

May 26, 2005

Mr. James A. Spina  
Vice President Nine Mile Point  
Nine Mile Point Nuclear Station, LLC  
P.O. Box 63  
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 (NMP1) - REQUEST FOR  
ADDITIONAL INFORMATION (RAI) REGARDING COLD WATER REACTIVITY  
ADDITION EVENT OF JANUARY 9, 2004 (TAC NO. MC6989)

Dear Mr. Spina:

The subject NMP1 issue was documented in Inspection Report (IR) 05000220/2004002, dated May 5, 2004, and IR 05000220/2005002, dated May 3, 2005. As a result, the Nuclear Regulatory Commission staff generated a number of questions (see enclosed RAI). The NRC Region I staff had previously discussed these questions with you. Your staff indicated that you can provide your response by June 30, 2005.

If you need clarification on this RAI, please do not hesitate to call me at 301-415-1451.

Sincerely,

*/RA/*

Peter S. Tam, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: As stated

cc w/encl: See next page

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SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 (NMP1) - REQUEST FOR  
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ADDITION EVENT OF JANUARY 9, 2004 (TAC NO. MC6989)

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The subject NMP1 issue was documented in Inspection Report (IR) 05000220/2004002, dated May 5, 2004, and IR 05000220/2005002, dated May 3, 2005. As a result, the Nuclear Regulatory Commission staff generated a number of questions (see enclosed RAI). The NRC Region I staff had previously discussed these questions with you. Your staff indicated that you can provide your response by June 30, 2005.

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DATE	5/26/05	5/26/05	5/26/05	5/26/05	5/26/05

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REQUEST FOR ADDITIONAL INFORMATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 (NMP1)

COLD WATER REACTIVITY ADDITION EVENT OF JANUARY 9, 2004

- (1) Have you previously analyzed the initiation of the emergency condenser (EC) at full power with an idle loop (or with all five recirculation pumps in service) with regard to expected reactivity transient effect on the core? Is this event enveloped by such an analysis and do operating procedures address recovery from such an event? DER 1-1999-3510/3551/3583, page 4 of 5, indicates that no such analysis has ever been conducted. Without such an analysis, is the full effect of the reactivity transient and resultant thermal margin(s) decreases well understood?
- (2) What is your basis for believing that the average power range monitor (APRM) flux spike had reached its maximum peak? The nuclear fuel vendor's reports evaluating this event relied heavily on this assertion. Your evaluation relied heavily on the belief that APRM flux had peaked at approximately 17%. What was the peak flux response for local power range monitors (LPRMs) in the core quadrant most affected by this event? The General Electric analysis notes that at high power, the reactor's response to a cold water reactivity transient is magnified. This necessitated additional steps prior to conducting the second EC test at higher power level to ensure adequate margin. Does this indicate that the effects of the test on reactivity and thermal margin were not well understood before the conduct of the first EC surveillance test at high power?
- (3) What is your basis for now concluding, pursuant to 10 CFR 50.59(c)(2), that you did not need not to obtain a license amendment prior to implementing this surveillance test procedure change? Have you reached that same conclusion for both the initial test at high power (with one idle recirculation loop) and the second test at high power (with all five recirculation loops in operation)? Has the effect of EC initiation at high power been adequately analyzed to ensure adequate core thermal margin?
- (4) Have you considered the potential impact on the reactivity transient if a turbine bypass valve(s) fails to modulate during the EC surveillance test? If not, considering the significant influence of the turbine bypass valve operation on the magnitude of any reactivity transient, what is your basis for not considering such a failure?
- (5) What was the "rate of reactivity addition" and "amount of reactivity added" during the January 9, 2004 event, in contrast to the January 21, 2004, EC surveillance tests? What was the amount of time for the EC cold water slug to travel through the core and how was this time determined? What was the duration and magnitude of the reactivity transient?

Enclosure

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