



**Constellation
Energy Group**

Nine Mile Point
Nuclear Station

January 12, 2004
NMP2L 2108

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Nine Mile Point Unit 2
Docket No. 50-410

Response to Request for Additional Information Regarding
Ultimate Heat Sink Temperature Requirements – Technical
Specification Amendment Application (TAC NO. MC0594)

Gentlemen:

By letter dated August 22, 2003, Nine Mile Point Nuclear Station, LLC (NMPNS) submitted a proposed change to the Nine Mile Point Unit 2 Technical Specifications (TS). Specifically, NMPNS proposed a revision to TS 3.7.1, "Service Water (SW) System and Ultimate Heat Sink (UHS)," to allow continued operation with short-term elevated UHS temperatures. On October 24, 2003, a telephone conversation was held between NMPNS and the NRC in which verbal responses were provided to several NRC questions regarding the amendment application. By letter dated November 10, 2003, the Commission issued a formal Request for Additional Information regarding this conversation. The attachment to this letter provides the NMPNS response.

Sincerely,

A handwritten signature in black ink that reads "Peter E. Katz".

Peter E. Katz
Vice President Nine Mile Point

PEK/JT/bjh

Attachment

A001

cc: Mr. H. J. Miller, NRC Regional Administrator, Region I
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. P. S. Tam, Senior Project Manager, NRR (2 copies)
Mr. John P. Spath, NYSERDA

STATE OF NEW YORK :
 : TO WIT:
COUNTY OF OSWEGO :

I, Peter E. Katz, being duly sworn, state that I am Vice President, Nine Mile Point Nuclear Station, LLC, and that I am duly authorized to execute and file this request on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Nine Mile Point employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 12th day of January, 2004.

WITNESS my Hand and Notarial Seal:

Notary Public



My Commission Expires:

Date 1/12/04

SANDRA A. OSWALD
Notary Public, State of New York
No. 01OS6032276
Qualified in Oswego County
Commission Expires 10/25/05

ATTACHMENT

Response to Request for Additional Information Nine Mile Point Nuclear Station, LLC (NMPNS), Unit 2 License Amendment Request (LAR) Regarding Ultimate Heat Sink Temperature Requirements

NRC Request for Additional Information (1)

At worst-case current licensing basis conditions with an ultimate heat sink (UHS) temperature of 84 °F, what temperatures are expected in the cooling system of the emergency diesel generators (EDGs), and what are the associated limits?

NMPNS Response

At worst case current licensing basis conditions with the ultimate heat sink (UHS) temperature at 84° F, the Division I and II Emergency Diesel Generator (EDG) jacket water temperatures are calculated to be less than 163° F. The EDG jacket water temperature limit for high temperature shutdown is 205° F.

At worst case current licensing basis conditions with the UHS temperature at 84° F, the Division III EDG jacket water temperature is calculated to be less than 182° F. The EDG jacket water temperature limit for high temperature shutdown is 208° F.

NRC Request for Additional Information (2)

What is the peak suppression pool temperature following a main steam line isolation transient from 100% power coincident with a loss of offsite power assuming a UHS temperature of 84 °F? Describe how the residual heat removal system heat exchanger tube plugging limit described in the submittal is administratively controlled.

NMPNS Response

The peak suppression pool temperature, assuming a UHS temperature of 84° F, a main steam isolation transient from 100% power, and a coincident loss of offsite power, is expected to be 213° F, one degree higher than the current design limit. This assumes design basis fouling and 5% tube plugging in the residual heat removal (RHR) heat exchangers.

Because the suppression pool temperature is expected to be greater than the design limit, NMPNS will either 1) evaluate a reduction in the allowed percentage of tubes which may be plugged, thereby increasing the system's calculated heat removal capability, 2) revise the applicable analysis to delete unnecessary conservatism thereby decreasing the calculated suppression pool temperature, and/or 3) raise the RHR heat exchanger performance requirement. In any case, the evaluation will confirm that the suppression

pool temperature design limit will not be exceeded with a UHS of 84°F. Required actions will be completed prior to implementation of the approved Amendment.

The 5% heat exchanger tube plugging limit is currently delineated in a NMPNS controlled technical manual. A maintenance procedure revision will be made to assure that the RHR heat exchanger tube plugging limit is not exceeded prior to implementation of the approved Amendment.

NRC Request for Additional Information (3)

The application is worded in such a way that it is not clear that analyses at the proposed UHS temperature of 84 °F were performed for various systems and parameters. It appears that, in most cases, a conclusion of acceptability was based on margin at the current UHS temperature. Please verify that analyses were performed at the proposed higher temperature and that the conclusions in the application remain valid at the higher temperature for the following. Note, that there is no need to submit the analyses; simple statements that analyses were done would suffice.

- a. *EDG building heating, ventilation, and air conditioning*
- b. *Control building safety-related area coolers*
- c. *The maximum post-LOCA peak suppression pool temperature*
- d. *Reactor building supply air cooler*
- e. *Reactor core isolation room unit coolers*
- f. *Turbine building closed loop cooling system.*

NMPNS Response

Items a, b, and e

As stated in our LAR, current margins are sufficient to offset the proposed 2°F increase in UHS temperature. Current evaluation supports this conclusion. NMPNS will update the safety-related unit cooler calculations, as well as applicable test procedures, to confirm acceptability of the proposed change prior to implementation of the approved Amendment.

Item c

As stated in our LAR, current margins have been determined to offset the proposed 2°F increase in UHS temperature. Current evaluation supports this conclusion. Accordingly, a detailed analysis for the maximum post-LOCA (Loss of Coolant Accident) suppression pool temperature with the UHS at 84°F has not been performed. NMPNS will update the

affected calculations to confirm acceptability of the proposed change prior to implementation of the approved Amendment.

Item d

The reactor building supply air coolers are used to cool incoming air during normal plant operation. During an accident condition, the reactor building supply air is isolated. Therefore, the supply air coolers have no accident mitigation function. The acceptability of the air coolers with the UHS at 84°F is based on an evaluation to maintain reactor building area temperature during normal plant operation that ensures habitability of the areas served and optimum performance of equipment.

Item f

The Turbine Building Closed Loop Cooling System is a non-safety related system that has no accident mitigation function. The acceptability of this system with the proposed 2° F increase in UHS temperature is based on system heat transfer characteristics and operating practices. As necessary, operating procedures will be updated prior to implementation of the approved Amendment.