ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. NPF-69

DOCKET NO. 50-410

Proposed Changes to Technical Specifications

Replace existing pages v, 3/4 3-17, 3/4 3-19A, 3/4 3-25, and 3/4 3-28 with the attached revised pages. These pages have been retyped in their entirety with marginal markings to indicate changes to the text. Also, add page 3/4 3-19B, which contains Figure 3.3.2-1, "Allowable and Trip Setpoint Values for the Main Steam Line Tunnel Lead Enclosure."

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. Primary Containment Isolation Signals (Continued)		
a. Reactor Vessel Water Level*		
1) Low, Low, Low, Level 1	≥ 17.8 in.	≥ 10.8 in.
2) Low, Low, Level 2	≥ 108.8 in.	≥ 101.8 in.
3) Low, Level 3	≥ 159.3 in.	≥ 157.8 in.
b. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
c. Main Steam Line		
1) Radiation - High**	≤ 3x Full Power Background	≤ 3.6x Full Power Background
2) Pressure - Low	≥ 766 psig	≥ 746 psig
3) Flow - High	≤ 121.5 psid	≤ 122.8 psid
d. Main Steam Line Tunnel		
1) Temperature - High	≤ 167.2°F	≤ 170.6°F
2) ΔTemperature - High	≤ 70.0°F	≤ 71.7°F
3) Temperature - High MSL Lead Enclosure***	≤ 148.2°F	≤ 151.6°F
e. Condenser Vacuum Low	≥ 8.5 in Hg vacuum	≥ 7.6 in. Hg vacuum
f. RHR Equipment Area Temperature - High (HXs/A&B Pump Rooms)	≤ 135°F	≤ 144.5°F
g. Reactor Vessel Pressure - High (RHR Cut-in Permissive)	≤ 128 psig	≤ 148 psig
h. SGTS Exhaust - High Radiation	≤ 5.7×10^{-3} μCi/cc	≤ 1.0×10^{-2} μCi/cc

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

** Within 24 hours prior to the planned start of the hydrogen injection test and with the reactor power at greater than 20% rated power, the normal full-power radiation background level and associated trip and alarm setpoints may be changed based on a calculated value of the radiation level expected during the test. The background radiation level and associated trip and alarm setpoints may be adjusted during the test program based on either calculations or measurements of actual radiation levels resulting from hydrogen injection. The background radiation level shall be determined and associated trip and alarm setpoints shall be reset within 24 hours after completion of the hydrogen injection test. At reactor power levels below 20% rated power hydrogen injection shall be terminated, and control rod withdrawal is prohibited until the Main Steam Line Radiation Monitor trip setpoint is restored to its pre-test value.

*** The trip setpoint and allowable value for a channel may be established based on Figure 3.3.2-1, if:

a. the actual ambient temperature reading for all operable channels in the Lead Enclosure area are equal to or greater than the ambient temperature used as the basis for the setpoint, and

b. the absence of steam leaks in the Main Steam Line Tunnel Lead Enclosure area is verified by visual inspection prior to increasing a channel setpoint, and

c. a surveillance is implemented in accordance with Note "d" of Table 4.3.2.1-1.

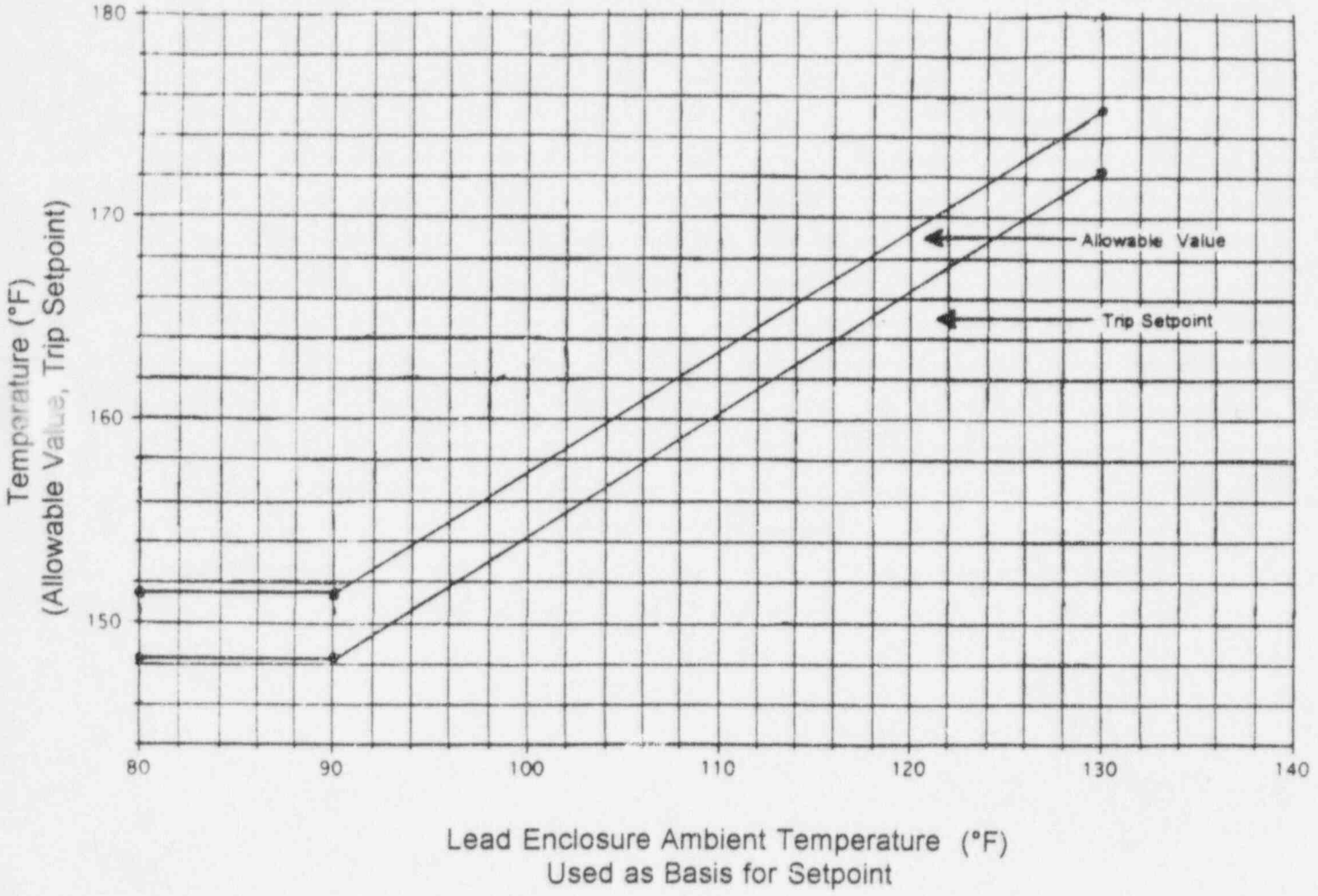

FIGURE 3.3.2-1 Allowable and Trip Setpoint Values for the Main Steam Line Tunnel Lead Enclosure

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTION TEST	CHANNEL CALIBRATION	OPERATION CONDITIONS FOR WHICH SURVEILLANCE IS REQUIRED
1. Primary Containment Isolation Signals				
a. Reactor Vessel Water Level				
1) Low, Low, Low, Level 1	S	Q	R(a)	1, 2, 3
2) Low, Low, Level 2	S	Q	R(a)	1, 2, 3 and *
3) Low, Level 3	S	Q	R(a)	1, 2, 3
b. Drywell Pressure - High	S	Q	R(a)	1, 2, 3
c. Main Steam Line				
1) Radiation - High	S	Q	R	1, 2, 3
2) Pressure - Low	S	Q	R(a)	1
3) Flow - High	S	Q	R(a)	1, 2, 3
d. Main Steam Line Tunnel				
1) Temperature - High	S	Q	R(b)	1, 2, 3
2) ΔTemperature - High	S	Q	R(b)	1, 2, 3
3) Temperature - High MSL Lead Enclosure	S(d)	Q	R(b)	1, 2, 3
e. Condenser Vacuum - Low	S	Q	R(a)	1, 2**, 3**
f. RHR Equipment Area Temperature - High (HXs/A&B Pump Rooms)	S	Q	R(b)	1, 2, 3
g. Reactor Vessel Pressure High (RHR Cut-in Permissive)	S	Q	R(a)	1, 2, 3

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

* During CORE ALTERATIONS and operations with a potential for draining the reactor vessel. This only applies to secondary containment isolation and automatic start of SGTS.

** When any turbine stop valve is greater than 90% open and/or when the key-locked condenser low vacuum bypass switch is open (in Normal position).

† When handling irradiated fuel in the reactor building and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

(a) Perform the calibration procedure for the trip unit setpoint at least once per 92 days.

(b) Calibration excludes sensors; sensor response and comparison shall be done in lieu of.

(c) Manual isolation pushbuttons are tested at least once per operating cycle during shutdown. All other circuitry associated with manual isolation shall receive a CHANNEL FUNCTIONAL TEST at least once per 92 days as part of the circuitry required to be tested for the automatic system isolation.

(d) In addition to the normal shift channel check, if a channel setpoint has been established using Figure 3.3.2-1, then once per shift the actual ambient temperature reading for all operable channels in the Lead Enclosure area shall be verified to be equal to or greater than the ambient temperature used as the basis for the setpoint.

ATTACHMENT B

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. NPF-69

DOCKET NO. 50-410

Marked Copy of Proposed Changes to Current Technical Specifications

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. Primary Containment Isolation Signals (Continued)		
a. Reactor Vessel Water Level*		
1) Low, Low, Low, Level 1	≥ 17.8 in.	≥ 10.8 in.
2) Low, Low, Level 2	≥ 108.8 in.	≥ 101.8 in.
3) Low, Level 3	≥ 159.3 in.	≥ 137.8 in.
b. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
c. Main Steam Line		
1) Radiation - High**	≤ 3x Full Power Background	≤ 3.6x Full Power Background
2) Pressure - Low	≥ 766 psig	≥ 746 psig
3) Flow - High	≤ 121.5 psid	≤ 122.8 psid
d. Main Steam Line Tunnel		
1) Temperature - High	≤ 167.2°F	≤ 170.6°F
2) ΔTemperature - High	≤ 70.0°F	≤ 71.7°F
3) Temperature - High MSL Lead Enclosure	≤ 148.2°F	≤ 151.6°F
e. Condenser Vacuum Low	≥ 8.5 in Hg vacuum	≥ 7.6 in. Hg vacuum
f. RHR Equipment Area Temperature - High (HXs/A&B Pump Rooms)	≤ 135°F	≤ 144.5°F
g. Reactor Vessel Pressure - High (RHR Cut-in Permissive)	≤ 128 psig	≤ 148 psig
h. SGTS Exhaust - High Radiation	≤ 5.7×10^{-3} μCi/cc	≤ 1.0×10^{-2} μCi/cc

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

** Within 24 hours prior to the planned start of the hydrogen injection test and with the reactor power at greater than 20% rated power, the normal full-power radiation background level and associated trip and alarm setpoints may be changed based on a calculated value of the radiation level expected during the test. The background radiation level and associated trip and alarm setpoints may be adjusted during the test program based on either calculations or measurements of actual radiation levels resulting from hydrogen injection. The background radiation level shall be determined and associated trip and alarm setpoints shall be reset within 24 hours after completion of the hydrogen injection test. At reactor power levels below 20% rated power hydrogen injection shall be terminated, and control rod withdrawal is prohibited until the Main Steam Line Radiation Monitor trip setpoint is restored to its pre-test value.

*** The trip setpoint and allowable value for a channel may be established based on Figure 3.3.2-1, if:

a. the actual ambient temperature readings for all operable channels in the Lead Enclosure Area are equal to or greater than the ambient temperature used as the basis for the setpoint, and

b. the absence of steam leaks in the Main Steam Line Tunnel Lead Enclosure Area is verified by visual inspection prior to increasing a channel setpoint, and

c. a surveillance is implemented in accordance with note "d" of Table 4.3.2.1-1.

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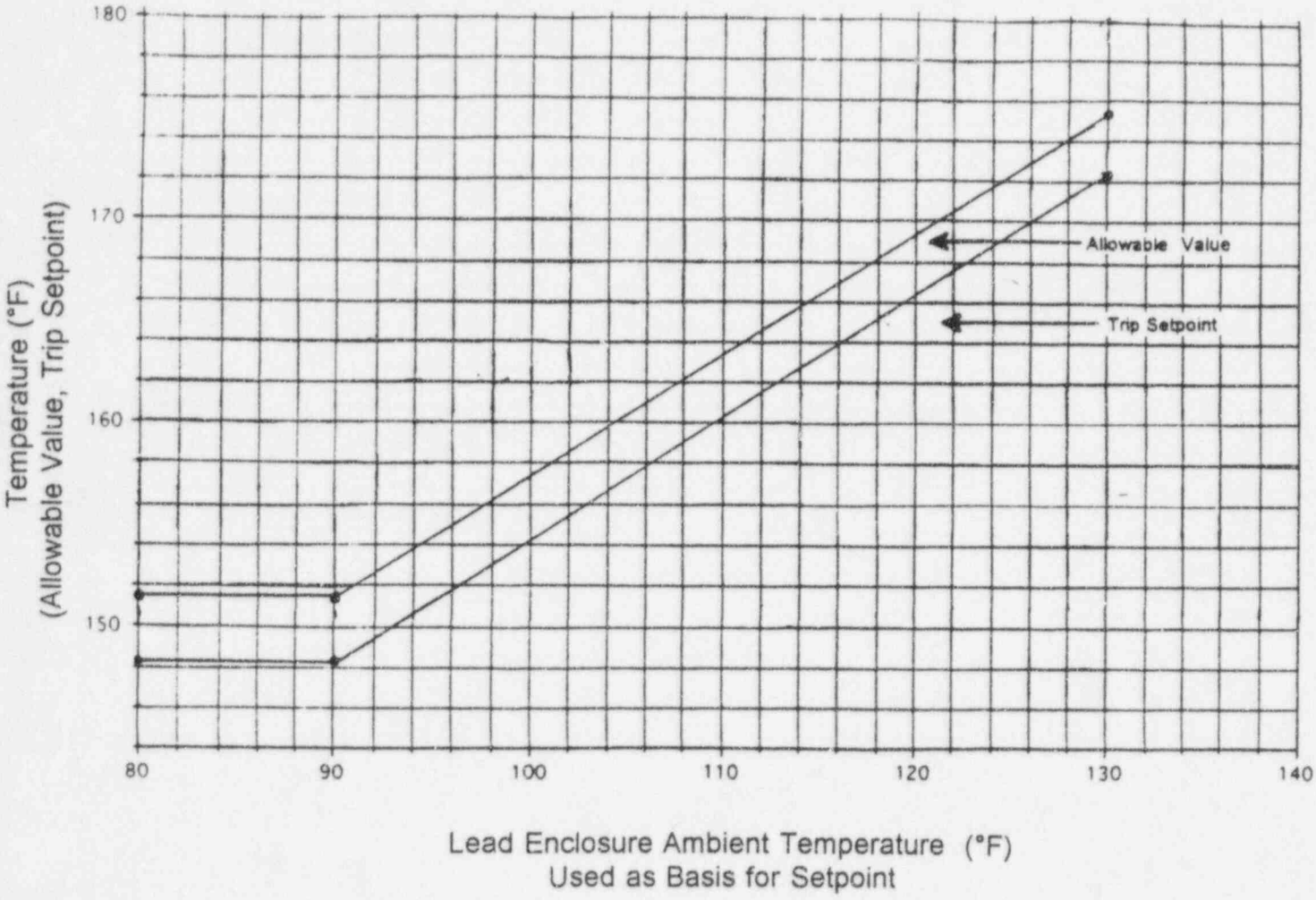

FIGURE 3.3.2-1 Allowable and Trip Setpoint Values for the Main Steam Line Tunnel Lead Enclosure

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTION TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE IS REQUIRED
1. Primary Containment Isolation Signals				
a. Reactor Vessel Water Level				
1) Low, Low, Low, Level 1	S	Q	R(a)	1, 2, 3
2) Low, Low, Level 2	S	Q	R(a)	1, 2, 3 and *
3) Low, Level 3	S	Q	R(a)	1, 2, 3
b. Drywell Pressure - High	S	Q	R(a)	1, 2, 3
c. Main Steam Line				
1) Radiation - High	S	Q	R	1, 2, 3
2) Pressure - Low	S	Q	R(a)	1
3) Flow - High	S	Q	R(a)	1, 2, 3
d. Main Steam Line Tunnel				
1) Temperature - High	S	Q	R(b)	1, 2, 3
2) ΔTemperature - High	S	Q	R(b)	1, 2, 3
3) Temperature - High MSL Lead Enclosure	S (d)	Q	R(b)	1, 2, 3
e. Condenser Vacuum - Low	S	Q	R(a)	1, 2**, 3**
f. RHR Equipment Area Temperature - High (HXs/A&B Pump Rooms)	S	Q	R(b)	1, 2, 3
g. Reactor Vessel Pressure High (RHR Cut-in Permissive)	S	Q	R(a)	1, 2, 3

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

* During CORE ALTERATIONS and operations with a potential for draining the reactor vessel. This only applies to secondary containment isolation and automatic start of SGTS.

** When any turbine stop valve is greater than 90% open and/or when the key-locked condenser low vacuum bypass switch is open (in Normal position).

† When handling irradiated fuel in the reactor building and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

(a) Perform the calibration procedure for the trip unit setpoint at least once per 92 days.

(b) Calibration excludes sensors; sensor response and comparison shall be done in lieu of.

(c) Manual isolation pushbuttons are tested at least once per operating cycle during shutdown. All other circuitry associated with manual isolation shall receive a CHANNEL FUNCTIONAL TEST at least once per 92 days as part of the circuitry required to be tested for the automatic system isolation.

(d) In addition to the normal shift channel check, if a channel setpoint has been established using Figure 3.3.2-1, then once per shift the actual ambient temperature reading for all operable channels in the Lead Enclosure Area shall be verified to be equal to or greater than the ambient temperature used as the basis for the setpoint.

ATTACHMENT C

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. NPF-69

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Supporting Information and No Significant Hazards Consideration Analysis

INTRODUCTION

Item 1.d of Table 3.3.2-2, entitled "Isolation Actuation Instrumentation Setpoints," of the Nine Mile Point Unit 2 (NMP2) Technical Specifications (TS) identifies the isolation actuation instrumentation temperature setpoints associated with the main steam line tunnel. Operating data indicates that actual temperatures for the Main Steam Line Lead Enclosure (i.e., item 1.d.3 of Table 3.3.2-2), particularly in the summer, approach the isolation actuation setpoint. In fact, at times during hot summer conditions, operating margin between the actual temperature and the actuation setpoint is often negligible. Niagara Mohawk has confirmed by inspection of the main steam line tunnel that these high tunnel temperatures are not the result of steam leakage in the area. Under these conditions, a minor disturbance in the turbine building ventilation system, while not otherwise compromising safe operation, could result in an unwarranted isolation actuation at full power with resulting Main Steam Isolation Valve closure and reactor scram.

The main steam tunnel high temperature isolation actuation instrumentation is part of the Leak Detection System (LDS). A schematic diagram of the system is shown on Figure 7.6-1, sheet 2, in the Updated Safety Analysis Report (USAR). The LDS complies with General Design Criterion (GDC) 54, and is discussed in Section 5.2.5 of the USAR. The portion of the LDS in the main steam tunnel is used to detect leakage from the main steam line and initiate signals used for automatic closure of the Main Steam Isolation Valves. The monitors located in the main steam tunnel and Lead Enclosure area have sensitivities suitable for detection of increases in ambient air temperature resulting from reactor coolant leakage into the area.

The design calculations for NMP2 estimated an average ambient temperature for the main steam tunnel of 85°F during the winter and 110°F during the summer. To provide the necessary sensitivity year round for a single setpoint, the transient analysis for a steam leak in the Main Steam Tunnel Lead Enclosure area utilized the winter temperature as an initial condition. The temperature setpoints for the main steam tunnel isolation actuation instrumentation were determined using an 80°F initial temperature and a 25 gallon per minute (gpm) steam leak. The isolation instrumentation setpoints assure that a main steam line leak in this area would be isolated before a pipe break occurred.

Niagara Mohawk Power Corporation (NMPC) has determined that the temperatures in the Main Steam Line Tunnel Lead Enclosure resulting from a postulated steam leak are dependent on the initial ambient temperature in the area. The acceptable trip setpoint and allowable temperatures, based on initial ambient temperatures, have been calculated and

plotted on proposed Figure 3.3.2-1. The range of temperatures for the allowable value and trip setpoint for main steam line isolation are the result of calculating the temperature increase for a main steam line leak for a range of initial temperatures. Since these calculated values are based on normal operating conditions, the absence of any steam leaks in the Main Steam Line Tunnel Lead Enclosure area is required to be visually verified prior to increasing the setpoint of any temperature instrument channel. Furthermore, a new surveillance requirement has been established to verify the continued validity of a setpoint established using Figure 3.3.2-1. The surveillance involves confirming, once per shift, that the actual temperature reading for all operable temperature channels in the Lead Enclosure area are equal to or greater than the ambient temperature used as the basis for the setpoint. This change does not affect the setpoint, function, or operation of the temperature instruments in the main steam line tunnel which are not in the Lead Enclosure area.

EVALUATION

The effects of the increased main steam tunnel temperatures were evaluated. The results concluded that all equipment and components in the main steam tunnel would remain operable and would perform their intended safety function.

The increase in the main steam lead enclosure temperature setpoints has been reviewed against Equipment Qualification (EQ) documentation. The increase has no adverse impact. The EQ program at NMP2 has a process in place to monitor ambient temperatures in different environmental zones, including the zones in the main steam lead enclosure. Qualified lives of EQ equipment are calculated and adjusted by the NMPC EQ group, based on actual ambient temperatures.

The peak temperature as a result of a main steam line break will not change, since the dominant effect is the energy released by the break.

The structural design was also evaluated and found to be acceptable for the increased temperature. Structural impacts are bounded by the steam line break analysis.

A small steam leak in the Lead Enclosure area could increase the ambient temperature in the area without causing a main steam line isolation. Raising the trip setpoint based on an ambient temperature affected by a steam leak could compromise the ability to detect a leak of 25 gpm. Therefore, a requirement to confirm the absence of steam leaks in the Lead Enclosure area, before increasing the setpoint of any temperature instrument channel, has been incorporated into this proposed TS change.

Temperatures in the Main Steam Line Lead Enclosure area can vary based on environmental conditions, such as the temperature of the outside air or the temperature of the lake water, which is the source of cooling water for the affected ventilation systems. Since the ambient temperature in the Lead Enclosure area is an input in establishing the trip setpoint and allowable values, this proposed TS change also includes a surveillance requirement to verify, once per shift, that the actual temperature reading for all operable temperature channels in the Lead Enclosure area are equal to or greater than the ambient temperature used as the basis for the setpoint. This frequency is considered adequate to preclude operation outside the allowable range and to permit compensatory action should actual Lead Enclosure temperatures be trending down toward the setpoint basis temperature. Experience has shown that actual Lead Enclosure temperatures respond relatively slowly to

even large and sudden environmental changes, such as the rapid reduction in lake water temperatures which have been experienced at Nine Mile Point. Available compensatory actions include reducing the trip setpoint consistent with the actual ambient temperature and adjusting ventilation system parameters to maintain an elevated ambient temperature.

The methodology utilized to determine the allowable values and setpoints is in accordance with Regulatory Guide 1.105, "Instrument Setpoints for Safety-Related Systems," Revision 2, February 1986, and Standard ISA-S67.04, "Setpoints for Nuclear Safety Related Instrumentation used in Nuclear Power Plants," 1982. The instrumentation in the main steam lead enclosure has been evaluated for the effect of increased temperatures on drift, accuracies, and allowances for environmental effects. The allowable values contain sufficient margin to account for instrument accuracy and calibration capability in the new environment. The differences between the trip setpoints and allowable values are adequate to account for expected drift between calibrations.

CONCLUSIONS

Based on these evaluations, it is concluded that the revised main steam lead enclosure temperature setpoints will not adversely affect any design/operational consideration. Specifically, the LDS will continue to provide a main steam line isolation for a leak prior to a pipe break, and the performance of safety-related equipment and structures as a result of increased steam line lead enclosure temperature has been determined to be acceptable.

NO SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

10CFR50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analysis using the standards in 10CFR50.92 as to whether no significant hazards consideration associated with the amendment exists. Therefore, in accordance with 10CFR50.91, the following analysis has been performed:

The operation of NMP2 in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The LDS instrumentation in the main steam line tunnel isolates the Main Steam Isolation Valves upon sensing a steam leak of 25 gpm. For an elevated ambient temperature in the Lead Enclosure area, a setpoint established using the proposed Figure 3.3.2-1 ensures that the Main Steam Isolation Valves continue to receive an isolation signal upon sensing a steam leak of 25 gpm. Verifying the absence of any steam leak in the area prior to raising any temperature instrument setpoint ensures that the ability to sense a 25 gpm leak is not compromised by an increased ambient temperature resulting from a smaller steam leak. The periodic surveillance to verify the actual ambient temperature ensures the continued validity of the ambient temperature used for the setpoint basis, and provides sufficient advance indication to take appropriate compensatory action. Accordingly, this change will not involve a significant increase in the consequences of any accident previously evaluated.

Furthermore, the LDS function provides a mitigation action for a postulated main steam line pipe leak which could lead to a pipe break. This function does not affect any accident precursors, and the proposed change does not affect the function of the LDS system.

Accordingly, this change will not involve a significant increase in the probability of any accident previously evaluated.

The operation of NMP2, in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any previously evaluated.

The qualification of safety-related equipment in the main steam lead enclosure is evaluated using actual temperatures and component qualified life is adjusted accordingly. The temperature elements are the only safety-related equipment affected by this change, therefore, the instrumentation response to previously evaluated accidents will not be adversely affected. This change will not affect the performance of safety related structures. Accordingly, the design capabilities of those structures, systems and components affected by the proposed change are not challenged in a manner not previously evaluated so as to create the possibility of a new or different kind of accident from any previously evaluated.

The operation of NMP2, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.

The proposed change provides a range of setpoints and allowable values for the Main Steam Line Tunnel Lead Enclosure temperatures. The calculation of the allowable values and trip setpoints was performed using the same methodologies as previously employed. For an elevated ambient temperature in the Lead Enclosure area, a setpoint established using the proposed Figure 3.3.2-1 ensures that the Main Steam Isolation Valves receive an isolation signal upon sensing a steam leak of 25 gpm, resulting in a main steam line isolation prior to a pipe break. Therefore, the proposed change provides the same level of protection against a main steam line break as the existing setpoint values. The proposed setpoints will provide increased scram avoidance, and thereby reduce unnecessary challenges to the plant shutdown systems. Accordingly, the proposed change does not result in a significant reduction in a margin of safety.