September 23, 1988

Docket

Docket No. 50-263

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Mr. D. M. Musolf, Manager
Nuclear Support Services
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

SUBJECT: AMENDMENT NO. 57 TO FACILITY OPERATING LICENSE NO. DPR-22: INCREASED SODIUM PENTABORATE BORON-10 ENRICHMENT (TAC NO. 67430)

The Commission has issued the enclosed Amendment No. 57 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. This amendment consists of changes to the Technical Specifications in response to your application dated March 1, 1988.

This amendment revises Sections 3.4 and 4.4 of the plant Technical Specifications to reflect the use of the Standby Liquid Control System (SLCS) sodium pentaborate solution having a Boron-10 enrichment of 55 atom percent, and to delete the requriement for a mid-cycle surveillance of the sodium pentoborate solution due to the availability and planned use of pre-mixed and vendor-certified sodium pentaborate solution for the SLCS.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

John J. Stefano, Project Manager
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

Enclosures:
1. Amendment No. 57 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures:
See next page

DC9/M.V. bc

LA/PD31:DRSP	PM/PD31:DRSP	D/PD31:DRSP	SRXB	OGC
RIngram	JStefano	MVirgilio	WHodges	
8/22/88	8/23/88	9/13/88	8/26/88	/88

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

September 23, 1988

Docket No. 50-263

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See next page

Mr. D. M. Musolf, Manager
Nuclear Support Services
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Gerald Charnoff, Esquire
Shaw, Pittman, Potts and
Trowbridge
2300 N Street, NW
Washington, D. C. 20037

U. S. Nuclear Regulatory Commission
Resident Inspector's Office
Box 1200
Monticello, Minnesota 55362

Plant Manager
Monticello Nuclear Generating Plant
Northern States Power Company
Monticello, Minnesota 55362

Russell J. Hatling
Minnesota Environmental Control
Citizens Association (MECCA)
Energy Task Force
144 Melbourne Avenue, S. E.
Minneapolis, Minnesota 55113

Dr. John W. Ferman
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155-3898

Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Commissioner of Health
Minnesota Department of Health
717 Delaware Street, S. E.
Minneapolis, Minnesota 55440

O. J. Arlien, Auditor
Wright County Board of
Commissioners
10 NW Second Street
Buffalo, Minnesota 55313

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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 57
License No. DPR-22

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northern States Power Company (the licensee) dated March 1, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Facility Operating License No. DPR-22 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 57 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dominic C. DiIanni /for M.V

Dominic DiIanni, Acting Director
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 23,1988

ATTACHMENT TO LICENSE AMENDMENT NO. 57

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Revise Appendix A Technical Specifications by removing the pages identified below and inserting enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
93	93
95	95
97	97
99	99

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

3.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the operating status of the standby liquid control system.

Objective

To assure the availability of an independent reactivity control mechanism.

SPECIFICATION:

A. Normal Operation

The standby liquid control system shall be operable at all times when fuel is in the reactor and the reactor is not shut down by control rods, except as specified in 3.4.B.

4.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the periodic testing requirements for the standby liquid control system.

Objective:

To verify the operability of the standby liquid control system.

SPECIFICATION

A. The operability of the standby liquid control system shall be verified by performance of the following tests:

1. At least once per month -

   Demineralized water shall be recycled to the test tank. Pump minimum flow rate of 24 gpm shall be verified against a system head of 1275 psig. Comparison of the measured pump flow rate against equation 2 of paragraph 3.4.C.1 shall be made to demonstrate operability of the system in accordance with the ATWS Design Basis.

2. At least once during each operating cycle -

   a. Manually initiate one of the two standby liquid control systems and pump demineralized water into the reactor vessel. This test checks explosion of the charge associated with the tested system, proper operation of the valves and pump capacity. Both systems shall be tested and inspected, including each explosion valve in the course of two operating cycles.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

C. Boron Solution Requirements

At all times when the Standby Liquid Control System is required to be operable:

1. The liquid poison tank shall contain a boron bearing solution that satisfies the volume, concentration and enrichment requirements of Figure 3.4.1, or compliance can be demonstrated by satisfying the following equations:

Equation 1 (Original Design Basis):

$$V \geq \left(\frac{71.18}{0.0051 \times C + 0.998}\right)\left(1+\frac{4821}{1101-E}\right)\left(\frac{19.8}{E}\right)\left(\frac{100}{C}\right) + 128 \text{ gal}$$

Equation 2 (ATWS Design Basis):

$$C \geq 8.28\left(\frac{86}{Q}\right)\left(\frac{19.8}{E}\right)$$

where:

V - indicated Boron solution tank volume (gal)
E - measured Boron solution enrichment (atom%)
C - measured Boron solution concentration (wt%)
Q - measured pump flow rate (gpm) at 1275 psig

If Equation 1 is satisfied, but Equation 2 cannot be met, continued plant operation is permissible, provided that:

a. Compliance with Equation 2 is demonstrated within 7 days or

b. The Commission shall be notified and a special report provided outlining the actions taken and the plans and schedule for demonstrating compliance with the ATWS Design Basis.

2. The temperature shall not be less than the solution temperature presented in Figure 3.4.2.

3. The heat tracing on the pump suction lines shall be operable whenever the room temperature is less than the solution temperature presented in Figure 3.4.2.

C. Boron Solution Surveillance

The availability of the proper boron bearing solution shall be verified by performance of the following tests:

1. At least once per cycle -

Boron enrichment shall be determined. The laboratory analysis to determine enrichment shall be obtained within 30 days of sampling or chemical addition.

2. At least once per month -

Boron concentration shall be determined. In addition, the boron concentration shall be determined any time water or boron are added or if the solution temperature drops below the limits specified by Figure 3.4.2.

3. At least once per day -

a. Solution volume shall be checked.

b. The solution temperature shall be checked.

c. The room temperature shall be checked in the vicinity of the standby liquid control system pumps.

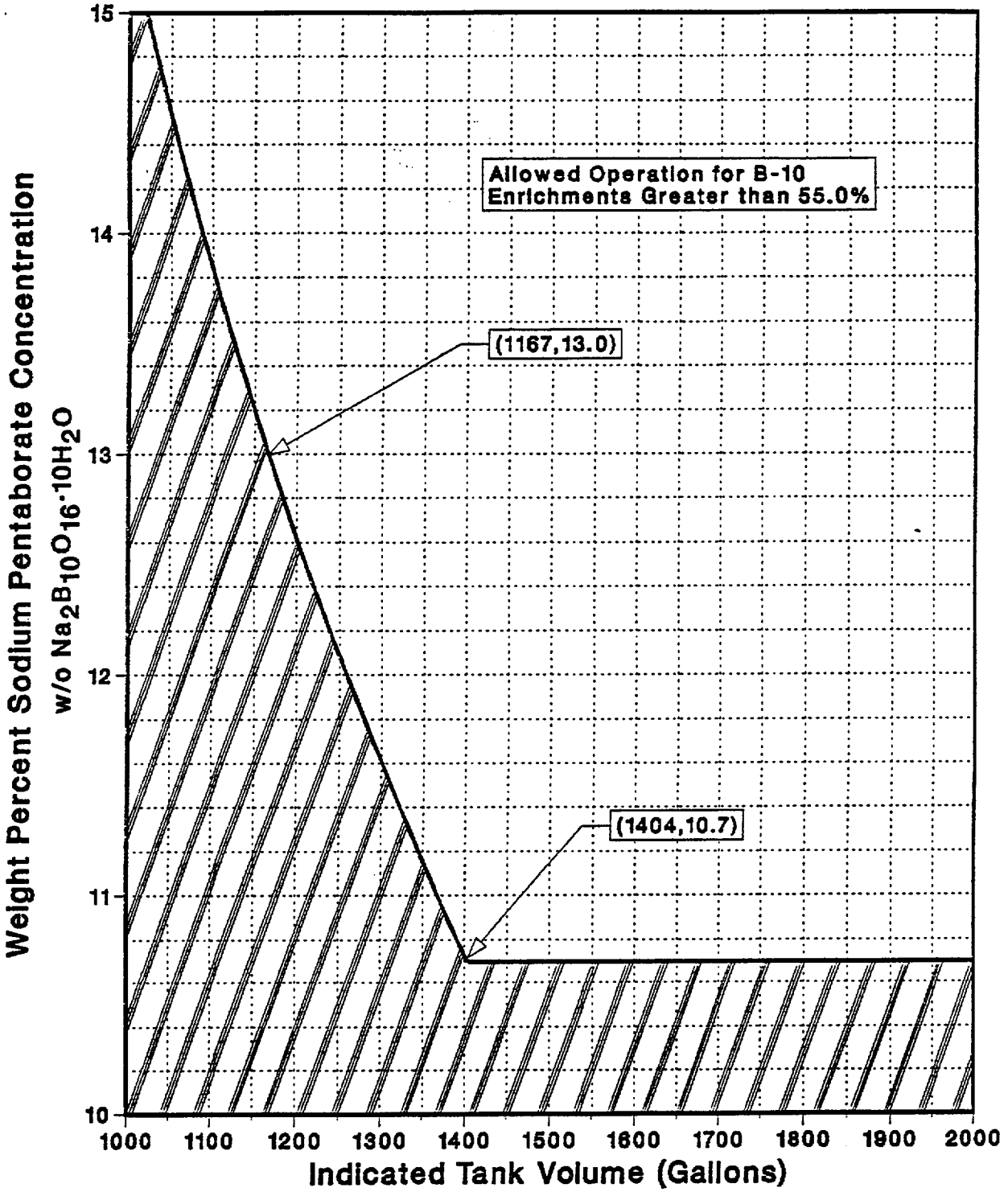

Figure 3.4-1 Sodium Pentaborate Solution Volume Concentration Requirements

Basis 3.4 and 4.4:

A. The design objective of the standby liquid control system is to provide the capability of bringing the reactor from full power to a cold, xenon-free shutdown assuming that none of the withdrawn control rods can be inserted. To meet this objective, the liquid control system is designed to inject a quantity of boron which produces a concentration of boron in the reactor core in less than 125 minutes sufficient to bring the reactor from full power to a 3% delta k subcritical condition considering the hot to cold reactivity swing, xenon poisoning and an additional 25% boron concentration margin for possible imperfect mixing of the chemical solution in the reactor water and dilution from the water in the cooldown circuit.

The time requirement (125 minutes) for insertion of the boron solution was selected to override the rate of reactivity insertion due to cooldown of the reactor following the xenon poison peak.

The ATWS Rule (10CFR50.62) requires the addition of a new design requirement to the generic SLC System design basis. Changes to flow rate, solution concentration or boron enrichment, to meet the ATWS Rule do not invalidate the original system design basis. Paragraph (c)(4) of 10CFR50.62 states that:

> "Each boiling water reactor must have a Standby Liquid Control System (SLCS) with a minimum flow capacity and boron content equivalent in control capacity to 86 gallons per minute of 13 weight percent sodium pentaborate solution" (natural boron enrichment).

The described minimum system parameters (equivalent to 24 gpm, 10.7% concentration and 55 atom percent Boron-10 enrichment) will ensure an equivalent injection capability that meets the ATWS rule requirement.

Boron enrichment concentration, solution temperature, and volume (including check of tank heater and pipe heat tracing system) are checked on a frequency to assure a high reliability of operation of the system should it ever be required. Experience with pump operability demonstrates that testing at a three-month interval is adequate to detect if failures have occurred.

The only practical time to test the standby liquid control system is during a refueling outage and by initiation from local stations. Components of the system are checked periodically as described above and make a functional test of the entire system on a frequency of less than once each refueling outage unnecessary. A test of explosive charges from one manufacturing batch is made to assure that the replacement charges for the tested system are satisfactory. A continual check of the firing circuit continuity is provided by pilot lights in the control room.

The relief valves in the standby liquid control system protect the system piping and positive displacement pumps which are nominally designed for 1500 psi from overpressure. The pressure relief valves discharge back to the standby liquid control solution tank.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 57 TO FACILITY OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 INTRODUCTION

By letter dated March 1, 1988, Northern States Power Company (NSP or the licensee) proposed changes to Sections 3.4 and 4.4 of the Technical Specifications (TSs) appended to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The proposed changes would reflect an increased Boron-10 enrichment in the sodium pentaborate solution used for the Standby Liquid Control System (SLCS). The changes proposed conform with: (1) the technical bases proposed by NSP for meeting the Anticipated Transients Without Scram (ATWS) Rule as set forth in 10 CFR 50.62(c)(4), originally incorporated into Facility Operating License No. DPR-22 by Amendment No. 56; and (2) the technical bases upon which the exemption from the minimum pump flow rate requirement specified in 10 CFR 50.62(c)(4) was granted on December 11, 1987.

The specific TS changes proposed are summarized as follows:

- Reduce the pump minimum flow rate in Paragraph 4.4.A.1 from 26 gpm to 24 gpm.
- Add a sentence in Paragraph 4.4.A.1 which reads, "Comparison of the measured pump flow rate against equation 2 of paragraph 3.4.C.1 shall be made to demonstrate operability of the system in accordance with the ATWS Design Basis".
- Add the words "indicated" and "measured" in the variable definitions contained in Paragraph 3.4.C.1.
- Delete the sentence in Paragraph 4.4.C.1 which reads, "In addition, the boron enrichment shall be determined any time new chemicals are added to the liquid poison tank".
- Replace Figure 3.4-1 which allows operation for B-10 enrichments greater than 39.6% with a new Figure 3.4-1 which allows operation for B-10 enrichments greater than 55.0%.

- Revise the sentence in the bases which reads, "The described minimum system parameters (equivalent to 26 gpm, 13.7% concentration and 39.6 atom percent Boron-10 enrichment) will ensure an equivalent injection capability that meets the ATWS rule requirement," to read, "The described minimum system parameters (equivalent to 24 gpm, 10.7% concentration and 55 atom percent Boron-10 enrichment) will ensure an equivalent injection capability that meets the ATWS rule requirement".

2.0 DISCUSSION

The proposed changes were requested because, subsequent to the licensee's June 22, 1987, TS change request and the issuance of License Amendment No. 56 (December 11, 1987), it was learned that the vendor could supply pre-mixed sodium pentaborate certified to 55 atom percent Boron-10 enrichment in lieu of enriched boric acid which would be mixed on site with borax to form sodium pentaborate with a 39.6 atom percent Boron-10 enrichment. This approach offers a number of advantages. The additional enrichment enables the return of the required pump minimum flow rate to the original value of 24 gpm and still meet the ATWS Rule (10 CFR 50.62). It eliminates the possibility of error when mixing the boric acid and borax on site and allows removal of the requirement for mid-cycle enrichment checks when adding chemicals. Finally, when performing surveillance tests, less material is lost since the solution is at a lower concentration.

In addition, certain other changes were proposed to provide clarity to the plant operator. These changes were based on questions received during training of the operators on the TSs which incorporated the requirements of the ATWS Rule and the use of enriched boron.

Substantive changes that have been proposed to the TSs include a) decreasing the required pump flow rate from 26 to 24 gpm, b) incorporating a new Figure 3.4-1 which is based on 55 atom percent enriched boron, and c) deleting the requirement for mid-cycle boron enrichment surveillance when new chemicals are added.

The 24 gpm minimum pump flow requirement is a return to the flow rate contained in the TSs prior to implementation of the ATWS Rule. It had been raised to 26 gpm when it was planned to utilize a lower enriched sodium pentaborate solution (39.6 atom percent) to allow for the lowest possible solution concentration (13.7 wt percent) in meeting the ATWS Rule. With the use of a 55.0 atom percent sodium pentaborte solution, the solution concentration can be maintained as low as 10.7 wt percent with the minimum pump flow rate returned to 24 gpm and still meet the ATWS Rule. This restores the original margin between the design value of the SLCS pump flow rate and the minimum pump flow rate contained in the TSs.

The curves in Figure 3.4-1 provide the boundaries which define an area of operation that ensures the original design basis and the ATWS Rule are satisfied. The equation for the lefthand curve or boundary is as provided in the discussion below entitled, "Comparison with the original design basis for the SLCS." The lower boundary is provided by a straight line at 10.7 wt percent below which the requirements of the ATWS Rule are not met if a pump flow rate

of 24 gpm and boron enrichment of 55.0 atom percent or 2.78 times that naturally occurring are assumed.

Surveillance requirements would be deleted for verifying boron enrichment during mid-cycle addition of chemicals to the storage tank. These requirements are no longer necessary because rather than buying enriched boric acid which then needed to be mixed on site with borax to obtain sodium pentaborate, the licensee would procure pre-mixed and certified sodium pentaborte directly from the vendor. The once per cycle requirement to verify enrichment is therefore adequate to ensure continued high system reliability.

Those changes which are proposed to provide clarification include a) the addition of a sentence which states that when the monthly flow rate surveillance is performed, that it should be compared to the equation which defines the ATWS Design Basis for the SLCS, and b) the addition of the words "indicated" and "measured" in the definitions of the variables used in the calculations defined by the formulas.

Comparison with the original design basis for the SLCS

The original design objective of the SLCS was to provide the capability of bringing the reactor from full power to a cold, xenon-free shutdown assuming that none of the withdrawn control rods could be inserted. To meet this objective, the SLCS was designed to inject a quantity of boron which produces a concentration of 660 ppm of boron in the reactor in less than 125 minutes. In addition, a 25 percent boron concentration margin was added to account for possible imperfect mixing of the chemical solution in the reactor water and dilution from the water in the cooldown circuit. This resulted in the requirement to inject a quantity of boron which produces a concentration of 825 ppm of boron in the reactor in less than 125 minutes. With a sodium pentaborate solution with natural Boron-10 isotopic enrichment of 19.8 atom percent, a volume of 1400 gallons of solution having a 21.4 wt percent sodium pentaborate concentration was required to meet the shutdown requirement. At a boron concentration of 10.8 wt percent, a volume of solution equal to the maximum tank capacity of 2895 gallons was required. With a flow rate of 24 gpm, the contents of the tank could be pumped into the reactor vessel in less than 121 minutes.

According to the licensee, the proposed modified SLCS will utilize enriched boron and a flow rate value of 24 gpm. The decreased value for the flow rate returns to the value utilized in the TSs prior to the implementation of the ATWS Rule. The planned boron enrichment of the sodium pentaborate solution is a Boron-10 level of 55.0 atom percent or greater as compared to 19.8 atom percent (naturally occurring Boron-10). This is equivalent to an enrichment ratio of 2.78. With the enriched boron being utilized, the required boron concentration level (concentration of B-10 and B-11) can be reduced by the ratio of enrichment. The weight of sodium pentaborate necessary to meet the shutdown requirement as calculated by the licensee is as follows:

$SB = (W)(BC/10^6)(1.25)(1/MW)(19.8/E)$ where;

W = Weight of the Water to be Borated = 715,000 lbs
including; a) Reactor Coolant Weight = 521,440 lbs (level 8 @ 70^0F)
b) Reactor Recirculation Loops = 61,780 lbs
c) RHR Loops (in shutdown cooling mode) = 130,000 lbs

BC = Boron Concentration Level = 660 ppm
1.25 = 25 percent to account for imperfect mixing
MW = Molecular Weight Ratio of boron to sodium pentaborate ($Na_2B_{10}O_{16}$ $10H_2O$)
SB = Weight of Sodium Pentaborate (lbs)
E = Boron Enrichment (atom percent)

$$(1/MW) = \frac{482.1 + 10(11.01 - E/100)}{10(11.01 - E/100)} = 1 + \frac{4821}{1101-E}$$

$$SB = (715{,}000)(660/10^6)(1.25)\left(1 + \frac{4821}{1101-E}\right)(19.8/E)$$

This equation may be used to calculate the indicated tank volume which the operator reads in the control room. The minimum indicated tank volume (gal) necessary to meet the original design basis would be calculated as follows:

$$\text{Volume} = \frac{(SB)(VC)}{(WB)(SG^{SB})(C/100)} + 128 \text{ gal}^*$$

where;

SB = Weight of Sodium Pentaborate (lbs)
VC = Volume Conversion = 7.481 gal/ft^3
WB = Density of Water = 62.00 lbs/ft^3 at 100^0F
SG^{SB} = Specific Gravity of Sodium Pentaborate - (0.0051xC) + 0.998
C = Concentration of Sodium Pentaborate (wt percent)

* To account for instrument inaccuracies (100 gal on the wide range 28 gal on the narrow range) an additional 128 gallons is added.

Substituting in for "SB" using the above equation and multiplying the constants together:

$$\text{Volume} = \frac{(71.18)\left(1+\frac{4821}{1101-E}\right)(19.8/E)(100/C)}{((0.0051 \times C) + 0.998)} + 128 \text{ gal}$$

This yields a minimum indicated value of 1404.2 gallons of solution required at 10.7 wt percent is necessary to meet the original design basis with an enrichment of 55.0 atom percent. With a minimum pump flow rate value of 24 gpm, the solution necessary to bring the reactor to shutdown will be pumped in under 59 minutes.

The operator will shut the SLCS pump off at an indicated volume of 0 gallons. An indicated volume of 0 gallons results in an actual volume remaining in the tank of 335 gallons. This 335 gallons represents 225 gallons for that unusable portion of the tank volume below the suction nozzle of the pump and

100 gallons for the wide range instrument inaccuracy which is necessary to prevent pump cavitation should the instrumentation read higher than the actual level.

Comparison with the ATWS Rule

To comply with the ATWS Rule, the licensee stated that a higher rate of boron injection is required compared with that required under the original design basis. This rate must be equivalent to 86 gpm of sodium pentaborate at a 13 wt percent concentration and natural Boron-10 enrichment for a 251-inch reactor vessel. Monticello has a 206-inch vessel. The method of normalizing the required boron injection for a 251-inch diameter vessel to the 206-inch diameter Monticello vessel is consistent with the method approved by the Commission in its letter dated December 11, 1987, granting the licensee an exemption from the requirement of 10 CFR 50.62(c)(4) relative to minimum pump flow rate. In Generic Letter 85-03, "Clarification of Equivalent Control Capacity for Standby Liquid Control Systems", dated January 28, 1985, the Commission provided clarification of equivalent control capacity as follows:

a) The "equivalent in control capacity" wording in 10 CFR 50.62(c)(4) was chosen to allow flexibility in the implementation of the requirement. For example, the equivalence can be obtained by increasing flow rate, boron concentration, or boron enrichment.

b) The 86 gallons per minute and 13 wt percent sodium pentaborate were values used in General Electric Topical Report, NEDE-24222, "Assessment of BWR Mitigation of ATWS, Volumes I and II", December 1979, for BWR/4, BWR/5 and BWR/6 plants with a 251-inch vessel inside diameter. The fact that different values would be equivalent for smaller plants was recognized in NEDE-24222.

   Per NEDE-24222, pp 2-15, the flow rates were normalized from a 251-inch diameter vessel plant to a 218-inch diameter vessel plant, i.e., the 66 gpm control liquid injection rate in a 218 is equivalent to 86 gpm in a 251 to bound the analysis.

c) The important parameters to consider in establishing equivalence are vessel boron concentration required to achieve shutdown and the time required to achieve that vessel boron concentration. The minimally acceptable system should show an equivalence in the parameters to the 251-inch diameter vessel studied in NEDE-24222.

The equivalency requirements can be demonstrated if the following relationship is shown to be true:

$$(Q/86\ \text{gpm})\ (M_{251}/M)\ (C/13\ \text{wt percent})\ (E/19.8\ \text{atom percent}) \geq 1$$

where the plant-specific parameters are defined as:

Q = minimum SLCS flow rate (one or two pump operation as appropriate), gpm.

M = mass of water in the reactor vessel and recirculation system at the hot rated conditions, lbs.

C = minimum sodium pentaborate solution concentration, wt percent.

E = minimum expected Boron-10 isotope enrichment (19.8 atom percent for natural boron), atom percent.

The value of M_{251} (the mass of the water in the reactor vessel and recirculation system at rated conditions in the reference plant) is 628,300 lbs for a BWR 3/4. This value was calculated by the licensee based on rated temperature, rated void content, normal water level, control rods fully withdrawn, expected minimum vessel dimensions, and nominal vessel internals dimensions. The plant specific values chosen by the licensee for Monticello, which are reflected in the proposed TS changes, are a flow rate (Q) of 24 gpm, a boron concentration (C) of 10.7 wt percent and a boron enrichment (E) of 55.0 atom percent. The mass of water in the reactor vessel and recirculation system at the hot rated conditions (M) for Monticello is 400,000 lbs. Using the Monticello specific values yields:

(24/86) (628,300/400,000) (10.7/13) (55.0/19.8) = 1.0022

3.0 EVALUATION

We have evaluated the acceptability of the proposed TS changes and the licensee's calculations as discussed above, the technical justification provided in support of the proposed changes, the original technical bases for effectuating License Amendment No. 56, and the basis for the exemption granted to 10 CFR 50.62(c)(4) and agree with the licensee's findings and determinations that the proposed changes will have no effect on the physical operation of the SLCS. The sodium pentaborate solution to be utilized has similar properties to the solution already in use and will pose no unknown factors to plant operating personnel; i.e., Boron-10 is a stable isotope and no degradation of the enrichment level over time is expected, and its other solution characteristics (such as concentration) are within the ranges which have been utilized in the past. The changes will in no way detract from the ability of the SLCS to meet its original design basis, nor its ability to meet the requirements of the ATWS Rule. As was documented in the exemption to 10 CFR 50.62(c)(4) granted for the Monticello facility on December 11, 1987, a decrease in minimum pump flow rate commensurate with an increase in Boron-10 enrichment is acceptable in that this will continue to maintain the ATWS Rule goal of reducing the time necessary to achieve cold shutdown in the event of an accident. Finally, the proposed TS changes for the SLCS at Monticello constitute an added safety margin due to the utilization of a pre-mixed and vendor-certified sodium pentaborate solution precluding the possibility of an accident that could occur by mixing the solution on site. As such, we also agree with the licensee that there is no longer a need for mid-cyle surveillance of the sodium pentaborate solution.

In view of these findings and determinations, we consider the proposed TS changes to be acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the installation or use of a facility component located within the restricted areas as defined in 10 CFR Part 20 and changes in a surveillance requirement. We have determined that the

amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR §51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: John Stefano
Timothy Collins

Dated: September 23, 1988