May 10, 1988

Docket Nos.: 50-254
and 50-265

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Mr. Henry Bliss
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Bliss:

SUBJECT: HPCI/RCIC STEAMLINE HIGH FLOW TS AMENDMENT

Re: Quad Cities Nuclear Power Station, Units 1 and 2
(Tac Nos. 66566 and 66567)

The Commission has issued the enclosed Amendment Nos. 107 and 102 to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2. These amendments are in response to your application dated November 6, 1987, as supplemented by December 16, 1987. They incorporate revisions to applicable Technical Specifications Limiting Conditions for Operation, Surveillance Requirements, and Bases which include changes to: 1) the number of HPCI and RCIC steamline high flow instrumentation required operable, 2) HPCI and RCIC high steam flow time delay setting, and 3) high steam flow instrument designation.

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

Sincerely,

/S/

Thierry Ross, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
1. Amendment No. 107 to
License No. DPR-29
2. Amendment No 102 to
License No. DPR-30
3. Safety Evaluation

cc: w/enclosures:
See next page

PDIII-2:PM	PDIII-2:LA	SPLB	PDIII-2:PD
TRoss:bj*	LLuther	JCraig	DMuller
/ /88	/ /88	/ /88	4/15 /88

* See previous white

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PDIII-2 Plant File

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Butterfield:

SUBJECT: HPCI/RCIC STEAMLINE HIGH FLOW TS AMENDMENT

Re: Quad Cities Nuclear Power Station, Units 1 and 2
(Tac Nos. 66566 and 66567)

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

Sincerely,

Thierry Ross, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
1. Amendment No. to
License No. DPR-29
2. Amendment No to
License No. DPR-30
3. Safety Evaluation

cc: w/enclosures:
See next page

PDIII-2:PM	PDIII-2:LA	SRXB	PDIII-2:PD
TRoss:bj	LLuther	WJoyce	DMuller
4/14/88	/ /88	4/29/88	/ /88

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

May 10, 1988

Docket Nos.: 50-254
and 50-265

Mr. Henry Bliss
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Bliss:

SUBJECT: HPCI/RCIC STEAMLINE HIGH FLOW TS AMENDMENT

Re: Quad Cities Nuclear Power Station, Units 1 and 2
(Tac Nos. 66566 and 66567)

The Commission has issued the enclosed Amendment Nos.107 and 102 to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2. These amendments are in response to your application dated November 6, 1987, as supplemented by December 16, 1987. They incorporate revisions to applicable Technical Specifications Limiting Conditions for Operation, Surveillance Requirements, and Bases which include changes to: 1) the number of HPCI and RCIC steamline high flow instrumentation required operable, 2) HPCI and RCIC high steam flow time delay setting, and 3) high steam flow instrument designation.

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

Sincerely,

Thierry Ross, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
1. Amendment No. 107 to
License No. DPR-29
2. Amendment No 102 to
License No. DPR-30
3. Safety Evaluation

cc: w/enclosures:
See next page

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

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 107
License No. DPR-29

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

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated November 6, 1987 and supplemented on December 16, 1987, 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 3.B of Facility Operating License No. DPR-29 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A and B, as revised through Amendment No.107, 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

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III, IV, V and Special Projects

Attachment:
Changes to the Technical Specifications

Date of Issuance: May 10, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 107

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

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

REMOVE	INSERT
3.2/4.2-10a	3.2/4.2-10a
3.2/4.2-11	3.2/4.2-11
3.2/4.2-17	3.2/4.2-17

Reactor water level instruments 1-263-73A & B, HPCI high steam flow instruments 1-2352 & 1-2353, and HPCI steam line low pressure instruments 1-2389A-D have been modified to be analog trip systems. The analog trip system consists of an analog sensor (transmitter) and a master/slave trip unit setup which ultimately drives a trip relay. The frequency of calibration and functional testing for instrument loops of the analog trip system has been established in Licensing Topical Report NEDO-21617-A (December 1978). With the one-out-of-two-taken-twice logic, NEDO-21617-A states that each trip unit be subjected to a calibration/functional test frequency of one month. An adequate calibration/surveillance test interval for the transmitter is once per operating cycle.

The radiation monitors in the ventilation duct and on the refueling floor which initiate building isolation and standby gas treatment operation are arranged in two one-out-of two logic systems. The bases given above for the rod blocks apply here also and were used to arrive at the functional testing frequency.

Based on experience at Dresden Unit 1 with instruments of similar design, a testing interval of once every 3 months has been found to be adequate.

The automatic pressure relief instrumentation can be considered to be a one-out-of-two logic system, and the discussion above applies to it also.

The instrumentation which is required for the postaccident condition will be tested and calibrated at regularly scheduled intervals. The basis for the calibration and testing of this instrumentation is the same as was discussed above for the reactor protection system and the emergency core cooling systems.

References

1. B. Epstein and A. Shiff, "Improving Availability and Readiness of Field Equipment Through Periodic Inspection", UCRL-50451, Lawrence Radiation Laboratory, p 10, Equation (24), July 16, 1968

TABLE 3.2-1

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION FUNCTIONS

Minimum Number of Operable or Tripped Instrument Channels[1]	Instruments	Trip Level Setting	Action[2]
4	Reactor low water[5]	>144 inches above top of active fuel*	A
4	Reactor low low water	≥84 inches above top of active fuel*	A
4	High drywell pressure[5]	≤2.5 psig [3]	A
16	High flow main steamline[5]	≤140% of rated steam flow	B
16	High temperature main steamline tunnel	≤200° F	B
4	High radiation main steamline tunnel[6]	≤7 x normal rated power background	B
4	Low main steam pressure[4]	≥825 psig	B
2	High flow RCIC steamline	≤300 % of rated steam flow(7)	C
16	RCIC turbine area high temperature	≤200° F	C
2	High flow HPCI steamline	≤300% of rated steam flow(7)	D
16	HPCI area high temperature	≤200° F	D

Notes

1. Whenever primary containment integrity is required, there shall be two operable or tripped systems for each function, except for low pressure main steamline which only need be available in the Run position.

2. Action, if the first column cannot be met for one of the trip systems, that trip system shall be tripped.

   If the first column cannot be met for both trip systems, the appropriate actions listed below shall be taken.

   A. Initiate an orderly shutdown and have the reactor in Cold Shutdown condition in 24 hours.

   B. Initiate an orderly load reduction and have reactor in Hot Standby within 8 hours.

   C. Close isolation valves in RCIC system.

   D. Close isolation valves in HPCI subsystem.

3. Need not be operable when primary containment integrity is not required.

4. The isolation trip signal is bypassed when the mode switch is in Refuel or Startup/ Hot Shutdown.

5. The instrumentation also isolates the control room ventilation system.

6. This signal also automatically closes the mechanical vacuum pump discharge line isolation valves.

7. Includes a time delay of $3 \leq t \leq 9$ seconds.

* Top of active fuel is defined as 360" above vessel zero for all water levels used in the LOCA analysis (see Bases 3.2).

Amendment No. 107

TABLE 4.2-1 (Cont'd)

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
HPCI Isolation			
1. Steamline high flow	(1) (9)	Once/3 months	None
2. Steamline area high temperature	Refueling outage	Refueling outage	None
3. Low reactor pressure	(1)	Once/3 months	None
Reactor Building Ventilation System Isolation and Standby Treatment System Initiation			
1. Refueling floor radiation monitors	(1)	Once/3 months	Once/day
Steam Jet Air Ejector Off-Gas Isolation			
1. Off-gas radiation monitors	(1) (4)	Refueling outage	Once/day
Control Room Ventilation System Isolation			
1. Reactor low water level	(1)	Once/3 months	Once/day
2. Drywell high pressure	(1)	Once/3 months	None
3. Main steamline high flow	(1)	Once/3 months	Once/day
4. Toxic gas analyzers (chlorine, ammonia, sulphur dioxide)	Once/Month	Once/18 months	Once/day

Notes:

1. Initially once per month until exposure hours (M as defined on Figure 4.1-1) are 2.0×10^5; thereafter, according to Figure 4.1-1 with an interval not less than 1 month nor more than 3 months. The compilation of instrument failure rate data may include data obtained from other boiling water reactors for which the same design instrument operates in an environment similar to that of Quad Cities Units 1 and 2.

2. Functional tests, calibrations, and instrument checks are not required when these instruments are not required to be operable or tripped.

3. This instrumentation is excepted from the functional test definition. The function test shall consist of injecting a simulated electric signal into the measurement channel.

4. This instrument channel is excepted from the functional test definitions and shall be calibrated using simulated electrical signals once every 3 months.

5. Functional tests shall be performed before each startup with a required frequency not to exceed once per week. Calibrations shall be performed during each startup or during controlled shutdowns with a required frequency not to exceed once per week.

6. The positioning mechanism shall be calibrated every refueling outage.

7. Logic system functional tests are performed as specified in the applicable section for these systems.

8. Functional tests shall include verification of operation of the degraded voltage. 5 minute timer and 7 second inherent timer.

9. Verification of the time delay setting of $3 \leq t \leq 9$ seconds shall be performed during each refueling outage.

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

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102
License No. DPR-30

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

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated November 6, 1987 and supplemented on December 16, 1987, 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 3.B of Facility Operating License No. DPR-30 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A and B, as revised through Amendment No. 102 , are hereby incorporated in this 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

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 10, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 102

FACILITY OPERATING LICENSE NO. DPR-30

DOCKET NO. 50-265

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

REMOVE	INSERT
3.2/4.2-10	3.2/4.2-10
3.2/4/2-11	3.2/4.2-11
3.2/4.2-17	3.2/4.2-17

Optimizing each channel independently may not truly optimize the system considering the overall rules of system operation. However, true system optimization is a complex problem. The optimums are broad, not sharp, and optimizing the individual channels is generally adequate for the system.

The formula given above minimizes the unavailability of a single channel which must be bypassed during testing. The minimization of the unavailability is illustrated by curve 1 of Figure 4.2-2, which assumes that a channel has a failure rate of 0.1×10^{6}/hour and 0.5 hour is required to test it. The unavailability is a minimum at a test interval t_1 of 3.6×10^{3} hours.

If two similar channels are used in a one-out-of-two configuration, the test interval for minimum availability changes as a function of the rules for testing. The simplest case is to test each one independent of the other. In this case, there is assumed to be a finite probability that both may be bypassed at one time. This case is shown by curve 2. Note that the unavailability is lower, as expected for a redundant system, and the minimum occurs at the same test interval. Thus, if the two channels are tested independently, the equation above yields the test interval for minimum unavailability.

A more usual case is that the testing is not done independently. If both channels are bypassed and tested at the same time, the result is shown in curve 3. Note that the minimum occurs at about 40,000 hours, much longer than for Cases 1 and 2. Also, the minimum is not nearly as low as Case 2, which indicates that this method of testing does not take full advantage of the redundant channel. Bypassing both channels for simultaneous testing should be avoided.

The most likely case would be to stipulate that one channel be bypassed, tested, and restored, and then immediately following the second channel be bypassed, tested, and restored. This is shown by curve 4. Note that there is not true minimum. The curve does have a definite knee, and very little reduction in system unavailability is achieved by testing at a shorter interval than computed by the equation for a single channel.

The best test procedure of all those examined is to perfectly stagger the tests. This is, if the test interval is 4 months, test one of the other channels every 2 months. This is shown in curve 5. The difference between Cases 4 and 5 is negligible. There may be other arguments, however, that more strongly support the perfectly staggered tests, including reductions in human error.

The conclusions to be drawn are these:

a. A one-out-of-n system may be treated the same as a single channel in terms of choosing a test interval.

b. More than one channel should not be bypassed for testing at any one time.

Reactor water level instruments 2-263-73A&B, HPCI high steam flow instruments 2-2352 & 2-2353, and HPCI steam line low pressure instruments 2-2389A-D have been modified to be analog trip systems The analog trip system consists of an analog sensor (transmitter) and a master/slave trip unit setup which ultimately drives a trip relay. The frequency of calibration and function testing for instrument loops of the analog trip system has been established in Licensing Topical Report NEDO-21617-A (December 1978). With the one-out-of-two-taken-twice logic, NEDO-21617-A states that each trip unit be subjected to a calibration/functional test frequency of one month. An adequate calibration/surveillance test interval for the transmitter is once per operating cycle.

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16	High temperature main steamline tunnel	≤200° F	B
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Notes

1. Whenever primary containment integrity is required, there shall be two operable or tripped systems for each function, except for low pressure main steamline which only need be available in the Run position.

2. Action, if the first column cannot be met for one of the trip systems, that trip system shall be tripped.

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   C. Close isolation valves in RCIC system.

   D. Close isolation valves in HPCI subsystem.

3. Need not be operable when primary containment integrity is not required.

4. The isolation trip signal is bypassed when the mode switch is in Refuel or Startup/ Hot Shutdown.

5. The instrumentation also isolates the control room ventilation system.

6. This signal also automatically closes the mechanical vacuum pump discharge line isolation valves.

7. Includes a time delay of $3 \leq t \leq 9$ seconds.

*Top of active fuel is defined as 360" above vessel zero for all water levels used in the LOCA analysis (see Bases 3.2).

TABLE 4.2-1 (Cont'd)

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
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1. Refueling floor radiation monitors	(1)	Once/3 months	Once/day
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Notes

1. Initially once per month until exposure hours (M as defined on Figure 4.1-1) are 2.0×10^5; thereafter, according to Figure 4.1-1 with an interval not less than 1 month nor more than 3 months. The compilation of instrument failure rate data may include data obtained from other boiling water reactors for which the same design instrument operates in an environment similar to that of Quad Cities Units 1 and 2.

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6. The positioning mechanism shall be calibrated every refueling outage.

7. Logic system functional tests are performed as specified in the applicable section for these systems.

8. Functional tests shall include verification of operation of the degraded voltage. 5 minute timer and 7 second inherent timer.

9. Verification of the time delay setting of $3 \leq t \leq 9$ seconds shall be performed during each refueling outage.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 107 TO FACILITY OPERATING LICENSE NO. DPR-29

AND AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-254 AND 50-265

1.0 INTRODUCTION

By letters dated November 6, 1987 and December 16, 1987, Commonwealth Edison Company (CECo, the licensee) proposed amending the Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2, Technical Specifications (TS) involving High Pressure Core Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems Steamline High Flow Indication. These proposed amendments would revise the TS to reflect the actual plant conditions, correct typographical errors and revise the time delay relay setting for HPCI and RCIC high steam flow logic to be consistent with an engineering recommendation based on a General Electric Company analysis. TS Tables 3.2-1 and 4.2-1, and TS Bases for QCNPS HPCI and RCIC High Steamline Flow instrumentation are effected by the proposed changes.

2.0 EVALUATION

Primary containment isolation system logic is generally arranged as a dual channel logic system (i.e., "one-out-of-two taken twice"). However, several exceptions to this basic logic arrangement were made in the original QCNPS design. Examples of two such exceptions are the Group 4 (HPCI steamline isolation) and Group 5 (RCIC steamline isolation) primary containment isolation functions[1]. In both cases, the initiation logic system only utilizes a "one-out-of-two taken once" type of logic for steamline high flow instrumentation. As such, only two channels of differential pressure switches for high steam line flow per logic system are necessary in order to isolate the RCIC or HPCI turbine during steam line break accident conditions. Current TS Table 3.2-1 erroneously requires four (4) channels for both the HPCI and RCIC steam line high flow instrumentation to actuate Group 4 or 5 isolation. Four channels

[1] Note Group 4 and Group 5 automatic containment isolation are important plant safety features that prevent excessive loss of reactor coolant and significant release of radioactive materials during a postulated break in the main steam supply lines to the HPCI or RCIC turbine.

are not consistent with the QCNPS logic system design and as-built configuration. This discrepancy has existed since the original TS were issued. As such, CECo's proposal to revise the number of operable or tripped HPCI and RCIC steam line high flow instrument channels from a minimum of four (4) channels to two (2) channels is acceptable. The basis for changing the minimum number of operable or tripped instruments for HPCI and RCIC steam line high flow, is because QCNPS only utilizes a "one-out-of-two taken once" logic for Group 4 and Group 5 isolation. Section 6.2.5 and 7.7.2 of the QCNPS Final Safety Analysis Report confirm that the two (2) channel instrument configuration for HPCI and RCIC steam line high flow was the intended design.

The original QCNPS HPCI and RCIC high steam flow logic time delay relays were replaced, as part of a station modification in accordance with Generic Letter 83-02, to prevent inadvertent HPCI isolation due to system pressure transients during start-up. TS were amended at that time to allow a time delay setting of $3 \leq t \leq 10$ seconds for the new relays. This value was reviewed and accepted by NRC staff in amendment numbers 88 and 83 to DPR-29 & 30 dated June 6, 1984. In the Safety Evaluation Report associated with this earlier amendment, the staff concluded that a maximum delay of up to 10 seconds was within the design basis of the HPCI and RCIC isolation system. Since that time, Commonwealth Edison's BWR Engineering Department has recommended, based on the value used in a General Electric (GC) Company analysis, that the setting should be changed to $3 \leq t \leq 9$ seconds, thereby revising the maximum allowed setting from ten (10) to nine (9) seconds. CECo's proposed amendment would change TS Tables 3.2-1 and 4.2-1 for the HPCI and RCIC high steam flow logic time delay setting from $3 \leq t \leq 10$ to $3 \leq t \leq 9$ seconds to be consistent with the Engineering Department recommendation and GE analysis. Since this change decreases the maximum allowed time delay setting to a more conservative value it is considered acceptable.

Lastly, there is a typographical error in the DPR-29 and DPR-30 TS bases involving the instrument number designations for the HPCI high steam flow and low pressure instruments. Current, Units 1 and 2, TS Section 3.2/4.2 bases identify the high steam flow instruments as 1-2389 A-D and 2-2389 A-D while the correct designations are 1-2352 & 1-2353, and 2-2352 & 2-2353, respectively. Conversely, the low pressure instruments are listed as 1-2352 & 1-2353 and 2-2352 & 2-2353 while the correct designations are 1-2389 A-D and 2-2389 A-D. More simply, instrument numbers for the high steam flow instrumentation, as found in the TS, are actually the designations for the low pressure instrumentation (while the instrument numbers for the low pressure instrumentation are actually the designations for the HPCI high steam flow instruments). Revising these instrument designations is considered to be an administrative change and, as such, is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to the use of a facility component located within the restricted area as defined in 10 CFR Part 20, and changes to the surveillance requirements. The staff has determined these amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding.

Accordingly, these amendments meet 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 nor environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance 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 nor to the health and safety of the public.

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