

July 30, 2004

Mr. Christopher M. Crane, President
and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 - ISSUANCE OF
AMENDMENTS FOR MAIN STEAM SAFETY VALVE TECHNICAL
SPECIFICATIONS (TAC NOS. MB6537 and MB6538)

Dear Mr. Crane:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 208 to Facility Operating License No. DPR-19 and Amendment No. 200 to Facility Operating License No. DPR-25 for Dresden Nuclear Power Station, Units 2 and 3 (DNPS). The amendments are in response to your application dated October 10, 2002, supplemented by letters dated October 10, and November 21, 2003, and January 13, July 8, and July 23, 2004. In the July 23, 2004, letter, and a phone call on July 29, 2004, between A. Mendiola, L. Rossbach and M. Banerjee, NRC and P. Simpson and K. Nicely, Exelon, Exelon agreed to certain license conditions. These conditions are added with the Amendments to Facility Operating Licenses (Enclosures 1 and 2).

The amendments revise the DNPS, Units 2 and 3, technical specifications (TS) to increase the required number of operable main steam safety valves from eight to nine and add surveillance requirements for the ninth valve. Additionally, as agreed by the licensee in their letter dated July 23, 2004, DNPS, Units 2 and 3, Facility Operating License is amended to add conditions as indicated in the Amendment to Facility Operating License. Dresden operating experience indicates that the as-found lift setpoints of these valves deviated from the TS tolerance limit of plus or minus 1 percent multiple times. The final resolution of the valve tolerance issue will require Exelon Generation Company, LLC, to examine the DNPS, Units 2 and 3, licensing bases to determine what, if any, modifications to the licensing basis analyses are required. Hence, conditions are added to the license to affect resolution of the issue of valve lift setpoint drift beyond the TS tolerance value.

C. Crane

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

Sincerely,

/RA/

Maitri Banerjee, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-237 and 50-249

Enclosures: 1. Amendment No. 208 to DPR-19
2. Amendment No. 200 to DPR-25
3. Safety Evaluation

cc w/encls: See next page

C. Crane

- 2 -

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

Sincerely,

/RA/

Maitri Banerjee, Project Manager, Section 2
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EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 208
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Exelon Generation Company, LLC (the licensee) dated October 10, 2002, supplemented by letters dated October 10, and November 21, 2003, and January 13, July 8, and July 23, 2004, 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-19 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 208, 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 and shall be implemented within 30 days of the date of issuance.
4. Exelon shall submit, for NRC approval, values for the safety valve and safety/relief valve setpoint tolerances and the tolerance uncertainty treatment methodology applied to the main steam safety valve and safety/relief valve setpoint test data by October 29, 2004.
5. Regarding the issue of the main steam safety valve and safety/relief valve test data potentially exceeding the current Technical Specification SR 3.4.3.1 allowed tolerance limit, Exelon shall submit a Technical Specification amendment request to change this tolerance value to one derived from item 4 above, if necessary, and the results of revisions to all applicable design basis analyses, within six months of NRC approval of item 4.
6. If regulatory approval of the tolerance uncertainty treatment methodology or the Technical Specification amendment application described above cannot be obtained, Exelon will operate Dresden Units 2 and 3 such that the Technical Specification dome pressure criterion of 1345 psig and the ASME overpressure criterion of 1375 psig are met with the respective main steam safety valve and the safety/relief valve setpoint tolerances contained in the July 8, 2004, Exelon submittal.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 30, 2004

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 200
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Exelon Generation Company, LLC (the licensee) dated October 10, 2002, supplemented by letters dated October 10, and November 21, 2003, and January 13, July 8, and July 23, 2004, 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-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 200, 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 and shall be implemented within 30 days of the date of issuance.
4. Exelon shall submit, for NRC approval, values for the safety valve and safety/relief valve setpoint tolerances and the tolerance uncertainty treatment methodology applied to the main steam safety valve and safety/relief valve setpoint test data by October 29, 2004.
5. Regarding the issue of the main steam safety valve and safety/relief valve test data potentially exceeding the current Technical Specification SR 3.4.3.1 allowed tolerance limit, Exelon shall submit a Technical Specification amendment request to change this tolerance value to one derived from item 4 above, if necessary, and the results of revisions to all applicable design basis analyses, within six months of NRC approval of item 4.
6. If regulatory approval of the tolerance uncertainty treatment methodology or the Technical Specification amendment application described above cannot be obtained, Exelon will operate Dresden Units 2 and 3 such that the Technical Specification dome pressure criterion of 1345 psig and the ASME overpressure criterion of 1375 psig are met with the respective main steam safety valve and the safety/relief valve setpoint tolerances contained in the July 8, 2004, Exelon submittal.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 30, 2004

ATTACHMENT TO LICENSE AMENDMENT NOS. 208 AND 200

FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DOCKET NOS. 50-237 AND 50-249

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove Pages

3.4.3-1
3.4.3-2

Insert Pages

3.4.3-1
3.4.3-2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 208 TO FACILITY OPERATING LICENSE NO. DPR-19
AND AMENDMENT NO. 200 TO FACILITY OPERATING LICENSE NO. DPR-25
EXELON GENERATION COMPANY, LLC
DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-237 AND 50-249

1.0 INTRODUCTION

By application dated October 10, 2002 (Reference 1), as supplemented by letters dated October 10 and November 21, 2003, and January 13, July 8 and July 23, 2004 (References 2, 3, 4, 5 and 6), Exelon Generation Company, LLC (Exelon) requested changes to the technical specifications (TS) for Dresden Nuclear Power Station (DNPS), Units 2 and 3. The supplements dated October 10 and November 21, 2003, and January 13, July 8 and July 23, 2004, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on December 10, 2002 (67 FR 75875).

The proposed changes would revise the number of main steam safety valves required to be operable. DNPS, Units 2 and 3 each have eight safety valves and one dual-function safety/relief valve (S/RV). The core configuration-specific pressurization response at the updated power level increased, leading to the need for higher pressure relieving capacity in order to meet the TS-specified reactor dome pressure of 1345 psig and the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) overpressure peak pressure limit of 1375 psig. Therefore, Exelon requested increasing the number of required safety valves in TS Limiting Condition for Operation (LCO) 3.4.3, "Safety and Relief Valves" from eight to nine. In addition, Exelon proposed revising the associated requirements for Surveillance Requirement (SR) 3.4.3.1 in order to add the actuation setpoint and the associated drift tolerance for the ninth safety valve.

2.0 REGULATORY EVALUATION

The staff finds that the licensee in Section C to the Appendix A of the October 10, 2002 submittal identified the applicable regulatory requirements to be the reactor pressure vessel design requirements of the ASME Code, Section III.

The Dresden, Units 2 and 3 Updated Final Safety Analysis Report (UFSAR) section 3.1.2, "Compliance with Final Design Criteria," states that Dresden, Units 2 and 3 conform to the intent of the General Design Criteria (GDC) of Appendix A to Title 10 of the Code of Federal

Regulations (10 CFR) Part 50. The UFSAR, under Criterion 15, "Reactor Coolant System Design," states that the reactor vessel is designed and fabricated to meet the ASME Code, Section III, Subsection A (1965 Edition). Additionally, the auxiliary, control, and protection systems associated with the reactor coolant system act to provide sufficient margin to ensure that the design conditions of the reactor coolant pressure boundary are not exceeded during any condition of normal operation, including anticipated operational occurrences.

The requirements of GDC 15 specify that "the reactor coolant system and associated auxiliary, control, and protection systems shall be designed with sufficient margin to assure that the design conditions of the reactor coolant pressure boundary are not exceeded during any condition of normal operation, including anticipated operational occurrences." The overpressure protection system is relied upon to maintain reactor coolant system pressure within acceptable design limits during certain analyzed transients. Application of GDC 15 to the overpressure protection system provides assurance that the reactor coolant pressure boundary will have an extremely low probability of failure during transients.

The guidance for the implementation of GDC 15 is covered in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 5.2.2 as follows:

Safety valves shall be designed with sufficient capacity to limit the pressure to less than 110 percent of the reactor coolant pressure boundary design pressure, as specified by the ASME Code, during the most severe abnormal operational transient with reactor scram. Also, sufficient margin shall be available to account for uncertainties in the design and operation of the plant assuming:

- (1) The reactor is operating at a power level that will produce the most severe over-pressurization transient.
- (2) All system and core parameters are at values within normal operating range, including uncertainties and technical specification limits that produce the highest anticipated pressure.
- (3) The reactor scram is initiated by the second safety-grade signal from the reactor protection system.
- (4) The discharge flow is based on the rated capacities specified in the ASME Code, for each type of valve. Full credit is allowed for spring-loaded safety valves designed in accordance with the requirements of the ASME Code.

The overpressure protection requirements are further specified in the ASME Code, which requires the reactor pressure vessel be protected from overpressure during upset conditions by self-actuated safety valves. As part of the nuclear pressure relief system, the size and number of safety valves are selected such that peak pressure in the nuclear system will not exceed the ASME Code limits for the reactor coolant pressure boundary. The overpressure protection system must accommodate the most severe pressurization transient. In accordance with GESTAR II, the most severe transient is the closure of all main steam isolation valves (MSIVs) followed by the reactor scram on high neutron flux (i.e., failure of the direct scram associated with MSIV position).

The staff's review of the proposed TS amendment is based on the compliance with GDC 15 requirements, as implemented in accordance with the ASME overpressure requirements.

3.0 TECHNICAL EVALUATION

The staff has reviewed the licensee's regulatory and technical analyses in support of the proposed license amendment which are described in Section F to the Appendix A of the October 10, 2002 submittal as supplemented by the October 10 and November 21, 2003, and January 13 and July 8, 2004, submittals. The detailed evaluation below will support the conclusion that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

3.1 Proposed Changes for DNPS, Units 2 and 3

Exelon proposes to revise the LCO in TS Section 3.4.3, "Safety and Relief Valves," by increasing the required number of operable main steam safety valves from eight to nine. In addition, Exelon proposes to revise SR 3.4.3.1 by adding the required lift setpoint for the ninth safety valve that is 1135 psig with a plus or minus 1 percent tolerance consistent with the current TS tolerance value for the other safety valves. DNPS SR 3.4.3.1 verifies that the safety valves will open at the pressures assumed in the safety analyses. Exelon states that these changes are needed to support reactor fuel designs in future operating cycles at DNPS, Units 2 and 3 which will otherwise result in an increase in the analyzed reactor pressure vessel (RPV) steam dome pressure during the most severe pressurization transient. Increasing the required number of safety valves will ensure that the analyzed RPV dome pressure remains below the TS safety limit, during the most severe pressurization transient.

The ninth valve is the lowest opening Target Rock dual-function safety/relief valve in Group 1. DNPS will implement these changes prior to Unit 3 reaching a cycle exposure of 13,800 megawatt days per metric ton of Uranium.

While reviewing the amendment, the staff focused its review on the following areas:

1. Exelon issued several Licensee Event Reports (LERs), reporting safety valve lift set point drift outside of the TS specified plus or minus 1 percent tolerance. However, the ASME overpressure analysis results submitted in the October 10, 2002, license amendment were based on a tolerance of plus 1 percent.
2. The licensee did not provide an evaluation of the applicability of the anticipated transient without scram (ATWS) analysis-of-record since the core-configuration specific ASME overpressure analysis resulted in an increased peak vessel pressure. The peak vessel pressure for the ATWS analysis of record was 1499 psig out of the ATWS peak vessel pressure limit of 1500 psig. The ATWS analysis is performed during new fuel introduction or changes in operating conditions that affect the ATWS analysis. The NRC-approved GESTAR methodology requires cycle-specific confirmation that the ATWS analysis-of-record bounds the core-configuration specific ATWS response.

The following sections contain the staff's evaluation of the ATWS and the ASME overpressure analyses for DNPS, Units 2 and 3.

3.2 ASME Overpressure Analysis

In general, the safety/relief valves for most BWRs have experienced valve lift setpoint drifts outside of the plus or minus one percent TS tolerance. Many BWR licensees have changed their TS tolerances to plus or minus 3 percent for all valve groups. In addition, many licensees have modified their valves in order to achieve greater relief capacity and/or reduce the potential for the Target Rock safety/relief valves to drift. For DNPS, Units 2 and 3, the licensee has not increased the TS tolerance values. Considering the limited relief capacity following the extended power uprate, the licensee also did not indicate plans to increase the units' relieving capacity.

Based on the original ASME overpressure analysis submitted in the October 10, 2002 amendment request, DNPS, Unit 3 has a very small reactor vessel peak steam dome pressure margin (1338.6 psig out of 1345 psig TS limit). Considering the low margin and an operating experience of the safety valve lift setpoint drift beyond the TS value, the staff became concerned with the validity of the setpoint drift values used as a key input parameter to the ASME overpressure analysis. The licensee has submitted several LERs reporting as-found lift setpoints outside of the current TS allowable value of plus or minus 1 percent due to valve drift. The upper as-found lift setpoints range from 1.03 percent to 2.29 percent. Since an increase in the valve setpoint would effect the ASME overpressure response, even with nine valves available, the staff requested the licensee to provide a review of their valve performance, including the data for each main steam safety valve and the dual-function safety/relief valve (MSSV and S/RV) for the past four outages. The staff also requested the licensee to submit a new ASME overpressure analysis using a higher valve setpoint that bounds the valve setpoint drifts experienced by DNPS, Units 2 and 3.

In response, the licensee submitted a new ASME overpressure analysis (Reference 5) using higher valve setpoint values. The licensee divided the valves into two types (i.e., MSSVs and S/RV) and developed an upper tolerance limit for each valve type. Using a 95/95 statistical analysis, the licensee calculated higher setpoint values of 2.2 percent for the MSSVs and 4.1 percent for the S/RVs.

The new ASME overpressure analysis for DNPS, Units 2 and 3 was performed using NRC-approved GESTAR methodology. The results of the new DNPS, Units 2 ASME overpressure analysis show that the limiting reactor vessel and steam dome pressure (1361 psig and 1337 psig) remain below the ASME acceptance limit of 1375 psig and the TS safety limit of 1345 psig, respectively, with only eight valves operable. Thus, DNPS, Unit 2 has adequate safety valve capacity at an increased tolerance for the remainder of the current operating cycle.

For DNPS, Unit 3, the licensee took advantage of the mid-cycle (MOC) re-analysis to obtain additional margin by performing core depletion (using actual cycle rod patterns and operating conditions) up to April 2004. This approach provided some margin because for a typical reload analysis the entire cycle is projected using limiting rod patterns and power distribution. The use of limiting rod patterns and power distribution ensures that the analysis assumptions (in terms of power distributions) bound how the plant would be operated as the licensee responds to emerging plant maneuvers. With the core follow analysis up to April 2004, the licensee

projected the core depletion for the rest of the cycle, based on the licensee's anticipated operational plan. To provide some flexibility for unplanned plant maneuvers, the core depletion was perturbed to obtain a hard bottom burn (HBB) end of cycle (EOC) power shape. According to the licensee, deep rods are used to suppress the power at the top of the core during the conservative projection such that when rods are withdrawn at the EOC, a more top peaked power shape is produced. The more top peaked power shape would minimize the effectiveness of scram yielding a more conservative transient response. The licensee stated this shape bounds the planned operation for the remainder of DNPS, Unit 3 cycle 18 (D3C18). The results for the new DNPS, Unit 3 ASME overpressure analyses show the reactor vessel pressure and steam dome pressure remain below the ASME acceptance limit of 1375 psig and the TS safety limit of 1345 psig, respectively, for the balance of the operating cycle. A summary of the key input parameters and analysis results for DNPS, Unit 3 are provided in Tables 3.1 and 3.2.

Table 3.1

Summary of Key Input Parameter Assumptions
for the Original and New ASME Overpressure Analyses

Parameter	Original ASME Overpressure Assumption	New ASME Overpressure Assumption
Initial RPV Pressure	1005 psig	1005 psig
Initial Reactor Thermal Power	102% of rated thermal power (3016 megawatts-thermal)	102% of rated thermal power (3016 megawatts-thermal)
Reactor Core Flow	Analyses were performed at both 100% rated core flow and 108% rated core flow to ensure most sever conditions.	Analyses were performed at both 95.3% of rated core flow (i.e.,MELLA) and 108% of rated core flow (i.e., ICF) to ensure the most severe conditions.
Reactor Scram Initiator	Reactor scam is initiated on high neutron flux. The direct scram on MSIV position is not credited.	Reactor scam is initiated on high neutron flux. The direct scram on MSIV position is not credited.
MSIV Closure	3 seconds (i.e., minimum TS isolation time)	3 seconds (i.e., minimum TS isolation time)
Scram Time	TS scram time used	TS scram time used
Valve Setpoint	1% for MSSVs and S/RV	2.2% for MSSVs and 4.1% for S/RV
Core Depletion Process	Used general conservatism as defined in the ASME overpressure analysis.	Followed actual DNPS Unit 3 performance up to April 2004. Actual plant depletion information up to April 2004 was used as basis to project core depletion for remainder of current cycle.

Table 3.2
Summary of the Original and New
ASME Overpressure Analysis Results for DNPS Unit 3

Analysis Performed	Event	Total Number of Safety Valves	P_{Vessel} (psig)	P_{Dome} (psig)
Original ASME Overpressure	MSIV Closure-MOC	8	1363	1338
	MSIV Closure-EOC	9	1362.2	1338.6
New ASME Overpressure	ICF-HBB MSIV Closure	9	1363	1338
	ICF-HBB MSIV Closure	8	1372	1349
	MELLA-HBB MSIV Closure	9	1362	1339
	MELLA-HBB MSIV Closure	8	1371	1350
	Pressure Limit			1375

Among the key input parameters important to the overpressure response is the TS scram times assumed in the analysis. If scram times of specific rods are slower than the assumed values, the available ASME overpressure margin would be affected. Therefore, the available margin is dependent on, in part, (1) the licensee operating the units within the projected depletion (i.e., rod pattern and associated power distribution), (2) the S/RV performance not exceeding the assumed values in the analysis, and (3) the control rod scram times remaining within the values used in the analysis.

During a July 15, 2004 telephone call with Exelon, the licensee confirmed that the current TS scram time was used in all of the ASME overpressure analyses. Because the core depletion projections for the new analyses are less conservative than the EOC projections in the October 10, 2002 amendment request, the licensee confirmed during the telephone call that the plant nuclear engineer at DNPS, Unit 3 will be responsible for verifying that the plant is not operated with control rod patterns and associated core power distributions outside of the projected core conditions provided in the July 8, 2004 supplement. The staff finds the margins obtained through core follow and projected depletion acceptable, provided the licensee operates the units within the core depletion assumptions. In addition, the staff accepted the licensee's confirmation that the TS scram times are reflected in the current DNPS, Units 2 and 3 control rod scram performance.

However, the staff also finds that the TS safety valve lift setpoints tolerance values do not reflect actual valve performance. The staff is concerned with adding the ninth (Target Rock) valve in the TS with a lift setpoint which often drifts outside the proposed tolerance of plus or

minus 1 percent. Therefore, the staff concludes that Exelon needs to revise SR 3.4.3.1 valve tolerance ranges to values that are consistent with valve test performance at the DNPS Units.

The staff finds the July 8, 2004 supplemental ASME overpressure analysis results for the remainder of the current DNPS, Units 2 and 3 operating cycles, acceptable. The staff concludes that the proposed TS changes that increase the number of safety valves required to be operable from eight to nine is acceptable. The staff also accepts the proposed change to TS SR 3.4.3.1 to add the ninth valve subject to the license conditions agreed to by Exelon in their July 23, 2004 letter to resolve the valve tolerance issue.

3.3 ATWS Peak Pressure Analysis

Since the proposed core design changes for DNPS, Units 2 and 3 affect the pressure response for the units, and given the original 1 psid ATWS peak pressure margin for DNPS, Unit 3, the staff requested the licensee to provide a cycle- and core-specific (GE14 and ATRIUM-9) ATWS analysis performed at power uprate conditions, in order to demonstrate that the ATWS analysis-of-record remains bounding. The licensee submitted a cycle-specific analysis (Reference 2) for D3C18. According to Exelon, the limiting ATWS case for DNPS is the Pressure Regulator Failure Open (PRFO) and the results show that the D3C18 core produced less limiting results than the current analysis-of-record calculations. Therefore, the licensee concludes the DNPS units continue to meet the ATWS vessel integrity criteria. For the cycle-specific ATWS analysis, the licensee used nine safety valves and a tolerance of 44 psid for the lowest opening target rock dual-function safety/relief valve.

Based on the licensee's demonstration that the current D3C18 core is less limiting than the current ATWS analysis-of-record, the staff finds the current ATWS analysis-of-record acceptable and bounding for the proposed core design changes for DNPS, Units 2 and 3.

4.0 CONCLUSION

The staff approves Exelon's amendment request dated October 10, 2002, as supplemented, to increase the number of safety valves operable in TS Section 3.4.3 from eight to nine valves and addition of the ninth valve in TS SR 3.4.3.1 at DNPS, Units 2 and 3, with license conditions as stipulated in the Amendment to Facility Operating License. Any deviation from the key input assumptions provided in Table 3.1 in a less conservative manner or operation of the plant outside the analyzed conditions defined in the Exelon letter dated July 8, 2004 (Reference 5), are not approved.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve 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 issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (67 FR 75875). References 2, 3, 4, 5 and 6, that Exelon submitted to supplement their October 10, 2002 amendment request (Reference 1) do not change this determination. Accordingly, the 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 or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated October 10, 2002.
2. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Additional Information Regarding Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated October 10, 2003.
3. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Additional Information Regarding Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated November 21, 2003.
4. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Additional Information Regarding Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated January 13, 2004.
5. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Additional Information Regarding Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated July 8, 2004.
6. Letter from P. R. Simpson (Exelon) to U. S. NRC, "Additional Information Regarding Request for Technical Specifications Changes Related to Main Steam Safety Valve Operability Requirements," dated July 23, 2004.

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