March 21, 2006

Mr. Christopher M. Crane, President
and Chief Executive Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, Illinois 60555

SUBJECT: CLINTON POWER STATION, UNIT 1 - ISSUANCE OF AMENDMENT - RE: REVISION OF SECONDARY CONTAINMENT BYPASS LEAKAGE SURVEILLANCE REQUIREMENT (TAC NO. MC6488)

Dear Mr. Crane:

The Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 173 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit 1. The amendment is in response to your application dated March 25, 2005.

The amendment revises Technical Specification Surveillance Requirement (SR) 3.6.1.3.8 to exclude the containment purge valve leakage rates from the summation of secondary containment bypass leakage rates.

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

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-461

Enclosures:
1. Amendment No. 173 to NPF-62
2. Safety Evaluation

cc w/encls: See next page

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DATE	3/17/06	3/17/06	3/20/06

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AMERGEN ENERGY COMPANY, LLC

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.173
License No. NPF-62

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

   A. The application for amendment by AmerGen Energy Company, LLC (the licensee), dated March 25, 2005, 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. NPF-62 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No.173 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by E.Hackett for/

Daniel S. Collins, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: March 21, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 173

FACILITY OPERATING LICENSE NO. NPF-62

DOCKET NO. 50-461

Replace the following page of Appendix "A," Technical Specifications, with the attached revised page. The revised page is identified by an amendment number and contains a marginal line indicating the area of change.

Remove Page	Insert Page
3.6-19	3.6-19

Clinton Power Station, Unit 1

cc:

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. NPF-62

AMERGEN ENERGY COMPANY, LLC

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, Commission) dated March 25, 2005, (Agencywide Documents Access and Management System Accession Number ML050870603) AmerGen Energy Company, LLC (the licensee), requested a technical specification (TS) change for Clinton Power Station, Unit 1 (Clinton). Specifically, the change would exclude the primary containment purge valve leakage rates from the summation of secondary containment bypass leakage rates.

TS Surveillance Requirement (SR) 3.6.1.3.8 states:

> Verify the combined leakage rate for all secondary containment bypass leakage paths is # 0.08 L_a when pressurized to $ P_a.

L_a is the maximum allowable primary containment leakage rate at pressure P_a. P_a is the calculated peak primary containment internal pressure related to the design basis loss-of-coolant accident (LOCA).

The licensee proposes to add a note which states:

> Leakage through penetrations 1MC-101 and 1MC-102 is excluded.

Penetrations 1MC-101 and 1MC-102 are the primary containment purge valve penetrations.

In addition, by this letter, the licensee requested withdrawal of its July 1, 2004, request for exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," which was submitted in support of its application for the alternative source term (AST). The NRC staff had no objection to the withdrawal.

2.0 BACKGROUND

The Clinton plant has a secondary containment, which encloses the primary containment. Its function is to capture radioactive material leaking from the primary containment during an accident, and to reduce the radiological consequences of this leakage by hold-up, recirculation, and filtration before release. However, a small amount of primary containment leakage will

bypass the secondary containment during an accident and be released directly to the environment. The licensee assumes a total secondary containment bypass leakage rate amount in its radiological consequences analysis, and then establishes a TS to verify and maintain that limit during plant operation.

Licensees identify primary containment penetrations, which are potential secondary containment bypass leakage pathways, in accordance with the guidelines in Standard Review Plan, Section 6.2.3, "Secondary Containment Functional Design," and Branch Technical Position CSB [Containment Systems Branch] 6-3, "Determination of Bypass Leakage Paths in Dual Containment Plants." The leakage rates through these penetrations are periodically measured and their sum must not exceed the TS limit for the total secondary containment bypass leakage rate.

The leakage rate through a potential secondary containment bypass leakage pathway is typically measured by performing local leakage rate tests on the primary containment isolation valves (PCIVs) in the pathway.

2.0 REGULATORY EVALUATION

10 CFR Part 50, Appendix J, contains requirements for performing local leakage rate tests on certain penetrations (Type B tests) and PCIVs (Type C tests). In addition, it requires that the sum of the leakage rates from Types B and C tests not exceed a limit specified in TS 5.5.13.a. (i.e., 0.6 L_a). However, Appendix J does not directly address secondary containment bypass leakage rates or their limits. The PCIVs in potential secondary containment bypass leakage pathways are a subset of the PCIVs that are Type C tested.

TS SR 3.6.1.3.8 specifies a limit of 0.08 L_a for the sum of the leakage rates through the potential secondary containment bypass leakage pathways. The Type C test results for the PCIVs are used to calculate the sum, which is then compared to the TS SR 3.6.1.3.8 limit of 0.08 L_a for the total secondary containment bypass leakage rate. However, neither Appendix J nor any other regulation controls which PCIVs are to be tested as potential secondary containment bypass leakage pathways. Further, no regulation specifies the TS limit for the sum of potential secondary containment bypass leakage rates.

3.0 TECHNICAL EVALUATION

Clinton has requested full implementation of the AST in accordance with 10 CFR 50.67, "Accident Source Term." License Amendment No. 167, dated September 19, 2005, approved the revised radiological consequence analysis for LOCAs associated with this request. In the revised analysis, the contribution to dose from the primary containment purge valves is calculated separately from the other potential secondary containment bypass leakage pathways. All of the doses calculated from the various release terms (primary containment, main steam isolation valves, feedwater isolation valves, primary containment purge valves, and emergency core cooling system leakage outside primary containment) are added together and shown to be within the applicable regulatory limits (10 CFR 50.67, as supplemented in Regulatory Position 4.4 of Regulatory Guide 1.183 and 10 CFR Part 50, Appendix A, General Design Criterion 19, "Control Room").

Based on its review, the NRC staff finds that:

1. The current TS combines primary containment purge valve leakage rates with the leakage rates of the other secondary containment bypass leakage pathways, in accordance with the pre-AST radiological consequence analysis for LOCA;

2. The dose contribution of the primary containment purge valves is calculated separately from the other potential secondary containment bypass leakage pathways in the AST analysis;

3. The total calculated LOCA dose is within regulatory limits;

4. The primary containment purge valves have their own separate TS leakage rate limit; and

5. There is no regulatory requirement, other than the current Clinton TS, to sum the primary containment purge valve leakage rates with other potential secondary containment bypass pathway leakage rates.

Therefore, the NRC staff finds that the primary containment purge valve leakage rates may be excluded from the combined leakage rate of the other potential secondary containment bypass leakage pathways, in TS SR 3.6.1.3.8.

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 amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, or changes a surveillance requirement. The NRC staff has 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 issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (70 FR 21451; April 26, 2005).

Accordingly, the 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 the amendment.

6.0 CONCLUSION

The NRC staff 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.

Principal Contributor: J. Pulsipher

Date: March 21, 2006