AmerGen Energy Company, LLC
200 Exelon Way
Suite 345
Kennett Square, PA 19348

www.exeloncorp.com

AmerGen SM

An Exelon/British Energy Company

10CFR50.90

April 17, 2001

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8E.100a

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Request for Amendment to Technical Specifications to Address Minor Editorial Errors and Administrative Changes

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," AmerGen Energy Company, LLC (i.e., AmerGen), proposes changes to Appendix A, Technical Specifications (TS), of Facility Operating License No. NPF-62 for the Clinton Power Station (CPS). Specifically, AmerGen requests approval of various proposed changes to TS Section 3.3, "Instrumentation." The proposed changes are requested in order to make editorial and administrative corrections and to eliminate minor discrepancies that have been identified between the current TS and plant design documents or other licensing basis documents. AmerGen requests approval of these changes prior to May 15, 2002.

This request is subdivided as follows.

1. Attachment A gives a description and safety analysis of the proposed changes.

2. Attachment B includes the marked-up TS pages with the requested changes indicated and a marked-up copy of the affected TS pages from the current TS Bases provided for information only.

3. Attachment C describes our evaluation performed using the criteria in 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (a)(1) which provides information supporting a finding of no significant hazards consideration in accordance with 10 CFR 50.92, "Issuance of amendment," paragraph (c).

4. Attachment D provides information supporting an Environmental Assessment.

A001

This proposed change has been reviewed by the CPS Plant Operations Review Committee and approved by the Nuclear Safety Review Board.

AmerGen is notifying the State of Illinois of this application for changes to the TS by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this letter, please contact Mr. J. L. Peterson at (217) 937-3418.

Respectfully,

J. M. Heffley
Vice President
Clinton Power Station

JLP/krk

Attachments:
Affidavit
Attachment A: Description and Safety Analysis for Proposed Changes
Attachment B: Marked-up Pages for Proposed Changes
Attachment C: Information Supporting a Finding of No Significant Hazards Consideration
Attachment D: Information Supporting An Environmental Assessment

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety

STATE OF ILLINOIS	)	
COUNTY OF DEWITT	)	
IN THE MATTER OF	)	
AMERGEN ENERGY COMPANY, LLC	)	**Docket Number**
CLINTON POWER STATION, UNIT 1	)	**50-461**

SUBJECT: Request for Amendment to Technical Specifications to Address Minor Editorial Errors and Administrative Changes

AFFIDAVIT

I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.

J. M. Heffley
Vice President
Clinton Power Station

Subscribed and sworn to before me, a Notary Public in and

for the State above named, this 17th day of

April, 2001.

" OFFICIAL SEAL "
Timothy A. Byam
Notary Public, State of Illinois
My Commission Expires 11/24/2001

Notary Public

DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGES

A. SUMMARY OF THE PROPOSED CHANGES

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," AmerGen Energy Company, LLC (i.e., AmerGen), proposes changes to Appendix A, Technical Specifications (TS), of Facility Operating License No. NPF-62 for the Clinton Power Station (CPS). Specifically, AmerGen proposes changes involving TS Section 3.3, "Instrumentation," which consist of four editorial or administrative changes to eliminate minor discrepancies that have been identified between the current TS and plant design documents or other licensing basis documents.

The proposed changes are described in Section E of this Attachment. The marked-up TS pages are shown in Attachment B.

B. DESCRIPTION OF THE CURRENT REQUIREMENTS

B.1 Suppression Pool Water Temperature

The primary purpose of the instrumentation denoted in TS Section 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation," is to display plant variables that provide information required by control room operators during accident situations. TS Table 3.3.3.1-1, Item 10, "Suppression Pool Quadrant Water Temperature," currently identifies the requirements for monitoring suppression pool water temperature.

A total of 24 temperature sensors monitor the suppression pool water temperature. These temperature sensors are located between the safety relief valve discharge pipes and are below the minimum suppression pool water level. Twelve temperature sensors are associated with Division 1, and 12 temperature sensors are associated with Division 2. The number of sensors required by TS Limiting Condition for Operation (LCO) 3.3.3.1 is less than the total available. The eight temperature sensors associated with this LCO are located such that there is one temperature sensor from each divisional channel within each quadrant of the suppression pool. The outputs for the temperature sensors are recorded on two, independent single-pen recorders mounted on the standby information panel in the main control room. These recorders average the output from the four required Division 1 sensors and the four required Division 2 sensors.

B.2 Reactor Core Isolation Cooling (RCIC) Isolation Instrumentation

The current TS Section 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," associates the "Reactor Vessel Water Level – Low Low, Level 2 (ECCS Divisions 1 and 2)" function with "Primary Containment and Drywell Isolation" (i.e., TS Table 3.3.6.1-1, Item 2.c). Isolation signals derived from Emergency Core Cooling System (ECCS) initiation logic typically isolate valves such as those associated with test return or minimum flow lines for the ECCS. Such instruments are generally listed in Section 2 of TS Table 3.3.6.1-1 where various primary containment and drywell isolation functions are identified.

The current TS Table 3.3.6.1-1, Item 3, "Reactor Core Isolation Cooling (RCIC) System Isolation" specifies manual initiation capability for the RCIC Isolation function (i.e., Table 3.3.6.1-1, Item 3.k). The RCIC "Manual Initiation" function is accomplished through the use of a single push button channel. This manual push button introduces a signal into the RCIC System isolation logic that is redundant to the automatic protective instrumentation (e.g., leak detection instrumentation), as it provides manual isolation capability to the control room operator if a RCIC initiation signal is present.

B.3 Control Room Ventilation System Instrumentation

TS Section 3.3.7.1, "Control Room Ventilation System Instrumentation," currently specifies that the Control Room Air Intake Radiation Monitors are required to be operable in Mode 1, "Power Operation;" Mode 2, "Startup;" and Mode 3, "Hot Shutdown;" as well as during "Core Alterations," "Operations With a Potential for Draining the Reactor Vessel," and "Movement of Irradiated Fuel in the Primary or Secondary Containment," to ensure that Main Control Room (MCR) personnel are protected during a Loss of Coolant Accident (LOCA), fuel handling event, or a reactor vessel draindown event. The Allowable Value for the Control Room Air Intake Radiation Monitors setpoint was selected to ensure protection of the MCR personnel.

C. BASES FOR THE CURRENT REQUIREMENTS

C.1 Suppression Pool Water Temperature

As stated in Section B.1 above, the primary purpose of the PAM instrumentation denoted in TS Section 3.3.3.1 is to display plant variables that provide information required by control room operators during accident situations. This information provides the necessary support for an operator to take manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for design basis events. The TS Section 3.3.3.1 instruments that monitor these variables are designated as Type A, Category I, and non-Type A, Category I in accordance with Regulatory Guide (RG) 1.97, "Instrumentation for Light Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," Revision 0.

The suppression pool water temperature is a Type A, Category I variable provided to detect a condition that could potentially lead to containment breach, and to verify the effectiveness of the ECCS to prevent containment breach. The suppression pool water temperature instrumentation allows operators to detect trends in suppression pool water temperature in sufficient time to take action to prevent steam-quenching vibrations in the suppression pool.

C.2 Reactor Core Isolation Cooling Isolation Instrumentation

As noted in the TS Bases for TS Section 3.3.6.1, low reactor pressure vessel (RPV) water level indicates the capability to cool the fuel may be threatened. Valves associated with piping that penetrate the primary containment, or associated with isolating the reactor coolant pressure boundary are required to close, or be closed, to

effect isolation in order to limit the release of fission products that may result from fuel damage due to a LOCA. The isolation of the primary containment, or the reactor coolant pressure boundary, in response to a low RPV water level condition supports actions to ensure that offsite dose limits of 10 CFR 100, "Reactor site criteria," are not exceeded. The "Reactor Vessel Water Level – Low Low, Level 2" function associated with containment and RPV isolation is implicitly assumed in the USAR analysis as the associated leakage paths are assumed to be isolated following a LOCA.

The current TS Table 3.3.6.1-1, Item 3.k requires two channels of manual initiation capability for the RCIC isolation function. The RCIC "Manual Initiation" function is accomplished through the use of a single push button channel. This manual push button introduces a signal into the RCIC System isolation logic that is redundant to the automatic protective instrumentation (e.g., leak detection instrumentation), as it provides manual isolation capability to the control room operator if a RCIC initiation signal is present.

C.3 Control Room Ventilation System Instrumentation

As discussed in the TS Bases for TS Section 3.3.7.1, the Control Room Air Intake Radiation Monitors measure radiation levels exterior to the ventilation intake of the MCR. A high radiation level may pose a threat to MCR personnel; thus, a detector indicating this condition automatically signals initiation of the Control Room Ventilation (CRV) System high radiation mode of operation. The CRV System is designed to provide a radiologically-controlled environment to ensure the habitability of the MCR for the safety of MCR operators under all plant conditions.

D. NEED FOR REVISION OF THE REQUIREMENTS

D.1 Suppression Pool Water Temperature

TS Table 3.3.3.1-1, Item 10 and its associated bases, describes the suppression pool water temperature function as the "Suppression Pool Quadrant Water Temperature." The use of the word "Quadrant" in the nomenclature is not fully accurate and could result in misinterpretation of the function requirements. To eliminate the ambiguity in nomenclature, AmerGen proposes to revise the description of the suppression pool water temperature PAM function to clarify that these PAM function instruments monitor suppression pool water "bulk average" temperature.

D.2 Reactor Core Isolation Cooling Isolation Instrumentation

An administrative error was identified involving the listing of the "Reactor Vessel Water Level – Low Low, Level 2 (ECCS Divisions 1 and 2)" function as Item 2.c of TS Table 3.3.6.1-1, "Primary Containment and Drywell Isolation" instrumentation. However, it was identified that the function only isolates RCIC valves 1E51F031 (i.e., RCIC suppression pool suction valve) and 1E51F064 (i.e., RCIC steam supply outboard isolation valve). In reviewing this discrepancy, it appears that this was an oversight that occurred during the development of the initial TS for CPS and was not identified during the conversion to the Improved TS (ITS). As such, this function is more appropriately administered in the

"Reactor Core Isolation Cooling (RCIC) System Isolation" section of TS Table 3.3.6.1-1 (i.e., Item 3), and the nomenclature "(ECCS Divisions 1 and 2)" should be deleted, as it is inaccurate.

A typographical error was identified involving the required number of channels for the RCIC System isolation instrumentation "Manual Initiation" function, (i.e., TS Table 3.3.6.1-1, Item 3.k). The error, which occurred in 1994, involved carrying forward the requirements from the former TS to the ITS. Based on a review of plant design basis and licensing basis documents, the RCIC manual isolation design is composed with only one channel. Thus, although the RCIC isolation logic provides manual isolation capability if an initiation signal is present, there is only one manual initiation push button channel for introducing a manual isolation signal into the RCIC System isolation logic.

The requirements that were in place prior to ITS correctly identified that only one RCIC manual initiation channel existed. This typographical error was not detected in the original ITS submittal process.

D.3 Control Room Ventilation System Instrumentation

An administrative error was identified involving the Allowable Value for the Control Room Air Intake Radiation Monitors setpoint as identified in TS Table 3.3.7.1-1, Item 1. It has been determined that, in accordance with design documents, the Allowable Value, as specified in TS Table 3.3.7.1-1, should not be the currently specified value of $\leq$ 10 mR/hr.

In reviewing this discrepancy, it was confirmed that the value of "$\leq$ 10 mR/hr" was listed as the "Alarm/Trip Setpoint" in the TS prior to conversion to the ITS. During the CPS conversion to the ITS, the "$\leq$ 10 mR/hr" value was retained in the ITS. However, also during the conversion, the column heading under which this limit is specified changed from "Alarm/Trip Setpoint" to "Allowable Value." The impact of the heading change relative to the specified value was not detected.

E. DESCRIPTION OF THE PROPOSED CHANGES

The proposed TS changes are as follows.

1. Change the nomenclature for TS Table 3.3.3.1-1, Item 10, "Suppression Pool Quadrant Water Temperature," to "Suppression Pool Water Bulk Average Temperature."

2. Delete the current Item 2.c, "Reactor Vessel Water Level – Low Low, Level 2 (ECCS Divisions 1 and 2)," from TS Table 3.3.6.1-1. Insert a new Item 3.h, "Reactor Vessel Water Level – Low, Low, Level 2," in TS Table 3.3.6.1-1.

3. Change the number of required channels for manual initiation capability of the RCIC isolation function in TS Table 3.3.6.1-1, Item 3.k, from two channels to one channel.

4. Change the Allowable Value for the Control Room Air Intake Radiation Monitors setpoint as identified in TS Table 3.3.7.1-1, Item 1, from ≤ 10 mR/hr to ≤ 26 mR/hr.

The proposed TS changes are reflected on a marked-up copy of the affected pages from the CPS TS contained in Attachment B. A marked-up copy of the affected pages from the current TS Bases is also provided in Attachment B. Following NRC approval of this request, we will revise the CPS TS Bases, in accordance with the TS Bases Control Program of TS Section 5.5.11, to incorporate the changes identified in Attachment B.

F. SAFETY ANALYSIS OF THE PROPOSED CHANGES

F.1 Suppression Pool Water Temperature

There are a total of eight temperature sensors arranged in two divisional channels (i.e., four temperature sensors per division) that are required to monitor suppression pool water temperature. The required temperature sensors are located such that there is one temperature sensor from each divisional channel within each of the quadrants of the suppression pool. The output of the four temperature sensors in each division (i.e., one from each quadrant) is averaged to determine the suppression pool water temperature. The monitored temperature is thus a "bulk average temperature" of the suppression pool water. This nomenclature is consistent with that used in other CPS licensing basis documents.

During the CPS conversion to the ITS, the PAM section of NUREG-1434, "Standard Technical Specifications (STS), General Electric Plants, BWR/6," Revision 0, was modified, in part, by including the word "Quadrant" in the nomenclature for TS Table 3.3.3.1-1, Item 10. Prior to the conversion, the CPS TS referred to this instrument function as a "Suppression Pool Water Temperature" monitoring function, and the "Required Number of Channels" was denoted as "2/quadrant." During the conversion, the reference to "per quadrant" was eliminated and Note c was added to TS Table 3.3.3.1-1. The words "monitoring each quadrant" were added as Note c and clarifies the requirement to have a temperature sensor for each divisional channel in each quadrant. The change in nomenclature (i.e., to add the word "Quadrant") was made as an administrative choice consistent with the addition of Note c. An inconsistency in nomenclature was thus introduced during the conversion process by including the word "Quadrant" in an attempt to apply the improved STS more specifically to the CPS configuration. This was likely considered to be a reasonable change to the ITS since the system design includes two independent channels having one temperature sensor in each quadrant. However, since the output of each of the four temperature sensors is summed and used to generate an average temperature value in lieu of providing individual quadrant temperatures, the addition of the word "Quadrant" provided an opportunity to misinterpret the intended function of the instrumentation.

Although the temperature sensors used to perform this measurement are physically located in different quadrants of the suppression pool, there are no requirements or commitments to obtain or record the temperature measurements of each independent quadrant of the suppression pool. The applicable CPS commitment to RG 1.97,

Revision 0, as acknowledged in Appendix G of NUREG-0853, "Safety Evaluation Report Related to the Operation of Clinton Power Station," Supplement 5, is satisfied by measuring suppression pool water bulk average temperature.

F.2 Reactor Core Isolation Cooling Isolation Instrumentation

This proposed change moves the tabular information and requirements from TS Table 3.3.6.1-1, Item 2.c to Item 3.h. Moving the function and the associated requirements to a different functional heading does not change the Applicability, Required Actions, or Completion Times for the function. The TS will continue to specify a Required Action to "isolate the affected penetration flow path(s)" within 24 hours in the event of channel inoperability. The proposed change to reformat the function under a different heading will not affect the associated requirements and the function will continue to perform as designed, since the operability and testing requirements remain unchanged. Moving the above requirements to the "RCIC System Isolation" function heading prevents the possibility of misapplication or misinterpretation of the function.

The proposed change to TS Table 3.3.6.1-1, Item 3.k, makes this item consistent with the RCIC System design. Even though the design has only one channel, the TS remain conservative with respect to the Required Action and Completion Time for this function. The current TS requires an action to "isolate the affected penetration flow path(s)" within 24 hours. This action is independent of the number of required channels listed in the table. Therefore, the Required Action for a design of one channel versus two channels would be the same. The proposed change to reflect a single channel will not affect the requirements associated with this function, and the function will continue to have the same isolation capability as designed. Changing the number of the required channels per function prevents the possibility of misapplication or misinterpretation of the function.

F.3 Control Room Ventilation System Instrumentation

The current TS specifies an Allowable Value limit of "$\leq$ 10 mR/hr" for the Control Room Air Intake Radiation Monitors setpoint which are identified as Item 1 on Table 3.3.7.1-1. However, in accordance with design setpoint calculations, the TS Allowable Value should be specified as "$\leq$ 26 mR/hr." The retention of the $\leq$ 10 mR/hr value as a trip setpoint and changing the Allowable Value setpoint to $\leq$ 26 mR/hr is justified to allow sufficient margin between the trip setpoint and Allowable Value setpoint. The $\leq$ 10 mR/hr trip setpoint value will be maintained in a licensee-controlled document, such as the Operational Requirements Manual.

G. IMPACT ON PREVIOUS SUBMITTALS

We have reviewed the proposed changes regarding impact on any previous submittals, and have determined that there is no impact on any outstanding license amendment requests.

H. SCHEDULE REQUIREMENTS

We request approval of these proposed changes prior to May 15, 2002.

I. REFERENCES

None

Attachment B
Proposed Technical Specification Changes
Clinton Power Station, Unit 1

MARKED-UP TS PAGES FOR PROPOSED CHANGES

REVISED TS PAGES

3.3-22
3.3-56
3.3-58
3.3-59
3.3-77

REVISED BASES PAGES
(PROVIDED FOR INFORMATION ONLY)

B 3.3-54
B 3.3-55
B 3.3-136
B 3.3-144
B 3.3-145
B 3.3-152
B 3.3-152a
B 3.3-152b

Table 3.3.3.1-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1
1. Reactor Steam Dome Pressure	2	E
2. Reactor Vessel Water Level	2	E
3. Suppression Pool Water Level		
a. High Range	2	E
b. Low Range	2	E
4. Drywell Pressure	2	E
5. Primary Containment Area Radiation	2	F
6. Drywell Area Radiation	2	F
7. Penetration Flow Path, Automatic PCIV Position	2 per penetration flow path [a][b]	E
8. Drywell and Containment H_2 & O_2 Analyzer	2	E
9. Primary Containment Pressure		
a. High Range	2	E
b. Low Range	2	E
10. Suppression Pool ~~Quadrant~~ Water **Bulk Average** Temperature	2[c]	E

(a) Not required for isolation valves whose associated penetration flow path is isolated.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

(c) Monitoring each quadrant.

Table 3.3.6.1-1 (page 2 of 6)
Primary Containment and Drywell Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION F.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. Primary Containment and Drywell Isolation					
a. Reactor Vessel Water Level-Low Low, Level 2	1,2,3	4[b]	K	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ -47.7 inches
	[c]	4	O	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ -47.7 inches
b. Drywell Pressure-High	1,2,3	4[b]	K	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.88 psig
~~c. Deleted Reactor Vessel Water Level-Low Low, Level 2 (ECCS Divisions 1 and 2)~~	~~1,2,3~~	~~4~~	~~I~~	~~SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6~~	~~≥ -47.7 inches~~
d. Drywell Pressure-High (ECCS Divisions 1 and 2)	1,2,3	4[b]	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.88 psig
e. Reactor Vessel Water Level-Low Low, Level 2 (HPCS NSPS Div 3 and 4)	1,2,3	4	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ -47.7 inches
f. Drywell Pressure-High (HPCS NSPS Div 3 and 4)	1,2,3	4	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.88 psig

(continued)

(b) Also required to initiate the associated drywell isolation function.

(c) During operations with a potential for draining the reactor vessel.

Table 3.3.6.1-1 (page 4 of 6)
Primary Containment and Drywell Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION F.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. Reactor Core Isolation Cooling (RCIC) System Isolation					
a. Auxiliary Building RCIC Steam Line Flow-High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 118.5 inches water
b. RCIC Steam Line Flow-High, Time Delay	1,2,3	2	I	SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 13 seconds
c. RCIC Steam Supply Line Pressure-Low	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ 52 psig
d. RCIC Turbine Exhaust Diaphragm Pressure-High	1,2,3	4	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 20 psig
e. RCIC Equipment Room Ambient Temperature-High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 207°F
f. Main Steam Line Tunnel Ambient Temperature-High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 171°F
g. Main Steam Line Tunnel Temperature Timer	1,2,3	2	I	SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 28 minutes
h. **~~Deleted~~ Reactor Vessel Water Level-Low Low, Level 2**	**1,2,3**	**4**	I	**SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6**	**≥ -47.7 inches**
i. Drywell RCIC Steam Line Flow - High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 188 inches water

(continued)

Table 3.3.6.1-1 (page 5 of 6)
Primary Containment and Drywell Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION F.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. RCIC System Isolation (continued)					
j. Drywell Pressure - High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.88 psig
k. Manual Initiation	1,2,3	~~21~~	J	SR 3.3.6.1.6	NA
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Differential Flow - High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 66.1 gpm
b. Differential Flow-Timer	1,2,3	2	I	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 47 seconds
c. RWCU Heat Exchanger Equipment Room Temperature-High	1,2,3	2 per room	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 205°F
d. RWCU Pump Rooms Temperature-High	1,2,3	2 per room	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 202°F
e. Main Steam Line Tunnel Ambient Temperature-High	1,2,3	2	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 171°F
f. Reactor Vessel Water Level-Low Low, Level 2	1,2,3	4	I	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ -47.7 inches
	(c)	4	O	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ -47.7 inches
g. Standby Liquid Control System Initiation	1,2	2	L	SR 3.3.6.1.6	NA
h. Manual Initiation	1,2,3	2	J	SR 3.3.6.1.6	NA
	(c), (d)	2	N	SR 3.3.6.1.6	NA

(continued)

(c) During operations with a potential for draining the reactor vessel.
(d) During CORE ALTERATIONS and during movement of irradiated fuel assemblies in the primary or secondary containment.

Table 3.3.7.1-1 (page 1 of 1)
Control Room Ventilation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Control Room Air Intake Radiation Monitors	1,2,3, (a),(b)	1/Intake	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.3	≤ ~~1026~~ mR/hr

(a) During operations with a potential for draining the reactor vessel.

(b) During CORE ALTERATIONS and during movement of irradiated fuel assemblies in the primary or secondary containment.

BASES

LCO

8. Drywell and Containment Hydrogen and Oxygen Analyzer (continued)

Two gas chromatograph hydrogen and oxygen analyzers are provided. Each of these monitors automatically takes samples from five locations in the drywell and containment. Gas chromatograph techniques are then utilized to separate the gaseous sample mixture into its individual components. A thermal conductivity cell analyzes each component to determine its concentration with respect to total sample volume. The results of the analysis are indicated and printed out in the main control room. The indicators provide the primary indication used by the operator during an accident. Therefore, the PAM Specification deals specifically with this portion of the instrument channel.

9. Primary Containment Pressure

Primary containment pressure is a Category I variable provided to verify RCS and containment integrity and to verify the effectiveness of ECCS actions taken to prevent containment breach. Four wide range primary containment pressure signals are transmitted from separate pressure transmitters and are continuously recorded and displayed on four control room recorders. Two of these instruments monitor containment pressure from -5 psig to 10 psig (low range). The remaining two instruments monitor containment pressure from 5 psig to 45 psig (high range). These recorders are the primary indication used by the operator during an accident. Therefore, the PAM Specification deals specifically with this portion of the instrument channel.

10. Suppression Pool ~~Quadrant~~ Water **Bulk Average** Temperature

Suppression pool ~~quadrant water temperature (also called suppression pool~~ water bulk average temperature~~)~~ is a Type A variable provided to detect a condition that could potentially lead to containment breach, and to verify the effectiveness of ECCS actions taken to prevent containment breach. The suppression pool water temperature instrumentation allows operators to detect trends in suppression pool water temperature in sufficient time to take action to prevent steam quenching vibrations in the suppression pool. Eight temperature sensors are arranged in two channels (i.e., divisions), located such that there is one sensor from each channel (division) within each quadrant of the suppression pool. These instruments provide the capability to monitor suppression pool water temperature

(continued)

BASES

LCO

10. Suppression Pool ~~Quadrant~~ Water **Bulk Average** Temperature (continued)

when pool water level is below the instruments addressed by the Operational Requirements Manual.

The outputs for the PAM sensors are recorded on two independent recorders in the control room. These recorders average the output from the four Division 1 sensors and the four Division 2 sensors. Both of these recorders must be OPERABLE to furnish two channels of PAM suppression pool water bulk average temperature. These recorders are the primary indication used by the operator during an accident. Therefore, the PAM Specification deals specifically with this portion of the instrument channels (Reference 4).

APPLICABILITY

The PAM instrumentation LCO is applicable in MODES 1 and 2. These variables are related to the diagnosis and preplanned actions required to mitigate DBAs. The applicable DBAs are assumed to occur in MODES 1 and 2. In MODES 3, 4, and 5, plant conditions are such that the likelihood of an event that would require PAM instrumentation is extremely low; therefore, PAM instrumentation is not required to be OPERABLE in these MODES.

ACTIONS

Note 1 has been added to the ACTIONS to exclude the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE while relying on the Actions even though the Actions may eventually require plant shutdown. This exception is acceptable due to the passive function of the instruments, the operator's ability to diagnose an accident using alternate instruments and methods, and the low probability of an event requiring these instruments.

A Note has also been provided to modify the ACTIONS related to PAM instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for

(continued)

BASES

BACKGROUND (continued)

The primary containment and drywell isolation instrumentation has inputs to the trip logic from the isolation Functions listed below.

1. Main Steam Line Isolation

Most Main Steam Line Isolation Functions receive inputs from four channels. The four channels input to four separate two-out-of-four logic divisions. The outputs from these logic divisions are combined into two two-out-of-two logic trip systems to isolate all main steam isolation valves (MSIVs) and MSL drain valves. Each MSL drain line has two isolation valves with one two-out-of-two logic system associated with each valve.

The exception to this arrangement is the Main Steam Line Flow-High Function. This Function uses 16 flow channels, four for each steam line. The four flow channels associated with a steam line are combined in a two-out-of-four logic configuration. The outputs of the high steam flow logic for each of the steam lines are combined in the two two-out-of-two logic trip systems described above.

2. Primary Containment and Drywell Isolation

Each Primary Containment Isolation and Drywell Function receives inputs from four channels. The outputs from these channels are arranged into two logic trip systems. One trip system initiates isolation of all inboard PCIVs and drywell isolation valves, while the other trip system initiates isolation of all outboard PCIVs and drywell isolation valves. Each trip system logic closes one of the two valves on each penetration so that operation of either trip system isolates the penetration. This logic configuration also provides automatic actuation capability for the Division 1 and 2 Shutdown Service Water (SX) subsystems.

3. Reactor Core Isolation Cooling System Isolation

Most Functions receive input from two channels, with each channel in one trip system. Each of the two trip systems is connected to one of the two valves on each RCIC penetration so that operation of either trip system isolates the penetration. The exception to this arrangement is the RCIC Turbine Exhaust Diaphragm Pressure-High Function. **The Reactor Vessel Water Level - Low Low, Level 2 RCIC initiation function receives inputs from four channels. The outputs from these channels are arranged into two logic trip systems. Each trip system logic closes one of the two valves on the RCIC penetration so that operation of either trip system isolates the penetration. The RCIC Turbine Exhaust Diaphragm Pressure - High** Function receives input from four turbine exhaust diaphragm

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

2. Primary Containment and Drywell Isolation

2.a~~, 2.c,~~ and 2.e. Reactor Vessel Water Level-Low Low, Level 2

Low RPV water level indicates the capability to cool the fuel may be threatened. The valves whose penetrations communicate with the primary containment are isolated to limit the release of fission products. The isolation of the primary containment on Level 2 supports actions to ensure that offsite dose limits of 10 CFR 100 are not exceeded. The Reactor Vessel Water Level-Low Low, Level 2 Function associated with isolation is implicitly assumed in the USAR analysis as these leakage paths are assumed to be isolated post LOCA. In addition, Function 2.a provides an isolation signal to certain drywell isolation valves. The isolation of drywell isolation valves, in combination with other accident mitigation systems, functions to ensure that steam and water releases to the drywell are channeled to the suppression pool to maintain the pressure suppression function of the drywell.

In addition to providing automatic isolation capability for primary containment and drywell isolation valves, Function 2.b provides signals for automatic actuation of the Division 1 and 2 SX subsystems, including automatic start of the Division 1 and 2 SX pumps and automatic actuation of the associated subsystem isolation valves (as required to support automatic operation of the SX subsystems). The equipment involved with the SX subsystems is described in LCO 3.7.1, "Division 1 and 2 SX Subsystems."

Reactor Vessel Water Level-Low Low, Level 2 signals are initiated from level transmitters that sense the difference between the pressure due to a constant column of water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel. Four channels of Reactor Vessel Water Level-Low Low, Level 2 Function are available and are required to be OPERABLE to ensure no single instrument failure can preclude the isolation function.

The Reactor Vessel Water Level-Low Low, Level 2 Allowable Value was chosen to be the same as the ECCS Reactor Vessel Water Level-Low Low, Level 2 Allowable Value (LCO 3.3.5.1),

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BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

2.a~~, 2.c,~~ and 2.e. Reactor Vessel Water Level-Low Low, Level 2 (continued)

since isolation of these valves is not critical to orderly plant shutdown. The Allowable Value is referenced from an instrument zero of 520.62 inches above RPV zero.

Function 2.a is also required to be OPERABLE during operations with a potential for draining the reactor vessel (OPDRVs). This Function initiates isolation of valves which isolate primary containment penetrations which bypass secondary containment. Thus, this Function is also required under those conditions in which a low reactor water level signal could be generated when secondary containment is required to be OPERABLE.

2.b, 2.d, 2.f. Drywell Pressure-High

High drywell pressure can indicate a break in the RCPB. The isolation of some of the PCIVs on high drywell pressure supports actions to ensure that offsite dose limits of 10 CFR 100 are not exceeded. The Drywell Pressure-High Function associated with isolation of the primary containment is implicitly assumed in the USAR accident analysis as these leakage paths are assumed to be isolated post LOCA. In addition, Functions 2.b and 2.d provide isolation signals to certain drywell isolation valves. The isolation of drywell isolation valves, in combination with other accident mitigation systems, functions to ensure that steam and water releases to the drywell are channeled to the suppression pool to maintain the pressure suppression function of the drywell.

In addition to providing automatic isolation capability for primary containment and drywell isolation valves, Function 2.b provides signals for automatic actuation of the Division 1 and 2 SX subsystems, including automatic start of the Division 1 and 2 SX pumps and automatic actuation of the associated subsystem isolation valves (as required to support automatic operation of the SX subsystems). The equipment involved with the SX subsystems is described in LCO 3.7.1, "Division 1 and 2 SX Subsystems."

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BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

3.g. Main Steam Line Tunnel Temperature Timer

The Main Steam Line Tunnel Temperature Timer is provided to allow all the other systems that may be leaking in the main steam tunnel (as indicated by the high temperature) to be isolated before RCIC is automatically isolated. This ensures maximum RCIC System operation by preventing isolations due to leaks in other systems. This Function is not assumed in any USAR transient or accident analysis; however, maximizing RCIC availability is an important function.

Two channels for RCIC Main Steam Line Tunnel Timer Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Values are based on maximizing the availability of the RCIC System; that is, providing sufficient time to isolate all other potential leakage sources in the main steam tunnel before RCIC is isolated.

3.h Reactor Vessel Water Level - Low Low, Level 2

Low RPV water level indicates the capability to cool the fuel may be threatened. The valves whose penetrations communicate with the primary containment are isolated to limit the release of fission products. The isolation of the primary containment on Level 2 supports actions to ensure that offsite dose limits of 10 CFR 100 are not exceeded. The Reactor Vessel Water Level - Low Low, Level 2 Function associated with isolation is implicitly assumed in the USAR analysis as these leakage paths are assumed to be isolated post LOCA. The Function isolates the following RCIC valves: 1E51F031 (RCIC suppression pool suction valve) and 1E51F064 (RCIC steam supply outboard isolation valve).

The Reactor Vessel Water Level - Low Low, Level 2 Allowable Value was chosen to be the same as the ECCS Reactor Vessel Water Level - Low Low, Level 2 Allowable Value (LCO 3.3.5.1), since isolation of these valves is not critical to orderly plant shutdown.

3.i. Drywell RCIC Steam Line Flow-High

Drywell RCIC high steam line flow is provided to detect a break of the common steam line of RCIC and RHR and initiates closure of the isolation valves for both systems. If the steam were allowed to continue flowing out of the break, the reactor would depressurize and the core could uncover. Therefore, the isolation is initiated at high flow to prevent or minimize core damage. Specific credit for this Function is not assumed in any USAR accident or transient analysis since the bounding analysis is performed for large breaks such as recirculation and MSL breaks.

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BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

3.i. Drywell RCIC Steam Line Flow-High (continued)

However, these instruments prevent the Drywell RCIC steam line break from becoming bounding.

The Drywell RCIC steam line flow signals are initiated from two transmitters that are connected to the steam line in the drywell. Two channels are available and required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function. The Allowable Value is selected to ensure that the trip occurs to prevent fuel damage and maintains the MSLB as the boundary event.

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BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

3.j. Drywell Pressure-High

High drywell pressure can indicate a break in the RCPB. The RCIC isolation of the turbine exhaust is provided to prevent communication with the drywell when high drywell pressure exists. A potential leakage path exists via the turbine exhaust. The isolation is delayed until the system becomes unavailable for injection (i.e., low steam line pressure). The isolation of the RCIC turbine exhaust by Drywell Pressure-High is indirectly assumed in the USAR accident analysis because the turbine exhaust leakage path is not assumed to contribute to offsite doses.

High drywell pressure signals are initiated from pressure transmitters that sense the pressure in the drywell. Isolation of the RCIC vacuum breaker isolation valves requires RCIC Steam Supply Line Pressure-Low coincident with Drywell Pressure-High signals. Two channels of RCIC Drywell Pressure-High Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Value was selected to be the same as the ECCS Drywell Pressure-High Allowable Value (LCO 3.3.5.1), since this is indicative of a LOCA inside primary containment.

3.k. Manual Initiation

The Manual Initiation push button channel introduces a signal into the RCIC System isolation logic that is redundant to the automatic protective instrumentation and provide manual isolation capability **if an initiation signal is present**. There is no specific USAR safety analysis that takes credit for this Function. It is retained for the isolation function as required by the NRC in the plant licensing basis.

There **is only one** ~~**are two**~~ push button**s** for RCIC, **in a single** ~~**one manual initiation push button per**~~ trip system. There is no Allowable Value for this Function since the channel**s** ~~**are**~~ **is** mechanically actuated based solely on the position of the push button**s**.

One~~**Two**~~ channel**s** of RCIC Manual Initiation is ~~**are available and are**~~ required to be OPERABLE.

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INFORMATION SUPPORTING A FINDING OF NO SIGNIFICANT HAZARDS CONSIDERATION

According to 10 CFR 50.92, "Issuance of Amendment," paragraph (c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

(1) Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated; or,

(2) Create the possibility of a new or different kind of accident from any previously analyzed; or,

(3) Involve a significant reduction in a margin of safety.

AmerGen Energy Company, LLC (i.e., AmerGen), proposes changes to Appendix A, Technical Specifications (TS), of Facility Operating License No. NPF-62 for Clinton Power Station (CPS). Specifically, AmerGen proposes changes involving TS Section 3.3, "Instrumentation," which consist of editorial and administrative changes to eliminate minor discrepancies that have been identified between the current TS and plant design documents or other licensing basis documents.

Information supporting the determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes involve correction of editorial or administrative errors made during the conversion of the Clinton Power Station (CPS) Technical Specifications (TS) to the Improved TS (ITS). These proposed changes are based upon current design and licensing basis requirements. The proposed changes involve correction or reformatting of the TS and do not involve any physical changes to plant systems, including those that mitigate the consequences of accidents or the manner in which these plant systems are operated. As such, these changes do not involve a significant increase in the probability or consequences of any accident previously evaluated.

Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes involve correcting errors or reformatting existing TS requirements that do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. These changes are consistent with the assumptions in the safety analyses and licensing basis. Thus, these changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

Does the change involve a significant reduction in a margin of safety?

The proposed changes involve correcting editorial or administrative errors introduced during the conversion of the CPS TS to the ITS. The change to the Allowable Value for the Control Room Ventilation System air intake radiation monitors setpoint in TS Table 3.3.7.1-1 is consistent with the supporting analyses for the trip setpoint value that was previously contained in the TS. The changes involve reformatting or correction of errors, and therefore will not reduce any margin of safety because there is no effect on any safety analysis assumptions. These proposed changes maintain requirements within the safety analyses and licensing basis. Therefore, these changes do not involve a significant reduction in a margin of safety.

Therefore, based on the above evaluation, we have concluded that the proposed changes do not involve a significant hazards consideration.

Attachment D
Proposed Technical Specification Changes
Clinton Power Station, Unit 1

INFORMATION SUPPORTING AN ENVIRONMENTAL ASSESSMENT CATEGORICAL EXCLUSION

AmerGen Energy Company, LLC (i.e., AmerGen) has evaluated this proposed change against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21, "Criteria for and identification of licensing and regulatory actions requiring environmental assessments." AmerGen has determined that this proposed change meets the criteria for a categorical exclusion set forth in 10 CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," paragraph (c)(9), and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92, "Issuance of amendment," paragraph (b). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50, "Domestic Licensing of Production and Utilization Facilities," which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, "Standards for Protection Against Radiation," or that changes an inspection or surveillance requirement, and the amendment meets the following specific criteria.

(i) **The proposed changes involve no significant hazards consideration.**

As demonstrated in Attachment C, this proposed amendment does not involve any significant hazards consideration.

(ii) **There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.**

The proposed changes are consistent with the design basis of the plant. As documented in Attachment A, there will be no significant increase in the amounts of any effluents released offsite. These changes do not result in an increase in power level, do not increase the production, nor alter the flow path or method of disposal of radioactive waste or byproducts. Therefore, the proposed changes will not affect the types or increase the amounts of any effluents released offsite.

(iii) **There is no significant increase in individual or cumulative occupational radiation exposure.**

The proposed changes will not result in changes in the configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels in the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from these changes.