

February 15, 2006

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

SUBJECT: CLINTON POWER STATION, UNIT 1 - CORRECTION LETTER RE: ADDITION
OF OSCILLATION POWER RANGE MONITOR (TAC NO. MC6551)

Dear Mr. Crane:

By letter dated January 26, 2006, the U.S. Nuclear Regulatory Commission issued Amendment No. 171 to Facility Operating License No. NPF-62. The amendment added technical specifications (TSs) containing operability requirements for the Oscillation Power Range Monitor (OPRM), associated surveillance requirements (SRs), and a core operating limits report OPRM requirement.

Subsequent to the issuance of the amendment, it was brought to our attention that corrections are needed to the safety evaluation (SE) supporting the issuance of the amendment, and to include revised TS pages 3.3-14a, 3.3-14b and 5.0-18. On page 5 of the SE, paragraph (c), SR 3.3.1.3.5 should have been referenced twice in lieu of SR 3.3.1.3.4; and on page 8, paragraph (c), SR 3.3.1.3.3 should have been referenced in lieu of SR 3.3.1.3.2. The areas of change are identified by lines in the margin for SE pages 5 and 8. Revised TS pages 3.3-14a and 3.3-14b were submitted by letter dated September 23, 2005, in response to a request for additional information. In addition, revised TS page 5.0-18 should be included because of a page shift that occurred due to the issuance of an amendment dated May 20, 2005 (ML050970046), while the OPRM amendment request was dated April 1, 2005. The amendment dated May 20, 2005, revised TS Section 5.0 (i.e., pages 5.0-17, 5.0-18, and 5.0-19) to delete the TS requirements to submit the monthly operating reports and annual occupational radiation exposure reports.

C. M. Crane

-2-

Enclosed are the corrected pages. Please replace the pages in your copy of the amendment with the enclosed pages. We apologize for any inconvenience that may have been caused by this administrative oversight.

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: As stated

cc w/encl: See next page

C. M. Crane

-2-

Enclosed are the corrected pages. Please replace the pages in your copy of the amendment with the enclosed pages. We apologize for any inconvenience that may have been caused by this administrative oversight.

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: As stated

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	LPLIII-2 r/f	RidsOGCRp	RidsAcrcAcnwMailCenter	HGarg
GHill (2)	MRing, RIII	AHowe	RidsNrrDorLplf	THuang
TBoyce	DClarke	GCranston	RidsNrrPMKJabbour	

ADAMS Accession Number: ML060330702

TS Pages Accession Number: ML

Package No.:ML060330719

OFFICE	PM:LPL3-2	LA:LPD3-2	BC:DE/EICB	BC:DSS/SBWB
NAME	KJabbour:mw	DClarke (THarris for)	AHowe	GCranston
DATE	2/6/06	2/3/06	2/7/06	2/7/06

OFFICE	BC: DIRS/ITSB	OGC	BC:DORL/LPL3-2(A)
NAME	TBoyce	AHodgdon	MLandau
DATE	2/7/06	2/9/06	2/15/06

OFFICIAL RECORD COPY

applicable, but should include an uncertainty treatment that accounts for the number of failed sensors permitted by the TSs of the plant's applicant.

The licensee stated that the methodology as described in NEDO-32465-A was followed for the PBDA including the analysis of sensor failure in the OPRM system, the cycle-specific analysis for the applicability of the scram setpoints, and the OPRM system operability. This is acceptable because the procedures specified in the approved methodology are used.

- (c) Implementation of Option III will require that the selected bypass region outside of which the detect and suppress action is deactivated be defined in the TSs.

The licensee confirmed that this region is included in surveillance requirement (SR) 3.3.1.3.5. The exclusion region methodology (safety analyses contained in NEDO-31960) would define a curved region on the power to flow operating map cutting across the corner of the map near the intersection of the natural circulation line and the highest flow control line. The staff finds this acceptable because the proposed exclusion region in conjunction with SR 3.3.1.3.5 is consistent with the boundaries discussed in NEDO-32465-A, Section 2.2.

- (d) If the algorithms detect oscillations, an automatic protective action should be initiated. This action may be a full scram or a selected rod insert (SRI).

The licensee confirmed that the automatic protective action of the OPRMs at CPS will be a full reactor scram, rather than an SRI. The staff finds this acceptable because the action is in compliance with GDCs 10 and 12.

- (e) The LPRM groupings defined in NEDO-31960-A to provide input to Option III algorithms are acceptable for the intended oscillation detection function. These LPRM groupings are the oscillation power range monitor for Option III.

The licensee stated that the LPRM assignments in Appendix D of NEDO-32465-A are identified as examples of the expected LPRM assignments that a licensee may choose without identifying the configuration which is used at CPS. The staff has reviewed the licensee's description and finds it acceptable because the configuration chosen is provided as one of the examples in NEDO-32465-A and NEDO-31960-A. However, the final configuration should be documented.

The staff finds that the licensee has adequately demonstrated the applicability of the topical reports by addressing the actions identified in the staff's SERs approving the topical reports.

3. Provide a plant-specific TS for the OPRM functions consistent with CENPD-400-P, Appendix A.

In its submittal, the licensee stated that the proposed TS is consistent with CENPD-400-P, Appendix A, except for the following deviations:

- (a) A new TS for the OPRM instrumentation, which includes the limiting condition for operation (LCO), Applicability, Actions and SRs necessary to define the operability of the OPRM channels, and the actions that must be taken by the plant operators when the instruments become inoperable. TS Section 3.3.1.3 requires four channels of the OPRM instrumentation to be operable when reactor power is 21.6 percent RTP. In addition, a note was added in the ACTIONS section which states that "Separate Condition entry is allowed for each channel."
 - (b) LCOs A, B and C have been added which are consistent with the referenced topical reports.
 - (c) SRs 3.3.1.3.1 through 3.3.1.3.6 have been added. There are some deviations from the referenced topical reports which are addressed in Section 3.2 of this safety evaluation. A note is added which states that "When a channel is placed in an inoperable status solely for performance of required Surveillance, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the OPRM maintains trip capability." Also, a statement is added to SR 3.3.1.3.3 to state that the setpoints for the trip function are specified in the COLR.
 - (d) Pages B 3.3-39a through B 3.3-39k have been added to provide the Bases for TS Section 3.3.1.3.
- (2) Revise TS Section 3.4.1, "Recirculation Loop Operating"

The licensee proposed to delete Figure 3.4.1-1, "Power versus Flow," and associated references to the figure from the LCO 3.4.1, Actions B, C, D, and F, and SR 3.4.1.2, to revise/renumber Actions E and G, and to add new Condition C with associated Action C1.

The staff has reviewed the proposed changes and finds them acceptable because the manual operator actions specified in TS LCO 3.4.1 (and its associated Conditions B, C, D, and F; Actions B.1, C.1, D.1, F.1, G.1, and G.2; and SR 3.4.1.2) are no longer in use due to the automatic functions provided by the OPRM.

- (3) Revise TS Section 5.6.5, "Core Operating Limits Report (COLR)"

The licensee proposed to add: (1) a new TS 5.6.5.a.5 "Oscillation Power Range Monitor (OPRM) Instrumentation;" and (2) a reference was added in TS 5.6.5.b. which is NEDO 32465, "BWR Owners' Group Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications."

The staff has reviewed the proposed changes and finds them acceptable because NEDO-32465 is an approved licensing topical report to support the new proposed TS 3.3.1.3 for determining the setpoint values of the applicable operating limits for OPRMs in the COLR.

Clinton Power Station, Unit 1

cc:

Senior Vice President of Operations
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Illinois Emergency Management
Agency
Division of Disaster Assistance &
Preparedness
110 East Adams Street
Springfield, IL 62701-1109

Vice President - Licensing and
Regulatory Affairs
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Manager Licensing - Dresden, Quad Cities,
and Clinton
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Regulatory Assurance Manager - Clinton
AmerGen Energy Company, LLC
Clinton Power Station
RR3, Box 228
Clinton, IL 61727-9351

Director - Licensing and Regulatory Affairs
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Document Control Desk - Licensing
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Site Vice President - Clinton Power Station
AmerGen Energy Company, LLC
Clinton Power Station
RR 3, Box 228
Clinton, IL 61727-9351

Clinton Power Station Plant Manager
AmerGen Energy Company, LLC
Clinton Power Station
RR 3, Box 228
Clinton, IL 61727-9351

Resident Inspector
U.S. Nuclear Regulatory Commission
RR #3, Box 229A
Clinton, IL 61727

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
Suite 210
2443 Warrenville Road
Lisle, IL 60532-4351

Assistant General Counsel
Exelon Generation Company, LLC
200 Exelon Way
Kennett Square, PA 19348

R. T. Hill
Licensing Services Manager
General Electric Company
175 Curtner Avenue, M/C 481
San Jose, CA 95125

Chairman of DeWitt County
c/o County Clerk's Office
DeWitt County Courthouse
Clinton, IL 61727

J. W. Blattner
Project Manager
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, IL 60603