February 14, 2005

Mr. L. William Pearce
Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (BVPS-1 AND 2) - REQUEST FOR ADDITIONAL INFORMATION (RAI) - STEAM GENERATOR (SG) LEVEL ALLOWABLE VALUE SETPOINTS (TAC NOS. MC4649 AND MC4650)

Dear Mr. Pearce:

The Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in your October 5, 2004, license amendment application to modify the SG level allowable value setpoints. The NRC staff has determined that the additional information contained in the enclosure to this letter is needed to complete its review. As discussed with your staff, we request your response within 45 days of receipt of this letter, in order for the NRC staff to complete its scheduled review of your submittal.

Sincerely,

/RA/

Timothy G. Colburn, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-334 and 50-412

Enclosure: RAI

cc w/encl: See next page

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ACCESSION NO. ML050320143 *Input received. No substantive changes made.

OFFICE	PDI-1/PM	PDI-2/LA	EEIB/SC	PDI-1/SC
NAME	TColburn	MO'Brien	EMarinos*	RLaufer
DATE	02/07/05	02/07/05	01/24/05	02/09/05

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REQUEST FOR ADDITIONAL INFORMATION (RAI)

RELATED TO FIRSTENERGY NUCLEAR OPERATING COMPANY (FENOC)

BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (BVPS-1 AND 2)

STEAM GENERATOR (SG) LEVEL ALLOWABLE VALUE SETPOINTS

DOCKET NOS. 50-334 AND 50-412

By letter dated October 5, 2004, FENOC (the licensee) proposed changes to BVPS-1 and 2 Technical Specifications (TSs) to change the SG level allowable value setpoints to address identified non-conservative setpoints identified as a result of recent generic issues involving new SG level uncertainty considerations and margins associated with Westinghouse-designed SGs. The Nuclear Regulatory Commission (NRC) staff has determined that it will need the additional information identified below to complete its review.

A. Interim RAI for Current License Amendment Requests

The NRC staff has determined that setpoint allowable values (AVs) established by means of the Instrumentation, Systems, and Automation Society (ISA) 67.04, Part 2, Method 3, do not provide adequate assurance that a plant will operate in accordance with the assumptions upon which the plant safety analyses have been based. These concerns have been described in various public meetings. The presentation used in public meetings in June and July, 2004 to describe the NRC staff's concerns is available on the public website under Agencywide Documents Access Management System (ADAMS) Accession Number ML041810346[1].

The NRC staff is currently formulating generic communication on this subject to affected licensees. It is presently clear, however, that the NRC staff will not be able to accept any requested TS change requests that are based upon the use of Method 3, unless the method is modified to alleviate the NRC staff's concerns. In particular, each setpoint limit in the TSs must ensure at least 95% probability with at least 95% confidence that the associated action will be initiated with the process variable no less conservative than the initiation value assumed in the plant safety analyses. In addition, the operability of each instrument channel addressed in the setpoint-related TSs must be ensured by the TS requirements. That is, conformance to the TSs must provide adequate assurance that the plant will operate in accordance with the safety analyses assumptions. Reliance on settings or practices outside the TSs and not mandated by them is not adequate.

The NRC staff has determined that AVs computed in accordance with ISA Method 1 or 2 do provide adequate assurance that the safety analysis limits will not be exceeded. The NRC staff has also determined that an entirely different approach, based upon the performance of an

[1] Go to www.nrc.gov, click on "Electronic Reading Room," then "Documents in ADAMS," then "Web-Based Access," then "Advanced Search," and enter the Accession number into the Accession Number box near the top of the page. Click on the "Search" button near the bottom of the page. Click on the icon under "Image File" on the search results page. NOTE: You will need Adobe Acrobat Reader to open this file.

instrument channel rather than directly upon the measured trip setting, can also provide the required assurance. This alternative approach, designated Performance-Based Technical Specifications (PBTSs), sets limits on acceptable nominal setpoints and upon the observed deviation in the measured setpoint from the end of one test to the beginning of the next. This approach has been accepted for use at the R. E. Ginna Nuclear Power Plant, and is discussed in a September 22, 2004, Safety Evaluation enclosed with Amendment No. 85, which is available via ADAMS under Accession Number ML041180293. The referenced Safety Evaluation is specific to Ginna, and is cited here only as a general reference for other licensees. It is up to each licensee to modify the approach as necessary to meet the indicated objectives for the particular plant(s) in question. In addition, licensees are welcome to propose alternative approaches that provide the indicated confidence, but such alternative approaches must be presented in detail and must be shown explicitly to provide adequate assurance that the safety analysis assumptions will not be violated.

The Nuclear Energy Institute (NEI) submitted a white paper concerning this matter for NRC consideration in the fall of 2004. Licensees may choose to endorse whatever approach and justification is described in that white paper, or to act independently of the NEI. If the NEI approach is found to be acceptable to the NRC staff, it will be necessary for each licensee who chooses to use it to affirm that the salient conditions, practices, etc., described in it are applicable to its facilities.

The four options below constitute an acceptable approach with respect to the setpoint-related TS changes you have requested. Please indicate which of the four options you wish to pursue with respect to your request.

1. Demonstrate that the approach that you have used to develop the proposed SG level AV limits provides adequate assurance that the plant will operate in accordance with the safety analyses assumptions. Discuss and demonstrate how Operability is ensured in the TSs.

2. Suspend consideration of setpoint-related aspects of your request pending generic resolution of the NRC staff's concern.

3. Revise your request to incorporate Method 1, Method 2, or PBTSs.

4. Revise your request to incorporate some other approach that you demonstrate to provide adequate confidence that the plant will operate in accordance with the safety analyses and show that Operability is ensured by the TSs surveillance requirement measurements obtained during the channel operational (functional) test.

B. The licensee proposed to revise the nominal trip setpoints and AV setpoints for SG water level low-low and high-high. Provide the actual calculations or summary sheets for the NRC staff's review.

Beaver Valley Power Station, Unit Nos. 1 and 2

cc:

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