

July 7, 2003

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 - REMOVAL OF
PERSONAL HOME ALERTING DEVICES FROM EMERGENCY
PREPAREDNESS PLAN (TAC NOS. MB6450 AND MB6451)

Dear Mr. Pearce:

By letter dated September 27, 2002, as supplemented by letters dated April 8 and 19, 2003, FirstEnergy Nuclear Operating Company (FENOC) submitted a request for Nuclear Regulatory Commission (NRC) approval of a change to the Beaver Valley Power Station, Units 1 and 2 (BVPS-1 and 2), Emergency Preparedness (EP) Plan. The proposed change consists of removing the Personal Home Alerting Devices (PHADs) from the EP Plan and replacing them with new sirens.

The applicable regulation for making changes to a licensee's emergency plan is in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.54(q). This regulation states that a licensee may change its radiological EP plan without NRC approval only if it does not decrease the effectiveness of the plan; however, the plan, as changed, continues to meet the planning standards of 10 CFR 50.47 and the requirements of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50. In its submittal, FENOC stated that prior to the addition of additional sirens, the removal of the PHADs would have been considered a decrease in the effectiveness of the EP Plan. Therefore, FENOC requested NRC approval prior to the removal of the PHADs due to the significance of the proposed change.

The NRC staff has completed its review of the proposed PHADs removal and has determined that the removal of the PHADS and subsequent replacement with new sirens meets the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. Therefore, the proposed change to the BVPS-1 and 2 EP Plan is acceptable and may be implemented.

L. Pearce

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The NRC staff's review of these changes is contained in the enclosed safety evaluation. If you have any questions, please contact me at 301-415-1402.

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: Safety Evaluation

cc w/encl: See next page

L. Pearce

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO THE PROPOSED EMERGENCY PREPAREDNESS PLAN CHANGE

FIRST ENERGY NUCLEAR OPERATING COMPANY

BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-334 AND 50-412

1.0 INTRODUCTION

This safety evaluation addresses a proposed change to the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and 2), Emergency Preparedness (EP) Plan. By letter dated September 27, 2002, as supplemented by letters dated April 8 and 19, 2003, and in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.54(q), FirstEnergy Nuclear Operating Company (the licensee) submitted a proposed change to the BVPS-1 and 2 EP Plan. The proposed change consists of removing the Personal Home Alerting Devices (PHADs) from the EP Plan and replacing them with new sirens.

2.0 REGULATORY EVALUATION

2.1 Applicable Regulations

Section 50.47(b)(5) of 10 CFR states, in part: "...and means to provide early notification and clear instruction to the populace within the Emergency Planning Zone (EPZ) have been established..."

Appendix E to 10 CFR Part 50, Section IV D.1, states, in part: "Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described." Section IV D.3 states, in part: "...each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ."

Section 350.4(e) of Title 44 of the *Code of Federal Regulations* (44 CFR), states in part: "FEMA [Federal Emergency Management Agency] has entered into a Memorandum of Understanding (MOU) with the NRC [Nuclear Regulatory Commission] to which it will furnish assessments, findings, and determinations as to whether State and local emergency response plans and preparedness are adequate and continue to be capable of implementation (e.g., procedures...and equipment adequacy)..."

Enclosure

In regard to State Plans, 44 CFR 350.12(b)(1) states that they “[a]re adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency.”

2.2 Applicable Guidance Documents

Regulatory Guide 1.101, “Emergency Planning and Preparedness for Nuclear Power Reactors,” Revision 3, states, in part: “The criteria and recommendations contained in Revision 1 of NUREG-0654/FEMA-REP-1 are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in onsite and offsite emergency response plans.”

NUREG-0654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” includes the following criteria for Alert Notification Systems (ANSs):

Section E.6 “Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instruction to the public...It is the licensees responsibility to demonstrate such means exist, regardless of who implements this requirement.”

Appendix 3 “The initial notification when appropriate, of the affected population within the plume exposure pathway EPZ must be completed in a manner consistent with assuring the public health and safety.”

FEMA-REP-10, “Standard Guide For the Evaluation of Alert and Notification Systems for Nuclear Power Plants,” includes the following criteria:

Section E.6.2 “To be acceptable, the emergency plan must describe administrative and physical means that ensure that the initial notification of the affected population within the plume exposure pathway EPZ can and will be completed in a manner consistent with 44 CFR 350.12(b)(1)...

The minimum acceptable design objectives for coverage by the system are:

a) capability for providing both an alert signal and an informational or instructional message on an area wide basis throughout the 10 mile EPZ, within 15 minutes.

b) the initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site.

c) special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ.”

The applicable regulation for making changes to a licensee's EP plan is 10 CFR 50.54(q). This regulation states that a licensee may change its radiological EP plan without NRC approval only if it does not decrease the effectiveness of the plan, and the plan, as changed continues to meet the planning standards of 10 CFR 50.47 and the requirements of Appendix E to 10 CFR Part 50. The licensee submitted the proposed change to the NRC in its application dated September 27, 2002, because of the significance of the proposed change to remove PHADs from the EP Plan.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed EP Plan change. The evaluation below will support the conclusion that: the proposed changes meet the guidance in NUREG-0654, and the proposed changes do not decrease the effectiveness of the EP plan, and that the plan, as changed, continues to meet the standards of Section 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

The licensee has proposed a change to the BVPS-1 and 2 EP Plan consisting of removing the PHADs and replacing them with sirens in the affected areas. The purpose of the sirens and PHADs are for offsite, general public notification of emergency conditions as deemed necessary by the State/County Agencies (i.e.; the licensee, fire, weather, etc.). The Siren System is maintained by the licensee, but controlled and activated by the County/Municipal Agencies. Some Fire Departments use specific sirens for their Department activation (along with radios, pagers, etc). However, PHADs are not used by any Fire Departments. The PHADs are only located in a portion of Beaver County, Pennsylvania, within the BVPS-1 and 2 10-mile EPZ.

Sound surveys were conducted by the licensee on the EPZ Siren System and six new sirens were installed in the Beaver County area that were considered serviced with PHAD coverage, and one additional siren was installed in Columbia County, Ohio, to augment siren coverage in a specific area. These installations were completed in April 2002. A "Supplement to the Beaver Valley Power Station Emergency Warning Notification System Design Report" (documentation of siren system modification and testing) was submitted to FEMA for evaluation.

FEMA conducted a review of the new siren sound study and documented the review in a letter dated August 15, 2002. It was determined that the ANS modification to replace areas that were originally covered by PHAD horns meets the applicable guidance of FEMA-REP-10.

Section 50.47(b)(5) of 10 CFR requires that a means be provided by which a plant's ANS system should function in terms of providing prompt alert notification to the public. The NRC staff's criteria for approving modifications to the public alert and notification system are that modifications must meet the design requirements of FEMA-REP-10 or are compliant with the FEMA-approved ANS design report. In addition, for any changes to the ANS, FEMA approval must be granted prior to implementation. The results of the sound study meet or exceed the requirements as specified by FEMA-REP-10. FEMA has also issued approval of the changes to the BVPS-1 and 2 ANS in a letter dated May 22, 2003. Therefore, the NRC staff finds that

replacing the PHADs with Federal Model 2001 sirens is adequate compensation to ensure the health and safety of the public, and the proposed changes are acceptable.

4.0 CONCLUSION

The NRC staff has determined that the licensee's proposed BVPS-1 and 2 EP Plan changes in its application dated September 27, 2002, as supplemented by the letters dated April 8 and 19, 2003, are acceptable. The NRC staff also finds that the BVPS-1 and 2 EP Plan changes meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E of 10 CFR Part 50. Therefore, the Commission concludes, based on the considerations discussed above, that: the proposed changes meet the guidance in NUREG-0654, and the proposed changes do not decrease the effectiveness of the EP plan, and that the plan, as changed, continues to meet the standards of Section 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Principal Contributor: K. Williams
T. Colburn

Date: July 7, 2003