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March 27, 2015

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

Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. DPR-53 and DPR-69  
NRC Docket Nos. 50-317 and 50-318

**Subject:** Supplemental Information - Atmospheric Dump Valves License Amendment Request

- References:**
1. Letter from G. H. Gellrich (Exelon) to Document Control Desk (NRC), dated January 13, 2014, License Amendment Request: Add Technical Specification for Atmospheric Dump Valves
  2. Letter from G. H. Gellrich (Exelon) to Document Control Desk (NRC), dated March 3, 2015, Request for Additional Information Regarding Atmospheric Dump Valves License Amendment Request

Reference 1 submitted a license amendment request to add a Technical Specification for the Atmospheric Dump Valves. As part of their review, the NRC staff has requested additional information and responses to the requested additional information were provided in Reference 2. During a subsequent phone call with the NRC staff on March 17, 2015, it was identified that supplemental information was needed to clarify the response provided in Reference 2. The requested information is in Attachment (1).

This additional information does not change the No Significant Hazards Determination provided in Reference 1. No regulatory commitments are contained in this letter.

Should you have questions regarding this matter, please contact Mr. Michael J. Fick at (410) 495-6714.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on March 27, 2015.

Respectfully,



George H. Gellrich  
Site Vice President

GHG/PSF/bjm

Attachment: (1) Supplemental Information

cc: NRC Project Manager, Calvert Cliffs  
NRC Regional Administrator, Region I

NRC Resident Inspector, Calvert Cliffs  
S. Gray, MD-DNR

**ATTACHMENT (1)**

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**SUPPLEMENTAL INFORMATION**

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**ATTACHMENT 1**  
**SUPPLEMENTAL INFORMATION**

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During a phone call with the NRC Staff on March 17, 2015, clarifying information was provided to address how the atmospheric dump valve (ADV) manual operator is designed to withstand a design basis event, including a seismic event.

GDC-2

As stated in our Final Safety Analysis Report submittal (1971) the plant design and construction proceeded based upon the intent of the draft General Design Criteria (GDC). General Design Criteria-2 (1967 draft) states, "Those systems and components of reactor facilities which are essential to the prevention of accidents which could affect the public health and safety or to mitigation of their consequences shall be designed, fabricated, and erected to performance standards that will enable the facility to withstand, without loss of the capability to protect the public, the additional forces that might be imposed by natural phenomena such as earthquakes, tornados, flooding conditions, winds, ice, and other local site effects. The design bases so established shall reflect: (a) appropriate consideration of the most severe of these natural phenomena that have been recorded for the site and the surrounding area and (b) an appropriate margin for withstanding forces greater than those recorded to reflect uncertainties about the historical data and their suitability as a basis for design."

Unlike the current GDC-2, the draft GDC did not require consideration of appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena. Therefore, a number of systems, including the ADVs, were not designed for a combination of accident loads with natural phenomenon. The safety function of the ADVs is to respond to a Steam Generator Tube Rupture event; a seismic event is not considered concurrently with a Steam Generator Tube Rupture event.

Seismic II/I

The issue of seismic qualification of mechanical and electrical equipment was designated as Unresolved Safety Issue (USI) A-46 in December 1980. The safety concern was that equipment in nuclear power plants with construction permit applications docketed before 1972 was not reviewed according to current licensing criteria. The NRC Staff determined that it was not feasible to require older operating plants to meet current licensing requirements (NUREG-1211). Therefore, a number of alternative processes were investigated. The process chosen used seismic experience data to evaluate the seismic capability of equipment. This alternative provided the most reasonable and cost effective means to ensure that the intent of GDC-2 is met. To implement this resolution to USI A-46, the NRC issued GL 87-02. Supplement 1 to GL 87-02 approved the industry's methodology and criteria for evaluating equipment.

This methodology was used to evaluate the Calvert Cliffs ADVs and their enclosures in the 1990's. The methodology included addressing potential adverse seismic interactions (seismic II/I concerns).

Recently, the chain wheel and in-line gear assembly supports on top of the ADV enclosures were once again evaluated as part of a replacement effort. Since the equipment is located in the Auxiliary Building, in the vicinity of SR-CATI equipment, these components are required to be supported in accordance with seismic II/I criteria (i.e., no damage to safety-related components from this equipment shall occur during or after a safe shutdown earthquake). The evaluation was performed to compare the original components to the new components to determine that they continue to meet seismic II/I criteria.

**ATTACHMENT 1**  
**SUPPLEMENTAL INFORMATION**

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Depending on which unit they are installed, the chain wheel and in-line gear assembly supports consist of either stiffened, welded steel plate mounting brackets, or W4x13 steel sections, with welded adaptor plates. Both of these configurations are welded directly to the top of their respective ADV enclosure.

By observation of the structural robustness of the welded supports it was determined that the new replacement chain wheel and in-line gear assemblies, subjected to design basis seismic demand accelerations, will not adversely impact the structural integrity of their supports, the ADV enclosures, or nearby Category I equipment. The support brackets are sufficiently stiffened and welded to preclude them from developing significant bending or shear stresses. The chain wheel and in-line gear assembly supports are acceptable.

Maintenance Rule

The ADVs and the manual operator have a maintenance rule function and are included in the Maintenance Rule program. Specifically, the Maintenance Rule function for the ADV manual operator is, "Manual Operators for ADVs operate to depressurize the affected Steam Generator." One functional failure is allowed per 24 month period.