



**PECO NUCLEAR**

A UNIT OF PECO ENERGY

Station Support Department

NRCB No. 96-02  
10CFR50.54(f)

PECO Energy Company  
Nuclear Group Headquarters  
965 Chesterbrook Boulevard  
Wayne, PA 19087-5691

May 10, 1996

Docket Nos. 50-277  
50-278  
50-352  
50-353

License Nos. DPR-44  
DPR-56  
NPF-39  
NPF-85

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

Subject: Peach Bottom Atomic Power Station, Units 2 and 3  
Limerick Generating Station, Units 1 and 2  
Response to NRC Bulletin 96-02, "Movement of Heavy  
Loads Over Spent Fuel, Over Fuel in the Reactor Core,  
or Over Safety-Related Equipment"

Gentlemen:

By letter dated April 11, 1996, the NRC issued Bulletin (NRCB) No. 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core or Over Safety-Related Equipment." This Bulletin requests that licensees review their plans and capabilities for handling heavy loads (e.g., spent-fuel dry storage casks, and reactor cavity biological shield plugs) in accordance with existing regulatory guidelines [specifically NUREG-0612 (Phase I) and Generic Letter (GL) 85-11] and with their licensing basis as previously analyzed in the Final Safety Analysis Report (FSAR). Also, this Bulletin requires licensees to report to the NRC whether and to what extent they have complied with the requested actions contained in this Bulletin and provide a written response within 30 days of the date of this Bulletin.

Attached is PECO Energy's response to NRCB 96-02 for Peach Bottom Atomic Power Station, Units 2 and 3, and Limerick Generating Station, Units 1 and 2. Each reporting requirement is restated in the attachment followed by our response. This letter is being submitted under affirmation in accordance with 10CFR50.54(f), and the required affidavit is enclosed.

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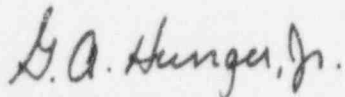
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If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,



G. A. Hunger, Jr.  
Director - Licensing

Attachment  
Enclosure

cc: T. T. Martin, Administrator, USNRC, Region I (w/ attachment & enclosure)  
N. S. Perry, USNRC Senior Resident Inspector, LGS (w/ attachment & enclosure)  
W. L. Schmidt, USNRC Senior Resident Inspector, PBAPS (w/ attachment & enclosure)

COMMONWEALTH OF PENNSYLVANIA

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ss.

COUNTY OF CHESTER

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D. B. Fetters, being first duly sworn, deposes and says:

That he is Vice President of PECO Energy Company; that he has read the foregoing response to NRC Bulletin 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment," for Peach Bottom Atomic Power Station, Units 2 and 3, and Limerick Generating Station, Units 1 and 2, and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information, and belief.

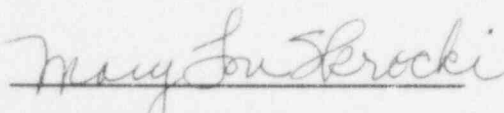


Vice President

Subscribed and sworn to

before me this 10<sup>th</sup> day

of May 1996



Notary Public

Notarial Seal  
Mary Lou Skrocki, Notary Public  
Tredyffrin Twp., Chester County  
My Commission Expires May 17, 1999

Member, Pennsylvania Association of Notaries

## **ATTACHMENT**

Peach Bottom Atomic Power Station, Units 2 and 3  
Limerick Generating Station, Units 1 and 2

Response to NRC Bulletin 96-02, "Movement of Heavy Loads  
Over Spent Fuel, Over Fuel in the Reactor Core,  
or Over Safety-Related Equipment"

**Peach Bottom Atomic Power Station, Units 2 and 3  
Limerick Generating Station, Units 1 and 2  
Response to NRC Bulletin 96-02**

On April 11, 1996, the NRC issued NRC Bulletin (NRCB) No. 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment," to alert licensees for nuclear power reactors to the importance of complying with existing regulatory guidelines associated with the control and handling of heavy loads at nuclear power plants while the plant is operating (in all modes other than cold shutdown, refueling and defueled). The Bulletin noted that some licensees have moved or are planning to move heavy loads, such as spent fuel shipping casks, transfer casks, and reactor cavity biological shield blocks, during plant operations, and, if these loads experience uncontrolled movement or are dropped on safety-related equipment, the impacted equipment may be unable to perform its functions. A specific example noted in the Bulletin involved a licensee who was scheduled to begin moving spent fuel in dry storage casks weighing 100 tons. The NRC audited the 10 CFR 50.59 evaluations performed by the licensee in support of the proposed activities and determined that the proposed tasks represented an unreviewed safety question. This determination was based on the facts that the activity involved loads heavier than previously analyzed in the FSAR, that the load drop had not been evaluated over the entire load path and that the possibility of a load drop in the reactor building while the reactor is at power could result in consequences that are greater than those previously postulated in the FSAR. Therefore, 10CFR50.59 required that the licensee submit an application for a license amendment to the NRC for review and approval pursuant to the requirements of 10 CFR 50.90.

Accordingly, NRCB 96-02 requires that all holders of operating licenses for nuclear power reactors review plans and capabilities for handling heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines and determine whether the activities are within the licensing basis. If necessary, a license amendment request should be submitted. NRCB 96-02 also requests that licensees determine whether changes to Technical Specifications (TS) will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug and associated lifting devices) over fuel assemblies in the spent fuel pool. In addition, NRCB 96-02 requires that all licensees of nuclear power reactors provide a written response within 30 days of the date of the bulletin as stipulated in the "Required Response" section. Each reporting requirement is restated below followed by PECO Energy's response for PBAPS, Units 2 and 3, and LGS, Units 1 and 2.

Reporting Requirement 1

For licensees planning to implement activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment within the next 2 years from the date of this bulletin, provide the following:

A report, within 30 days of the date of this bulletin, that addresses the licensee's review of its plans and capabilities to handle heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. The report should also indicate whether the activities are within the licensing basis and should include, if necessary, a schedule for submission of a license amendment request. Additionally, the report should indicate whether changes to Technical Specifications will be required.

## Response

PECO Energy is reviewing its plans and capabilities for handling heavy loads at PBAPS, Units 2 and 3, and LGS, Units 1 and 2, while the reactors are at power as requested in this NRCB 96-02. This effort involves reviewing the following licensing basis documentation associated with moving heavy loads at PBAPS and LGS.

- PBAPS and LGS Heavy Load Program (i.e., NUREG-0612 implementation) documentation.
- Applicable NRC Safety Evaluation Reports (SERs).
- PBAPS and LGS Updated Final Safety Analysis Reports (UFSARs).
- Applicable heavy loads implementing procedures.
- Applicable commitments.
- Heavy Loads Training Program requirements.

To date this review has determined that NUREG-0612, Phase I, commitments are being effectively implemented at PBAPS and LGS. Actions have been taken to enhance some of our original commitments ( e.g., training), and most NUREG-0612, Phase II, actions were retained (e.g., height and weight restrictions, and electrical interlocks on Reactor Building cranes and Pump Structure crane).

Also included in this review were other or new type of load lifts that have been performed since the issuance of the NRC SERs. This review involved evaluating previous 10CFR50.59 Reviews prepared in support of heavy load movements at PBAPS and LGS.

One specific heavy load activity presently being reviewed at both PBAPS and LGS is the lifting of the reactor cavity biological shield plugs while the units are operating. The reactor cavity shield plugs are moved in preparation for refueling outages at PBAPS and LGS while at low power (i.e., less than 25% power). Lifting of the shield plugs is also used at PBAPS for calibration of the load cell of the Reactor Building crane during plant operation. The Reactor Building cranes at PBAPS and LGS meet single-failure proof requirements, although the associated lift points on the shield plugs do not meet the single failure proof criteria. The lifting of the reactor cavity shield plugs does meet NUREG-0612, Phase I, guidelines and Generic Letter 85-11 which stated that the implementation of NUREG-0612, Phase I, has provided sufficient protection such that the risk associated with potential heavy load drops is acceptably small. As a result, past reviews determined that this activity was within the scope of the approved heavy loads program. Therefore, the possibility of a load drop was deemed not significant, and no rigorous load drop analysis was performed to evaluate the potential consequences of a load drop of a shield plug on an operating reactor area. However, in light of the recommendations specified in NRCB 96-02, we have determined that additional evaluation is necessary to support the lifting of reactor cavity shield plugs while at low power at PBAPS and LGS in order to adequately address the Requested Actions stipulated in this Bulletin to ensure there is no unreviewed safety question. If required by this additional evaluation, a load drop analysis would be performed to determine if there would be an unreviewed safety question.

Some changes of original commitments have been identified during this current review; however, we consider these changes to be minor. Additional evaluations are being performed to ensure that these issues are resolved.



Future activities, at PBAPS and LGS, involving the handling of heavy loads near spent fuel, fuel in the reactor core, or safety-related equipment within the scope of NRCB 96-02 will be evaluated on a case-by-case basis. Based on the results of these evaluations, the appropriate actions will be taken as required by NRCB 96-02.

Other heavy load lifts occur during power operations on the refuel floors at PBAPS and LGS. However, these load lifts are performed within the height and weight restrictions noted in our heavy loads procedures or are rigged such that they meet the criteria for a single-failure proof equivalent lift. Therefore, we consider these lifts to be within the existing analysis for heavy loads at PBAPS and LGS and thereby satisfy the requested action described in NRCB 96-02.

At this time there appears to be no need to request changes to the PBAPS, Units 2 and 3, and LGS, Units 1 and 2, Technical Specifications.

#### Reporting Requirement 2

For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) and that involve a potential load drop accident that has not previously been evaluated in the FSAR, submit a license amendment request in advance (6-9 months) of the planned movement of the loads so as to afford the staff sufficient time to perform an appropriate review.

#### Response

Based on PECO Energy's review of its plans and capabilities to handle heavy loads while the reactor is at power, and the Requested Actions stipulated in NRCB 96-02, we have determined that further review is necessary to facilitate lifting of the reactor shield plugs at low reactor power conditions (e.g., below 25% power) in preparation for refueling outages at PBAPS and LGS. As indicated above, PECO Energy will continue to evaluate, on a case-by-case basis, any heavy load lifts that are made during power operations at PBAPS and LGS against the recommendations delineated in this Bulletin, and if necessary, submit the appropriate license amendment request.

#### Reporting Requirement 3

For licensees planning to move dry storage casks over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) include in item 2 above, a statement of the capability of performing the actions necessary for safe shutdown in the presence of radiological source term that may result from a breach of the dry storage cask, damage to the fuel, and damage to safety-related equipment as a result of a load drop inside the facility.

#### Response

PECO Energy does not anticipate using dry storage casks in the next two years; therefore, a statement regarding the capability of performing the actions as described in Reporting Requirement 3 above is not considered necessary at this time. However, in the event dry storage casks are used in the future at PBAPS, Units 2 and 3, or LGS, Units 1 and 2, an analysis will be performed and will consider the capability to perform the actions necessary to achieve safe shutdown as discussed in the above Reporting Requirement.

Reporting Requirement 4

For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled), determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug) over fuel assemblies in the spent fuel pool and submit the appropriate information in advance (6-9 months) of the planned movement of the loads for NRC review and approval.

Response

PECO Energy has reviewed planned activities associated with handling heavy loads as described in Reporting Requirement 4 above for PBAPS, Units 2 and 3, and LGS, Units 1 and 2, and determined that no changes to Technical Specifications are necessary at this time to facilitate the handling of heavy loads over fuel assemblies in the Spent Fuel Pool.