

November 18, 2010

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Peach Bottom Atomic Power Station, Unit 1  
Facility Operating License No. DPR-12  
NRC Docket No. 50-171

Subject: Request for Exemption from 10 CFR 73 and Exemption from 10 CFR 50.54(p)  
Security Requirements

Reference: NRC Letter to Exelon Nuclear (M. Pacilio), "Peach Bottom Atomic Power Station  
Unit 1 - Revised Power Reactor Security Rule," dated August 2, 2010

In accordance with 10 CFR 50.12 and 10 CFR 73.5, "Specific exemptions," Exelon Generation Company, LLC (Exelon) is requesting a permanent exemption from the following security requirements for Peach Bottom Atomic Power Station (PBAPS) Unit 1: Section (p) under 10 CFR 50.54 "Conditions of Licenses" and 10 CFR 73 "Physical Protection of Plants and Materials."

The requested exemption would eliminate the requirements for the security, fitness for duty and access authorization for PBAPS Unit 1, since there is no longer any Special Nuclear Material (SNM) located within PBAPS Unit 1 other than that contained in plant systems as residual contamination. Attachment 1 provides justification, as required in 10 CFR 73.5 and 10 CFR 50.12, that the exemption would not endanger life or property or the common defense and security, and is otherwise in the public interest.

The changes proposed in this exemption are not required to address an immediate safety or security concern, but rather are being submitted in response to the referenced NRC letter requesting Exelon to evaluate the applicability of the current 10.CFR 73 to PBAPS Unit 1.

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This exemption request contains no new regulatory commitments. Exelon requests approval of this exemption request by December 1, 2011.

If you have any questions or require additional information, please contact Doug Walker at 610-765-5952.

Respectfully,



Pamela B. Cowan  
Director, Licensing and Regulatory Affairs  
Exelon Generation Company, LLC

Attachments: 1. Request for Exemption from 10 CFR 50.54(p) "Conditions of Licenses" and 10 CFR 73, "Physical Protection of Plants and Materials"

cc:	Regional Administrator - NRC Region I	w/attachments
	NRC Senior Resident Inspector – PBAPS	"
	NRC Project Manager, NRR – PBAPS Unit 1	"

**ATTACHMENT 1**

**Peach Bottom Atomic Power Station, Unit 1**

**Docket No. 50-171**

**Request for Exemption from**

**10 CFR 50.54(p) "Conditions of Licenses" and**

**10 CFR 73, "Physical Protection of Plants and Materials"**

## ATTACHMENT 1

### REQUEST FOR EXEMPTION FROM 10 CFR 50.54(p) "CONDITIONS OF LICENSES" AND 10 CFR 73 "PHYSICAL PROTECTION OF PLANTS AND MATERIALS"

#### **I. SPECIFIC EXEMPTION REQUEST**

In accordance with 10 CFR 50.12 and 10 CFR 73.5, "Specific exemptions," paragraphs, Exelon Generation Company, LLC (Exelon) is requesting a permanent exemption from the following security requirements for Peach Bottom Atomic Power Station (PBAPS) Unit 1: Section (p) under 10 CFR 50.54 "Conditions of Licenses" and 10 CFR 73 "Physical Protection of Plants and Materials." The requested exemption would eliminate the requirements for the security, fitness for duty and access authorization for PBAPS Unit 1, since all special nuclear material (SNM) has been removed from the site.

#### **Background:**

Exelon is the licensee and holder of Facility Operating License No. DPR-12 issued for PBAPS Unit 1, located in York County, PA. PBAPS Unit 1 is a permanently shutdown nuclear reactor facility. PBAPS Unit 1 was a high temperature, gas cooled reactor that was operated from June of 1967 to its final shutdown on October 31, 1974. All spent fuel has been removed from the site, and the spent fuel pool is drained and decontaminated. The reactor vessel, primary system piping, and steam generators remain in place. The facility is permanently shut down in a SAFSTOR condition and defueled and Exelon is no longer authorized to operate or place fuel in the reactor. PBAPS Unit 1 is currently licensed pursuant to Section 104(b) of the Atomic Energy Act of 1954, as amended, and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities" to possess but not operate the facility.

All residual activity from the final decommissioned plant configuration is contained within the PBAPS Unit 1 Containment and Spent Fuel Pool Buildings. Within the Containment Building, more than 99.9 percent of the estimated 0.2 megacuries of activity is contained inside the reactor vessel in the form of induced activity in the vessel walls, reactor internals and control rod couplings (Reference 4). The reactor vessel is contained inside the reactor vessel cavity and is accessible only by removing the concrete missile shields, the refueling port flanges and the refueling port shield plugs. The missile shields can only be removed with the building crane which is electrically deactivated.

#### **II. BASIS FOR EXEMPTION REQUEST**

Pursuant to 10 CFR 50.12, the NRC may grant exemptions from the requirements of 10 CFR Part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security, and (2) when special circumstances are present. Special circumstances are present when application of the regulation in the particular circumstances would not serve the underlying purpose of the rule and when compliance would result in costs significantly in excess of those incurred by others similarly situated.

Also, pursuant to 10 CFR 73.5 “Specific exemptions,” the NRC may grant exemptions from the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Section 50.54(p)(1) of Title 10 of the *Code of Federal Regulations* states,

*“The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C of Part 73 of this chapter for affecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan.”*

Part 73 of Title 10 of the *Code of Federal Regulations*, “Physical Protection of Plant and Materials,” provides,

*“This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used.”*

In Section 73.55, entitled “Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage,” paragraph (b)(1) states,

*“The licensee shall establish and maintain a physical protection program, to include a security organization, which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety.”*

The NRC revised 10 CFR 73.55, in part to include the preceding language, through the issuance of a final rule on March 27, 2009. The revised regulation stated that it was applicable to all Part 50 licensees. In an August 2, 2010, letter to Exelon (reference 1), the NRC stated that some Part 50 licensees (e.g., a Part 50 licensee with a facility undergoing decommissioning) may not have recognized the applicability of the revised Power Reactor Security Rule to their facility. As a result, Part 50 licensees with facilities in decommissioning or decommissioned status may be out of compliance with the current 10 CFR 73.55 security requirements. Accordingly, the NRC informed licensees with facilities in decommissioning status and other stakeholders that the requirements of 10 CFR 73.55 were applicable to all Part 50 licensees. In a letter dated August 2, 2010, the NRC informed Exelon of the applicability of the revised rule to PBAPS Unit 1 and that it would need to comply with the revised rule or request an exemption.

The security requirements of 10 CFR Part 73, as applicable to a 10 CFR Part 50 licensed facility, presume that the purpose of the facility is to possess and utilize SNM. With the completion of the transfer of the PBAPS Unit 1 spent nuclear fuel to the Idaho National Engineering and Environmental Laboratory for reprocessing on February 17, 1977, there is no longer any SNM located within PBAPS Unit 1 other than that contained in plant systems as residual contamination. The remaining radioactive material is in a form that does not pose a risk of removal (i.e., an intact reactor pressure vessel) and is well dispersed and is not easily aggregated. With the removal of the fuel, the potential for radiological sabotage or diversion of SNM at the 10 CFR Part 50 licensed site was eliminated. Therefore, the continued application of the 10 CFR Part 73 requirements to the PBAPS Unit 1 facility would no longer be necessary to achieve the underlying purpose of the rule.

Additionally, as has been noted at other decommissioning nuclear power facilities, with the removal of the spent nuclear fuel from the site, PBAPS Unit 1 site would be comparable to a byproduct licensee that uses general industrial security (i.e., locks and barriers) to protect the public health and safety. The continued application of 10 CFR Part 73 security requirements would cause Exelon to expend significantly more funds for security requirements than other source and byproduct facilities. Therefore, compliance with 10 CFR Part 73 would result in costs significantly in excess of those incurred by others similarly situated.

Based on the above, the lack of the fuel containing SNM at PBAPS Unit 1 constitutes special circumstances. The possession and responsibility for the security of the SNM was transferred to the Idaho National Engineering and Environmental Laboratory in 1977. Other than residual contamination as previously noted, SNM is no longer located at the PBAPS Unit 1 facility. Therefore, protection of the SNM is no longer a requirement of the licensee's 10 CFR Part 50 license. With no SNM to protect, there is no need for a safeguards contingency plan or procedures, physical security plan, guard training and qualification plan, or cyber security plan for PBAPS Unit 1.

Regarding the remaining byproduct material, PBAPS Unit 1 is located within the site Owner Controlled Area which is routinely surveyed and patrolled to detect and deter unauthorized access. The Exclusion Area consists of an area within the PBAPS site Owner Controlled Area which is enclosed within locked barriers, and contains the containment vessel, spent pool fuel building, and Radwaste building. Entry to the Containment Building or the Spent Fuel Pool Building requires the use of a key to unlock the doors to those buildings. Entry to radiation areas requires additional controls to gain access.

#### Related Precedent

On February 20, 2001, Sacramento Municipal Utility District (SMUD) submitted a similar request to the NRC in Letter MPC&D 01-012, "Proposed License Amendment No. 195 and Exemption from 10 CFR 50.54(p) and 10 CFR Part 73," for the Rancho Seco Nuclear Generating Station (Reference 2). On October 10, 2002, the NRC approved the SMUD exemption request.

On June 16, 2008, the NRC granted Humboldt Bay Power Plant Unit 3 a permanent exemption from security requirements in Section (p) under 10 CFR 50.54 "Conditions of Licenses" and 10 CFR 73 "Physical Protection of Plants and Materials," based on the fact that in 1985, Humboldt Bay Unit 3 was placed in a SAFSTOR status and all fuel had been removed to an Independent Spent Fuel Storage Installation.

On October 8, 2010, the NRC granted Fermi Unit 1 a permanent exemption from the following security requirements: Section (p) under 10 CFR 50.54 "Conditions of Licenses" and 10 CFR 73 "Physical Protection of Plants and Materials." Fermi 1 was a fast breeder reactor power plant cooled by sodium and operated at essentially atmospheric pressure. In 1972, the decision was made to decommission Fermi 1. The fuel and blanket subassemblies were shipped offsite in 1973. The facility is permanently shut down and defueled and the licensee is no longer authorized to operate or place fuel in the reactor.

### **III. ENVIRONMENTAL ASSESSMENT**

In accordance with 10 CFR 51.30 and 51.32, the following information is provided in support of an environmental assessment and finding of no significant impact for the proposed action. The proposed action would result in a permanent exemption from the requirements of Section (p) under 10 CFR 50.54 "Conditions of Licenses" and 10 CFR 73 "Physical Protection of Plants and Materials" for Peach Bottom Atomic Power Station Unit 1.

The proposed exemption will not significantly increase the probability or consequences of accidents, no changes are being made in the types or quantities of any radiological effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed exemption. In addition, the proposed exemption does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological impacts associated with the proposed exemption. As a result, in accordance with the requirements of 10 CFR 51.32, the proposed exemption will not have a significant effect on the quality of the human environment.

### **IV. CONCLUSION**

As demonstrated above, Exelon considers that this exemption request of 10 CFR 50.54(p) is in accordance with the criteria of 10 CFR 50.12. Specifically, Exelon has determined that, pursuant to 10 CFR 50.12(a), an exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

The criteria for granting specific exemptions from 10 CFR 73 regulations are specified in 10 CFR 73.5. In accordance with 10 CFR 73.5(a)(1), the NRC is authorized to grant an exemption upon determining that the exemption is authorized by law, since the application of the regulation in this particular circumstance would not endanger life or property or the common defense and security, and are otherwise in the public interest .

Both exemptions are based on the transfer of the Special Nuclear Material from the PBAPS Unit 1 site to the Idaho National Engineering and Environmental Laboratory for reprocessing in 1977. Special circumstances are present based on the removal of the spent nuclear fuel from PBAPS Unit 1. Therefore, Exelon hereby requests an exemption from the requirements of 10 CFR 50.54(p) and 10 CFR 73 for PBAPS Unit 1.

### **V. REFERENCES**

1. NRC Letter to Exelon Nuclear (M. Pacilio), "Peach Bottom Atomic Power Station Unit 1 - Revised Power Reactor Security Rule," dated August 2, 2010.
2. NRC Letter to Sacramento Municipal Utility District (Mr. Steve J. Redeker), "Rancho Seco Nuclear Generating Station - Issuance of Amendment and Exemption from Requirements of 10 CFR Part 50 Security Requirements," dated October 10, 2002.
3. NRC Letter to Pacific Gas and Electric Company (Mr. John T. Conway), "Humboldt Bay Power Plant Unit 3 - Issuance of Amendment and Exemption from Requirements of 10 CFR Part 50 and 10 CFR Part 73 Security Requirements," dated June 16, 2008.

4. Philadelphia Electric Company Letter to U.S. Nuclear Regulatory Commission (Harold R. Denton), Application for Amendment of Facility License DPR-12, dated March 4, 1987.
5. NRC Letter to J. H. Plona (DTE Energy), "Enrico Fermi Atomic Power Plant Unit 1 – Issuance of Exemption from Requirements of 10 CFR Part 50 and 10 CFR Part 73 Security Requirements," dated October 8, 2010..
6. Letter from W. M. Alden, Philadelphia Electric Company, to Mr. Victor Stello, U. S. Nuclear Regulatory Commission, "Decommissioning Peach Bottom Unit 1, Final Report", dated November 6, 1978.