

NUCLEAR REGULATORY COMMISSION

EXELON NUCLEAR

DOCKET NO. 50-171

NRC-2011-0141

PEACH BOTTOM ATOMIC POWER STATION, UNIT 1

EXEMPTION FROM CERTAIN SECURITY REQUIREMENTS

1.0 BACKGROUND

Exelon Nuclear is the licensee and holder of Facility Operating License No. DPR-12 issued for Peach Bottom Atomic Power Station (PBAPS), Unit 1, located in York County, PA. PBAPS Unit 1 is a permanently shut down 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, 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 radioactivity 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 radioactivity 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.

2.0 ACTION

Section 50.54(p)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR) states in part, "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 10 CFR, "Physical Protection of Plant and Materials," provides in part in 73.1(a), "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 U.S. Nuclear Regulatory Commission (NRC or the Commission) 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. The NRC became aware that many Part 50 licensees with facilities in decommissioning status did not recognize the applicability of this regulation to their facility. 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. By letter dated August 2, 2010, the NRC informed Exelon Nuclear of the applicability of the revised rule and stated that it would have to evaluate the applicability of the regulation to its facility and either make appropriate changes or request an exemption.

By letter dated November 18, 2010, Exelon Nuclear responded to the NRC's letter and requested exemptions from the security requirements in 10 CFR Part 73 and 10 CFR 50.54(p).

3.0 DISCUSSION

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, 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, for example, when application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or 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 Commission may, upon application of any interested person or upon its own initiative, grant exemptions from the regulations in Part 73 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.

The purpose of the security requirements of 10 CFR Part 73, as applicable to a 10 CFR Part 50 licensed facility, is to prescribe requirements for a facility that possesses and utilizes special nuclear material (SNM). The transfer of the PBAPS Unit 1 spent nuclear fuel to the Idaho National Engineering and Environmental Laboratory (INEEL) for reprocessing was completed on February 17, 1977. With the completion of the fuel transfer, 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 containing SNM, 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 PBAPS Unit 1 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, the 10 CFR Part 50 licensed site would be comparable to a source and 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 the licensee 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 NRC has determined that the removal of the fuel containing SNM at the 10 CFR Part 50 licensed site constitutes special circumstances. The possession and responsibility for the security of the SNM was transferred to INEEL and is no longer the responsibility of the licensee. 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 the PBAPS Unit 1, 10 CFR Part 50 licensed site.

4.0 CONCLUSION

Accordingly, the Commission 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 based on the continued maintenance of appropriate security requirements for the remaining SNM contained in plant systems as residual contamination. Additionally, special circumstances are present based on the removal of the spent nuclear fuel from the 10 CFR Part 50 licensed site. Therefore, the Commission hereby grants Exelon Nuclear an exemption from the requirements of 10 CFR 50.54(p) at PBAPS Unit 1.

The Commission has also determined that, pursuant to 10 CFR 73.5, an exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest because the security requirements for the spent fuel containing SNM are no longer the responsibility of the licensee. Therefore, the Commission hereby grants Exelon Nuclear an exemption from the fixed site physical protection requirements of 10 CFR Part 73 at PBAPS Unit 1. The fixed site physical protection requirements of 10 CFR Part 73 are delineated in §§ 73.20, 74.40, 73.45, 73.46, 73.50, 73.51, 73.54, 73.55, 73.56, 73.57, 73.58, 73.59, 73.60, 73.61, 73.67, Appendix B and Appendix C. The requirements for protection of safeguards information, physical protection of SNM in transit, and records and reports, contained in these or other sections of Part 73 continue to apply. To the extent that the licensee's request for an exemption from 10 CFR Part 73 included the requirements other than for the fixed site physical protection requirements, that request is denied.

Part of this licensing action meets the categorical exclusion provision in 10 CFR Part 51.22(c)(25), as part of this action is an exemption from the requirements of the Commission's

regulations and (i) there is no significant hazards consideration; (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (iii) there is no significant increase in individual or cumulative public or occupational radiation exposure; (iv) there is no significant construction impact; (v) there is no significant increase in the potential for or consequences from radiological accidents; and (vi) the requirements from which an exemption is sought involve safeguard plans. Therefore, this part of the action does not require either an environmental assessment or an environmental impact statement.

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact related to part of this exemption was published in the *Federal Register* on June 28, 2011 (76 FR 37842). Based upon the environmental assessment, the Commission has determined that issuance of this exemption will not have a significant effect on the quality of the human environment.

These exemptions are effective immediately.

Dated at Rockville, Maryland, this 1st day of August 2011.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

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