

**NUCLEAR REGULATORY COMMISSION**

**Docket No. 50-219**

**Exelon Generation Company, LLC**

**Oyster Creek Nuclear Generating Station**

**Exemption**

**I. Background.**

Exelon Generation Company, LLC (Exelon, the licensee) is the holder of Renewed Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station (Oyster Creek). The facility is located in the town of Forked River, Ocean County, New Jersey.

By letter dated February 14, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18045A084), Exelon submitted to the U.S. Nuclear Regulatory Commission (NRC) a certification in accordance with Section 50.82(a)(1)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR), stating its determination to permanently cease operations at Oyster Creek no later than October 31, 2018. By letter dated September 25, 2018 (ADAMS Accession No. ML18268A258), Exelon submitted to the NRC a certification in accordance with 10 CFR 50.82(a)(1)(ii), stating that Oyster Creek permanently ceased power operations on September 17, 2018, and that, as of September 25, 2018, all fuel had been permanently removed from the Oyster Creek reactor vessel. By letter dated December 30, 2014 (ADAMS Accession No. ML14365A067), Exelon submitted the Oyster Creek Irradiated Fuel Management Plan (IFMP) pursuant to 10 CFR 50.54(bb) and Preliminary Decommissioning Cost Estimate (DCE). The DCE was updated by letter dated March 30, 2016 (ADAMS Accession No. ML16090A067). By letter dated May 21, 2018 (ADAMS Accession No. ML18141A775), Exelon submitted a Post-Shutdown Decommissioning Activities Report (PSDAR) and site-specific DCE for Oyster Creek.

## II. Request/Action.

By letter dated March 22, 2018 (ADAMS Accession No. ML18081A201), Exelon submitted a request for exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv). The exemption from 10 CFR 50.82(a)(8)(i)(A) would permit Exelon to make withdrawals from the Oyster Creek Decommissioning Trust Fund (DTF) for irradiated fuel management and site restoration activities in accordance with the Oyster Creek DCE. The exemption from 10 CFR 50.75(h)(1)(iv) would also permit Exelon to make these withdrawals without prior notification of the NRC, similar to withdrawals for decommissioning activities made in accordance with 10 CFR 50.82(a)(8). By separate letters dated March 30, 2016, and May 21, 2018, Exelon submitted updates to the Oyster Creek DCE.

As part of its exemption request, Exelon provided Table 2, "Annual SAFSTOR Decommissioning Fund Cash Flow for Oyster Creek Nuclear Generating Station," that shows the annual DTF cash flow for Oyster Creek, while in SAFSTOR (deferred dismantling). Table 2 contains the projected withdrawals from the DTF needed to cover the estimated costs of radiological decommissioning, irradiated fuel management, and site restoration activities as projected on the day of the application. Subsequent to its exemption request, Exelon provided the DTF balance and cost estimates for these same activities in its letter dated May 21, 2018, for the Oyster Creek PSDAR and in Attachment 4 to its March 28, 2018, annual report on the status of decommissioning funding for Oyster Creek (ADAMS Accession No. ML18087A150). The NRC staff considered each of these submittals in its review of the exemption request.

The requirements of 10 CFR 50.82(a)(8)(i)(A) restrict withdrawals from DTFs to expenses for legitimate decommissioning activities consistent with the definition of decommission in 10 CFR 50.2. The definition of "decommission" in 10 CFR 50.2 is:

to remove a facility or site safely from service and reduce residual radioactivity to a level that permits-

- (1) Release of the property for unrestricted use and termination of the license; or
- (2) Release of the property under restricted conditions and termination of the license.

This definition does not include activities associated with irradiated fuel management and site restoration activities. The requirements of 10 CFR 50.75(h)(1)(iv) also restrict the use of DTF disbursements (other than for ordinary administrative costs and other incidental expenses of the fund in connection with the operation of the fund) to decommissioning expenses until final radiological decommissioning is completed. Therefore, an exemption from 10 CFR 50.82(a)(8)(i)(A) is needed to allow Exelon to use funds from the Oyster Creek DTF for irradiated fuel management and site restoration activities at Oyster Creek. The requirements of 10 CFR 50.75(h)(1)(iv) further provide that, except for withdrawals being made under 10 CFR 50.82(a)(8) or for payments of ordinary administrative costs and other incidental expenses of the fund in connection with the operation of the fund, no disbursement may be made from the DTF without written notice to the NRC at least 30 working days in advance. Therefore, an exemption from 10 CFR 50.75(h)(1)(iv) is also needed to allow Exelon to use funds from the Oyster Creek DTF for irradiated fuel management and site restoration activities at Oyster Creek without prior NRC notification.

### **III. 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 (1) when the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and (2)

when any of the special circumstances listed in 10 CFR 50.12(a)(2) are present. These special circumstances include, among other things:

(a) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; and

(b) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

**A. The Exemptions are Authorized by Law**

The requested exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would allow Exelon to use a portion of the funds from the Oyster Creek DTF for irradiated fuel management and site restoration activities at Oyster Creek without prior notice to the NRC, in the same manner that withdrawals are made under 10 CFR 50.82(a)(8) for decommissioning activities. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50 when the exemptions are authorized by law. The NRC staff has determined, as explained below, that granting the licensee's proposed exemptions will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations. Therefore, the exemptions are authorized by law.

**B. The Exemptions Present No Undue Risk to the Public Health and Safety**

The underlying purpose of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) is to provide reasonable assurance that adequate funds will be available for the radiological decommissioning of power reactors. Based on the site-specific DCE and the cash flow analysis, use of a portion of the Oyster Creek DTF for irradiated fuel management and site

restoration activities at Oyster Creek will not adversely impact Exelon's ability to complete radiological decommissioning within 60 years and terminate the Oyster Creek license. Furthermore, an exemption from 10 CFR 50.75(h)(1)(iv) to allow the licensee to make withdrawals from the DTF for irradiated fuel management and site restoration activities without prior written notification to the NRC will not affect the sufficiency of funds in the DTF to accomplish radiological decommissioning because such withdrawals are still constrained by the provisions of 10 CFR 50.82(a)(8)(i)(B) – (C) and are reviewable under the annual reporting requirements of 10 CFR 50.82(a)(8)(v) – (vii).

According to the application dated March 22, 2018, there are no new accident precursors created by using the DTF in the proposed manner. Thus, the probability of postulated accidents is not increased. Also, based on the above, the consequences of postulated accidents are not increased. No changes are being made in the types or amounts of effluents that may be released offsite. There is no significant increase in occupational or public radiation exposure. Therefore, the requested exemptions will not present an undue risk to the public health and safety.

**C. The Exemptions are Consistent with the Common Defense and Security**

The requested exemptions would allow Exelon to use funds from the Oyster Creek DTF for irradiated fuel management and site restoration activities at Oyster Creek. Irradiated fuel management under 10 CFR 50.54(bb) is an integral part of the planned Exelon decommissioning and license termination process and will not adversely affect Exelon's ability to physically secure the site or protect special nuclear material. This change to enable the use of a portion of the funds from the DTF for irradiated fuel management and site restoration activities has no relation to security issues. Therefore, the common defense and security is not impacted by the requested exemptions.

**D. Special Circumstances**

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), are present whenever application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the regulation.

The underlying purpose of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv), which restrict withdrawals from DTFs to expenses for radiological decommissioning activities, is to provide reasonable assurance that adequate funds will be available for radiological decommissioning of power reactors and license termination. Strict application of these requirements would prohibit the withdrawal of funds from the Oyster Creek DTF for activities other than radiological decommissioning activities at Oyster Creek, such as for irradiated fuel management and site restoration activities, until final radiological decommissioning at Oyster Creek has been completed.

The March 28, 2018, annual report on the status of decommissioning funding for Oyster Creek, and the May 21, 2018, PSDAR both report a DTF balance of \$982 million as of December 31, 2017. The cash flow analysis in Table 2 of the March 22, 2018, application is based on a beginning DTF balance of \$979 million as of December 31, 2017. The licensee stated that the beginning DTF balance was adjusted to account for decommissioning and irradiated fuel management planning costs incurred in 2017 that would be reimbursed if the exemption were granted. In its analysis provided in the enclosed Table, "NRC Cash Flow Analysis of Oyster Creek Decommissioning Trust Funds and Associated Costs, including Irradiated Fuel Management and Site Restoration," the NRC staff used the lesser opening DTF balance of \$979 million as a conservative estimate that reflects less money available to cover radiological decommissioning, irradiated fuel management, and site restoration costs. The Exelon analysis in the May 21, 2018, PSDAR projects the total radiological decommissioning

cost of Oyster Creek to be approximately \$1,109 million in 2017 dollars, the irradiated fuel management costs to be \$290 million in 2017 dollars, and the site restoration costs to be \$60.2 million in 2017 dollars. The estimated costs in the PSDAR are consistent with the estimated costs for site radiological decommissioning (\$1,103.7 million in 2017 dollars), ISFSI radiological decommissioning (\$5.8 million in 2017 dollars), irradiated fuel management (\$290 million in 2017 dollars), and site restoration (\$60.2 million in 2017 dollars) provided by Exelon in the March 22, 2018, exemption request.

The NRC staff performed an independent cash flow analysis of the DTF over the 60 year SAFSTOR period (assuming an annual real rate of return of 2 percent, as allowed by 10 CFR 50.75(e)(1)(ii)) and determined the projected earnings of the DTF. The results of the staff's analysis are presented in the enclosed Table. As shown in the enclosed Table, the NRC staff confirmed that the current funds in the DTF and projected earnings provide reasonable assurance of adequate funding to complete all NRC required radiological decommissioning activities, and also to pay for irradiated fuel management and site restoration activities. Therefore, the NRC staff finds that Exelon has provided reasonable assurance that adequate funds will be available for the radiological decommissioning of Oyster Creek, even with the disbursement of funds from the DTF for irradiated fuel management and site restoration activities. Consequently, the NRC staff concludes that application of the requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) that funds from the DTF only be used for radiological decommissioning activities and not for irradiated fuel management and site restoration activities is not necessary to achieve the underlying purpose of the rule; thus, special circumstances are present supporting approval of the exemption request.

In its submittal, Exelon also requested exemption from the requirement of 10 CFR 50.75(h)(1)(iv) concerning prior written notification to the NRC of withdrawals from the DTF to fund activities other than radiological decommissioning. The underlying purpose of notifying the NRC prior to withdrawal of funds from the DTF is to provide opportunity for NRC intervention, when

deemed necessary, if the withdrawals are for expenses other than those authorized by 10 CFR 50.75(h)(1)(iv) and 10 CFR 50.82(a)(8) that could result in there being insufficient funds in the DTF to accomplish radiological decommissioning.

By granting the exemptions to 10 CFR 50.75(h)(1)(iv) and 10 CFR 50.82(a)(8)(i)(A), the NRC staff considers that withdrawals consistent with the licensee's submittal dated March 22, 2018, are authorized. As stated previously, the NRC staff has determined that there are sufficient funds in the DTF to complete radiological decommissioning activities as well as to conduct irradiated fuel management and site restoration activities consistent with the PSDAR, DCE, IFMP, and the March 22, 2018, exemption request. Pursuant to the requirements in 10 CFR 50.82(a)(8)(v) and (vii), licensees are required to monitor and annually report to the NRC the status of the DTF and the licensee's funding for managing irradiated fuel. These reports provide the NRC staff with awareness of, and the ability to take action on, any actual or potential funding deficiencies. Additionally, 10 CFR 50.82(a)(8)(vi) requires that the annual financial assurance status report must include additional financial assurance to cover the estimated cost of completion if the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2-percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning. The requested exemption would not allow the withdrawal of funds from the DTF for any other purpose that is not currently authorized in the regulations without prior notification to the NRC. Therefore, the granting of this exemption to 10 CFR 50.75(h)(1)(iv) to allow the licensee to make withdrawals from the DTF to cover authorized expenses for irradiated fuel management and site restoration activities without prior written notification to the NRC will still meet the underlying purpose of the regulation.

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(iii), are present whenever compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in



excess of those incurred by others similarly situated. The licensee states that the DTF contains funds in excess of the estimated costs of radiological decommissioning and that these excess funds are needed for irradiated fuel management and site restoration activities. The NRC does not preclude the use of funds from the decommissioning trust in excess of those needed for radiological decommissioning for other purposes, such as irradiated fuel management or site restoration.

The NRC has stated that funding for irradiated fuel management and site restoration activities may be commingled in the DTF, provided that the licensee is able to identify and account for the radiological decommissioning funds separately from the funds set aside for irradiated fuel management and site restoration activities (see NRC Regulatory Issue Summary 2001-07, Rev. 1, "10 CFR 50.75 Reporting and Recordkeeping for Decommissioning Planning," dated January 8, 2009 (ADAMS Accession No. ML083440158), and Regulatory Guide 1.184, Rev. 1, "Decommissioning of Nuclear Power Reactors," dated October 2013 (ADAMS Accession No. ML13144A840)). To prevent access to those excess funds in the DTF because irradiated fuel management and site restoration activities are not associated with radiological decommissioning would create an unnecessary financial burden without any corresponding safety benefit. The adequacy of the DTF to cover the cost of activities associated with irradiated fuel management and site restoration, in addition to radiological decommissioning, is supported by the site-specific decommissioning cost analysis. If the licensee cannot use its DTF for irradiated fuel management and site restoration activities, it would need to obtain additional funding that would not be recoverable from the DTF, or the licensee would have to modify its decommissioning approach and methods. The NRC staff concludes that either outcome would impose an unnecessary and undue burden significantly in excess of that contemplated when 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) were adopted.

Since the underlying purposes of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would be achieved by allowing Exelon to use a portion of the Oyster Creek DTF for irradiated fuel

management and site restoration activities without prior NRC notification, and since compliance with the regulations would result in an undue hardship or other costs that are significantly in excess of those contemplated when the regulations were adopted, the special circumstances required by 10 CFR 50.12(a)(2)(ii) and 10 CFR 50.12(a)(2)(iii) exist and support the approval of the requested exemptions.

**E. Environmental Considerations**

In accordance with 10 CFR 51.31(a), the Commission has determined that the granting of the exemptions will not have a significant effect on the quality of the human environment (see Environmental Assessment and Finding of No Significant Impact published in the *Federal Register* on September 14, 2018 (83 FR 46763)).

**IV. Conclusions.**

In consideration of the above, the NRC staff finds that the proposed exemptions confirm the adequacy of funding in the Oyster Creek DTF, considering growth, to complete radiological decommissioning of the site and to terminate the license and also to cover estimated spent fuel management and site restoration activities.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants Exelon exemptions from the requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) to allow use of a portion of the funds from the Oyster Creek DTF for spent fuel management and site restoration activities in accordance

with the Oyster Creek PSDAR and DCE, dated May 21, 2018. Additionally, the Commission hereby grants Exelon an exemption from the requirement of 10 CFR 50.75(h)(1)(iv) to allow such withdrawals without prior NRC notification.

The exemptions are effective upon issuance.

Dated at Rockville, Maryland, this 19<sup>th</sup> day of October, 2018.

For the Nuclear Regulatory Commission.

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