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10 CFR 50.12
10 CFR 50.82(a)(8)(i)(A)
10 CFR 50.75(h)(1)(iv)

TM-19-039

April 12, 2019

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

Three Mile Island Nuclear Station, Unit 1
Renewed Facility Operating License No. DPR 50
NRC Docket No. 50 289

Subject: Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv)

Reference:

1) Letter from Michael P. Gallagher, (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Site-Specific Decommissioning Cost Estimate for Three Mile Island Nuclear Station, Unit 1,"* dated April 5, 2019 (ML19095A010)
2) Letter from J. Bradley Fewell (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, *"Certification of Permanent Cessation of Power Operations for Three Mile Island Nuclear Station, Unit 1,"* dated June 20, 2017 (ML17171A151)
3) Letter from Michael P. Gallagher, (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Spent Fuel Management Plan for Three Mile Island Nuclear Station – Unit 1,"* dated April 5, 2019 (ML19095A009)

Pursuant to 10 CFR 50.12, "Specific exemptions," Exelon Generation Company, LLC (Exelon) requests an exemption from 10 CFR 50.82(a)(8)(i)(A) for Three Mile Island Nuclear Station, Unit 1, (TMI-1) to allow use of a portion of the funds from the TMI-1 decommissioning trust fund (DTF) for the management of spent fuel based on the TMI-1 decommissioning cost estimate (DCE) (Reference 1). Exelon also requests, pursuant to 10 CFR 50.12, an exemption from 10 CFR 50.75(h)(1)(iv) to allow TMI-1 DTF disbursements for spent fuel management to be made without prior notice, similar to withdrawals in accordance with 10 CFR 50.82(a)(8).

By letter dated June 20, 2017 (Reference 2), Exelon informed the U.S. Nuclear Regulatory Commission (NRC) that TMI-1 will permanently cease power operations on or about September 30, 2019. By a letter dated April 5, 2019 (Reference 3), Exelon submitted the TMI-1 Spent Fuel Management Plan pursuant to 10 CFR 50.54(bb).

10 CFR 50.82(a)(8)(i)(A) states that DTFs "may be used by licensees if . . . [t]he withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in § 50.2." The definition of decommissioning in 10 CFR 50.2 pertains to safely removing a facility from service and reducing residual radioactivity for eventual property release (i.e., radiological decommissioning). The NRC does not construe the 10 CFR 50.2 definition of "decommission" as including activities associated with spent fuel management.

10 CFR 50.75(h)(1)(iv) similarly requires that trust agreements restrict disbursements (other than for ordinary administrative and other incidental expenses of the fund) to those allowed under Section 50.82(a)(8) and requires a 30-day advance notification to the NRC prior to making disbursements for expenses not covered under Section 50.82(a)(8).

Therefore, exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) are needed to allow Exelon to use DTF for spent fuel management activities.

The cost estimate provided in Reference 1 discusses estimated costs associated with radiological decommissioning and spent fuel management. The Attachment of this letter demonstrates that the DTF contains adequate funds to cover not only the estimated costs of radiological decommissioning, but also the estimated costs for spent fuel management activities. Therefore, application of the restrictions in 10 CFR 50.82(a)(8)(i)(A) and 10 CFR50.75(h)(1)(iv) is not necessary to ensure adequate funding for radiological decommissioning of TMI-1. Additionally, the annual reporting requirements in 10 CFR 50.82(a)(8)(v) and (vi) will allow for continual NRC oversight of the status of the DTF.

The requested exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) are permissible under 10 CFR 50.12 because they 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 (10 CFR 50.12(a)(1)). In addition, application of the regulations in this particular circumstance is not necessary to achieve the underlying purpose of the rule (10 CFR 50.12(a)(2)(ii)). As the DTF contains adequate funds to complete radiological decommissioning as well as spent fuel management activities, these exemptions would not present an undue risk to the public health and safety or prevent decommissioning from being completed as planned.

Exelon recognizes that if this exemption request is approved, amendments to its nuclear decommissioning trust agreements for TMI-1 may be necessary, and that prior notice of material changes to the trust agreements is required by 10 CFR50.75(h)(1)(iii). Based on its preliminary review, Exelon has not identified any amendments to the trust agreements that would be required if the exemption request is approved.

Exelon requests approval of this exemption request by October 1, 2019. The expedited request for approval is intended to allow for planning for and actions to facilitate construction and transition to dry cask storage of spent fuel. This will result in the most efficient decommissioning process, while preserving the trust fund, and maintaining funding assurance margin.

The exemption request is provided in the Attachment to this letter.

This letter contains no new regulatory commitments.

If you have any questions concerning this submittal, please contact Paul Bonnett at (610) 765-5264.

Respectfully,

Michael P. Gallagher
Vice President, License Renewal & Decommissioning
Exelon Generation Company, LLC

Attachment: Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv)

cc: w/Attachment

Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Three Mile Island Nuclear Station – Unit 1
NRC Project Manager, NRR – Three Mile Island Nuclear Station – Unit 1
NRC Project Manager, NMSS/DUWP/RDB – Three Mile Island – Unit 2
Director, Bureau of Radiation Protection - PA Department of Environmental Resources

Attachment

Three Mile Island Nuclear Station - Unit 1

Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv)

1.0 SPECIFIC EXEMPTION REQUEST

Pursuant to 10 CFR 50.12, "Specific exemptions," Exelon Generation Company, LLC (Exelon) requests an exemption from 10 CFR 50.82(a)(8)(i)(A) for Three Mile Island Nuclear Station, Unit 1 (TMI-1) to allow use of a portion of the funds from the TMI-1 decommissioning trust funds (DTF) for the management of spent fuel activities. Exelon also requests, pursuant to 10 CFR 50.12, an exemption from 10 CFR 50.75(h)(1)(iv) to allow DTF disbursements for spent fuel management activities to be made without prior notice, similar to withdrawals in accordance with 10 CFR 50.82(a)(8).

10 CFR 50.82(a)(8)(i)(A) and the applicable provisions of 10 CFR 50.75(h)(1)(iv) are provided below:

Section (a)(8)(i)(A) of 10 CFR 50.82, "Termination of license," states the following:

> Decommissioning trust funds may be used by licensees if-- (A) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in § 50.2.

Section (h)(1)(iv) of 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," states, in part:

> Except for withdrawals being made under § 50.82(a)(8) or for payments of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, no disbursement or payment may be made from the trust, escrow account, Government fund, or other account used to segregate and manage the funds until written notice of the intention to make a disbursement or payment has been given to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the date of the intended disbursement or payment.

Section (h)(1)(iv) of 10 CFR 50.75 also states, in part:

> Disbursements or payments from the trust, escrow account, Government fund, or other account used to segregate and manage the funds, other than for payment of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, are restricted to decommissioning expenses or transfer to another financial assurance method acceptable under paragraph (e) of this section until final decommissioning has been completed. After decommissioning has begun and withdrawals from the decommissioning fund are made under § 50.82(a)(8), no further notification need be made to the NRC.

10 CFR 50.2, "Definitions," contains the following definition of "decommission:"

> ... 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.

The NRC construes the definition of "decommission" in 10 CFR 50.2 as not including activities associated with spent fuel management.

Exelon has concluded that 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would prohibit use of DTFs for activities related to spent fuel management prior to completion of radiological decommissioning. Exelon anticipates maintaining TMI-1 in a safe storage condition (SAFSTOR) for an extended period prior to completion of radiological decommissioning. This will allow radioactive decay to occur, thereby reducing the quantity of contamination and radioactivity that must be disposed of during the decontamination and dismantlement process as well as reducing the associated occupational exposure. As specified in the Spent Fuel Management Plan (Reference 3), Exelon is pursuing the long-term dry storage option until the fuel is transferred to the Department of Energy (DOE).

Exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) are requested to allow Exelon to withdraw and use funds from the DTF for spent fuel management activities. The exemptions would cover all spent fuel management activities at TMI-1. Table 2 demonstrates that the DTF contains the amount needed to cover the estimated costs of radiological decommissioning (including decommissioning for the proposed ISFSI), as well as spent fuel management activities. As the DTF contains adequate funds to complete radiological decommissioning as well as spent fuel management activities, these exemptions would not present an undue risk to the public health and safety or prevent decommissioning from being completed as planned.

2.0 BACKGROUND

By letter dated June 20, 2017 (Reference 1), pursuant to 10 CFR 50.82(a)(1)(i), Exelon notified the U.S. Nuclear Regulatory Commission (NRC) of its intention to permanently cease power operations at TMI-1 by September 30, 2019. Once fuel has been permanently removed from the reactor vessel, Exelon will submit a written certification to the NRC, in accordance with 10 CFR 50.82(a)(1)(ii) that meets the requirements of 10 CFR 50.4(b)(9). Upon docketing of these certifications, the 10 CFR Part 50 license for TMI-1 will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2).

By letters dated April 5, 2019 (Reference 2 and 3), Exelon submitted the TMI-1 Decommissioning Cost Estimate (DCE) pursuant to 10 CFR 50.82(a)(4)(i) and the Spent Fuel Management Plan pursuant to 10 CFR 50.54(bb). The DCE submittal was based on the annual cash flow required for decommissioning TMI-1 based on the SAFSTOR scenario. The TMI-1 DCE was based on a retirement date of 2019.

3.0 BASIS FOR EXEMPTION REQUEST

Exelon anticipates using the SAFSTOR method of decommissioning at TMI-1, which defers completion of radiological decommissioning until after a storage period, thus delaying (absent an exemption) the availability of excess amounts in the DTF for spent fuel management activities. Reference 2 provided a site-specific DCE, which estimates the cost of radiological decommissioning and spent fuel management efforts.

Table 1 reflects the projected annual expenditures required for radiological decommissioning TMI-1 (including decommissioning for the proposed Independent Spent Fuel Storage Installation

(ISFSI)) based on the SAFSTOR scenario from the Reference 2 cost estimate. The annual expenditures for spent fuel management efforts are also reflected in Table 1.

The Reference 2 cost estimate includes costs associated with radiological decommissioning planning performed by a dedicated site organization prior to permanent shutdown (costs occur through September 2019 in the estimate). None of the 2019 radiological decommissioning planning costs have been reimbursed from the DTF. Therefore, these costs, along with the radiological decommissioning costs beginning on permanent shutdown, are included in the 2019 row in Table 1.

Spent fuel management costs are included in the Reference 2 cost estimate starting in 2019. These costs include the cost to design and build the ISFSI, design and manufacture the upgraded refuel handling building crane, and purchase long lead time items associated with the spent fuel storage system. None of the 2019 spent fuel management costs have been reimbursed from the DTF.

The Reference 2 cost estimate is in thousands of June 2018 dollars. The costs have been escalated to December 31, 2018, dollars prior to inclusion in Table 1. The escalation was determined using a forecasted average annual escalation rate of 2.8638%. This rate was calculated using the Employment Cost Index Total Compensation Private Industry Workers United States (NAICS).

Table 2 includes a cash flow analysis demonstrating that, with credited earnings during the SAFSTOR period, the DTF contains sufficient funds needed to cover the cost of radiological decommissioning and spent fuel management activities.

Table 2 contains the projected annual cash flow from the TMI-1 DTF for decommissioning the site (including radiological decommissioning (including decommissioning for the proposed ISFSI) and spent fuel management) based on the SAFSTOR scenario annual costs from Table 1. The cash flow analysis conservatively assumes all expenses in a year are incurred at the beginning of year (i.e., beginning of year convention) during the decommissioning period. A 2% annual real rate of return on the DTF as allowed by 10 CFR 50.75(e)(1)(i) is used in the analysis. Additionally, contributions to the DTF and cost escalation are both assumed to be zero in the Table 2 analysis.

The 2019 beginning of year (BOY) Trust Fund Value (analysis starting trust fund balance) in Table 2 is the December 31, 2018, DTF value ($669,617K) less the 2017 and 2018 site radiological decommissioning planning and the 2018 spent fuel management planning costs which are $4,817k and $1,846k, respectively.

Exelon formed a site organization dedicated to decommissioning planning in 2017. The 2017 and 2018 radiological decommissioning planning costs associated with this organization have not yet been reimbursed from the DTF. Consequently, the 2017 actual costs of $561.5k and 2018 estimated costs of $4,255.9K are subtracted from the December 31, 2018, DTF balance.

Exelon began spent fuel management planning at TMI-1 in 2018. The 2018 spent fuel management planning costs of approximately $1,846k have not been reimbursed from the DTF. These costs are subtracted from the December 31, 2018, DTF balance to reflect future reimbursement if this exemption is approved.

Table 2 demonstrates that the TMI-1 DTF as of December 31, 2018, exceeds the amount required to complete decommissioning of the site under the SAFSTOR scenario. At the end of the decommissioning project, an estimated $6.2 million will remain in the DTF.

4.0 ADJUSTING COST ESTIMATES AND FUNDING LEVELS

10 CFR 50.82(a)(8)(iv) states the following ***[emphasis added]***:

> *For decommissioning activities that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide a means of* ***adjusting cost estimates and associated funding levels over the storage or surveillance period****.*

Exelon anticipates maintaining TMI-1 in a safe storage condition (SAFSTOR) for an extended period prior to completion of radiological decommissioning. This will allow radioactive decay to occur, thereby reducing the quantity of contamination and radioactivity that must be disposed of during the decontamination and dismantlement process as well as reducing the associated occupational exposure.

Exelon's approach to address the requirements of 10 CFR 50.82(a)(8)(iv) with respect to ***"adjusting*** *[decommissioning]* ***cost estimates and associated funding levels over the storage or surveillance period"*** is discussed below.

During the SAFSTOR period, the site-specific decommissioning cost estimate will be periodically updated in compliance with Exelon procedures and applicable regulatory requirements.

In accordance with 10 CFR 50.82(a)(8)(iv), decommissioning funding assurance will be reviewed and reported to the NRC annually during the SAFSTOR period. The cost estimates and financial levels will be adjusted in accordance with Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors" (Reference 4) (applicable revision at the time) and will be used to demonstrate funding assurance. If the funding assurance demonstration shows the decommissioning trust fund is not sufficient, then an alternate funding mechanism allowed by 10 CFR 50.75(e) and the guidance provided in the Regulatory Guide, will be put in place at an appropriate time.

5.0 JUSTIFICATION FOR EXEMPTIONS AND SPECIAL CIRCUMSTANCES

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 the regulations of Part 50 which 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. 10 CFR 50.12 also states that the Commission will not consider granting an exemption unless special circumstances are present. As discussed below, this exemption request satisfies the provisions of Section 50.12.

5.1 Exemptions

A. The exemptions are authorized by law

The proposed 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 decommissioning trust fund for spent fuel management activities, consistent with the TMI-1 Spent Fuel Management Plan and decommissioning cost estimate. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR Part 50. The proposed exemptions would not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations. The NRC has granted exemptions to other licensees to use DTFs for spent fuel

management (see Section 6.0 of this attachment). Therefore, the exemptions are authorized by law.

B. The exemptions will not present an undue risk to 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 decommissioning of power reactors within 60 years of cessation of operations. Based on the site-specific cost estimate and the cash flow analysis provided in Tables 1 and 2, use of some of the funds in the trust fund for spent fuel management activities will not adversely impact Exelon's ability to terminate the TMI-1 license (i.e., complete radiological decommissioning) within 60 years. Furthermore, an exemption from 10 CFR 50.75(h)(1)(iv) to allow Exelon to make withdrawals from the trust fund to cover expenses for spent fuel management efforts without prior written notification to the NRC will not affect the sufficiency of funds in the trust fund to accomplish radiological decontamination of the site. Additionally, the annual reporting requirements in 10 CFR 50.82(a)(8)(v) and (vi) will allow for continual NRC oversight of the status of the DTF.

Based on the above, no new accident precursors are created by using the trust fund 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 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 proposed exemptions would allow Exelon to use a portion of trust funds for spent fuel management efforts, consistent with the TMI-1 Spent Fuel Management Plan and Decommissioning Cost Estimate. Spent fuel management activities are an integral part of the planned TMI-1 decommissioning process and will not adversely affect Exelon's ability to physically secure the site or protect special nuclear material. This change to enable use of some of the funds in the trust fund for spent fuel management activities will not alter the scope or availability of sufficient funding for the TMI-1 security program. Therefore, the proposed exemptions are consistent with the common defense and security.

5.2 Special Circumstances

Pursuant to 10 CFR 50.12(a)(2), the NRC will not consider granting an exemption to its regulations unless special circumstances are present. Exelon has determined that special circumstances are present as discussed below.

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. (10 CFR 50.12(a)(2)(ii))

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 decommissioning of power reactors within 60 years of cessation of operations. Strict application of the rule would prohibit withdrawal of funds from the DTF for activities associated with spent fuel management activities until final radiological decommissioning at TMI-1 has been completed. However, Tables 1 and 2 (as discussed above) demonstrate that adequate funds are available in the

DTF to complete radiological decommissioning and spent fuel management activities. The Table 2 cash flow analysis projects that the DTF will contain $6.2 million at the end of the decommissioning project in 2081 (using a 0.0% escalation rate and a 2.0% annual fund growth rate on remaining funds).

The 30-day notification provision in 10 CFR 50.75(h)(1)(iv) was not intended to duplicate other reporting requirements that would exist after a plant commences 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 insufficient funds in the DTF to accomplish radiological decontamination of the site.

A comment, received during the rulemaking for the Decommissioning Trust Fund Provisions in 10 CFR 50.75(h)(1)(iv), noted that licensees that have complied with the requirements of 10 CFR 50.82(a)(4) regarding submittal of a Post-Shutdown Decommissioning Activities Report (PSDAR) and control disbursements in accordance with the provisions of 10 CFR 50.82(a)(6), (a)(7) and (a)(8) should be exempt from further restrictions on disbursements (Reference 5). The NRC agreed with the comment, because requiring notification in such circumstances would not provide any additional assurance that funding is available and would duplicate notification requirements in 10 CFR 50.82. If the NRC grants the requested exemption allowing Exelon to use some of the funds in its DTF for spent fuel management activities, the same consideration would justify dispensing with the 30-day notification requirement as well. The decommissioning cost estimate identifies the estimated annual expenditures, and the annual reporting requirements in 10 CFR 50.82(a)(8)(v) and (vi) will allow continual NRC oversight of the status of the trust fund. Applying the 30-day advance notification requirement in 10 CFR 50.75(h)(1)(iv) to disbursements for spent management activities would duplicate these other reporting requirements and is not necessary to achieve the underlying purposes of the rule.

Therefore, since the underlying purposes of the rules would be achieved by allowing Exelon to use the DTF to fund the activities as discussed in the TMI-1 cost estimate and Spent Fuel Management Plan, the special circumstances of 10 CFR 50.12(a)(2)(ii) are present.

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. (10 CFR 50.12(a)(2)(iii))

The NRC did not intend to prevent the use of these funds solely because they are commingled, and to do so would create an unnecessary financial burden without any corresponding safety benefit. The NRC does not preclude use of funds from the decommissioning trust in excess of those needed for radiological decommissioning for other purposes, such as spent fuel management efforts. The NRC has stated that funding for spent fuel management activities may be commingled in the decommissioning trust provided the licensee is able to identify and account for the radiological decommissioning funds separately from the funds set aside for spent fuel management activities (see NRC Regulatory Issue Summary 2001-07, Revision 1, "10 CFR 50.75 Reporting and Recordkeeping for

Decommissioning Planning" dated January 8, 2009 (Reference 6), and Regulatory Guide 1.184, Revision 1, "Decommissioning of Nuclear Power Reactors," (Reference 7)). The adequacy of the trust fund to cover the cost of activities associated with decommissioning and the spent fuel management activities is supported by the provided cash flow analysis. The amount of funds required for radiological decommissioning and spent fuel management activities will be identified and accounted for in the annual report required by 10 CFR 50.75(f) and 10 CFR 50.82(a)(8).

If Exelon cannot use its trust fund for spent fuel management activities, it would be forced to provide additional funding that would not be recoverable from the trust fund until the TMI-1 operating license is terminated. To prevent access to the excess funds in the trust would impose an unnecessary and undue burden in excess of that contemplated when the regulation was adopted without any corresponding safety benefit.

Therefore, compliance with the rule would result in an 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 and the special circumstances of 10 CFR 50.12(a)(2)(iii) are present.

6.0 PRECEDENT

The exemption request for 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50. 75(h)(1)(iv) is consistent with exemption requests that recently have been issued by the NRC for other nuclear power reactor facilities beginning decommissioning. Specifically, the NRC granted similar exemptions to Oyster Creek Nuclear Generation Station (Reference 8), Entergy Nuclear Operations, Inc., for Vermont Yankee (Reference 9); to Duke Energy Florida, Inc. for Crystal River Unit 3 (Reference 10); and to Dominion Energy Kewaunee, Inc. for Kewaunee Power Station (Reference 11).

7.0 ENVIRONMENTAL ASSESSMENT

The proposed exemption meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(25), because the proposed exemption involves: (i) no significant hazards consideration; (ii) no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (iii) no significant increase in individual or cumulative public or occupational radiation exposure; (iv) no significant construction impact; (v) no significant increase in the potential for or consequences from radiological accidents; and (vi) the requirements from which the exemption is sought involve: (H) surety, insurance or indemnity requirements.

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed exemption.

(i) No Significant Hazards Consideration Determination

Exelon has evaluated the proposed exemption to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92 as discussed below:

1. Does the proposed exemption involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed exemptions would allow Exelon to withdraw funds from the Three Mile Island Nuclear Station's (TMI-1) decommissioning trust fund (DTF) to conduct activities associated with spent fuel management activities in accordance with the TMI-1 decommissioning cost estimate and Spent Fuel Management Plan. The proposed exemptions have no effect on plant structures, systems, and components (SSCs) and no effect on the capability of any plant SSC to perform its design function. The proposed exemptions would not increase the likelihood of the malfunction of any plant SSC. The proposed exemptions would have no effect on any of the previously evaluated accidents in the TMI-1 Updated Final Safety Analysis Report. Use of funds in the DTF as allowed under the exemptions will not affect the probability of occurrence of any previously analyzed accident. The proposed exemptions do not change the requirements pertaining to spent fuel management.

   Therefore, the proposed exemption does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Do the proposed exemptions create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed exemption does not involve a physical alteration of the plant. No new or different type of equipment will be installed and there are no physical modifications to existing equipment associated with the proposed exemption. Similarly, the proposed exemption will not physically change any SSCs involved in the mitigation of any accidents. Thus, no new initiators or precursors of a new or different kind of accident are created. Furthermore, the proposed exemption does not create the possibility of a new accident as a result of new failure modes associated with any equipment or personnel failures. No changes are being made to parameters within which the plant is normally operated, or in the setpoints which initiate protective or mitigative actions, and no new failure modes are being introduced.

   Therefore, the proposed exemption does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Do the proposed exemptions involve a significant reduction in a margin of safety?

   Response: No.

   The proposed exemption does not alter the design basis or any safety limits for the plant. The proposed exemption does not impact station operation or any plant SSC that is relied upon for accident mitigation.

   Therefore, the proposed exemption does not involve a significant reduction in a margin of safety.

Based on the above, Exelon concludes that the proposed exemption presents no significant hazards consideration, and, accordingly, a finding of "no significant hazards consideration" is justified.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

There are no expected changes in the types, characteristics, or quantities of effluents discharged to the environment associated with the proposed exemption. There are no materials or chemicals introduced into the plant that could affect the characteristics or types of effluents released offsite. In addition, the method of operation of waste processing systems will not be affected by the exemption. The proposed exemption will not result in changes to the design basis requirements of SSCs that function to limit or monitor the release of effluents. All the SSCs associated with limiting the release of effluents will continue to be able to perform their functions. Therefore, the proposed exemption will result in no significant change to 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.

The proposed exemptions do not involve any physical alterations to the plant configuration or any changes to the operation of the facility that could lead to a significant increase in individual or cumulative occupational radiation exposure.

(iv) There is no significant construction impact.

No construction activities are associated with the proposed exemption.

(v) There is no significant increase in the potential for or consequences from radiological accidents.

See the no significant hazards considerations discussion in Item (i)(1) above.

(vi) The requirements from which exemption is sought involve: (H) surety, insurance or indemnity requirements.

The underlying purpose of the requirements from which exemptions are sought is to provide reasonable assurance that adequate funds will be available for decommissioning of power reactors within 60 years of cessation of operations. These requirements provide surety for decommissioning funding.

8.0 CONCLUSION

The proposed exemptions would allow Exelon to use the TMI-1 decommissioning trust fund for the management of spent fuel as described in the decommissioning cost estimate and to make such disbursements in the same manner as withdrawals for radiological decommissioning.

Granting these exemptions will be consistent with the purposes underlying NRC decommissioning regulations as the exemptions: (1) would not foreclose release of the site for possible unrestricted use; (2) would not result in significant environmental impacts not previously reviewed by the NRC;

and (3) would not undermine the existing and continuing reasonable assurance that adequate funds will be available for decommissioning.

Pursuant to the provisions of 10 CFR 50.12, Exelon is requesting a permanent exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) for TMI-1. Based on the considerations discussed above, the requested 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. In addition, special circumstances are present as set forth in 10 CFR 50.12(a)(2)(ii) and (iii).

9.0 REFERENCES:

1. Letter from J. Bradley Fewell (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, *"Certification of Permanent Cessation of Power Operations for Three Mile Island Nuclear Station, Unit 1,"* dated June 20, 2017 (ADAMS Accession No. ML17171A151)
2. Letter from Michael P. Gallagher, (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *" Site-Specific Decommissioning Cost Estimate for Three Mile Island Nuclear Station, Unit 1,"* dated April 5, 2019 (ADAMS Accession No. ML19095A010)
3. Letter from Michael P. Gallagher, (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Spent Fuel Management Plan for Three Mile Island Nuclear Station – Unit 1,"* dated April 5, 2019 (ADAMS Accession No. ML19095A009)
4. Regulatory Guide 1.159, *"Assuring the Availability of Funds for Decommissioning Nuclear Reactors,"* Revision 2, dated October 2011 (ADAMS Accession No. ML112160012)
5. Federal Register Notice, 67 FR 78332, Decommissioning Trust Provisions, dated December 24, 2002
6. NRC Regulatory Issue Summary 2001-07, Revision 1, *"10 CFR50.75 Reporting and Recordkeeping for Decommissioning Planning,"* dated January 8, 2009 (ADAMS Accession No. ML083440158)
7. Regulatory Guide 1.184, Revision 1, *"Decommissioning of Nuclear Power Reactors,"* dated October 2013 (ADAMS Accession No. ML13144A840)
8. Letter from U.S. Nuclear Regulatory Commission to Bryan C. Hanson, (Exelon Generation, LLC), *"Oyster Creek Nuclear Generating Station - Exemptions from the Requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) (EPID L-218-LLE-0002),"* dated October 19, 2018 (ADAMS Accession No. ML18227A025)
9. Letter from U.S. Nuclear Regulatory Commission to Entergy Nuclear Operations, Inc; *"Vermont Yankee Nuclear Power Station - Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.75(h)(1)(iv) (TAC NO. MF5575),"* dated June 17, 2015 (ADAMS Accession No. ML15128A219)
10. Letter from U.S. Nuclear Regulatory Commission to Terry D. Hobs, (Crystal River Nuclear Plant), *"Crystal River Unit 3 Nuclear Generating Plant - Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.75(h)(1)(iv) (TAC NO. MF3875),"* dated January 26, 2015 (ADAMS Accession No. ML14247A545)

11. Letter from U.S. Nuclear Regulatory Commission to David A. Heacock, (Dominion Energy Kewaunee, Inc), *"Kewaunee Power Station - Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.75(h)(1)(iv) (TAC NO. MF1438),"* dated May 21, 2014 (ADAMS Accession No. ML13337A287)

Table 1
RADIOLOGICAL DECOMMISSIONING AND SPENT FUEL MANAGEMENT ANNUAL EXPENDITURES FOR SAFSTOR THREE MILE ISLAND NUCLEAR STATION UNIT 1
(December 31, 2018 dollars, thousands)

Year	Radiological Decommissioning Cost	Spent Fuel Management Cost	Total Cost[a]
2019	20,490	27,477	47,967
2020	66,516	30,973	97,490
2021	45,645	25,395	71,040
2022	38,025	14,963	52,988
2023	10,086	123	10,209
2024	9,099	1,139	10,238
2025	6,057	4,152	10,209
2026	6,057	4,152	10,209
2027	6,057	4,152	10,209
2028	6,073	4,163	10,237
2029	6,057	4,152	10,209
2030	6,057	4,152	10,209
2031	6,057	4,152	10,209
2032	6,073	4,163	10,237
2033	6,057	4,152	10,209
2034	6,052	7,385	13,437
2035	6,040	13,784	19,824
2036	5,702	0	5,702
2037	5,686	0	5,686
2038	5,686	0	5,686
2039	5,686	0	5,686
2040	5,702	0	5,702
2041	5,686	0	5,686
2042	5,686	0	5,686
2043	5,686	0	5,686
2044	5,702	0	5,702
2045	5,686	0	5,686
2046	5,686	0	5,686
2047	5,686	0	5,686
2048	5,702	0	5,702
2049	5,686	0	5,686
2050	5,686	0	5,686
2051	5,686	0	5,686
2052	5,702	0	5,702
2053	5,686	0	5,686
2054	5,686	0	5,686

Table 1 (Continued)

Year	Radiological Decommissioning Cost	Spent Fuel Management Cost	Total Cost[a]
2055	5,686	0	5,686
2056	5,702	0	5,702
2057	5,686	0	5,686
2058	5,686	0	5,686
2059	5,686	0	5,686
2060	5,702	0	5,702
2061	5,686	0	5,686
2062	5,686	0	5,686
2063	5,686	0	5,686
2064	5,702	0	5,702
2065	5,686	0	5,686
2066	5,686	0	5,686
2067	5,686	0	5,686
2068	5,702	0	5,702
2069	5,686	0	5,686
2070	5,686	0	5,686
2071	5,686	0	5,686
2072	5,702	0	5,702
2073	24,709	0	24,709
2074	6,1226	0	6,1226
2075	150,301	0	150,301
2076	113,681	0	113,681
2077	75,862	0	75,862
2078	75,687	0	75,687
2079	32,813	0	32,813
2080	133[b]	0	133
2081	95[b]	0	95
Totals[a]	1,001,552	158,631	1,160,184

[a]Cash flows may not add due to rounding.

[b]2080 and 2081 Radiological Decommissioning Costs are administrative expenses associated with submitting a final report to the NRC following license termination and do not include any physical decommissioning work.

Table 2
ANNUAL SAFSTOR DECOMMISSIONING FUND CASH FLOW FOR THREE MILE ISLAND NUCLEAR STATION, UNIT 1
(December 31, 2018 dollars, thousands)

Year	Total Cost[a]	BOY Trust Fund Value	BOY Trust Fund Less Cost	Trust Fund Earnings[b]	EOY Trust Fund Value[c]
2019	47,967	662,953[d]	614,986	12,300	627,286
2020	97,490	627,286	529,797	10,596	540,393
2021	71,040	540,393	469,352	9,387	478,739
2022	52,988	478,739	425,751	8,515	434,266
2023	10,209	434,266	424,057	8,481	432,539
2024	10,238	432,539	422,301	8,446	430,747
2025	10,209	430,747	420,538	8,411	428,949
2026	10,209	428,949	418,740	8,375	427,114
2027	10,209	427,114	416,905	8,338	425,244
2028	10,237	425,244	415,007	8,300	423,307
2029	10,209	423,307	413,098	8,262	421,360
2030	10,209	421,360	411,151	8,223	419,374
2031	10,209	419,374	409,165	8,183	417,348
2032	10,237	417,348	407,111	8,142	415,253
2033	10,209	415,253	405,044	8,101	413,145
2034	13,437	413,145	399,709	7,994	407,703
2035	19,824	407,703	387,879	7,758	395,637
2036	5,702	395,637	389,935	7,799	397,733
2037	5,686	397,733	392,047	7,841	399,888
2038	5,686	399,888	394,202	7,884	402,086
2039	5,686	402,086	396,400	7,928	404,328
2040	5,702	404,328	398,626	7,973	406,598
2041	5,686	406,598	400,912	8,018	408,930
2042	5,686	408,930	403,244	8,065	411,309
2043	5,686	411,309	405,623	8,112	413,735
2044	5,702	413,735	408,033	8,161	416,194
2045	5,686	416,194	410,508	8,210	418,718
2046	5,686	418,718	413,031	8,261	421,292
2047	5,686	421,292	415,606	8,312	423,918
2048	5,702	423,918	418,216	8,364	426,580
2049	5,686	426,580	420,894	8,418	429,312
2050	5,686	429,312	423,626	8,473	432,098
2051	5,686	432,098	426,412	8,528	434,940

Table 2 (Continued)

Year	Total Cost[a]	BOY Trust Fund Value	BOY Trust Fund Less Cost	Trust Fund Earnings[b]	EOY Trust Fund Value[c]
2052	5,702	434,940	429,238	8,585	437,823
2053	5,686	437,823	432,137	8,643	440,780
2054	5,686	440,780	435,093	8,702	443,795
2055	5,686	443,795	438,109	8,762	446,871
2056	5,702	446,871	441,169	8,823	449,993
2057	5,686	449,993	444,306	8,886	453,192
2058	5,686	453,192	447,506	8,950	456,456
2059	5,686	456,456	450,770	9,015	459,785
2060	5,702	459,785	454,084	9,082	463,165
2061	5,686	463,165	457,479	9,150	466,628
2062	5,686	466,628	460,942	9,219	470,161
2063	5,686	470,161	464,475	9,289	473,764
2064	5,702	473,764	468,062	9,361	477,424
2065	5,686	477,424	471,737	9,435	481,172
2066	5,686	481,172	475,486	9,510	484,996
2067	5,686	484,996	479,309	9,586	488,895
2068	5,702	488,895	483,194	9,664	492,857
2069	5,686	492,857	487,171	9,743	496,915
2070	5,686	496,915	491,228	9,825	501,053
2071	5,686	501,053	495,367	9,907	505,274
2072	5,702	505,274	499,572	9,991	509,564
2073	24,709	509,564	484,855	9,697	494,552
2074	6,1226	494,552	433,326	8,667	441,992
2075	150,301	441,992	291,692	5,834	297,525
2076	113,681	297,525	183,844	3,677	187,521
2077	75,862	187,521	111,659	2,233	113,892
2078	75,687	113,892	38,205	764	38,969
2079	32,813	38,969	6,156	123	6,279
2080	133	6,279	6,146	123	6,269
2081	95	6,269	6,174	123	6,298

Total[c] 1,160,184

[a] Annual SAFSTOR decommissioning cost (radiological + spent fuel)
[b] A 2% annual real rate of return is used as allowed by 10 CFR 50.75(e)(1)(i)
[c] Cash flows may not add due to rounding
[d] The 2019 BOY Trust Fund Value is the value of the decommissioning trust as of 12/31/2018 less the 2017 and 2018 radiological decommissioning planning and 2018 spent fuel management planning costs, $4,817k and $1,846k respectively.