



Michael P. Gallagher
Exelon Nuclear
Vice President
License Renewal and Decommissioning

200 Exelon Way
Kennett Square, PA 19348

610 765 5958 Office
610 765 5658 Fax
www.exeloncorp.com
michaelp.gallagher@exeloncorp.com

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

TM-21-022

May 20, 2021

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 and 72-077

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, "Certification of Permanent Removal of Fuel from the Reactor Vessel for Three Mile Island Nuclear Station, Unit 1," dated September 26, 2019 (ML19269E480)
- 4) Letter from Justin C. Poole (U.S. Nuclear Regulatory Commission) to Bryan C. Hanson (Exelon Generation Company, LLC), "Three Mile Island Nuclear Station, Unit 1 - Exemptions from the Requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) (EPID L-2019-LLE-0009)," dated October 16, 2019 (ML19259A175)

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 site restoration 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 site restoration 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) 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 U.S. Nuclear Regulatory Commission (NRC) does not construe the 10 CFR 50.2 definition of "decommission" as including activities associated with site restoration.

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 site restoration activities.

The cost estimate provided in Reference 1 discusses estimated costs associated with radiological decommissioning, spent fuel management, and site restoration. Exelon has previously received an exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) that allows use of the DTF for spent fuel management (Reference 4). The Attachment of this letter demonstrates that the DTF contains adequate funds to cover not only the estimated costs of radiological decommissioning and spent fuel management, but also the estimated costs for site restoration activities. Therefore, application of the restrictions in 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) are 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 continued 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)). Since the DTF contains adequate funds to complete radiological decommissioning, spent fuel management, and site restoration 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 CFR 50.75(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 June 10, 2022.

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


This letter contains no new regulatory commitments.

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If you have any questions concerning this submittal, please contact John Hilditch at (267) 533-5120.

Respectfully,

Gallagher,
Michael P

 Digitally signed by Gallagher,
Michael P
Date: 2021.05.20 10:47:52
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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 Project Manager, NMSS/DUWP/RDB - Three Mile Island
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 site restoration 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 site restoration 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.

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.

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.

The NRC construes the definition of "decommission" in 10 CFR 50.2 as not including activities associated with site restoration activities.

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 site restoration 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.

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 site restoration activities. The exemptions would cover all site restoration 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 Independent Spent Fuel Storage Installation (ISFSI)), spent fuel management activities, and the site restoration activities. Exelon has previously received an exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) that allows use of the DTF for spent fuel management (Reference 1). Since the DTF contains adequate funds to complete radiological decommissioning, spent fuel management activities, and site restoration 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

In References 2 and 3, Exelon submitted certifications pursuant to 10 CFR 50.82(a)(1)(i) and (ii), that TMI-1 has permanently ceased power operations and that all fuel has been permanently removed from the reactor vessel. Therefore, the 10 CFR 50 license for TMI-1 no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2). In Reference 4, the TMI-1 license was amended to allow possession and use the facility for fuel storage and removed the ability to operate the facility.

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

3.0 BASIS FOR EXEMPTION REQUEST

Exelon continues to anticipate 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 site restoration activities. Reference 5 provided a site-specific DCE, which estimates the cost of radiological decommissioning, spent fuel management efforts, and site restoration activities.

Table 1 reflects the projected annual expenditures required for radiological decommissioning (including decommissioning for the proposed ISFSI) for TMI-1 based on the SAFSTOR scenario from the Reference 5 cost estimate. The annual expenditures for spent fuel management and site restoration efforts are also reflected in Table 1.

The Reference 5 DCE included costs associated with radiological decommissioning and spent fuel management beginning in 2019. Exelon considers these 2019 and 2020 annual costs to be historical expenditures as of January 1, 2021 and as such they have been excluded from Table 1. As described below, the Trust Fund Value has been adjusted to account for expenditures in those years that have not been reimbursed. None of the Table 1 annual costs associated with radiological decommissioning, spent fuel management, and site restoration in 2021 have been reimbursed from the DTF.

In the Reference 5 DCE, site restoration annual expenditures are projected to begin in 2073. These costs are reflected in Table 1. However, TMI-1 intends to begin some site restoration activities in 2021 (i.e., removal of emergency sirens, some non-radiological waste, vehicle barrier system (VBS) blocks, and some ancillary buildings). These anticipated early site restoration costs are shown as expenditures in 2021 in Table 1. In total, these costs have been added to the previous site restoration costs from the DCE that were to begin in 2073; the DCE site restoration costs were not adjusted to remove these costs from a later period. This approach is conservative relative to the overall site restoration cost and evaluation of the funds remaining in the DTF after decommissioning.

The Reference 5 DCE is in thousands of June 2018 dollars. The costs in Table 1 have been escalated to December 31, 2020 dollars. The escalation was determined using a forecasted average annual escalation rate of 2.71%. This rate was calculated using the Employment Cost Index Total Compensation Private Industry Workers United States from the North American Industry Classification System (NAICS).

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

Table 2 provides the projected annual cash flow from the TMI-1 DTF for decommissioning the site (including radiological decommissioning (including decommissioning for the proposed ISFSI), spent fuel management, and site restoration) 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 (BOY) 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 2021 BOY Trust Fund Value (analysis starting trust fund balance) in Table 2 is the December 31, 2020 DTF value (\$742,497k) less the 2020 site radiological decommissioning costs (\$14,663k) and the 2018, 2019, and 2020 spent fuel management costs (\$54,673k) that were not yet reimbursed as of December 31, 2020¹. As of December 31, 2020, a portion of the actual 2020 radiological decommissioning costs for TMI-1 were not yet reimbursed from the DTF due to the timing of the expenses. Therefore, these 2020 radiological decommissioning costs (\$14,663k), are subtracted from the December 31, 2020 DTF balance. Exelon began spent fuel management planning at TMI-1 in 2018, as of December 31, 2020, the actual 2018 and 2019 spent fuel management planning costs for TMI-1 and a portion of the actual 2019 and 2020 spent fuel management costs (costs occurring after permanent defuel) were not yet reimbursed from the

¹ The amount not yet reimbursed is an estimate based on the best information obtainable at this time.

DTF as of December 31, 2020. Therefore, these 2018, 2019, and 2020 spent fuel management costs, of \$54,673k, are subtracted from the December 31, 2020 DTF balance.

Table 2 demonstrates that the TMI-1 DTF as of December 31, 2020, exceeds the amount required to complete decommissioning (including radiological, spent fuel management, and site restoration) of the site under the SAFSTOR scenario. At the end of the decommissioning project, an estimated \$253,689k 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 continues to anticipate 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 6) 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 Regulatory Guide 1.159, 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 site

restoration activities, consistent with the TMI-1 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 site restoration (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 site restoration 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 site restoration 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 site restoration efforts, consistent with the TMI-1 Decommissioning Cost Estimate. This change to enable use of some of the funds in the trust fund for site restoration 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 site restoration 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, spent fuel management activities, and site restoration. The Table 2 cash flow analysis projects that the DTF will contain \$253.7 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 7). 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 site restoration 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 site restoration 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, 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 and site restoration activities. The NRC has stated that funding for spent fuel management activities and site restoration 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 and site restoration 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 8), and Regulatory Guide 1.184, Revision 1, "Decommissioning of Nuclear Power Reactors," (Reference 9)). The adequacy of the trust fund to cover the cost of activities associated with radiological decommissioning, spent fuel management, and site restoration is supported by the provided cash flow analysis. The amount of funds required for radiological decommissioning, spent fuel management, and site restoration 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 site restoration 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 Power Station (Reference 10), Florida Power & Light Company for Duane Arnold Energy Center (Reference 11), to Pacific Gas and Electric Company for Diablo Canyon Nuclear Power Plant (Reference 12); and to Entergy Nuclear Operations, Inc for Pilgrim Nuclear Power Station (Reference 13).

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 site restoration in accordance with the TMI-1 decommissioning cost estimate. 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.

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 site restoration 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 Justin C. Poole (U.S. Nuclear Regulatory Commission) to Bryan C. Hanson (Exelon Generation Company, LLC), *"Three Mile Island Nuclear Station, Unit 1 - Exemptions from the Requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) (EPID L-2019-LLE-0009),"* dated October 16, 2019 (ADAMS Accession No. ML19259A175)
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 (ADAMS Accession No. ML17171A151)
3. Letter from Michael P. Gallagher, (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Certification of Permanent Removal of Fuel from the Reactor Vessel for Three Mile Island Nuclear Station, Unit 1,"* dated September 26, 2019 (ADAMS Accession No. ML19269E480)
4. Letter from Justin C. Poole (U.S. Nuclear Regulatory Commission) to Bryan C. Hanson (Exelon Generation Company, LLC), *"Three Mile Island Nuclear Station, Unit 1 - Issuance of Amendment No. 297 Re: Defueled Technical Specifications and Revised License Conditions (EPID L-2018-LLA-0204),"* dated August 29, 2019 (ADAMS Accession No. ML19211D317)
5. 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)
6. Regulatory Guide 1.159, *"Assuring the Availability of Funds for Decommissioning Nuclear Reactors,"* Revision 2, dated October 2011 (ADAMS Accession No. ML112160012)
7. Federal Register Notice, 67 FR 78332, Decommissioning Trust Provisions, dated December 24, 2002
8. 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)
9. Regulatory Guide 1.184, Revision 1, *"Decommissioning of Nuclear Power Reactors,"* dated October 2013 (ADAMS Accession No. ML13144A840)

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and 10 CFR 50.75(h)(1)(iv)

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10. Letter from U.S. Nuclear Regulatory Commission to Bryan C. Hanson, (Exelon Generation, LLC), *"Oyster Creek Nuclear Power Station – Issuance of Exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) (EPID L-2018-LLM-0002),"* dated June 20, 2019 (ADAMS Accession No. ML19113A204 and ML19170275)
11. Letter from U.S. Nuclear Regulatory Commission to Don Moul (Florida Power & Light Company); *"Duane Arnold Energy Center – Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 50.75(h)(1)(iv) (EPID L-2020-LLE-0011),"* dated August 12, 2020 (ADAMS Accession No. ML20171A626)
12. Letter from U.S. Nuclear Regulatory Commission to James M. Welsch, (Diablo Canyon Nuclear Power Plant), *"Diablo Canyon Nuclear Power Plant, Units 1 and 2 - Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.82(a)(8)(ii) (EPID L-2018-LLE-0023),"* dated September 10, 2019 (ADAMS Accession No. ML19163A104)
13. Letter from U.S. Nuclear Regulatory Commission to Brian R. Sullivan, (Entergy Nuclear Operations, Inc), *"Pilgrim Nuclear Power Station – Request for Exemptions from 10 CFR s 50.82(a)(8)(i)(A) and 50.75(h)(1)(iv) (EPID L-2018-LLE-0020),"* dated August 22, 2019 (ADAMS Accession No. ML19192A083)

Table 1
RADIOLOGICAL DECOMMISSIONING, SPENT FUEL MANAGEMENT
AND SITE RESTORATION ANNUAL EXPENDITURES FOR SAFSTOR
THREE MILE ISLAND NUCLEAR STATION UNIT 1
(December 31, 2020 dollars, thousands)

Year	Radiological Decommissioning Costs	Spent Fuel Management Costs	Site Restoration Costs	Total Costs^(a)
2021	48,053	26,735	2,135	76,924
2022	40,031	15,752	0	55,784
2023	10,618	129	0	10,748
2024	9,579	1,199	0	10,778
2025	6,376	4,371	0	10,748
2026	6,376	4,371	0	10,748
2027	6,376	4,371	0	10,748
2028	6,394	4,383	0	10,777
2029	6,376	4,371	0	10,748
2030	6,376	4,371	0	10,748
2031	6,376	4,371	0	10,748
2032	6,394	4,383	0	10,777
2033	6,376	4,371	0	10,748
2034	6,371	7,775	0	14,146
2035	6,359	14,511	0	20,870
2036	6,003	0	0	6,003
2037	5,986	0	0	5,986
2038	5,986	0	0	5,986
2039	5,986	0	0	5,986
2040	6,003	0	0	6,003
2041	5,986	0	0	5,986
2042	5,986	0	0	5,986
2043	5,986	0	0	5,986
2044	6,003	0	0	6,003
2045	5,986	0	0	5,986
2046	5,986	0	0	5,986
2047	5,986	0	0	5,986
2048	6,003	0	0	6,003
2049	5,986	0	0	5,986
2050	5,986	0	0	5,986
2051	5,986	0	0	5,986
2052	6,003	0	0	6,003
2053	5,986	0	0	5,986
2054	5,986	0	0	5,986
2055	5,986	0	0	5,986
2056	6,003	0	0	6,003
2057	5,986	0	0	5,986
2058	5,986	0	0	5,986
2059	5,986	0	0	5,986
2060	6,003	0	0	6,003
2061	5,986	0	0	5,986
2062	5,986	0	0	5,986
2063	5,986	0	0	5,986
2064	6,003	0	0	6,003
2065	5,986	0	0	5,986
2066	5,986	0	0	5,986
2067	5,986	0	0	5,986
2068	6,003	0	0	6,003

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Table 1 (Continued)

Year	Radiological Decommissioning Costs	Spent Fuel Management Costs	Site Restoration Costs	Total Costs^(a)
2069	5,986	0	0	5,986
2070	5,986	0	0	5,986
2071	5,986	0	0	5,986
2072	6,003	0	0	6,003
2073	26,013	0	345	26,358
2074	64,456	0	1,392	65,849
2075	158,231	0	2,567	160,798
2076	119,679	0	1,654	121,333
2077	79,864	0	847	80,712
2078	79,681	0	843	80,523
2079	34,545	0	10,716	45,261
2080	140 ^(b)	0	42,155	42,295
2081	100 ^(b)	0	30,172	30,272
Totals^(a)	962,798	105,467	92,827	1,161,092

^(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, 2020 dollars, thousands)

Year	Total Costs ^(a)	BOY Trust Fund Value	BOY Trust Fund Value Less Cost	Trust Fund Earnings ^(b)	EOY Trust Fund Value ^(c)
2021	76,924	673,162 ^(d)	596,238	11,925	608,163
2022	55,784	608,163	552,379	11,048	563,427
2023	10,748	563,427	552,679	11,054	563,733
2024	10,778	563,733	552,955	11,059	564,014
2025	10,748	564,014	553,266	11,065	564,332
2026	10,748	564,332	553,584	11,072	564,656
2027	10,748	564,656	553,908	11,078	564,986
2028	10,777	564,986	554,209	11,084	565,293
2029	10,748	565,293	554,546	11,091	565,637
2030	10,748	565,637	554,889	11,098	565,987
2031	10,748	565,987	555,239	11,105	566,344
2032	10,777	566,344	555,567	11,111	566,678
2033	10,748	566,678	555,931	11,119	567,049
2034	14,146	567,049	552,904	11,058	563,962
2035	20,870	563,962	543,092	10,862	553,954
2036	6,003	553,954	547,951	10,959	558,910
2037	5,986	558,910	552,924	11,058	563,982
2038	5,986	563,982	557,996	11,160	569,156
2039	5,986	569,156	563,170	11,263	574,433
2040	6,003	574,433	568,431	11,369	579,799
2041	5,986	579,799	573,813	11,476	585,289
2042	5,986	585,289	579,303	11,586	590,889
2043	5,986	590,889	584,903	11,698	596,601
2044	6,003	596,601	590,598	11,812	602,410
2045	5,986	602,410	596,424	11,928	608,352
2046	5,986	608,352	602,366	12,047	614,413
2047	5,986	614,413	608,427	12,169	620,595
2048	6,003	620,595	614,593	12,292	626,885
2049	5,986	626,885	620,898	12,418	633,316
2050	5,986	633,316	627,330	12,547	639,877
2051	5,986	639,877	633,890	12,678	646,568
2052	6,003	646,568	640,565	12,811	653,377
2053	5,986	653,377	647,390	12,948	660,338
2054	5,986	660,338	654,352	13,087	667,439
2055	5,986	667,439	661,453	13,229	674,682
2056	6,003	674,682	668,679	13,374	682,053
2057	5,986	682,053	676,066	13,521	689,588
2058	5,986	689,588	683,601	13,672	697,273
2059	5,986	697,273	691,287	13,826	705,113
2060	6,003	705,113	699,110	13,982	713,092
2061	5,986	713,092	707,106	14,142	721,248
2062	5,986	721,248	715,262	14,305	729,567
2063	5,986	729,567	723,581	14,472	738,052
2064	6,003	738,052	732,050	14,641	746,691
2065	5,986	746,691	740,704	14,814	755,518
2066	5,986	755,518	749,532	14,991	764,523
2067	5,986	764,523	758,537	15,171	773,707
2068	6,003	773,707	767,705	15,354	783,059
2069	5,986	783,059	777,072	15,541	792,614
2070	5,986	792,614	786,628	15,733	802,360
2071	5,986	802,360	796,374	15,927	812,301
2072	6,003	812,301	806,299	16,126	822,425

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Table 2 (Continued)

Year	Total Costs ^(a)	BOY Trust Fund Value	BOY Trust Fund Value Less Cost	Trust Fund Earnings ^(b)	EOY Trust Fund Value ^(c)
2073	26,358	822,425	796,067	15,921	811,988
2074	65,849	811,988	746,140	14,923	761,062
2075	160,798	761,062	600,265	12,005	612,270
2076	121,333	612,270	490,937	9,819	500,755
2077	80,712	500,755	420,044	8,401	428,445
2078	80,523	428,445	347,922	6,958	354,880
2079	45,261	354,880	309,619	6,192	315,811
2080	42,295	315,811	273,517	5,470	278,987
2081	30,272	278,987	248,715	4,974	253,689
Totals^(c)	1,161,092				

^(a) Annual SAFSTOR decommissioning cost (radiological + spent fuel + site restoration)

^(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 2021 BOY Trust Fund Value is the value of the decommissioning trust as of 12/31/2020 less the 2020 radiological decommissioning and 2018, 2019, and 2020 spent fuel management / ISFSI costs that have not yet been reimbursed, \$14,663k and \$54,673k respectively.