UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SECRETARY

April 23, 2020

Patrick McDonnell
Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063

Dear Secretary McDonnell:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of April 6, 2020, addressed to Chairman Svinicki regarding the Three Mile Island Unit 2 (TMI-2) License Transfer. Your letter expresses concern regarding the transfer. Further, a response letter dated April 13, 2020, to you from the presidents of GPU Nuclear and Energy*Solutions*, copying Chairman Svinicki, was also received.

Because the NRC has received requests for an adjudicatory hearing on the matter, your letter bears on what is now a contested proceeding before the Commission. For that reason, it would be inappropriate for the Commission to respond to the questions in your letter or to comment generally on the matter at this time. This is because the Commission must remain impartial during the pendency of the proceeding.

Additionally, your letter requests a briefing of your staff from the NRC staff and the applicant as well as a local PSDAR public meeting. These requests are being referred to the technical staff to provide a response.

A copy of your letter, the GPU Nuclear/Energy*Solutions* letter, and this response will be served on the participants in the TMI-2 license transfer proceeding.

Sincerely,

Annette L. Vietti-Cook

Digitally signed by Annette L. Vietti-Cook
Date: 2020.04.23 14:51:59 -04'00'

Annette L. Vietti-Cook

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

April 6, 2020

Kristine L. Svinicki, Chairman
U.S. Nuclear Regulatory Commission
Office of the Chairman
Mail Stop O-16 B33
Washington, D.C. 20555-0001

Re: Three Mile Island Unit 2 License Transfer

Dear Chairman Svinicki:

I am writing to you to express my serious concern regarding the proposed license transfer of the Three Mile Island Unit 2 (TMI Unit 2) nuclear power plant from GPU Nuclear Corporation to the Energy*Solutions'* subsidiary TMI-2 Solutions, LLC (TMI-2 Solutions).

As you are aware, in 1979, the TMI Unit 2 power reactor had the worst nuclear accident in U.S. history. The TMI Unit 2 nuclear accident resulted in damage to the majority of the reactor core, released millions of curies of radioactive noble gases into the environs, and grossly contaminated the interiors of the containment and auxiliary buildings. Because of this, we understand there are very high radiation areas within TMI Unit 2 that present a grave risk to personnel that enter. Despite the limited entries into the containment building to remove damaged nuclear fuel in the 1980s, there are vast areas in the plant with unknown radiological conditions related to the TMI Unit 2 accident. I firmly believe TMI Unit 2 is the most radiologically contaminated facility in our nation outside of the Department of Energy's weapons complex.

When it was announced that TMI Unit 1 was going to be permanently shut down, the Commonwealth's residents and the Pennsylvania Department of Environmental Protection (DEP)) believed this to mean that TMI Unit 1 would enter into a SAFSTOR status for several decades and be decommissioned first. This would allow for the further decay of radioactivity within TMI Unit 2 and reduce worker exposure and possible environmental releases of radiation during clean up.

However, this understanding is no longer the case. With the announcement of GPU Nuclear Corporation planning to shed its responsibility for TMI Unit 2 to TMI-2 Solutions, we now understand that TMI-2 Solutions plans to immediately begin the decommissioning of TMI Unit 2 with the accrued $800 million in the financial assurance fund that GPU Nuclear Corporation and the NRC currently control. This leaves us with many questions and concerns, which I outline in more detail below, about what a license transfer of TMI Unit 2 will mean for Pennsylvania, the local environment, and the communities surrounding Three Mile Island.

Concerns with Three Mile Island Unit 2 License Transfer

Environmental & Safety Impacts

Due to the TMI Unit 2 power reactor partial meltdown, it is our understanding there are still very high radiation areas within TMI Unit 2 that would present a grave risk to any personnel that enter. Related to this understanding, I have the following questions about environmental impacts and safety associated with the decommissioning of TMI Unit 2:

- What increased environmental surveillance and pollution controls will the NRC require during clean-up of TMI Unit 2 to ensure any radiological releases are detected?
- The TMI Unit 2 facility is in the middle of the Susquehanna River, a major water supply for the region that drains into the Chesapeake Bay. What environmental and pollution controls will be put in place to ensure no contamination of this critical water source?
- What flood controls will be utilized during decommissioning to mitigate a worst-case flood scenario on the Susquehanna (e.g. a weather event similar to Hurricane Agnes in 1972 that produced 19-inches of rain in Pennsylvania)?
- Will the NRC require a local decommissioning advisory committee to be established to assure the clean-up of TMI Unit 2 is transparent to the public and local and state governments?

Cost of Clean-Up & Financial Responsibility

As noted above, GPU Nuclear Corporation and the NRC currently have $800 million in its financial assurance fund for decommissioning TMI Unit 2. However, estimates have shown it will cost $1.2 billion to decommission TMI Unit 2. For these reasons, I have the following questions, related to the cost and financial responsibility of cleaning up TMI Unit 2:

- Given there is a significant disparity between the estimated cost to decommission TMI Unit 2 from the amount of funds currently available, what funding source will be used to cover the deficit?
- Since the radiological conditions inside TMI Unit 2 are unknown, the actual cost to decommission it could be much higher than the current estimate of $1.2 billion. What legal and financial assurances will be put in place to address this potential?
- Who will the NRC require to retain financial responsibility to clean-up TMI Unit 2 after the license has been transferred?

Radioactive Waste Handling

Due to the severe contamination from the partial meltdown and the unknown radioactivity levels of materials that will need to be disposed, I request to know the following information related to how the radioactive waste from TMI Unit 2 will be handled:

- Has the U.S. Department of Energy agreed to dispose of the TMI Unit 2 reactor vessel, which has a portion of the damaged nuclear fuel from the 1979 accident still fused inside?

- How will TMI-2 Solutions dispose of any contaminated lead shielding, which is now mixed waste, that may be present in TMI Unit 2?
- Are there volume and activity estimates of the Class B & C low-level radioactive waste that cannot be shipped to the Energy*Solutions* disposal site in Utah?
- Has the low-level radioactive waste disposal site in Texas agreed to accept the Class B & C waste?
- Is there any greater than Class C low-level radioactive waste in TMI Unit 2? If so, will that remain onsite?
- If asked by the licensee, will the NRC consider and approve very low-level radioactive waste to be disposed of in non-hazardous landfills in Pennsylvania?

Given my stated concerns, I hope you and your fellow Commissioners will thoughtfully consider the unique aspects of the severely damaged TMI Unit 2 nuclear reactor and not approve a license transfer until all parties are satisfied that the decommissioning can be done safely. Equally important, we require firm legal assurances that financial resources are available to complete decommissioning once started, including bonding between the Commonwealth and licensee. I also expect no radioactive waste from TMI Unit 2 will be left on Three Mile Island.

Additionally, I ask your executive staff and the current and proposed licensee brief my fellow local and state officials responsible for protection of the public and environment. Obviously, the current health crisis will dictate whether this meeting is in person or virtual. Furthermore, in that the licensee has recently amended the Post-Shutdown Decommissioning Activities Report (PSDAR) and has proposed a significant schedule change, the Pennsylvania DEP expects the NRC to hold a local PSDAR meeting after the COVID-19 situation has resolved so that the proposed clean-up work at TMI Unit 2 and timeline can be presented to the public, with ample opportunity for questions and discussion.

Should you or your staff have any questions regarding my stated concerns or wish to discuss them further, please feel free to contact David J. Allard, Director for Bureau of Radiation Protection, by e-mail at djallard@pa.gov or by telephone at 717.787.2480.

Sincerely,

Patrick McDonnell
Secretary

cc: David J. Allard, Director, Bureau of Radiation Protection, DEP
NRC Commissioner Jeff Baran, Washington, DC 20555-0001
NRC Commissioner Annie Caputo, Washington, DC 20555-0001
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GPU NUCLEAR

ENERGYSOLUTIONS

April 13, 2020
TMI-20-013

Patrick McDonnell
Office of the Secretary
Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063

Dear Secretary McDonnell

We want to thank you for the clarity of the concerns and questions the Department of Environmental Protection expressed on the future of Three Mile Island Unit 2 (TMI-2) in your April 6, 2020 letter to NRC Chairman Svinicki. We felt it imperative that we (GPU Nuclear and Energy*Solutions*, the parent of TMI-2 *Solutions*) address the questions you raised regarding the status and decommissioning of TMI-2. First let me assure you that we are intensely focused on the environment as well as the health and safety of the public and our personnel at TMI-2, both now and in the future. Our decommissioning planning efforts, considering also the shutdown of Three Mile Island Unit 1 (TMI-1), have been a key focus of our activities over the last several years. During this time, we have ensured open access to information to your on-site Division of Nuclear Safety staff.

The radioactive cleanup of the accident-generated radioactive material in the 1980s resulted in approximately 99% of the nuclear fuel being taken by the U.S. Department of Energy to a dry fuel storage facility in Idaho. Over the last 30 years, the plant has been carefully monitored by GPU Nuclear, Exelon, the NRC, and with oversight through the Pennsylvania Division of Nuclear Safety. TMI-2 is in a state of Post-Defueling Monitored Storage (PDMS), designed and implemented specifically for the unique characteristics of TMI-2. There have been no incidences or even near misses of releases from the plant that in any way endangered or put the public at any risk. Having said that, we are taking the planned dismantlement of the plant and remediation of the remaining radioactive material very seriously. In May of 2019, as GPUN Chief Nuclear Officer, I personally performed my 3rd inspection of the inside of the Reactor Building and put my eyes on many of the areas of increased radioactivity. I was accompanied on this tour by a member of your DEP staff as well as a USNRC commissioner.

We believe now is the right time to complete the cleanup. GPU Nuclear carefully and thoughtfully chose Energy*Solutions* as a proven and leading nuclear decommissioning and waste management company to handle the remediation of TMI-2. They have successfully decommissioned sites in Illinois, Arkansas and Wisconsin and are actively working on the decommissioning of San Onofre Nuclear Generating Station in California and Fort Calhoun Station in Nebraska. They own the leading radioactive waste depository in the country and are the most experienced company in the United States at handling radioactive waste of all types.

The questions and concerns you raised are very much in the forefront of our planning efforts. We feel they are very valid points, and would like to take this opportunity to provide some additional information and renew our offer of an in-person meeting with you and your staff to field additional questions and clarifications. We realize these are challenging times for in-person meetings, but at the first opportunity, whether in-person or by teleconference, we would appreciate the opportunity to provide additional time for further understanding. The enclosure to this letter provides detailed answers to the issues raised. To ensure clarity, we restated points in your letter and provided commentary beneath it. It is difficult to anticipate further questions in this letter, but we welcome additional interaction in any area you require more detail.

We trust these answers and commentary will provide the PA DEP with increased assurances about the efficacy of the proposed transfer of TMI-2 to TMI-2 *Solutions*. This license and ownership transfer, at the time of reductions in Exelon's workforce on the Island, will ensure a deeply experienced nuclear company to care for TMI-2. The proposed business deal described in the License Transfer Application to the USNRC provides for strong financial assurances coupled with the proven technical abilities of Energy*Solutions*. As we work through the approval process with the USNRC, we are more than willing to address additional concerns and questions by the Department of Environmental Protection in a meeting forum of your choice.

As mentioned above, we are very much interested in being able to meet with you and your staff to further the discussion on future plans for TMI-2. The planning phase will occur over the next several years so there is ample opportunity to interact, address questions and concerns, and maintain a high level of engagement with all of our stakeholders.

Please, if you have additional questions or concerns, feel free to contact Greg Halnon, President and Chief Nuclear Officer, GPU Nuclear at ghalnon@firstenergycorp.com. Your Division of Nuclear Safety staff is able to contact me on my personal devices if necessary during the COVID-19 restrictions.

Gregory H. Halnon
President, CNO
GPU Nuclear

Confirmed By:
John T. Sauger
President, CNO
Energy*Solutions*

Cc (via email)
David J. Allard, Director, Bureau of Radiation Protection, DEP
Rich Janati, Chief, Division of Nuclear Safety, DEP
Kristine Svinicki, Chairman, USNRC Commission
David Lew, Regional Administrator, USNRC Region 1

Enclosure

Detailed Commentary to Issues Raised by the Pennsylvania Department of Environmental Protection

Environmental & Safety Impacts

1. What increased environmental surveillance and pollution controls will the NRC require during the clean-up of TMI Unit 2 to ensure any radiological releases are detected?

TMI Unit 2 Technical Specification (TMI-2 TS) 6.7.4a requires a Radiological Effluent Controls Program which conforms to NRC Regulation 10 CFR 50.36a "Technical specifications on effluents from nuclear power reactors". This regulation requires that releases of radioactive materials to unrestricted areas during normal conditions, including expected occurrences, are as low as is reasonably achievable. Implementation of these controls are described in the Offsite Dose Calculation Manual and include redundant monitors on the TMI-2 ventilation exhaust as described in the Post-Defueling Monitored Storage (PDMS) Safety Analysis Report (SAR) Revision 13 Section 7.2.4.3 "Effluent Monitoring". In addition, the PDMS SAR sections 7.2.1.2 "Containment Atmospheric Breather", 7.2.1.3 "Containment Ventilation and Purge", 7.2.6.1 "Auxiliary Building Ventilation System" and 7.2.6.2 "Fuel Handling Building Ventilation System" identifies the capability to provide HEPA filtered ventilation exhaust from Three Mile Island Unit 2. Results of this monitoring are reported in the Annual Radioactive Effluent Release Report required by Technical Specification 6.8.1.2 and 10 CFR 50.36a. The most recent Annual Radioactive Effluent Release Report for TMI Unit 2 is dated April 29, 2019 and can be found on the NRC's website at ADAMS Accession Number ML19120A236.

Additionally, TMI-2 TS 6.7.4b requires a Radiological Environmental Monitoring Program which conforms to the guidance of NRC Regulation 10 CFR 50 Appendix I. This program monitors radiation and radionuclides in the environs of the plant. The program provides:

a. Representative measurements of radioactivity in the highest potential exposure pathways; and
b. Verification of the accuracy of the effluent modeling program and modeling of environmental exposure pathways.

Also, groundwater monitoring will continue throughout the decommissioning process to ensure that groundwater is not impacted.

Implementation of these controls for this program is also described in the Offsite Dose Calculation Manual. The most recent Radiological Environmental Monitoring Program Report for TMI Unit 2 is dated April 30, 2019 and can be found on the NRC's website at ADAMS Accession Number ML19120A231.

TMI-2 will continue to comply with all applicable NRC Technical Specification and related requirements throughout the decommissioning.

2. **The TMI Unit 2 facility is in the middle of the Susquehanna River, a major water supply for the region that drains into the Chesapeake Bay. What environmental and pollution controls will be put in place to ensure no contamination of this critical water source?**

   As described in response to Question 1 above, TMI-2 TS 6.7.4a and 6.7.4b require TMI-2 to maintain a Radiological Effluent Controls Program and a Radiological Environmental Monitoring Program, which are implemented via the Offsite Dose Calculation Manual. These programs ensure monitoring of radiological release from TMI-2 and reporting via the Annual Radioactive Effluent Release Report and the Radiological Environmental Monitoring Program Report. For non-radiological contaminants NPDES Permit 0009920 controls their release. The NRC required programs and NPDES permit will remain in effect throughout decommissioning. In addition, TMI's Preparedness, Prevention and Contingency (PPC) Plan documents the pollution prevention design features of Three Mile Island Nuclear Station (TMINS) as well as the established plans and procedures that assure facility operation in compliance with the PADEP's Emergency Environmental Response Guidelines. Best management practices will be designed and implemented specific to the decommissioning activities.

3. **What flood controls will be utilized during decommissioning to mitigate a worst-case flood scenario on the Susquehanna (e.g. a weather event similar to Hurricane Agnes in 1972 that produced 19-inches of rain in Pennsylvania)?**

   As described in the PDMS SAR Section 2.4, TMI is situated at an elevation that is above the peak Agnes flood elevation of 300.5 feet mean seal level (MSL) with a flow of approximately 1,000,000 cubic feet per second (cfs). In addition to the largest recorded historic flood, TMI-2 is designed to protect against a Probable Maximum Flood. The Probable Maximum Flood (PMF) at TMI-2 exceeds the Agnes flood with a flow rate of 1,625,000 cfs with a flood elevation of 308.5 ft MSL. TMI-2 is protected from this flood including any wave action by the installation of flood barriers at all external entrances to the contaminated portions of the facility. Procedures and regulatory commitments remain in effect for the installation of these flood control barriers.

   The current revision of the PDMS SAR also describes a dike surrounding the TMINS. The elevation of this dike is 304 ft. MSL and thus is not protective of a PMF event. With the closure of TMI-1 this dike is no longer maintained and reference to the dike will be removed in PDMS SAR Revision 14.

   Radioactive or contaminated waste temporarily stored outside for packaging into transport containers will incorporate flood protection features, such as berms, to prevent the material from being washed away during a flood or severe storm.

4. **Will the NRC require a local decommissioning advisory committee to be established to assure the clean-up of TMI Unit 2 is transparent to the public and local and state governments?**

   Energy*Solutions*, through its subsidiary TMI-2 *Solutions*, intends to establish a Citizens Awareness Panel (CAP) after completion of the transfer of TMI-2. Energy*Solutions* is eager to engage with the state and the TMI community as it proceeds with decontamination and dismantlement of the TMI-2 site. The panel will provide a continuing opportunity for the stakeholders and public to be informed and provide feedback on the progress to decontaminate and cleanup the site for future use. Energy*Solutions* has had a very positive experience with a CAP decommissioning the two unit Zion site and will build on that experience with TMI-2. Included in our progress reports to the Zion CAP is a status of the NDT and the remaining estimated work to complete. Public participation was also welcomed and the NRC and Illinois Nuclear Safety Division attended and were periodically asked to provide their perspectives on our decommissioning progress as our regulators.

Cost of Clean-up and Financial Responsibility

1. **Given there is a significant disparity between the estimated cost to decommission TMI Unit 2 from the amount of funds currently available, what funding source will be used to cover the deficit?**

   The License Transfer Application (LTA) Enclosure 7 provides a decommissioning cost estimate for TMI-2 of $1,056,874, as well as the projected annual spending, which includes a substantial contingency. Although the current value of the TMI-2 nuclear decommissioning trust fund (NDT) is approximately $892M, it is important to recognize that the cost estimate represents the cost to decommission the facility over many years in the future. Over time, even presuming a conservative 2% average estimate of fund growth above inflation, the current 2019 NDT can satisfy the roughly $1.05 billion decommissioning cost estimate. The TMI-2 Post-Shutdown Decommissioning Activities Report (PSDAR) revision 3 Table 1B-3 provides a funding analysis that also demonstrates there is sufficient margin in the NDT today to complete the planned decommissioning in accordance with NRC requirements. The funding analysis uses realistic parameters and has actual project estimates based on detailed planning.

   Additionally, as described in Section IV.A.3 and Enclosure 4B of the LTA, Energy*Solutions* is providing additional financial protection mechanisms to ensure there are sufficient funds available to complete the decommissioning of TMI-2 as required by NRC. This extra financial protection can amount to $100 million at certain phases of the project, above and beyond what is projected to meet the current project expectation.

   Finally, it is important to provide a high-level description of how the deal with Energy*Solutions* was constructed. The project cost estimate was developed and each major

activity was assigned a contingency risk percentage based on the confidence level it could be successfully completed within the base line-item budget costs. Additional funds were added to each activity based on this confidence level of success. After each activity was increased due to the risk of successful completion, Energy*Solutions* added another unassigned contingency of $50M on top of all of the assigned contingencies across the project. Finally, the additional $100M financial assurance was added to the transaction to give further assurance of adequate funds. Energy*Solutions* demonstrated the financial and technical ability to meet these and numerous other parameters of the deal structure required by FirstEnergy.

The financial assurances required by FirstEnergy during deal negotiations were based on an assumed minimum balance in the NDT of $800M. In other words, as long as the NDT balance is above $800M, the assurances of the $100M financial assurance mechanisms as well as the assigned and unassigned contingencies provide for acceptable project finances built into the transaction, adequately protecting FirstEnergy companies and any downstream liabilities to the Commonwealth from potential future shortfalls.

2. **Since the radiological conditions inside TMI-2 Unit 2 are unknown, the actual cost to decommission it could be much higher than the current estimate of $1.2 billion. What legal and financial assurances will be put in place to address this potential?**

The radiological conditions inside TMI-2 are fairly well known and characterized. Pre-PDMS surveys have been documented and extensive analyses of radiological conditions were performed prior to the NRC approving the PDMS license amendment in 1993. Appendix H, Chapter 5 of the PDMS SAR provides a full description of the radiological conditions that existed in TMI-2 at the time it entered PDMS. Since that time natural radioactive decay has reduced these radiation and contamination levels and the amount of curies of major radioactive constituents (Cs-137 and Sr-90) contained in the plant have decayed by over 50%. Continuous monitoring over the many years since the accident has confirmed the level of radioactive decay. The PDMS SAR Appendix H, Chapter 5 Appendix 5A contemplated a 30 year PDMS period and described future clean-up operations and expected personnel radiation exposure savings.

In addition to the detailed and conservative characterizations already in place for TMI-2, recognizing that any project carries risk of overruns, as previously mentioned, additional financial assurance mechanisms required by FirstEnergy are being put in place by Energy*Solutions*, amounting to $100 million at certain phases of the project, to help ensure overall decommissioning success.

3. **Who will the NRC require to retain financial responsibility to clean-up TMI Unit 2 after the license has been transferred?**

   As stated on page 2 of the License Transfer Application Cover letter "TMI-2 *Solutions* will assume responsibility for all licensed activities at the TMI-2 site, including responsibility under the License to complete radiological decommissioning pursuant to NRC regulations".

Radioactive Waste Handling

1. **Has the U.S. Department of Energy agreed to dispose of the TMI Unit 2 reactor vessel, which has a portion of the damaged nuclear fuel from the 1979 accident still fused inside?**

   GPU Nuclear and Energy*Solutions* have met with the Department of Energy regarding the status of TMI-2 waste that will be generated during the removal and recovery of the remaining damaged core material. There is conceptual agreement that DOE retains ultimate responsibility for the disposal of any high-level radioactive waste on site, including the remaining damaged core material, pursuant to the terms of the DOE Standard Contract for Disposal of Spent Nuclear Fuel and High Level Waste. Packaging and storage of this damaged core material is fundamentally similar to that for the spent fuel that TMI-1 will be storing on-site in the Independent Spent Fuel Storage Facility (ISFSI).

   Energy*Solutions*, leveraging its past experience on large nuclear decommissioning projects, plans to minimize the overall volume of radioactive waste produced by the TMI-2 remediation. This is accomplished by separating accident-generated solid waste from the Reactor Vessel and other components containing fragmented damaged core material. When separation is not feasible, segmentation is performed to reduce the radioactive waste volume. Given this proven technique, the estimated volume of damaged core material is estimated to be contained to twelve dry cask storage canisters that will be stored in the ISFSI. Such operations are being planned and are technically feasible using already established commercial techniques and equipment.

2. **How will TMI-2 Solutions [*sic*] dispose of any contaminated lead shielding, which is now mixed waste, that may be present in TMI Unit 2?**

   Reactor site decommissioning projects typically encounter some level of RCRA hazardous materials used throughout the facility. Some of these materials are radioactively contaminated and as a result are "mixed waste". The Energy*Solutions* disposal facility in Clive Utah is permitted to accept mixed waste, which is a combination of both RCRA hazardous and radioactive waste. Treatment technologies include macro encapsulation of radioactive lead solids and hazardous debris, stabilization of heavy metals, neutralization and solidification of contaminated liquids, thermal treatment of waste containing organic solvents, amalgamation of elemental mercury, and treatment of other unique waste streams.

Dealing with such wastes is neither new nor unique to TMI-2 and Energy*Solutions*. Proven techniques and processes are available, and staff are trained and qualified to deal with these materials in a manner that is in full compliance with applicable regulations.

3. **Are there volume and activity estimates of Class B & C low-level radioactive waste that cannot be shipped to the EnergySolutions [*sic*] disposal site in Utah?**

   As described in the 2018 TMI-2 Decommissioning Cost Estimate there is an estimated 12,558 cubic feet of Class B & C waste at TMI-2. This waste is intended to be disposed of at the Waste Control Specialists (WCS) Disposal Facility in Andrews County, Texas.

4. **Has the low-level radioactive waste disposal site in Texas agreed to accept the Class B & C waste?**

   Energy*Solutions* has an ongoing contractual relationship with WCS, and it regularly ships Class B & C waste to WCS for disposal.

5. **Is there any greater than Class C low-level waste in TMI-2? If so, will that remain on site?**

   The decommissioning of TMI-2 may generate some greater than Class C (GTCC) low level waste. GTCC waste is a regulatory term, not a unique waste type. TMI-2 did not operate long enough (approximately 90 days) to produce irradiated hardware GTCC as is with most decommissioning projects. However, portions of the damaged core material at TMI-2 that have spread and contaminated components inside and outside of the reactor vessel may be classified as GTCC. The 2018 DCE estimates approximately 2530 ft^3 which is similar to the volume at other decommissioning projects. One must keep in mind that much of the cleanup had already been performed in the years following the accident. This remaining waste will be stored on site in accordance with NRC Regulations contained in 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste." It is important to emphasize that every reactor decommissioning project generates some GTCC waste, and GTCC waste is routinely stored on site until the Department of Energy accepts ownership to dispose of this waste in a deep geologic repository. For example, the Crystal River Unit 3 PSDAR[1] assumes there will be 1785 ft^3 of GTCC waste.

6. **If asked by the licensee, will the NRC consider and approve very low-level radioactive waste to be disposed of in non-hazardous landfills in Pennsylvania?**

   The NRC website states: "On March 6, 2020, the NRC issued a proposed interpretation of its low-level radioactive waste disposal regulations in 10 CFR 20.2001 that would permit licensees to dispose of waste by transfer to persons who hold specific exemptions for the purpose of disposal (85 FR 13076)[]. In the proposed interpretation, the NRC would consider approval of requests for specific exemptions for the purpose of disposal if they are for the disposal of VLLW by land burial. Therefore, the NRC's intent is that this interpretive rule

[1] NRC ADAMS ML13340A009; page 30, Section 5.1.17

would allow licensees to transfer VLLW to exempt persons for the purpose of disposal by land burial. The NRC is requesting comment on this proposed interpretive rule." The rulemaking is on-going and the DEP staff is encouraged comment as requested by the NRC. In addition, approvals granted by the NRC for disposal of VLLW at a burial site generally require such disposal to be in full compliance with any regulations and permits required by regulations administered by the host state. Therefore, this is an issue over which the Commonwealth of Pennsylvania has a certain degree of control. The important point is that TMI-2 *Solutions* will comply with all applicable state and federal regulatory requirements for disposal of all types of wastes, including VLLW.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
FirstEnergy Companies	)	Docket Nos. 50-320 LT
	)	
TMI-2 Solutions, LLC	)	
	)	
(Three Mile Island Nuclear Station, Unit 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **LETTER FROM COMMISSION SECRETARY ANNETTE VIETTI-COOK TO PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION SECRETARY PATRICK MCDONNELL** have been served upon the following persons by Electronic Information Exchange.

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Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 23rd day of April 2020.