Request for Additional Information (non-proprietary)

By letter dated April 18, 2019, as supplemented August 5, 2019, October 2, 2019, and October 29, 2019, TN Americas LLC submitted to the U.S. Nuclear Regulatory Commission (NRC) an application for Certificate of Compliance (CoC) No. 1042, Amendment No. 2, to the NUHOMS® EOS System, pursuant to the requirements of Part 72 of Title 10 of the *Code of Federal Regulations*.

This request for additional information (RAI) identifies additional information needed by the NRC staff in connection with its review of this amendment application. Each RAI below describes information needed by the staff to complete its review of the subject application.

__Structural RAIs:__

RAI 3-1 PROPRIETARY: See Enclosure 2

RAI 3-2: Justify the assumption of a temperature of 500°F used for SA-240 Type 304 stainless steel for the EOS-37PTH Dry Shielded Canister (DSC) in Appendix 3.9.1, "DSC SHELL STRUCTURAL ANALYSIS."

The applicant assumed a temperature of 500°F for SA-240 Type 304 stainless steel in Appendix 3.9.1, "DSC SHELL STRUCTURAL ANALYSIS" (see Table 3.9.1-3), while Table 4.9.7-7 shows a maximum temperature of 717°F at the DSC shell in the heat zone loading configuration (HLZC) 10, which is the new HLZC proposed in this Amendment 2. Justify the temperature assumption in the structural analysis for the SA-240 Type 304 stainless steel. Staff is concerned that structural calculations related to pressure and thermally induced stresses may result in lower margins. Update the calculations as necessary

This information is needed so that the staff may determine compliance with the regulations in 10 CFR 72.236(b).

__Thermal RAIs:__

RAI 4-1: Clarify in the Safety Analysis Report (SAR) whether the Horizontal Storage Module - Matrix (HSM-MX) storage conditions and OS197 transfer cask conditions considered in Chapter B.4 reflect the different content from that found in Appendix T, Chapter T.4 of Reference [B.4-2].

Technical Specification Table 19 and Table 20 indicated that this amendment request's content in the 61BTH Type 2 DSC has the cooling period reduced to two years from the five years analyzed in reference [B.4-2], which would indicate differences in radionuclides and fission gases for a specified heat load. There was no discussion in Chapter B.4 to demonstrate that the decay heat and gases and their effect on pressure calculations (e.g., maximum internal pressure discussed in B.4.6) within the 61BTH DSC in the HSM-MX and OS197 transfer cask (and its derivatives) are as reflected in [B.4-2].

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-2: Clarify in the SAR the impact of increasing component temperatures (e.g., DSC) due to model uncertainties (e.g., Grid Convergence Index (GCI) corrections), for normal, off-normal, and accident conditions during transfer, especially considering that an important to safety (ITS) component is at a temperature well above from which property data are available.

It is important that corrections and uncertainties are considered to ensure temperatures are below allowable values. Although SAR Section 4.9.7.2.1.4 included the effect of the GCI correction for storage, this correction was not explicitly included in the discussions for transfer and transfer accident conditions (e.g., Table 4.9.7-4, Table 4.9.7-5, Table 4.9.7-7). This is especially relevant for temperatures of duplex stainless-steel DSCs that are above temperatures from which property data are available (see Materials RAI 8-4).

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-3: Provide explanation or demonstrate in the SAR that bounding thermal analyses are considered for damaged fuel and failed fuel scenarios under accident transfer conditions.

SAR Section 4.9.7.3.4 and Figure 4.9.7-7 showed that DSC and transition rail temperatures are bounding with damaged fuel (modeled as rubble) as content during accident conditions compared to the design basis condition with intact fuel at a higher decay heat. This analysis indicates that local high component temperatures are possible due to the local thermal behavior from damaged/failed fuel. However, SAR Section 4.9.7.4.4 did not perform an accident analysis with failed fuel as content but, rather, stated the accident transfer condition with intact fuel would bound the results with failed fuel because results for the intact fuel assemblies at normal/off-normal conditions bound failed fuel assembly calculations at off-normal conditions. Similar issues should be considered for the 61BTH damaged/failed fuel analyses.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-4: Clarify in the SAR how the EOS-37PTH DSC with Type 1 basket/HLZC 1 storage and transfer thermal analyses bound EOS-37PTH DSC with Type 4H basket/HLZC 1.

SAR page 4-2 and page 4-89 stated the storage and transfer thermal evaluations for EOS-37PTH Type 1 basket are applicable for the EOS-37PTH Type 4H basket. However, SAR page 4-89 stated that the time limits for transfer operations of the EOS-37PTH with Type 4H basket and HLZC 1 are reduced to 8 hours from 10 hours (for the Type 1 basket/HLZC 1). It is not clear how the Type 1 basket/HLZC 1 storage and thermal analyses are bounding if a Type 4H basket/HLZC 1 requires a shorter transfer time limit.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-5: Correct the SAR and clarify the meaning and relevance of the final sentence in SAR Section 4.9.6.1.3.2 ("If the maximum temperatures from the above transient analyses and the accident evaluation …").

The sentence speaks of a transient analysis even though the discussion is for a steady-state storage scenario. The sentence's context, or proper location within the SAR, is uncertain and may affect proper understanding of the relevant storage/transfer system.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-6: Clarify in the SAR that the internal DSC pressure within the EOS-108 transfer cask is below design basis values for off-normal and accident conditions.

SAR Section 4.9.6.3.3 C (page 4.9.6-24) notes that the DSC cavity temperature is 550 K. This is higher than the 543 K temperature for the "bounding normal condition" of the EOS-125 transfer cask described in SAR Section 4.9.6.1.6.4 and would appear to indicate the conditions in the EOS-108 result in higher gas cavity temperatures, and thus, higher cavity pressures, than in the EOS-125. However, no discussion was provided to demonstrate that the internal DSC pressure within the EOS-108 during off-normal and accident conditions would be below design basis values. Likewise, the effect on model uncertainties (e.g., GCI temperature corrections) should be discussed when determining internal DSC pressures.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-7: Provide the time limits and the appropriateness of the time periods associated with required action A.2 and A.3 of limiting conditions for operation (LCO) 3.1.3.

(a) The technical specification for LCO 3.1.3 indicated that the 61BTH Type 2 DSC time limits to ensure safe operation when completing the DSC transfer are not available. The technical specifications, which form part of the CoC approval, are to be completed prior to NRC certification to ensure there is adequate performance.
(b) The appropriateness of the time limits should be discussed relative to the sensitivity of the ambient temperature during transfer, as noted in Technical Specification 5.1.2(g).

This information is needed to determine compliance with 10 CFR 72.11 and 72.236(f).

RAI 4-8: Provide the acceptance criteria for determining an "appropriate solar shield" when transferring a 61BTH Type 2 DSC with ambient temperatures exceeding 100°F.

Technical Specification 5.1.2(g) stated that a solar shield is necessary to ensure transfer operations, but no acceptance criteria were provided to determine the geometric extent or thermal effectiveness of the solar shield.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

RAI 4-9: Demonstrate that the EOS-37PTH DSC with a heat load greater than 41.8 kW and the EOS-89BTH DSC with a heat load greater than 41.6 kW would result in component temperatures below allowable values for ambient temperatures greater than 70°F.

According to Technical Specification 4.5.3, an EOS-37PTH with a heat load less than 41.8 kW (or an EOS-89BTH DSC with a heat load less than 41.6 kW) is limited to a site with a maximum calculated normal average ambient temperature (corresponding to a 24-hour period) of 90°F.

The present licensing action seeks to add EOS-37PTH and EOS-89BTH DSC with new heat load zone configurations which can have decay heats greater than 41.6 kW and 41.8 kW. Technical Specification 4.5.3 indicates that a EOS-37PTH with a heat load greater than 41.8 kW (or an EOS-89BTH DSC with a heat load greater than 41.6 kW) can be loaded at a site with a maximum calculated average yearly temperature of 70°F, even if the site has a maximum calculated normal average ambient temperature corresponding to a 24-hour period of 90°F (or higher). The thermal analyses for heat load greater than 41.8 kW for an EOS-37PTH DSC or 41.6 kW for an EOS-89BTH DSC have not demonstrated ambient temperatures greater than 70°F would result in component temperatures below allowable values. It is noted that site ambient conditions for the 61BTH DSC were not included in Technical Specification 4.5.3.

This information is needed to determine compliance with 10 CFR 72.236 (f), (l).

Shielding RAIs:

RAI 6-1 PROPRIETARY: See enclosure 2

RAI 6-2: Revise the Technical Specifications (TS) for the EOS-HSM or HSM-MX module to specify that the OS197 transfer cask (TC) will be used to transfer only the 61BTH DSC to and from the spent fuel pool to the ISFSI.

On Page 1-2 of the Updated Final Safety Analysis Report (UFSAR) revision 0 for 72-1042 Amendment 2, the applicant states: "Amendment 2 of this UFSAR incorporates the 61BTH Type 2 Dry Shielded Canister (DSC) for storage in the new NUHOMS® MATRIX (HSM-MX) design submitted under Amendment 1 to CoC No. 1042. The 61BTH Type 2 DSC is from CoC No. 1004 Amendment No. 15. The design will allow for intact, damaged, and failed fuel, the definitions of which come from CoC No. 1042 Amendment No. 1."

On the same page of the UFSAR, the applicant states: "Comprehensive analyses of components to the NUH61BTH Type 2 DSC and the OS197 TC as used in the HSM-MX are provided in Appendix B [to this SAR]."

All the above-quoted statements indicate that the OS197 TC will be used to transfer only the 61BTH Type 2 DSC to and from the HSM-MX storage module. However, the TS for HSM-MX system does not include this requirement. The applicant needs to revise the TS for the HSM-MX storage system to explicitly state this requirement.

The staff needs this information to determine if the NUHOMS® MATRIX (HSM-MX) design, with the proposed amendments, meet the regulatory requirements of 10 CFR 72.236(d).

RAI 6-3: Specify the other requested Boiling Water Reactor (BWR) fuels that are not listed in Table 13, "BWR Fuel Assembly Design Characteristics for the 61BTH Type 2 DSC".

Section 2.3, "Fuel to be stored in the 61BTH Type 2 DSC," of the proposed TS points to Table 13 of the TS for the authorized BWR fuel classes to be stored in the 61BTH DSC. However, notes (3) to Table 13 states: "Example BWR fuel designs are listed herein and are not all-inclusive." This note appears to indicate that other fuel classes beside these listed in Table 13 can also be stored in the 61BTH DSC. In accordance to 10 CFR 72.236(a), specifications must be provided for the spent fuel to be stored in the spent fuel cask. For this reason, the application shall include specifications for all fuel assembly designs that are intended to be stored in the 61BTH Type 2 DSC.

The staff needs this information to determine if the NUHOMS® MATRIX (HSM-MX) design, with the proposed amendments, meet the regulatory requirements of 10 CFR 72.236(a).

RAI 6-4: Clarify (1) the number of irradiated stainless steel rods allowed in reconstituted assemblies per the 61BTH Type II DSC and (2) the number of irradiated stainless steel rods per reconstituted fuel assembly and revise the UFSAR and/or TS to reflect these limits as necessary.

On page 1-24 of the HSM-MX UFSAR, the applicant states: "Reconstituted assemblies containing up to five replacement irradiated stainless steel rods per assembly or an unlimited number of low enriched or natural uranium fuel rods or unirradiated non-fuel rods are acceptable for storage in an EOS-89BTH DSC as intact FAs."

On page 2-6 of the same UFSAR, the applicant states: "Fuel assemblies are evaluated with five irradiated stainless steel rods per assembly, 40 rods per EOS-37PTH DSC, and 100 rods per EOS-89BTH DSC. The cooling time is the same as unreconstituted FAs. The reconstituted rods can be at any location in the FAs. There is no limit on the number of reconstituted FAs per DSC; the FAs containing irradiated stainless steel reconstituted rods are modeled in the inner compartments as shown in Figure 6-1 for EOS-37PTH and Figure 6-2 for EOS-89BTH of Chapter 6."

However, the staff notes that Table 1-1t of the CoC No. 1004 TS states that the maximum number of irradiated stainless steel rods in reconstituted assemblies per the 61BTH Type II DSC is 40, the maximum number of irradiated stainless steel rods per reconstituted fuel assembly is 10, and the maximum number of reconstituted assemblies per DSC with unlimited number of low enriched UO_2 rods or Zr rods or Zr pellets or unirradiated stainless steel rods is 61.

The staff also notes that the TS for amendment 2 of the HSM-MX system includes: "Number of RECONSTITUTED FUEL ASSEMBLIES [per the 61BTH Type II DSC [is] 61." However, information on the maximum number of irradiated stainless steel rods in reconstituted assemblies per the 61BTH Type II DSC and the maximum number of irradiated stainless steel rods per reconstituted fuel assembly is missing from both the TS and UFSAR for the HSM-MX system.

The staff needs this information to determine if the HSM-MX meet the regulatory requirements of 10 CFR 236(d).

RAI 6-5: Justify that the specific power used in the source term calculations is appropriate or revise the source terms and shielding calculations for the HSM-MX system using a more appropriate specific power.

The applicant provides the fuel depletion parameters used in generating the source terms for the BWR fuel. The staff notes that the applicant states that it used the specific power as used in NUREG/CR-7194 for BWR fuel source term calculations. However, the staff notes that NUREG/CR-7194 used three different specific powers, 25 Watts/gram (W/g), 35 W/g, and 45 W/g. It used these different specific powers for sensitivity study rather than asserting these are the actual values of the BWR core operating parameters. The staff also notes that NUREG/CR-

6700 states the specific power used for BWR fuel source analyses is 35 W/g. In addition, the staff found that the Standard NUHOMS CoC No. 1004 design used 35 W/g in its design basis source term calculations for BWR fuel. Based on the information in the cited documents, it is not clear if the specific power used by the applicant in the source term calculation is conservative. Because using a specific power lower than the actual value in the depletion calculation will give lower source terms, the staff is concerned with whether the value used by the applicant bounds all the BWR fuels to be stored in the 61BTH DSC.

The staff needs this information to determine if the NUHOMS® EOS system, with the requested amendments, meets the regulatory requirements of 10 CFR 72.236(d).

RAI 6-6: Justify that the EOS DSC site dose analysis documented in Section A.11.3 of the UFSAR bounds the 61BTH DSC or revise the HSM-MX TS dose rate limit as necessary.

On page B.6-11 of Revision 2 of the UFSAR, the applicant states: "Although a highly conservative approach is employed to compute HSM-MX dose rates using the 61BTH DSC, the dose rates are below the dose rates computed for the EOS DSCs (EOS-37PTH and EOS-89BTH), see Table B.6-16 and Table B.6-17. The TS dose rate limits in TS Section 5.1.2(c) are based upon EOS-DSC dose rates." On page B.11-5 of the same document, the applicant states: "The vent dose rates for an HSM-MX containing an EOS-DSC bound the vent dose rates for the 61BTH DSC, see the discussion in Section B.6.4.4. Therefore, the EOS DSC site dose analysis documented in Section A.11.3 may be used to bound the 61BTH DSC." In addition, the applicant states on page B.11-4 of the USFAR: "No change to Section A.11.2.5, as the 61BTH DSC is bounded by the EOS-DSC within the HSM-MX." However, the comparison shown in Table B.6-17 of the UFSAR shows that the dose rate of 61BTH is 30% more than the dose rate of EOS-DSC at the door centerline line of the HSM-MX. As such, it is not clear to the staff if the dose rate for the HSM-MX loaded with the 61BTH DSCs is still bounded by the dose rate of the HSM-MX loaded with EOS DSC.

The staff needs this information to determine if the HSM-MX system meets the regulatory requirements of 10 CFR 72.236(d).

Editorial SH-RAI-1: Revise the UFSAR to clearly state that damaged or failed BWR fuel is a new content in amendment 2 to the EOS HSM-MX system design and can be stored only in the 61BTH dry shielded canister (DSC).

On page 1-2 of the UFSAR, the applicant states: "Amendment 2 of this UFSAR incorporates the 61BTH Type 2 dry storage canister (DSC) for storage in the new NUHOMS® MATRIX (HSM-MX) design submitted under Amendment 1 to CoC No. 1042. The 61BTH Type 2 DSC is from CoC No. 1004 Amendment No. 15. The design will allow for intact, damaged, and failed fuel, the definitions of which come from CoC No. 1042 Amendment No. 1." However, the staff notes that damaged and failed BWR fuels are not part of the authorized contents of CoC No. 1042 Amendments No. 0 and 1. EOS-89BTH is allowed to store only intact BWR fuel. The intact, damaged, and failed BWR fuel is to be stored only in the 61BTH Type 2 DSC, not to be stored in the EOS-89BTH DSC with this amendment.

<u>Materials RAIs</u>

RAI 8-1: Clarify the design criteria and American Society of Mechanical Engineers (ASME) code alternative information incorporated by reference from the CoC No. 1004 FSAR Revision 18.

The EOS UFSAR Section B.8.2.1 references Table R.3.1-2. No such table is included in CoC No. 1004 UFSAR Appendix R. The staff notes that Appendix R is for the NUHOMS® Horizontal Storage Module (HSM) Model 152. It appears that the callout should be to Table T.3.1-2 which has alternatives to the ASME code for the 61BTH DSC. This would be consistent with the EOS UFSAR Section B.8.2.1 call out to Table T.3.1-3 that has the code alternatives to the DSC basket. Note that the Alternatives to the ASME Code are now in Section 4.2.4 of the Technical Specifications.

None of the tables referenced in B.8.2.1 apply to the OS197. For the OS197, the EOS UFSAR should include Chapter 3 Section 3.2.5.3 of the 72-1004 UFSAR and Chapter 4 Section 4.9 and Table 4.9-1 which documents the ASME Code Exceptions List for the Transfer Cask.

This information is needed to determine compliance with 10 CFR 72.236(b).

RAI 8-2: Revise UFSAR Section B.8.2.2 to be consistent with UFSAR Section B.3.3.2 (as revised in response to Materials RSI-2) to provide correct references to the OS197 TC material specifications and properties.

Appendix T Section T.3.3 of the 72-1004 UFSAR referenced in EOS UFSAR Section B.8.2.2 addresses the NUHOMS® 61BTH DSC, Zircaloy and, to a limited extent, the concrete of the HSM/HSM-H. Appendix T Section T.3.3 in Reference B.8-2 does not address the OS197 Transfer Cask (TC). The 72-1004 UFSAR (reference B.8-2) Appendix T Section T.3.3 Mechanical Properties of Materials calls out Table T.3.6-3 Mechanical Properties of Materials which has entries for Stainless Steel ASME SA-240 Type 304 and Carbon Steel ASME SA-36.

The OS197 TC drawings are in Appendix E.3 of the 72-1004 UFSAR. There are many materials in the ITS structures, systems, and components (SSCs) for the OS197 TC that are not common with the 61BTH that are not included in Table T.3.6-3 in the CoC No. 1004 UFSAR.

This information is needed to determine compliance with 10 CFR 72.236(b).

RAI 8-3: Provide the range of operating temperatures for the HSM-MX components included in Drawing MX-5001-SAR and verify that these materials are suitable for the expected service temperatures under normal, off-normal and accident conditions.

These components include carbon steels, stainless steels and high strength alloy steel fasteners with the American Society of Testing and Materials (ASTM) material specifications. The staff note that ASTM specifications do not include allowable temperature ranges for use, nor do they provide information on mechanical properties as a function of temperature. The expected performance of the carbon and stainless steel materials may be estimated from information available from ASME B&PV code Section II Part D when ASME B&PV code Section II has incorporated ASTM Standards and specified material properties as a function of temperature. Relevant information on high strength steel bolting identified Drawing MX-5001-

SAR is not available in the ASME B&PV code Section II Part D. Limited studies published by the National Institute of Standards and Technology (NIST) show that these bolting materials have reduced strength at elevated temperatures (Weigand et al., 2018).

This information is needed to determine compliance with 10 CFR 72.236(b).

Reference

Weigand, J.M., R. Peixoto, L.C.M. Vieira Jr., J.A. Main, and M. Seif, "An Empirical Component-Based Model for High-Strength Bolts at Elevated Temperatures," Journal of Construction Steel Research, Vol. 147, pp. 87-102, 2018

RAI 8-4. Provide the following information with respect to the analysis shown in Tables 4-29, 4.9.6-6, 4.9.7-5 and 4.9.7-7 where the maximum DSC shell temperature is greater than 600°F.

1. Provide mechanical properties for the SA-240/SA-479 Type 2205 / SA-182 Gr F60 (UFSAR Table 8-7) and SA-240 UNS S31803 / SA-182 Gr F51 (UFSAR Table 8-8) at temperatures that encompass the use of these materials under the conditions identified in UFSAR Table 4.9.7-7.

2. Explain the recovery actions for the analysis shown in Table 4.9.7-7 where the maximum DSC shell temp could exceed 600°F. The maximum DSC shell temperature of 717°F based on a steady state analysis for the accident condition with the EOS-37PTH DSC and HLZC 10 with 6 damaged fuel assemblies using shown in Table 4.9.7-7 is 117°F greater than the American Society of Mechanical Engineers (ASME) code allowable for a Unified Numbering System (UNS) S31803 duplex stainless steel using ASME Code Case N-635-1. Previous analysis show that significant alteration of the microstructure and mechanical properties can occur when duplex stainless steel are exposed to temperatures above 600°F (Weng et al. 2003; Taveres et al., 2005; Della Rovere et al., 2013).

This information is needed to determine compliance with 10 CFR 72.236(b).

References

Della-Rovere, C.A., F.S. Santos, R. Silva, C.A.C. Souza, and S.E. Kuri, "Influence of Long-Term Low-Temperature Aging on the Microhardness and Corrosion Properties of Duplex Stainless Steel," *Corrosion Science*, Vol. 68, pp. 84–90, 2013.

Taveres, S.S.M., V.F. Terra, P. De Lima Neto, and D.E Matos, "Corrosion Resistance Evaluation of the UNS S31803 Duplex Stainless Steels Aged at Low Temperatures (350 to 550 °C) using DLEPR Tests," *Journal of Materials Science*, Vol. 40, pp. 4023-4028, 2005.

Weng, L.W., T.H. Chen, and J.R. Yong, "The High-Temperature and Low-Temperature Aging Embrittlement in a 2205 Duplex Stainless Steel," *Bulletin of College Engineering*, No. 89, pp. 45–61, 2003.

Operating Procedures RAI

RAI 9-1: Revise the Operating Procedures to include requirements for measuring the dose rates around the transfer cask.

The applicant developed operating procedures for loading the 61BTH DSC into the HSM-MX module. However, the dose rate measurement action, as listed in step 19 of the Operating Procedures of the Standard NUHOMS, CoC No. 1004, is not included in the Operating Procedures for the HSM-MX for loading the 61BTH DSC. It is imperative to include the dose rate measure requirement in the Operating Procedures to ensure grossly misloaded DSCs are not loaded into the ISFSI to avoid violation of the 10 CFR 72.104 and 72.106 regulations.

The staff needs this information to determine that the HSM-MX system meets the regulatory requirements of 10 CFR 72.234(f) and 72.236(d).

Radiation Protection RAI

RAI 11-1: Provide operating procedures with estimated time for each step for using the OS197 TC to transport the 61BTH to the HSM-MX storage module and corresponding dose rate estimates and radiation protection plan.

In Section B.1.2.3.1 of Revision 0 of the UFSAR for CoC No. 1042 Amendment 2 application, the applicant states: "The primary operations for loading fuels into the NUHOMS® 61BTH Type 2 DSC, moving the loaded OS197 TC to ISFSI, and transferring the NUHOMS® 61BTH Type 2 DSC to the HSM-MX is same as described in Section A.1.2.3.1." On page B.6-1 of the same UFSAR, the applicant states: "It is also demonstrated that dose rates for transfer of the 61BTH DSC within the OS197 transfer cask (TC) are similar to dose rates for transfer of the EOS-89BTH DSC within the EOS-TC125 documented in Chapter 6. Therefore, the exposure estimate for transfer of the EOS-89BTH DSC to the HSM-MX documented in Chapter A.11 may be applied to the 61BTH DSC." However, the staff notes from Table B.6-14 of 72-1042 Amendment 2 UFSAR that the dose rates at the bottom of the OS197 TC containing the 61BTH DSC is twice as much as the EOS-TC125 containing EOS-89BTH DSC. Based on these data the estimated exposure for transfer of the EOS-89BTH DSC to the HSM-MX documented in Chapter A.11 may not be applied to the 61BTH DSC.

The staff needs this information to proceed with its review to determine that the NUHOMS® MATRIX (HSM-MX) loaded with the 61BTH canister meets the regulatory requirements of 10 CFR 72.236(d).