Dry Storage Cask Inventory Assessment

Fuel Cycle Research & Development

Prepared for
U.S. Department of Energy
Nuclear Fuels Storage and Transportation Planning Project

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FCRD-NFST-2014-000602, Revision 2

SUMMARY

The report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*(FCRD-NFST-2013-000263, Rev.4), provides information on the inventory of commercial spent fuel, referred to in this report as used nuclear fuel (UNF), as well as Government-owned UNF and High Level Waste (HLW) in the U.S. Department of Energy (DOE) complex. Inventory forecasts for commercial UNF were made for a few selected scenarios of future commercial nuclear power generation involving the existing reactor fleet including one scenario involving reactors under construction.

This report uses the data contained in FCRD-NFST-2013-000263 to define the existing inventory of UNF in dry storage. This information is integrated with data on dry storage canisters and casks from the report, *Storage and Transport Cask Data for Used Commercial Nuclear Fuel, 2013 U. S. Edition* (ATI-TR-13047, August 9, 2013), in a Microsoft Access database (hereinafter referred to as the Dry Storage Cask/Inventory Database). The Dry Storage Cask/Inventory Database is used to produce queries for assessing the various systems used for the existing inventory of dry storage casks. The database and this report will be revised in the future as the inventory of fuel in dry storage changes and as additional information becomes available.

Both bare fuel and canistered dry storage casks are currently used to dry store UNF. Only 4 utilities currently use bare fuel storage systems for dry storage at 5 reactor sites. Seven unique bare fuel storage cask systems are used to store a total of 9,150 used fuel assemblies in 204 total casks. The distribution of casks loaded versus cask system is shown in Figure S-1.

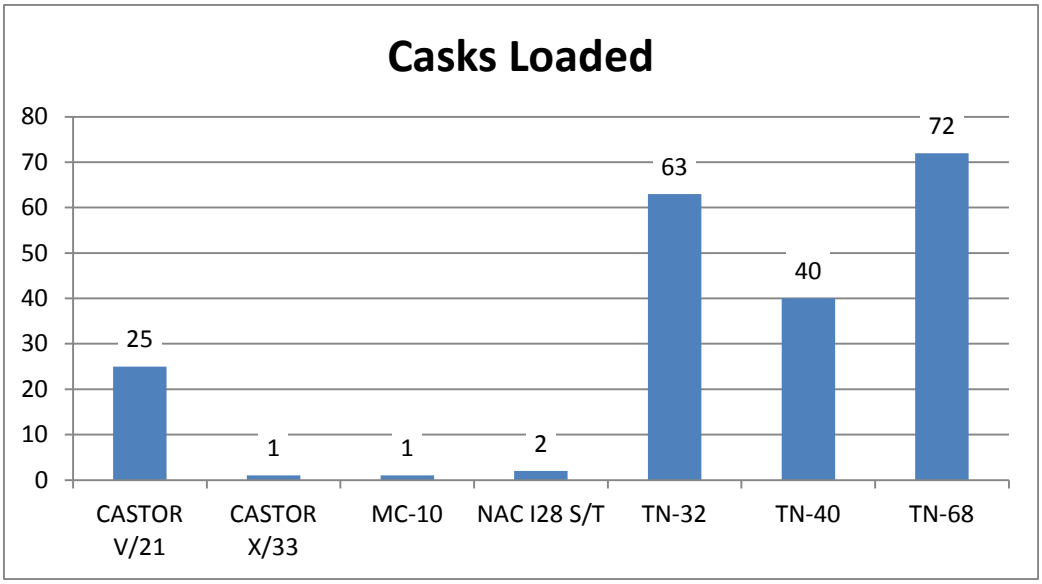

Figure S-1 Distribution of Casks Loaded Versus Bare Fuel Storage Systems

Thirty utilities currently use canistered storage systems for dry storage at 70 reactor sites. Sixteen unique canistered storage cask systems are used to store a total of 83,361 used fuel assemblies in 2,073 total canisters. The distribution of canisters loaded versus cask system is shown in Figure S-2

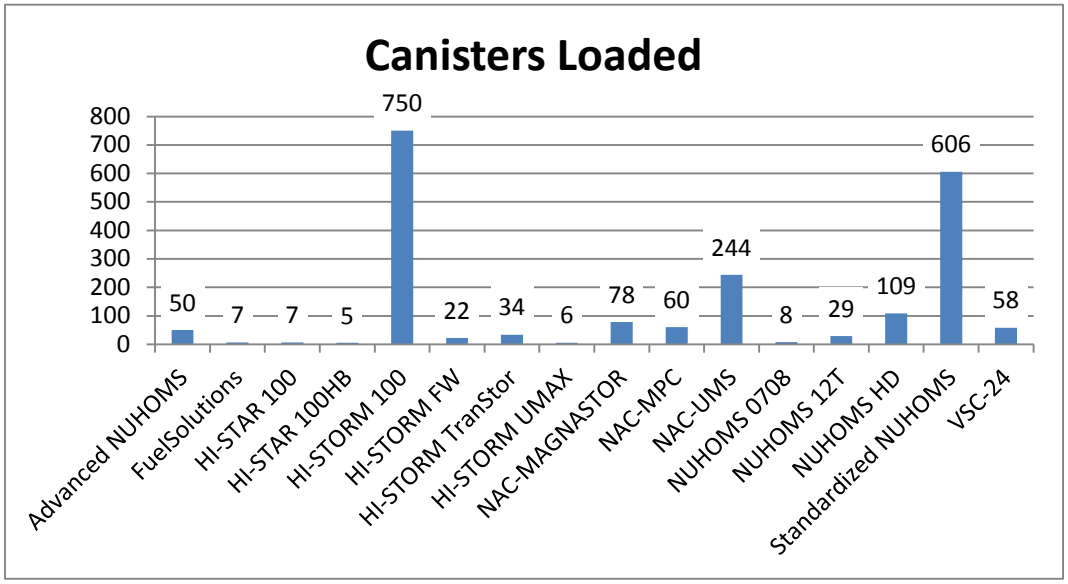

Figure S-2 Distribution of Canisters Loaded Versus Canistered Storage Systems

In many cases the canister designations listed in FCRD-NFST-2013-000263 are incomplete designations. For instance the NUHOMS 24P is available in both short and long variants; therefore, the proper designation is 24PS and 24PL. Not enough information is currently available publicly regarding the current dry storage inventory to always define the canisters at this level of fidelity; therefore, the canisters associated with the canistered storage systems in the dry storage inventory are regarded as “canister families”. Possible canisters applicable to canister families are designated simply as “canisters”. Because of this uncertainty, the number of unique combinations of reactor sites, storage systems and canisters in the current dry storage inventory is potentially larger than that presented in FCRD-NFST-2013-000263. A total of 36 canister families are represented by the current inventory of canistered systems in dry storage. These canister families represent a total of 51 unique canisters. Of these 51 canisters, 35 are certified for storage and transportation and 16 are currently certified only for storage. Additionally, 42 of these 51 canisters are certified under a general license and 9 are certified under a site specific license.

Similarly, the canistered storage cask systems listed in the dry storage inventory are incomplete designations for the actual storage cask used. For instance the HI-STORM 100 system has numerous storage cask variants associated with it. Not enough information is currently available publicly regarding the current dry storage inventory to define the canistered storage casks at this level of fidelity; therefore, the dry storage inventory is not defined beyond the storage system level. Because of this uncertainty, the number of unique combinations of reactor sites, canistered storage systems and canistered storage casks in the current dry storage inventory is potentially larger than that presented in FCRD-NFST-2013-000263. A total of 16 canistered storage cask systems are represented by the current inventory of canistered systems in dry storage. These storage cask systems represent a total of 35 unique canistered storage casks in use.

Specific transfer casks are not listed in FCRD-NFST-2013-000263. The combinations of transfer casks, storage systems and canister families are also quite large. The large number of combinations is driven primarily by the wide variety of transfer casks associated with some storage systems, particularly the Standardized NUHOMS system. Up to 10 different transfer casks are available for the Standardized NUHOMS system. Many of these transfer casks are simple adaptations of other transfer casks, e.g. the OS197FC transfer cask is identical to the OS197 transfer cask except for provisions for forced cooling of a canister during transfer operations. Up to 4 different transfer casks are available for the Holtec HI-STORM 100 system. A total of 14 canistered storage cask systems utilizing transfer casks are represented by the current inventory of canistered systems in dry storage. These storage cask systems represent a total of 29 unique transfer casks potentially available for use with the current inventory of dry storage canisters.

A total of 8 unique transportation casks are available for the 36 canister families (51 different canister types) in the current inventory. The availability of a transportation cask is dependent on the canister applicable to the canister family. A total of 22 canister families have an approved transportation cask regardless of which canister is applicable to the canister family. These canister families represent 1,307 canisters (63.1% of the total 2,073 canisters) and 59,925 assemblies (71.9% of the total 83,361 assemblies) in the current dry storage inventory. A total of 13 canister families do not have an approved transportation cask for any of the applicable canisters associated with the canister family. These canister families represent 451 canisters (21.8% of the total 2,073 canisters) and 113,356 assemblies (16.0% of the total 83,361 assemblies) in the current dry storage inventory. Only 1 canister family may not have an approved transportation cask depending on which canister is applicable to the canister family. This canister family represents 315canisters (15.2% of the total 2,073 canisters) and 10,080 assemblies (12.1% of the total 83,361 assemblies) in the current dry storage inventory.

During the course of developing this report, several limitations with the existing knowledge base of information pertaining to the current inventory of used fuel in dry storage were discovered. The following recommendations are made to address these limitations:

1. The primary source of cask system data for this report is the document, *Storage and Transport Cask Data for Used Commercial Nuclear Fuel, 2013 U. S. Edition*, (ATI-TR-13047). Several errors, omissions and ambiguities were discovered in this document during preparation of this report. It is recommended that these items be considered in any future revisions of ATI-TR-13047.
2. The Dry Storage Cask/Inventory Database that was developed to support this report was developed with the assumption that it would eventually be incorporated into the NFST Unified Database developed by the Oak Ridge National Laboratory. Data tables associated with Revision 1 of this report were imported into the Unified Database early in FY 2016. This data should be updated to incorporate the changes made to the Dry Storage Cask/Inventory Database to support Revision 2 of this report.
3. Inventory data to support this report is derived primarily from the document, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263). Data was also obtained from the document, *Preliminary Evaluation of Removing Used Fuel from Shutdown Sites* (FCRD-NFST-2014-000372) as appropriate. Modifications were made to this information as described in the report. These modifications should be considered in future revisions to FCRD-NFST-2013-000263 and FCRD-NFST-2014-000372.
4. The inventory of commercial light water reactor used fuel in dry storage should continue to be refined to provide better and more complete information relative to the specific components used to store and potentially transport the used fuel in the future. Particular attention should be devoted to the identification of the specific canisters used to enable a more accurate assessment of the availability of transportation casks for the current inventory of used fuel.

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SUMMARY OF REVISIONS

Revision Number	Date	Description
0	August 29, 2014	Original issue
1	August 31, 2015	Revised to incorporate current inventory data as provided in the *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263, June 30, 2015, Revision 3). Specific changes made to the inventory are listed in Section 2.1. Other changes to correct errors and provide clarification include the following: Section 2, Item 4 – The inventory for GE Trojan was split into two canister groups. Although this was stated in Revision 0, the split was not made in Revision 0. Revision 1 corrects this error. Section 2, Item 7 – Changed the basis for the quantity of MTiHM stored per canister at Ranch Seco from a ratio based on the quantity of canisters loaded to a ratio based on the quantity of assemblies stored. The supporting Microsoft Access database was updated to correct errors in designating the NUHOMS MP197HB transportation cask for certain NUHOMS canisters as allowed by Certificate of Compliance 71-9302, issued April 23, 2014. These corrections affect data reported in Section 4.6 and Appendix E. The supporting Microsoft Access database was updated to delete the MAGNATRAN transport cask as an approved transportation cask for the NAC-MAGNASTOR storage system since the cask is not yet approved. The supporting Microsoft Access database was updated to revise the Site Characteristic descriptions to better agree with those defined by the Inventory Report. The NUHOMS 61BTHF canister was added as a potential canister to the NUHOMS 61BTH canister family. The TranStor canister family was split into two distinct canister families since the inventory at GE Trojan (the only reactor site to use the HI-STORM TranStor system) is known at the canister level. The current inventory (i.e. Appendix A) for Millstone was clarified as Units 2 and 3 only since these reactors are PWR reactors. Unit 1 is a BWR reactor and has not initiated dry storage. The projected inventory for Millstone 1 is included in the Appendix F inventory since Unit 1 is shut down.

SUMMARY OF REVISIONS
(continued)

Revision Number	Date	Description
2	August 31, 2016	The report and appendices were revised to incorporate current inventory data as provided in the *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263, June 30, 2016, Revision 4). Specific changes made to the inventory are listed in a new section of this report, i.e. Section 2.2. The supporting Microsoft Access database (i.e. the Dry Storage Cask/Inventory Database) was updated to include the revised inventory data and to include other changes such as Certificate of Compliance status and revision/amendment information. Appendix G was added to capture the changes made to the Access database to support Revision 2 of this report. Table 4.6-1 was revised to include the NUHOMS HD Cask System and the 32PTH canister. The NUHOMS 32PTH canister was previously and erroneously included in the Standardized NUHOMS system. The projected inventory for the Pilot ISF used for Section 4.6.1 (i.e. Appendix F) was revised to include the inventory from reactors that announced their intentions to shut down since Revision 1 of the report. The inventory was revised to incorporate projected inventory data as provided in the *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263, June 30, 2016, Revision 4). Other minor editorial changes were made.

ACRONYMS

AEP	American Electric Power
ANO	Arkansas Nuclear One
APS	Arizona Public Service
BWR	Boiling Water Reactor
CoC	Certificate of Compliance
DOE	Department of Energy
DPC	Dairyland Power Cooperative
FPL	Florida Power and Light
HLW	High Level Waste
HSM	Horizontal Storage Module
INL	Idaho National Laboratory
ISFSI	Independent Spent Fuel Storage Installation
NFST	Nuclear Fuels Storage and Transportation
NPPD	Nebraska Public Power District
NRC	Nuclear Regulatory Commission
OPPD	Omaha Public Power District
ORNL	Oak Ridge National Laboratory
PG&E	Pacific Gas and Electric
PPL	Pennsylvania Power and Light
PS Colorado	Public Service Company of Colorado
PSEG	Public Service Enterprise Group
SMUD	Sacramento Municipal Utility District
SONGS	San Onofre Nuclear Generating Station
TVA	Tennessee Valley Authority
UNF	Used Nuclear Fuel
VCC	Ventilated Concrete Cask
YAEC	Yankee Atomic Electric Company

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DRY STORAGE CASK INVENTORY ASSESSMENT

1. INTRODUCTION

The report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263, Rev. 4), provides information on the inventory of commercial spent fuel, referred to in this report as used nuclear fuel (UNF), as well as Government-owned UNF and High Level Waste (HLW) in the U.S. Department of Energy (DOE) complex. Inventory forecasts for commercial UNF were made for a few selected scenarios of future commercial nuclear power generation involving the existing reactor fleet including one scenario involving reactors under construction.

This report uses the data contained in FCRD-NFST-2013-000263 to define the existing inventory of UNF in dry storage. UNF in wet storage (i.e. pools) is excluded from this assessment. This information is integrated with data on dry storage casks from the report, *Storage and Transport Cask Data for Used Commercial Nuclear Fuel, 2013 U. S. Edition* (ATI-TR-13047, August 9, 2013), in a Microsoft Access database (hereinafter referred to as the Dry Storage Cask/Inventory Database). The Dry Storage Cask/Inventory Database is used to produce queries for assessing the various systems used for the existing inventory of dry storage casks. The queries and reports developed include the following:

- Storage casks (canistered and bare fuel) used at existing dry storage sites
- Canister designs used at existing dry storage sites
- Transfer casks applicable to the canisters used at existing dry storage sites
- Transportation casks applicable to the canisters used at existing dry storage sites

The Dry Storage Cask/Inventory Database and this report will be revised in the future as the inventory of fuel in dry storage changes and as additional information becomes available. The queries listed above and included in this report are only examples of the type of queries possible using the Dry Storage Cask/Inventory Database. Additional queries can be defined and run in the future as needed. Additional information can be added to the queries described above as well, e.g. Certificate of Compliance (CoC) number, licensing status, CoC expiration date, etc.

Section 2 provides a brief summary of the current inventory of dry storage casks for UNF as reported in FCRD-NFST-2013-000263. Section 3 describes the Dry Storage Cask/Inventory Database used for the assessment. Section 4 provides the results of the queries listed above. The database developed for this assessment is planned to be provided to the Oak Ridge National Laboratory (ORNL) for possible incorporation into the Nuclear Fuels Storage and Transportation (NFST) Unified Database.

2. CURRENT DRY STORAGE CASK INVENTORY

The current inventory of dry storage casks stored at Independent Spent Fuel Storage Installations (ISFSI) is based on data contained in the most recent revision of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. The text that follows describes the modifications made to the inventory for Revision 0 of this report. Section 2.1 describes modifications made to the inventory for Revision 1 of this report.

Revision 0 Basis

The information contained in Revision 1 of FCRD-NFST-2013-000263 [Carter/Vinson 2014] and in supporting Microsoft Excel spreadsheets is current to March 2014 and is used as the basis for Revision 0 of this report. The following changes to clarify or otherwise modify the dry storage inventory provided in FCRD-NFST-2013-000263, Revision 1 were made to enable integration with the Dry Storage Cask/Inventory Database developed for Revision 0 of this report. The changes made include the following:

1. All NUHOMS 24P storage canisters/casks for Duke Oconee are grouped together even though they are stored under both a general license and a site specific license. The database developed for this report splits the NUHOMS 24P inventory into two separate categories, one for the general license and one for the site specific license based on information contained in a presentation by Duke Energy to the Nuclear Regulatory Commission (NRC). [Duke Energy 2006]
2. The canister for Consumers/Big Rock Point is listed as W150. This is the designation for the FuelSolutions storage cask. The correct canister family designation is W74. [Leduc 2014b]
3. The CASTOR V/21 and CASTOR X/33 casks for Dominion Surry are grouped together for a total of 26 casks. For this report, these are split into two separate groups, one for the CASTOR V/21 and one for the CASTOR X/33. The Certificate of Compliance for Surry ISFSI lists 25 CASTOR V/21 casks. [SNM-2501] It is assumed that the remaining cask out of the 26 listed in FCRD-NFST-2013-000263 is an X/33 cask.
4. The MPC-24E and MPC-24EF canisters for Portland GE Trojan are grouped together for a total of 34 canisters. These are split into two separate groups, one for the MPC-24E canisters (29 canisters) and one for the MPC-24EF canisters (5 canisters). [Leduc 2014a]

   Revision 1 Note: The change described above was not actually implemented in Revision 0. Revision 1 corrects the error and splits the MPC-24E and MPC-24EF canisters into two separate entries in the inventory provided in Appendix A.
5. The used fuel inventory for Fort St. Vrain is not included in the database developed for this report. The canisters used to store the Fort St. Vrain fuel are not compatible with the commercial light water reactor used fuel casks described in the ATI-TR-13047 document.
6. The commercial light water reactor used fuel inventory from Three Mile Island stored at the Idaho National Laboratory (INL) is included in the database for this report. This fuel is stored in commercial light water reactor casks included in the ATI-TR-13047 document (i.e. NUHOMS 12T).

7. The canisters for SMUD (Sacramento Municipal Utility District) Rancho Seco are listed as 24PT canisters. The 24PT designation is not an accurate designation for the canisters at Rancho Seco. The actual canisters at Rancho Seco are designated as FO-DSC, FC-DSC and FF-DSC in the licensing documents. The FO-DSC (fuel only) and FC-DSC (fuel and control components) each have 24 assembly positions. There is only one FF-DSC (failed fuel) and it has 13 assembly positions. These canisters are split into 3 separate groups, one for 2 FO-DSCs, a second for 18 FC-DSCs, and a third for the 1 FF-DSC. [Leduc 2014]

   Revision 1 Note: The basis for the quantity of MTiHM stored per canister was changed from a ratio based on the quantity of Canisters Loaded to the quantity of Assemblies Stored.
8. The data contained in FCRD-NFST-2013-000263 includes dry storage canisters loaded with greater than Class C (GTCC) waste. A total of 12 GTCC canisters as listed below are deducted from the inventory and not included in the inventory used for this report.
   - Connecticut Yankee/Connecticut Yankee – 3 GTCC canisters
   - Consumers/Big Rock Point – 1 GTCC canister
   - Maine Yankee/Maine Yankee – 4 GTCC canisters
   - Pacific Gas and Electric (PG&E)/Humbolt Bay – 1 GTCC canister
   - SMUD/Rancho Seco – 1 GTCC canister
   - Southern California Edison/San Onofre Nuclear Generating Station (SONGS) 1 – 1 GTCC canister
   - Yankee Atomic Electric Company (YAEC)/Yankee Rowe – 1 GTCC canister
9. In many instances, the canister designations listed in the dry storage inventory are incomplete designations. For instance the NUHOMS 24P is available in both short and long variants; therefore, the proper designation is 24PS and 24PL. Not enough information is currently available publicly about the dry storage inventory to always define the canisters at this level of fidelity; therefore, the canister designations in the dry storage inventory are regarded as "canister families". In some cases, the canister designations listed in the dry storage inventory are legitimate designations; however, variants of these canisters also exist. For instance the Holtec MPC-68 by itself is a legitimate designation; however, there are variants of this canister, i.e. the MPC-68F and MPC-68FF canisters. The information in the dry storage inventory could be interpreted to mean the actual canister listed (e.g. MPC-68); however, there are known instances for specific reactors where such a designation is used generically for all variants (e.g. Dresden uses all three variants of the MPC-68 canister in their HI-STORM 100 storage system although the dry storage inventory only lists the canister as "MPC-68"). The known use of these designations as generic designations introduces uncertainties for other instances of these designations; therefore, these types of designations are also treated as "canister families". Canisters potentially applicable to canister families are designated simply as "canisters" in this report.

The inventory of UNF in dry storage incorporating the modifications described above and as utilized for this report is shown in Appendix A.

2.1 Revision 1 Inventory Basis

The information contained in Revision 3 of FCRD-NFST-2013-000263 [Carter/Vinson 2015] and in supporting Microsoft Excel spreadsheets is current to May 2015 and is used as the basis for Revision 1 of this report. The following describes the major changes resulting from the revised inventory contained in Revision 3 of FCRD-NFST-2013-000263:

1. The utility name for Calvert Cliffs, Ginna, and Nine Mile Point was changed from Constellation to Exelon.
2. The utility name for Brunswick and Robinson was changed from Progress to Duke.
3. The utility name for Waterford was changed from Exelon to Entergy.
4. The utility name, FPL, was changed to NextEra Energy.
5. Utilities/reactors that made their first ever dry canister load since Revision 0 of this report were added. The utilities/reactors added and the year loaded are:
   - Detroit Edison/Fermi 2 (2014)
   - Entergy/Pilgrim (2015)
   - First Energy/Beaver Valley (2015)
6. Utilities/reactors that had loaded fuel into dry storage prior to Revision 0 of this report but made their first dry canister load into a new/different canister design since Revision 0 of this report were added. The utilities/reactors/canisters added and the year loaded are:
   - Exelon/Nine Mile Point/NUHOMS 61BTH (2014)
   - NPPD/Cooper/NUHOMS 61BTH (2014)
7. The inventory quantities were changed for the following utilities/reactors/canister family (or bare fuel cask):
   - Dominion/Kewaunee/NUHOMS 32PT
   - Dominion/Millstone/NUHOMS 32PT
   - Dominion/North Anna/NUHOMS 32PTH
   - Dominion/Surry/NUHOMS 32PTH
   - Duke/Brunswick/NUHOMS 61BTH
   - Duke/Catawba/TSC PWR
   - Duke/McGuire/TSC PWR
   - Duke/Oconee/NUHOMS 24PHB
   - Duke/Robinson/NUHOMS 24PTH
   - Energy Northwest/Columbia/MPC-68 (HI-STORM)
   - Entergy/ANO/MPC-24 (HI-STORM)
   - Entergy/Indian Point 2 & 3/MPC-32 (HI-STORM)
   - Entergy/River Bend/MPC-68 (HI-STORM)
   - Exelon/Braidwood/MPC-32 (HI-STORM)
   - Exelon/Byron/MPC-32 (HI-STORM)
   - Exelon/Calvert Cliffs/NUHOMS 32P
   - Exelon/Dresden/MPC-68 (HI-STORM)
   - Exelon/LaSalle/MPC-68 (HI-STORM)
   - Exelon/Limerick/NUHOMS 61BTH
   - Exelon/Peach Bottom/TN-68

- Exelon/Quad Cities/MPC-68 (HI-STORM)
- First Energy/Perry/MPC-68 (HI-STORM)
- Luminant/Comanche Peak/MPC-32 (HI-STORM)
- PPL/Susquehanna/NUHOMS 61 BTH
- PSEG/Hope Creek/MPC-68 (HI-STORM)
- Southern Nuclear/Farley/MPC-32 (HI-STORM)
- Southern Nuclear/Hatch/MPC-68 (HI-STORM)
- Southern Nuclear/Vogtle/MPC-32 (HI-STORM)
- TVA/Sequoyah/MPC-32 (HI-STORM)
- Xcel Energy/Prairie Island/TN-40HT
- Zion Solutions/Zion/TSC PWR

The same changes to clarify or otherwise modify the inventory contained in Revision 1 of FCRD-NFST-2013-000263 for Revision 0 of this report as described in Section 2 (with clarifications noted in the "Revision 1 Notes" in Section 2) are also applicable to Revision 3 of FCRD-NFST-2013-000263 for the current revision of this report. These changes are made to enable integration with the Dry Storage Cask/Inventory Database developed for Revision 1 of this report.

In regards to the "canister families" described in Section 2, Item 9, clarification on actual canisters used at some reactor sites has become available since Revision 0 of this report. [Gutherman 2014] The available clarifications are as follows:

- Dresden Unit 1 – The canisters stored in HI-STORM 100 overpacks are MPC-68, MPC-68F or MPC-68FF canisters. As of the date the clarifications were obtained only one MPC-68FF canister existed. It is not known if additional MPC-68FF canisters have been loaded since that time. The split between the remaining MPC-68 and MPC-68F canisters is also not known. The information provided for Dresden Unit 1 is insufficient to meaningfully modify the dry storage inventory provided by Revision 3 of FCRD-NFST-2013-000263. The use of "MPC-68" as a "canister family" cannot be discontinued for Dresden Unit 1 based on the information provided.
- Indian Point Unit 1 – All fuel is stored in MPC-32 canisters. No MPC-32F canisters are used. Although the information provided for Indian Point Unit 1 is sufficient clarification for that particular reactor, the use of "MPC-32" as a "canister family" is continued since MPC-32 canisters are designated for other reactors. The inventory data in Appendix B and Appendix F is footnoted to clarify the inventory specific to Indian Point Unit 1.
- Vermont Yankee – All fuel is stored in MPC-68 or MPC-68FF canisters. MPC-68F canisters are not used. The information provided for Vermont Yankee is insufficient to meaningfully modify the dry storage inventory provided by Revision 3 of FCRD-NFST-2013-000263. The use of "MPC-68" as a "canister family" cannot be discontinued for Vermont Yankee based on the information provided. The fact that MPC-68F canisters are not used at Vermont Yankee is footnoted in the inventory data in Appendix B and Appendix F.

2.2 Revision 2 Inventory Basis

The information contained in Revision 4 of FCRD-NFST-2013-000263 [Carter/Vinson 2016] is current to May 3, 2016 and is used as the basis for Revision 2 of this report (i.e. FCRD-NFST-2014-000602). The following describes the major changes to this report resulting from the revised inventory contained in Revision 4 of FCRD-NFST-2013-000263:

1. The utility name for Big Rock Point was changed from Consumers to Entergy.
2. Utilities/reactors that made their first ever dry load since Revision 1 of this report were added. The utilities/reactors added and the year of first load are:
   - Ameren/Callaway (2015)
   - SCE&G/V. C. Summer (2016)
3. Utilities/reactors that had loaded fuel into dry storage prior to Revision 1 of this report but made their first dry canister load into a new/different canister design since Revision 1 of this report were added. The utilities/reactors/canisters added and the year of first load are:
   - Exelon/Dresden 2 & 3/MPC-68M (2015)
   - Southern Nuclear/Hatch/MPC-68M (2015)
   - TVA/Browns Ferry/MPC-89 (2015)
   - TVA/Sequoyah/MPC-37 (2016)
4. The inventory quantities were changed for the following utilities/reactors/canister family (or bare fuel cask):
   - AEP/D. C. Cook/MPC-32 (HI-STORM)
   - APS/Palo Verde/UMS-PWR
   - Dominion/Millstone 2 & 3/NUHOMS 32PT
   - Dominion/North Anna/NUHOMS 32PTH
   - Dominion/Surry/NUHOMS 32PTH
   - Duke/Catawba/TSC PWR
   - Duke/McGuire/TSC PWR
   - Duke/Oconee/NUHOMS 24PHB
   - Entergy/ANO/MPC-24 (HI-STORM)
   - Entergy/ANO/MPC-32 (HI-STORM)
   - Entergy/Grand Gulf/MPC-68 (HI-STORM)
   - Entergy/Indian Point 2 & 3/MPC-32 (HI-STORM)
   - Entergy/Waterford/MPC-32 (HI-STORM)
   - Exelon/Braidwood/MPC-32 (HI-STORM)
   - Exelon/Byron/MPC-32 (HI-STORM)
   - Exelon/Calvert Cliffs/NUHOMS 32P
   - Exelon/Dresden 2 & 3/MPC-68 (HI-STORM)
   - Exelon/LaSalle/MPC-68 (HI-STORM)
   - Exelon/Limerick/NUHOMS 61BTH
   - Exelon/Nine Mile Point/NUHOMS 61BTH
   - Exelon/Peach Bottom 2 & 3/TN-68

- Exelon/Quad Cities/MPC-68 (HI-STORM)
- First Energy/Beaver Valley/NUHOMS 37PTH
- Luminant/Comanche Peak/MPC-32 (HI-STORM)
- PG&E/Diablo Canyon/MPC-32 (HI-STORM)
- PPL/Susquehanna/NUHOMS 61BTH
- PSEG/Salem/MPC-32 (HI-STORM)
- Southern Nuclear/Farley/MPC-32 (HI-STORM)
- Southern Nuclear/Hatch/MPC-68 (HI-STORM)
- Southern Nuclear/Vogtle/MPC-32 (HI-STORM)
- Xcel Energy/Prairie Island/TN-40HT

5. In all cases, the mass of spent fuel stored (i.e. MTiHM) was revised to reflect the inventory values contained in Appendix B of Revision 4 of FCRD-NFST-2013-000263 [Carter/Vinson 2016]. Previously, the mass of spent fuel was calculated based on an average PWR and BWR assembly mass.

Several canister families were revised as follows to eliminate uncertainty in the inventory:

1. The MPC-68 and MPC-68F canisters for the HI-STAR storage system were originally grouped into a common Canister Family, MPC-68 (HI-STAR). These canisters now have their own unique Canister Families, MPC-68 (HI-STAR) and MPC-68F (HI-STAR). The MPC-68, MPC-68F, MPC-68FF and MPC-68M canisters for the HI-STORM storage system were grouped into a common Canister Family, MPC-68 (HI-STORM). These canisters now have their own unique Canister Families, MPC-68 (HI-STORM) and MPC-68F (HI-STORM), MPC-68FF and MPC-68M. Since Dresden and Hatch have started loading MPC-68M canisters and the UxC Consulting Company distinguishes between MPC-68 canisters and MPC-68M canisters in its StoreFUEL report [Ux Consulting 2016], the uncertainty previously associated with the MPC-68 family of canisters is no longer assumed.
2. The MSB-Short, MSB-Long and MSB-Standard canisters for the VSC-24 storage system were originally grouped into a common Canister Family, MSB. These canisters now have their own unique Canister Families, MSB-Short, MSB-Long and MSB-Standard. Since the UxC Consulting Company distinguishes between MSB-Short, MSB-Long and MSB-Standard canisters in its StoreFUEL report [Ux Consulting 2016], the uncertainty previously associated with the MSB family of canisters is no longer assumed.
3. The W74M and W74T canisters for the FuelSolutions storage system were originally grouped into a common Canister Family, W74. These canisters now have their own unique Canister Families, W74M and W74T. The only reactor site that has loaded W74 canisters is Big Rock Point. Confirmation has been received that all of the canisters at Big Rock Point are W74T canisters [Sisley 2014], which justifies splitting the original W74 Canister Family into the two unique Canister Families, thereby, removing the uncertainty associated with the W74 family of canisters.

The fuel inventory in dry storage for Dresden is uncertain in regards to its origin, i.e. Dresden 1, Dresden 2 or Dresden 3. Dresden has loaded fuel into three different types of storage systems:

- MPC-68 (HI-STAR) canisters in HI-STAR 100 overpacks,
- MPC-68 (HI-STORM) canisters in HI-STORM 100 overpacks and
- MPC-68M canisters in HI-STORM 100 overpacks.

Although complete data is not available, the fuel contained in the HI-STAR 100 system likely came from Dresden 1. Dresden 1 discharged 892 assemblies during operations. Of these 892 assemblies, 272 assemblies were placed into dry storage from the Dresden 1 pool, 3 assemblies were transferred to Idaho and the remaining 617 assemblies were transferred to the Dresden 3 pool. Of these 617 assemblies transferred to the Dresden 3 pool, 509 were placed into dry storage as of June, 2013. It seems possible, and maybe likely, that all Dresden 1 fuel is now in dry storage. It is also known that Dresden 1 fuel has been comingled with Dresden 2 fuel in the same canister, which indicates that some Dresden 1 fuel may have been transferred to the Dresden 2 pool at some time as well. For the purposes of this report, the inventory defined in Appendix A associates all of the HI-STAR 100 casks with Dresden 1 fuel assemblies and the remaining fuel assemblies/storage systems with Dresden 2 and 3 combined.

3. DRY STORAGE CASK/INVENTORY DATABASE

The Dry Storage Cask/Inventory Database is a Microsoft Access Database used to support the development of this report. The database integrates the existing dry storage cask inventory data described in Section 2 with basic physical properties and characteristics of the dry storage components. The sections that follow describe the dry storage cask data and the database structure.

3.1 Dry Storage Cask Data

Dry storage cask data used in the Dry Storage Cask/Inventory Database is derived primarily from the ATI-TR-13047 report. Some modifications to the information contained in ATI-TR-13047 were required to incorporate the data into the database. These modifications were made to correct errors, omissions and ambiguities. The modifications made to the data contained in ATI-TR-13047 include the following:

1. The ATI-TR-13047 report gives a range for Overall Length and Cavity Length for the Energy*Solutions* VSC-24 Ventilated Concrete Cask (VCC) implying that at least 2 variants exist. The renewal application for the VSC-24 (LAR 1007-007) identifies 3 different lengths for the VSC, i.e. short, standard and long. These VCCs are incorporated into the Dry Storage Cask/Inventory Database; however, some parameters, especially length, are uncertain.
2. The HI-STORM 100 system (excluding the HI-STORM 100U system) does not list all available HI-STORM storage overpacks but only refers to the HI-STORM 100 system generically. There are at least 7 unique storage overpacks associated with the HI-STORM 100 system:
    - HI-STORM 100
    - HI-STORM 100A
    - HI-STORM 100S(232)
    - HI-STORM 100S(243)
    - HI-STORM 100S-218 Version B
    - HI-STORM 100S-229 Version B
    - HI-STORM 100SA

    These overpacks are described in the HI-STORM Safety Analysis Report (HI-2002444). The storage overpacks with the “A” suffix (i.e. HI-STORM 100A and HI-STORM 100SA) are anchored variants of their respective overpack designs. Note that it is unclear if the HI-STORM 100SA is a single storage overpack design or is a generic designation for an anchored version of all “S” type overpacks. There could be up to 10 unique storage overpacks in the HI-STORM 100 system if all “S” type overpacks are available as anchored variants. This report considers the HI-STORM 100SA storage overpack as a single overpack design, although many parameters, especially length, are unknown. All storage overpack designs listed above are incorporated into the Dry Storage Cask/Inventory Database.
3. Information pertaining to the HI-STORM 100 system in ATI-TR-13047 lists 3 out of the 4 available transfer casks as described in the HI-STORM Safety Analysis Report (HI-2002444). The 3 transfer casks listed are the HI-TRAC 100, the HI-TRAC 125 and the HI-TRAC 125D. The HI-TRAC 100D is not listed. The HI-TRAC 100D is incorporated into the Dry Storage Cask/Inventory Database.

4. The ATI-TR-13047 report designates the LACBWR canister for the NAC-MPC system as a "DPC" canister (presumably for Dairyland Power Cooperative). The designation "LACBWR" is used in NRC licensing documents and this report as well. The NAC-MPC Certificate of Compliance (CoC) 72-1025 includes the LACBWR canister for storage of La Crosse Boiling Water reactor (BWR) used fuel. The LACBWR canister is included in the database under the NAC-MPC system.
5. The NAC-STC transportation cask is described in the ATI-TR-13047 report under the NAC-MPC system for transporting NAC transportable storage canisters (i.e. it is discussed in the section on canistered systems). The report correctly states that used fuel can also be directly loaded into the NAC-STC transportation cask; however, the NAC-STC transportation cask is not identified in the report specifically as a non-canistered (i.e. bare fuel) cask along with other bare fuel casks such as the NAC I28 S/T and the TN-40 casks. The Dry Storage Cask/Inventory Database treats the NAC-STC separately in both the canistered and the bare fuel systems.
6. The ATI-TR-13047 report identifies a certain NUHOMS canister as the 24PTH-LC. Based on information contained in the NUHOMS Technical Specifications for the Standardized NUHOMS Horizontal Modular Storage System, it appears this designation should be 24PTH-S-LC. The designation 24PTH-S-LC is used in this report.
7. The NUHOMS system is comprised of several "sub-systems" as follows:
    - Advanced NUHOMS
    - NUHOMS 0708
    - NUHOMS 12T
    - NUHOMS HD
    - Standardized NUHOMS

    These systems are not distinguished in the ATI-TR-13047 report but are incorporated into the Dry Storage Cask/Inventory Database. Because these "sub-systems" are not included in the ATI-TR-13047 report, the individual horizontal storage modules (HSMs) are not associated with their applicable sub-system. Table 3.1-1 associates the sub-systems with the HSMs. Some of the HSMs listed are not identified or discussed in the ATI-TR-13047 report and are indicated in the table as such. All of the HSMs listed in the table below are incorporated into the Dry Storage Cask/Inventory Database.

Table 3.1-1 NUHOMS Horizontal Storage Modules

NUHOMS Sub-System	Horizontal Storage Module [1]	Remark
Advanced NUHOMS	Advanced HSM	Included in ATI-TR-13047
	Advanced HSM-HS	Included in ATI-TR-13047
NUHOMS 0708	07P HSM	Included in ATI-TR-13047
NUHOMS 12T	12T HSM	Included in ATI-TR-13047
NUHOMS HD	HSM-H (HD)	Per the NUHOMS HD Final Safety Analysis Report, this HSM is "virtually identical" to the HSM-H of the Standardized NUHOMS system
Standardized NUHOMS	HSM Model 80 (BWR)	Included in ATI-TR-13047
	HSM Model 80 (PWR)	Included in ATI-TR-13047
	HSM Model 102 (BWR)	Included in ATI-TR-13047
	HSM Model 102 (PWR)	Included in ATI-TR-13047
	HSM Model 152	Not included in the ATI-TR-13047 report but incorporated into the Dry Storage Cask/Inventory Database
	HSM Model 202	
	HSM-H	Included in ATI-TR-13047
	HSM-HS	Included in ATI-TR-13047

1. The expressions in parenthesis (e.g. HSM-H(HD), HSM Model 80 (PWR), etc.) are provided for the purpose of this report and associated Dry Storage Cask/Inventory Database and are not part of the official storage module designations.

8. The NUHOMS 61BTH canister has three variants, the 61BTH Type 1, the 61BTH Type 2 and the 61BTHF. The designation of 61BTH without the type designations appears to be an incomplete designation based on information contained in the *Technical Specifications for the Standardized NUHOMS Horizontal Modular Storage System*, Amendment Number 11, Docket Number 72-1004. The three variants are included in the Dry Storage Cask/Inventory Database instead of the single 61BTH designation.
9. The NUHOMS 12T canister is listed as being transportable in the MP-187 transportation cask. This is not supported by the Certificate of Compliance for the MP-187 transportation cask. The Dry Storage Cask/Inventory Database lists the NUHOMS 12T canister as Storage Only.
10. The ATI-TR-13047 report is inconsistent in its treatment of the fuel types allowed for storage in the canisters. For instance, the report provides information on the Holtec canisters relative to allowable fuel (i.e. intact, damaged, debris); however, no mention is made on the restrictions placed on the NUHOMS canisters. Where information is available, data on allowable fuel content is incorporated into the Dry Storage Cask/Inventory Database.
11. Certificate of Compliance 71-9302 was approved for the NUHOMS MP197HB transportation cask on April 23, 2014 (subsequent to the issue of the ATI-TR-13047 report). The Dry Storage Cask/Inventory Database used for Revision 0 of this report incorrectly designated the MP197 transportation cask for some NUHOMS canisters. This error was corrected for Revision 1 of this report to accurately reflect the canisters allowed for transportation in the NUHOMS MP197HB transportation cask.

12. The MPC-37 and MPC-89 canisters used in the HI-STORM FW storage system (Certificate of Compliance 72-1032) and the HI-STORM UMAX storage system (Certificate of Compliance 72-1040) are variable length canisters. According to Section 2.1.1 of the Final Safety Analysis Report on the HI-STORM FW Storage System [Holtec 2015b] (hereinafter referred to as the HI-STORM FW FSAR) the length of the MPC-37 and MPC-89 canister cavities (and presumably the overall lengths) is varied to suit the fuel being stored. The minimum fuel assembly length for the MPC-37 canister per Table 2.1.1 of the HI-STORM FW FSAR is 149 inches. The reference length is 167.2 inches and the maximum is 199.2 inches, much greater than the "Reference" fuel assembly length. The minimum fuel assembly length for the MPC-89 canister per Table 2.1.1 of the HI-STORM FW FSAR is 171 inches. The reference length is 176.5 inches and the maximum is 181.5 inches.

    Table 3.1.14 of the HI-STORM FW FSAR lists the maximum overall length of the MPC-37 canister as 213 inches and 195 inches for the MPC-89 canister. The publically available, non-proprietary version of the HI-STORM FW FSAR does not provide values for the minimum overall length and the minimum and maximum cavity length. The reference values for overall length and cavity length as provided in the ATI-TR-13047 report are used in the Dry Storage Cask/Inventory Database.

    The value used in the database for overall cross section is obtained from the ATI-TR-13047 report. This value is supported by data provided in Table 3.1.14 of the HI-STORM FW FSAR; however, Table 1.1.2 in the Safety Analysis Report on the HI-STAR 190 Package (CoC 71-9373) [Holtec 2015a] lists the overall diameter as 75.75 inches. The value as provided by the ATI-TR-13047 report and supported by the HI-STORM FW FSAR is used in the Dry Storage Cask/Inventory Database.

    Text similar to the above discussion is provided in the dimensional comment field in the Dry Storage Cask/Inventory Database.

The modifications listed above should be considered in future revisions of the ATI-TR-13047 report.

3.2 Database Structure

The Dry Storage Cask/Inventory Database is structured around the primary components of the dry storage systems. The top element (i.e. table) of the database is the Cask Systems. Cask Systems are subdivided into tables for Canistered Systems, Bare Fuel Systems and Transport Only Casks (i.e. used fuel casks not certified for storage). Bare Fuel Systems and Transport Only Casks are treated without further subdivision; however, the Canistered Systems are further subdivided into tables applicable to the following components:

- Canisters
- Transfer Casks
- Transportation Casks

The current Dry Storage Inventory data is contained in a table linked back to the system and components tables as necessary. Junction tables are used where necessary to establish many-to-many relationships. This basic structure is shown graphically in Figure 3.2-1. Not all table linkages are shown for clarity.

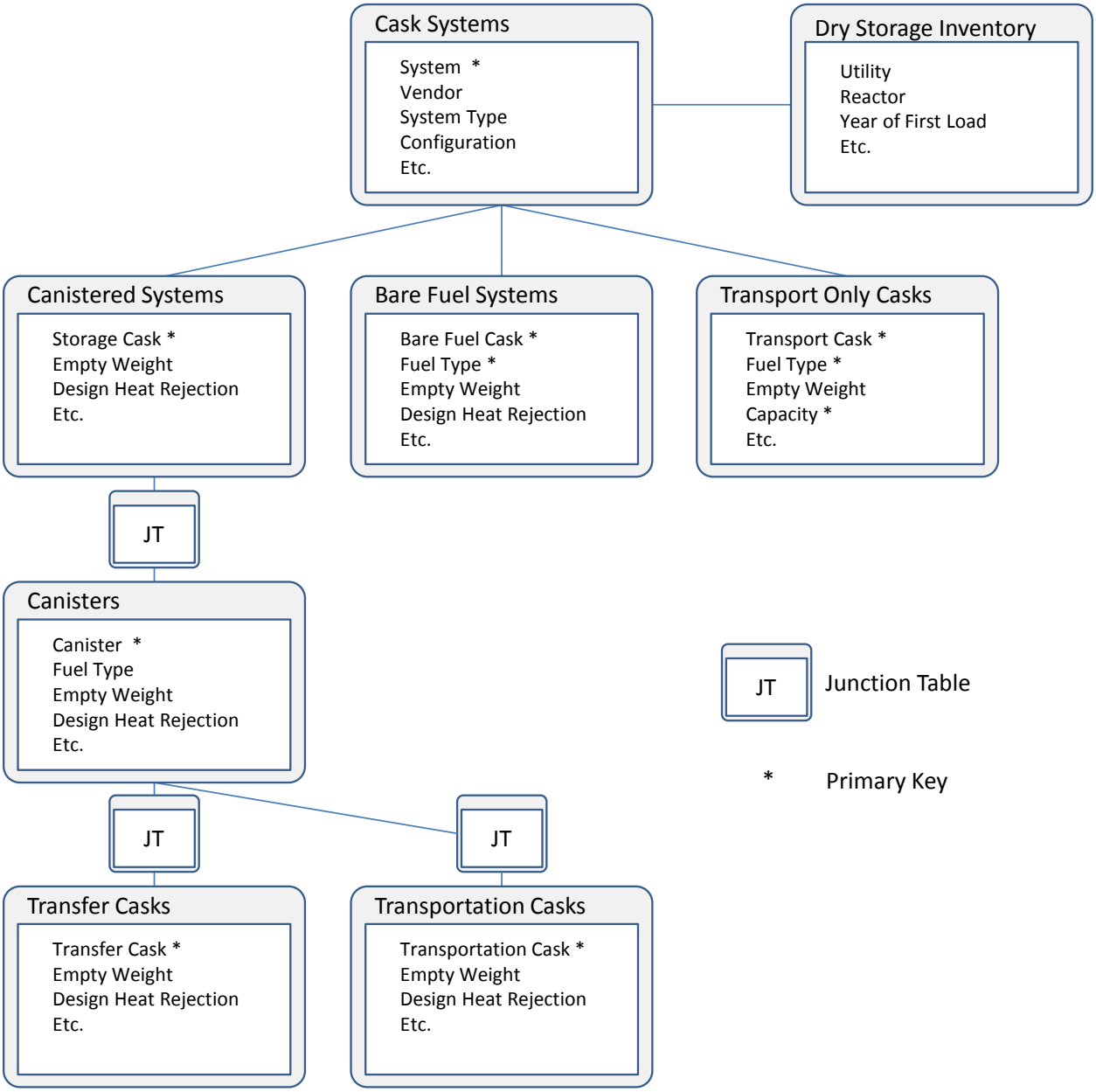

Figure 3.2-1 Dry Storage Cask/Inventory Database Structure

4. CASK INVENTORY ASSESSMENT

The Dry Storage Cask/Inventory Database was queried to assess the current inventory of dry storage casks described in Section 2. The following queries were developed:

1. Bare fuel storage systems used in the current inventory of dry storage casks
2. Canistered storage systems used in the current inventory of dry storage casks
3. Canisters associated with the canister families identified in the current inventory of dry storage casks
4. Storage casks associated with the canister families identified in the current inventory of dry storage casks
5. Transfer casks associated with the canister families identified in the current inventory of dry storage casks
6. Transportation casks associated with the canister families identified in the current inventory of dry storage casks

The results of these queries are discussed in the sections that follow.

4.1 Bare Fuel Storage Systems

The inventory of bare fuel storage systems currently used for dry storage of UNF is small compared to the number of canistered systems deployed (see Section 4.2). Table 4.1-1 shows the bare fuel storage systems currently deployed.

Table 4.1-1 Bare Fuel Storage Systems

Utility	Reactor	Site Characteristic [1]	Cask System	Licensed Purpose	Casks Loaded [3]	Assemblies [3]	MTiHM [3]
Dominion	North Anna	C2	TN-32	Storage Only	27	864	400.3
Dominion	Surry	C2	CASTOR V/21	Storage Only	25	525	240.8
Dominion	Surry	C2	CASTOR X/33	Storage Only	1	33	15.1
Dominion	Surry	C2	MC-10	Storage Only	1	24	11.0
Dominion	Surry	C2	NAC I28 S/T	Storage Only	2	56	25.7
Dominion	Surry	C2	TN-32	Storage Only	26	832	381.7
Duke	McGuire	C2	TN-32	Storage Only	10	320	143.9
Exelon	Peach Bottom 2 & 3	C2	TN-68	Storage and Transportation	72	4,896	879.0
Xcel Energy	Prairie Island	C2	TN-40 (Note 2)	Storage and Transportation	11	440	160.6
			TN-40 (Note 2)	Storage and Transportation	29	1160	423.4
4 Total Utilities	5 Total Reactor Sites	9 Total Reactor/Cask System Combinations With All Reactors Operating and Wet and Dry Storage	7 Unique Cask Systems Used	3 Reactor/Cask System Combinations Licensed for Storage and Transportation	204 Casks Loaded	9,150 Assemblies Loaded	2,681.5 MTiHM Loaded
				7 Reactor/Cask System Combinations Licensed for Storage Only			
10 Total Unique Utility/Reactor/Cask System Combinations							

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as follows:
   - C2 - All Reactors Operating - Wet and Dry Storage
2. The TN-40 Cask System is listed twice for Xcel Energy/Prairie Island since more than one version of the TN-40 cask is used (e.g. TN-40 and TN-40HT). Twenty-nine TN-40 casks are loaded and 11 TN-40HT casks are loaded.
3. The inventory is current to the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* FCRD-NFST-2013-000263. See Section 2 for further explanation.

Only 4 utilities currently use bare fuel storage systems for dry storage at 5 reactor sites. Seven unique bare fuel storage cask systems are used to store a total of 9,150 used fuel assemblies in 204 total casks. The Transnuclear bare fuel casks (TN-40 and TN-68) continue to be loaded. The distributions of Bare Fuel Casks Loaded and Assemblies versus Cask System are shown in Figures 4.1-1 and 4.1-2 respectively.

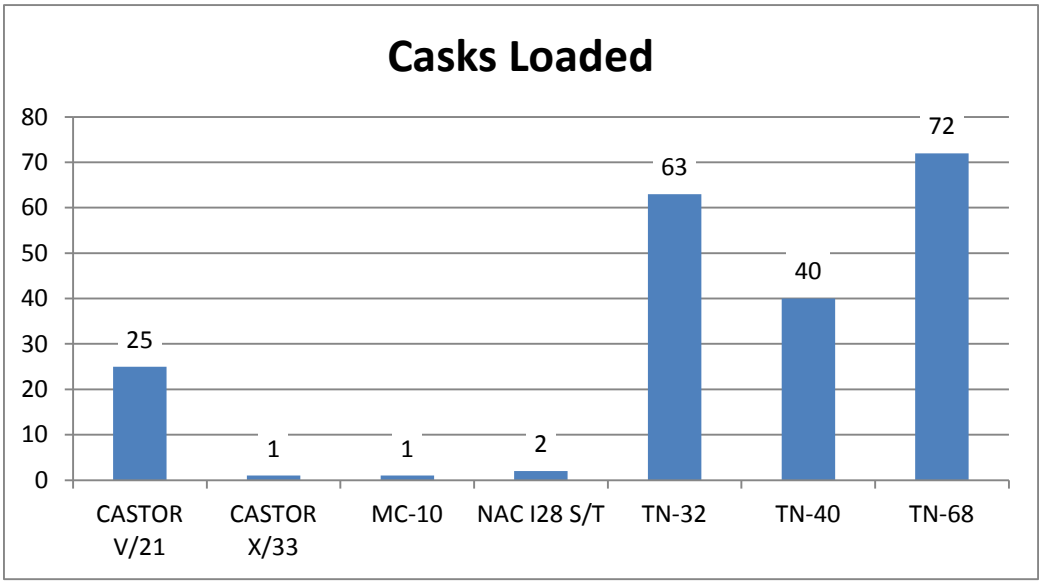

Figure 4.1-1 Distribution of Casks Loaded Versus Bare Fuel Storage Systems

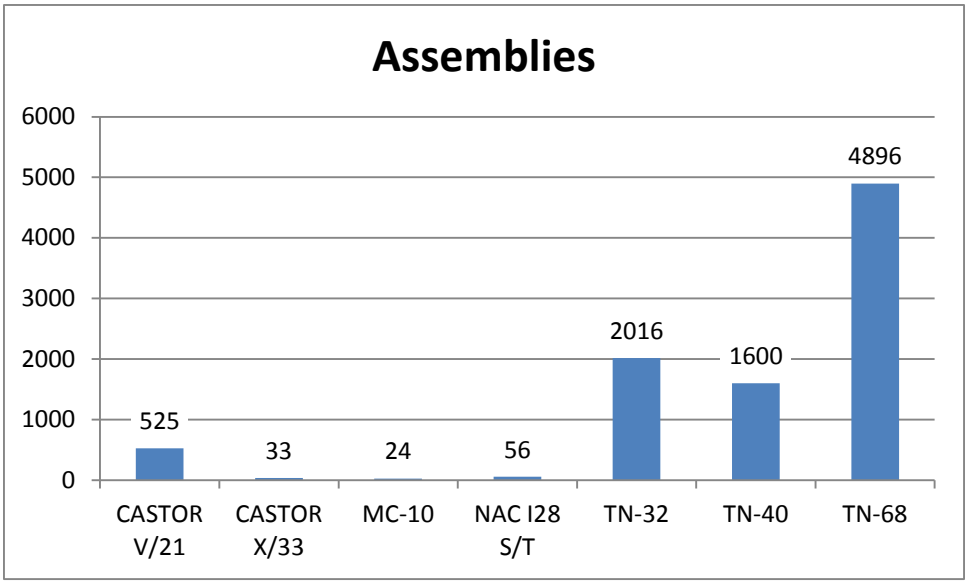

Figure 4.1-2 Distribution of Assemblies Versus Bare Fuel Storage Systems

4.2 Canistered Storage Systems

The majority of the current inventory of used fuel in dry storage is stored in canistered storage systems. Table 4.2-1 shows the canistered storage systems currently deployed.

Table 4.2-1 Canistered Storage Systems

Utility	Reactor	Site Characteristic [1]	Cask System [2]	Canister Family [3]	Canisters Loaded [4]	Assemblies [4]	MTiHM [4]
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	28	896	393.0
Ameren	Callaway	C2	HI-STORM UMAX	MPC-37	6	222	94.0
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	132	3168	1,360.0
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	40	1019	413.5
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	5	333	38.0
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	6	408	72.0
DOE	INEEL	ISFSI Only	NUHOMS 12T	NUHOMS 12T	29	177	83.0
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	14	448	174.1
Dominion	Millstone 2 & 3	A2	Standardized NUHOMS	NUHOMS 32PT	25	800	339.0
Dominion	North Anna	C2	NUHOMS HD	NUHOMS 32PTH	25	800	370.7
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	26	832	381.7
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	19	1159	232.0
Duke	Catawba	C2	NAC-MAGNASTOR	TSC PWR	6	222	99.3
Duke	Catawba	C2	NAC-UMS	UMS-PWR	24	576	257.7
Duke	McGuire	C2	NAC-MAGNASTOR	TSC PWR	11	407	183.0
Duke	McGuire	C2	NAC-UMS	UMS-PWR	28	672	302.1
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	40	960	447.3
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	44	1056	492.0
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	53	1272	592.7
Duke	Robinson	C2	NUHOMS 0708	NUHOMS 07P	8	56	24.2
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	18	432	186.8

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic [1]	Cask System [2]	Canister Family [3]	Canisters Loaded [4]	Assemblies [4]	MTiHM [4]
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	36	2448	431.0
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	28	672	296.1
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	21	672	296.1
Entergy	ANO	C2	VSC-24	MSB-Long	24	576	253.8
Entergy	Big Rock Point	A1	FuelSolutions	W74T	7	441	57.9
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	21	1428	258.0
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	28	1904	336.0
Entergy	Indian Point 1	A2	HI-STORM 100	MPC-32 (HI-STORM)	5	160	30.6
Entergy	Indian Point 2 & 3	A2	HI-STORM 100	MPC-32 (HI-STORM)	29	928	422.0
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	13	312	128.4
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	11	352	144.9
Entergy	Palisades	C2	VSC-24	MSB-Standard	18	432	177.8
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	3	204	36.0
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	23	1564	277.0
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	13	884	160.4
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	17	544	229.0
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	15	480	202.0
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	20	640	270.0
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	48	1152	451.1
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	30	960	375.9

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic [1]	Cask System [2]	Canister Family [3]	Canisters Loaded [4]	Assemblies [4]	MTiHM [4]
Exelon	Dresden	A2	HI-STORM 100	MPC-68M	2	136	24.0
Exelon	Dresden 1	A2	HI-STAR 100	MPC-68 (HI-STAR)	4	272	27.7
Exelon	Dresden 2 & 3	A2	HI-STORM 100	MPC-68 (HI-STORM)	60	4080	719.0
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	6	192	71.0
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	24	1632	292.0
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	19	1159	206.7
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	14	854	152.3
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	16	976	172.7
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	8	488	86.3
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	8	488	86.6
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	15	915	162.4
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	41	2788	495.0
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	4	148	68.0
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	3	72	34.0
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	14	952	172.0
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	24	768	323.0
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	60	1434	542.3
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	20	1220	221.0
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	23	736	281.9
NextEra Energy	Point Beach	C2	VSC-24	MSB-Short	16	384	147.1
NextEra Energy	Seabrook	C2	NUHOMS HD	NUHOMS 32PTH	14	448	205.0

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic [1]	Cask System [2]	Canister Family [3]	Canisters Loaded [4]	Assemblies [4]	MTiHM [4]
NextEra Energy	St. Lucie	C2	NUHOMS HD	NUHOMS 32PTH	26	832	323.0
NextEra Energy	Turkey Point	C2	NUHOMS HD	NUHOMS 32PTH	18	576	263.0
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	8	488	88.0
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	10	610	110.0
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	10	320	117.0
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	37	1184	510.0
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	5	390	28.9
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	29	675	306.6
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	5	116	52.7
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	27	1404	247.8
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	48	2928	516.9
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	16	976	172.3
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	28	1904	342.0
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	22	704	323.0
SCE&G	V. C. Summer	C2	HI-STORM FW	MPC-37	4	148	63.0
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	18	432	200.1
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	1	13	6.0
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	2	48	22.2
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	17	395	160.1
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	33	792	320.9

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic [1]	Cask System [2]	Canister Family [3]	Canisters Loaded [4]	Assemblies [4]	MTiHM [4]
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	37	1184	520.0
Southern Nuclear	Hatch	C2	HI-STAR 100	MPC-68 (HI-STAR)	3	204	36.7
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	60	4080	734.6
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	3	204	36.7
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	16	512	221.0
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	45	3060	553.0
TVA	Browns Ferry	C2	HI-STORM FW	MPC-89	12	1068	193.0
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	44	1408	644.0
TVA	Sequoyah	C2	HI-STORM FW	MPC-37	6	222	101.6
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	10	610	106.0
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	5	305	53.0
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	15	533	127.1
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	61	2226	1,019.4
30 Total Utilities	70 Total Reactor Sites		16 Cask Systems Used	36 Canister Families	2,073 Total Canisters Loaded	83,361Total Assemblies Loaded	24,379.7 MTiHM Loaded
95 Total Combinations of Utilities and Reactor Sites							

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.
2. Some Cask Systems are listed twice for a given reactor since more than one canister type is used for a given system. See Appendix A and Appendix B for the specific canisters used and their licensed purpose.
3. See Section 4.3, Appendix A, or Appendix B for the Licensed Purpose of the canisters associated with the canister families listed in the table.
4. The inventory is current to the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* FCRD-NFST-2013-000263. See Section 2 for further explanation.

Thirty utilities currently use canistered storage systems for dry storage at 70 reactor sites. Sixteen unique canistered storage cask systems are used to store a total of 83,361 used fuel assemblies in 2,073 total canisters. A total of 95 unique combinations of reactor sites and storage systems are present in the current inventory of used fuel in dry storage. The distribution of canisters loaded and assemblies versus cask system is shown in Figures 4.2-1 and 4.2-2 respectively.

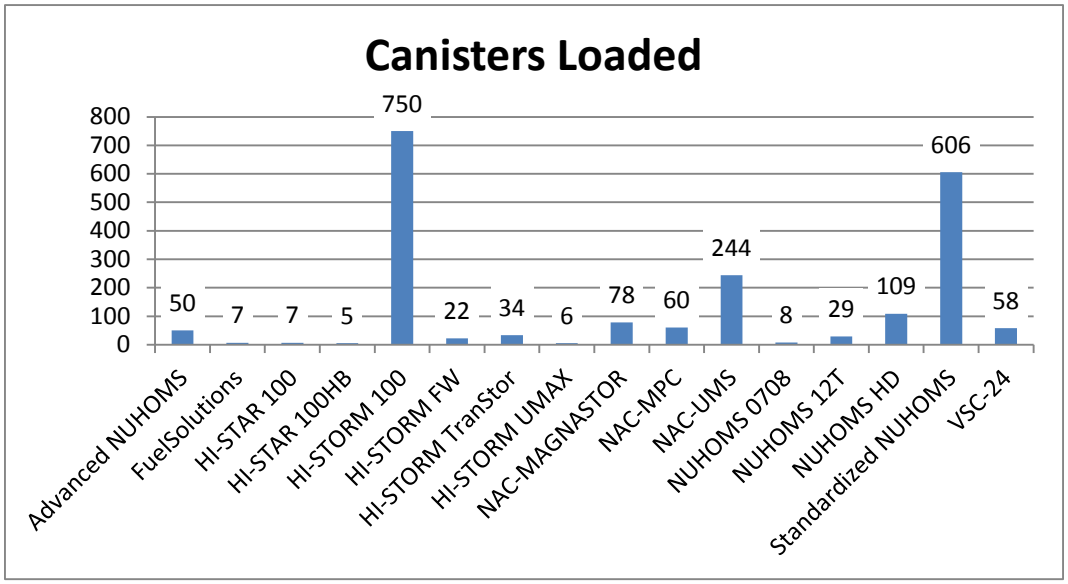

Figure 4.2-1 Distribution of Canisters Loaded Versus Canistered Storage Systems

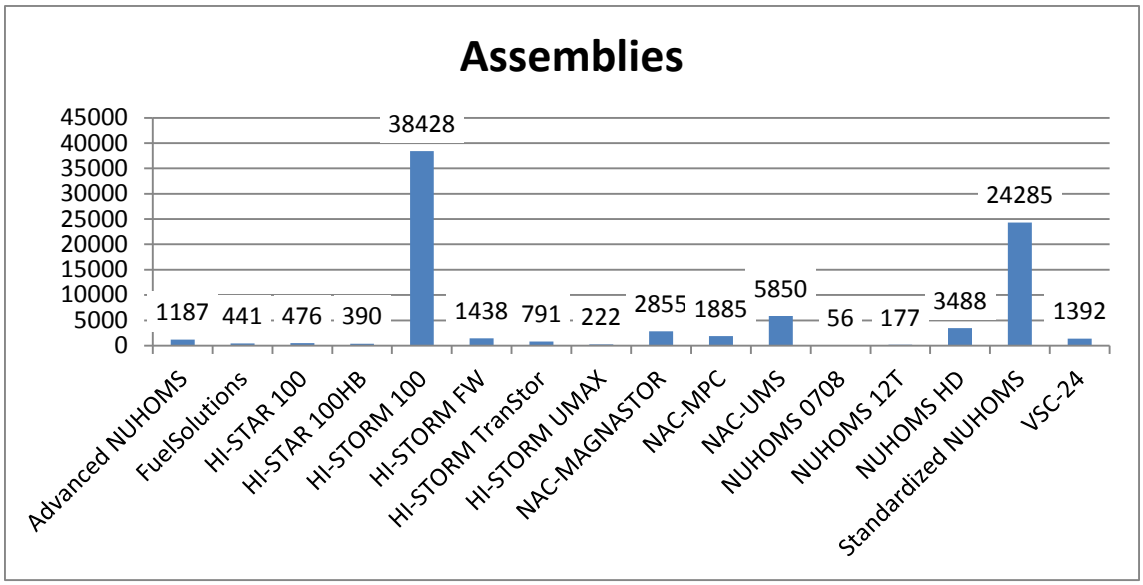

Figure 4.2-2 Distribution of Assemblies Versus Canistered Storage Systems

4.3 Canister Types Currently in Dry Storage

As discussed in Section 2, in many cases the canister designations listed in the dry storage inventory are incomplete designations. For instance the NUHOMS 24P is available in both short and long variants; therefore, the proper designation is 24PS and 24PL. Not enough information is currently available publicly regarding the current dry storage inventory to define the canisters at this level of fidelity; therefore, the canisters associated with the canistered storage systems in the dry storage inventory are regarded as "canister families". Because of this uncertainty, the number of unique combinations of reactor sites, storage systems and canisters in the current dry storage inventory could be up to 160, larger than the 95 combinations of reactor sites, storage systems and canister families discussed in Section 4.2.

Appendix B provides a list of the 160 combinations of reactor sites, storage systems and canisters. The following can be observed from the information contained in Appendix B:

- A total of 36 canister families are represented by the current inventory of canistered systems in dry storage.
- These canister families represent a total of 51 unique canisters. These canisters are listed in Table 4.3-1 below.
- Of these 51 canister types, 35 are certified for storage and transportation and 16 are certified for storage only.
- Of these 51 canister types, 42 are certified under a general license and 9 are certified under a site specific license.

Table 4.3-1 Canisters Currently in Dry Storage

Cask System	Canister Family	Canister	Licensed Purpose	License Type
Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	Storage and Transportation	General License
	NUHOMS 24PT4	NUHOMS 24PT4	Storage and Transportation	General License
FuelSolutions	W74T	W74T	Storage and Transportation	General License
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	Storage and Transportation	General License
HI-STAR 100HB	MPC-HB	MPC-HB	Storage and Transportation	Site Specific
HI-STORM 100	MPC-24 (HI-STORM)	MPC-24 (HI-STORM)	Storage and Transportation	General License
		MPC-24E (HI-STORM)	Storage and Transportation	General License
		MPC-24EF (HI-STORM)	Storage and Transportation	General License
	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
		MPC-32F	Storage Only	General License
	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
	MPC-68M	MPC-68M	Storage Only	General License
HI-STORM FW	MPC-37	MPC-37	Storage Only	General License
	MPC-89	MPC-89	Storage Only	General License
HI-STORM UMAX	MPC-37	MPC-37	Storage Only	General License
HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	Storage and Transportation	Site Specific
	MPC-24EF (TranStor)	MPC-24EF (TranStor)	Storage and Transportation	Site Specific
NAC-MAGNASTOR	TSC PWR	TSC PWR	Storage and Transportation	General License
NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	Storage and Transportation	General License
	LACBWR	LACBWR	Storage and Transportation	General License
	Yankee-MPC	Yankee-MPC	Storage and Transportation	General License
NAC-UMS	UMS-PWR	TSC-Class 1	Storage and Transportation	General License
		TSC-Class 2	Storage and Transportation	General License
		TSC-Class 3	Storage and Transportation	General License
NUHOMS 0708	NUHOMS 07P	NUHOMS 07P	Storage Only	Site Specific
NUHOMS 12T	NUHOMS 12T	NUHOMS 12T	Storage Only	Site Specific
NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License
Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
		NUHOMS 24PS	Storage Only	General License
	NUHOMS 24PHB	NUHOMS 24PHBL	Storage Only	General License
		NUHOMS 24PHBS	Storage Only	General License

Table 4.3-1 Canisters Currently in Dry Storage (continued)

Cask System	Canister Family	Canister	Licensed Purpose	License Type
Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-L	Storage and Transportation	General License
		NUHOMS 24PTH-S	Storage and Transportation	General License
		NUHOMS 24PTH-S-LC	Storage and Transportation	General License
	NUHOMS 32P	NUHOMS 32P	Storage Only	Site Specific
	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
		NUHOMS 32PT-L125	Storage and Transportation	General License
		NUHOMS 32PT-S100	Storage and Transportation	General License
		NUHOMS 32PT-S125	Storage and Transportation	General License
	NUHOMS 37PTH	NUHOMS 37PTH-M	Storage and Transportation	General License
		NUHOMS 37PTH-S	Storage and Transportation	General License
	NUHOMS 52B	NUHOMS 52B	Storage Only	General License
	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
		NUHOMS 61BTH Type 2	Storage and Transportation	General License
		NUHOMS 61BTHF	Storage and Transportation	General License
	NUHOMS FC-DSC	NUHOMS FC-DSC	Storage and Transportation	Site Specific
	NUHOMS FF-DSC	NUHOMS FF-DSC	Storage and Transportation	Site Specific
	NUHOMS FO-DSC	NUHOMS FO-DSC	Storage and Transportation	Site Specific
VSC-24	MSB-Long	MSB-Long	Storage Only	General License
	MSB-Short	MSB-Short	Storage Only	General License
	MSB-Standard	MSB-Standard	Storage Only	General License
16 Total Cask Systems	36 Total Canister Families	51 Total Canisters	35 Storage and Transportation	42 General License
			16 Storage Only	9 Site Specific

4.4 Canistered Storage Casks Currently in Dry Storage

Similar to the "canister families" discussed in Section 2 and 4.3, the canistered storage cask systems listed in the dry storage inventory are incomplete designations for the actual storage cask used. For instance the HI-STORM 100 system has numerous storage cask variants associated with it. Not enough information is currently available publicly regarding the current dry storage inventory to define the canistered storage casks at this level of fidelity; therefore, the dry storage inventory is not defined beyond the storage system level. Because of this uncertainty, the number of unique combinations of reactor sites, canistered storage systems and canistered storage casks in the current dry storage inventory could be up to 386, larger than the 95 combinations of reactor sites, canistered storage systems and canister families discussed in Section 4.2.

Appendix C provides a list of the 386 combinations of reactor sites, storage systems and canisters. The following can be observed from the information contained in Appendix C:

- A total of 16 canistered storage cask systems are represented by the current inventory of canistered systems in dry storage.
- These storage cask systems represent a total of 35 unique canistered storage casks that could be in use. These storage casks are listed in Table 4.4-1 below.

Table 4.4-1 Canistered Storage Casks Currently in Dry Storage

Cask System	Storage Casks
Advanced NUHOMS	Advanced HSM
FuelSolutions	W150-Long
HI-STAR 100	HI-STAR 100 S/T Overpack
HI-STAR 100HB	HI-STAR 100HB S/T Overpack
HI-STORM 100	HI-STORM 100 Storage Overpack
	HI-STORM 100A Storage Overpack
	HI-STORM 100S(232) Storage Overpack
	HI-STORM 100S(243) Storage Overpack
	HI-STORM 100S-218 Version B Storage Overpack
	HI-STORM 100S-229 Version B Storage Overpack
	HI-STORM 100SA Storage Overpack
HI-STORM FW	HI-STORM FW Overpack
HI-STORM TranStor	TranStor
HI-STORM UMAX	HI-STORM UMAX Vertical Ventilated Module (PWR)
NAC-MAGNASTOR	PWR Vertical Concrete Cask (VCC)
NAC-MPC	CY-MPC Vertical Concrete Cask (VCC)
	Yankee-MPC Vertical Concrete Cask (VCC)
	LACBWR MPC Vertical Concrete Cask (VCC)
NAC-UMS	Class 1 Vertical Concrete Cask (VCC)
	Class 2 Vertical Concrete Cask (VCC)
	Class 3 Vertical Concrete Cask (VCC)
NUHOMS 0708	07P HSM
NUHOMS 12T	12T HSM
NUHOMS HD	HSM-H (HD)
Standardized NUHOMS	HSM Model 80 (PWR)
	HSM Model 80 (BWR)
	HSM Model 102 (PWR)
	HSM Model 102 (BWR)
	HSM Model 152
	HSM Model 202
	HSM-H
	HSM-HS
VSC-24	Vertical Concrete Cask (VCC)-Long
	Vertical Concrete Cask (VCC)-Short
	Vertical Concrete Cask (VCC)-Standard
16 Total Cask Systems	35 Total Storage Casks

4.5 Transfer Casks

Specific transfer casks are not listed in the dry storage inventory. The combinations of transfer casks, storage systems and canister families could be up to 464. The large number of combinations is driven primarily by the wide variety of transfer casks associated with some storage systems, particularly the Standardized NUHOMS system. Up to 10 different transfer casks are available for the Standardized NUHOMS system. Many of these transfer casks are simple adaptations of other transfer casks, e.g. the OS197FC transfer cask is identical to the OS197 transfer cask except for provisions for forced cooling of a canister during transfer operations. Up to 4 different transfer casks are available for the Holtec HI-STORM 100 system.

Appendix D provides a list of the combinations of storage systems, canister families and transfer casks. The following can be observed from the information contained in Appendix D:

- A total of 14 canistered storage cask systems are represented by the current inventory of canistered systems in dry storage. Note that this quantity differs from the quantity of canistered storage systems identified in Section 4.2 and 4.4. This is because not all of the canistered storage systems utilize transfer casks, e.g. HI-STAR 100, etc.
- These storage cask systems represent a total of 29 unique transfer casks available for use with the current inventory of dry storage canisters. Some cask systems share the same transfer cask, e.g. the Advanced NUHOMS and the Standardized NUHOMS systems share the OS197 and OS197H transfer casks. The storage casks are listed in Table 4.5-1 below.

Table 4.5-1 Transfer Casks for Use with the Current Inventory of Dry Storage Canisters

Cask System	Transfer Casks	Supplemental Data Source [1]
Advanced NUHOMS	OS197	- NUH-01.0150, *Final Safety Analysis Report for the Standardized Advanced NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel*, Revision 0, February 2003 - Appendix A to Certificate of Compliance Number 1029, *Technical Specifications for the Advanced NUHOMS System Operating Controls and Limits*, Amendment Number 1
	OS197H	
FuelSolutions	W100	
HI-STORM (TranStor)	HI-TRAC 100	- HI-2002444, *Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System*, USNRC Docket Number 72-1014, Revision 11, August 1, 2013
	HI-TRAC 100D	
	HI-TRAC 125	
	HI-TRAC 125D	
HI-STORM 100	HI-TRAC 100	- HI-2002444, *Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System*, USNRC Docket Number 72-1014, Revision 11, August 1, 2013
	HI-TRAC 100D	
	HI-TRAC 125	
	HI-TRAC 125D	
HI-STORM FW	HI-TRAC VW-BWR (maximum lead)	
	HI-TRAC VW-BWR (minimum lead)	
	HI-TRAC VW-PWR (maximum lead)	
	HI-TRAC VW-PWR (minimum lead)	
HI-STORM UMAX	HI-TRAC VW-PWR (maximum lead)	
	HI-TRAC VW-PWR (minimum lead)	
NAC-MAGNASTOR	PWR Transfer Cask	
NAC-MPC	CY Transfer Cask	
	DPC/Yankee Transfer Cask	
NAC-UMS	Class 1 Transfer Cask	
	Class 2 Transfer Cask	
	Class 3 Transfer Cask	
NUHOMS 0708	IF-300	- NUH-003, *Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel*, Revision 6, October 2001
NUHOMS 12T	MP187	- *INEEL TMI-2 Safety Analysis Report*, Revision 3, March 1, 2003
	OS197	

Table 4.5-1 Transfer Casks for Use with the Current Inventory of Dry Storage Canisters (continued)

Cask System	Transfer Casks	Supplemental Data Source [1]
NUHOMS HD	OS187H	- *NUHOMS HD Horizontal Modular Storage System for Irradiated Nuclear Fuel, Updated Final Safety Analysis Report*, Revision 1, September 2007
Standardized NUHOMS	OS197	- NUH-003, *Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel*, Revision 6, October 2001 - NUH-003, *Updated Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel*, Revision 10, February 1, 2008 - Certificate Number 1004*, Certificate of Compliance for Spent Fuel Storage Casks*, Docket Number 72-1004, Amendment 11, Amendment Effective Date January 7, 2014
	OS197FC	
	OS197FC-B	
	OS197H	
	OS197HFC	
	OS197HFC-B	
	OS197L	
	OS200	
	OS200FC	
	Standardized	
	MP187	
VSC-24	MTC	
14 Total Cask Systems	29 Total Transfer Casks	

Notes:

1. Available transfer casks are derived primarily from the report, *Storage and Transport Cask Data for Used Commercial Nuclear Fuel, 2013 U. S. Edition*, ATI-TR-13047, August 9, 2013. Some of the transfer casks are not captured in the ATI-TR-13047 report and are derived from the supplemental sources listed in the table.

4.6 Canister Transportation Casks

Up to 167 combinations of transportation casks and canisters are possible. The large number of combinations is driven primarily by the uncertainty in the specific canister type in the current inventory of canisters in dry storage (see Section 2 and Section 4.3). Up to 8 different transportation casks are available to transport the current inventory of canisters in dry storage. Many canisters do not have an approved transportation cask available.

Appendix E provides a list of the 167 combinations of storage systems, canister families, canisters and transportation casks. The following can be observed from the information contained in Appendix E:

- A total of 8 unique transportation casks are available for the 36 canister families (51 different canister types) in the current inventory. The canister families and canisters with their associated transportation casks are listed in Table 4.6-1 below.
- The availability of a transportation cask is dependent on the applicable canister. Some canister families have an approved transportation cask regardless of which canister is applicable, e.g. the MPC-24 (HI-STORM) canister family. A total of 22 canister families **have** an approved transportation cask regardless of the applicable canister. These canister families represent 1,307 canisters (63.1% of the 2,073 canisters) and 59,925 assemblies (71.9% of the total 83,361 assemblies) in the current dry storage inventory.
- Some canister families do not have an approved transportation cask for any of the applicable canisters associated with the canister family, e.g. the NUHOMS 24P canister family. A total of 13 canister families **do not have** an approved transportation cask for any of the associated canisters. These canister families represent 451 canisters (21.8% of the total 2,073 canisters) and 13,356 assemblies (16.0% of the total 83,361 assemblies) in the current dry storage inventory. It should be noted that two new transportation packages are currently under review for several of the canisters listed in Table 4.6-1. The Holtec HI-STAR 190 transportation cask is intended for use with the HI-STORM FW and UMAX systems for the MPC-37 and MPC-89 canisters. The safety analysis report for the HI-STAR 190 transportation cask is currently being reviewed by the NRC under Docket Number 71-9373. The NAC MAGNATRAN transportation cask is intended for use with the NAC-MAGNASTOR system for the TSC PWR (and TSC BWR) canister. The safety analysis report for the MAGNATRAN transportation cask is currently being reviewed by the NRC under Docket Number 71-9356.
- Some canister families could have an approved transportation cask depending on which canister is applicable, e.g. MPC-32 (HI-STORM) canister family. Only 1 canister family **may not have** an approved transportation cask depending on the applicable canister. This canister family represents 315 canisters (15.2% of the total 2,073 canisters) and 10,080 assemblies (12.1% of the total 83,361 assemblies) in the current dry storage inventory.

Table 4.6-1 Transportation Casks for Use with the Current Inventory of Dry Storage Canisters

Cask System	Canister Family	Canister	Transportation Cask	Canisters Loaded [1]	Assemblies Loaded [1]
Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	MP187	17	395
	NUHOMS 24PT4	NUHOMS 24PT4	MP197HB	33	792
FuelSolutions	W74T	W74T	TS125	7	441
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	7	476
HI-STAR 100HB	MPC-HB	MPC-HB	HI-STAR 100HB	5	390
HI-STORM 100	MPC-24 (HI-STORM)	MPC-24 (HI-STORM)	HI-STAR 100	28	672
		MPC-24E (HI-STORM)	HI-STAR 100		
		MPC-24EF (HI-STORM)	HI-STAR 100		
	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	315	10,080
		MPC-32F	Not Available		
	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	402	27,336
	MPC-68M	MPC-68M	Not Available	5	340
HI-STORM FW	MPC-37	MPC-37	Not Available [2]	10	370
	MPC-89	MPC-89	Not Available [2]	12	1,068
HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	HI-STAR 100	29	675
HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	116
HI-STORM UMAX	MPC-37	MPC-37	Not Available [2]	6	222
NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available [3]	78	2,855
NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	NAC-STC Transport Cask	40	1,019
	Yankee-MPC	Yankee-MPC	NAC-STC Transport Cask	15	533
	LACBWR	LACBWR	NAC-STC Transport Cask	5	333
NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	244	5,850
		TSC-Class 2	Universal Transport Cask		
		TSC-Class 3	Universal Transport Cask		

Table 4.6-1 Transportation Casks for Use with the Current Inventory of Dry Storage Canisters (continued)

Cask System	Canister Family	Canister	Transportation Cask	Canisters Loaded [1]	Assemblies Loaded [1]
NUHOMS 0708	NUHOMS 07P	NUHOMS 07P	Not Available	8	56
NUHOMS 12T	NUHOMS 12T	NUHOMS 12T	Not Available	29	177
NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	109	3,488
Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available	135	3,240
		NUHOMS 24PS	Not Available		
	NUHOMS 24PHB	NUHOMS 24PHBL	Not Available	53	1,272
		NUHOMS 24PHBS	Not Available		
	NUHOMS 24PTH	NUHOMS 24PTH-L	MP197HB	31	744
		NUHOMS 24PTH-S	MP197HB		
		NUHOMS 24PTH-S-LC	MP197HB		
	NUHOMS 32P	NUHOMS 32P	Not Available	30	960
	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	89	2,848
		NUHOMS 32PT-L125	MP197HB		
		NUHOMS 32PT-S100	MP197HB		
		NUHOMS 32PT-S125	MP197HB		
	NUHOMS 37PTH	NUHOMS 37PTH-M	MP197HB	4	148
		NUHOMS 37PTH-S	MP197HB		
	NUHOMS 52B	NUHOMS 52B	Not Available	27	1,404
	NUHOMS 61BT	NUHOMS 61BT	MP197	129	7,869
	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	87	5,307
		NUHOMS 61BTH Type 2	MP197HB		
		NUHOMS 61BTHF	MP197HB		

Table 4.6-1 Transportation Casks for Use with the Current Inventory of Dry Storage Canisters (continued)

Cask System	Canister Family	Canister	Transportation Cask	Canisters Loaded [1]	Assemblies Loaded [1]
Standardized NUHOMS	NUHOMS FC-DSC	NUHOMS FC-DSC	MP187	18	432
	NUHOMS FF-DSC	NUHOMS FF-DSC	MP187	1	13
	NUHOMS FO-DSC	NUHOMS FO-DSC	MP187	2	48
VSC-24	MSB	MSB-Long	Not Available	24	576
		MSB-Short	Not Available	16	384
		MSB-Standard	Not Available	18	432
16 Total Cask Systems	36 Total Canister Families	51 Total Canisters	8 Total Transportation Casks Available for the Canisters in the Current Dry Storage Inventory	2,073 Total Canisters in the Current Dry Storage Inventory	83,361 Total Assemblies in the Current Dry Storage Inventory
	22 Canister Families HAVE An Approved Transportation Cask			1,307 Canisters in the Current Dry Storage Inventory HAVE Available Transportation Casks	59,925 Assemblies in the Current Dry Storage Inventory HAVE Transportation Casks
	1 Canister Famiy MAY NOT HAVE An Approved Transportation Cask			315 Canisters in the Current Dry Storage Inventory MAY NOT HAVE Available Transportation Casks	10,080 Assemblies in the Current Dry Storage Inventory MAY NOT HAVE Available Transportation Casks
	13 Canister Families DO NOT HAVE an Approved Transportation Cask			451 Canisters in the Current Dry Storage Inventory DO NOT HAVE Available Transportation Casks	13,356 Assemblies in the Current Dry Storage Inventory DO NOT HAVE Available Transportation Casks

Notes:

1. The inventory is current to the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 for further explanation.
2. The HI-STAR 190 transportation cask is intended for use with the HI-STORM FW and UMAX systems but is not currently licensed. The safety analysis report is currently under review by the NRC (Docket Number 71-9373).
3. The MAGNATRAN transportation cask is intended for use with the NAC-MAGNASTOR system but is not currently licensed. The safety analysis report is currently under review by the NRC (Docket Number 71-9356).

4.6.1 Transportation Casks for Shutdown Reactor Sites

A pilot interim storage facility (ISF) is planned for demonstrating the storage of UNF from shutdown commercial nuclear power reactors. [Wagner 2014] The inventory of UNF to be stored at the pilot interim storage facility has not yet been defined. A special inventory (i.e. different from that defined in Section 2) was considered to assess the availability of transportation casks for transporting UNF from the shutdown reactor sites to the pilot interim storage facility. The projected inventory from the following shutdown reactor sites shown in Table 4.6-2 was considered.

Table 4.6-2 Shutdown Reactor Sites

Utility	Reactor [1]	Site Characteristic [2]
Connecticut Yankee	Connecticut Yankee	A1
Consumers	Big Rock Point	A1
Dairyland Power	Lacrosse	A1
Maine Yankee	Maine Yankee	A1
PG&E	Humboldt Bay	A1
Portland	GE Trojan	A1
SMUD	Rancho Seco	A1
YAEC	Yankee Rowe	A1
Zion Solutions	Zion	A1
Dominion	Kewaunee	A2
Entergy	Vermont Yankee	A2
Southern Cal Edison	SONGS 1, 2 & 3	A2
Duke	Crystal River	A3
Entergy	Indian Point 1	B1
Exelon	Dresden 1	B2
Dominion	Millstone 1	B3
Entergy	**Fitzpatrick**	AS – W&D
Entergy	**Pilgrim**	AS – W&D
Exelon	**Clinton**	AS - WO
Exelon	Oyster Creek	AS – W&D
Exelon	**Quad Cities 1 & 2**	AS – W&D
OPPD	**Fort Calhoun**	AS – W&D
PG&E	**Diablo Canyon 1 & 2**	AS – W&D

Notes:

1. Reactors in **BOLD** font are new for Revision 2 of this report.
2. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - A3 - All Reactors Shut Down - Wet Storage Only
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - B3 - At Least One Operating and One Shutdown Reactor - Wet Storage Only

   "Announced Shutdown – Wet and Dry Storage" (AS – W&D) and "Announced Shutdown – Wet Storage Only" (AS – WO) are used in the table above to designate intent to shut down prior to pilot ISF operations.

There are 16 shutdown reactors at 13 sites with no operating reactors (i.e. Site Characteristic = A1, A2 or A3). There are 3 shutdown reactors at 3 sites with at least one operating reactor remaining (i.e. Site Characteristic = B1, B2 or B3). Nine reactors at seven sites have announced their intention to shut down prior to the anticipated startup of the pilot ISF.

The projected inventory defined in Tables 2-10, 2-11, 2-12 and 2-13 of FCRD-NFST-2013-000263 provides the basis for defining the used fuel inventory anticipated from the shutdown reactors listed in Table 4.6-2. This inventory is included in Appendix F, Table F-1. The following is a list of differences between the projected inventory included in Appendix F and the current inventory defined in Section 2 and included in Appendix A:

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors

Utility	Reactor [1]	Site Characteristic [2]	Current Inventory	Projected Inventory	Comment
Connecticut Yankee	Connecticut Yankee	A1	1,019 assemblies in 40 CY-MPC,26 Assy. canisters	No change from Current Inventory	
Dairyland Power	La Crosse	A1	333 assemblies in 5 NAC LACBWR canisters	No change from Current Inventory	
Entergy	Big Rock Point	A1	441 assemblies in 7 FuelSolutions W74T canisters	No change from Current Inventory	
Maine Yankee	Maine Yankee	A1	1,434 assemblies in 60 NAC UMS-PWR canisters	No change from Current Inventory	
PG&E	Humboldt Bay	A1	390 assemblies in 5 Holtec MPC-HB canisters	No change from Current Inventory	
Portland	GE Trojan	A1	- 675 assemblies in 29 Holtec MPC-24E (TranStor) canisters - 116 assemblies in 5 Holtec MPC-24EF (TranStor) canisters	No change from Current Inventory	

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors (continued)

Utility	Reactor [1]	Site Characteristic [2]	Current Inventory	Projected Inventory	Comment
SMUD	Rancho Seco	A1	- 432 assemblies in 18 NUHOMS FC-DSC canisters - 13 assemblies in 1 NUHOMS FF-DSC canisters - 48 assemblies in 2 NUHOMS FO-DSC canisters	No change from Current Inventory	
YAEC	Yankee Rowe	A1	533 assemblies in 15 NAC Yankee-MPC canisters	No change from Current Inventory	
Zion Solutions	Zion 1	A1	1,143 assemblies in 31 NAC TSC PWR canisters	No change from Current Inventory	
Zion Solutions	Zion 2	A1	1,083 assemblies in 30 NAC TSC PWR canisters	No change from Current Inventory	
Dominion	Kewaunee	A2	448 assemblies in 14 NUHOMS 32PT canisters	- 448 assemblies in 14 NUHOMS 32PT canisters - 887 assemblies in 24 NAC-MAGNASTOR TSC-PWR canisters	Kewaunee has announced intentions of using the NAC-MAGNASTOR system for dry storing its remaining inventory of used fuel.
Entergy	Vermont Yankee	A2	884 assemblies in 13 Holtec MPC-68 (HI-STORM) canisters	3,877 assemblies in 58 MPC-68 (HI-STORM) canisters	

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors (continued)

Utility	Reactor [1]	Site Characteristic [2]	Current Inventory	Projected Inventory	Comment
Southern Cal Edison	SONGS 1	A2	395 assemblies in 17 NUHOMS 24PT1 canisters	No change from Current Inventory	
	SONGS 2	A2	792 assemblies in 33 NUHOMS 24PT4 canisters	No change from Current Inventory	
	SONGS 2 & 3	A2		2,668 assemblies in 73 Holtec MPC-37 canisters	The Holtec UMAX dry storage system has been selected to store the remaining fuel from SONGS 2 and 3.
Duke	Crystal River	A3		1,243 assemblies in 39 NUHOMS 32PTH1 canisters	Crystal River has not yet loaded used fuel in dry storage. Canister selection is based on information contained in FCRD-NFST-2013-000263, Table 2-26.
Entergy	Indian Point 1	B1	160 assemblies in 5 Holtec MPC-32 (HI-STORM) canisters	No change from Current Inventory	
Exelon	Dresden 1	B2	272 assemblies in 4 Holtec MPC-68 (HI-STAR) canisters	- 272 assemblies in 4 MPC-68 (HI-STAR) canisters - 617 assemblies in 10 MPC-68 (HI-STORM) canisters	Apparently, some Unit 1 fuel is comingled in dry storage with fuel from Unit 2 and with Unit 3 fuel in the Unit 3 storage pool. See the discussion in Section 2.2. The Current Inventory listed here is incomplete.

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors (continued)

Utility	Reactor [1]	Site Characteristic [2]	Current Inventory	Projected Inventory	Comment
Dominion	Millstone 1	B3		2,884 assemblies in 48 NUHOMS 61BT canisters	The current inventory of fuel in dry storage at Millstone only includes used fuel from Millstone 2 & 3 which are PWR reactors and are still operating. The NUHOMS storage system with 32PT canisters is currently used for dry storage of Millstone 2 & 3 fuel assemblies. No used fuel from Millstone 1 which is a BWR reactor has been loaded into dry storage canisters. Dominion has not announced what canister(s) it will use for Millstone 1. See Note 3 regarding the assumption of NUHOMS 61BT canisters for Millstone 1.
Entergy	**Fitzpatrick**	AS-W&D	1,428 assemblies in 21 Holtec MPC-68 (HI-STORM) canisters	4,624 assemblies in 68 Holtec MPC-68 (HI-STORM) canisters	
Entergy	**Pilgrim**	AS-W&D	204 assemblies in 3 Holtec MPC-68 (HI-STORM) canisters	4,113 assemblies in 61 Holtec MPC-68 (HI-STORM) canisters	
Exelon	**Clinton**	AS-WO		4,188 assemblies in 62 Holtec MPC-89 canisters	Clinton plans to use the Holtec HI-STORM FW dry storage system.
Exelon	Oyster Creek	AS-W&D	- 488 assemblies in 8 NUHOMS 61BT canisters - 915 assemblies in 15 NUHOMS 61BTH canisters	- 3,796 assemblies in 63 NUHOMS 61BT canisters - 915 assemblies in 15 NUHOMS 61BTH canisters	NUHOMS 61BT canisters are assumed for future loadings per FCRD-NFST-2013-000263, Table 2-26.

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors (continued)

Utility	Reactor [1]		Current Inventory	Projected Inventory	Comment
Exelon	**Quad Cities 1**	AS-W&D	2,788 assemblies in 41 Holtec MPC-68 (HI-STORM) canisters	5,807 assemblies in 86 MPC-68 (HI-STORM) canisters	
Exelon	**Quad Cities 2**	AS-W&D		5,402 assemblies in 80 MPC-68 (HI-STORM) canisters	
OPPD	**Fort Calhoun**	AS-W&D	320 assemblies in 10 NUHOMS 32PT canisters	1,350 assemblies in 43 NUHOMS 32PT canisters	
PG&E	**Diablo Canyon 1**	AS-W&D	1,184 assemblies in 37 Holtec MPC-32 (HI-STORM) canisters	2,357 assemblies in 74 Holtec MPC-32 (HI-STORM) canisters	
PG&E	**Diablo Canyon 2**	AS-W&D		2,094 assemblies in 66 Holtec MPC-32 (HI-STORM) canisters	

Table 4.6-3 Comparison of the Projected Inventory to the Current Inventory for Shutdown Reactors (continued)

Notes:

1. Reactors in **BOLD** font are new for Revision 2 of this report.
2. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - A3 - All Reactors Shut Down - Wet Storage Only
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - B3 - At Least One Operating and One Shutdown Reactor - Wet Storage Only

   "Announced Shutdown – Wet and Dry Storage" (AS-W&D) and "Announced Shutdown – Wet Storage Only" (AS-WO) are used in the table above to designate intent to shut down prior to pilot ISF operations.
3. The current Millstone ISFSI license includes provisions for storing BWR fuel from Millstone 1 and PWR fuel from Millstone 2 & 3 using the NUHOMS dry storage system. NUHOMS 61BT canisters are assumed for dry storage of fuel from Millstone 1. This is contrary to the assumption stated in Table 2-27 of FCRD-NFST-2013-000263 (i.e. the Inventory Report) which states that canisters with a capacity of 68 assemblies are assumed for fuel from Millstone 1. Table 2-13 of FCRD-NFST-2013-000263 seems to validate the selection of canisters with a capacity of 68 fuel assemblies since the quantity of canisters loaded is 43 for 2,884 assemblies (2,884 assemblies ÷ 68 assemblies/canister = 43 canisters). On the other hand, Table 2-13 of FCRD-NFST-2013-000263 provides a total of 67 canisters for Millstone 1 along with Dresden 1 (14 canisters) and Indian Point 1 (5 canisters), which indicates the total for Millstone 1 should be 48 (67 – 14 – 5 = 48). This in turn would indicate a canister with a capacity of 61 (2,884 assemblies ÷ 61 assemblies/canister = 48 canisters). Since the NUHOMS system does not include a canister with a capacity of 68 and some parts of FCRD-NFST-2013-000263 indicate the use of canisters with a capacity of 61 assemblies, the assumption of NUHOMS 61BT canisters seems appropriate. FCRD-NFST-2013-000263 should be revised to reflect this assumption.

Up to 50 combinations of transportation casks and canisters are possible for the projected inventory of UNF at shutdown reactor sites. The large number of combinations is driven primarily by the uncertainty in the specific canister type associated with the projected inventory of canisters in dry storage. Up to 8 different transportation casks are available to transport the projected inventory of canisters in dry storage to the pilot ISF. Many canisters do not have an approved transportation cask available.

Appendix F, Table F-2 provides a list of the 50 combinations of storage systems, canister families, canisters and transportation casks. The following can be observed from the information contained in Table F-2:

- A total of 8 unique transportation casks are available for the 23 canister families (33 different canister types) in the projected inventory. The canister families and canisters with their associated transportation casks are listed in Table 4.6-4 below.
- The availability of a transportation cask is dependent on the applicable canister. Some canister families have an approved transportation cask regardless of which canister is applicable, e.g. the NUHOMS 32PT canister family. A total of 19 canister families **have** an approved transportation cask regardless of the applicable canister. These canister families represent 826 canisters (69.4% of the total 1,191 canisters) and 41,969 assemblies (74.2% of the total 56,549 assemblies) in the projected inventory. The percentage of canister families that have an approved transportation cask regardless of the applicable canister (i.e. 69.4%) is somewhat higher for the projected inventory of UNF at shutdown reactor sites than for the current inventory of UNF in dry storage (i.e. 63.1%, see Section 4.6).
- Three canister families **do not have** an approved transportation cask for any of the applicable canisters associated with the canister family, i.e. the MPC-37, the MPC-89 and the TSC-PWR canister families. These canister families represent 220 canisters (18.5% of the total 1,191 canisters) and 9,969 assemblies (17.6% of the total 56,549assemblies) in the current dry storage inventory.
- One canister family **may not have** an approved transportation cask depending on which canister is applicable, e.g. MPC-32 (HI-STORM) canister family. This canister family represents 145 canisters (12.2% of the total 1,191 canisters) and 4,611 assemblies (8.2% of the total 56,549 assemblies) in the projected inventory.

Table 4.6-4 Canistered System Transportation Casks for Shutdown Reactor Sites

Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Generated For Projected Inventory [1]	Reactor
FuelSolutions	W74T	W74T	TS125	7	Big Rock Point
HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	74 66	Diablo Canyon 1 Diablo Canyon 2
		MPC-32F	Not Available	5	Indian Point 1
	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	58 68 61 86 80 10	Vermont Yankee Fitzpatrick Pilgrim Quad Cities 1 Quad Cities 2 Dresden 1
HI-STORM FW	MPC-89	MPC-89	Not Available [2]	62	Clinton
HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	HI-STAR 100	29	GE Trojan
	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	
HI-STORM UMAX	MPC-37	MPC-37	Not Available [2]	73	SONGS 2 & 3
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	4	Dresden 1
HI-STAR 100HB	MPC-HB	MPC-HB	HI-STAR 100HB	5	Humboldt Bay

Table 4.6-4 Canistered System Transportation Casks for Shutdown Reactor Sites (continued)

Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Generated For Projected Inventory [1]	Reactor
Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	14 43	Kewaunee Fort Calhoun
		NUHOMS 32PT-L125	MP197HB		
		NUHOMS 32PT-S100	MP197HB		
		NUHOMS 32PT-S125	MP197HB		
	NUHOMS 32PTH1	NUHOMS 32PTH1-L	MP197HB	39	Crystal River
		NUHOMS 32PTH1-M	MP197HB		
		NUHOMS 32PTH1-S	MP197HB		
	NUHOMS 61BT	NUHOMS 61BT	MP197	48 63	Millstone 1 Oyster Creek
			MP197HB		
	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	15	Oyster Creek
		NUHOMS 61BTH Type 2	MP197HB		
		NUHOMS 61BTHF	MP197HB		
	NUHOMS FC-DSC	NUHOMS FC-DSC	MP187	18	Rancho Seco
	NUHOMS FF-DSC	NUHOMS FF-DSC	MP187	1	Rancho Seco
	NUHOMS FO-DSC	NUHOMS FO-DSC	MP187	2	Rancho Seco
Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	MP187	17	SONGS 1
	NUHOMS 24PT4	NUHOMS 24PT4	MP197HB	33	SONGS 2
NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	NAC-STC Transport Cask	40	Connecticut Yankee
	LACBWR	LACBWR	NAC-STC Transport Cask	5	Lacrosse
	Yankee-MPC	Yankee-MPC	NAC-STC Transport Cask	15	Yankee Rowe

Table 4.6-4 Canistered System Transportation Casks for Shutdown Reactor Sites (continued)

Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Generated For Projected Inventory [1]	Reactor
NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	60	Maine Yankee
		TSC-Class 2	Universal Transport Cask		
		TSC-Class 3	Universal Transport Cask		
NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available [3]	24 61	Kewaunee Zion
12 Total Cask Systems	23 Total Canister Families	33 Total Canisters	8 Total Transportation Casks Available for the Canisters in the Current Dry Storage Inventory	1,191 Total Canisters in the Projected Inventory	56,549 Total Assemblies in the Projected Inventory
	19 Canister Families HAVE An Approved Transportation Cask			826 Canisters in the Projected Inventory HAVE Available Transportation Casks	41,969 Assemblies in the Projected Inventory HAVE Transportation Casks
	1 Canister Family MAY NOT HAVE An Approved Transportation Cask			145 Canisters in the Projected Inventory MAY NOT HAVE Available Transportation Casks	4,611 Assemblies in the Projected Inventory MAY NOT HAVE Available Transportation Casks
	3 Canister Families DO NOT HAVE an Approved Transportation Cask			220 Canisters in the Projected Inventory DO NOT HAVE Available Transportation Casks	9,969 Assemblies in the Projected Inventory DO NOT HAVE Available Transportation Casks

Notes:

1. The projected inventory is based on the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 and Section 4.6.1 for further explanation.
2. The HI-STAR 190 transport cask is intended for use with the HI-STORM FW and UMAX system but is not currently licensed. The safety analysis report is currently under review by the NRC (Docket Number 71-9373).
3. The MAGNATRAN transport cask is intended for use with the NAC-MAGNASTOR system but is not currently licensed. The safety analysis report is currently under review by the NRC (Docket Number 71-9356).

5. RECOMMENDATIONS

During the course of developing this report, several limitations with the existing knowledge base of information pertaining to the current inventory of used fuel in dry storage were discovered. Most of these limitations have been discussed or alluded to already in this report. The following recommendations are made to address these limitations:

1. The primary source of cask system data for this report is the document, *Storage and Transport Cask Data for Used Commercial Nuclear Fuel, 2013 U. S. Edition*, (ATI-TR-13047). Several errors, omissions and ambiguities were discovered in this document during preparation of this report. It is recommended that the items listed in Section 3.1 be considered in any future revisions of ATI-TR-13047.
2. The database (the Dry Storage Cask/Inventory Database) that was developed to support this report was developed with the assumption that it would eventually be incorporated into the NFST Unified Database developed by ORNL. Data tables associated with Revision 1 of this report were imported into the Unified Database early in FY 2016. This data should be updated to incorporate the changes made to the Dry Storage Cask/Inventory Database to support Revision 2 of this report. These changes are detailed in Appendix G.
3. Inventory data to support this report is derived primarily from the document, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report* (FCRD-NFST-2013-000263). Data was also obtained from the document, *Preliminary Evaluation of Removing Used Fuel from Shutdown Sites* (FCRD-NFST-2014-000372) as appropriate. Modifications were made to this information as described in Section 2 for this report. These modifications should be considered in future revisions to FCRD-NFST-2013-000263 and FCRD-NFST-2014-000372.
4. The inventory of commercial light water reactor used fuel in dry storage should continue to be refined to provide better and more complete information relative to the specific components used to store and potentially transport the used fuel in the future. Particular attention should be devoted to the identification of the specific canisters used to enable a more accurate assessment of the availability of transportation casks for the current inventory of used fuel.

6. REFERENCES

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Appendix A
Current Inventory of UNF in Dry Storage

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Table A-1 Current Inventory of UNF in Dry Storage

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [2]	MTiHM [2]
AEP	D.C.Cook	PWR	C2	General License	2012	HI-STORM 100	MPC-32 (HI-STORM)		28	896	393.0
Ameren	Callaway	PWR	C2	General License	2015	HI-STORM UMAX	MPC-37		6	222	94.0
APS	Palo Verde	PWR	C2	General License	2003	NAC-UMS	UMS-PWR		132	3168	1,360.0
Connecticut Yankee	Connecticut Yankee	PWR	A1	General License	2004	NAC-MPC	CY-MPC, 26 Assy		40	1019	413.5
Dairyland Power	La Crosse	BWR	A1	General License	2012	NAC-MPC	LACBWR		5	333	38.0
Detroit Edison	Fermi 2	BWR	C2	General License	2014	HI-STORM 100	MPC-68 (HI-STORM)		6	408	72.0
DOE	INEEL	PWR	ISFSI Only	Site Specific	1991	NUHOMS 12T	NUHOMS 12T		29	177	83.0
Dominion	Kewaunee	PWR	A2	General License	2009	Standardized NUHOMS	NUHOMS 32PT		14	448	174.1
Dominion	Millstone 2 & 3	PWR	B2	General License	2005	Standardized NUHOMS	NUHOMS 32PT		25	800	339.0
Dominion	North Anna	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		25	800	370.7
Dominion	North Anna	PWR	C2	Site Specific	1998	TN-32		TN-32	27	864	400.3

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [3]	MTiHM [2]
Dominion	Surry	PWR	C2	Site Specific	1986	CASTOR V/21		CASTOR V/21	25	525	240.8
Dominion	Surry	PWR	C2	Site Specific	1986	CASTOR X/33		CASTOR X/33	1	33	15.1
Dominion	Surry	PWR	C2	Site Specific	1986	MC-10		MC-10 (PWR)	1	24	11.0
Dominion	Surry	PWR	C2	Site Specific	1986	NAC I28 S/T		NAC I28 S/T	2	56	25.7
Dominion	Surry	PWR	C2	General License	2007	NUHOMS HD	NUHOMS 32PTH		26	832	381.7
Dominion	Surry	PWR	C2	Site Specific	1986	TN-32		TN-32	26	832	381.7
Duke	Brunswick	BWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 61BTH		19	1159	232.0
Duke	Catawba	PWR	C2	General License	2013	NAC-MAGNASTOR	TSC PWR		6	222	99.3
Duke	Catawba	PWR	C2	General License	2007	NAC-UMS	UMS-PWR		24	576	257.7
Duke	McGuire	PWR	C2	General License	2001	NAC-MAGNASTOR	TSC PWR		11	407	183.0
Duke	McGuire	PWR	C2	General License	2001	NAC-UMS	UMS-PWR		28	672	302.1
Duke	McGuire	PWR	C2	General License	2001	TN-32		TN-32	10	320	143.9
Duke	Oconee	PWR	C2	General License	1990	Standardized NUHOMS	NUHOMS 24P		44	1056	492.0
Duke	Oconee	PWR	C2	Site Specific	1990	Standardized NUHOMS	NUHOMS 24P		40	960	447.3
Duke	Oconee	PWR	C2	General License	2000	Standardized NUHOMS	NUHOMS 24PHB		53	1272	592.7

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [3]	MTiHM [2]
Duke	Robinson	PWR	C2	Site Specific	1989	NUHOMS 0708	NUHOMS 07P		8	56	24.2
Duke	Robinson	PWR	C2	General License	2007	Standardized NUHOMS	NUHOMS 24PTH		18	432	186.8
Energy Northwest	Columbia	BWR	C2	General License	2002	HI-STORM 100	MPC-68 (HI-STORM)		36	2448	431.0
Entergy	ANO	PWR	C2	General License	1996	HI-STORM 100	MPC-24 (HI-STORM)		28	672	296.1
Entergy	ANO	PWR	C2	General License	1996	HI-STORM 100	MPC-32 (HI-STORM)		21	672	296.1
Entergy	ANO	PWR	C2	General License	1996	VSC-24	MSB-Long		24	576	253.8
Entergy	Big Rock Point	BWR	A1	General License	2002	FuelSolutions	W74T		7	441	57.9
Entergy	Fitzpatrick	BWR	C2	General License	2002	HI-STORM 100	MPC-68 (HI-STORM)		21	1428	258.0
Entergy	Grand Gulf	BWR	C2	General License	2006	HI-STORM 100	MPC-68 (HI-STORM)		28	1904	336.0
Entergy	Indian Point 1	PWR	B1	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)		5	160	30.6
Entergy	Indian Point 2 & 3	PWR	B2	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)		29	928	422.0
Entergy	Palisades	PWR	C2	General License	1993	Standardized NUHOMS	NUHOMS 24PTH		13	312	128.4
Entergy	Palisades	PWR	C2	General License	1993	Standardized NUHOMS	NUHOMS 32PT		11	352	144.9
Entergy	Palisades	PWR	C2	General License	1993	VSC-24	MSB-Standard		18	432	177.8
Entergy	Pilgrim	BWR	C2	General License	2015	HI-STORM 100	MPC-68 (HI-STORM)		3	204	36.0

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [3]	MTiHM [2]
Entergy	River Bend	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		23	1564	277.0
Entergy	Vermont Yankee	BWR	A2	General License	2008	HI-STORM 100	MPC-68 (HI-STORM)		13	884	160.4
Entergy	Waterford	PWR	C2	General License	2011	HI-STORM 100	MPC-32 (HI-STORM)		17	544	229.0
Exelon	Braidwood	PWR	C2	General License	2011	HI-STORM 100	MPC-32 (HI-STORM)		15	480	202.0
Exelon	Byron	PWR	C2	General License	2010	HI-STORM 100	MPC-32 (HI-STORM)		20	640	270.0
Exelon	Calvert Cliffs	PWR	C2	Site Specific	1992	Standardized NUHOMS	NUHOMS 24P		48	1152	451.1
Exelon	Calvert Cliffs	PWR	C2	Site Specific	1992	Standardized NUHOMS	NUHOMS 32P		30	960	375.9
Exelon	Dresden 1	BWR	B2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)		4	272	27.7
Exelon	Dresden 2 & 3	BWR	B2	General License	2000	HI-STORM 100	MPC-68 (HI-STORM)		60	4080	719.0
Exelon	Dresden 2 & 3	BWR	B2	General License	2015	HI-STORM 100	MPC-68M		2	136	24.0
Exelon	Ginna	PWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 32PT		6	192	71.0
Exelon	LaSalle	BWR	C2	General License	2010	HI-STORM 100	MPC-68 (HI-STORM)		24	1632	292.0
Exelon	Limerick	BWR	C2	General License	2008	Standardized NUHOMS	NUHOMS 61BT		19	1159	206.7
Exelon	Limerick	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		14	854	152.3

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [3]	MTiHM [2]
Exelon	Nine Mile Point	BWR	C2	General License	2012	Standardized NUHOMS	NUHOMS 61BT		16	976	172.7
Exelon	Nine Mile Point	BWR	C2	General License	2014	Standardized NUHOMS	NUHOMS 61BTH		8	488	86.3
Exelon	Oyster Creek	BWR	C2	General License	2002	Standardized NUHOMS	NUHOMS 61BT		8	488	86.6
Exelon	Oyster Creek	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		15	915	162.4
Exelon	Peach Bottom 2 & 3	BWR	C2	General License	2000	TN-68		TN-68	72	4896	879.0
Exelon	Quad Cities	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		41	2788	495.0
FirstEnergy	Beaver Valley	PWR	C2	General License	2015	Standardized NUHOMS	NUHOMS 37PTH		4	148	68.0
FirstEnergy	Davis-Besse	PWR	C2	General License	1995	Standardized NUHOMS	NUHOMS 24P		3	72	34.0
FirstEnergy	Perry	BWR	C2	General License	2012	HI-STORM 100	MPC-68 (HI-STORM)		14	952	172.0
Luminant	Comanche Peak	PWR	C2	General License	2012	HI-STORM 100	MPC-32 (HI-STORM)		24	768	323.0
Maine Yankee	Maine Yankee	PWR	A1	General License	2002	NAC-UMS	UMS-PWR		60	1434	542.3
NextEra Energy	Duane Arnold	BWR	C2	General License	2003	Standardized NUHOMS	NUHOMS 61BT		20	1220	221.0
NextEra Energy	Point Beach	PWR	C2	General License	1995	Standardized NUHOMS	NUHOMS 32PT		23	736	281.9
NextEra Energy	Point Beach	PWR	C2	General License	1995	VSC-24	MSB-Short		16	384	147.1
NextEra Energy	Seabrook	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		14	448	205.0

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [3]	MTiHM [2]
NextEra Energy	St. Lucie	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		26	832	323.0
NextEra Energy	Turkey Point	PWR	C2	General License	2011	NUHOMS HD	NUHOMS 32PTH		18	576	263.0
NPPD	Cooper	BWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 61BT		8	488	88.0
NPPD	Cooper	BWR	C2	General License	2014	Standardized NUHOMS	NUHOMS 61BTH		10	610	110.0
OPPD	Fort Calhoun	PWR	C2	General License	2006	Standardized NUHOMS	NUHOMS 32PT		10	320	117.0
PG&E	Diablo Canyon	PWR	C2	Site Specific	2009	HI-STORM 100	MPC-32 (HI-STORM)		37	1184	510.0
PG&E	Humboldt Bay	BWR	A1	Site Specific	2008	HI-STAR 100HB	MPC-HB		5	390	28.9
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24E (TranStor)		29	675	306.6
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24EF (TranStor)		5	116	52.7
PPL	Susquehanna	BWR	C2	General License	1999	Standardized NUHOMS	NUHOMS 52B		27	1404	247.8
PPL	Susquehanna	BWR	C2	General License	1999	Standardized NUHOMS	NUHOMS 61BT		48	2928	516.9
PPL	Susquehanna	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		16	976	172.3
PSEG	Hope Creek	BWR	C2	General License	2006	HI-STORM 100	MPC-68 (HI-STORM)		28	1904	342.0
PSEG	Salem	PWR	C2	General License	2010	HI-STORM 100	MPC-32 (HI-STORM)		22	704	323.0
SCE&G	V. C. Summer	PWR	C2	General License	2016	HI-STORM FW	MPC-37		4	148	63.0

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor	Site	ISFSI	Year	Cask	Canister	Bare	Total	Assemblies	MTiHM [2]

		Type	Characteristic [1]	License Type	Of First Load	System	Family	Fuel Cask	Canisters Or Casks Loaded [3]	Stored [3]	
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FC-DSC		18	432	200.1
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FF-DSC		1	13	6.0
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FO-DSC		2	48	22.2
Southern Cal Edison	SONGS 1	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT1		17	395	160.1
Southern Cal Edison	SONGS 2	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT4		33	792	320.9
Southern Nuclear	Farley	PWR	C2	General License	2005	HI-STORM 100	MPC-32 (HI-STORM)		37	1184	520.0
Southern Nuclear	Hatch	BWR	C2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)		3	204	36.7
Southern Nuclear	Hatch	BWR	C2	General License	2000	HI-STORM 100	MPC-68 (HI-STORM)		60	4080	734.6
Southern Nuclear	Hatch	BWR	C2	General License	2015	HI-STORM 100	MPC-68M		3	204	36.7
Southern Nuclear	Vogtle	PWR	C2	General License	2013	HI-STORM 100	MPC-32 (HI-STORM)		16	512	221.0
TVA	Browns Ferry	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		45	3060	553.0
TVA	Browns Ferry	BWR	C2	General License	2015	HI-STORM FW	MPC-89		12	1068	193.0
TVA	Sequoyah	PWR	C2	General License	2004	HI-STORM 100	MPC-32 (HI-STORM)		44	1408	644.0
TVA	Sequoyah	PWR	C2	General License	2016	HI-STORM FW	MPC-37		6	222	101.6

Table A-1 Current Inventory of UNF in Dry Storage (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Bare Fuel Cask	Total Canisters Or Casks Loaded [3]	Assemblies Stored [2]	MTiHM [2]
Xcel Energy	Monticello	BWR	C2	General License	2008	Standardized NUHOMS	NUHOMS 61BT		10	610	106.0
Xcel Energy	Monticello	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		5	305	53.0
Xcel Energy	Prairie Island	PWR	C2	Site Specific	1993	TN-40		TN-40	29	1160	423.4
Xcel Energy	Prairie Island	PWR	C2	Site Specific	2013	TN-40		TN-40HT	11	440	160.6
YAEC	Yankee Rowe	PWR	A1	General License	2002	NAC-MPC	Yankee-MPC		15	533	127.1
Zion Solutions	Zion	PWR	A1	Site Specific	2013	NAC-MAGNASTOR	TSC PWR		61	2226	1,019.4
30 Total Utilities	72 Total Reactor Sites					23 Total Cask Systems	36 Total Canister Families	8 Total Bare Fuel Casks	2,277 Total Canisters and Bare Fuel Casks Loaded	92,511 Total Assemblies Loaded	27,061 Total MTiHM Loaded
									2,073 Canisters Loaded	83,361Assemblies Loaded in Canisters	24,380 MTiHM Loaded in Canisters
									204 Bare Fuel Casks Loaded	9,150 Assemblies Loaded in Bare Fuel Casks	2,682MTiHM Loaded in Bare Fuel Casks

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.
2. The inventory is current to the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 for further explanation.

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Appendix B
Canister Types in Dry Storage

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Table B-1 Canister Types Currently in Dry Storage

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Ameren	Callaway	C2	HI-STORM UMAX	MPC-37	MPC-37	Storage Only	General License
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Storage and Transportation	General License
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Storage and Transportation	General License
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Storage and Transportation	General License
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	Storage and Transportation	General License
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	LACBWR	Storage and Transportation	General License
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
DOE	INEEL	ISFSI Only	NUHOMS 12T	NUHOMS 12T	NUHOMS 12T	Storage Only	Site Specific
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License
Dominion	North Anna	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
Duke	Catawba	C2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Storage Only	General License
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Storage and Transportation	General License
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Storage and Transportation	General License
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Storage and Transportation	General License
Duke	McGuire	C2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Storage Only	General License
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Storage and Transportation	General License
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Storage and Transportation	General License
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Storage Only	General License
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Storage Only	General License
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	NUHOMS 24PHBL	Storage Only	General License
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	NUHOMS 24PHBS	Storage Only	General License
Duke	Robinson	C2	NUHOMS 0708	NUHOMS 07P	NUHOMS 07P	Storage Only	Site Specific
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-L	Storage and Transportation	General License
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S	Storage and Transportation	General License
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S-LC	Storage and Transportation	General License
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24 (HI-STORM)	Storage and Transportation	General License
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24E (HI-STORM)	Storage and Transportation	General License
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24EF (HI-STORM)	Storage and Transportation	General License
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Entergy	ANO	C2	VSC-24	MSB-Long	MSB-Long	Storage Only	General License
Entergy	Big Rock Point	A1	FuelSolutions	W74T	W74T	Storage and Transportation	General License
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-L	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S-LC	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License
Entergy	Palisades	C2	VSC-24	MSB-Standard	MSB-Standard	Storage Only	General License
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Storage Only	General License
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	NUHOMS 32P	Storage Only	Site Specific
Exelon	Dresden 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	Storage and Transportation	General License
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	MPC-68M	Storage Only	General License
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-M	Storage and Transportation	General License
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-S	Storage and Transportation	General License
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Storage Only	General License
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 1	Storage and Transportation	General License
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 2	Storage and Transportation	General License
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 3	Storage and Transportation	General License
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License
NextEra Energy	Point Beach	C2	VSC-24	MSB-Short	MSB-Short	Storage Only	General License
NextEra Energy	Seabrook	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License
NextEra Energy	St. Lucie	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License
NextEra Energy	Turkey Point	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	Storage and Transportation	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	Storage and Transportation	General License
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	Storage and Transportation	General License
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	Storage and Transportation	General License
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	Storage and Transportation	General License
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	MPC-HB	Storage and Transportation	Site Specific
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	Storage and Transportation	Site Specific
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	Storage and Transportation	Site Specific

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	NUHOMS 52B	Storage Only	General License
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
SCE&G	V. C. Summer	C2	HI-STORM FW	MPC-37	MPC-37	Storage Only	General License
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	NUHOMS FC-DSC	Storage and Transportation	Site Specific
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	NUHOMS FF-DSC	Storage and Transportation	Site Specific
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	NUHOMS FO-DSC	Storage and Transportation	Site Specific
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	Storage and Transportation	General License
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	NUHOMS 24PT4	Storage and Transportation	General License
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License

Table B-1 Canister Types Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Southern Nuclear	Hatch	C2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	Storage and Transportation	General License
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	MPC-68M	Storage Only	General License
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
TVA	Browns Ferry	C2	HI-STORM FW	MPC-89	MPC-89	Storage Only	General License
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Storage Only	General License
TVA	Sequoyah	C2	HI-STORM FW	MPC-37	MPC-37	Storage Only	General License
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	Yankee-MPC	Storage and Transportation	General License
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	TSC PWR	Storage Only	General License

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.
2. All fuel stored at Indian Point 1 is stored in MPC-32 canisters. No MPC-32F canisters are used.
3. All fuel stored at Vermont Yankee is stored in MPC-68 or MPC-68FF canisters. No MPC68F or MPC-68M canisters are used.

Appendix C
Canistered Storage Casks Currently in Dry Storage

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Table C-1 Canistered Storage Casks Currently in Dry Storage

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Ameren	Callaway	C2	HI-STORM UMAX	MPC-37	HI-STORM UMAX Vertical Ventilated Module (PWR)
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	Class 1 Vertical Concrete Cask (VCC)
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	Class 2 Vertical Concrete Cask (VCC)
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	Class 3 Vertical Concrete Cask (VCC)
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	CY-MPC Vertical Concrete Cask (VCC)
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	LACBWR MPC Vertical Concrete Cask (VCC)
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
DOE	INEEL	ISFSI Only	NUHOMS 12T	NUHOMS 12T	12T HSM
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)
Dominion	North Anna	C2	NUHOMS HD	NUHOMS 32PTH	HSM-H (HD)
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	HSM-H (HD)

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
Duke	Catawba	C2	NAC-MAGNASTOR	TSC PWR	PWR Vertical Concrete Cask (VCC)
Duke	Catawba	C2	NAC-UMS	UMS-PWR	Class 1 Vertical Concrete Cask (VCC)
Duke	Catawba	C2	NAC-UMS	UMS-PWR	Class 2 Vertical Concrete Cask (VCC)
Duke	Catawba	C2	NAC-UMS	UMS-PWR	Class 3 Vertical Concrete Cask (VCC)
Duke	McGuire	C2	NAC-MAGNASTOR	TSC PWR	PWR Vertical Concrete Cask (VCC)
Duke	McGuire	C2	NAC-UMS	UMS-PWR	Class 1 Vertical Concrete Cask (VCC)
Duke	McGuire	C2	NAC-UMS	UMS-PWR	Class 2 Vertical Concrete Cask (VCC)
Duke	McGuire	C2	NAC-UMS	UMS-PWR	Class 3 Vertical Concrete Cask (VCC)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 102 (PWR)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 102 (PWR)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 152
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 152
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 202
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 202
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 80 (PWR)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 80 (PWR)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	HSM Model 102 (PWR)
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	HSM Model 152
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	HSM Model 202
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	HSM Model 80 (PWR)
Duke	Robinson	C2	NUHOMS 0708	NUHOMS 07P	07P HSM
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 102 (PWR)
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 152
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 202
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 80 (PWR)
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM-H
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM-HS

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	ANO	C2	VSC-24	MSB-Long	Vertical Concrete Cask (VCC)-Long
Entergy	Big Rock Point	A1	FuelSolutions	W74T	W150-Long
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 102 (PWR)
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 152
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 202
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM Model 80 (PWR)
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM-H
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	HSM-HS
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)
Entergy	Palisades	C2	VSC-24	MSB-Standard	Vertical Concrete Cask (VCC)-Standard
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 102 (PWR)
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 152
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 202
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 80 (PWR)
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	HSM Model 80 (PWR)
Exelon	Dresden 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	HI-STAR 100 S/T Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100 Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100A Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100S(232) Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100S(243) Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100S-218 Version B Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100S-229 Version B Storage Overpack
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	HI-STORM 100SA Storage Overpack
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	HSM-H
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	HSM-HS
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 102 (PWR)
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 152
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 202
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	HSM Model 80 (PWR)
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	Class 1 Vertical Concrete Cask (VCC)
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	Class 2 Vertical Concrete Cask (VCC)
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	Class 3 Vertical Concrete Cask (VCC)

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)
NextEra Energy	Point Beach	C2	VSC-24	MSB-Short	Vertical Concrete Cask (VCC)-Short
NextEra Energy	Seabrook	C2	NUHOMS HD	NUHOMS 32PTH	HSM-H (HD)
NextEra Energy	St. Lucie	C2	NUHOMS HD	NUHOMS 32PTH	HSM-H (HD)
NextEra Energy	Turkey Point	C2	NUHOMS HD	NUHOMS 32PTH	HSM-H (HD)
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 102 (PWR)
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 152
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 202
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	HSM Model 80 (PWR)

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	HI-STAR 100HB S/T Overpack
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	TranStor
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	TranStor
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	HSM Model 102 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	HSM Model 152
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	HSM Model 202
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	HSM Model 80 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
SCE&G	V. C. Summer	C2	HI-STORM FW	MPC-37	HI-STORM FW Storage Overpack
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	HSM Model 80 (PWR)
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	HSM Model 80 (PWR)
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	HSM Model 80 (PWR)
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	Advanced HSM
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	Advanced HSM
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
Southern Nuclear	Hatch	C2	HI-STAR 100	MPC-68 (HI-STAR)	HI-STAR 100 S/T Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100 Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100A Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100S(232) Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100S(243) Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100S-218 Version B Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100S-229 Version B Storage Overpack
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	HI-STORM 100SA Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack
TVA	Browns Ferry	C2	HI-STORM FW	MPC-89	HI-STORM FW Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA Storage Overpack
TVA	Sequoyah	C2	HI-STORM FW	MPC-37	HI-STORM FW Storage Overpack

Table C-1 Canistered Storage Casks Currently in Dry Storage (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Storage Cask
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 102 (BWR)
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 152
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 202
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	HSM Model 80 (BWR)
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 102 (BWR)
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 152
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 202
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM Model 80 (BWR)
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-H
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	HSM-HS
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	Yankee-MPC Vertical Concrete Cask (VCC)
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	PWR Vertical Concrete Cask (VCC)

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.

Appendix D
Transfer Casks

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Table D-1 Transfer Casks

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
AEP	D.C.Cook	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
AEP	D.C.Cook	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
AEP	D.C.Cook	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
AEP	D.C.Cook	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Ameren	Callaway	C2	General License	HI-STORM UMAX	MPC-37	HI-TRAC VW-PWR (maximum lead)
Ameren	Callaway	C2	General License	HI-STORM UMAX	MPC-37	HI-TRAC VW-PWR (minimum lead)
APS	Palo Verde	C2	General License	NAC-UMS	UMS-PWR	Class 1 Transfer Cask
APS	Palo Verde	C2	General License	NAC-UMS	UMS-PWR	Class 2 Transfer Cask
APS	Palo Verde	C2	General License	NAC-UMS	UMS-PWR	Class 3 Transfer Cask
Connecticut Yankee	Connecticut Yankee	A1	General License	NAC-MPC	CY-MPC, 26 Assy	CY Transfer Cask
Dairyland Power	La Crosse	A1	General License	NAC-MPC	LACBWR	DPC/Yankee Transfer Cask
Detroit Edison	Fermi 2	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Detroit Edison	Fermi 2	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Detroit Edison	Fermi 2	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Detroit Edison	Fermi 2	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
DOE	INEEL	ISFSI Only	Site Specific	NUHOMS 12T	NUHOMS 12T	MP187
DOE	INEEL	ISFSI Only	Site Specific	NUHOMS 12T	NUHOMS 12T	OS197
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
Dominion	Kewaunee	A2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
Dominion	Millstone 2 & 3	B2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized
Dominion	North Anna	C2	General License	NUHOMS HD	NUHOMS 32PTH	OS187H
Dominion	Surry	C2	General License	NUHOMS HD	NUHOMS 32PTH	OS187H
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
Duke	Brunswick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized
Duke	Catawba	C2	General License	NAC-MAGNASTOR	TSC PWR	PWR Transfer Cask
Duke	Catawba	C2	General License	NAC-UMS	UMS-PWR	Class 1 Transfer Cask
Duke	Catawba	C2	General License	NAC-UMS	UMS-PWR	Class 2 Transfer Cask
Duke	Catawba	C2	General License	NAC-UMS	UMS-PWR	Class 3 Transfer Cask
Duke	McGuire	C2	General License	NAC-MAGNASTOR	TSC PWR	PWR Transfer Cask
Duke	McGuire	C2	General License	NAC-UMS	UMS-PWR	Class 1 Transfer Cask
Duke	McGuire	C2	General License	NAC-UMS	UMS-PWR	Class 2 Transfer Cask
Duke	McGuire	C2	General License	NAC-UMS	UMS-PWR	Class 3 Transfer Cask

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197FC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197FC-B
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197H
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197HFC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197HFC-B
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197L
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS200
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS200FC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24P	Standardized
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197FC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197FC-B
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197H
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197HFC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197HFC-B
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS197L
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS200
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	OS200FC
Duke	Oconee	C2	General License	Standardized NUHOMS	NUHOMS 24PHB	Standardized
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197FC
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197FC-B
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197H
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197HFC
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197HFC-B
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197L
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS200
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS200FC
Duke	Oconee	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197FC
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197FC-B
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197H
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197HFC
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197HFC-B
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197L
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS200
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS200FC
Duke	Robinson	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	Standardized
Duke	Robinson	C2	Site Specific	NUHOMS 0708	NUHOMS 07P	IF-300
Energy Northwest	Columbia	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Energy Northwest	Columbia	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Energy Northwest	Columbia	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Energy Northwest	Columbia	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	ANO	C2	General License	HI-STORM 100	MPC-24 (HI-STORM)	HI-TRAC 100
Entergy	ANO	C2	General License	HI-STORM 100	MPC-24 (HI-STORM)	HI-TRAC 100D
Entergy	ANO	C2	General License	HI-STORM 100	MPC-24 (HI-STORM)	HI-TRAC 125
Entergy	ANO	C2	General License	HI-STORM 100	MPC-24 (HI-STORM)	HI-TRAC 125D
Entergy	ANO	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Entergy	ANO	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Entergy	ANO	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Entergy	ANO	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Entergy	ANO	C2	General License	VSC-24	MSB-Long	MTC
Entergy	Big Rock Point	A1	General License	FuelSolutions	W74T	W100

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Entergy	Fitzpatrick	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Entergy	Fitzpatrick	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Entergy	Fitzpatrick	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Entergy	Fitzpatrick	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	Grand Gulf	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Entergy	Grand Gulf	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Entergy	Grand Gulf	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Entergy	Grand Gulf	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	Indian Point 1	B1	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Entergy	Indian Point 1	B1	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Entergy	Indian Point 1	B1	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Entergy	Indian Point 1	B1	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Entergy	Indian Point 2 & 3	B2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Entergy	Indian Point 2 & 3	B2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Entergy	Indian Point 2 & 3	B2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Entergy	Indian Point 2 & 3	B2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197FC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197FC-B
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197H
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197HFC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197HFC-B
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS197L
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS200
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	OS200FC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 24PTH	Standardized
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
Entergy	Palisades	C2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized
Entergy	Palisades	C2	General License	VSC-24	MSB-Standard	MTC

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Entergy	Pilgrim	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Entergy	Pilgrim	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Entergy	Pilgrim	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Entergy	Pilgrim	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	River Bend	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Entergy	River Bend	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Entergy	River Bend	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Entergy	River Bend	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	Vermont Yankee	A2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Entergy	Vermont Yankee	A2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Entergy	Vermont Yankee	A2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Entergy	Vermont Yankee	A2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Entergy	Waterford	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Entergy	Waterford	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Entergy	Waterford	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Entergy	Waterford	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Exelon	Braidwood	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Exelon	Braidwood	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Exelon	Braidwood	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Exelon	Braidwood	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Exelon	Byron	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Exelon	Byron	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Exelon	Byron	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Exelon	Byron	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197FC
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197FC-B
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197H
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197HFC
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197HFC-B
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS197L
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS200
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	OS200FC
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 24P	Standardized
Exelon	Calvert Cliffs	C2	Site Specific	Standardized NUHOMS	NUHOMS 32P	OS197
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68M	HI-TRAC 100
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68M	HI-TRAC 100D
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68M	HI-TRAC 125
Exelon	Dresden 2 & 3	B2	General License	HI-STORM 100	MPC-68M	HI-TRAC 125D
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
Exelon	Ginna	C2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Exelon	LaSalle	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Exelon	LaSalle	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Exelon	LaSalle	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Exelon	LaSalle	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
Exelon	Limerick	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
Exelon	Nine Mile Point	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
Exelon	Oyster Creek	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized
Exelon	Quad Cities	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Exelon	Quad Cities	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Exelon	Quad Cities	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Exelon	Quad Cities	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197FC
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197FC-B
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197H
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197HFC
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197HFC-B
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS197L
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS200
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	OS200FC
FirstEnergy	Beaver Valley	C2	General License	Standardized NUHOMS	NUHOMS 37PTH	Standardized
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197FC
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197FC-B
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197H
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197HFC
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197HFC-B
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS197L
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS200
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	OS200FC
FirstEnergy	Davis-Besse	C2	General License	Standardized NUHOMS	NUHOMS 24P	Standardized
FirstEnergy	Perry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
FirstEnergy	Perry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
FirstEnergy	Perry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
FirstEnergy	Perry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Luminant	Comanche Peak	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Luminant	Comanche Peak	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Luminant	Comanche Peak	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Luminant	Comanche Peak	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Maine Yankee	Maine Yankee	A1	General License	NAC-UMS	UMS-PWR	Class 1 Transfer Cask
Maine Yankee	Maine Yankee	A1	General License	NAC-UMS	UMS-PWR	Class 2 Transfer Cask
Maine Yankee	Maine Yankee	A1	General License	NAC-UMS	UMS-PWR	Class 3 Transfer Cask

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
NextEra Energy	Duane Arnold	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
NextEra Energy	Point Beach	C2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized
NextEra Energy	Point Beach	C2	General License	VSC-24	MSB-Short	MTC
NextEra Energy	Seabrook	C2	General License	NUHOMS HD	NUHOMS 32PTH	OS187H
NextEra Energy	St. Lucie	C2	General License	NUHOMS HD	NUHOMS 32PTH	OS187H
NextEra Energy	Turkey Point	C2	General License	NUHOMS HD	NUHOMS 32PTH	OS187H

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
NPPD	Cooper	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197FC-B
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197H
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197HFC-B
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS197L
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	OS200FC
OPPD	Fort Calhoun	C2	General License	Standardized NUHOMS	NUHOMS 32PT	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
PG&E	Diablo Canyon	C2	Site Specific	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
PG&E	Diablo Canyon	C2	Site Specific	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
PG&E	Diablo Canyon	C2	Site Specific	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
PG&E	Diablo Canyon	C2	Site Specific	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24E (TranStor)	HI-TRAC 100
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24E (TranStor)	HI-TRAC 100D
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24E (TranStor)	HI-TRAC 125
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24E (TranStor)	HI-TRAC 125D
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24EF (TranStor)	HI-TRAC 100
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24EF (TranStor)	HI-TRAC 100D
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24EF (TranStor)	HI-TRAC 125
Portland	GE Trojan	A1	Site Specific	HI-STORM TranStor	MPC-24EF (TranStor)	HI-TRAC 125D

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197FC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197H
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197HFC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197HFC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS197L
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS200
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	OS200FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 52B	Standardized
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
PPL	Susquehanna	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
PSEG	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
PSEG	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
PSEG	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
PSEG	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
PSEG	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
PSEG	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
PSEG	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
PSEG	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
SCE&G	V. C. Summer	C2	General License	HI-STORM FW	MPC-37	HI-TRAC VW-PWR (maximum lead)
SCE&G	V. C. Summer	C2	General License	HI-STORM FW	MPC-37	HI-TRAC VW-PWR (minimum lead)
SMUD	Rancho Seco	A1	Site Specific	Standardized NUHOMS	NUHOMS FC-DSC	MP187
SMUD	Rancho Seco	A1	Site Specific	Standardized NUHOMS	NUHOMS FF-DSC	MP187
SMUD	Rancho Seco	A1	Site Specific	Standardized NUHOMS	NUHOMS FO-DSC	MP187
Southern Cal Edison	SONGS 1	A2	General License	Advanced NUHOMS	NUHOMS 24PT1	OS197
Southern Cal Edison	SONGS 1	A2	General License	Advanced NUHOMS	NUHOMS 24PT1	OS197H
Southern Cal Edison	SONGS 2	A2	General License	Advanced NUHOMS	NUHOMS 24PT4	OS197
Southern Cal Edison	SONGS 2	A2	General License	Advanced NUHOMS	NUHOMS 24PT4	OS197H
Southern Nuclear	Farley	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Southern Nuclear	Farley	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Southern Nuclear	Farley	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Southern Nuclear	Farley	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68M	HI-TRAC 100
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68M	HI-TRAC 100D
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68M	HI-TRAC 125
Southern Nuclear	Hatch	C2	General License	HI-STORM 100	MPC-68M	HI-TRAC 125D
Southern Nuclear	Vogtle	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
Southern Nuclear	Vogtle	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
Southern Nuclear	Vogtle	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
Southern Nuclear	Vogtle	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
TVA	Browns Ferry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
TVA	Browns Ferry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
TVA	Browns Ferry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
TVA	Browns Ferry	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
TVA	Browns Ferry	C2	General License	HI-STORM FW	MPC-89	HI-TRAC VW-BWR (maximum lead)
TVA	Browns Ferry	C2	General License	HI-STORM FW	MPC-89	HI-TRAC VW-BWR (minimum lead)
TVA	Sequoyah	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
TVA	Sequoyah	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
TVA	Sequoyah	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
TVA	Sequoyah	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
TVA	Sequoyah	C2	General License	HI-STORM FW	MPC-37	HI-TRAC VW-PWR (maximum lead)
TVA	Sequoyah	C2	General License	HI-STORM FW	MPC-37	HI-TRAC VW-PWR (minimum lead)

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic [1]	License Type	Cask System	Canister Family	Transfer Cask
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197FC-B
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197H
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197HFC-B
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS197L
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	OS200FC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BT	Standardized
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197FC-B
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197H
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197HFC-B
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS197L
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	OS200FC
Xcel Energy	Monticello	C2	General License	Standardized NUHOMS	NUHOMS 61BTH	Standardized
YAEC	Yankee Rowe	A1	General License	NAC-MPC	Yankee-MPC	DPC/Yankee Transfer Cask
Zion Solutions	Zion	A1	Site Specific	NAC-MAGNASTOR	TSC PWR	PWR Transfer Cask

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.

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Appendix E
Transportation Casks

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Table E-1 Transportation Casks

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	28	896
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Ameren	Callaway	C2	HI-STORM UMAX	MPC-37	MPC-37	Not Available	6	222
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	132	3,168
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Universal Transport Cask		
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Universal Transport Cask		
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	NAC-STC Transport Cask	40	1,019
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	LACBWR	NAC-STC Transport Cask	5	333
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	6	408
DOE	INEEL	ISFSI Only	NUHOMS 12T	NUHOMS 12T	NUHOMS 12T	Not Available	29	177
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	14	448
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	25	800
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
Dominion	North Anna	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	25	800
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	26	832
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	19	1,159
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Duke	Catawba	C2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available	6	222
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	24	576
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Universal Transport Cask		
Duke	Catawba	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Universal Transport Cask		

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Duke	McGuire	C2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available	11	407
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	28	672
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 2	Universal Transport Cask		
Duke	McGuire	C2	NAC-UMS	UMS-PWR	TSC-Class 3	Universal Transport Cask		
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available	44	1,056
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available		
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available	40	960
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available		
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	NUHOMS 24PHBL	Not Available	53	1,272
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	NUHOMS 24PHBS	Not Available		
Duke	Robinson	C2	NUHOMS 0708	NUHOMS 07P	NUHOMS 07P	Not Available	8	56
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-L	MP197HB	18	432
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S	MP197HB		
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S-LC	MP197HB		

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	36	2,448
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24 (HI-STORM)	HI-STAR 100	28	672
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24E (HI-STORM)	HI-STAR 100		
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24EF (HI-STORM)	HI-STAR 100		
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	21	672
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Entergy	ANO	C2	VSC-24	MSB-Long	MSB-Long	Not Available	24	576
Entergy	Big Rock Point	A1	FuelSolutions	W74T	W74T	TS125	7	441
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	21	1,428
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	28	1,904
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	5	160
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	29	928
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-L	MP197HB	13	312
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S	MP197HB		
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	NUHOMS 24PTH-S-LC	MP197HB		
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	11	352
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
Entergy	Palisades	C2	VSC-24	MSB-Standard	MSB-Standard	Not Available	18	432

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	3	204
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	23	1,564
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	13	884
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	17	544
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	15	480
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	20	640
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available		
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available	48 30	1152 960
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	NUHOMS 32P	Not Available		
Exelon	Dresden 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	4	272
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	60	4,080
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68M	MPC-68M	Not Available	2	136
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB		
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB	6	192
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	24	1,632

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	19	1,159
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	14	854
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	16	976
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	8	488
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	8	488
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	15	915
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	41	2,788

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-M	MP197HB	4	148
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-S	MP197HB		
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available	3	72
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available		
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	14	952
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	24	768
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	60	1,434
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 2	Universal Transport Cask		
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 3	Universal Transport Cask		
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	20	1,220
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	23	736
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
NextEra Energy	Point Beach	C2	VSC-24	MSB-Short	MSB-Short	Not Available	16	384

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
NextEra Energy	Seabrook	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	14	448
NextEra Energy	St. Lucie	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	26	832
NextEra Energy	Turkey Point	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	18	576
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	8	488
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	10	610
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	10	320
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	37	1,184
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	MPC-HB	HI-STAR 100HB	5	390
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	HI-STAR 100	29	675
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	116

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site	Cask System	Canister Family	Canister	Transportation	Total	Total

		Characteristic [1]				Cask	Canisters Loaded [2]	Assemblies Loaded [2]
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	NUHOMS 52B	Not Available	27	1,404
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	48	2,928
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	16	976
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
PSEG	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	28	1,904
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	22	704
PSEG	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
SCE&G	V. C. Summer	C2	HI-STORM FW	MPC-37	MPC-37	Not Available	4	148
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	NUHOMS FC-DSC	MP187	18	432
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	NUHOMS FF-DSC	MP187	1	13
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	NUHOMS FO-DSC	MP187	2	48
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	MP187	17	395
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	NUHOMS 24PT4	MP197HB	33	792
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	37	1,184
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		

Table E-1 Transportation Casks (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Southern Nuclear	Hatch	C2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	3	204
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	60	4,080
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68M	MPC-68M	Not Available	3	204
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	16	512
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	45	3,060
TVA	Browns Ferry	C2	HI-STORM FW	MPC-89	MPC-89	Not Available	12	1,068
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	44	1,408
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
TVA	Sequoyah	C2	HI-STORM FW	MPC-37	MPC-37	Not Available	6	222
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	10	610
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	5	305
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	Yankee-MPC	NAC-STC Transport Cask	15	533
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available	61	2,226
TOTAL							2,073	83,361

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - C2 - All Reactors Operating - Wet and Dry Storage

   "ISFSI Only" is used in the table above for INEEL since the INEEL ISFSI is not at a reactor site.
2. The inventory is current to the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 for further explanation.

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Appendix F
Projected Inventory and Canistered Transportation Casks for Shutdown Reactor Sites

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Table F-1 Projected Inventory of UNF at Shutdown Reactor Sites

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Total Canisters Or Casks Loaded [2]	Assemblies Stored [2]
Connecticut Yankee	Connecticut Yankee	PWR	A1	General License	2004	NAC-MPC	CY-MPC, 26 Assy	40	1019
Dairyland Power	La Crosse	BWR	A1	General License	2012	NAC-MPC	LACBWR	5	333
Entergy	Big Rock Point	BWR	A1	General License	2002	FuelSolutions	W74T	7	441
Maine Yankee	Maine Yankee	PWR	A1	General License	2002	NAC-UMS	UMS-PWR	60	1434
PG&E	Humboldt Bay	BWR	A1	Site Specific	2008	HI-STAR 100HB	MPC-HB	5	390
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24E (TranStor)	29	675
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24EF (TranStor)	5	116
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FC-DSC	18	432
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FF-DSC	1	13
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FO-DSC	2	48
YAEC	Yankee Rowe	PWR	A1	General License	2002	NAC-MPC	Yankee-MPC	15	533
Zion Solutions	Zion	PWR	A1	Site Specific	2013	NAC-MAGNASTOR	TSC PWR	61	2226
Dominion	Kewaunee	PWR	A2	General License		NAC-MAGNASTOR	TSC PWR	24	887
Dominion	Kewaunee	PWR	A2	General License	2009	Standardized NUHOMS	NUHOMS 32PT	14	448

Table F-1 Projected Inventory of UNF at Shutdown Reactor Sites (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Total Canisters Or Casks Loaded [2]	Assemblies Stored [2]
Entergy	Vermont Yankee	BWR	A2	General License	2008	HI-STORM 100	MPC-68 (HI-STORM)	58	3877
Southern Cal Edison	SONGS 1	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT1	17	395
Southern Cal Edison	SONGS 2	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT4	33	792
Southern Cal Edison	SONGS 2 & 3	PWR	A2	General License		HI-STORM UMAX	MPC-37	73	2668
Duke	Crystal River	PWR	A3	General License		Standardized NUHOMS	NUHOMS 32PTH1	39	1243
Entergy	Indian Point 1	PWR	B1	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)	5	160
Exelon	Dresden 1	BWR	B2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)	4	272
Exelon	Dresden 1	BWR	B2	General License		HI-STORM 100	MPC-68 (HI-STORM)	10	617
Dominion	Millstone 1	BWR	B3	General License		Standardized NUHOMS	NUHOMS 61BT	48	2884
Entergy	Fitzpatrick	BWR	AS - W&D	General License	2002	HI-STORM 100	MPC-68 (HI-STORM)	68	4624
Entergy	Pilgrim	BWR	AS - W&D	General License	2015	HI-STORM 100	MPC-68 (HI-STORM)	61	4113
Exelon	Oyster Creek	BWR	AS - W&D	General License	2002	Standardized NUHOMS	NUHOMS 61BT	63	3796
Exelon	Oyster Creek	BWR	AS - W&D	General License	2013	Standardized NUHOMS	NUHOMS 61BTH	15	915
Exelon	Quad Cities 1	BWR	AS - W&D	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)	86	5807
Exelon	Quad Cities 2	BWR	AS - W&D	General License		HI-STORM 100	MPC-68 (HI-STORM)	80	5402
OPPD	Fort Calhoun	PWR	AS - W&D	General License	2006	Standardized NUHOMS	NUHOMS 32PT	43	1350

Table F-1 Projected Inventory of UNF at Shutdown Reactor Sites (continued)

Utility	Reactor	Reactor Type	Site Characteristic [1]	ISFSI License Type	Year Of First Load	Cask System	Canister Family	Total Canisters Or Casks Loaded [2]	Assemblies Stored [2]
PG&E	Diablo Canyon 1	PWR	AS - W&D	Site Specific	2009	HI-STORM 100	MPC-32 (HI-STORM)	74	2357
PG&E	Diablo Canyon 2	PWR	AS - W&D	Site Specific		HI-STORM 100	MPC-32 (HI-STORM)	66	2094
Exelon	Clinton	BWR	AS - WO	General License		HI-STORM FW	MPC-89	62	4188
14 Total Utilities	27 Total Reactor Sites					12 Total Cask Systems	23 Total Canister Families	1,191 Total Canisters or Casks Loaded	56,549 Total Assemblies Stored

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - A3 - All Reactors Shut Down - Wet Storage Only
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - B3 - At Least One Operating and One Shutdown Reactor - Wet Storage Only

   "Announced Shutdown – Wet and Dry Storage" (AS – W&D) and "Announced Shutdown – Wet Storage Only" (AS – WO) are used in the table above to designate intent to shut down prior to pilot ISF operations.
2. The projected inventory is based on the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 and Section 4.6.1 for further explanation.

Table F-2 Canistered System Transportation Casks for Shutdown Reactor Sites

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	NAC-STC Transport Cask	40	1,019
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	LACBWR	NAC-STC Transport Cask	5	333
Entergy	Big Rock Point	A1	FuelSolutions	W74T	W74T	TS125	7	441
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	60	1,434
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 2	Universal Transport Cask		
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 3	Universal Transport Cask		
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	MPC-HB	HI-STAR 100HB	5	390
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	HI-STAR 100	29	675
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	116
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	NUHOMS FC-DSC	MP187	18	432
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	NUHOMS FF-DSC	MP187	1	13
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	NUHOMS FO-DSC	MP187	2	48
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	Yankee-MPC	NAC-STC Transport Cask	15	533
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available	61	2,226

Table F-2 Canistered System Transportation Casks for Shutdown Reactor Sites (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Dominion	Kewaunee	A2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available	24	887
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	14	448
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	58	3,877
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	NUHOMS 24PT1	MP187	17	395
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	NUHOMS 24PT4	MP197HB	33	792
Southern Cal Edison	SONGS 2 & 3	A2	HI-STORM UMAX	MPC-37	MPC-37	Not Available	73	2,668
Duke	Crystal River	A3	Standardized NUHOMS	NUHOMS 32PTH1	NUHOMS 32PTH1-L	MP197HB	39	1,243
Duke	Crystal River	A3	Standardized NUHOMS	NUHOMS 32PTH1	NUHOMS 32PTH1-M	MP197HB		
Duke	Crystal River	A3	Standardized NUHOMS	NUHOMS 32PTH1	NUHOMS 32PTH1-S	MP197HB		
Entergy	Fitzpatrick	AS - W&D	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	68	4,624
Entergy	Pilgrim	AS - W&D	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	61	4,113

Table F-2 Canistered System Transportation Casks for Shutdown Reactor Sites (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Exelon	Oyster Creek	AS - W&D	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	63	3,796
Exelon	Oyster Creek	AS - W&D	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Oyster Creek	AS - W&D	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	15	915
Exelon	Oyster Creek	AS - W&D	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Exelon	Oyster Creek	AS - W&D	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Exelon	Quad Cities 1	AS - W&D	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	86	5,807
Exelon	Quad Cities 2	AS - W&D	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	80	5,402
OPPD	Fort Calhoun	AS - W&D	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	43	1,350
OPPD	Fort Calhoun	AS - W&D	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
OPPD	Fort Calhoun	AS - W&D	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S100	MP197HB		
OPPD	Fort Calhoun	AS - W&D	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-S125	MP197HB		
PG&E	Diablo Canyon 1	AS - W&D	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	74	2,357
PG&E	Diablo Canyon 1	AS - W&D	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
PG&E	Diablo Canyon 2	AS - W&D	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	66	2,094
PG&E	Diablo Canyon 2	AS - W&D	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		

Table F-2 Canistered System Transportation Casks for Shutdown Reactor Sites (continued)

Utility	Reactor	Site Characteristic [1]	Cask System	Canister Family	Canister	Transportation Cask	Total Canisters Loaded [2]	Total Assemblies Loaded [2]
Exelon	Clinton	AS - WO	HI-STORM FW	MPC-89	MPC-89	Not Available	62	4,188
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	5	160
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Exelon	Dresden 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	4	272
Exelon	Dresden 1	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	10	617
Dominion	Millstone 1	B3	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	48	2,884
Dominion	Millstone 1	B3	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
TOTAL							1,191	56,549

Notes:

1. The Site Characteristic is defined in the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263, as one of the following:
   - A1 - All Reactors Shut Down - Dry Storage Only
   - A2 - All Reactors Shut Down - Wet and Dry Storage
   - A3 - All Reactors Shut Down - Wet Storage Only
   - B1 - At Least One Operating and One Shutdown Reactor - Dry Storage Only
   - B2 - At Least One Operating and One Shutdown Reactor - Wet and Dry Storage
   - B3 - At Least One Operating and One Shutdown Reactor - Wet Storage Only

   "Announced Shutdown – Wet and Dry Storage" (AS – W&D) and "Announced Shutdown – Wet Storage Only" (AS – WO) are used in the table above to designate intent to shut down prior to pilot ISF operations.
2. The projected inventory is based on the most recent version of the report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*, FCRD-NFST-2013-000263. See Section 2 and Section 4.6.1 for further explanation.
3. All fuel stored at Indian Point 1 is stored in MPC-32 canisters. No MPC-32F canisters are used.

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Appendix G
Changes to the Dry Storage Cask/Inventory Database

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Table G-1 Changes to the Bare Fuel Casks Table in the Dry Storage Cask/Inventory Database

Bare Fuel Cask	Report Revision Number	Description of Change
CASTOR V/21	2	• Revised the Licensing Details
CASTOR X/33	2	• Added the expiration date to the Licensing Details
MC-10 (BWR)	2	• Revised the Licensing Details
NAC I28 S/T	2	• Added the expiration date to the Licensing Details
NAC-STC	2	• Changed the Revision number and expiration date
REA-2023 (BWR)	2	• Revised the Licensing Details
REA-2023 (PWR)	2	• Revised the Licensing Details
TN-24	2	• Revised the Licensing Details
TN-24P	2	• Added the Licensing Number • Set the Licensing Status to Expired • Revised the Licensing Details
TN-40	2	• Changed the Licensing Status to Active • Revised the Licensing Details
TN-40HT	2	• Changed the Licensing Status to Active • Revised the Licensing Details
TN-68	2	• Changed the Revision number and expiration date

Table G-2 Changes to the Canistered Storage Casks Table in the Dry Storage Cask/Inventory Database

Storage System	Canistered Storage Cask	Report Revision Number	Description of Change
Advanced NUHOMS	Advanced HSM	2	• Revised the Licensing Details
Advanced NUHOMS	Advanced HSM-HS	2	• Changed the Licensing Status to Active • Revised the Licensing Details
FuelSolutions	W150-Long	2	• Revised the Licensing Details
FuelSolutions	W150-Short	2	• Revised the Licensing Details
HI-STAR 100	HI-STAR 100 S/T Overpack	2	• Revised the Licensing Details
HI-STAR 100HB	HI-STAR 100HB S/T Overpack	2	• Revised the Licensing Details
HI-STAR 190	HI-STAR 190 S/T Overpack	2	• Deleted “Docket” from the Transportation License Number • Revised the Licensing Details
HI-STORM 100	HI-STORM 100 Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100A Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100S(232) Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100S(243) Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100S-218 Version B Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100S-229 Version B Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100	HI-STORM 100SA Storage Overpack	2	• Revised the Amendment number in the Licensing Details
HI-STORM 100U	HI-STORM 100U Vertical Ventilated Module	2	• Revised the Amendment number in the Licensing Details
HI-STORM FW	HI-STORM FW Storage Overpack	2	• Revised the Amendment number and the expiration date in the Licensing Details
HI-STORM TranStor	TranStor	2	• Added the expiration date to the Licensing Details

Table G-2 Changes to the Canistered Storage Casks Table in the Dry Storage Cask/Inventory Database (continued)

Storage System	Canistered Storage Cask	Report Revision Number	Description of Change
HI-STORM UMAX	HI-STORM UMAX Vertical Ventilated Module (BWR)	2	• Deleted "Docket Number" from the Storage License Number • Changed the Licensing Status to Active • Revised the Licensing Details
HI-STORM UMAX	HI-STORM UMAX Vertical Ventilated Module (PWR)	2	• Deleted "Docket Number" from the Storage License Number • Changed the Licensing Status to Active • Revised the Licensing Details
NAC MAGNASTOR	BWR Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC MAGNASTOR	PWR Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC-MPC	CY-MPC Vertical Concrete Cask (VCC)	2	• Revised Amendment number
NAC-MPC	LACBWR MPC Vertical Concrete Cask (VCC)	2	• Revised Amendment number
NAC-MPC	Yankee-MPC Vertical Concrete Cask (VCC)	2	• Revised Amendment number
NAC-UMS	Class 1 Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC-UMS	Class 2 Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC-UMS	Class 3 Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC-UMS	Class 4 Vertical Concrete Cask (VCC)	2	• Added Amendment number
NAC-UMS	Class 5 Vertical Concrete Cask (VCC)	2	• Added Amendment number
NUHOMS 0708	07P HSM	2	• Added Storage License Number • Set Licensing Status to Active • Added Licensing Details
NUHOMS 12T	12T HSM	2	• Added Storage License Number • Set Licensing Status to Active • Added Licensing Details
NUHOMS HD	HSM-H (HD)	2	• Revised the Licensing Details

Table G-2 Changes to the Canistered Storage Casks Table in the Dry Storage Cask/Inventory Database (continued)

Storage System	Canistered Storage Cask	Report Revision Number	Description of Change
Standardized NUHOMS	HSM Model 102 (BWR)	2	• Revised the Licensing Details
Standardized NUHOMS	HSM Model 102 (PWR)	2	• Revised the Licensing Details
Standardized NUHOMS	HSM Model 152	2	• Revised the Licensing Details
Standardized NUHOMS	HSM Model 202	2	• Revised the Licensing Details
Standardized NUHOMS	HSM- Model 80 (BWR)	2	• Revised the Licensing Details
Standardized NUHOMS	HSM Model 80 (PWR)	2	• Revised the Licensing Details
Standardized NUHOMS	HSM-H	2	• Revised the Licensing Details
Standardized NUHOMS	HSM-HS	2	• Revised the Licensing Details
VSC-24	Vertical Concrete Cask (VCC)-Long	2	• Revised the Licensing Details
VSC-24	Vertical Concrete Cask (VCC)-Short	2	• Revised the Licensing Details
VSC-24	Vertical Concrete Cask (VCC)-Standard	2	• Revised the Licensing Details

Table G-3 Changes to the Canistered Transfer Casks Table in the Dry Storage Cask/Inventory Database

Canistered Transfer Cask	Report Revision Number	Description of Change
Class 1 Transfer Cask	2	• Revised the Amendment number in the Licensing Details
Class 2 Transfer Cask	2	• Revised the Amendment number in the Licensing Details
Class 3 Transfer Cask	2	• Revised the Amendment number in the Licensing Details
Class 4 Transfer Cask	2	• Revised the Amendment number in the Licensing Details
Class 5 Transfer Cask	2	• Revised the Amendment number in the Licensing Details
CY Transfer Cask	2	• Revised the Amendment number in the Licensing Details
DPC/Yankee Transfer Cask	2	• Revised the Amendment number in the Licensing Details
HI-TRAC 100	2	• Revised the Amendment number in the Licensing Details
HI-TRAC 100D	2	• Revised the Amendment number in the Licensing Details
HI-TRAC 125	2	• Revised the Amendment number in the Licensing Details
HI-TRAC 125D	2	• Revised the Amendment number in the Licensing Details
HI-TRAC VW-BWR (maximum lead)	2	• Revised the Amendment number and expiration date in the Licensing Details
HI-TRAC VW-BWR (minimum lead)	2	• Revised the Amendment number and expiration date in the Licensing Details
HI-TRAC VW-PWR (maximum lead)	2	• Revised the Amendment number and expiration date in the Licensing Details
HI-TRAC VW-PWR (minimum lead)	2	• Revised the Amendment number and expiration date in the Licensing Details
MP187	2	• Added NUHOMS 12T as a Reference System
MTC	2	• Revised the Amendment number in the Licensing Details
OS197	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Revised the Amendment number for CoC 72-1029 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details • Added NUHOMS 12T as a Reference System
OS197FC	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details
OS197FC-B	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details

Table G-3 Changes to the Canistered Transfer Casks Table in the Dry Storage Cask/Inventory Database (continued)

Canistered Transfer Cask	Report Revision Number	Description of Change
OS197H	2	• Added 72-1029 to the License Number • Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details • Added statement regarding CoC 72-1029 to the Licensing Details
OS197HFC	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details
OS197HFC-B	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details
OS197L	2	• Changed the Licensing Status to Renewal • Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details
OS200	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details
OS200FC	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Revised the Amendment number for CoC 72-1029 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details • Changed “OS200” to “OS200FC” in the Licensing Details
Standardized	2	• Revised the Amendment number for CoC 72-1004 in the Licensing Details • Added statement regarding timely renewal of CoC 72-1004 to the Licensing Details

Canistered Transportation Casks

The HI-STAR 190 transportation package was split into two distinct packages, the HI-STAR 190 Version SL and the HI-STAR 190 Version XL. The original record designated simply as the HI-STAR 190 was changed to be the record for the HI-STAR 190 Version SL. An entirely new record was created for the HI-STAR 190 Version XL. The changes listed in the table below for the HI-STAR 190 are changes made to create the record for the HI-STAR 190 Version SL.

Table G-4 Changes to the Canistered Transportation Casks Table in the Dry Storage Cask/Inventory Database

Canistered Transportation Cask	Report Revision Number	Description of Change
HI-STAR 190	2	• Changed Transportation Cask (i.e. the name of the cask) to HI-STAR 190 Version SL • Added Overall Cross Section, Cavity Length, Cavity Cross Section and Dimensional Comments • Added Cask Body Material • Added Neutron Shield Material - Side • Added 71-9373 to the License Number • Changed the Licensing Status to Pending • Revised the Licensing Details
HI-STAR 190 Version XL	2	• This is an entirely new record

Canisters

The MPC-68 and MPC-68F canisters for the HI-STAR storage system were originally grouped into a common Canister Family, MPC-68 (HI-STAR). These canisters now have their own unique Canister Families, MPC-68 (HI-STAR) and MPC-68F (HI-STAR). The MPC-68, MPC-68F, MPC-68FF and MPC-68M canisters for the HI-STORM storage system were grouped into a common Canister Family, MPC-68 (HI-STORM). These canisters now have their own unique Canister Families, MPC-68 (HI-STORM) and MPC-68F (HI-STORM), MPC-68FF and MPC-68M. Since Dresden and Hatch have started loading MPC-68M canisters and the UxC Consulting Company distinguishes between MPC-68 canisters and MPC-68M canisters in its StoreFUEL report, the uncertainty previously associated with the MPC-68 family of canisters is no longer assumed.

The MSB-Short, MSB-Long and MSB-Standard canisters for the VSC-24 storage system were originally grouped into a common Canister Family, MSB. These canisters now have their own unique Canister Families, MSB-Short, MSB-Long and MSB-Standard. Since the UxC Consulting Company distinguishes between MSB-Short, MSB-Long and MSB-Standard canisters in its StoreFUEL report, the uncertainty previously associated with the MSB family of canisters is no longer assumed.

The W74M and W74T canisters for the FuelSolutions storage system were originally grouped into a common Canister Family, W74. These canisters now have their own unique Canister Families, W74M and W74T. The only reactor site that has loaded W74 canisters is Big Rock Point. Confirmation has been received that all of the canisters at Big Rock Point are W74T canisters, which justifies splitting the original W74 Canister Family into the two unique Canister Families, thereby, removing the uncertainty associated with the W74 family of canisters.

Other changes to specific canisters are listed in Table G-5.

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database

Canister	Report Revision Number	Description of Change
CY-MPC, 26 Assy	2	• Added quantity (i.e. 26) for Damaged/Debris Container Capacity
LACBWR	2	• Changed Maximum Burnup – Transportation from 36 to 22 • Added Weight and Thermal Comments
MPC-24 (HI-STAR)	2	• Added Payload Restrictions and Comments
MPC-24E (HI-STAR)	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Revised Payload Restrictions and Comments
MPC-24EF (HI-STAR)	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Revised Payload Restrictions and Comments
MPC-24E (TranStor)	2	• Revised Amendment number and expiration date in the License Comment
MPC-24EF (TranStor)	2	• Revised Amendment number and expiration date in the License Comment
MPC-32 (HI-STAR)	2	• Revised Payload Restrictions and Comments
MPC-37	2	• Revised the License Comment
MPC-68F (HI-STAR)	2	• Changed the Canister Family to MPC-68F (HI-STAR)
MPC-68F (HI-STORM)	2	• Changed the Canister Family to MPC-68F (HI-STORM)
MPC-68FF	2	• Changed the Canister Family to MPC-68FF
MPC-68M	2	• Changed the Canister Family to MPC-68M
MPC-89	2	• Revised the License Comment • Changed the Licensed Purpose to Storage Only
MSB-Short	2	• Changed the Canister Family to MSB-Short • Revised the Amendment number for CoC 72-1007 • Added statement regarding timely renewal of CoC 72-1007 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
MSB-Long	2	• Changed the Canister Family to MSB-Long • Revised the Amendment number for CoC 72-1007 • Added statement regarding timely renewal of CoC 72-1007 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
MSB-Standard	2	• Changed the Canister Family to MSB-Standard • Revised the Amendment number for CoC 72-1007 • Added statement regarding timely renewal of CoC 72-1007 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
NUHOMS 07P	2	• Added the Amendment number and expiration date for SNM-2502
NUHOMS 12T	2	• Added the Amendment number and expiration date for SNM-2508
NUHOMS 24PHBL	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 24) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PHBS	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 24) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PL	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 24) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PS	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 24) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PT2L	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PT2S	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 24PTH-L	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302
NUHOMS 24PTH-S	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302
NUHOMS 24PTH-S-LC	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
NUHOMS 32P	2	• Added the Amendment number and expiration date for SNM-2505
NUHOMS 32PTH	2	• Added the expiration date for CoC 71-9302 • Changed Maximum Burnup – Transportation from 60 to 62 to agree with existing Weight and Thermal Comments
NUHOMS 32PTH Type 1	2	• Added the expiration date for CoC 71-9302 • Changed Maximum Burnup – Transportation from 60 to 62 to agree with existing Weight and Thermal Comments
NUHOMS 32PTH1-L	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 32) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 32PTH1-M	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 32) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 32PTH1-S	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 32) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 32PTH2	2	• Added expiration date for CoC 72-1029 • Added quantity (i.e. 32) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
NUHOMS 32PT-L100	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
NUHOMS 32PT-L125	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
NUHOMS 32PT-S100	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
NUHOMS 32PT-S125	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
NUHOMS 37PTH-M	2	• Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added Weight and Thermal Comments
NUHOMS 37PTH-S	2	• Added statement regarding timely renewal of CoC 72-1004 • Added expiration date for CoC 71-9302 • Added Weight and Thermal Comments

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
NUHOMS 52B	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments
NUHOMS 61BT	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 61) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Design Heat Rejection – Transportation from 15.89 to 18.3 • Added Weight and Thermal Comments
NUHOMS 61BTH Type 1	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004
NUHOMS 61BTH Type 2	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004
NUHOMS 61BTHF	2	• Revised the Amendment number for CoC 72-1004 • Added statement regarding timely renewal of CoC 72-1004
NUHOMS 69BTH	2	• Added statement regarding timely renewal of CoC 72-1004 • Added quantity (i.e. 69) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 45 to 62 • Revised Weight and Thermal Comments
NUHOMS FC-DSC	2	• Added expiration date for SNM-2510 • Added revision number and expiration date for CoC 71-9255 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity
NUHOMS FF-DSC	2	• Added expiration date for SNM-2510 • Added revision number and expiration date for CoC 71-9255
NUHOMS FO-DSC	2	• Added expiration date for SNM-2510 • Added revision number and expiration date for CoC 71-9255 • Added quantity (i.e. 0) for Damaged/Debris Container Capacity

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
TSC BWR	2	• Deleted "71-9356" from the Transportation License Number since this license is not yet approved • Changed the Licensed Purpose to Storage Only • Added quantity (i.e. 0) for Damaged/Debris Container Capacity
TSC PWR	2	• Deleted "71-9356" from the Transportation License Number since this license is not yet approved • Changed the Licensed Purpose to Storage Only
TSC-Class 1	2	• Added quantity (i.e. 4) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 60 to 45 • Added Weight and Thermal Comments
TSC-Class 2	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 60 to 45 • Added Weight and Thermal Comments
TSC-Class 3	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 60 to 45 • Added Weight and Thermal Comments
TSC-Class 4	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 60 to 45 • Added Weight and Thermal Comments
TSC-Class 5	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Changed Maximum Burnup – Transportation from 60 to 45 • Added Weight and Thermal Comments

Table G-5 Changes to the Canisters Table in the Dry Storage Cask/Inventory Database (continued)

Canister	Report Revision Number	Description of Change
W21M-LD	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21M-LS	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21M-SD	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21M-SS	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21T-LL	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21T-LS	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21T-SL	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W21T-SS	2	• Added quantity (i.e. 0) for Damaged/Debris Container Capacity • Added Payload Restrictions and Comments • Added Weight and Thermal Comments
W74M	2	• Changed the Canister Family to W74M • Changed Maximum Burnup – Transportation from 40 to 32 • Added Weight and Thermal Comments
W74T	2	• Changed the Canister Family to W74T • Changed Maximum Burnup – Transportation from 40 to 32 • Added Weight and Thermal Comments

Canisters/Canistered Transfer Casks

The following changes were made for the NUHOMS 12T storage system

- Changed "Not Available" to the MP187 transfer cask for the existing record
- Added an additional record for the NUHOMS 12T storage system with the OS197 transfer cask

Cask Systems

The following general changes were made to the Cask Systems table in the Dry Storage Cask/Inventory Database

- Changed "Licensed Purpose" to "Intended Purpose"
- Changed "License Type" to "Storage License Type"

Other changes to specific cask systems are listed in Table G-6.

Table G-6 Changes to the Cask Systems Table in the Dry Storage Cask/Inventory Database

Cask System	Report Revision Number	Description of Change
CASTOR V/21	2	• Revised the License Notes
CASTOR X/33	2	• Revised the License Notes
FuelSolutions	2	• Set the Storage License Type to General License • Added License Notes
GA-4 Legal Weight Truck	2	• Deleted "General License" from the Storage License Type • Revised the Revision number and expiration date in the License Notes
HI-STAR 100	2	• Set the Storage License Type to Canister Dependent
HI-STAR 100HB	2	• Set the Storage License Type to Site Specific
HI-STAR 180	2	• Deleted "General License" from the Storage License Type • Revised the Revision number and expiration date in the License Notes • Added information regarding the HI-STAR 180D transportation package to the License Notes
HI-STAR 190	2	• Added License Note
HI-STAR 60	2	• Deleted "General License" from the Storage License Type • Revised the Revision number and expiration date in the License Notes
HI-STORM 100	2	• Set the Storage License Type to General License
HI-STORM 100U	2	• Set the Storage License Type to General License
HI-STORM FW	2	• Changed the Intended Purpose to Storage and Transportation • Set the Storage License Type to General License • Added License Note
HI-STORM UMAX	2	• Set the Storage License Type to General License • Added License Note

Table G-6 Changes to the Cask Systems Table in the Dry Storage Cask/Inventory Database (continued)

Cask System	Report Revision Number	Description of Change
NAC LWT Legal Weight Truck	2	• Deleted "General License" from the Storage License Type • Revised the Revision number and expiration date in the License Notes
NAC-MAGNASTOR	2	• Set the Storage License Type to General License • Added License Note
NAC-MPC	2	• Set the Storage License Type to General License • Added License Note
NAC-MPC (Direct Load)	2	• Revised the Revision number and expiration date in the License Notes
NAC-UMS	2	• Set the Storage License Type to General License • Added License Note
NUHOMS 0708	2	• Set the Storage License Type to Site Specific
NUHOMS 12T	2	• Set the Storage License Type to Site Specific
NUHOMS HD	2	• Set the Storage License Type to General License • Added License Note
Standardized NUHOMS	2	• Set the Storage License Type to Canister Dependent • Added License Note
TN-24	2	• Revised the License Notes
TN-32	2	• Revised the License Notes
TN-40	2	• Revised the License Notes including the Revision number and expiration date for CoC 71-9313
TN-68	2	• Revised the Revision number and expiration date in the License Notes
TN-FSV Legal Weight Truck	2	• Deleted "General License" from the Storage License Type • Revised the Revision number and expiration date in the License Notes
TN-LC	2	• Deleted "General License" from the Storage License Type

Lookup – Canister Family

See the discussion under "Canisters" above regarding the changes to the Canister Families. The following changes were made to the Lookup – Canister Family table in the Dry Storage Cask/Inventory Database:

- Added MPC-68F (HI-STAR), MPC-68F (HI-STORM), MPC-68FF and MPC-68M
- Changed MSB to MSB-Short
- Added MSB-Long and MSB-Standard
- Changed W74 to W74M
- Added W74T

Transport Casks

Table G-7 Changes to the Transport Casks Table in the Dry Storage Cask/Inventory Database

Cask System	Report Revision Number	Description of Change
NAC LWT Legal Weight Truck Transport Cask	2	• Changed the Licensing Status to Active • Revised the Revision number and expiration date
HI-STAR 180 Transport Cask	2	• Added Impact Limiter Material
HI-STAR 180D Transport Cask	2	• This is an entirely new record in the database