

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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August 31, 2015
FCRD-NFST-2014-000602, Revision 1
SRNL-TR-2014-00193



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SUMMARY

The report, *Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report*(FCRD-NFST-2013-000263, Rev.3), 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. The 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 8,798 used fuel assemblies in 198 total casks. The distribution of casks loaded versus cask system is shown in Figure S-1.

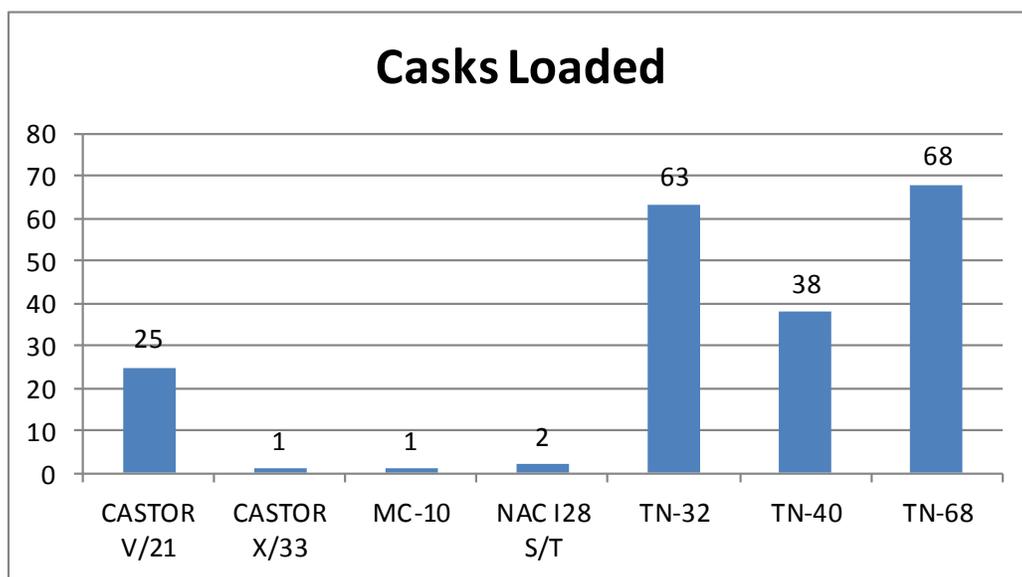


Figure S-1 Distribution of Casks Loaded Versus Bare Fuel Storage Systems

Twenty-nine utilities currently use canistered storage systems for dry storage at 67 reactor sites. Fourteen unique canistered storage cask systems are used to store a total of 75,963 used fuel assemblies in 1,907 total canisters. The distribution of canisters loaded versus cask system is shown in Figure S-2

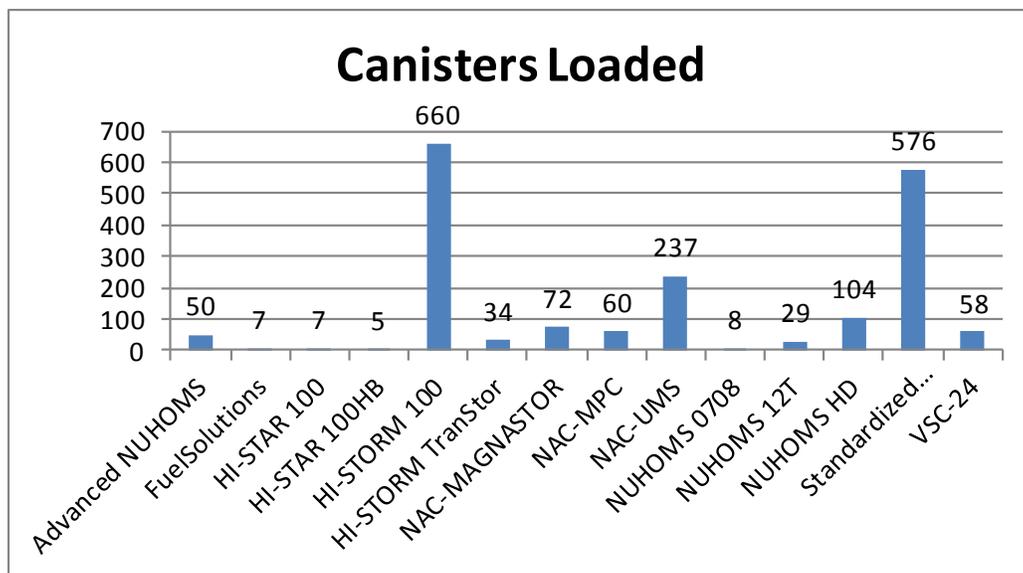


Figure S-2 Distribution of Canisters Loaded Versus Canistered Storage Systems

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 31 canister families are represented by the current inventory of canistered systems in dry storage. These canister families represent a total of 53 unique canisters. Of these 53 canisters, 39 are certified for storage and transportation and 14 are currently certified only for storage. Additionally, 44 of these 53 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 14 canistered storage cask systems are represented by the current inventory of canistered systems in dry storage. These storage cask systems represent a total of 33 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 is 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 11 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 25 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 31 canister families (53 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 21 canister families have an approved transportation cask regardless of which canister is applicable to the canister family. These canister families represent 864 canisters (45.3% of the total 1,907 canisters) and 30,861 assemblies (40.6% of the total 75,963 assemblies) in the current dry storage inventory. A total of 8 canister families do not have an approved transportation cask for any of the applicable canisters associated with the canister family. These canister families represent 407 canisters (21.3% of the total 1,907 canisters) and 10,998 assemblies (14.5% of the total 75,963 assemblies) in the current dry storage inventory. A total of 2 canister families may not have an approved transportation cask depending on which canister is applicable to the canister family. These canister families represent 636 canisters (33.4% of the total 1,907 canisters) and 34,104 assemblies (44.9% of the total 75,963 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 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. Incorporation of this information into the NFST Unified Database should be considered in the future.
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	<p>Revised to incorporate current inventory data as provided in the <i>Commercial Spent Nuclear Fuel and High-Level Radioactive Waste Inventory Report (FCRD-NFST-2013-000263, June 30, 2015, Revision 3)</i>. Specific changes made to the inventory are listed in Section 2.1. Other changes to correct errors and provide clarification include the following:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>The supporting Microsoft Access database was updated to revise the Site Characteristic descriptions to better agree with those defined by the Inventory Report.</p> <p>The NUHOMS 61BTHF canister was added as a potential canister to the NUHOMS 61BTH canister family.</p> <p>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.</p> <p>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.</p>

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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
PSE&G	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. 3), 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. The 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 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 Microsoft Access 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 integrated 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 Microsoft Access 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
- PSE&G/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 Microsoft Access 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.

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 EnergySolutions 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 Microsoft Access database and are not part of the official storage module designations.

8. The NUHOMS 61BTH canister has two variants, the 61BTH Type 1 and the 61BTH Type 2. 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 two 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 NUHOMS 61BTHF canister was added to the NUHOMS 61BTH canister family.

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.

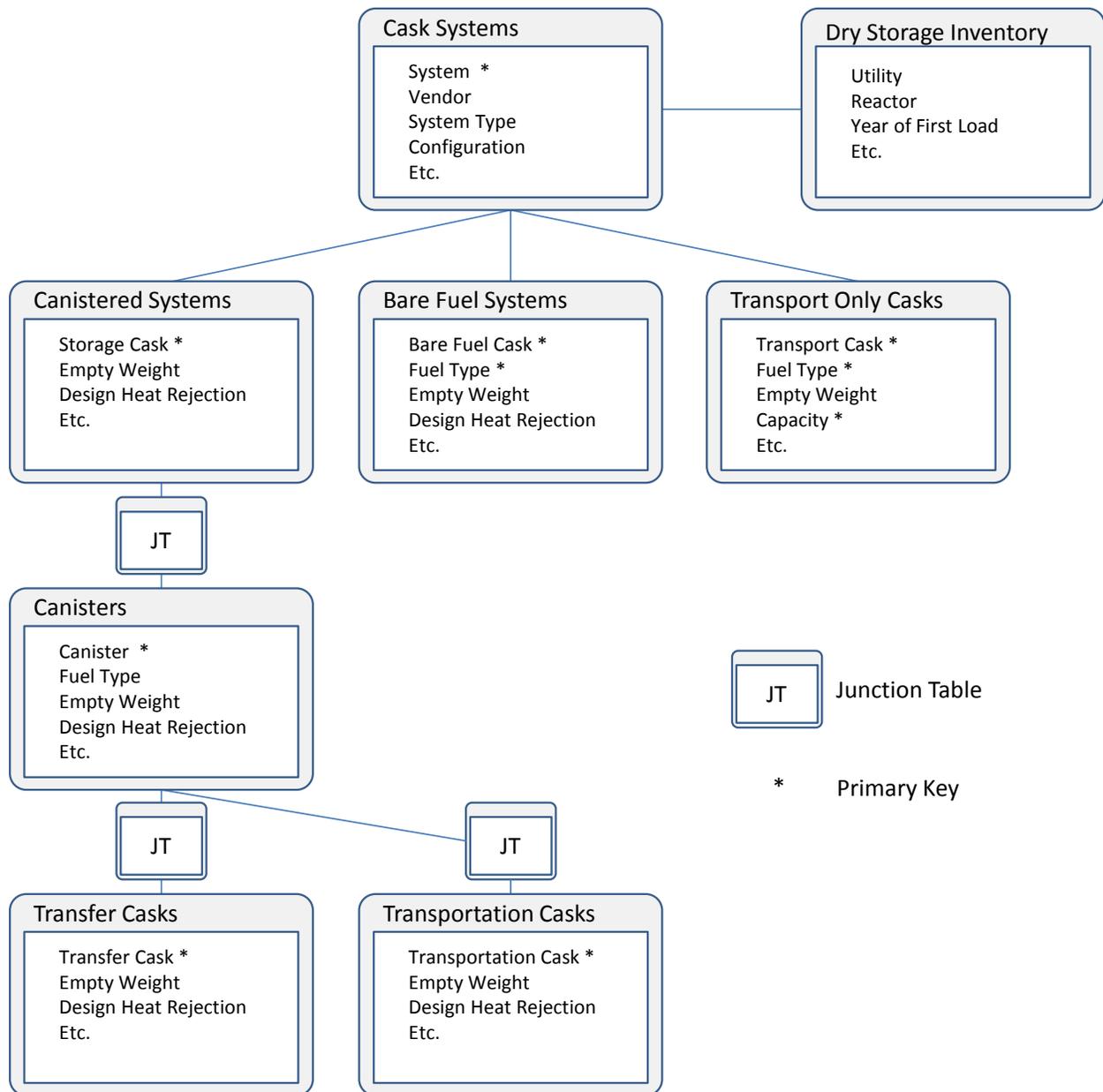


Figure 3.2-1 Dry Storage Cask/Inventory Database Structure

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
Dominion	North Anna	C2	TN-32	Storage Only	27	864
Dominion	Surry	C2	CASTOR V/21	Storage Only	25	525
Dominion	Surry	C2	CASTOR X/33	Storage Only	1	33
Dominion	Surry	C2	MC-10	Storage Only	1	24
Dominion	Surry	C2	NAC I28 S/T	Storage Only	2	56
Dominion	Surry	C2	TN-32	Storage Only	26	832
Duke	McGuire	C2	TN-32	Storage Only	10	320
Exelon	Peach Bottom 2 & 3	C2	TN-68	Storage and Transportation	68	4624
Xcel Energy	Prairie Island	C2	TN-40 (Note 2)	Storage and Transportation	9	360
			TN-40 (Note 2)	Storage and Transportation	29	1160
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 7 Reactor/Cask System Combinations Licensed for Storage Only	198 Casks Loaded	8,798 Assemblies Loaded
10 Total Unique Utility/Reactor/Cask System Combinations						

Notes:

- 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
- 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 9 TN-40HT casks are loaded.
- 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 8,798 used fuel assemblies in 198 total casks. The Transnuclear bare fuel casks (TN-32, 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.

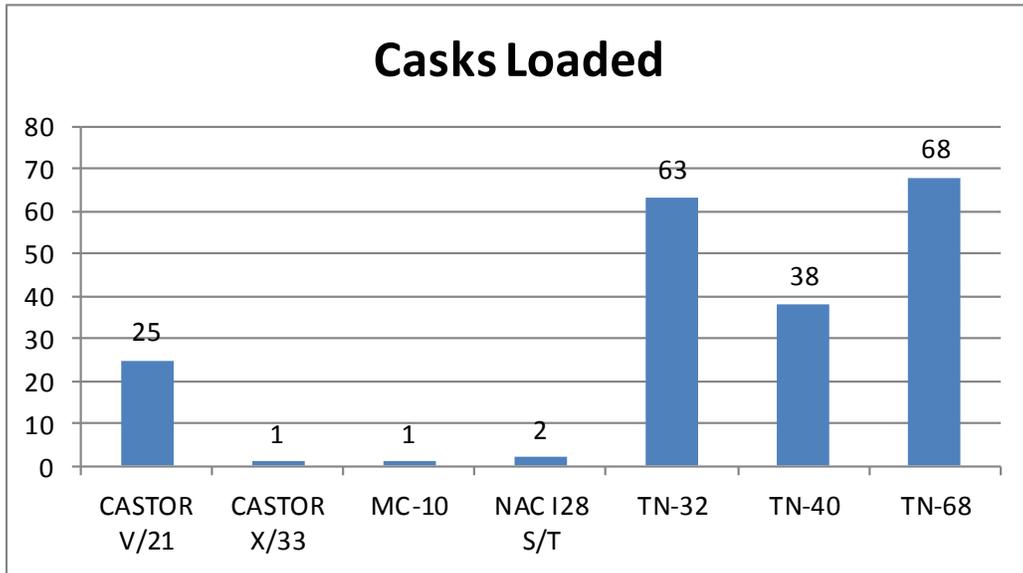


Figure 4.1-1 Distribution of Casks Loaded Versus Bare Fuel Storage Systems

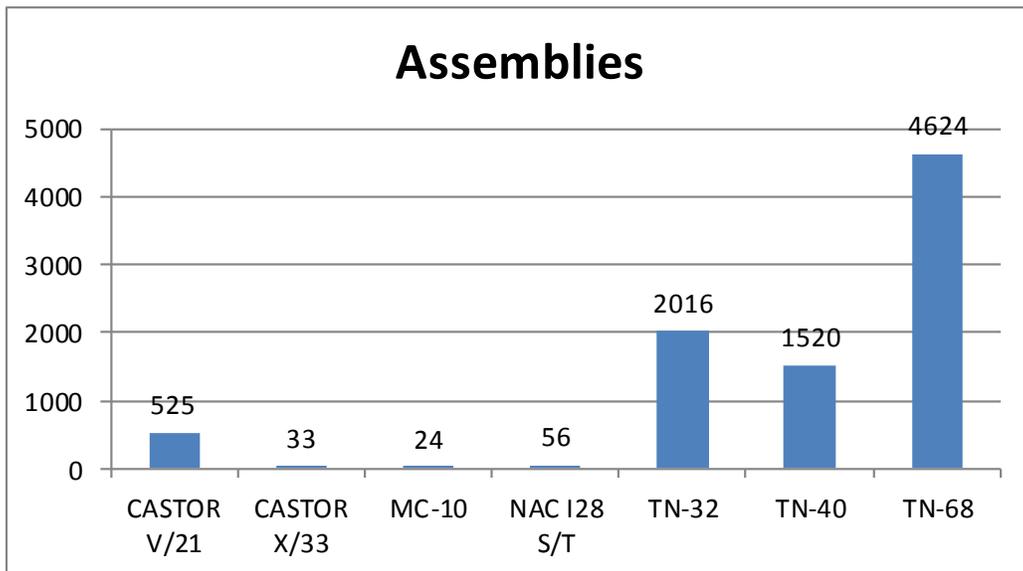


Figure 4.1-2 Distribution of Assemblies Versus Bare Fuel Storage Systems

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
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	12	384
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	125	3000
Connecticut Yankee	Connecticut Yankee	A1	NAC-MPC	CY-MPC, 26 Assy	40	1019
Consumers	Big Rock Point	A1	FuelSolutions	W74	7	441
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	5	333
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	6	408
DOE	INEEL	ISFSI Only	NUHOMS 12T	NUHOMS 12T	29	177
Dominion	Kewaunee	A2	Standardized NUHOMS	NUHOMS 32PT	14	448
Dominion	Millstone 2 & 3	B2	Standardized NUHOMS	NUHOMS 32PT	19	608
Dominion	North Anna	C2	NUHOMS HD	NUHOMS 32PTH	22	704
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	24	768
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	19	1159
Duke	Catawba	C2	NAC-MAGNASTOR	TSC PWR	5	185
Duke	Catawba	C2	NAC-UMS	UMS-PWR	24	576
Duke	McGuire	C2	NAC-MAGNASTOR	TSC PWR	6	222
Duke	McGuire	C2	NAC-UMS	UMS-PWR	28	672
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	44	1056
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	40	960
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	50	1200

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic ¹	Cask System ²	Canister Family ³	Canisters Loaded ⁴	Assemblies ⁴
Duke	Robinson	C2	NUHOMS 0708	NUHOMS 07P	8	56
Duke	Robinson	C2	Standardized NUHOMS	NUHOMS 24PTH	18	432
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	36	2448
Entergy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	24	576
Entergy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	18	576
Entergy	ANO	C2	VSC-24	MSB	24	576
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	21	1428
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	23	1564
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	5	160
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	25	800
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 24PTH	13	312
Entergy	Palisades	C2	Standardized NUHOMS	NUHOMS 32PT	11	352
Entergy	Palisades	C2	VSC-24	MSB	18	432
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	3	204
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	23	1564
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	13	884
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	13	416
Exelon	Braidwood	C2	HI-STORM 100	MPC-32 (HI-STORM)	12	384
Exelon	Byron	C2	HI-STORM 100	MPC-32 (HI-STORM)	16	512
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	48	1152
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	28	896

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic¹	Cask System²	Canister Family³	Canisters Loaded⁴	Assemblies⁴
Exelon	Dresden 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	4	272
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	59	4012
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	6	192
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	16	1088
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	19	1159
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	9	549
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BT	16	976
Exelon	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	4	244
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BT	8	488
Exelon	Oyster Creek	C2	Standardized NUHOMS	NUHOMS 61BTH	15	915
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	37	2516
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	2	74
FirstEnergy	Davis-Besse	C2	Standardized NUHOMS	NUHOMS 24P	3	72
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	14	952
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	22	704
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	60	1434
NextEra Energy	Duane Arnold	C2	Standardized NUHOMS	NUHOMS 61BT	20	1220
NextEra Energy	Point Beach	C2	Standardized NUHOMS	NUHOMS 32PT	23	736
NextEra Energy	Point Beach	C2	VSC-24	MSB	16	384
NextEra Energy	Seabrook	C2	NUHOMS HD	NUHOMS 32PTH	14	448

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic ¹	Cask System ²	Canister Family ³	Canisters Loaded ⁴	Assemblies ⁴
NextEra Energy	St. Lucie	C2	NUHOMS HD	NUHOMS 32PTH	26	832
NextEra Energy	Turkey Point	C2	NUHOMS HD	NUHOMS 32PTH	18	576
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BT	8	488
NPPD	Cooper	C2	Standardized NUHOMS	NUHOMS 61BTH	10	610
OPPD	Fort Calhoun	C2	Standardized NUHOMS	NUHOMS 32PT	10	320
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	29	928
PG&E	Humboldt Bay	A1	HI-STAR 100HB	MPC-HB	5	390
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24E (TranStor)	29	674
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	5	116
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	27	1404
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	48	2928
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	8	488
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	28	1904
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	16	512
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FC-DSC	18	432
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FF-DSC	1	13
SMUD	Rancho Seco	A1	Standardized NUHOMS	NUHOMS FO-DSC	2	48
Southern Cal Edison	SONGS 1	A2	Advanced NUHOMS	NUHOMS 24PT1	17	395
Southern Cal Edison	SONGS 2	A2	Advanced NUHOMS	NUHOMS 24PT4	33	792

Table 4.2-1 Canistered Storage Systems (continued)

Utility	Reactor	Site Characteristic ¹	Cask System ²	Canister Family ³	Canisters Loaded ⁴	Assemblies ⁴
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	29	928
Southern Nuclear	Hatch	C2	HI-STAR 100	MPC-68 (HI-STAR)	3	204
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	58	3944
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	13	416
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	45	3060
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	44	1408
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BT	10	610
Xcel Energy	Monticello	C2	Standardized NUHOMS	NUHOMS 61BTH	5	305
YAEC	Yankee Rowe	A1	NAC-MPC	Yankee-MPC	15	533
Zion Solutions	Zion	A1	NAC-MAGNASTOR	TSC PWR	61	2226
29 Total Utilities	67 Total Reactor Sites		14 Cask Systems Used	31 Canister Families	1,907 Total Canisters Loaded	75,963 Total Assemblies Loaded
89 Total Combinations of Utilities and Reactor Sites						

Notes:

- 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.
- 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.
- 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.
- 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.

Twenty-nine utilities currently use canistered storage systems for dry storage at 67 reactor sites. Fourteen unique canistered storage cask systems are used to store a total of 75,963 used fuel assemblies in 1,907 total canisters. A total of 89 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.

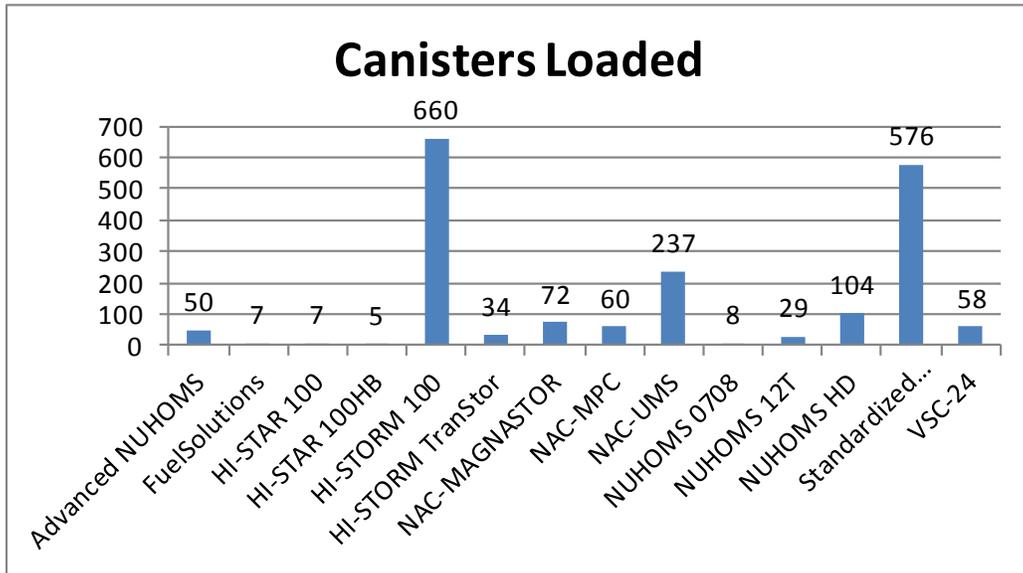


Figure 4.2-1 Distribution of Canisters Loaded Versus Canistered Storage Systems

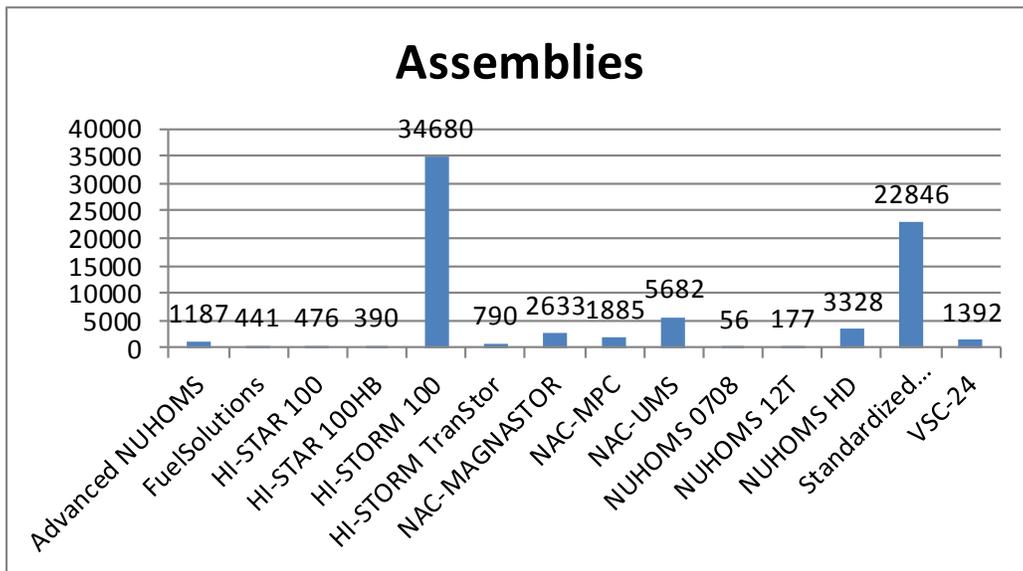


Figure 4.2-2 Distribution of Assemblies Versus Canistered Storage Systems

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 205, larger than the 89 combinations of reactor sites, storage systems and canister families discussed in Section 4.2.

Appendix B provides a list of the 205 combinations of reactor sites, storage systems and canisters. The following can be observed from the information contained in Appendix B:

- A total of 31 canister families are represented by the current inventory of canistered systems in dry storage.
- These canister families represent a total of 53 unique canisters. These canisters are listed in Table 4.3-1 below.
- Of these 53 canister types, 39 are certified for storage and transportation and 14 are certified for storage only.
- Of these 53 canister types, 44 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	W74	W74M	Storage and Transportation	General License
		W74T	Storage and Transportation	General License
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	Storage and Transportation	General License
		MPC-68F (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-68F (HI-STORM)	Storage and Transportation	General License
		MPC-68FF	Storage Only	General License
	MPC-68M	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	MSB-Long	Storage Only	General License
		MSB-Short	Storage Only	General License
		MSB-Standard	Storage Only	General License
14 Total Cask Systems	31 Total Canister Families	53 Total Canisters	39 Storage and Transportation	44 General License
			14 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 374, larger than the 89 combinations of reactor sites, canistered storage systems and canister families discussed in Section 4.2.

Appendix C provides a list of the 374 combinations of reactor sites, storage systems and canisters. The following can be observed from the information contained in Appendix C:

- A total of 14 canistered storage cask systems are represented by the current inventory of canistered systems in dry storage.
- These storage cask systems represent a total of 33 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 TranStor	TranStor
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
14 Total Cask Systems	33 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 446. 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 446 combinations of storage systems, canister families and transfer casks. The following can be observed from the information contained in Appendix D:

- A total of 11 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 25 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 Source¹
Advanced NUHOMS	OS197	<ul style="list-style-type: none"> - NUH-01.0150, <i>Final Safety Analysis Report for the Standardized Advanced NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel</i>, Revision 0, February 2003 - Appendix A to Certificate of Compliance Number 1029, <i>Technical Specifications for the Advanced NUHOMS System Operating Controls and Limits</i>, Amendment Number 1
	OS197H	
FuelSolutions	W100	
HI-STORM (TranStor)	HI-TRAC 100	<ul style="list-style-type: none"> - HI-2002444, <i>Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System</i>, 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	<ul style="list-style-type: none"> - HI-2002444, <i>Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System</i>, USNRC Docket Number 72-1014, Revision 11, August 1, 2013
	HI-TRAC 100D	
	HI-TRAC 125	
	HI-TRAC 125D	
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	<ul style="list-style-type: none"> - NUH-003, <i>Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel</i>, Revision 6, October 2001
NUHOMS HD	OS187H	<ul style="list-style-type: none"> - <i>NUHOMS HD Horizontal Modular Storage System for Irradiated Nuclear Fuel, Updated Final Safety Analysis Report</i>, Revision 1, September 2007

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
Standardized NUHOMS	OS197	- NUH-003, <i>Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel</i> , Revision 6, October 2001 - NUH-003, <i>Updated Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel</i> , Revision 10, February 1, 2008 - Certificate Number 1004, <i>Certificate of Compliance for Spent Fuel Storage Casks</i> , 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	
11 Total Cask Systems	25 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 212 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 212 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 31 canister families (53 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 21 canister families **have** an approved transportation cask regardless of the applicable canister. These canister families represent 864 canisters (45.3% of the total 1,907 canisters) and 30,861 assemblies (40.6% of the total 75,963 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 8 canister families **do not have** an approved transportation cask for any of the associated canisters. These canister families represent 407 canisters (21.3% of the total 1,907 canisters) and 10,998 assemblies (14.5% of the total 75,963 assemblies) in the current dry storage inventory.
- Some canister families could have an approved transportation cask depending on which canister is applicable, e.g. MPC-32 (HI-STORM) canister family. A total of 2 canister families **may not have** an approved transportation cask depending on the applicable canister. These canister families represent 636 canisters (33.4% of the total 1,907 canisters) and 34,104 assemblies (44.9% of the total 75,963 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	W74	W74M	TS125	7	441
		W74T	TS125		
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	7	476
		MPC-68F (HI-STAR)	HI-STAR 100		
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	24	576
		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	254	8128
		MPC-32F	Not Available		
	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	382	25976
		MPC-68F (HI-STORM)	HI-STAR 100		
		MPC-68FF	Not Available		
MPC-68M		Not Available			
HI-STORM TranStor	MPC-24E (TranStor)	MPC-24E (TranStor)	HI-STAR 100	29	674
HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	116
NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available ²	72	2633
NAC-MPC	CY-MPC, 26 Assy	CY-MPC, 26 Assy	NAC-STC Transport Cask	40	1019
	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	237	5682
		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 Loaded¹	Assemblies Loaded¹
NUHOMS 0708	NUHOMS 07P	NUHOMS 07P	Not Available	8	56
NUHOMS 12T	NUHOMS 12T	NUHOMS 12T	Not Available	29	177
Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available	135	3240
		NUHOMS 24PS	Not Available		
	NUHOMS 24PHB	NUHOMS 24PHBL	Not Available	50	1200
		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	28	896
	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	104	3328
	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	83	2656
		NUHOMS 32PT-L125	MP197HB		
		NUHOMS 32PT-S100	MP197HB		
		NUHOMS 32PT-S125	MP197HB		
	NUHOMS 37PTH	NUHOMS 37PTH-M	MP197HB	2	74
		NUHOMS 37PTH-S	MP197HB		
	NUHOMS 52B	NUHOMS 52B	Not Available	27	1404
	NUHOMS 61BT	NUHOMS 61BT	MP197	129	7869
	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	70	4270
		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	58	1392
		MSB-Short	Not Available		
		MSB-Standard	Not Available		
14 Total Cask Systems	31 Total Canister Families	53 Total Canisters	8 Total Transportation Casks Available for the Canisters in the Current Dry Storage Inventory	1,907 Total Canisters in the Current Dry Storage Inventory	75,963 Total Assemblies in the Current Dry Storage Inventory
	21 Canister Families <u>HAVE</u> An Approved Transportation Cask			864 Canisters in the Current Dry Storage Inventory <u>HAVE</u> Available Transportation Casks	30,861 Assemblies in the Current Dry Storage Inventory <u>HAVE</u> Transportation Casks
	2 Canister Families <u>MAY NOT HAVE</u> An Approved Transportation Cask			636 Canisters in the Current Dry Storage Inventory <u>MAY NOT HAVE</u> Available Transportation Casks	34,104 Assemblies in the Current Dry Storage Inventory <u>MAY NOT HAVE</u> Available Transportation Casks
	8 Canister Families <u>DO NOT HAVE</u> an Approved Transportation Cask			407 Canisters in the Current Dry Storage Inventory <u>DO NOT HAVE</u> Available Transportation Casks	10,998 Assemblies in the Current Dry Storage Inventory <u>DO NOT HAVE</u> 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 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).

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	Site Characteristic ¹
Connecticut Yankee	Connecticut Yankee	A1
Consumers	Big Rock Point	A1
Dairyland Power	Lacrosse	A1
Dominion	Kewaunee	A2
Dominion	Millstone 1	B3
Duke	Crystal River	A3
Entergy	Indian Point 1	B1
Entergy	Vermont Yankee	A2
Exelon	Dresden 1	B2
Exelon	Oyster Creek	Announced Shutdown – Wet and Dry
Maine Yankee	Maine Yankee	A1
PG&E	Humboldt Bay	A1
Portland	GE Trojan	A1
SMUD	Rancho Seco	A1
Southern Cal Edison	SONGS 1, 2 & 3	A2
YAEC	Yankee Rowe	A1
Zion Solutions	Zion	A1

Notes:

- 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” is used in the table above to designate Oyster Creek’s intent to shut down by 2019.

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). One site, Oyster Creek, has announced its intention to shut down prior to the anticipated startup of the pilot ISF.

The projected inventory defined in Tables 2-10, 2-11 and 2-12 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	Current Inventory	Projected Inventory	Comment
Dominion	Kewaunee	- 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.
Dominion	Millstone 1		- 2,884 assemblies in 48 NUHOMS 61BT canisters	The current inventory only includes used fuel from Millstone 2 & 3 which are PWR reactors and are still operating. No used fuel from Millstone 1 which is a BWR reactor has been loaded into canisters. Dominion has not announced what canisters it will use for Millstone 1. NUHOMS 61BT canisters are assumed.
Duke	Crystal River		- 1,319 assemblies in 42 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	Vermont Yankee	- 884 assemblies in 13 MPC-68 (HI-STORM) canisters	- 3,880 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	Current Inventory	Projected Inventory	Comment
Exelon	Dresden 1	- 272 assemblies in 4 MPC-68 (HI-STAR) canisters	- 272 assemblies in 4 MPC-68 (HI-STAR) canisters - 617 assemblies in 10 MPC-68 (HI-STORM) canisters	
Exelon	Oyster Creek	- 488 assemblies in 8 NUHOMS 61BT canisters - 915 assemblies in 15 NUHOMS 61BTH canisters	- 3,817 assemblies in 63 NUHOMS 61BT canisters - 915 assemblies in 15 NUHOMS 61BTH canisters	
Southern Cal Edison	SONGS 1	- 395 assemblies in 17 NUHOMS 24PT1 canisters	- 395 assemblies in 17 NUHOMS 24PT1 canisters	SONGS has announced intentions of using the Holtec UMAX system for dry storing its remaining inventory of used fuel.
	SONGS 2	- 792 assemblies in 33 NUHOMS 24PT4 canisters	- 792 assemblies in 33 NUHOMS 24PT4 canisters	
	SONGS 2 & 3		- 2,668 assemblies in 72 Holtec MPC-37 canisters	

Reactors listed in Table 4.6-2 but not listed in Table 4.6-3 are currently shut down and currently have all their fuel in dry storage (i.e. Site Characteristic Codes A1 and B1).

Up to 45 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 45 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 22 canister families (37 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 18 canister families **have** an approved transportation cask regardless of the applicable canister. These canister families represent 423 canisters (64.8% of the total 653 canisters) and 16,275 assemblies (60.9% of the total 26,713 assemblies) in the projected inventory. The percentage of canister families that have an approved transportation cask regardless of the applicable canister (i.e. 64.8%) is much higher for the projected inventory of UNF at shutdown reactor sites than for the current inventory of UNF in dry storage (i.e. 45.3%, see Section 4.6).
- Two 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 and the TSC-PWR canister families. These canister families represent 157 canisters (24.0% of the total 653 canisters) and 5,781 assemblies (21.6% of the total 26,713 assemblies) in the current dry storage inventory.
- Some canister families could have an approved transportation cask depending on which canister is applicable, e.g. MPC-32 (HI-STORM) canister family. A total of 2 canister families **may not have** an approved transportation cask depending on the applicable canister. These canister families represent 73 canisters (11.2% of the total 653 canisters) and 4,657 assemblies (17.4% of the total 26,713 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	W74	W74M	TS125	7	Big Rock Point
		W74T	TS125		
HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	5	Indian Point 1
		MPC-32F	Not Available		
	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	68	Vermont Yankee Dresden 1
		MPC-68F (HI-STORM)	HI-STAR 100		
		MPC-68FF	Not Available		
		MPC-68M	Not Available		
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	72	SONGS 2 & 3
HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	4	Dresden 1
		MPC-68F (HI-STAR)	HI-STAR 100		
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	MP197	14	Kewaunee
		NUHOMS 32PT-L125	MP197		
		NUHOMS 32PT-S100	MP197		
		NUHOMS 32PT-S125	MP197		
	NUHOMS 32PTH1	NUHOMS 32PTH1-L	MP197	42	Crystal River
		NUHOMS 32PTH1-M	MP197		
		NUHOMS 32PTH1-S	MP197		
	NUHOMS 61BT	NUHOMS 61BT	MP197 MP197HB	111	Millstone 1 Oyster Creek
	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

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-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
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 ²	85	Kewaunee Zion
11 Total Cask Systems	22 Total Canister Families	37 Total Canisters	8 Total Transportation Casks Available for the Canisters in the Current Dry Storage Inventory	653 Total Canisters in the Projected Inventory	26,713 Total Assemblies in the Projected Inventory
	18 Canister Families <u>HAVE</u> An Approved Transportation Cask			423 Canisters in the Projected Inventory <u>HAVE</u> Available Transportation Casks	16,275 Assemblies in the Projected Inventory <u>HAVE</u> Transportation Casks
	2 Canister Families <u>MAY NOT HAVE</u> An Approved Transportation Cask			73 Canisters in the Projected Inventory <u>MAY NOT HAVE</u> Available Transportation Casks	4,657 Assemblies in the Projected Inventory <u>MAY NOT HAVE</u> Available Transportation Casks
	2 Canister Families <u>DO NOT HAVE</u> an Approved Transportation Cask			157 Canisters in the Projected Inventory <u>DO NOT HAVE</u> Available Transportation Casks	5,781 Assemblies in the Projected Inventory <u>DO NOT HAVE</u> Available Transportation Casks

Notes:

- 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.
- The MAGNASTOR 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 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. Incorporation of this information into the NFST Unified Database should be considered in the future.
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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18. *NUHOMS HD Horizontal Modular Storage System for Irradiated Nuclear Fuel, Updated Final Safety Analysis Report*, Revision 1, September 2007
19. SNM-2501, *License for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste*, Docket Number 72-2, Expires July 31, 2046
20. *Technical Specifications for the Standardized NUHOMS Horizontal Modular Storage System*, Amendment Number 11 to CoC 1004, Docket Number 72-1004
21. Howard, R., et al., *Nuclear Fuels Storage and Transportation Planning Project (NFST): Near-Term Implementation Plan*, FCRD-NFST-2013-000075, Revision 3, June 30, 2015

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 ³	MTiHM (Based On Average Assembly) ³
AEP	D.C.Cook	PWR	C2	General License	2012	HI-STORM 100	MPC-32 (HI-STORM)		12	384	167.2
APS	Palo Verde	PWR	C2	General License	2003	NAC-UMS	UMS-PWR		125	3000	1,306.5
Connecticut Yankee	Connecticut Yankee	PWR	A1	General License	2004	NAC-MPC	CY-MPC, 26 Assy		40	1019	443.8
Consumers	Big Rock Point	BWR	A1	General License	2002	FuelSolutions	W74		7	441	78.8
Dairyland Power	La Crosse	BWR	A1	General License	2012	NAC-MPC	LACBWR		5	333	59.5
Detroit Edison	Fermi 2	BWR	C2	General License	2014	HI-STORM 100	MPC-68 (HI-STORM)		6	408	72.9
DOE	INEEL	PWR	ISFSI Only	Site Specific	1991	NUHOMS 12T	NUHOMS 12T		29	177	77.1
Dominion	Kewaunee	PWR	A2	General License	2009	Standardized NUHOMS	NUHOMS 32PT		14	448	195.1
Dominion	Millstone 2 & 3	PWR	B2	General License	2005	Standardized NUHOMS	NUHOMS 32PT		19	608	264.8
Dominion	North Anna	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		22	704	306.6
Dominion	North Anna	PWR	C2	Site Specific	1998	TN-32		TN-32	27	864	376.3

Dry Storage Cask Inventory Assessment

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 (Based On Average Assembly) ³
Dominion	Surry	PWR	C2	General License	2007	NUHOMS HD	NUHOMS 32PTH		24	768	334.5
Dominion	Surry	PWR	C2	Site Specific	1986	CASTOR V/21		CASTOR V/21	25	525	228.6
Dominion	Surry	PWR	C2	Site Specific	1986	CASTOR X/33		CASTOR X/33	1	33	14.4
Dominion	Surry	PWR	C2	Site Specific	1986	MC-10		MC-10 (PWR)	1	24	10.5
Dominion	Surry	PWR	C2	Site Specific	1986	NAC I28 S/T		NAC I28 S/T	2	56	24.4
Dominion	Surry	PWR	C2	Site Specific	1986	TN-32		TN-32	26	832	362.3
Duke	Brunswick	BWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 61BTH		19	1159	207.0
Duke	Catawba	PWR	C2	General License	2013	NAC-MAGNASTOR	TSC PWR		5	185	80.6
Duke	Catawba	PWR	C2	General License	2007	NAC-UMS	UMS-PWR		24	576	250.8
Duke	McGuire	PWR	C2	General License	2001	NAC-MAGNASTOR	TSC PWR		6	222	96.7
Duke	McGuire	PWR	C2	General License	2001	NAC-UMS	UMS-PWR		28	672	292.7
Duke	McGuire	PWR	C2	General License	2001	TN-32		TN-32	10	320	139.4
Duke	Oconee	PWR	C2	General License	1990	Standardized NUHOMS	NUHOMS 24P		44	1056	459.9
Duke	Oconee	PWR	C2	General License	2000	Standardized NUHOMS	NUHOMS 24PHB		50	1200	522.6
Duke	Oconee	PWR	C2	Site Specific	1990	Standardized NUHOMS	NUHOMS 24P		40	960	418.1

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 (Based On Average Assembly) ³
Duke	Robinson	PWR	C2	General License	2007	Standardized NUHOMS	NUHOMS 24PTH		18	432	188.1
Duke	Robinson	PWR	C2	Site Specific	1989	NUHOMS 0708	NUHOMS 07P		8	56	24.4
Energy Northwest	Columbia	BWR	C2	General License	2002	HI-STORM 100	MPC-68 (HI-STORM)		36	2448	437.2
Entergy	ANO	PWR	C2	General License	1996	HI-STORM 100	MPC-24 (HI-STORM)		24	576	250.8
Entergy	ANO	PWR	C2	General License	1996	HI-STORM 100	MPC-32 (HI-STORM)		18	576	250.8
Entergy	ANO	PWR	C2	General License	1996	VSC-24	MSB		24	576	250.8
Entergy	Fitzpatrick	BWR	C2	General License	2002	HI-STORM 100	MPC-68 (HI-STORM)		21	1428	255.0
Entergy	Grand Gulf	BWR	C2	General License	2006	HI-STORM 100	MPC-68 (HI-STORM)		23	1564	279.3
Entergy	Indian Point 1	PWR	B1	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)		5	160	69.7
Entergy	Indian Point 2 & 3	PWR	B2	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)		25	800	348.4
Entergy	Palisades	PWR	C2	General License	1993	Standardized NUHOMS	NUHOMS 24PTH		13	312	135.9
Entergy	Palisades	PWR	C2	General License	1993	Standardized NUHOMS	NUHOMS 32PT		11	352	153.3
Entergy	Palisades	PWR	C2	General License	1993	VSC-24	MSB		18	432	188.1
Entergy	Pilgrim	BWR	C2	General License	2015	HI-STORM 100	MPC-68 (HI-STORM)		3	204	36.4

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 (Based On Average Assembly) ³
Entergy	River Bend	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		23	1564	279.3
Entergy	Vermont Yankee	BWR	A2	General License	2008	HI-STORM 100	MPC-68 (HI-STORM)		13	884	157.9
Entergy	Waterford	PWR	C2	General License	2011	HI-STORM 100	MPC-32 (HI-STORM)		13	416	181.2
Exelon	Braidwood	PWR	C2	General License	2011	HI-STORM 100	MPC-32 (HI-STORM)		12	384	167.2
Exelon	Byron	PWR	C2	General License	2010	HI-STORM 100	MPC-32 (HI-STORM)		16	512	223.0
Exelon	Calvert Cliffs	PWR	C2	Site Specific	1992	Standardized NUHOMS	NUHOMS 24P		48	1152	501.7
Exelon	Calvert Cliffs	PWR	C2	Site Specific	1992	Standardized NUHOMS	NUHOMS 32P		28	896	390.2
Exelon	Dresden 1	BWR	B2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)		4	272	48.6
Exelon	Dresden 2 & 3	BWR	B2	General License	2000	HI-STORM 100	MPC-68 (HI-STORM)		59	4012	716.5
Exelon	Ginna	PWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 32PT		6	192	83.6
Exelon	LaSalle	BWR	C2	General License	2010	HI-STORM 100	MPC-68 (HI-STORM)		16	1088	194.3
Exelon	Limerick	BWR	C2	General License	2008	Standardized NUHOMS	NUHOMS 61BT		19	1159	207.0
Exelon	Limerick	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		9	549	98.1
Exelon	Nine Mile Point	BWR	C2	General License	2012	Standardized NUHOMS	NUHOMS 61BT		16	976	425.0
Exelon	Nine Mile Point	BWR	C2	General License	2014	Standardized NUHOMS	NUHOMS 61BTH		4	244	106.3

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 ³ Loaded ³	Assemblies Stored ³	MTiHM (Based On Average Assembly) ³
Exelon	Oyster Creek	BWR	C2	General License	2002	Standardized NUHOMS	NUHOMS 61BT		8	488	87.2
Exelon	Oyster Creek	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		15	915	163.4
Exelon	Peach Bottom 2 & 3	BWR	C2	General License	2000	TN-68		TN-68	68	4624	825.8
Exelon	Quad Cities	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		37	2516	449.4
FirstEnergy	Beaver Valley	PWR	C2	General License	2015	Standardized NUHOMS	NUHOMS 37PTH		2	74	32.2
FirstEnergy	Davis-Besse	PWR	C2	General License	1995	Standardized NUHOMS	NUHOMS 24P		3	72	31.4
FirstEnergy	Perry	BWR	C2	General License	2012	HI-STORM 100	MPC-68 (HI-STORM)		14	952	170.0
Luminant	Comanche Peak	PWR	C2	General License	2012	HI-STORM 100	MPC-32 (HI-STORM)		22	704	306.6
Maine Yankee	Maine Yankee	PWR	A1	General License	2002	NAC-UMS	UMS-PWR		60	1434	624.5
NextEra Energy	Duane Arnold	BWR	C2	General License	2003	Standardized NUHOMS	NUHOMS 61BT		20	1220	217.9
NextEra Energy	Point Beach	PWR	C2	General License	1995	Standardized NUHOMS	NUHOMS 32PT		23	736	320.5
NextEra Energy	Point Beach	PWR	C2	General License	1995	VSC-24	MSB		16	384	167.2
NextEra Energy	Seabrook	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		14	448	195.1
NextEra Energy	St. Lucie	PWR	C2	General License	2008	NUHOMS HD	NUHOMS 32PTH		26	832	362.3
NextEra Energy	Turkey Point	PWR	C2	General License	2011	NUHOMS HD	NUHOMS 32PTH		18	576	250.8

Dry Storage Cask Inventory Assessment

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 ³ Loaded ³	Assemblies Stored ³	MTiHM (Based On Average Assembly) ³
NPPD	Cooper	BWR	C2	General License	2010	Standardized NUHOMS	NUHOMS 61BT		8	488	87.2
NPPD	Cooper	BWR	C2	General License	2014	Standardized NUHOMS	NUHOMS 61BTH		10	610	108.9
OPPD	Fort Calhoun	PWR	C2	General License	2006	Standardized NUHOMS	NUHOMS 32PT		10	320	139.4
PG&E	Diablo Canyon	PWR	C2	Site Specific	2009	HI-STORM 100	MPC-32 (HI-STORM)		29	928	404.1
PG&E	Humboldt Bay	BWR	A1	Site Specific	2008	HI-STAR 100HB	MPC-HB		5	390	69.7
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24E (TranStor)		29	674	293.5
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24EF (TranStor)		5	116	50.6
PPL	Susquehanna	BWR	C2	General License	1999	Standardized NUHOMS	NUHOMS 52B		27	1404	250.8
PPL	Susquehanna	BWR	C2	General License	1999	Standardized NUHOMS	NUHOMS 61BT		48	2928	522.9
PPL	Susquehanna	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		8	488	87.2
PSE&G	Hope Creek	BWR	C2	General License	2006	HI-STORM 100	MPC-68 (HI-STORM)		28	1904	340.1
PSE&G	Salem	PWR	C2	General License	2010	HI-STORM 100	MPC-32 (HI-STORM)		16	512	223.0
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FC-DSC		18	432	188.1
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FF-DSC		1	13	5.7
SMUD	Rancho Seco	PWR	A1	Site Specific	2001	Standardized NUHOMS	NUHOMS FO-DSC		2	48	20.9

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 ³ Loaded ³	Assemblies Stored ³	MTiHM (Based On Average Assembly) ³
Southern Cal Edison	SONGS 1	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT1		17	395	172.0
Southern Cal Edison	SONGS 2	PWR	A2	General License	2003	Advanced NUHOMS	NUHOMS 24PT4		33	792	344.9
Southern Nuclear	Farley	PWR	C2	General License	2005	HI-STORM 100	MPC-32 (HI-STORM)		29	928	404.1
Southern Nuclear	Hatch	BWR	C2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)		3	204	36.4
Southern Nuclear	Hatch	BWR	C2	General License	2000	HI-STORM 100	MPC-68 (HI-STORM)		58	3944	704.4
Southern Nuclear	Vogtle	PWR	C2	General License	2013	HI-STORM 100	MPC-32 (HI-STORM)		13	416	181.2
TVA	Browns Ferry	BWR	C2	General License	2005	HI-STORM 100	MPC-68 (HI-STORM)		45	3060	546.5
TVA	Sequoyah	PWR	C2	General License	2004	HI-STORM 100	MPC-32 (HI-STORM)		44	1408	613.2
Xcel Energy	Monticello	BWR	C2	General License	2008	Standardized NUHOMS	NUHOMS 61BT		10	610	108.9
Xcel Energy	Monticello	BWR	C2	General License	2013	Standardized NUHOMS	NUHOMS 61BTH		5	305	54.5
Xcel Energy	Prairie Island	PWR	C2	Site Specific	1993	TN-40		TN-40	29	1160	505.2
Xcel Energy	Prairie Island	PWR	C2	Site Specific	2013	TN-40		TN-40HT	9	360	156.8

Dry Storage Cask Inventory Assessment

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 (Based On Average Assembly) ²
YAEC	Yankee Rowe	PWR	A1	General License	2002	NAC-MPC	Yankee-MPC		15	533	232.1
Zion Solutions	Zion	PWR	A1	Site Specific	2013	NAC-MAGNASTOR	TSC PWR		61	2226	969.4
29 Total Utilities	69 Total Reactor Sites					21 Total Cask Systems	31 Total Canister Families	8 Total Bare Fuel Casks	2,105 Total Canisters and Bare Fuel Casks Loaded	84,761 Total Assemblies Loaded	25,465 Total MTiHM Loaded
									1,907 Canisters Loaded	75,963 Assemblies Loaded in Canisters	22,822 MTiHM Loaded in Canisters
									198 Bare Fuel Casks Loaded	8,798 Assemblies Loaded in Bare Fuel Casks	2,644 MTiHM Loaded in Bare Fuel Casks

Notes:

- 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.
- 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.

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
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
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74M	Storage and Transportation	General License
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74T	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
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	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

Dry Storage Cask Inventory Assessment

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

Utility	Reactor	Site Characteristic¹	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 and Transportation	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 and Transportation	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
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License

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

Utility	Reactor	Site Characteristic¹	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	MSB-Long	Storage Only	General License
Entergy	ANO	C2	VSC-24	MSB	MSB-Short	Storage Only	General License
Entergy	ANO	C2	VSC-24	MSB	MSB-Standard	Storage Only	General License
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Entergy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
Entergy	Grand Gulf	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-68F (HI-STORM)	Storage and Transportation	General License
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Entergy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
Entergy	Indian Point 1	B1 (see Note 2)	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Entergy	Indian Point 1	B1 (see Note 2)	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	MSB-Long	Storage Only	General License
Entergy	Palisades	C2	VSC-24	MSB	MSB-Short	Storage Only	General License
Entergy	Palisades	C2	VSC-24	MSB	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	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
Entergy	River Bend	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-68F (HI-STORM)	Storage and Transportation	General License
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License

Dry Storage Cask Inventory Assessment

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

Utility	Reactor	Site Characteristic¹	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Entergy	Vermont Yankee	A2 (see Note 3)	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Entergy	Vermont Yankee	A2 (see Note 3)	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Entergy	Vermont Yankee	A2 (see Note 3)	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Entergy	Vermont Yankee	A2 (see Note 3)	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	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
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 1	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68F (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-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Exelon	Dresden 2 & 3	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	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	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	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	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
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

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

Utility	Reactor	Site Characteristic¹	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
Exelon	Oyster Creek	Fully Operational	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	Storage and Transportation	General License
Exelon	Oyster Creek	Fully Operational	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	Storage and Transportation	General License
Exelon	Oyster Creek	Fully Operational	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	Storage and Transportation	General License
Exelon	Oyster Creek	Fully Operational	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	Storage and Transportation	General License
Exelon	Quad Cities	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
Exelon	Quad Cities	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Exelon	Quad Cities	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Exelon	Quad Cities	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
FirstEnergy	Beaver Valley	Fully Operational	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-M	Storage and Transportation	General License
FirstEnergy	Beaver Valley	Fully Operational	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-S	Storage and Transportation	General License
FirstEnergy	Davis-Besse	Fully Operational	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Storage Only	General License
FirstEnergy	Davis-Besse	Fully Operational	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Storage Only	General License
FirstEnergy	Perry	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
FirstEnergy	Perry	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
FirstEnergy	Perry	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
FirstEnergy	Perry	Fully Operational	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
Luminant	Comanche Peak	Fully Operational	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
Luminant	Comanche Peak	Fully Operational	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
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	MSB-Long	Storage Only	General License
NextEra Energy	Point Beach	C2	VSC-24	MSB	MSB-Short	Storage Only	General License
NextEra Energy	Point Beach	C2	VSC-24	MSB	MSB-Standard	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

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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
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	Storage and Transportation	General License
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Storage Only	General License
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	Storage and Transportation	General License
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	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

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

Utility	Reactor	Site Characteristic¹	Cask System	Canister Family	Canister	Licensed Purpose	Canister License Type
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
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-STAR 100	MPC-68 (HI-STAR)	MPC-68F (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-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	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 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	Storage and Transportation	General License
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Storage Only	General License
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	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

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
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 and Transportation	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.

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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
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)
Consumers	Big Rock Point	A1	FuelSolutions	W74	W150-Long
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)

Dry Storage Cask Inventory Assessment

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	Vertical Concrete Cask (VCC)-Long
Entergy	ANO	C2	VSC-24	MSB	Vertical Concrete Cask (VCC)-Short
Entergy	ANO	C2	VSC-24	MSB	Vertical Concrete Cask (VCC)-Standard
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

Dry Storage Cask Inventory Assessment

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	Vertical Concrete Cask (VCC)-Long
Entergy	Palisades	C2	VSC-24	MSB	Vertical Concrete Cask (VCC)-Short
Entergy	Palisades	C2	VSC-24	MSB	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	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

Dry Storage Cask Inventory Assessment

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)

Dry Storage Cask Inventory Assessment

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	Vertical Concrete Cask (VCC)-Long
NextEra Energy	Point Beach	C2	VSC-24	MSB	Vertical Concrete Cask (VCC)-Short
NextEra Energy	Point Beach	C2	VSC-24	MSB	Vertical Concrete Cask (VCC)-Standard
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
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100 Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100A Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	HI-STORM 100SA Storage Overpack

Dry Storage Cask Inventory Assessment

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

Utility	Reactor	Site Characteristic ¹	Cask System	Canister Family	Storage Cask
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100 Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100A Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(232) Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S(243) Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-218 Version B Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100S-229 Version B Storage Overpack
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	HI-STORM 100SA 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	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	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

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:

- 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
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
Consumers	Big Rock Point	A1	General License	FuelSolutions	W74	W100
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
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

Dry Storage Cask Inventory Assessment

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

Dry Storage Cask Inventory Assessment

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	MTC
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

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic ¹	License Type	Cask System	Canister Family	Transfer Cask
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
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	MTC

Dry Storage Cask Inventory Assessment

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	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
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

Dry Storage Cask Inventory Assessment

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic ¹	License Type	Cask System	Canister Family	Transfer Cask
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

Dry Storage Cask Inventory Assessment

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

Dry Storage Cask Inventory Assessment

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	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

Dry Storage Cask Inventory Assessment

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic¹	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

Dry Storage Cask Inventory Assessment

Table D-1 Transfer Casks (continued)

Utility	Reactor	Site Characteristic ¹	License Type	Cask System	Canister Family	Transfer Cask
PSE&G	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100
PSE&G	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 100D
PSE&G	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125
PSE&G	Hope Creek	C2	General License	HI-STORM 100	MPC-68 (HI-STORM)	HI-TRAC 125D
PSE&G	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100
PSE&G	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 100D
PSE&G	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125
PSE&G	Salem	C2	General License	HI-STORM 100	MPC-32 (HI-STORM)	HI-TRAC 125D
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	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	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

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:

- 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 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	12	384
AEP	D.C.Cook	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
APS	Palo Verde	C2	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	125	3000
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	1019
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74M	TS125	7	441
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74T	TS125		
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
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Detroit Edison	Fermi 2	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
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		

Dry Storage Cask Inventory Assessment

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	19	608
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	22	704
Dominion	Surry	C2	NUHOMS HD	NUHOMS 32PTH	NUHOMS 32PTH	MP197HB	24	768
Duke	Brunswick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	19	1159
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	5	185
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	6	222
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	1056
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available		
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PL	Not Available	40	960
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available		
Duke	Oconee	C2	Standardized NUHOMS	NUHOMS 24PHB	NUHOMS 24PHBL	Not Available	50	1200
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		

Dry Storage Cask Inventory Assessment

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	2448
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Energy Northwest	Columbia	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Energy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24 (HI-STORM)	HI-STAR 100	24	576
Energy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24E (HI-STORM)	HI-STAR 100		
Energy	ANO	C2	HI-STORM 100	MPC-24 (HI-STORM)	MPC-24EF (HI-STORM)	HI-STAR 100		
Energy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	18	576
Energy	ANO	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
Energy	ANO	C2	VSC-24	MSB	MSB-Long	Not Available	24	576
Energy	ANO	C2	VSC-24	MSB	MSB-Short	Not Available		
Energy	ANO	C2	VSC-24	MSB	MSB-Standard	Not Available		
Energy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	21	1428
Energy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Energy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Energy	Fitzpatrick	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Energy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	23	1564
Energy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Energy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Energy	Grand Gulf	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Energy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	5	160
Energy	Indian Point 1	B1	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
Entergy	Indian Point 2 & 3	B2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	25	800
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	MSB-Long	Not Available	18	432
Entergy	Palisades	C2	VSC-24	MSB	MSB-Short	Not Available		
Entergy	Palisades	C2	VSC-24	MSB	MSB-Standard	Not Available		
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	3	204
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Entergy	Pilgrim	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	23	1564
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Entergy	River Bend	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		

Dry Storage Cask Inventory Assessment

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	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	13	884
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Entergy	Waterford	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	13	416
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	12	384
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	16	512
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	48	1152
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 24P	NUHOMS 24PS	Not Available		
Exelon	Calvert Cliffs	C2	Standardized NUHOMS	NUHOMS 32P	NUHOMS 32P	Not Available	28	896
Exelon	Dresden	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68 (HI-STAR)	HI-STAR 100	4	272
Exelon	Dresden	B2	HI-STAR 100	MPC-68 (HI-STAR)	MPC-68F (HI-STAR)	HI-STAR 100		
Exelon	Dresden	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	59	4012
Exelon	Dresden	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Exelon	Dresden	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Exelon	Dresden	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	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
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L100	MP197HB	6	192
Exelon	Ginna	C2	Standardized NUHOMS	NUHOMS 32PT	NUHOMS 32PT-L125	MP197HB		
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	16	1088
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Exelon	LaSalle	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	19	1159
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Limerick	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	9	549
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		

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	Nine Mile Point	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	4	244
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	37	2516
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Exelon	Quad Cities	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
FirstEnergy	Beaver Valley	C2	Standardized NUHOMS	NUHOMS 37PTH	NUHOMS 37PTH-M	MP197HB	2	74
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		

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	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	14	952
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
FirstEnergy	Perry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Luminant	Comanche Peak	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	22	704
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	1434
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	1220
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		

Dry Storage Cask Inventory Assessment

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	Point Beach	C2	VSC-24	MSB	MSB-Long	Not Available	16	384
NextEra Energy	Point Beach	C2	VSC-24	MSB	MSB-Short	Not Available		
NextEra Energy	Point Beach	C2	VSC-24	MSB	MSB-Standard	Not Available		
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		

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
PG&E	Diablo Canyon	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	29	928
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	674
Portland	GE Trojan	A1	HI-STORM TranStor	MPC-24EF (TranStor)	MPC-24EF (TranStor)	HI-STAR 100	5	116
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 52B	NUHOMS 52B	Not Available	27	1404
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	48	2928
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	8	488
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
PPL	Susquehanna	C2	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	28	1904
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
PSE&G	Hope Creek	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	16	512
PSE&G	Salem	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		

Dry Storage Cask Inventory Assessment

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
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	29	928
Southern Nuclear	Farley	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
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-STAR 100	MPC-68 (HI-STAR)	MPC-68F (HI-STAR)	HI-STAR 100		
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	58	3944
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Southern Nuclear	Hatch	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Southern Nuclear	Vogtle	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	13	416
Southern Nuclear	Vogtle	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
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	45	3060
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
TVA	Browns Ferry	C2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM)	HI-STAR 100	44	1408
TVA	Sequoyah	C2	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F	Not Available		
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	2226

Notes:

- 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.
- 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
Consumers	Big Rock Point	BWR	A1	General License	2002	FuelSolutions	W74	7	441
Dairyland Power	La Crosse	BWR	A1	General License	2012	NAC-MPC	LACBWR	5	333
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
Dominion	Millstone 1	BWR	B3	General License		Standardized NUHOMS	NUHOMS 61BT	48	2884
Duke	Crystal River	PWR	A3	General License		Standardized NUHOMS	NUHOMS 32PTH1	42	1319
Entergy	Indian Point 1	PWR	B1	General License	2008	HI-STORM 100	MPC-32 (HI-STORM)	5	160
Entergy	Vermont Yankee	BWR	A2	General License	2008	HI-STORM 100	MPC-68 (HI-STORM)	58	3880
Exelon	Dresden 1	BWR	B2	General License	2000	HI-STAR 100	MPC-68 (HI-STAR)	4	272
Exelon	Dresden 1	BWR	B2	General License	2000	HI-STORM 100	MPC-68 (HI-STORM)	10	617
Exelon	Oyster Creek	BWR	Announced Shutdown - Wet and Dry Storage	General License	2002	Standardized NUHOMS	NUHOMS 61BT	63	3817
Exelon	Oyster Creek	BWR	Announced Shutdown - Wet and Dry Storage	General License	2013	Standardized NUHOMS	NUHOMS 61BTH	15	915
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	674
Portland	GE Trojan	PWR	A1	Site Specific	2002	HI-STORM TranStor	MPC-24EF (TranStor)	5	116

Dry Storage Cask Inventory Assessment

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
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
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	72	2668
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
14 Total Utilities	19 Total Reactor Sites					11 Total Cask Systems	22 Total Canister Families	653 Total Canisters or Casks Loaded	26,713 Total Assemblies Stored

Notes:

- 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” is used in the table above to designate Oyster Creek’s intent to shut down by 2019.
- 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	1019
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74M	TS125	7	441
Consumers	Big Rock Point	A1	FuelSolutions	W74	W74T	TS125		
Dairyland Power	La Crosse	A1	NAC-MPC	LACBWR	LACBWR	NAC-STC Transport Cask	5	333
Dominion	Kewaunee	A2	NAC-MAGNASTOR	TSC PWR	TSC PWR	Not Available ³	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		
Dominion	Millstone 1	B3	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	48	2884
Dominion	Millstone 1	B3	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Duke	Crystal River	A3	Standardized NUHOMS	NUHOMS 32PTH1	NUHOMS 32PTH1-L	MP197HB	42	1319
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	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32 (HI-STORM) ⁴	HI-STAR 100	5	160
Entergy	Indian Point 1	B1	HI-STORM 100	MPC-32 (HI-STORM)	MPC-32F ⁴	Not Available		

Dry Storage Cask Inventory Assessment

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
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM) ⁵	HI-STAR 100	58	3880
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM) ⁵	HI-STAR 100		
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF ⁵	Not Available		
Entergy	Vermont Yankee	A2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M ⁵	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-STAR 100	MPC-68 (HI-STAR)	MPC-68F (HI-STAR)	HI-STAR 100		
Exelon	Dresden 1	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68 (HI-STORM)	HI-STAR 100	10	617
Exelon	Dresden 1	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68F (HI-STORM)	HI-STAR 100		
Exelon	Dresden 1	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68FF	Not Available		
Exelon	Dresden 1	B2	HI-STORM 100	MPC-68 (HI-STORM)	MPC-68M	Not Available		
Exelon	Oyster Creek	Announced Shutdown - Wet and Dry Storage	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197	63	3817
Exelon	Oyster Creek	Announced Shutdown - Wet and Dry Storage	Standardized NUHOMS	NUHOMS 61BT	NUHOMS 61BT	MP197HB		
Exelon	Oyster Creek	Announced Shutdown - Wet and Dry Storage	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 1	MP197HB	15	915
Exelon	Oyster Creek	Announced Shutdown - Wet and Dry Storage	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTH Type 2	MP197HB		
Exelon	Oyster Creek	Announced Shutdown - Wet and Dry Storage	Standardized NUHOMS	NUHOMS 61BTH	NUHOMS 61BTHF	MP197HB		
Maine Yankee	Maine Yankee	A1	NAC-UMS	UMS-PWR	TSC-Class 1	Universal Transport Cask	60	1434
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		

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
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	674
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
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	72	2668
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 ³	61	2226

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

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” is used in the table above to designate Oyster Creek’s intent to shut down by 2019.
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. The MAGNATRAN transport cask is not currently licensed. The safety analysis report is currently under review by the NRC (Docket Number 71-9356).
4. All fuel stored at Indian Point 1 is stored in MPC-32 canisters. No MPC-32F canisters are used.
5. All fuel stored at Vermont Yankee is stored in MPC-68 or MPC-68FF canisters. No MPC68F or MPC-68M canisters are used.