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ATTN: Document Control Desk
Director, Division of Fuel Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

South Texas Project
Units 1 and 2
Docket Nos. 50-498; 50-499; 72-1041
Independent Spent Fuel Storage Installation
Request for Exemption from Various Part 72 Regulations Resulting from
Fuel Basket Design Control Compliance

Pursuant to 10 CFR 72.7, "Specific Exemptions," STP Nuclear Operating Company (STPNOC) requests an exemption from the requirements of 10 CFR 72.212(a)(2), 10 CFR 72.212(b)(3), 10 CFR 72.212(b)(5)(i), 10 CFR 72.212(b)(11), and 10 CFR 72.214 for the STP ISFSI. Specifically, an exemption is requested for the Holtec Multi-Purpose Canisters (MPC) with a Continuous Basket Shim (CBS) design variant condition requiring analysis of a postulated non-mechanistic tip-over event using NRC approved methods of evaluation (MOE).

The requested exemption will allow the following:

- Future loading of MPC-37 canisters with MPC-37 CBS variant for the planned 2025 loading campaign under Certificate of Compliance (CoC) 1032, Amendment 2, as listed in Table 1 of the Attachment.
- Shuffling previously loaded MPC-37 CBS variant canisters on the ISFSI pad prior to the planned 2025 loading campaign, as listed in Table 2 of the Attachment.

STPNOC requests approval of this exemption by July 8, 2024, to support the next loading campaign preparations, including loading two MPC-37 CBS canisters, which is scheduled to begin March 2025.

Additional supporting information and analyses for this exemption request is in the Attachment.

There are no commitments in this submittal.

If there are any questions regarding this submittal, please contact Chris Warren at (361) 972-7293 or me at (361) 972-7806.

C. H. Georgeson Digitally signed by C. H. Georgeson Date: 2024.05.07 11:10:11 -05'00'
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Attachment: Request for Specific Exemption from Certain Requirements of 10 CFR 72.212 and 10 CFR 72.214 for STPNOC

cc:
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Attachment

REQUEST FOR SPECIFIC EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR 72.212 and 10 CFR 72.214 FOR STPNOC

REQUEST FOR SPECIFIC EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR 72.212 and 10 CFR 72.214 FOR STPNOC

1. Description

The Holtec, International, Inc., (Holtec) HI-STORM FW dry cask storage (DCS) system is designed to hold, and store spent fuel assemblies for independent spent fuel storage installation (ISFSI) deployment. The system is listed in 10 CFR 72.214 as Certificate of Compliance (CoC) Number 1032 (Reference 1). This system is in use by South Texas Project Nuclear Operating Company (STPNOC) at the South Texas Project Electric Generating Station (STP), in accordance with 10 CFR 72.210, “General License Issued.”

Pursuant to 10 CFR 72.7, “Specific Exemptions,” STPNOC requests an exemption from the requirements of 10 CFR 72.212(a)(2), 10 CFR 72.212(b)(3), 10 CFR 72.212(b)(5)(i), 10 CFR 72.212(b)(11), and 10 CFR 72.214 for the STP ISFSI. These regulations require, in part, that a licensee store its irradiated fuel in compliance with the terms and conditions of the spent fuel storage cask’s CoC. Specifically, an exemption is requested for the Holtec Multi-Purpose Canister 37 (MPC-37) with a Continuous Basket Shim (CBS) design variant condition requiring analysis of a postulated non-mechanistic tip-over event using NRC approved methods of evaluation (MOE).

The requested exemption will allow the following:

- Future loading of MPC-37 canisters with MPC-37 CBS design for the planned 2025 loading campaign under Certificate of Compliance (CoC) 1032, Amendment 2, as listed in Table 1.
- Shuffling previously loaded MPC-37 CBS canisters on the ISFSI pad prior to the planned 2025 loading campaign, as listed in Table 2.

The exemption is needed because although Holtec performed a non-mechanistic tip-over analysis with favorable results and subsequently implemented the CBS design variant under 10 CFR 72.48, the NRC issued Severity Level IV violations (Reference 2) that indicated that the design variant should have resulted in an amendment to the HI-STORM FW CoC 1032. Specifically, the NRC determined that the non-mechanistic tip-over analysis performed for the CBS design included changes to elements of a previously approved method of evaluation (MOE) as well as the use of a new or different MOE thus requiring prior NRC approval. It is unknown when an NRC approved MOE for non-mechanistic tip-over analysis of the MPC-37 CBS would be expected.

Table 1 – Unloaded Affected MPCs with CBS Design

MPC Serial Number (STP Equipment Number)	HI-STORM Serial Number (STP Equipment Number)	ISFSI Pad Placement Date
247 (DAO019MMP0015)	246 (DBO019CCK0014)	Planned 2025
251 (DAO019MMP0019)	250 (DBO019CCK0018)	Planned 2025

Table 2 - Fuel-Loaded MPC-37 CBS Canisters

MPC Serial Number (STP Equipment Number)	HI-STORM Serial Number (STP Equipment Number)	ISFSI Pad Location (Ref 6)
245 (DAO019MMP0013)	245 (DBO019CCK0013)	PC-10
246 (DAO019MMP0014)	247 (DBO019CCK0015)	PC-08
248 (DAO019MMP0016)	248 (DBO019CCK0016)	PC-07
249 (DAO019MMP0017)	249 (DBO019CCK0017)	PC-06
250 (DAO019MMP0018)	251 (DBO019CCK0019)	PB-10
252 (DAO019MMP0020)	252 (DBO019CCK0020)	PC-09
253 (DAO019MMP0021)	253 (DBO019CCK0021)	PB-08
254 (DAO019MMP0022)	254 (DBO019CCK0022)	PB-07
255 (DAO019MMP0023)	255 (DBO019CCK0023)	PB-06
256 (DAO019MMP0024)	256 (DBO019CCK0024)	PB-09

Note: All affected MPC-37 CBS canisters were fabricated and loaded under CoC 1032, Amendment 2 and HI-STORM FW FSAR Revision 5.

2. Background

STPNOC currently utilizes the HI-STORM FW System under CoC 1032, Amendment 2 for dry storage of spent nuclear fuel in specific Multi-Purpose Canisters (MPC) (i.e., MPC-37 canisters). All design features and contents must fully meet CoC 1032, Amendment 2, operations must occur within the Limiting Conditions for Operations (LCOs), and the site must demonstrate that they meet all site-specific parameters as documented per 10 CFR 72.212.

Holtec developed a variant of the design for the MPC-37 known as MPC-37 Continuous Basket Shim (CBS). The MPC-37 CBS basket, like the previously certified MPC-37, is made of Metamic-HT and has the same geometric dimensions and assembly configuration. The only changes implemented through the new variant pertain to the external shims which are between the basket periphery and the MPC shell, and the elimination of the difficult to manufacture friction-stir-weld (FSW) seams joining the raw edges of the basket panels.

The CBS variant calls for longer panels of Metamic-HT. The projections of the Metamic panels provide an effective means to fix the shims to the basket using a set of stainless-steel fasteners. These fasteners don't carry any primary loads, except for the dead weight of the shims when the MPC is oriented vertically, which generates minimal stress in the fasteners. The fasteners are made of Alloy X stainless material, which is a pre-approved material for the MPCs in the HI-STORM FW system. Fixing the shim to the basket has the added benefit of improving the heat transfer path from the stored fuel to the external surface of the MPC.

Holtec originally implemented these design variants under the provisions of 10 CFR 72.48, however, the NRC has issued three Severity Level IV violations that indicated that these design variants should have resulted in an amendment to the HI-STORM FW CoC 1032.

A multi-disciplinary NRC team of thermal, criticality, shielding, and structural staff assessed a potential structural failure of the fuel basket during accident conditions for the HI-STORM 100 and HI-STORM Flood/Wind (FW) dry cask storage systems to determine the safety significance of these violations. The conclusions were documented and made public in NRC Memorandum, "Safety Determination of a Potential Structural Failure of the Fuel Basket During Accident Conditions for the HI-STORM 100 and HI-STORM Flood/Wind Dry Cask Storage Systems," (Reference 3).

3. Basis for Approval of Exemption Request

In accordance with 10 CFR 72.7, the NRC may, upon application by an interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

a) Authorized by Law

This exemption would allow STPNOC to continue to store previously loaded and load additional canisters of the MPC-37 CBS design. The NRC issued 10 CFR 72.7 under the authority granted to it under Section 133 of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. § 10153. Section 72.7 allows the NRC to grant exemptions from the requirements of 10 CFR Part 72. Granting the proposed exemption will not endanger life or property, or the common defense and security, and is otherwise in the public interest. Therefore, the exemption is authorized by law.

b) Will not Endanger Life or Property or the Common Defense and Security

The NRC has performed a safety assessment (Reference 3) to evaluate the loading and storage of the MPC-37 CBS variant without an NRC approved tip-over analysis. This evaluation (detailed below) assumed basket failure due to the non-mechanistic tip-over event but "[…] concluded that the consequences of a basket failure have a very low safety significance provided the confinement boundary is maintained and the fuel is kept in a dry storage condition. As these conditions are demonstrated to be met during a tip-over event, the staff determined that there was no need to take an immediate action with respect to loaded HI-STORM FW and HI-STORM 100 DCS systems with the continuous basket shim (CBS) fuel basket designs." Based on the NRC safety assessment detailed below and summarized here, the proposed exemption does not endanger life or property or the common defense and security.

c) Otherwise in the Public Interest

It is in the public's interest to grant an exemption, since dry storage places the fuel in an inherently safe, passive system, and the exemption would permit the continued storage of already loaded canisters until full compliance is achieved. This exemption would also allow upcoming loading campaigns to proceed on time to move fuel into the dry storage condition and maintain the ability to offload fuel from the reactor, thus allowing continued safe reactor operation.

Maintain Full Core Discharge Capabilities

Full core offload (FCOL) margin is based on estimates for the cells needed during outage movements, the number of inaccessible/equipment used cells, the open interface cells required between fuel racks of different regions, and cells needed for sudden offloading of the core.

Currently, STP Unit 1 has positive FCOL margin in the SFP. STPNOC maintains a FCOL margin to account for unplanned outages and DCS component fabrication challenges that could drive rescheduling of a DCS campaign. This margin was adversely impacted after loading only four of the planned six Unit 1 casks in 2022 and will be further impacted after the Unit 1 2024 refueling outage. Loading the remaining two MPC-37 CBS variant casks from the 2022 campaign will allow STPNOC to restore the planned FCOL margin.

Decay Heat Removal Requirements

Each spent fuel bundle contributes to the decay heat removal demand on the spent fuel pool cooling system. The estimated decay heat from the spent fuel pool that is scheduled to be moved into dry storage using the two MPC-37 CBS canisters in 2025 is approximately 2%. Additionally, removing spent fuel bundles from the spent fuel pool allows for dispersion of the remaining heat load.

Accident Consequences and Probability

Design Basis Accidents associated with the spent fuel pool include a loss of spent fuel pool cooling event and a fuel handling accident. The consequence of a loss of spent fuel pool cooling is made worse due to the approximately 2% additional decay heat load contributing to increasing spent fuel pool temperatures, reducing the time to boil duration for the spent fuel pool during a loss of spent fuel pool cooling event.

The consequence of a fuel handling accident is not impacted; however, the likelihood of a fuel handling accident is increased based on the additional fuel moves required to manage spent fuel pool loading with extra assemblies in the pool.

Margin to Capacity

Once spent fuel pool capacity is reached, the ability to refuel the operating reactor is lost thus taking away a highly reliable clean energy source.

Logistical Considerations and Cascading Impacts

DCS campaigns are scheduled, budgeted, and planned several years in advance of the actual performance. Campaigns are scheduled based on planned refueling outages, new fuel receipt, and other enterprise-level projects while also considering the availability of specialty resources (equipment, vendors) needed to complete a campaign. These special resources are utilized by other sites for outages and DCS campaigns, further restricting availability on shorter-term requests for support.

The largest cascading impact is to STPNOC's planned transition to a 24-month fuel cycle using doped pellets, and Accident Tolerant Fuel (ATF) concept. Preparations for this transition include removing additional fuel assemblies from the spent fuel pools prior to 2029 from what was previously planned under STPNOC's current 18-month refuel cycle. The additional assemblies will need to be removed to ensure compliance with a revised spent fuel pool criticality analysis for the ATF.

Delaying the ability to load empty MPC-37 CBS canisters and relocate previously loaded MPC-37 CBS canisters could result in schedule delays and additional costs for implementation of the improved fuel design.

Conclusion

Maintaining adequate full core offload margin ensures flexibility necessary for completing refueling outages, implementing enterprise projects, and sustained safe and efficient operation of the nuclear facilities.

Additionally, based on the logistic and financial impacts on STPNOC as discussed above when compared to the minimal safety benefit discussed in the NRC safety memo, delaying the use of the MPC-37 CBS canisters does not provide a measurable public benefit.

In contrast, approval of the referenced exemption request supports the continued safe, efficient, cost-effective, and long-term operation of STP.

4. Technical Justification

The MPC-37 CBS basket assembly features the same fuel storage cavity configuration as the certified standard MPC-37 configuration. The way the inter-panel connectivity is established and by which the aluminum shims are held in place outside the basket is changed. The standard design utilizes friction stir welded basket corners and free-standing shims.

This change is made such that, the loose aluminum shims around the basket periphery used in the original MPC-37 design are replaced with integrated aluminum shims that are mechanically fastened (bolted) to basket panel extensions that protrude into the annular region between the basket and the enclosure vessel.

The addition of these bolted shims eliminates the need for the friction stir welds located in the external periphery of the Metamic-HT fuel basket. All other design characteristics of the fuel basket are unchanged using the CBS variant.

Regardless of their design, the primary design functions of the basket shims are to facilitate heat transfer away from the fuel basket and spent fuel assemblies and to provide lateral support of the fuel basket during the non-mechanistic tip over accident. The primary design functions of the Metamic-HT fuel basket itself, regardless of shim configuration, are to provide structural support of the fuel assemblies and perform the criticality control design function for the system.

Thermal

The NRC staff used the structural assessment to confirm there was no loss of confinement integrity and considered the thermal impacts of a postulated non-mechanistic tip-over accident. The staff considered fuel debris that might cause hot spots near the bottom of the MPC (on its side from a postulated tip-over). The staff noted that there might be some local increase in temperatures, but no temperatures that would challenge the MPC confinement based on its stainless-steel material. The thermal review concludes, “the containment will remain intact and therefore the non-mechanistic tip-over accident condition does not result in significant safety consequences for the HI-STORM FW and HI-STORM 100 storage systems.”

Structural and Confinement

The hypothetical tip-over accident is the most significant challenge of the structural performance of the basket. The primary safety function is to prevent a criticality event, and as stated below, the criticality assessment determined no safety concerns under a hypothetical tip-over including basket failure.

The NRC staff assessment (Reference 3) concludes that the MPC, which is the confinement boundary, maintains its structural integrity during a tip-over event and, “the staff concludes that the MPC confinement boundary maintains its structural integrity and no water is able to enter the interior of the MPC during accident conditions.” The NRC staff also acknowledges that consistent with the Final Safety Analysis Report (FSAR) (Reference 4), the cladding is not relied on for any safety conclusions, “there is no requirement to demonstrate structural integrity of the cladding.” Retrievability requirements continue to be met, since as stated above, the MPC maintains its integrity.

The NRC staff also considered natural phenomena hazards (NPH) and concluded, “the structural failure of the fuel baskets during these NPH accident conditions is unlikely.” However, even if a basket failure occurs, the criticality evaluation below demonstrates that the fuel will be maintained subcritical. “Therefore, the staff concludes that the NPH accident conditions do not result in significant safety consequences for the HI-STORM FW and HI-STORM 100 storage systems with the CBS fuel basket designs,” (Reference 3).

Finally, the structural assessment considered the handling operations for the DCS systems. The system is either handled with single failure proof devices where a drop is considered non-credible or held to a lift height which has been demonstrated acceptable via a drop analysis. The drop analysis shows that there are no significant loads on the basket that would challenge the structural integrity. “Therefore, a similar conclusion to that for the non-mechanistic tip-over can be made for dry cask handling accident conditions. The MPC confinement boundary maintains its structural integrity and no water can enter the interior of the MPC. Should the fuel basket fail to maintain its structural integrity during stack-up the fuel will be maintained in a subcritical condition,” (Reference 3).

As required by Condition 4 of CoC 1032, Amendment 2 (Reference 1), STPNOC performed and documented in the STPNOC 72.212 Evaluation Report (Reference 5) a plant-specific review of the heavy load handling procedures to show operational compliance with heavy load requirements when performing DCS operations inside and outside Part 50 structures. This review documents the following:

> *Movement of heavy loads at STP Units 1 and 2, including those associated with dry cask storage, is governed by procedures 0PGP03-ZA-0069 (Reference 6.30.12) and 0PGP03-ZI-0026 (Reference 6.30.13). Heavy load moves required to facilitate dry cask storage activities in the Fuel Handling Building are performed in accordance with procedures 0DCS03-ZO-0003, -0005, and -0007 (References 6.30.3, 6.30.5, and 6.30.8). Movement of a fuel-loaded HI-STORM overpack and MPC-37 outside of the STP Unit 1 or Unit 2 Fuel Handling Buildings is performed using a vertical cask transporter (VCT). The VCT meets all of the design requirements specified in 5.2.c [CoC 1032, Amendment 2, Appendix A] above (Reference 6.32).*

The following STPNOC procedures are used for handling an MPC inside and outside Part 50 structures:

- 0DCS01-ZO-0001, HI-STORM Transport Operations
- 0DCS03-ZO-0003, MPC Loading Operations
- 0DCS03-ZO-0005, MPC Transfer Operations
- 0DCS03-ZO-0007, MPC Unloading Operations
- 0PGP03-ZA-0069, Control of Heavy Loads
- 0PGP03-ZI-0026, Lifting, Rigging, and Material Handling

Shielding and Criticality

In Reference 3, the NRC staff assessed the potential for a criticality incident under a complete failure of the basket, which could result in basket material and fuel debris at the bottom of the MPC. The NRC staff relied on documented studies related to the enrichment of uranium needed to achieve criticality in an unmoderated, unreflected environment. The allowable contents have enrichment limits well below that in the studies and the neutron absorbing material would still be present. Therefore, the NRC staff concluded, “there is no criticality safety concern for the CBS basket variants for both the HI-STORM 100 and FW casks under the assumption of fuel basket failure.”

Also in Reference 3, the NRC staff reviewed the shielding impact and concluded, “as the damaged is localized and the vast majority of the shielding material remains intact, the effect on the dose at the site boundary is negligible. Therefore, the site boundary doses for the loaded HI-STORM FW overpack for accident conditions are equivalent to the normal condition doses, which meet the Title 10 of the *Code of Federal Regulations* (10 CFR) Section 72.106 radiation dose limits.”

Materials

There is no change in the materials used in the CBS variant of the basket compared to the original design of the MPC and basket. Therefore, there is no new material related safety concern.

Safety Conclusion

The above analysis demonstrates that the MPC maintains all safety functions, and no changes are needed to the operations or allowable contents of the storage system. The MPC-37 CBS variant meets the criteria outlined in the HI-STORM FW FSAR, and thus meets all requirements of 10 CFR 72. Therefore, the MPC-37 CBS should be allowed for loading and storage in the HI-STORM FW system.

5. Environmental Consideration

The proposed exemption does not meet the eligibility criterion for categorical exclusion for performing an environmental assessment as set forth in 10 CFR 51.22(c)(25) because the exemption does not satisfy the requirement of 10 CFR 51.22(c)(25)(vi). Specifically the request does not involve exemption from any of the following requirements: (A) Recordkeeping requirements; (B) Reporting requirements; (C) Inspection or surveillance requirements; (D) Equipment servicing or maintenance scheduling requirements; (E) Education, training, experience, qualification, requalification or other employment suitability requirements; (F) Safeguard plans, and materials control and accounting inventory scheduling requirements; (G) Scheduling requirements; (H) Surety, insurance or indemnity requirements; or (I) Other requirements of an administrative, managerial, or organizational nature.

STPNOC has evaluated the environmental impacts of the proposed exemption request and has determined that neither the proposed action nor the alternative to the proposed action will have an adverse impact on the environment. Therefore, neither the proposed action nor the alternative requires any Federal permits, licenses, approvals, or other entitlements.

a) *Environmental Impacts of the Proposed Action*

   The STP ISFSI is a radiologically controlled area on the plant site. The area considered for potential environmental impact because of this exemption request is the area in and surrounding the ISFSI.

   The interaction of a loaded HI-STORM FW system with the environment is through thermal, shielding, and confinement design functions for the cask system.

In Reference 3, the NRC documented the following conclusion:

"A non-mechanistic tip-over accident condition is considered a hypothetical accident scenario and may affect the HI-STORM FW overpack by resulting in limited and localized damage to the outer shell and radial concrete shield. As the damage is localized and the vast majority of the shielding material remains intact, the effect on the dose at the site boundary is negligible. Therefore, the site boundary doses for the loaded HI-STORM FW overpack for accident conditions are equivalent to the normal condition doses, which meet the Title 10 of the Code of Federal Regulations (10 CFR) Section 72.106 radiation dose limits."

The STPNOC ISFSI Dose Rate calculation demonstrating compliance with 10 CFR 72.104 is documented in Section 5.3 of the STPNOC 72.212 Evaluation Report, Revision 3. The results of the analysis are provided in Section 5.3.1.2.

Regarding compliance with 10 CFR 72.106, Section 12.2 of the HI-STORM FW FSAR, Revision 5 (Reference 5) demonstrates that there are no accidents which would significantly affect shielding effectiveness of the HI-STORM FW system and that the requirements of 10 CFR 72.106 are easily met by the HISTORM FW system for the postulated tip-over event.

The distance from the ISFSI fence to the Owner Controlled Area Boundary is conservatively estimated at 1400 meters, based on publicly available maps, which exceeds the 100-meter minimum distance specified in 10 CFR 72.106.

Based on the above and the NRC's conclusion that damage is localized and the vast majority of shielding material remains intact, compliance with 10 CFR 72.104 and 10 CFR 72.106 is not impacted by a non-mechanistic tip-over event resulting in basket failure. Therefore, compliance is not impacted by approving the subject exemption request.

There are no gaseous, liquid, or solid effluents (radiological or non-radiological), radiological exposures (worker or member of the public) or land disturbances associated with the proposed exemption. Therefore, approval of the requested exemption has no impact on the environment.

b) Adverse Environmental Effects Which Cannot be Avoided Should the Exemption be Approved

Since there are no environmental impacts associated with approval of this exemption, there are no adverse environmental effects which cannot be avoided should the exemption request be approved.

c) *Alternative to the Proposed Action*

In addition to the proposed exemption request, alternative action has been considered. Specifically, the existing MPC-37 CBS canister would need to be unloaded and re-loaded into the older design MPC-37 canisters. Future loading campaigns would also need to be delayed until older design canisters can be fabricated and delivered to site.

In addition, the reflooding of the MPCs, removal of fuel assemblies, and replacement into a different MPC would result in additional doses and handling operations with no added safety benefit, since it has been demonstrated that the MPC maintains all its safety functions.

d) *Environmental Effects of the Alternatives to the Proposed Action*

There are no environmental impacts associated with the alternative to the proposed action.

e) *Environmental Conclusion*

As a result of the environmental assessment, the continued storage and future use of MPC-37 CBS variant at STP is in the public interest in that it avoids unnecessary additional operations and incurred dose that would result from the alternative to the proposed action.

6. Conclusion

As the safety assessment and environmental review above demonstrate, the HI-STORM FW system with the MPC-37 CBS variant canister is capable of performing required safety functions and is capable of mitigating the effects of design basis accidents (DBAs). Therefore, continued use of the subject canisters, even though the non-mechanistic tip-over analysis had deviated from previously approved methods of evaluation, does not present a threat to public and environmental safety.

STPNOC has reviewed the requirements in 10 CFR 72 and determined that an exemption to certain requirements in 72.212 and 72.214 are necessary. This exemption request would allow the continued storage and future loading of the Holtec HI-STORM FW MPC-37 CBS systems currently in non-compliance for the term specified in the CoC and allow loading of two empty MPC-37 CBS canisters. The exemption provided herein meets the requirements of 10 CFR 72.7.

Precedent

1. Approved Exemption for MPC CBS Design Variant for Dresden Nuclear Power Station Units 2 and 3; dated April 1, 2024; ADAMS Accession number ML24065A482

2. Approved Exemption for MPC CBS Design Variant for Watts Bar Nuclear Plant Units 1 and 2; dated April 17, 2024; ADAMS Accession number ML2408A060

3. Approved Exemption for MPC CBS Design Variant for Susquehanna Steam Electric Station Units 1 and 2; dated April 22, 2024; ADAMS Accession number ML24087A069

References

1 Holtec International – HI-STORM FW MPC Storage System, Certificate of Compliance No. 1032, Amendment 2, dated November 7, 2016 (ML16280A017)

2 NRC letter to Holtec, “Holtec International – Notice of Violation; The U.S. Nuclear Regulatory Commission Inspection Report No. 07201014/2022-201,” dated January 30, 2024 (ML24016A190)

3 NRC Memorandum, “Safety Determination of a Potential Structural Failure of the Fuel Basket During Accident Conditions for the HI-STORM 100 and HI-STORM Flood/Wind Dry Cask Storage Systems,” dated January 31, 2024 (ML24018A085)

4 Holtec International – Final Safety Analysis Report on the HI-STORM FW MPC Storage System, Holtec Report No. HI-2114830, Revision 5, dated June 20, 2017

5 STPNOC 72.212 Evaluation Report, Revision 3

6 STP Unit 2 Plant Curve Book, Figure 5.20, Revision 2, STI 35334561