

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-2.1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Section 2.1: Fuel Specifications and Loading Conditions 2.1.1: Fuel to be Stored in the HI-STORM FW Storage System 2.1.2: Fuel Loading	
CoC Body Certified Design	Section I. Technology		No	
	Section II. Design Features		No	
Appendix A - Inspections, Tests, and Evaluations			No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes	
		A2	Yes	
		A3	Yes	
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No	
		L2	No	
		L3	No	
	Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		N/A	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		N/A	
	A Significant reduction in the margin of safety for ISFSI or cask operation?		N/A	

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Evaluation Summary	Retain in Appendix B Section 2. Applies generically to all three criteria (A1, A2, A3).
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CoC Condition/TS Identifier: B-2.2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 2.2: Violations If any Fuel Specifications or Loading Conditions of 2.1 are violated, the following actions shall be completed: 2.2.1 The affected fuel assemblies shall be placed in a safe condition. 2.2.2 Within 24 hours, notify the NRC Operations Center. 2.2.3 Within 30 days, submit a special report which describes the cause of the violation, and actions taken to restore compliance and prevent recurrence.	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		Yes	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	N/A	
	The possibility of a new or different kind of accident being created compared	N/A	

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	to those previously evaluated in the FSAR?	
	A Significant reduction in the margin of safety for ISFSI or cask operation?	N/A
Evaluation Summary		Retain in Appendix B Section 4 as these are procedural and record keeping administrative controls.

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CoC Condition/TS Identifier: B-Fig. 2.1-1 through 2.1-5

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Figures 2.1-1 through 2.1-4 illustrate the fuel loading regions and cell identifications for the applicable MPCs: Figure 2.1-1: MPC-37 Region-Cell Identification Figure 2.1-2: MPC-89 Region-Cell Identification Figure 2.1-3: MPC-32ML Cell Identification Figure 2.1-4: MPC-37P Cell Identification Figure 2.1-5: MPC-44 Cell Identification	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	Yes
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	Yes	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	Yes	

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	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes
Evaluation Summary		Retain in Appendix B Section 2 as these tables illustrate fuel loading information necessary to understand the information in other tables in this section. (Criterion A2) Specifically, discussions in other parts of the CoC (i.e. Table 2.1-1) refer to these figures when identifying permitted locations for storing DFCs. The permitted locations of damaged and failed fuel assemblies inside DFCs are key features required to provide reasonable assurance that the cask safety functions of decay heat removal and shielding will be maintained. The figures are also referred to in order to illustrate heat loading regions through the MPC.

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CoC Condition/TS Identifier: B-Table 2.1-1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Table 2.1-1: Fuel Assembly Limits	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes – The following items in Table 2.1-1 are required per Criterion A1 and shall be retained: <ul style="list-style-type: none"> <li>Fuel (Type of spent fuel)</li> <li>Cladding type (Type of spent fuel)</li> <li>Enrichment</li> <li>Cooling time</li> <li>Burn-up</li> <li>Decay heat (heat designed to be dissipated)</li> <li>Damaged fuel assemblies or fuel debris allowed per MPC (condition of spent fuel)</li> <li>Neutron source assemblies and burnable poison rod assemblies (type of fuel)</li> </ul>
		A2	No
		A3	Yes (see evaluation summary below)
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
	Risk Insight**: Will removing this requirement from the CoC/TS result in...	A1 Items – Yes Other Items - No	
	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		

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	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	A1 Items – Yes Other Items - No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	A1 Items – Yes Other Items - No
Evaluation Summary		<p>Retain A1 items identified above in CoC Appendix B Section 2.</p> <p>The following characteristics will be eliminated from this table in the CoC and already exist in the FSAR (Tables 2.1.1a and 2.1.1b):</p> <ul style="list-style-type: none"> <li>• Fuel assembly length</li> <li>• Fuel assembly width</li> </ul> <p>If the Licensee has fuel that does not meet these characteristics that already exist in the FSAR, acceptability will be determined per 10 CFR 72.48.</p> <p>Fuel assembly weight is a characteristic that would also not meet the Criteria A1 and A2 above. However, other CoC reorganization efforts have resulted in this characteristic being retained in the final approved CoC. Therefore, this characteristic could be said to meet Criterion A3 and will be retained in CoC Appendix B Section 2 with the rest of the retained information in this Table.</p>

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.1-2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Table 2.1-2: PWR Fuel Assembly Characteristics	
CoC Body	Section I. Technology	No	
Certified Design	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes – The following items in Table 2.1-2 are required per Criterion A1 and shall be retained: <ul style="list-style-type: none"> <li>• Number of fuel rod locations (Type of spent fuel)</li> <li>• Number of guide and/or instrument tubes (Type of spent fuel)</li> </ul>
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls	No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	A1 Items – Yes Other Items - No	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	A1 Items – Yes Other Items - No	

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	A Significant reduction in the margin of safety for ISFSI or cask operation?	A1 Items – Yes Other Items - No
Evaluation Summary		<p>Retain A1 items identified above in CoC Appendix B Section 2.</p> <p>The following characteristics will be eliminated from this table in the CoC and already exist in the FSAR (Table 2.1.2):</p> <ul style="list-style-type: none"> <li>• Fuel cladding inner and outer diameters</li> <li>• Fuel pellet diameter</li> <li>• Fuel rod pitch</li> <li>• Active fuel length</li> <li>• Guide and/or instrument tube thickness</li> </ul> <p>If the Licensee has fuel that does not meet these characteristics that already exist in the FSAR, acceptability will be determined per 10 CFR 72.48.</p>

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CoC Condition/TS Identifier: B-Table 2.1-3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Table 2.1-3: BWR Fuel Assembly Characteristics	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes – The following items in Table 2.1-3 are required per Criterion A1 and shall be retained: <ul style="list-style-type: none"> <li>• Maximum planar-average initial enrichment</li> <li>• Number of fuel rod locations (Type of spent fuel)</li> <li>• Number of water rods (Type of spent fuel)</li> </ul>
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls	No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	A1 Items – Yes Other Items - No	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	A1 Items – Yes Other Items - No	

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	A Significant reduction in the margin of safety for ISFSI or cask operation?	A1 Items – Yes Other Items - No
Evaluation Summary		<p>Retain A1 items identified above in CoC Appendix B Section 2.</p> <p>The following characteristics will be eliminated from this table in the CoC and already exist in the FSAR (Table 2.1.3):</p> <ul style="list-style-type: none"> <li>• Fuel cladding inner and outer diameters</li> <li>• Fuel pellet diameter</li> <li>• Fuel rod pitch</li> <li>• Active fuel length</li> <li>• Water rod thickness</li> <li>• Channel thickness</li> </ul> <p>If the Licensee has fuel that does not meet these characteristics that already exist in the FSAR, acceptability will be determined per 10 CFR 72.48.</p>

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CoC Condition/TS Identifier: B-2.3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 2.3: Decay Heat Limits 2.3.1: Fuel Loading Decay Heat Limits for VENTILATED OVERPACK 2.3.2: Fuel Loading Decay Heat Limits for UNVENTILATED OVERPACK 2.3.3: Variable Fuel Height for MPC-37, <u>MPC-37P</u> , and <u>MPC-44</u> 2.3.4: Variable Fuel Height for MPC-89 2.3.5: When complying with the maximum fuel storage location decay heat limits, users must account for the decay heat from both the fuel assembly and any NON-FUEL HARDWARE, as applicable for the particular fuel storage location, to ensure the decay heat emitted by all contents in a storage location does not exceed the limit.	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on “maximum heat designed to be dissipated” (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this	A significant increase in the probability or consequences of an	No	

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requirement from the CoC/TS result in...	accident previously evaluated in the cask FSAR?	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes  If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify. In addition, the use of MPC/Overpack models with a limited heat load is necessary to limit the occupational dose.
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on decay heat limits (72.236(a)). (Criterion A1)

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CoC Condition/TS Identifier: B-Tables 2.3-1 through 2.3-5

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B: Table 2.3-1A: MPC-37 Heat Load Data Table 2.3-1B: MPC-37 Heat Load Data Table 2.3-1C: MPC-37 Heat Load Data Table 2.3-2A: MPC-89 Heat Load Data Table 2.3-2B: MPC-89 Heat Load Data Table 2.3-3: MPC-37 Heat Load Data Table 2.3-4: MPC-89 Heat Load Data Table 2.3-5: MPC-32ML Heat Load Data	
CoC Body	Section I. Technology	No	
Certified Design	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes These Tables provide information on “maximum heat designed to be dissipated” (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No	
	The possibility of a new or different kind of accident being created compared	No	

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	to those previously evaluated in the FSAR?	
	A Significant reduction in the margin of safety for ISFSI or cask operation?	<p>Yes</p> <p>If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify. In addition, the use of MPC/Overpack models with a limited heat load is necessary to limit the occupational dose.</p>
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on decay heat limits (72.236(a)). (Criterion A1)

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CoC Condition/TS Identifier: B-Table 2.3-6

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 2.3-6: PWR Fuel Length Categories
CoC Body	Section I. Technology		No
Certified Design	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	Yes
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No	
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify. In addition, the use of	

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		<p>MPC/Overpack models with a limited heat load is necessary to limit the occupational dose.</p> <p>The information in this fuel length category table is not directly a set of heat load limits or other parameter that falls under A1 in this evaluation. However, the fuel length category informs which set of heat load limits apply to loading of a specific MPC.</p>
Evaluation Summary		<p>Retain in Appendix B Section 2 as these tables illustrate fuel loading information necessary to understand the information in other tables in this section. (Criterion A2) Specifically, the information in this table informs the heat load limit loading patterns captured in Figures 2.3-1 through 2.3-9. The fuel length categories are necessary to understand the differences between the Figures and the heat load limits they contain.</p>

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CoC Condition/TS Identifier: B-Tables 2.3-7 through 2.3-13

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B: Table 2.3-7A: MPC-37P Heat Load Data for Ventilated Overpack Table 2.3-7B: MPC-37P Heat Load Data for Ventilated Overpack Table 2.3-8A: MPC-44 Heat Load Data for Ventilated Overpack Table 2.3-8B: MPC-44 Heat Load Data for Ventilated Overpack Table 2.3-9A: MPC-37 Heat Load Data for Unventilated Overpack Table 2.3-9B: MPC-37 Requirements on Developing Regionalized Heat Load Patterns for Unventilated Overpack Table 2.3-10A: MPC-89 Heat Load Data for Unventilated Overpack Table 2.3-10B: MPC-89 Requirements on Developing Regionalized Heat Load Patterns for Unventilated Overpack Table 2.3-11: Section Heat Load Calculations for MPC-37 Table 2.3-12: Section Heat Load Calculations for MPC-89 Table 2.3-13: MPC-44 Heat Load Data for Unventilated Overpack	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes These Tables provide information on “maximum heat designed to be dissipated” (10CFR72.236(a)).
		A2	No
		A3	No
		L1	No

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	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No
	A Significant reduction in the margin of safety for ISFSI or cask operation?		Yes  If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify. In addition, the use of MPC/Overpack models with a limited heat load is necessary to limit the occupational dose.
Evaluation Summary			Retain in Appendix B Section 2 as this Section provides information on decay heat limits (72.236(a)). (Criterion A1)

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\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement	<p>Appendix B:</p> <p>Figure 2.3-1: Loading Pattern 37C1 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, “Short” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-2: Loading Pattern 37C2 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, “Short” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-3: Loading Pattern 37C3 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, “Short” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-4: Loading Pattern 37D1 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, “Standard” Fuel per Cell Heat Load</p> <p>Figure 2.3-5: Loading Pattern 37D2 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, “Standard” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-6: Loading Pattern 37D3 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, “Standard” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-7: Loading Pattern 37E1 for MPC-37 Loading Pattern for MPCs Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, “Long” Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-8: Loading Pattern 37E2 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, “Long” Fuel per Cell Heat Load Limits</p>
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		<p>Figure 2.3-9: Loading Pattern 37E3 for MPC-37 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, "Long" Fuel per Cell Heat Load Limits</p> <p>Figure 2.3-10: Loading Pattern 89A1 for MPC-89 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, per Cell Heat Load Limits</p> <p>Figure 2.3-11: Loading Pattern 89A2 for MPC-89 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, per Cell Heat Load Limits</p> <p>Figure 2.3-12: Loading Pattern 89B1 for MPC-89 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, per cell Heat Load Limits</p> <p>Figure 2.3-13: Loading Pattern 89B2 for MPC-89 Containing Undamaged and Damaged Fuel in DFCs/DFIs, and/or Fuel Debris in DFC, per Cell Heat Load Limits</p> <p>Figure 2.3-14: Loading Pattern 1 for MPC-37P</p> <p>Figure 2.3-15: Loading Pattern 2 for MPC-37P</p>	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes These Figures provide information on "maximum heat designed to be dissipated" (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls	No	

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Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify. In addition, the use of MPC/Overpack models with a limited heat load is necessary to limit the occupational dose.
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on heat load limits (72.236(a)). (Criterion A1)

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-2.4

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		<p>Appendix B Section 2.4: Burnup Credit</p> <p>Criticality control during loading of the MPC-37 is achieved through either meeting the soluble boron limits in LCO 3.3.1 OR verifying that the assemblies meet the minimum burnup requirements in Table 2.4-1.</p> <p>For those spent fuel assemblies that need to meet the burnup requirements specified in Table 2.4-1, a burnup verification shall be performed in accordance with either Method A OR Method B described below.</p> <p>Method A: Burnup Verification Through Quantitative Burnup Measurement</p> <p>Method B: Burnup Verification Through an Administrative Procedure and Qualitative Measurements</p>	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls	No	

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes The margin to criticality during an accident could be impacted if neither the minimum burnup requirements specified in Table 2.4-1 nor the soluble boron limits from LCO 3.3.1 are met.
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on burnup (72.236(a)). (Criterion A1)

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.4-1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 2.4-1: Polynomial Functions for the Minimum Burnup as a Function of Initial Enrichment
CoC Body Certified Design	Section I. Technology		No
	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on “burnup” (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No
	A Significant reduction in the margin of safety for ISFSI or cask operation?		Yes The margin to criticality during an accident could be impacted if neither the minimum burnup requirements specified in Table 2.4-1 nor the soluble boron limits from LCO 3.3.1 are met.

CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Evaluation Summary	Retain in Appendix B Section 2 as this Section provides information on burnup and cooling time limits (72.236(a)). (Criterion A1)
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.4-2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 2.4-2: Burnup Credit Configurations
CoC Body	Section I. Technology		No
Certified Design	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on “burnup” (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No
	A Significant reduction in the margin of safety for ISFSI or cask operation?		Yes The margin to criticality during an accident could be impacted if neither the minimum burnup requirements specified in Table 2.4-1 nor the soluble boron limits from LCO 3.3.1 are met.

CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Evaluation Summary	Retain in Appendix B Section 2 as this Section provides information on fuel assembly burnup (72.236(a)). (Criterion A1)
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.4-3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 2.4-3: In-Core Operating Requirements	
CoC Body Certified Design	Section I. Technology		No	
	Section II. Design Features		No	
Appendix A - Inspections, Tests, and Evaluations			No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No	
	Section 2 Approved Contents (Selection Criteria)	A1	Yes	
		A2	No	
		A3	No	
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No	
		L2	No	
		L3	No	
	Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		N/A	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		N/A	
	A Significant reduction in the margin of safety for ISFSI or cask operation?		N/A	
Evaluation Summary			Retain in Appendix B Section 2 as this Table provides information such as fuel temperature during operation which is related to condition of the spent fuel at the time of storage (72.236(a)). (Criterion A1)	

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-2.5

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 2.5: Burnup and Cooling Time Qualification Requirements 2.5.1: Burnup and cooling time limits for fuel assemblies authorized for loading into the MPC-32ML are provided in Table 2.5-1. Burnup and cooling time limits for fuel assemblies authorized for loading according to only the alternative loading patterns shown in Figures 2.3-1 through 2.3-9 (MPC-37) and Figures 2.3-10 through 2.3-13 (MPC-89) are provided in Table 2.5-2...  2.5.2: Burnup and cooling time limits for fuel assemblies authorized for loading into the MPC-37P and MPC-44 are provided in Table 2.5-3...	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on the relationship between “burnup” and cooling time (“maximum heat designed to be dissipated”) for authorized fuel (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes  If the minimum cooling times are not met, the maximum heat value for a given MPC could be exceeded. If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify.
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on burnup and cooling time limits (72.236(a)). (Criterion A1)

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.5-1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 2.5-1: Burnup and Cooling Time Fuel Qualification Requirements for MPC-32ML
CoC Body	Section I. Technology		No
Certified Design	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on the relationship between “burnup” and cooling time (“maximum heat designed to be dissipated”) for authorized fuel (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No
	A Significant reduction in the margin of safety for ISFSI or cask operation?		Yes If the minimum cooling times are not met, the maximum heat value for a given MPC could be

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

		exceeded. If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify.
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on burnup and cooling time limits (72.236(a)). (Criterion A1)

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.5-2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Table 2.5-2: Burnup and Cooling Time Fuel Qualification Requirements for MPC-37 and MPC-89	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on the relationship between “burnup” and cooling time (“maximum heat designed to be dissipated”) for authorized fuel (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

	A Significant reduction in the margin of safety for ISFSI or cask operation?	<p>Yes</p> <p>If the minimum cooling times are not met, the maximum heat value for a given MPC could be exceeded. If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify.</p>
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on burnup and cooling time limits (72.236(a)). (Criterion A1)

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 2.5-3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Table 2.5-3: Burnup and Cooling Time Fuel Qualification Requirements for MPC-37P and MPC-44	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		No	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	Yes This section provides information on the relationship between “burnup” and cooling time (“maximum heat designed to be dissipated”) for authorized fuel (10CFR72.236(a)).
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
	Section 4 Administrative Controls		No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No

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	A Significant reduction in the margin of safety for ISFSI or cask operation?	<p>Yes</p> <p>If the minimum cooling times are not met, the maximum heat value for a given MPC could be exceeded. If the maximum heat value for a given MPC is higher than that analyzed in the design bases, then if a blockage of the vents were to occur, the accident consequences – thermal overheating and possible cladding rupture – would occur sooner than the limits currently specify.</p>
Evaluation Summary		Retain in Appendix B Section 2 as this Section provides information on burnup and cooling time limits (72.236(a)). (Criterion A1)

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CoC Condition/TS Identifier: B-3.1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Section 3.1: Site		
			3.1.1: Site Location The HI-STORM FW Cask System is authorized for general use by 10 CFR Part 50 license holders at various site locations under the provisions of 10 CFR 72, Subpart K.		
CoC Body Certified Design	Section I. Technology		No		
	Section II. Design Features		No		
Appendix A - Inspections, Tests, and Evaluations			No		
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No		
	Section 2 Approved Contents (Selection Criteria)	A1	No		
		A2	No		
		A3	No		
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No		
		L2	No		
		L3	No		
	Section 4 Administrative Controls		No		
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No		
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No		

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	A Significant reduction in the margin of safety for ISFSI or cask operation?	No
Evaluation Summary		Eliminate from CoC - not required as compliance with the QA provisions in 10 CFR 72 Subpart K is a regulatory requirement that must be met.

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CoC Condition/TS Identifier: B-3.2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		<p>Appendix B Section 3.2: Design Features Important for Criticality Control</p> <p>3.2.1 MPC-37</p> <ol style="list-style-type: none"> <li>1. Minimum basket cell ID: 8.92 in. (nominal)</li> <li>2. Minimum basket cell wall thickness: 0.57 in. (nominal)</li> <li>3. B<sub>4</sub>C in the Metamic-HT: 10.0 wt % (min.)</li> </ol> <p>3.2.2 MPC-89</p> <ol style="list-style-type: none"> <li>1. Minimum basket cell ID: 5.99 in. (nominal)</li> <li>2. Minimum basket cell wall thickness: 0.38 in. (nominal)</li> <li>3. B<sub>4</sub>C in the Metamic-HT: 10.0 wt % (min.)</li> </ol> <p>(3.2.3 is covered in next table)</p> <p>3.2.4 MPC-32ML</p> <ol style="list-style-type: none"> <li>1. Minimum basket cell ID: 9.53 (nominal)</li> <li>2. Minimum basket cell wall thickness: 0.57 in (nominal)</li> <li>3. B<sub>4</sub>C in the Metamic-HT: 10.0 wt % (min.)</li> </ol> <p>3.2.5 MPC-37P</p> <ol style="list-style-type: none"> <li>1. Minimum basket cell ID: 8.70 (nominal)</li> <li>2. Minimum basket cell wall thickness: 0.77 in (nominal)</li> <li>3. B<sub>4</sub>C in the Metamic-HT: 10.0 wt % (min.)</li> </ol> <p>3.2.6 MPC-44</p> <ol style="list-style-type: none"> <li>1. Minimum basket cell ID: 8.00 (nominal)</li> <li>2. Minimum basket cell wall thickness: 0.49 in (nominal)</li> <li>3. B<sub>4</sub>C in the Metamic-HT: 10.0 wt % (min.)</li> </ol>
CoC Body Certified Design	Section I. Technology	No
	Section II. Design Features	<p>No</p> <p>These features are not general enough to incorporate into the CoC main body. They are only included in Appendix A as they are important to acceptance testing related to criticality control.</p>
Appendix A - Inspections, Tests, and Evaluations		<p>Yes</p> <p>Acceptance Testing for neutron absorber material is necessary for the cask to operate in conformance</p>

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

			with the certified design and fulfill its required safety functions.
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		N/A
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		N/A
	A Significant reduction in the margin of safety for ISFSI or cask operation?		N/A
Evaluation Summary			Retain in Appendix A – design features important to acceptance testing for neutron absorber material.

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CoC Condition/TS Identifier: B-3.2.3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 3.2.3: Neutron Absorber Tests	
		<ol style="list-style-type: none"> <li>1. The weight percentage of the boron carbide must be confirmed to be greater than or equal to 10% in each lot of Al/B<sub>4</sub>C powder.</li> <li>2. The areal density of the B-10 isotope corresponding to the 10% min. weight density in the manufactured Metamic HT panels shall be independently confirmed by the neutron attenuation test method by testing at least one coupon from a randomly selected panel in each lot.</li> <li>3. If the B-10 areal density criterion in the tested panels fails to meet the specific minimum, then the manufacturer has the option to reject the entire lot or to test a statistically significant number of panels and perform statistical analysis for acceptance.</li> <li>4. All test procedures used in demonstrating compliance with the above requirements shall conform to the cask designer's QA program which has been approved by the USNRC under docket number 71-0784.</li> </ol>	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		<p>Yes</p> <p>Acceptance Testing for neutron absorber material is necessary for the cask to operate in conformance with the certified design and fulfill its required safety functions.</p>	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)*	L1	No
		L2	No
		L3	No

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	and Surveillance Requirements (SRs) (Selection Criteria)	
	Section 4 Administrative Controls	No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	No
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	No
	A Significant reduction in the margin of safety for ISFSI or cask operation?	Yes The margin of safety would be reduced if these neutron poison acceptance tests were not met. The results of the criticality analyses would be subject to question since assumptions underlying the analysis may no longer be valid.
Evaluation Summary		Retain in Appendix A as the described tests ensure the MPC has been manufactured and will operate in conformance with the certified design, and that the safety functions of confinement, sub-criticality and shielding will be performed.

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-3.3

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Section 3.3: Codes and Standards The American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), 2007 Edition, is the governing Code for the HI-STORM FW System MPC as clarified in Specification 3.3.1 below, except for Code Sections V and IX. The ASME Code paragraphs applicable to the HI-STORM FW OVERPACK and TRANSFER CASK are listed in Table 3-2. The latest effective editions of ASME Code Sections V and IX, including addenda, may be used for activities governed by those sections, provided a written reconciliation of the later edition against the 2007 Edition, including any addenda, is performed by the certificate holder. American Concrete Institute (ACI) 349-85 is the governing Code for plain concrete as clarified in Appendix 1.D of the Final Safety Analysis Report for the HI-STORM 100 Cask System.
CoC Body Certified Design	Section I. Technology		No
	Section II. Design Features		Yes
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this	A significant increase in the probability or consequences of an		Second sentence - No Removal of this statement does not change any requirements for Holtec systems.

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

requirement from the CoC/TS result in...	accident previously evaluated in the cask FSAR?	<p>Rest of section – Yes</p> <p>If the ITS MPCs/Casks are not built in accordance with the ASME Code requirements, then the consequences of an accident might be significantly increased.</p>
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	<p>Second sentence - No</p> <p>Removal of this statement does not change any requirements for Holtec systems.</p>
	A Significant reduction in the margin of safety for ISFSI or cask operation?	<p>Second sentence - No</p> <p>Removal of this statement does not change any requirements for Holtec systems.</p> <p>Rest of section – Yes</p> <p>The margin of safety could be reduced if these ITS MPCs are not built in accordance with the ASME Code requirements. Confinement safety function could be compromised.</p>
Evaluation Summary		<p>Eliminate the second sentence “The ASME Code paragraphs applicable to the HI-STORM FW OVERPACK and TRANSFER CASK are listed in Table 3-2” from the CoC. This information already exists in Table 1.2.6 of the FSAR.</p> <p>Retain the rest of the section text in CoC Section II as this explains which Codes and Standards are applicable to the cask and canister designs.</p>

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-3.3.1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Section: Alternatives to Codes, Standards, and Criteria Table 3-1 lists approved alternatives to the ASME Code for the design of the MPCs of the HI-STORM FW Cask System.
CoC Body Certified Design	Section I. Technology		No
	Section II. Design Features		Yes
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		N/A
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		N/A
	A Significant reduction in the margin of safety for ISFSI or cask operation?		N/A

CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Evaluation Summary	Retain in CoC Section II as this explains which Codes and Standards are applicable to the cask and canister designs.
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-3.3.2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 3.3.2: Construction/Fabrication Alternatives to Codes, Standards, and Criteria  Proposed alternatives to the ASME Code, Section III, 2007 Edition, including modifications to the alternatives allowed by Specification 3.3.1 may be used on a case-specific basis when authorized by the Director of the Office of Nuclear Material Safety and Safeguards or designee. The request for such alternative should demonstrate that: <ol style="list-style-type: none"> <li>1. The proposed alternatives would provide an acceptable level of quality and safety, or</li> <li>2. Compliance with the specified requirements of the ASME Code, Section III, 2007 Edition, would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.</li> </ol> Requests for alternatives shall be submitted in accordance with 10 CFR 72.4.	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	Yes	
Appendix A - Inspections, Tests, and Evaluations			
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

	Section 4 Administrative Controls	No
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	N/A
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	N/A
	A Significant reduction in the margin of safety for ISFSI or cask operation?	N/A
Evaluation Summary		Retain in CoC Section II as this explains which Codes and Standards are applicable to the cask and canister designs.

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 3-1

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 3-1: List of ASME Code Alternatives for Multi-Purpose Canisters (MPCs)
CoC Body Certified Design	Section I. Technology		No
	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			Yes (see evaluation summary below)
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		N/A
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		N/A
	A Significant reduction in the margin of safety for ISFSI or cask operation?		N/A
Evaluation Summary			While this Table could potentially be removed without any risk impact, the removal could increase the need for cumbersome alternative code use

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

	<p>approval requests. Also, other CoC reorganization efforts have resulted in this table being retained in the final approved CoC. Therefore, this table will be retained in Appendix A.</p> <p>It could be more appropriate to place this table in a separate Appendix. However, other Holtec CoCs contain more than two Appendices due to the complexity of these systems (see CoC-1014). Therefore, to maintain consistent Appendix designations between various Holtec CoCs, this table will be retained in its own section at the end of CoC Appendix A.</p>
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-Table 3-2

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Table 3-2: Reference ASME Code Paragraphs for HI-STORM FW Overpack and HI-TRAC VW Transfer Cask, Primary Load Bearing Parts		
CoC Body Certified Design	Section I. Technology		No		
	Section II. Design Features		No		
Appendix A - Inspections, Tests, and Evaluations			No		
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No		
	Section 2 Approved Contents (Selection Criteria)	A1	No		
		A2	No		
		A3	No		
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No		
		L2	No		
		L3	No		
Section 4 Administrative Controls		No			
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		No. Removal of this Table does not change any requirements for Holtec systems.		
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No. Removal of this Table does not change any requirements for Holtec systems.		
	A Significant reduction in the margin of safety for ISFSI or cask operation?		No. Removal of this Table does not change any requirements for Holtec systems.		
Evaluation Summary			Remove from CoC and Appendices. While the table is useful to more easily identify where a user must look		

CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

	in the code to find the applicable paragraphs, it does not change which paragraphs/sections/requirements are applicable. This information already exists in Table 1.2.6 of the FSAR.
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-3.4

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement		Appendix B Section 3.4: Site Specific Parameters and Analyses that will require verification by the system user.	
CoC Body Certified Design	Section I. Technology	No	
	Section II. Design Features	No	
Appendix A - Inspections, Tests, and Evaluations		Yes	
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application	No	
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		No	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?	N/A	
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?	N/A	
	A Significant reduction in the margin of safety for ISFSI or cask operation?	N/A	

CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

Evaluation Summary	Retained in Appendix A as this includes key generic design criteria used by the CoC holder in the cask design, which require general licensee evaluation.
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## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

CoC Condition/TS Identifier: B-3.5

\* All LCOs also require an Applicability, Condition(s), Required Action(s), Completion Time(s), Surveillance Requirement(s), and Frequency(ies). Refer to NUREG-1745 for additional guidance.

\*\* In performing the risk insight evaluation above, the evaluator should think about subsequent changes to a relocated CoC requirement. Specifically, ask the question “what is the likelihood and worst possible consequences of a future change to this requirement in the less conservative direction”?

Requirement			Appendix B Section 3.5: Combustible Gas Monitoring During MPC Lid Welding and Cutting During MPC lid-to-shell welding and cutting operations, combustible gas monitoring of the space under the MPC lid is required, to ensure that there is no combustible mixture present.
CoC Body Certified Design	Section I. Technology		No
	Section II. Design Features		No
Appendix A - Inspections, Tests, and Evaluations			No
Appendix B. Technical Specifications	Section 1 Definitions, Use and Application		No
	Section 2 Approved Contents (Selection Criteria)	A1	No
		A2	No
		A3	No
	Section 3 Limiting Conditions for Operation (LCOs)* and Surveillance Requirements (SRs) (Selection Criteria)	L1	No
		L2	No
		L3	No
Section 4 Administrative Controls		Yes	
Risk Insight**: Will removing this requirement from the CoC/TS result in...	A significant increase in the probability or consequences of an accident previously evaluated in the cask FSAR?		Yes Unnoticed buildup of combustible gas could increase the probability of a fire.
	The possibility of a new or different kind of accident being created compared to those previously evaluated in the FSAR?		No

## CoC Condition/Technical Specification Evaluation Form - CoC original Appendix B

	A Significant reduction in the margin of safety for ISFSI or cask operation?	No
Evaluation Summary		Retain in Appendix B Section 4, Administrative Controls, as these controls are necessary to assure that the operations involved in the storage of spent fuel and reactor-related GTCC waste in an ISFSI are performed in a safe manner.