SUMMARY OF PROPOSED CHANGES (SOPC)

HI-STAR 80 2ND Round RAI Submittal

LIST FOR MAJOR TECHNICAL TOPICS AND KEYWORDS

- 1. Cask shielding redesign
 - a. Cask Outer Shield Cylinder (OSC)
 - b. Cask Intermediate Shell
 - c. Cask body extensive lead
 - d. Cask body extensive neutron shielding (Holtite)
 - e. Cask Holtite Plugs (Drilled Holes)
 - f. Cask gamma shield inserts
 - g. Cask Containment Bottom Forging
 - h. Cask Bottom Ring Forging
- 2. Prevention of melting of lead under Hypothetical Fire Accident Condition of Transport
- 3. Metamic-HT Fracture Toughness
- 4. Authorized contents and requirements
 - a. Mixed MOX/ UO₂ Fuel
 - b. Cobalt 59 Impurity (Co-59)
 - c. Maximum Burnup of Control Rods
 - d. Source Term for NFH
 - e. Non-Fuel Waste Source Strength
- 5. Dimensional tolerances of shielding components including Holtite components
- 6. Low Pressure Drying (LPD)
- 7. Options to Improve ALARA for Radiation Workers
 - a. Shielding Port Blocks option in the cask cavity space
 - b. Orifice Port geometry options for ALARA
 - c. Inner Closure Lid Inter-Seal Test Port Plug options for ALARA
 - d. NITS impact limiter lifting/handling options for ALARA
- 8. Helium Leak Rate Calculation
- 9. Cask cavity space initial backfill and total cask heat load and per assembly heat load conditions

ABOUT THIS SOPC

This summary of proposed changes (PCs) provides reasons and justifications for proposed changes and is presented in three parts as follows:

- A. Proposed Changes to Certificate of Compliance
- B. Proposed Changes in the Safety Analysis Report Rev 2.C
- C. Proposed Changes to the Licensing Drawing Package Corresponding to SAR Rev 2.C

In general, editorial changes and certain minor changes are not summarized in the SOPC. The SAR's revision summary log contains additional change description information on a section by section basis for all SAR chapters. Holtec submitted a proposed CoC for HI-STAR 80 with the initial submittal of the application. The proposed changes under Part A are with respect to SAR content that are conditions of the CoC. The proposed changes under Part B are provided on a chapter by chapter basis.

SAR supporting documents supplied with this submittal are listed in the submittal letter document ID 2370005-NRC. Submittal of supporting documents may comprise of both revised and newly generate documents.

A. PROPOSED CHANGES TO CERTIFICATE OF COMPLIANCE

Proposed Change No. A1

The proposed CoC for the HI-STAR 80 contains the following two conditions which is typical of previous Holtec HI-STAR CoC's:

"In addition to the requirements of Subpart G of 10 CFR Part 71:

- (a) The package shall be prepared for shipment and operated in accordance with Chapter 7 of the application.
- (b) The package shall meet the acceptance tests and be maintained in accordance with Chapter 8 of the application."

Chapters 7 and 8 of the SAR have been modified to specifically identify which requirements, data, paragraphs, tables, figures and/or SAR sections are conditions to the CoC. Appendix 7.D of the SAR "Content Conditions of the HI-STAR 80 Package" is a condition of the CoC as a whole.

Reason for Change

Information provided in Chapter 7 and 8 does not all apply to the CoC Condition.

Justification for Change

Certain information in the SAR is provided for completeness or other purposes that do not fit the intent or purpose of the CoC Condition.

Proposed Change No. A2

Appendix 7.D of the SAR specifying allowable/authorized contents of the HI-STAR 80 Cask has been revised. See proposed changes to Chapter 7 in Part B of this SOPC.

Reason for Change

Reasons range from editorial clarification to the modification of the cask dose blocker parts to prevent lead melting. See proposed changes to Chapter 7 in Part B of this SOPC.

Justification for Change

See proposed changes to Chapter 7 in Part B of this SOPC.

B. PROPOSED CHANGES IN SAFETY ANALYSIS REPORT REV 2.C

Proposed Change No. B1

Proposed changes have been made to Chapter 1 mainly to address the change in shielding component(s) that were required to address the concern of lead melting under hypothetical fire accident condition of transport. The following table provides a complete list of proposed changes to Chapter 1.

Item No.	Section of Chapter	Proposed Change	Reason/Justification for Change
	1	Chapter 1 – General Information	n
1	Section 1.1, Paragraph 1.2.1.1 Paragraph 1.2.1.8 Table 1.2.1 Figure 1.2.1 Reference Section	Proposed changes describe the Outer Shield Cylinder, a cask dose blocker part that replaces a portion of the previous cask dose block parts. General information regarding heat transfer features, structural adequacy and materials are included.	In order to address the concern of lead melting under hypothetical fire accident condition of transport, a portion of the cask's shielding design has been redesigned.
2	Subparagraph 1.2.1.6.1	Charpy impact strength ancillary property is replaced with fracture toughness ancillary property as it relates to qualification of Metamic-HT. Other related editorial changes.	The proposed change reflects the latest requirements consistent with the Metamic-HT sourcebook and consistent with NRC expectation. Also see proposed changes to Chapter 2.
3	Table 1.1.1	Editorial changes	Table 1.1.1 has no bearing on the description of the package design or package safety evaluation.
4	Table 1.2.4	Editorial change to the Specific Heat of Metamic-HT	The proposed change reflects the latest requirements consistent with the Metamic-HT sourcebook. There is no impact on safety analysis.

Proposed Change No. B2

Proposed changes have been made to Chapter 2 mainly to address the change in shielding component(s) that were required to address the concern of lead melting under hypothetical fire accident condition of transport. The following table provides a complete list of proposed changes to Chapter 2.

Item	Section of Chapter	Proposed Change	Reason/Justification for
No.			Change
		Chapter 2 – Structural Evaluation	n
1	Paragraph 2.1.1.1	Proposed changes describe	In order to address the
	Paragraph 2.1.2.2	the Outer Shield Cylinder, a	concern of lead melting under
	Subsection 2.2.2	cask dose blocker part that	hypothetical fire accident
	Subsection 2.3.1	replaces a portion of the	condition of transport, a
	Figure 2.3.6	previous cask dose block	portion of the cask's shielding
	Paragraph 2.7.1.1	parts.	design has been redesigned.
	Reference Section		
		General information	
		regarding 1) protection	
		against crack propagation, 2)	
		chemical, galvanic and other	
		reactions and 3) Problem	
		description and dynamic	
		model have been updated as	
		appropriate.	
2	Paragraph 2.1.2.2	The safety evaluation for the	The proposed change reflects
		fuel basket protection against	the latest requirements
		crack propagation is	consistent with the Metamic-
		proposed to be based on	HT sourcebook and consistent
		fracture toughness.	with NRC expectation. Also
			see proposed changes to
			Chapter 1.

Proposed Change No. B3

Proposed changes have been made to Chapter 3 mainly to address the change in shielding component(s) that were required to address the concern of lead melting under hypothetical fire accident condition of transport. The following table provides a complete list of proposed changes to Chapter 3.

Item No.	Section of Chapter	Proposed Change	Reason/Justification for Change
	1	Chapter 3 – Thermal Evaluation	
1	Sections 3.1 through 3.4	editorial changes	General editorial changes to improve readability
2	Subsection 3.1.1	updated	Discussion on the effect of thermal conductivity of helium with temperature and pressure with respect to helium backfill of the cask cavity space.
3	Tables 3.2.1, 3.2.2, 3.2.6, and 3.2.7	updated	The thermal properties of are replaced with those of material of the new cask shielding design component(s).
4	Table 3.2.10	updated	The temperature limits of are replaced with those of material of the new cask shielding design component(s).
5	Table 3.2.13	added	To provide the thermal conductivity of the material of the new cask shielding design component(s).
6	Section 3.4	editorial changes	In the new cask design, the outer shield cylinder is made of a material that will not melt when exposed fire. Editorial changes are made to provide the methodology adopted in the fire analysis of the new cask design.
7	All result tables in Section 3.1, 3.3 and 3.4 Figure 3.4.1	updated	All the evaluations are reperformed for the new cask shielding design. The result tables and figure are updated accordingly.

8	Figures 3.3.3 through 3.3.6	updated	Figures are updated for the new cask design with the outer
			shield cylinder made of copper
			instead of aluminum.
9	Paragraph 3.3.6.3 &	deleted	The open loop low pressure
	Table 3.3.9		drying method is no longer
			considered.
10	Reference Section	Updated	Updated with reference for
			the material used for the cask
			shielding design.

Proposed Change No. B4

Proposed changes have been made to Chapter 4 mainly to address minor changes to the containment boundary and updates to the helium leak rate calculation. The following table provides a complete list of proposed changes to Chapter 4.

Item	Section of Chapter	Proposed Change	Reason/Justification for
No.			Change
	CI	napter 4 – Containment Evaluati	on
1	Figure 4.1.1	Proposed change to reflect	In order to allow the
		the revised containment base	fabrication of the cask with the
		forging of the containment	revised shielding design.
		boundary.	
2	Subsection 4.5.1	Proposed changes made to	The information in the SAR has
	Paragraph 4.5.2.1	correct assumptions used in	been made consistent with the
	Table 4.5.3	determining the allowable	revised containment
	Table 4.5.4	leakage rates. Tables	calculation package.
		updated to correct values and	
		descriptions.	

Proposed Change No. B5

Proposed changes have been made to Chapter 5 mainly to address the change in shielding component(s) that were required to address the concern of lead melting under hypothetical fire accident condition of transport as well as to address 2nd round shielding RAIs. The following table provides a complete list of proposed changes to Chapter 5.

Item No.	Section of Chapter	Proposed Change	Reason/Justification for Change	
	Chapter 5 Shielding Evaluation			
1	Sections 5.1 through 5.4	Editorial changes	general editorial changes to improve readability; various changes as the result of the improved radial shielding design	
2	All result tables in 5.1 and 5.4	All dose rates are updated	Incorporation of the improved radial shielding design; consideration of tolerances (RAI 5-1)	
3	Figures in Section 5.1 and 5.3	Updated	Incorporation of the improved radial shielding design	
4	Section 5.3.1.1	Various modifications of existing texts, or expansions of the texts	Incorporation of the improved radial shielding design; consideration of tolerances (RAI 5-1)	
5	Table 5.3.3	Revised some densities	Incorporation of the improved radial shielding design; consideration of tolerances (RAI 5-1)	
6	Table 5.3.7a	Revised and added dimensions	Incorporation of the improved radial shielding design	
7	Table 5.3.9	Revised and added dimensions	Incorporation of the improved radial shielding design	
8	Section 5.4.5.2	Text expanded	Clarification	
9	Section 5.4.7.2, Tables	Text Expanded	RAI 5-4 (c), consideration of power density for qualification of approved content in Appendix 7.D. To avoid significant reduction of flexibility, additional number of cycles / cooling time combinations are added. Also, additional burnup levels are added.	

10	5.4.9	Texts expanded	More detailed discussion on the results of the studies and conclusions
11	5.4.10	Deleted	This option is no longer considered (RAI 5-4 (b))
12	5.1.11	Significantly revised	Incorporation of the improved radial shielding design; consideration of tolerances (RAI 5-1). Since the model for the improved shielding design already includes the consideration for dimensional tolerances, the scope of the calculations here is reduced.
13	Tables for Section 5.4	Some tables were consolidated by only showing maximum result over the various burnups.	Avoid unnecessary information.
14	Table 5.4.32	Some information removed	Burnup/enrichment/cooling time combinations for increased/reduced number of cycles are now explicitly listed in Appendix 7.D, so they are remove here; factors for alternative assemblies were added (see Section 5.4.9) (RAI 5-4 (b))
15	Tables 5.4.37 and 5.4.38	Tables added	These were moved from Appendix F to Section 5.4, and results for reduced power density was added (see Section 5.4.7.2) (RAI 5-4 (b))
16	Appendix 5.A and 5.B	Replaced	Incorporation of the improved radial shielding design; consideration of tolerances (RAI 5-1)
17	Appendix 5.E	Clarification added	Justification added for maintaining the results from the original design
18	Section 5.E.1.3	Text modified	More accurate consideration is specified for assemblies with part length rods.
19	Appendix 5.F	Clarification added	Justification added for maintaining the results from the original design

Proposed Change No. B6

Proposed changes have been made to Chapter 6 mainly to address the change to address 2^{nd} round shielding RAI on MOX fuel. The following table provides a complete list of proposed changes to Chapter 5.

Item	Section of Chapter	Proposed Change	Reason/Justification for
No.			Change
	1	Chapter 6 Criticality Evaluation	
1	Subsection 6.2.3	Changes have been proposed	Changes in Chapter 6 are
	Table 6.2.6	to the SAR to remove fuel	linked to response to RAI 6-1.
	Table 6.2.7	assemblies that only contain	
	Subsection 6.2.4	a small number of MOX rods	The change eliminates any
	Subsection 6.3.1	from the approved content	concerns of arbitrary mixtures
	Table 6.3.5	and the safety analysis, and	of MOX and UO2 rods within
	Table 6.3.6	only those assemblies	an assembly. The change
	Appendix 6.B	containing all MOX rods are	alleviates any concerns that
	(Section 6.B.7)	retained.	may exist about the mixture of
			MOX and UO2 fuel assemblies
		Changes have been made to	in a basket.
		the SAR for the locations that	
		MOX assemblies are	Previously, those 4 MOX
		permitted to be loaded. The	assemblies were located in the
		number of a maximum of 4	center of the basket, creating
		MOX assemblies per basket is	a larger area of MOX rods. For
		retained.	the revised content and
			analysis, these assemblies
		Subsection 6.2.4 is proposed	moved outwards, so individual
		to be deleted.	MOX assemblies are no longer
			placed face-to-face to each
			other, instead, they are
			separated by UO2 assemblies.
			The necessary safety
			evaluations have been
			updated in support of the
			change.

Proposed Change No. B7

Proposed changes have been made to Chapter 7 mainly to address 2nd round shielding RAIs that impact the authorized contents of the package. The following table provides a complete list of proposed changes to Chapter 7.

Item No.	Section of Chapter	Proposed Change	Reason/Justification for Change
	1	Chapter 7 Package Operations	
1	Section 7.0	Chapters 7 is proposed to be modified to specifically identify which requirements, data, paragraphs, tables, figures and/or SAR sections are conditions to the CoC.	Information provided in Chapter 7 does not all apply to the CoC Condition. Certain information in the SAR is provided for completeness or other purposes that do not fit the intent or purpose of the CoC Condition.
2	Section 7.0	Editorial deletion of a redundant statement concerning fuel assembly selection and verification	Redundant statement
3	Section 7.1	Same as Item 1 above.	Same as Item 1 above.
4	Paragraph 7.1.2.1 Table 7.1.2	Deletion of Step 11 and Deletion of low pressure drying criteria	The open loop low pressure drying method is no longer considered.
5	Paragraph 7.1.2.2	Addition of Step 6	Clarification of cask closure evolution.
6	Table 7.1.4	Addition of optional backfill pressure range and associated total cask heat load and per assembly heat load limits.	Thermal evaluations in Chapter 3 allow for changes to backfill pressure range.
7	Section 7.2	Same as Item 1 above.	Same as Item 1 above.
8	Subsection 7.2.2	Update to Step 3	Clarification of outer lid and cask water fill configuration.
9	Section 7.3	Same as Item 1 above.	Same as Item 1 above.
10	Appendix 7.A	Same as Item 1 above.	Same as Item 1 above.
11	Appendix 7.D	Same as Item 1 above.	Same as Item 1 above.
12	Page 7.D-1, -2	Text removed	This option is no longer considered (RAI 5-4 (b))
13	Table 7.D.1	Notes added; Notes modified	Addresses RAI 5-4 (a). also clarify applicability of enrichment limits; for

			modified notes see change reason for Table 7.D.10
14	Table 7.D.1, BWR	Removed some MOX specification; changed location of MOX assemblies	Addresses RAI 6-1
15	Table 7.D.1	Added Co-59 Limit	Addresses RAI 5-3
16	Table 7.D.2 and 7.D.3	Note removed	This option is no longer considered (RAI 5-4 (b))
17	Table 7.D.4 and 7.D.5	Tables expanded	See item 14 for Chapter 5 above
18	Table 7.D.6	Table Revised	Incorporation of the improved radial shielding design; also addresses RAI 5-4 (d); also addresses RAI 6-1
19	Table 7.D.7	Removed	See item 14 for Chapter 5 above
20	Table 7.D.9	Values revised; total values added	Incorporation of the improved radial shielding design; addresses RAI 5-2 (c)
21	Table 7.D.9	Notes expanded	Addresses RAI 5-2
22	Table 7.D.10	Some modification to the consideration of part length rods	Provide a more accurate consideration. See also item 18 for Chapter 5 above

Proposed Change No. B8

Proposed changes have been made to Chapter 8 mainly to address changes directly related to the change in cask shielding component(s) that were required to address the concern of lead melting under hypothetical fire accident condition of transport. The following table provides a complete list of proposed changes to Chapter 8.

Item	Section of Chapter	Proposed Change	Reason/Justification for
No.			Change
	· · · · · · · · · · · · · · · · · · ·	Acceptance Tests and Maintena	-
1	Section 8.0, Section 8.1 and Section 8.2 Table 8.1.1 Table 8.1.2 Table 8.1.3 Table 8.1.4 Table 8.1.8 Table 8.1.9 Table 8.1.11 Table 8.2.1	Chapters 8 is proposed to be modified to specifically identify which requirements, data, paragraphs, tables, figures and/or SAR sections are conditions to the CoC.	Information provided in Chapter 8 does not all apply to the CoC Condition. Certain information in the SAR is provided for completeness or other purposes that do not fit the intent or purpose of the CoC Condition.
2	Table 8.1.6	Proposed changes to this table address Codes, Standards and other requirements applicable to the Outer Shield Cylinders	The cask shielding design has been modified and a new major component, outer shield cylinder, has been added.
3	Table 8.1.9	Proposed changes to this table provides clarification to impact testing of ferritic steel parts of the cask that are not containment boundary components	The cask shielding design has been modified and a new major component (dose blocker part) has been added. Dose blocker parts on the exterior of the package that are unprotected from direct impactive loads are included if any. Certain other components are included in the table as defense-in-depth.
4	Table 8.1.10	The minimum bulk density and the minimum hydrogen density of Holtite are proposed to be revised.	The cask shielding design has been modified and a new major component (dose blocker part) has been added. Holtite components have been modified accordingly and shielding evaluation has been performed consistent with the revised Holtite characteristics.

C. PROPOSED CHANGES TO THE LICENSING DRAWING PACKAGE CORRESPONDING TO SAR REV. 2.C

Changes have been made to the licensing drawing package in Section 1.3 of the SAR. Only the latest revision of the drawing is provided with SAR Revision 2.C. This section details the changes made to the drawings from one revision to the next and provides justifications as necessary. Certain proposed changes were previously submitted under Holtec's response to RSIs and first round RAIs. The proposed changes described below encompass proposed changes submitted under 1st round RAIs which may or may not have been further modified in the latest revisions of the drawings. The complete drawing package is provided with Revision 2.C of the SAR.

Changes to Drawing 9800: HI-STAR 80 Cask

Drawing Revision History Initial Submittal: Revision 5 RSI Submittal: Revision 5

1st Round RAI Submittal: Revision 5.1 2nd Round RAI Submittal: Revision 7

Summary of Changes from Revision 5 to Revision 6

Note: Revision 6 of the drawing does not incorporate changes to the cask shielding design required to address lead melting under hypothetical accident conditions of transport. Refer to Revision 7.

- 1. Modification or addition of dimensional tolerances to support shielding and structural evaluations. Consistent with first round RAI 1-1.
- 2. Add flag note 22 to address local deviations and repair of material thicknesses. Note is similar to note on the cask licensing drawing that was included as part of response to NRC RAI.
- 3. Add an alternative product form of the same material to the list of acceptable weld overlay materials. Chemical composition of both materials are the same.
- 4. Add a note to clarify the governing units for the drawing.
- 5. Revise flag note 4 addressing gaps for thermal expansion of Holtite components.
- 6. Revise NDE inspection of certain welds to VT only. These welds do not require PT.
- 7. Clarification of neutron shielding drilled holes dimensioning in Section FC-FC and Section FD-FD for both clarity and to avoid potential interference with other cask components.
- 8. Remove redundant weld callout(s).
- 9. Change thicknesses of gamma shield insert and inner middle intermediate shell. Changes required to optimize shielding.
- 10. Change the angular position of the inter-seal test ports of both closure lids to reference to allow flexibility. No impact on safety evaluations.

- 11. Change the depth dimension of the inter-seal test ports of both closure lids to reference to allow flexibility. No impact on safety evaluations.
- 12. Change flag note 16 and 24 to allow certain components to be integral (without welds).
- 13. Add flag note 26 to allow orifice port flow passage geometry in Section AB-AB to vary within certain limitations. ALARA is improved.
- 14. Add flag note 25 to allow details of inter-seal test port plugs, seals and helical thread inserts to vary. An optional Type 2 inter-seal test port arrangement is also proposed. ALARA is improved.
- 15. Add a type 3 vent/drain port and update the BOM. ALARA is improved.

Summary of Changes from Revision 6 to Revision 7

Note: Revision 7 of the drawing incorporates changes to the cask shielding design required to address lead melting under hypothetical accident conditions of transport.

- 1. Modification of a portion of the cask shielding design to address lead melting under hypothetical fire accident condition of transport.
- 2. Change to gamma shield insert design to optimize shielding performance.
- 3. Modification of the cask containment forging to allow installation of the cask bottom ring forging.
- 4. Modification of the cask intermediate shell for compatibility with the cask outer shield cylinder to optimize shielding performance.
- 5. Modification of the cask body extensive neutron shielding (Holtite) and lead shielding to optimize shielding performance.
- 6. Modification of Holtite drilled holes to optimize shielding performance.
- 7. Minor modification to cask port orifices and other minor cask components.

Changes to Drawing 9796: F-12P Fuel Basket

Drawing Revision History Initial Submittal: Revision 3 RSI Submittal: Revision 3

1st Round RAI Submittal: Revision 3.1 2nd Round RAI Submittal: Revision 4

Summary of Changes from Revision 3 to Revision 4

- 1. Modification or addition of dimensional tolerances to support shielding and structural evaluations. Consistent with first round RAI 1-1.
- 2. Add flag note 19 to address local deviations and repair of material thicknesses. Note is similar to note on the cask licensing drawing that was included as part of response to NRC RAI.
- 3. Add flag note 21 to address NITS welds that may be omitted. Safety evaluations are not affected by mission of NITS welds that the flag note applies to.

- 4. Add flag note 17 to allow fuel spacer opening to be optional. Safety evaluations are not affected.
- 5. Add flag note 20 to allow modification of the fuel basket on the top end for clearance of lifting devices or fuel grapple. Safety evaluations are not affected.
- 6. Add general note to allow optional NITS shielding port blocks. Safety evaluations are not affected. ALARA is improved.
- 7. Add a weld size equivalent table for conversion from US to metric units. Safety evaluations are not affected.

Changes to Drawing 9797: F-32B Fuel Basket

Drawing Revision History Initial Submittal: Revision 3 RSI Submittal: Revision 3

1st Round RAI Submittal: Revision 3.1 2nd Round RAI Submittal: Revision 4

Summary of Changes from Revision 3 to Revision 4

- 1. Modification or addition of dimensional tolerances to support shielding and structural evaluations. Consistent with first round RAI 1-1.
- 2. Add flag note 20 to address local deviations and repair of material thicknesses. Note is similar to note on the cask licensing drawing that was included as part of response to NRC RAI.
- 3. Add flag note 21 to address NITS welds that may be omitted. Safety evaluations are not affected by mission of NITS welds that the flag note applies to.
- 4. Add notation to allow fuel spacer opening to be optional. Safety evaluations are not affected.
- 5. Add flag note 20 to allow modification of the fuel basket on the top end for clearance of lifting devices or fuel grapple. Safety evaluations are not affected.
- 8. Add general note to allow optional NITS shielding port blocks. Safety evaluations are not affected. ALARA is improved.
- 6. Add a weld size equivalent table for conversion from US to metric units. Safety evaluations are not affected.

Changes to Drawing 9798: NFWB-1 Non-Fuel Waste Basket

Drawing Revision History Initial Submittal: Revision 4 RSI Submittal: Revision 4

1st Round RAI Submittal: Revision 4.1 2nd Round RAI Submittal: Revision 5

Summary of Changes from Revision 4 to Revision 5

- 1. Modification or addition of dimensional tolerances to support shielding and structural evaluations. Consistent with first round RAI 1-1.
- 2. Add flag note 9 to address local deviations and repair of material thicknesses. Note is similar to note on the cask licensing drawing that was included as part of response to NRC RAI.
- 3. Add a weld size equivalent table for conversion from US to metric units. Safety evaluations are not affected.

Changes to Drawing 9801: HI-STAR 80 Impact Limiter Assembly

Drawing Revision History Initial Submittal: Revision 3 RSI Submittal: Revision 3

1st Round RAI Submittal: Revision 3.1 2nd Round RAI Submittal: Revision 4

Summary of Changes from Revision 3 to Revision 4

- 1. Modification or addition of dimensional tolerances to support shielding and structural evaluations. Consistent with first round RAI 1-1.
- 2. Add flag note 8 to address local deviations and repair of material thicknesses. Note is similar to note on the cask licensing drawing that was included as part of response to NRC RAI.
- 3. Add flag note 9 to address local shape deviations within limitations. No significant effect on impact limiter performance or other safety evaluations.
- 4. Correct safety classification of impact limiter cover plate components from NITS to ITS. Editorial clarification.
- 5. Add optional to holders for tie-down straps which do not pertain to transport operations.
- 6. Add optional covers that block access to cask trunnions during transport and thus render the trunnions inoperable. Proposed change is consistent with SAR Figure 7.A.1.
- 7. Add option for handling features that are NITS to facilitate handling of impact limiters during installation or removal and thus improve ALARA.

Changes to Drawings 9795: HI-STAR 80 Transport Package

Drawing Revision History Initial Submittal: Revision 3 RSI Submittal: Revision 3

1st Round RAI Submittal: Revision 3 2nd Round RAI Submittal: Revision 3

No Changes.