

Page	Heading/Item/Step	Para #/Item/Step	Line #/Item/Step	What it was (Revision J-2)	What it is (Revision J-3) <i>Justification (if needed)</i>
FrontMatter					
i	–	–	–	Rev. J-2, June 22, 2021	Rev. J-3, Date July 19, 2023 (Note: Automatically applied to all footers. Due to software constraints, SAR page footers might/might not include a revision bar indicating this change. Additionally, the revision bar might span both lines of the footer.)
iv	Revision History	J-3	–	–	<ul style="list-style-type: none"> • Changed Cask Lid Attachment Bolt – All Models preload torque requirements with a minimum / maximum value • Clarified that cask lid attachment bolts must be lubricated prior to use • Replaced Appendices 4.5.2 and 4.5.3 with new Appendix 4.5.2, "Cask Lid Attachment Bolt Evaluation" • Clarified Chapter 4 and 8 Reference lists
v – xxxviii	–	–	–	–	<Replaced entire CONTENTS, FIGURES, and TABLES lists; NO REVISION BARS shown>
Chapter 1					
1-1	1.1	7	2	...cask lid attachment bolts analysis.	...cask lid attachment bolt evaluation.
1-23	Table 1-5	Cask Component row	Models AOS-025A/050A/100A/100B/100A-S, respectively	166D8143 J 166D8137 J 105E9712G001 M 105E9712G002 M 105E9719 M	166D8143 K 166D8137 K 105E9712G001 N 105E9712G002 N 105E9719 N
1-28, 1-34, 1-40, 1-41, 1-42	Cask Drawing pages, Models AOS-025A/050A/100A/100B/100A-S, respectively			166D8143 J 166D8137 J 105E9712G001 M 105E9712G002 M 105E9719 M	<Revised to incorporate Min / Max Torque Values for Cask Lid Attachment Bolts; and Cask Lid Weights> 166D8143 K – 29 / 35 ft.-lbs.; Note 4 Maximum Lid Weight = 14 lb. 166D8137 K – 62.5 / 68 ft.-lbs.; Note 4 Maximum Lid Weight = 14 lb. 105E9712G001 N – 400 /ft.-lbs.; Note 4 Maximum Lid Weight = 105 lb. 105E9712G002 N – 400 /ft.-lbs.; Note 4 Maximum Lid Weight = 105 lb. 105E9719 N – 400 /ft.-lbs.; Note 4 Maximum Lid Weight = 105 lb.

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Chapter 2					
2-23	Table 2-7	AOS-100A row 2 Col "Contents"	8	xxx500	500
2-47 – 2-48	Table 2-20	Model # heading row and footnotes	–	AOS-025 AOS-050 AOS-100	AOS-025A AOS-050A AOS-100A ^a <i>a. Model AOS-100A is the heaviest of the AOS-100 models and is therefore the bounding case. <The table's original footnote a is now renumbered to b.></i>
2-81	2.6.5	3 rd para	4 th – 6 th lines	The analytical procedure applied to the cask lid attachment bolts of the AOS Transport Packaging System account for fatigue and vibration loads, in addition to preload, pressure, and temperature loads. Procedure setup provides infinite life service (1×10^6 cycles), based upon the ASME Code, Reference [2.14]. (Refer to Appendix 4.5.2, "Fortran Program Used to Analyze Cask Lid Attachment Bolts (Reference [4.6])," for details.)	The fatigue analysis is presented in Paragraph 4.5.2.6, "Cask Lid Attachment Bolt Fatigue Analysis," This analysis considers operating cycles and vibration loads and is based on the ASME Code provided in Reference [2.14].
Chapter 3 – No changes					
Chapter 4					
4-8	4.1.4	1	was 1 – 4 (now 1 – 2)	A set of cask lid attachment bolts, ASME SB-637, UNS N07718, attaches the cask lid to the cask. lid metallic seal (all models), or to the cask lid elastomeric seal (Model AOS-100, all variations). For Models AOS-025 and AOS-050, the cask lid elastomeric seal is captured within the dove-tailed groove that is machined onto the cask lid bottom surface. The cask lid bolted joint is recessed within the cask body, to protect the joint from transportation loads. The cask lid attachment bolt stress analysis followed the methodology and acceptance criteria specified in NUREG/CR-6007 (Reference [4.6]), and a Fortran program (Appendix 4.5.2) was coded to facilitate the required calculations. The input information required by the program is listed in Table 4-1. The program's output (results) are summarized in Table 4-2. The actual input and output files used in conjunction with the program are provided in Appendix 4.5.3.	A set of cask lid attachment bolts, ASME SB-637, UNS N07718, attaches the cask lid to the cask. The cask lid bolted joint is recessed within the cask body, to protect the joint from transportation loads. The cask lid attachment bolt stress evaluation is presented in Appendix 4.5.2 and follows the methodology and acceptance criteria specified in NUREG/CR-6007 (Reference [4.6]). The cask and bolt features and properties required for the analysis are listed in Table 4-1.

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4-8	Figure 4-6	–	–	–	CASK LID ATTACHMENT BOLT <added 2x>
4-8 – 4-9	Figure 4-6 4.1.4	–	–	Tlo Tli Tl Tb Tc	Tlo Tli Tl Tb Tc
4-10	4.1.4	3 rd page	Last bullet	Use ASME Code, Section III (Reference [4.5]), Appendix I, fatigue curves I-9-4	Use ASME Code, Section III Division 1 (Reference [4.13]), Appendix I, fatigue curves I-9-4
4-12 – 4-16	Table 4-1	–	–	<Rev J-2 version of table.>	<Replaced entire table.>
4-17	Table 4-2	–	–	<Rev J-2 version of table.>	<Replaced entire table.>
4-33	4.5	2 nd and 3 rd bullets	–	<ul style="list-style-type: none"> Fortran Program Used to Analyze Cask Lid Attachment Bolts (Reference [4.6]) Cask Lid Attachment Bolt Fortran Program Input/Output Files 	<ul style="list-style-type: none"> Cask Lid Attachment Bolt Evaluation
J-2: 4-43 – 4-54 (J-3: 4-43 – 4-114)	Appendix 4.5.2	–	–	<Rev J-2 version of appendix.>	<Replaced entire appendix.>
J-2: 4-55 – 4-215 (J-3: 4-115)	Appendix 4.5.3			<Rev J-2 version of appendix.>	<Marked as DELETED>
J-2: 4-216 (J-3: 4-116)	4.6	[4.5]	–	American Society of Mechanical Engineers, <i>ASME Boiler and Pressure Vessel Code</i> , Section III, Division 3, 2004, No Addenda.	American Society of Mechanical Engineers, <i>ASME Boiler and Pressure Vessel Code (BPVC)</i> , Section III, Division 1, 2004, No Addenda.
	4.6	[4.7]	–	<i>Machinery's Handbook</i> , "Fasteners" Section, Industrial Press, 26 th Ed., 1988.	Jones, F. D., H. L. Horton, and E. Oberg, <i>Machinery's Handbook</i> 23, "Fasteners" Section, New York: Industrial Press, Inc., 23 rd Ed., 1988.
	4.6	[4.9] – [4.14]	–	–	<Added References [4.9] through [4.14].>
Chapters 5 and 6 – No changes					

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Chapter 7					
7-1	7	1	3 – 4	The transport packages should be operated using detailed written procedures that are based upon, and consistent with, the operations described in this.	The transport packages should be operated using detailed written procedures that are based upon, and consistent with, the operations described in this chapter and the certification drawings listed in Table 1-5, "AOS Transport Packaging System Certification Drawing List – All Models."
7-1	Note(s)	–	–	Note: <i>Unless indicated otherwise, all information related to the Model AOS-100A is also applicable to Models AOS-100B and AOS-100A-S.</i>	Notes: <i>Unless indicated otherwise, all information related to the Model AOS-100A is also applicable to Models AOS-100B and AOS-100A-S.</i> <i>Package Operations as specified in this chapter also include the information specified by the certification drawings. (Refer to Table 1-5, "AOS Transport Packaging System Certification Drawing List – All Models.")</i>
7-6	Bullet list	11 th bullet <new>	–	–	Certification Drawing requirements.
7-9	7.1.2.3	3 <new>	–	–	The cask lid attachment bolts must be lubricated with a lubricant such as Neolube No. 2 (note that the lubricant must be approved by AOS).
7-10	7.1.3.1	Step a	New (subsequent steps renumbered)	–	a. Lubricate the cask lid attachment bolts with a lubricant such as Neolube No. 2. The lubricant must be approved by AOS. In the case of wet loading, the lubricant must be applied after the cask has been removed from the pool and dried.
7-10	7.1.3.1	Step b2d	New (subsequent steps renumbered)	–	d. Dry the cask lid attachment bolts and then lubricate with a lubricant such as Neolube No. 2.
7-11	Table 7-2	–	–	<Rev J-2 version of table.>	<Replaced entire table.>

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Chapter 8					
8-3	8.1.3	1	3	...[8.2] and [8.3].	...[8.2].
8-6	Table 8-2	Non-Destructive Examination row	Requirements column, lines 3 – 4	...(References [8.2] and [8.3]).	...(Reference [8.2]).
8-8	Table 8-4	Non-Destructive Examination row	Requirements column, line 4	...(References [8.2] and [8.3]).	...(Reference [8.2]).
8-10 – 8-11	Table 8-5	Formulation and Batch columns Flame Retardancy rows (2x)	Sample Size (in.) column (2x)	0.5 × 3 × 6+	0.5 × 3 × 6
8-21	8.4	[8.2]	1	American Society of Mechanical Engineers, <i>ASME Boiler and Pressure Vessel Code</i> , Section III, Division 1, 2004, No Addenda.	American Society of Mechanical Engineers, <i>ASME Boiler and Pressure Vessel Code (BPVC)</i> , Section III, Division 1, 2004, No Addenda.
8-21	8.4	[8.3]	–	American Society of Mechanical Engineers, <i>ASME Boiler and Pressure Vessel Code</i> , Section III, Division 3, 2004, No Addenda.	DELETED.
8-21	8.4	[8.6]	–	U.S. Nuclear Regulatory Commission (NRC), Title 10, Code of Federal Regulations, Part 71 (10 CFR 71), "Packaging and Transportation of Radioactive Material."	DELETED.
Chapter 9 – No changes					