

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
		Title: Document Review Log	

1. Document No.: TSC C1e Cargo Fire Detection Instruments	2. Project Manager: Joan Hughson AIR-133	3. Reviewing Office: Reviewer's Name & phone #:	4. Date of Review:	5. Date of Disposition:
---	---	--	---------------------------	--------------------------------

Item No:	Page and Paragraph No:	Comment:	Reason:	Recommendation:	Disposition:
1.	1, Section 3, a, 1 st paragraph S. Happenny, ANM-112, (425 227-2147)	The paragraph correctly states some applications for applicability of this TSO. However, the FAA may require that the TSO be utilized in other applications. Or an applicant could volunteer to meet the TSO in other applications (e.g., smoke detector used in a lavatory).	The FAA may require that the TSO be used for detectors within special conditions or as conditions of grants of exemption. An example would be as a requirement in a remote crew rest; i.e., that the smoke detector meet the TSO requirements.	Suggest the following sentence be added to this paragraph: <i>.... It may also apply to detectors used in lavatories (at applicant's discretion) or as required by FAA within special conditions or as conditions of grants of exemption.</i>	Non-concur. The MPS for the TSO was developed based on the requirements for cargo compartments. The MPS was not evaluated against or approved considering other applications. Installation of these articles for other applications may be acceptable, but special conditions or grants of exemption are determined during the TC/STC process and are not part of approving the article to the MPS of the TSO.

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
		Title: Document Review Log	Date: June 19, 2009

2.	Page 1, Paragraph 3.b. J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Last sentence in paragraph is missing a period.	Typo	Correct	Adopted.
3.	Page 2, Paragraph 3.c. J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Add quotation marks to the title of document RTCA/DO-178C.	To make consistent in TSO.		Adopted for paragraph 3.e. Paragraph 3.e should have the quotation marks. Refernece to paragraph 3.c appears to be atypo.
4.	Page 2, Paragraph e. Note: J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Please define the term "certification liaison process objectives"	To clarify.		Answer: The certification liaison process objectives are defined in Paragraph 9 of RTCA DO-178C. If, as an FAA employee you would like a copy of DO-178C, we can assist in obtaining one for you. Contact Doug Law at 202-267-1617
5.	Page 2, Paragraph 3.f J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Add quotation marks to the title of document RTCA/DO-254 and add release date of the document.	To make consistent in TSO.		Adopted.

UNCONTROLLED COPY WHEN DOWNLOADED

Check The Master List To Verify That This Is The Correct Revision Before Use /s/ NMB 6/19/09

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
		Title: Document Review Log	

6.	Page 2, Paragraph 3.g J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Change 14 CFR § 21.618 to Title 14, Code of Federal Regulations (CFR) 21.618.	To clarify.		Adopted.
7.	Page 2, Paragraph 3.g J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Please clarify the expectations supporting a deviation to the TSO MPS in this paragraph.	For clarification purposes to align with 14 CFR section 21.618.	In Paragraph 3.g, revise the second sentence as follows, "If you invoke these provisions, you must show that your equipment maintains an equivalent level of safety to compensate for the TSO MPS.	Non-concur. This paragraph is standard for all new or revised TSOs and directly references 14 CFR section 21.618. Applicants wanting to apply for a deviation need to read and meet the rule. We directly referenced the rule so there would be no confusion as to the requirements in 21.618 for obtaining a deviation.
8.	Page 4, Paragraph 5.a. J.S. Palmer, ANM-104B, (425) 917-6481/S. Lennon, ANM-100B, (425) 917-6436	Add summary of fire detection instruments specifications such as the sensitivity set point and electrical requirements	To clarify.		Non-concur. The TSO provides minimum performance standards. The particular case presented would provide a second source of information with the potential for unintended differences between the MPS and the summary. A single source of information ensures use of one standard for accuracy and traceability.

UNCONTROLLED COPY WHEN DOWNLOADED

Check The Master List To Verify That This Is The Correct Revision Before Use /s/ NMB 6/19/09

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
		Title: Document Review Log	

9	Page 2, Paragraph 2.e. (Software Qualification) D. Law AIR-111	Reference to DO-178C has incorrect revision date.	DO-178C was issued on 12-13-2011. This paragraph references 12-1-1992	Revise date to read 12-13-2011 for DO-178C	Adopted
10	General P. DeVore, ACE-116W	The prior revision of the TSO included a requirement for a “false warn” test when subjected to a sudden cabin pressure decrease or increase. This requirement was eliminated in the new standard.	There is no explanation as to why this requirement was eliminated.	<i>Explain the rationale for eliminating the “false warn” requirement from the revised TSO document.</i>	Answer. TSO-C1d provided no definition for “sudden”. RTCA D160G Section 4.6.2 provides a quantitative definition for decompression testing (15seconds).
11	Page 5, Section 6 P. DeVore, ACE-116W	The Manufacturer Data Requirements do not include a requirement for the manufacturer to maintain a copy of all the detail design drawings for the components.	In Section 5 (Application Data Requirements) there is a requirement for the manufacturer to provide a listing of all the drawings and processes that define the article’s design. However, in Section 6 there is only a requirement to have the material and process specifications available for review, but not the drawings.	Add “design drawings” to the list of items the manufacturer must have available for review.	Non-concur: The detail design drawings are required by section 5, which is to be submitted with the application. Section 6 is additional information that they don’t have to submit with the application but make it available if we ask to see it. There is no need to have the design drawings requirement in both locations.

UNCONTROLLED COPY WHEN DOWNLOADED

Check The Master List To Verify That This Is The Correct Revision Before Use /s/ NMB 6/19/09

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
Title: Document Review Log		Date: June 19, 2009	Page 5 of 5

12	David Walen Chief Scientific and Technical Advisor - Aircraft Lightning, HIRF, and EMC	SAE AS8036A includes sections 4.9, 4.10, and 4.11 dealing with dielectric, insulation resistance and over-potential tests. These requirements should not be included in an aerospace equipment performance standard.	These are typically requirements that are used for piece-parts and components, such as insulated wires and connectors. The requirements in RTCA/DO-160 effectively cover the intent of sections 4.9, 4.10, and 4.11.	I suggest that the TSO exclude these requirements.	Adopted.
----	--	--	--	--	----------

UNCONTROLLED COPY WHEN DOWNLOADED

Check The Master List To Verify That This Is The Correct Revision Before Use /s/ NMB 6/19/09