

National Aeronautics and
Space Administration
John F. Kennedy Space Center
Kennedy Space Center, FL 32899



October 15, 2010

Reply to Attn of: SA-C

TO: Lyndon B. Johnson Space Center
Attn: EA3/T. Martin

FROM: SA-C/Chairman, Ground Safety Review Panel

SUBJECT: Closure of the Ground Safety Verification Tracking Log (SVTL) for
the Alpha Magnetic Spectrometer-02 (AMS-02), Flight ULF6,
Mission STS-134

The Ground Safety Review Panel has completed the review of the data submitted in support of the closure of the subject Payload's SVTL. The data is acceptable and the SVTL is closed.

This completes your Ground Safety Review Process. Thank you for your cooperation.

Please contact Tom Tinsler at (321) 867-3644, if you have any questions.

A handwritten signature in black ink, appearing to read "Paul D. Kirkpatrick". The signature is stylized and cursive.

Paul D. Kirkpatrick

Enclosure

cc:

NE-O-C/M. Gardner
NE-O-C/A. Gilmore
NE-O-C/T. Holbert
NE-O-C/J. Mathis
SA-B1/D. McCarter
SA-B3/A. Stampfel
SA-C1/T. Tinsler
SA-C2/S. Brunelle
SA-C2/P. Falk
SA-C2/S. Hadaway
SA-C2/P. Hales
SA-C2/D. Moore
SA-C-MEI/J. Hamilton
SA-G/SMASS MEI/R. Schwader
TA-C2/M. Cardinale
UB-G/S. Bigos
UB-G/R. Fritsche
UB-I/D. Clark
UB-I/J. Merbitz
UB-R/M. Czech
UB-R/J. Delai
UB-R/J. Graves
UB-R/G. Horanic
UB-R/J. Keifenheim
UB-R/I. Kight
UB-R/J. Valle
HQ/OSMA/G. White
JSC/EA3/K. Bollweg
JSC/ESCG/JE-1SA/E. Harvey
JSC/ESCG/JE-4EB/C. Clark
JSC/ESCG/JE-4EB/L. Hill
JSC/ESCG/JE-4EB/P. Mott
JSC/ESCG/JE-4EB/J. C. Tutt
JSC/ESCG/JE-4EB/T. Urban
JSC/HB3-40/R. Miley
JSC/NE141/V. Berend
JSC/NE141/G. Dawson
JSC/NE141/R. Guidry
JSC/NE141/D. Moreland
Boeing/721S-S210/C. Hardison
Boeing/721S-S235/J. Balzer
Boeing/721S-S235/R. Hart
Boeing/721S-S235/M. Sestile
Boeing/721S-S243/J. Degano
Boeing/721S-S243/D. Semder
Boeing/721S-S270/M. Dahm
IHA-022/R. Nickell
TA-B1A/R. Scott
USK-142/L. Boehmer

USK-291/J. Garrett
USK-291/B. Leathers

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT AND MISSION: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operation(s) Constrained	j. Independent Verification Required	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
1.	GHR-AMS02-001	1.2.1	Review of AMS-02 flight and GSE materials lists against KSC-approved lists.	Unable to use plastic films, adhesive tapes, and foams	No	08/24/10	07/13/10	E-mail between Chris Tutt and Louis Petcovic, Boeing M&P.
2.	GHR-AMS02-001	1.2.2	Review of AMS-02 materials usage agreements.	Unable to use plastic films, adhesive tapes, and foams	No	08/24/10	07/13/10	E-mail between Chris Tutt and Louis Petcovic, Boeing M&P.
3.	GHR-AMS02-001	1.5.1	Approval of the Process Waste Questionnaire.	Unable to dispose of toxic or flammable by-products	No	09/15/10	09/13/10	Process Waste Questionnaires filled out and turned into KSC
4.	GHR-AMS02-001	2.1.1	Inspect flight hardware and GSE for proper identification of potential ignition sources and correct warning labels.	Unable to access flight hardware or GSE	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0025, <i>EGSE Design Review</i> .
5.	<i>GHR-AMS02-001</i>	2.2.1	Review of design for proper containment of flammable materials.	Unable to access flight hardware or GSE	No	08/24/10	08/25/10	ESCG-4295-10-ADV-SY-MEMO-0029, Potential for Ammonia Leakage During AMS-02 Transport.
6.	<i>GHR-AMS02-001</i>	2.3.1	Review of flight hardware and GSE design drawings for proper controls/shielding.	Unable to access flight hardware or GSE	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0023, <i>Electrical Safety Verifications of AMS-02 Ground Support Equipment (GSE) Power Equipment and GSE Cables</i> .
7.	GHR-AMS02-001	3.1.1	Review of AMS-02 electrical GSE to verify it meets the requirements of KHB 1700.7C, Section 4.3.2 (Electrical) and the National Electric Code (NEC), National Fire Protection Association 70 (NFPA 70, or equivalent.	Unable to use GSE electrical circuits.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0023, <i>Electrical Safety Verifications of AMS-02 Ground Support Equipment (GSE) Power Equipment and GSE Cables</i> .
8.	GHR-AMS02-001	4.1.1	Review of AMS-02 mating/demating procedures.	Unable to perform mate/demate operations with unreviewed proc.'s	No	08/24/10	07/27/10	<i>Generic EGSE Electrical Safety Steps</i> . These are steps that will be inserted into the appropriate TPSs when they are written.

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

PAYLOAD/ELEMENT:

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
9.	GHR-AMS02-001	5.1.2	QA inspections of as-built hardware to approved drawings.	Unable to mate uninspected PVGF connector with another connector.	No	10/06/10	10/14/10	PVGF connector inspected per TPS #2A1020253 All other connectors inspected per TPS.
10.	GHR-AMS02-001	5.2.1	Review of procedures.	Unable to review unreviewed procedures.	No	08/24/10	07/27/10	Generic EGSE Electrical Safety Steps. These are steps that will be inserted into the appropriate TPSs
11.	GHR-AMS02-001	5.3.1	Review of affected connectors to ensure label placement.	Unable to use those connectors that need labels.	No	08/24/10	08/27/10	ESCG-4295-10-ADV SY-MEMO-0032, Review of AMS-02 Power Connectors.
12.	GHR-AMS02-001	6.1.1	Review of AMS-02 procedures to verify monitoring of heater circuit temperatures.	Unable to use AMS-02 heaters.	No	08/24/10	08/04/10	E-mail from Tim Urban dated 08/04/10 stating heaters will be disabled and verified shortly after activation.
13.	GHR-AMS02-001	6.3.1	Review of AMS-02 heater parameters.	Unable to AMS-02 heaters.	No	08/24/10	08/24/10	ESCG-4470-10-TEAN-DOC-0119, AMS-02 Heaters During Ground Operations.
14.	GHR-AMS02-001	7.1.1	Review of component specifications to ensure design lifetime exceeds operational lifetime.	Unable to use unreviewed components.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0025, EGSE Design Review.
15.	GHR-AMS02-001	9.1.1	Review of GSE electrical schematics for proper bonding/grounding.	Unable to use GSE electrical equipment	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0023, Electrical Safety Verifications of AMS-02 Ground Support Equipment (GSE) Power Equipment and GSE Cables.
16.	GHR-AMS02-002	1.1.1	Review of list of certified personnel.	Unable to use toxic materials.	No	08/24/10	08/30/10	ESCG-4295-10-ADV SY-MEMO-0033, Toxic Materials used by AMS-02 During Ground Processing.
17.	GHR-AMS02-002	2.1.1	Inspection of cleaning solvent/adhesive material containers.	Unable to use toxic materials	No	08/24/10	08/30/10	ESCG-4295-10-ADV SY-MEMO-0033, Toxic Materials used by AMS-02 During Ground Processing.

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
18.	GHR-AMS02-004	1.5.1	Demonstration of positive margins of safety.	Unable to use RICH GSE	No	08/24/10	08/25/10	Certificate from Chesterfield Special Cylinders Ltd., refer also to RICH GSE pressure matrix attached to GHR-AMS02-004
19.	GHR-AMS02-004	1.5.2	Review of RICH GSE design.	Unable to use RICH GSE	No	08/24/10	08/25/10	Certificate from Chesterfield Special Cylinders Ltd., refer also to RICH GSE pressure matrix attached to GHR-
20.	GHR-AMS02-004	1.6.1	Demonstration of positive margins of safety.	Unable to use TRD Drop Pressure GSE	No	08/24/10	09/01/10	Luxfer Gas Cylinders Declaration of Conformity, dated 03/04/09. TRD Drop Pressure Matrix in GHR-AMS02-004.
21.	GHR-AMS02-004	1.6.2	Review of TRD Drop Pressure GSE design.	Unable to use TRD Drop Pressure GSE	No	08/24/10	09/01/10	Luxfer Gas Cylinders Declaration of Conformity, dated 03/04/09. TRD Drop Pressure Matrix in GHR-AMS02-004.
22.	GHR-AMS02-004	5.1.1	Review and approval of procedures.	Unable to use AMS pressure vessels.	No	08/24/10	08/25/10	Letter to GSRP Chairman from AMS-02 NASA Project Manager
23.	GHR-AMS02-004	5.2.1	Review and approval of training and certification process of personnel.	Personnel will not be able to handle AMS-02 pressure vessels.	No	08/24/10	08/25/10	Letter to GSRP Chairman from AMS-02 NASA Project Manager
24.	GHR-AMS02-004	5.3.1	Review and approval of procedures to restrict access.	Unable to use tools in vicinity of payload.	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan</i>
25.	GHR-AMS02-004	7.1.2	Review of design and procedures to ensure appropriate materials usage with hardware.	Unable to use flt. or GSE press. vessels.	No	08/24/10	08/26/10	The remaining gases in the GSE (nitrogen, CO ₂ , and Xenon) are inert and will not adversely affect the GSE used to contain them.

26.	GHR-AMS02-004	8.1.1	QA review to ensure hardware is built per approved drawings.	Unable to use TRD Drop Pressure GSE	No	08/24/10	09/01/10	TRD Stabilization Tank with vendor's seal (located behind GHR-AMS02-004). RICH and TRD Drop Pressure tank vendors' seals (located behind SVTL).
27.	GHR-AMS02-004	8.1.2	QA review of as-built hardware to ensure it meets design.	Unable to use TRD Drop Pressure GSE	No	08/24/10	09/01/10	TRD Stabilization Tank with vendor's seal (located behind GHR-AMS02-004). RICH and TRD Drop Pressure tank vendors' seals (located behind SVTL).

b. Page 4 of 10

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
28.	GHR-AMS02-004	8.2.1	Review of test/operational data from CERN and ESTEC.	Unable to use flt. or GSE press. vessels.	No	08/24/10	07/16/10	ETS Facility Data Report, <i>AMS-02 Thermal Vacuum Test</i> .
29.	GHR-AMS02-004	12.1.1	Agreement by JSC ES4/Pressure Vessel Technical Monitor/Fracture Control Board Chairman that flight hazard report is sufficient to assess the AMS COPV ground processing risk with respect to stress rupture.	Unable to use COPVs	No	08/24/10	08/24/10	Closed per GSRP direction.
30.	GHR-AMS02-004	12.2.1	AMS-02 concurrence with KSC access restriction requirements	Unable to use COPVs	No	08/24/10	08/17/10	E-mail dated 08/16/10 from Joe Hamilton to Chris Tutt, <i>AMS COPV design burst values</i> .
31.	GHR-AMS02-004	12.2.2	AMS-02 will provide the ARDE design burst pressure data.	Unable to use COPVs	No	08/24/10	08/17/10	E-mail dated 08/11/10 from Chris Tutt to Joe Hamilton, <i>AMS COPVs</i> .
32.	GHR-AMS02-004	12.2.3	AMS-02 will provide the temperature at which the maximum ground operating pressure is 1/3 the design burst pressure to KSC. AMS-02 will also provide the pressure at 77F (the maximum temperature in the SSPF).	Unable to use COPVs	No	08/24/10	08/17/10	E-mail dated 08/11/10 from Chris Tutt to Joe Hamilton, <i>AMS COPVs</i> .
33.	GHR-AMS02-004	12.2.3.1	If maximum operating pressures are below 1/3 design burst pressure, no additional controls per KNPR 8715.3 are needed.	Unable to use COPVs	No	08/24/10	08/17/10	E-mail dated 08/16/10 from Joe Hamilton to Chris Tutt, <i>AMS COPV design burst values</i> .

34.	GHR-AMS02-004	12.2.3.2	If maximum operating pressures are above 1/3 design burst pressure, KSC will determine operational controls.	Unable to use COPVs	No	08/24/10	08/17/10	E-mail dated 08/16/10 from Joe Hamilton to Chris Tutt, <i>AMS COPV design burst values.</i>
35.	GHR-AMS02-007	1.1.1	Oxygen displacement/accumulation analyses for Xenon, Carbon Dioxide, Nitrogen release into each KSC location for GSE and flight hardware to assure that a >19.5% oxygen concentration will be maintained or that sources that will not maintain that level are identified for venting/additional control.	Unable to operate AMS-02 in KSC facilities.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0026, <i>Venting Hazard Reassessment.</i>

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
36.	GHR-AMS02-007	1.3.1	Certification of personnel training on evacuation procedures.	Personnel will not be able to work near payload or GSE.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0026, <i>Venting Hazard Reassessment.</i>
37.	GHR-AMS02-007	2.1.1	Operational procedures analysis will ensure that work locations avoid potential oxygen depletion zones or streams.	Personnel will not be able to work near payload or GSE.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0026, <i>Venting Hazard Reassessment.</i> TRD gases will be dispersed by debris shielding.
38.	GHR-AMS02-007	2.2.1	QA inspection of warning labels to verify that they are appropriately sized and located.	Personnel will not be able to work near payload or GSE.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0026, <i>Venting Hazard Reassessment.</i> TRD gases will be dispersed by debris shielding.
39.	GHR-AMS02-009	1.1.2	Load testing and tagging of all AMS-02 lifting hardware.	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	TPS#2A1020081-Load Test of AMS Lift Fixtures at CERN for KSC, AMS-02 Ground Support Lifting/Handling Equipment Matrices.
40.	GHR-AMS02-009	2.1.1	Review of AMS-02 records to ensure NDI was performed. An NCR (AMS02-GNCR-001) was submitted for swivel hoists that could not be taken out of their slings for testing.	Will not be able to use lifting equipment.	No	08/24/10	08/24/10	NDR Test Results for AMS-02 Lifting Equipment from Furgo Consultants, Inc. TPS#2A1020063-NDE Inspection and Load Test of Lifting Hardware. 08/24/10-NCR approved by GSRP Chairman per e-mail from T. Tinsler, 08/24/10.
41.	GHR-AMS02-009	2.2.1	Review of AMS-02 lifting procedures to ensure inspections are included.	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	TPS#2A102-Generic TPSs for MPLF/PLF Reconfiguration Procedures.
42.	GHR-AMS02-009	2.3.1	Load testing will be completed to 1.25 times the rated load within one year prior to use.	Will not be able to use lifting equipment	No	08/24/10	08/17/10	ESCG-4450-06-STAN-DOC-0049 (PLF), ESCG-4005-05-STAN-DOC-0103 (MPLF), Ground Support Lifting/Handling Equipment Matrix for the Primary Lifting Fixture Hoist Assembly and Multi-Purpose Lifting Fixture Hoist Assembly.

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOGa. FLIGHT GROUND

c. PAYLOAD/ELEMENT:

AMS-02/STS-134 (ULF-6)

d. DATE:

10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
43.	GHR-AMS02-009	3.1.2	QA reports documenting that installed hardware meet requirements.	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	TPS#2A102-MPFL/PLF reconfigurations, TPS#2A1020127-Swivel Hoist Installation on the PSS
44.	GHR-AMS02-009	4.1.1	QA inspections/verifications that the AMS-02 lifting equipment in properly posted/tagged.	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	2A1020081, Load Test of AMS Lift Fixtures at CERN, TPS, TPS#2A1020063-NDE Inspection and Load Test of Lifting Hardware
45.	GHR-AMS02-009	5.1.1	Review of AMS-02 drawings and procedures for the AMS-02 lifting equipment.	Will not be able to use lifting equipment.	No	08/24/10	07/26/10	MPLF drawing SEG38117075 and PLF drawing SEG38117100. TPS#2A102 MPLF/PLF Reconfiguration Procedures.
46.	GHR-AMS02-009	5.1.2	Inspection of sling components to ensure that normally disassembled components are either marked, coded or tethered.	Will not be able to use lifting equipment.	No	08/24/10	07/26/10	MPLF drawing SEG38117075 and PLF drawing SEG38117100. TPS#2A102 MPLF/PLF Reconfiguration Procedures.
47.	GHR-AMS02-009	5.2.1	Review of AMS-02 procedures for reassembly instructions and QA inspections/verifications of proper assembly.	Will not be able to use lifting equipment.	No	08/24/10	07/26/10	MPLF drawing SEG38117075 and PLF drawing SEG38117100. TPS#2A102 MPLF/PLF Reconfiguration Procedures.
48.	GHR-AMS02-009	5.3.1	Inspection of eyebolt insertion.	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	E-mail from Phil Mott dated 08/06/10 stating the eyebolts on the LUSS Shipping Assembly will not be used to lift the cover.
49.	GHR-AMS02-009	5.4.1	Inspection of PSS Top Cover torque measurements	Will not be able to use lifting equipment.	No	08/24/10	08/06/10	TPS#2A1020127-Swivel Hoist Installation on the PSS.
50.	GHR-AMS02-009	6.1.1	AMS-02 will participate in lift procedure development per AMS-02 Launch Site Safety Plan.	Will not be able to use lifting equipment.	No	08/24/10	07/26/10	ESCG-4420-10-CED-MEMO-0007, <i>Lift Procedures</i>

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
51.	GHR-AMS02-010	1.2.1	Review of procedures to verify compliance with assumptions in stress analysis.	Will not be able to use stands.	No	08/24/10	08/23/10	TPS #2A1020169
52.	GHR-AMS02-010	2.1.1	Review of the PSS assembly/adjustment procedure.	Will not be able to use stands.	No	08/24/10	07/16/10	TPS #2A1020058
53.	GHR-AMS02-010	2.3.1	Review of procedures.	Will not be able to use stands.	No	08/24/10	07/16/10	TPS #2A1020058
54.	GHR-AMS02-011	1.2.1	Review and approval of AMS and AMS CGSE electrical schematics.	Will not be able to use electrical systems.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0023, <i>Electrical Safety Verifications of AMS-02 Ground Support Equipment (GSE) Power Equipment and GSE Cables.</i>
55.	GHR-AMS02-011	1.2.2	Review of COTS hardware for UL or equivalent electrical safety qualification.	Will not be able to use COTS hardware.	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0023, <i>Electrical Safety Verifications of AMS-02 Ground Support Equipment (GSE) Power Equipment and GSE Cables.</i>
56.	GHR-AMS02-011	2.1.1	Inspection of GSE socket connectors/schematics.	Will not be able to use GSE electrical systems.	No	08/24/10	08/25/10	ESCG-4295-10-ADV SY-MEMO-0030, Review of AMS-02 GSE Power Cables

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. 10/14/10

DATE:

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
57.	GHR-AMS02-011	2.3.1	QA inspection of hardware ensuring high voltage locations are inaccessible.	Will not be able to power PVGF harness.	No	10/06/10	10/14/10	PVGF harness has been inspected per TPS #2A1020253. All other high voltage areas inspected per TPS.
58.	GHR-AMS02-011	2.4.1	Review of operational procedures showing lockout-tagout of power supplies for AMS GSE to ensure no power to AMS GSE prior to maintenance and/or mate/demate operations.	Will not be able to conduct maintenance on flt./GSE hardware.	No	08/24/10	07/27/10	<i>Generic EGSE Electrical Safety Steps.</i> These are steps that will be inserted into the appropriate TPSs when they are written.
59.	GHR-AMS02-011	5.1.1	Grounding and bonding verification tests will be performed on the AMS-02 payload, electrical GSE, and the interfacing between AMS-02 equipment and KSC facilities.	Unable to use flt./GSE electrical systems.	No	08/24/10	8/27/2010	E-mail from Trent Martin, NASA Project Manager, with grounding test results. Dated 08/27/10
60.	GHR-AMS02-011	6.1.1	Review of AMS-02 procedures to ensure there is a warning to not perform blind mating.	Will not be able to perform electrical mates.	No	08/24/10	07/27/10	<i>Generic EGSE Electrical Safety Steps.</i> These are steps that will be inserted into the appropriate TPSs when they are written.
61.	GHR-AMS02-011	6.3.1	Review of procedures to ensure personnel will inspect power connectors for debris	Will not be able to perform mating of power connectos.	No	08/24/10	07/27/10	<i>Generic EGSE Electrical Safety Steps.</i> These are steps that will be inserted into the appropriate TPSs when they are written.

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
62.	GHR-AMS02-013	1.1.1	Review of design.	Unable to process AMS-02.	No	08/24/10	07/13/10	ESCG Memo ESCG-4295-10-ADVSY-MEMO-0013, <i>AMS Permanent Magnet Magnetic Field Correlation</i>
63.	GHR-AMS02-013	1.1.2	Measurement of magnetic field.	Unable to charge the magnet.	No	08/24/10	07/13/10	ESCG Memo ESCG-4295-10-ADVSY-MEMO-0013, <i>AMS Permanent Magnet Magnetic Field Correlation</i>
64.	GHR-AMS02-013	2.1.1	Review of procedures to ensure placement of warning signs.	Personnel unable to approach magnet.	No	08/24/10	08/27/10	Photograph of warning sign placed around AMS-02 in footprint 7 in the SSPF.
65.	GHR-AMS02-013	2.2.1	Review list of tools to ensure inclusion of non-magnetic tools.	Unable to approach magnet with tools.	No	08/24/10	07/26/10	ESCG-4420-10-CED-MEMO-0006, <i>Non Magnetic Tools</i>
66.	GHR-AMS02-013	3.1.1	Review of procedures to ensure placement of warning signs.	Personnel unable to approach magnet.	No	08/24/10	08/27/10	Photograph of warning sign placed around AMS-02 in footprint 7 in the SSPF.
67.	GHR-AMS02-014	1.1.1	Inspection of GSE.	Personnel will be unable to work near payload/GSE	No	08/24/10	08/27/10	ESCG-4295-10-ADV SY-MEMO-0031, <i>Review of Sharp Edges on AMS-02 GSE Hardware.</i>
68.	GHR-AMS02-014	1.2.1	Review of AMS-02 procedures to ensure sharp edges are avoided during maintenance operations.	Personnel will be unable to work near payload/GSE	No	08/24/10	08/04/10	Lockwire-Use PRC-9005B, <i>Process Specification for Lockwiring</i> Wire ties-E-mail from Tim Urban explaining wire tie process.

NSTS/ISS PAYLOAD SAFETY VERIFICATION TRACKING LOG a. FLIGHT GROUND

c. PAYLOAD/ELEMENT: AMS-02/STS-134 (ULF-6)

d. DATE: 10/14/10

e. Log No.	f. Hazard Report Number	g. Safety Verification Number	h. Safety Verif. Method (Identify Procedures By Number and Title)	i. Ground Operations Constrained	j. Independent Verification Required Yes/No	k. Scheduled Completion Date	l. Completion Date	m. Method of Closure (Comments)
69.	GHR-AMS02-014	1.3.1	Review of procedures to ensure warnings are in place.	Personnel will be unable to work near payload/GSE	No	08/24/10	08/27/10	ESCG-4295-10-ADV SY-MEMO-0031, <i>Review of Sharp Edges on AMS-02 GSE Hardware.</i>
70.	GHR-AMS02-015	1.3.1	Review of AMS-02 procedures.	Personnel unable to work near hot touch temperature areas	No	08/24/10	07/21/10	ESCG-4295-10-ADV SY-MEMO-0025, <i>EGSE Design Review.</i>
71.	GHR-AMS02-016	1.1.1	Design review.	Unable to use lasers.	No	08/24/10	07/16/10	ESCG-4295-10-ADV SY-MEMO-0020, <i>TAS Inspection</i>
72.	GHR-AMS02-016	1.2.1	Design review.	Unable to use lasers.	No	08/24/10	07/16/10	ESCG-4295-10-ADV SY-MEMO-0020, <i>TAS Inspection</i>
73.	GHR-AMS02-017	1.1.1	Review of tool control plan to ensure it includes the use of temporary restraints.	Unable to use tools	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan.</i>
74.	GHR-AMS02-017	1.3.1	Review of tool control plan to ensure personnel are directed to use only secured tools.	Unable to use tools	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan.</i>
75.	GHR-AMS02-017	1.4.1	Verification of training of personnel in proper use of tools.	Unable to use tools	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan.</i>
76.	GHR-AMS02-017	2.1.1	Verification of training in the tool control plan.	Unable to use tools	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan.</i>
77.	GHR-AMS02-017	3.1.1	Verification of training to account for parts/components.	Unable to use tools	No	08/24/10	08/20/10	ESCG-4295-09-CPAS-MEMO-0011, <i>Tool Control Plan.</i>