



Alpha Magnetic
Spectrometer NASA / DOE

Open Paper Management Tool Open Items Report



National Aeronautics and
Space Administration

Friday, November 16, 2007

Open Action Items Report

Open Item Number: 05-042

RID Open Date: 9/14/2005

Title: Helium Venting Hazard Analysis

Initiator(s):

Description: Provide hazard analysis for venting of helium from the main tank.

Action Item Information

Actionee(s): Chris Tutt/ESCG

Action Due Date: 4/1/2007

Action: Take existing hazard analysis of helium venting presented to NASA and create stand-alone report for delivery to ESTEC.

Action Status: 8/24/2007 - Venting analysis confirms that directed vents will be needed for SSPF - analysis for ESTEC will be done next.

8/9/2007 - Collaboration between SM and ESCG more clearly defined in telecon - answers should be available soon to support GOWG and ESTEC.

11/20/06 - Date rolled to April 1st to better reflect need. Meeting at ESTEC planned for late April.

8/14/06 - Date rolled to September 1st.

6/5/06 - Necessary information received from SCL. In-work, C. Tutt.

3/30/2006 - Date changed again as analyst is not becoming any faster.

3/6/2006 - Date changed to 4/1 to account for slothful analyst.

11/14/2006 - Date changed to 3/1 to better reflect analyst workloads.

Open Action Items Report

Open Item Number: 05-043

RID Open Date: 9/14/2005

Title: Helium Venting Hazard Analysis

Intiator(s):

Description: Provide hazard analysis for venting of helium from the main tank.

Action Item Information

Actionee(s): Gaetan Piret/ESTEC

Action Due Date: 5/1/2007

Action: Upon delivery of hazard analysis described in 05-042, evaluate potential hazards to EMI and TV test chambers.

Action Status: 11/20/06 - Date rolled to May 1st to roll with 05-042.

8/14/06 - Date rolled to October 1st.

4/10/06 - Due date changed to 6/1/06 allow time after completion of 05-042.

11/12/2005 - Date changed to 4/1/2006 to match item 05-042.

Open Action Items Report

Open Item Number: 05-074

RID Open Date: 10/28/2005

Title: CGSE Support at Pad

Intiator(s): Trent Martin

Description: It is not clear how the cryogenic GSE, particularly the piping, will be supported at the pad.

Action Item Information

Actionee(s): Robert Becker/MIT, Alexander Gretchko/MIT

Action Due Date: 10/25/2007

Action: Provide details on how the GSE will be supported at the pad.

Action Status: 10/24/2007 - New layouts proposed at GOWG - New drawings/layouts in work in Shanghai.

6/4/2007 - Ken Bollweg and Mike Capell to work with Alexander Grechko to resolve file transfer problems.

11/27/06 - J. Keiffenheim reports that space is available for hanging plumbing, and KSC can design, manufacture hanging hardware. Still have concerns regarding fill port plumbing suspension, so will keep open.

10/16/06 - Date rolled to 11/15 after Cryo GSE meeting at KSC.

6/26/2006 - Date rolled to October 15th after Magnet Processing meeting at KSC.

5/15/2006 - Further discussion on handling of CGSE after PLBD close prelaunch is required.

3/24/2006 - Trent Martin to forward all data provided by KSC to Art Nelson for inclusion in ground safety package.

2/14/2006 - Alexander Gretchko waiting on information from KSC - Trent Martin to coordinate.

Open Action Items Report

Open Item Number: 07-003

RID Open Date: 6/14/2007

Title: DDRS Drawings Status

Intiator(s): Chris Tutt

Description: DDRS drawings are required to close out several items on the interior Form 1230.

Action Item Information

Actionee(s): Tim Urban/ESCG

Action Due Date: 11/1/2007

Action: Provide released drawings of the DDRS.

Action Status: 6/15/2007 - Tim Urban to get current status of DDRS drawings and provide schedule estimate for their completion.

Open Action Items Report

Open Item Number: 07-004

RID Open Date: 6/14/2007

Title: DDRS EMI Assessment

Intiator(s): Chris Tutt

Description: DDRS must meet one of four requirements called out on line 8 of Form 1230.

Action Item Information

Actionee(s): Tim Urban

Action Due Date: 11/1/2007

Action: DDRS must be shown to meet EMI requirements.

Action Status: 6/15/2007 - Tim Urban to determine which of the four requirements is applicable for DDRS and provide ECD for resolution.

Open Action Items Report

Open Item Number: 07-005

RID Open Date: 6/14/2007

Title: *DDRS Thermal Analysis*

Intiator(s): *Chris Tutt*

Description: *DDRS must be shown to meet touch temperature requirements in Form 1230 Row 10.*

Action Item Information

Actionee(s): *Tim Urban/ESCG, Craig Clark/ESCG*

Action Due Date: *9/10/2007*

Action: *Perform sufficient analysis or review to demonstrate that PGSC/NGLS will not see excessive thermal load.*

Action Status: *10/12/2007 - System information provided to Craig Clark, analysis underway.*

6/15/2007 - Tim Urban, Craig Clark, and Leland Hill to determine what assessment is required to close SVM and provide ECD.

Open Action Items Report

Open Item Number: 07-008

RID Open Date: 6/14/2007

Title: DDRS Rapid Safing

Intiator(s): Chris Tutt

Description: DDRS must meet rapid safing requirements described in MA2-96-190.

Action Item Information

Actionee(s): Tim Urban/ESCG

Action Due Date: 9/10/2007

Action: Gain concurrence from NASA that DDRS meets rapid safing requirements.

*Action Status: 9/28/2007 - Joel Sills/MO researching requirements and trying to identify appropriate points of contact within SSP.
6/15/2007 - Tim Urban to investigate who approves IVA rapid safing and find out what they want to see to close issue.*

Open Action Items Report

Open Item Number: 07-016

RID Open Date: 7/31/2007

Title: Static Test Approval

Intiator(s): Chris Tutt

Description: SWG is withholding approval of the AMS-02 Static Test

Action Item Information

Actionee(s): Chris Tutt/ESCG, Carl Lauritzen/ESCG

Action Due Date: 9/1/2007

Action: Meet with SWG to review memo describing static test design principles and determine what additonal information, if any, is needed for their approval.

Action Status: 9/27/2007 - Paul Romine has asked to see initial test correlation results before issuing final opinion. Quick correlation in work and will be written up as stand-alone memo.
8/17/2007 - Meeting held on 8/15/2007. Basic static test design concept accepted by SWG, but Paul Romine to review detailed writeup and issue final approval.
8/9/2007 - Chris Tutt to pulse Lance Mushung and Paul Romine for status.

Open Action Items Report

Open Item Number: 07-020

RID Open Date: 11/5/2007

Title: Ground Vacuum Pumps

Intiator(s): Jack Keifenheim

Description: Provide suitable controls to prevent ground pump from contaminating KSC facilities.

Action Item Information

Actionee(s): Chris Tutt/ESCG, Trent Martin/JSC

Action Due Date:

Action: Determine suitable trailer/shed/containment system for ground pump outside of SSPF.

Action Status:

Open Action Items Report

Open Item Number: 07-021

RID Open Date: 11/5/2007

Title: Water Cooling for Ground Pumps

Intiator(s): Jack Keifenheim

Description: Determine what facilities are needed to cool ground pumps.

Action Item Information

Actionee(s): Alexander Gretchko/MIT

Action Due Date:

Action: Provide ground pumps required cooling water flow rate.

Action Status: 11/7/2007 - Room-temperature water flow rate is 185 gal/hr. Chilled water flow rate TBD.

Open Action Items Report

Open Item Number: 07-023

RID Open Date: 11/5/2007

Title: GSE Schedules

Intiator(s): Jack Keifeneim

Description: Determine whether JAXA schedule and AMS schedules for Footprint 7 are compatible.

Action Item Information

Actionee(s): Morgan Simpson/KSC, Dave Board/KSC, Steve Bigos/KSC

Action Due Date:

Action: Provide preliminary assessment for when AMS could begin SSPF mods without interfering with JAXA operations.

Action Status:

Open Action Items Report

Open Item Number: 07-024

RID Open Date:

Title: Concrete Slab Dimensions

Intiator(s): Jack Keifenheim

Description: Provide dimensions of concrete slabs external to SSPF.

Action Item Information

Actionee(s): Dave Board/KSC

Action Due Date:

Action: Provide dimensions of concrete slabs external to SSPF.

Action Status:

Open Action Items Report

Open Item Number: 07-025

RID Open Date: 11/5/2007

Title: Vacuum Pump Monitoring

Intiator(s): Jack Keifenheim

Description: Determine ground and on-board vacuum pump monitoring requirements at pad.

Action Item Information

Actionee(s): Trent Martin/JSC, Mike Capell/MIT

Action Due Date:

Action: Determine what information needs to be monitored on the vacuum pumps during all ground processing scenarios. In particular, determine what monitoring is required during S0024 and the pad clears, and whether 24/7 monitoring is required.

Action Status:

Open Action Items Report

Open Item Number: 07-026

RID Open Date: 11/5/2007

Title: Oxygen Sensors

Intiator(s): Jack Keifenheim

Description: Determine need for oxygen sensors in SSPF and PCR.

Action Item Information

Actionee(s): Dave Kots/KSC, Tom Tinsler/KSC

Action Due Date:

Action: Determine need for oxygen sensors in SSPF and PCR, and determine appropriate type of sensor for use in a high helium environment.

Action Status:

Open Action Items Report

Open Item Number: 07-027

RID Open Date:

Title: Emergency Vent Lines

Intiator(s): Jack Keifenheim

Description: Provide final decision on need for emergency vent lines in SSPF, CRF, Canister, and/or PCR.

Action Item Information

Actionee(s): Art Nelson/ESCG

Action Due Date:

Action: Provide initial hazard report and ground safety writeup on potential credible venting scenarios during KSC operations to GSRP for review.

Action Status: 11/9/2007 - Draft writeup under review by ESCG.

Open Action Items Report

Open Item Number: 07-028

RID Open Date: 11/5/2007

Title: Hurricane Scenario

Intiator(s): Jack Keifenheim

Description: Develop hurricane ride-out scenario for AMS-02.

Action Item Information

Actionee(s): Trent Martin/JSC

Action Due Date:

Action: Provide preliminary plan for keeping AMS-02 safe and functional during a potential hurricane.

Action Status:

Open Action Items Report

Open Item Number: 07-029

RID Open Date: 11/5/2007

Title: Launch Site Support Plan

Intiator(s): Jack Keifenheim

Description: Develop Launch Site Support Plan

Action Item Information

Actionee(s): Dave Board/KSC, Liz Maresca/KSC

Action Due Date:

Action: Identify AMS-02 LSSP development milestones and support requirements.

Action Status: 11/9/2007 - Preliminary schedule provided by Dave Board. Required contents still under review.

Open Action Items Report

Open Item Number: 07-030

RID Open Date: 11/5/2007

Title: T-0 Emergency Power

Intiator(s): Jack Keifenheim/KSC

Description: Determine feasibility of providing 110 VAC emergency power through the T-0.

Action Item Information

Actionee(s): Mike Dahm/Boeing, Dave Olsen/KSC

Action Due Date:

Action: Determine feasibility of providing 110 VAC emergency power through the T-0.

Action Status:

Open Action Items Report

Open Item Number: 07-031

RID Open Date: 11/5/2007

Title: Cryo Launch Delay Capability

Intiator(s): Jack Keifenheim

Description: Assess what infrastructure and procedures are required to support potential launch delays of up to 120 hours.

Action Item Information

Actionee(s): Stephen Harrison/SM, Chris Tutt/ESCG

Action Due Date:

Action: Assess the potential states and launch readiness of the cryosystem up to 120 hours after first T-0.

Action Status:

Open Action Items Report

Open Item Number: 07-032

RID Open Date: 11/5/2007

Title: KSC Hardware Familiarization

Intiator(s): Jack Keifenheim

Description: Determine appropriate time(s) for KSC personnel to observe operations at CERN which will be required later at KSC.

Action Item Information

Actionee(s): Trent Martin/JSC, John Heilig/ESCG

Action Due Date:

Action: Determine appropriate time(s) for KSC personnel to observe operations at CERN which will be required later at KSC.

Action Status: 11/9/2007 - John Heilig sent out an email proposing two possible visits, one in August and one in September. Dates are still tentative at this point.

Open Action Items Report

Open Item Number: 07-033

RID Open Date: 11/5/2007

Title: OPF Testing

Intiator(s): Jack Keifenheim

Description: Provide details on proposed OPF testing.

Action Item Information

Actionee(s): Tim Urban/ESCG

Action Due Date:

Action: Provide details on facility requirements for all proposed OPF tests.

Action Status:

Open Action Items Report

Open Item Number: 07-034

RID Open Date: 11/5/2007

Title: LCC Monitoring

Intiator(s): Jack Keifenheim

Description: Determine how AMS-02 LCC will be accomplished.

Action Item Information

Actionee(s): Tracy Gill/KSC, Mike Capell/MIT, Tim Urban/ESCG

Action Due Date:

Action: Determine how status information will be communicated from the payload to the decision point and what level of redundancy is required.

Action Status:

Open Action Items Report

Open Item Number: 07-035

RID Open Date: 11/5/2007

Title: LCC Monitoring

Intiator(s): Jack Keifenheim

Description: Determine how AMS-02 LCC will be accomplished.

Action Item Information

Actionee(s): Jack Keifenheim/KSC, Tracy Gill/KSC

Action Due Date:

Action: Determine where final decision maker needs to be located for AMS-02 LCC.

Action Status:

Open Action Items Report

Open Item Number: AMS_02-CDR-06

RID Open Date: 5/1/2003

Title: AMS-CDR-1-17: Meteoroid/Orbital Debris Shielding

Intiator(s): E. Christiansen/NASA

Description: *Shielding from meteoroid/debris impact is inadequate to meet protection requirements. Shielding of pressurized vessels on AMS-02 such as the vacuum case and TRD (as well as any other pressure vessel) is required to prevent catastrophic rupture of these tanks in the event of meteoroid/debris impact which would release high-velocity fragments creating a potentially serious safety issue for on-board crew. The assessed probability of no penetration (PNP) using specified environment models is 0.97 which is far below the specified 0.997 PNP requirement. Updating ballistic limit equations and models as described in the forward work plan does not appear adequate to show compliance with requirements. Additional or significantly enhanced shielding will likely be necessary to meet safety requirements.*

Action Item Information

Actionee(s): Dana Lear/ESCG

Action Due Date: 8/15/2006

Action: *Confirm analysis requirement for AMS-02*

Action Status: *10/12/2007 - CR to NSTS 1700.7B in place and under review.*

8/24/2007 - Action to focus on getting requirement clarified. Eric Christiansen made presentation last week to PSRP to consolidate requirements.

6/4/2007 - Chris Tutt and Trent Martin to meet with Eric Christiansen and Dana Lear on Thursday to discuss plan forward. Mike Capell to send details on which electronics crates should be included in future assessments.

6/26/2006 - R. Harold to work with Will Minter on model updates. Will is available until end of August.

05/03/05 - The AMS-02 modeling for the MMOD assessment was completed last week. Additionally, the BUMPER geometry runs have been completed. Dana Lear verifying/updating all inputs for both the shield ballistic response definitions (BLEs) and the mission parameters.

Open Action Items Report

Open Item Number: AMS_02-PDS_CDR-06

RID Open Date: 4/18/2005

Title:

Initiator(s): Tim Urban

Description:

Action Item Information

Actionee(s): Marco Molina

Action Due Date: 12/1/2007

Action: Re-evaluate thermal optical properties on the top of the PDS as there are no longer heaters located there (breakdown of MLI vs. white paint). QM & FM different ?

*Action Status: 3/26/2007 - Work has restarted - ECD on this question 4/15.
2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.
7/7/06 - Investigate contract status at July TIM.
5/08/2006 - Contract to be in place by June; roll date to 7/1/06
4/10/06 - On-hold pending resolution of ETH/CGS contract.
8/2/2005 - Awaiting thermal analysis of revised worst hot case.*

Open Action Items Report

Open Item Number: AMS_02-PDS_CDR-08

RID Open Date: 4/18/2005

Title:

Intiator(s): Tim Urban

Description:

Action Item Information

Actionee(s): S. Alia

Action Due Date: 12/1/2007

Action: Add 0.03 μ F per 3.2.2.2.2.A of SSP 57003, and add verification by design inspection or test.

Action Status: 3/26/2007 - Updated reports to be released at PDS MRR in December.
2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.
5/08/2006 - Contract to be in place by June; roll date to 7/1/06
4/10/06 - On-hold pending resolution of ETH/CGS contract.
11/7/2005 - All further PDS activities on hold until 6 Feb 2006.
8/22/2005 - CGS proposes release of updated document by 9/19.
8/15/2005 - Tim Urban to contact Sergio Alia and resolve remaining concerns. Closure expected by 9/5.

Open Action Items Report

Open Item Number: AMS_02-PDS_CDR-09-2

RID Open Date: 4/18/2005

Title:

Initiator(s): Tim Urban

Description:

Action Item Information

Actionee(s): S. Alia

Action Due Date: 12/1/2007

Action: Update document for maximum operating temperature of 51°C (Section 3.2, requirement ID PDS-ENV-3).

Action Status: 2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.
5/08/2006 - Contract to be in place by June; roll date to 7/1/06
4/10/06 - On-hold pending resolution of ETH/CGS contract.
11/7/2005 - All further PDS activities on hold until 6 Feb 2006.
8/22/2005 - CGS proposes release of updated document by 9/19.
8/2/2005 - MOT should be changed to match updated worst case hot temperature.