



First Stage (FS) Development Motor (DM-1) Restart: On November 3, the first segment (center/aft) of the Ares FS five-segment motor (RSRMV) was successfully cast with all process parameters within family. In addition, subsequent propellant cure, castable inhibitor application, and core removal processes were successfully performed. X-ray inspections performed to date show no indication of the propellant void condition experienced on the Shuttle FSM-15 static test motor. Pending continued successful x-ray results, remaining segments will be processed through March 2009, with a potential static test date in late August.



DM-1 Center/Aft Castable Inhibitor Application



DM-1 Center/Aft Preparation for X-Ray Inspection Following Successful Propellant Cast/Cure

Recent activities specific to the Elements include:

- **First Stage (FS)**
 - **Reusable Solid Rocket Motor (RSRM) Property Review for Transfer to FS:** The First Stage Element has completed a series of reviews with the Reusable Solid Rocket Booster (RSRB) Project and the RSRM prime, ATK, to provide concurrence for the transfer of RSRM property to the First Stage Element. This property will be needed by the Ares I and/or Ares V Projects. The majority of the property will be transferred at the conclusion of the Shuttle Program. Property necessary for the build-up of First Stage Design, Development, Test & Evaluation (DDT&E) efforts are reviewed/approved by the RSRB Project and the FS Element when requested by ATK. Of the total Shuttle Program RSRM property, 85.4% has been identified to be transferred to First Stage. Concurrence has been provided by RSRB and FS to excess now 6.2% of tooling and equipment. These items are no longer needed by Shuttle or required by Ares. An additional 7.4% tooling and equipment has been identified to

November 21, 2008





be exceeded at the end of the Shuttle Program and is not required by Ares. Currently NASA Headquarters has put a hold on the excess of any Shuttle property.

- **Flight and Integrated Test Office (FITO) and Ares I-X**
 - **Test Stand 4550 Mast Climbers on Order:** The purchase order for the first set of mast climbers was placed with Klimer Manufacturing on November 14. The mast climbers will be used to access the Integrated Vehicle Ground Vibration Test (IVGVT) test article and Special Test Equipment (STE) in Test Stand 4550 during setup and testing. These climbers offer improved access with moveable platforms. Shuttle-era static platforms in the test stand were removed during this past summer. Mast climber delivery is expected in the Spring of 2009.
 - **Ares I-X Roll Control System (RoCS) Element:** Activities specific to the RoCS Element include:
 - Cold flow oxidizer lines have had the Peacekeeper (PK) filters welded in place and are ready for x-ray and dye-penetrant testing. The fuel lines are installed in the calibration flow bench.
 - Some minor re-work has been identified on the fairings as a precursor to match drilling to panels.
 - The test rig for the flight helium regulator and relief valve testing has been set back up with cleaned components, in preparation of performing functional checks on the flight helium systems.
 - The overview of the Safety Hazards Assessment Report was presented to and approved by the Ares I-X Control Board (XCB) as a precursor to the Constellation Safety and Engineering Review Panel (CSERP) data drop.
 - The Acceptance Review Plan review comments are being addressed, with a focus on the pre-ship review in December. The Teledyne shipping/handling procedure release is due in late November, allowing closure of remaining pre-ship verification constraints for shipping RoCS modules. Other closures not related to shipping are ongoing as time permits.

The Ares Projects look forward to the US Element friction stir weld of actual US dome gores in MSFC's Building 4755 in December. This will be a follow-up to the successful welding of two shuttle External Tank (ET) dome gores in August.

...and as of this Ares Projects Weekly Summary, there are only 232 days until the first Ares I test flight, Ares I-X!!!

November 21, 2008

