



Test Stand A-3 construction continues (Figure 1). The 66-inch water pipe from the site High Pressure Industrial Water system to A-3, six of the nine chemical steam generator water tanks, and a significant amount of pipe supports, platforms, lines and ducts, electrical, and other components are installed. The Isopropyl Alcohol unloading dock is complete and the Shop Building is under construction. The isolation valve is also under construction.



*Figure 1. A-3 Construction Site*

Figures 2–4 show fabrication of a few of the test cell and diffuser components.



*Figure 2. A-3 Test Cell and Diffuser Sections in Fabrication*





*Figure 3. A-3 Test Cell Main Door Hatch in Fabrication*



*Figure 4. A-3 Diffuser Ejector Ring in Fabrication*

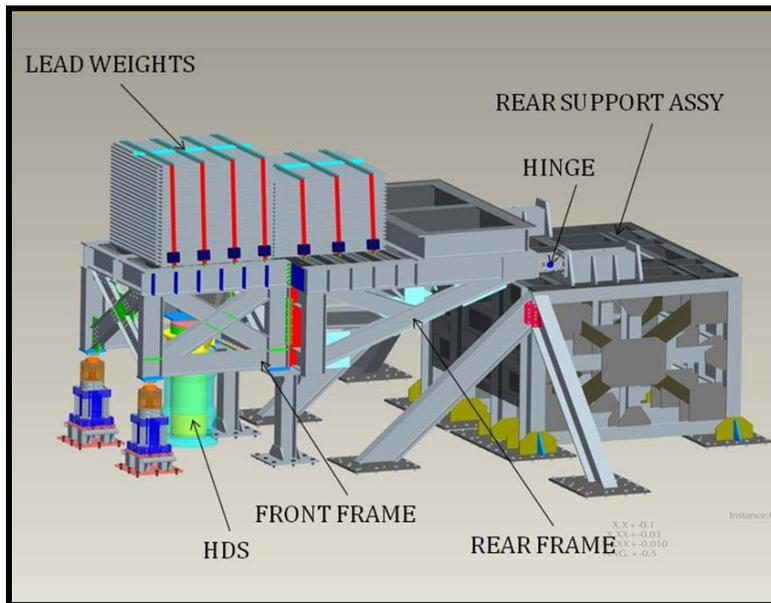
### Upper Stage (US)

***Flight Software (FSW) Preliminary Design Review (PDR)-2:*** The Ares I US FSW PDR-2 kickoff was held on March 23–24, with participation from Marshall Space Flight Center (MSFC), Glenn Research Center, NASA Headquarters, Jet Propulsion Laboratory, and Johnson Space Center. The FSW PDR-2 will conclude with a Board on May 13. This review is being conducted to demonstrate that the preliminary design of the flight computer meets all requirements and establishes the basis for proceeding with detailed design and coding. The review is focused on the requirements of the flight computer software, and also focuses on the design of the command telemetry computer software. FSW PDR-2 is a follow-on to PDR-1 (held in March 2009), which was focused on the requirements and design of the command telemetry computer software. The US FSW Critical Design Review (CDR) will be held in conjunction with the US CDR in the June 2011 timeframe.



**Flight and Integrated Test Office (FITO)**

**Hydrodynamic Support (HDS) – Functional Test Plan:** Four HDS units used in previous dynamic testing of the Saturn V and the space shuttle are being refurbished for use on the Ares I Integrated Vehicle Ground Vibration Test. A vital part of the refurbishment is a thorough functional test program. Functional testing of these HDS units will be conducted in two major phases. ET40 developed a test plan, which was released on March 29, for the first major phase which is underway in MSFC Building 4619. The illustration below shows the functional test fixture currently being fabricated for use during the second major phase of the testing.



**Project Integration**

**Ares Quarterly Progress Video #15:** Ares Quarterly Progress Video #15 was released to the public March 22 via the NASA web site, YouTube, and iTunes, and the video release was announced on the Ares Facebook page. Subjects of this video include Development Motor-1 post-firing inspections, Upper Stage demonstration articles and manufacturing facilities, J-2X nozzle extension coating tests, and J-2X component manufacturing. As of this week, the video had received 1,705 hits and generated 166 new subscribers on YouTube, and the Facebook announcement had been viewed 11,000 times (9,000 in the first 24 hours).

***The Ares Projects look forward to the launch of STS-131, Space Shuttle Discovery, planned for April 5.***