



# Ares

## WEEKLY SUMMARY



The Ares I-X continues its stacking/mating activities, as Super Stack 4 (SS4) is mated to the vehicle in High Bay 3 at Kennedy Space Center's (KSC) Vehicle Assembly Building (VAB). The vehicle is now over 250 feet tall. If things continue as planned, the vehicle should be completely stacked by the end of this week.



*SS4 in the VAB*



The first water tank was delivered at Stennis Space Center (SSC) to Test Stand A-3 and installed on August 12. The Chemical Steam Generation (CSG) system includes three liquid oxygen tanks, two isopropyl alcohol tanks, and nine water tanks. The tanks were shipped to Port Bienville in Bay Saint Louis by rail and stored until delivery by truck to A-3. The tanks are approximately 80 feet in length. Due to their size, the tanks have to be transported via Interstate 10 with the assistance of the



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Mississippi Highway Patrol and the Bay Saint Louis Police. Additional tank deliveries are scheduled from Port Bienville throughout the next week. The Tower Structure and Propellant Barge docks are complete. The CSG foundations remain in-work and the CSG vessels are being installed.



*A-3 construction site*



*The first A-3 water tank delivery to SSC*



*Water tank at the A-3 site*



*Tank being unloaded at A-3*

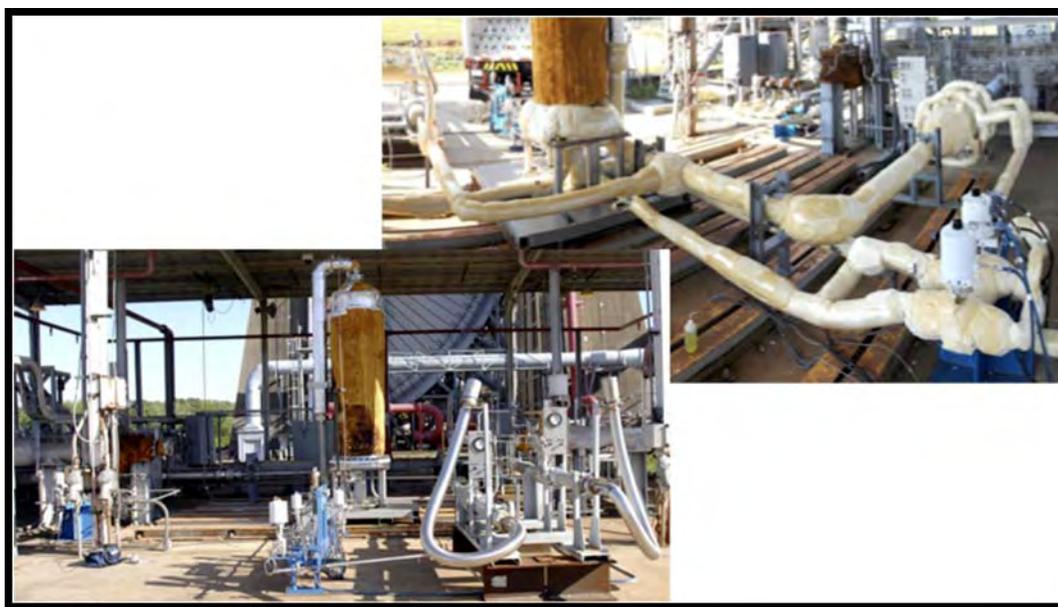


*Installation begins*

*Recent activities specific to the Elements include:*

### Upper Stage (US)

- ***US Main Propulsion System (MPS) Subsystem:*** The US MPS team recently completed cold helium (helium at hydrogen temperature) testing of an off-the-shelf ambient helium regulator at Marshall Space Flight Center (MSFC). Because no off-the-shelf cold helium regulator exists within industry, an off-the-shelf ambient helium regulator was selected to provide mitigation testing as a functional “proof of concept.” Leading up to cold helium testing, ambient and nitrogen functional testing was conducted at the Component Development Area of MSFC using a helium conditioning facility developed by ER33. This facility, along with support facilities at the West Test Area, provided the capability to test cold helium flow conditions. Testing successfully demonstrated the capabilities of the test facility and the regulator’s performance at cold helium conditions. Results provide a better understanding of system performance at cold helium conditions and the achievability of component specification requirements.



*MPS cryogenic helium flow test facility*

### Project Integration

- ***Education Outreach:*** The Ares outreach team supported an August 6 presentation to educators attending Space Camp at the U.S. Space & Rocket Center. The teachers learned about the Constellation Program and Ares Projects and discussed ways to incorporate the information into their lessons plans.



- ***NASA FIRST Leadership Development Program Exhibit:*** The Ares outreach team displayed the 1:50 Ares I and V model set and the 1:25 Ares I cutaway outside Morris Auditorium for participants of the NASA FIRST Leadership Development Program event August 3–7 at MSFC. This event was for GS 11–12 civil servants nominated as future leaders within the Agency. Part of their week was devoted to major programs such as Ares.

***The Ares Projects look forward to the First Stage DM-1 static test at ATK in Promontory, Utah, in August.***

National Aeronautics and Space Administration

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