

ORION

CREW EXPLORATION VEHICLE

WEEKLY ACCOMPLISHMENTS



09.16.10



Work continues on the Crew Module (CM) Ground Test Article (GTA) at the Michoud Assembly Facility in New Orleans, Louisiana following the successful proof pressure test. While the Non Destructive Evaluation (NDE) testing from the proof pressure test is wrapping up, the team has begun priming various areas of the GTA (shown above) before it is installed in the birdcage tool. In addition, 91 instrumentation channels have been routed and 4 internal Environmental Correlation Test (ECT) instrumentation harnesses have been installed. Next, the team will move the CM GTA to the birdcage tool where the Thermal Protection Structure (TPS) will be installed.

Several Orion crew systems hardware items including EVA in-space installable handrails, EVA handrail receptacles and internal handrails/mobility aids were evaluated at the NASA Neutral Buoyancy Laboratory (NBL) facility using the new joint EVA NBL Orion mockup. The evaluation is being led by the CxP EVA System Project with support from Orion and other organizations. Other objectives for this test series included an evaluation of hatch operations, EVA ingress/egress of the vehicle, and gross internal assessment of crew aids (location, internal volume constraints, etc.)





Recently, United Space Alliance (USA) performed an at sea test of alternate ground support equipment prototype hardware at Kennedy Space Center. The evaluation is being led by the CxP Ground Operations Project with support from Orion and other organizations. The first test conducted was to attach a tow loop around the CM (shown above) and tow the CM similar to how it would be winched into the well deck for nominal End Of Mission (EOM.) The second test involved putting a capture net around the CM and attaching a sea anchor which would be used in rescue scenarios to orient the CM in a particular direction and keep the CM from spinning while a stabilization collar is attached. The third test attached a GSE Basket Lift Device to the CM and then attached lifting slings from the crane to lift the CM out of the water (shown right.) This technique would be used in a contingency salvage of the CM after landing in an off nominal location. All of the test objectives were successfully achieved.

