

# Multi Purpose Crew Vehicle Environmental Control and Life Support Development Status

John F. Lewis<sup>1</sup>, Richard A. Barido<sup>2</sup>, and Cynthia D. Cross<sup>3</sup>.  
*NASA Johnson Space Center, Houston, Texas, 77058*

*and*

George Edward Rains<sup>4</sup>  
*Jacobs Engineering, Houston, Texas, 77058*

**The Orion Multi Purpose Crew Vehicle (MPCV) is the first crew transport vehicle to be developed by the National Aeronautics and Space Administration (NASA) in the last thirty years. Orion is currently being developed to transport the crew safely beyond Earth orbit. This year, the vehicle focused on building the Exploration Flight Test 1 (EFT1) vehicle to be launched in 2014. The development of the Orion Environmental Control and Life Support (ECLS) System, focused on the completeing the components which are on EFT1. Additional development work has been done to keep the remaining component progressing towards implementation for a flight tests in of EM1 in 2017 and in and EM2 in 2020. This paper covers the Orion ECLS development from April 2012 to April 2013.**

---

<sup>1</sup> Orion ECLS System Manager, EC6/Crew and Thermal Systems Divison

<sup>2</sup> Orion ECLS ARS Subsystem Manager, EC6/Crew and Thermal Systems Divison

<sup>3</sup> Orion ECLS ATCS Subsystem Manager, EC6/Crew and Thermal Systems Divison

<sup>4</sup> Orion ECLS PSC Subsystem Manager, EC6/Crew and Thermal Systems Divison.