

## 2012 AGENDA

Topic: Development of Rescue and Recovery Operations

### Panel: Shuttle Operations

Draft Panel Abstract

Title: Development of Space Shuttle Rescue and Recovery Operations

Author: Michael Chandler, [michael.r.chandler@nasa.gov](mailto:michael.r.chandler@nasa.gov), Johnson Space Center, Medical Operations, Mail Code SD2, Houston TX 77058

**Introduction:** As the first Space Shuttle launch was still in our future, many from NASA, the Department of Defense (DoD) and NASA contractors were busy planning for not only a nominal launch and return, but contingency operations at the launch pad and landing sites. Prior to the first launch, detailed coordination, planning and simulations were conducted at all three locations and internal rescue procedures were taught at Kennedy Space Center (KSC). Later in the Program, the Transoceanic Abort Landing (TAL) sites were added in Europe and Africa. For the 51L mission a new TAL site was brought on line in Morocco. However, upon launch, the Shuttle Program experienced it's first lost. During the following months a complete review of all contingency operations (launch and landing) was completed. Many enhancements were made based on the reviews following. A Mode VIII water rescue was developed for NASA by the DoD before the STS-26 launch. Different concepts were explored and being debated by NASA. Training of the contingency forces was required before final decisions were made forcing the teaching of two different sets of procedures.

To assist with training, a video was developed for the fire/crash/rescue personnel. This accompanied the detailed extraction procedures that were developed by a combination of KSC and DoD firemen. Training for the fire/crash/rescue personnel at Vandenberg AFB was also being planned before the accident happen. The fire/crash/rescue mockup that was being built at Chanutte AFB was diverted to Edwards AFB.

#### **Educational Objectives:**

With the emphasis on Commercial Crew Programs for Space flight it is important that all involved understand what is required to prepare for contingencies. Cost effective means of being prepared for contingencies are needed.

Questions:

1. When should planning for nominal and contingency operations begin?
2. What type of training aids are needed for contingency operations?
3. Who were the major contributors to Shuttle contingency operations?