

Smoking!

By Lt. Greg Petrovic

AP-3C just had taken off from Diego Garcia on a 10-hour surveillance flight. The checklists were complete, and the crew began their on-station duties. One of the aft observers reported over the ICS that he smelled a very strong odor of burning plastic in the aft section of the aircraft. The mission was aborted, and the crew searched for the odor's source. The outcome would surprise everyone.

The aircraft was only 10 minutes from the airfield when the pilot turned the Orion toward home. The crew continued to search the tube until they had to prepare for landing. After the aircraft landed and the engines were secured, the source of the fumes finally was found.

The post-flight inspection revealed the NAVCOM ARO power supply had been smoldering inches from the navigator. The fire was caused by an unusual event. This aircraft had been through a Maverick modification, and, during the mod, maintainers had removed the TACCO ARO power supply to make room for the Maverick video display. When they removed the TACCO power supply, the aircraft was left with an unseated cannon plug. The problem began when that plug was secured.

Through the years, various methods have evolved to secure cannon plugs. Some maintainers use ESD tape, parachute cord, or black electrical tape; none of these options are listed in the MIMs. In this case, the cannon plug was secured with a MAF bag. The bag was taped around the cannon plug, using ESD tape.

This fix seemed reasonable, but Diego Garcia's high humidity eventually filled the bag with water—about two cups worth. As the bag got old, it rubbed

against a frame and eventually formed a hole, which allowed water to drip down onto the NAVCOM ARO power supply, causing a short and a fire.

Our maintenance department didn't place this MAF bag on the cannon plug, but that procedure is common. Our investigation revealed different shops had different means of securing loose cannon plugs. The MIMs have very specific procedures for securing cannon plugs, but none involve the use of a MAF bag. 

Lt. Petrovic flies with VP-9.

