What Do You Mean, It Didn't Go Out?

By LCdr. Kent Moore

I remembered thinking, "It doesn't get much better than this."

We were scheduled for an eight-hour, banker's-hours flight off the coast of Central America. Generally, every event is a zero-dark-30 (middle-of-the-night) preflight and launch for a 10-hour-plus grinder of a mission. I should have known then that what seemed to be a perfect day probably wasn't going to end that way.

I was just four months into my department-head tour and flying with a junior crew. I just had knocked off the rust from being out of the plane for two years. We had a gorgeous day, not a cloud in the sky, and just a calm breeze blowing. The crew was excited about flying; everything went like clockwork, and we got airborne 15 minutes early.

The mission proceeded as planned. About two hours after takeoff, I swapped seats with the 2P, then headed to the back of the plane for a break and something to eat. As I got halfway down the tube, the radar operator reported smelling fumes. I spun around and headed back up front. When I got there, the flight station already had been notified. The 2P and 3P had commenced a climb from 300 feet AGL and had initiated the fire-of-unknown-origin checklist.

I felt comfortable with the situation up front, so I went aft to perform runner duties, as discussed during our planeside brief. The runner relays information from the tube to the flight station and assists as necessary. I remember thinking, "It's probably some radio that's overheated, and this scenario would be an excellent training opportunity for the two junior pilots to work through an emergency checklist by themselves."

As I passed the main-load center to check in with the tactical coordinator (TACCO), the inflight tech (IFT) reported fumes were coming from the F rack. Yep, just as I had suspected, an overheated radio. At almost the same time, sensor operator one (SS1) reported flames coming from a box on the wall in the main-load center. I thought, "Flames, yeah, right." I peeked inside the main-load center to confirm. Yep, flames were coming up from the shroud that surrounds transfer relay No. 2. The off-duty flight engineer had

arrived on scene and agreed the flames were from transfer relay No. 2.

I headed to the flight station to direct the securing of the No. 2 generator and the pulling of the Bus A, control circuit breaker to cut all possible power sources to the transfer relay. Once all power was secured, the TACCO directed the discharge of a portable fire extinguisher into the shroud of transfer relay No. 2. The flames had subsided, but the relay still glowed.

I felt uncomfortable not being in the left seat, so I initiated a three-way seat swap to get my 2P in the right seat. About the time I got strapped in, the TACCO reported that flames had returned.

I thought, "OK, we've secured all possible sources of power to this thing and put a fire extinguisher on it. What do you mean it didn't go out? That can't happen, can it? So, now what do we do?"

We guessed that the transfer relay still had power. We recalled the aircraft-discrepancy book (ADB) documented problems with the No. 2 generator and supervisory panel, and we also knew a generator still would supply power to the panel as long as the engine was rotating. Base on this information we secured the No. 2 engine. Seconds after E-handling the motor, the TACCO reported the flames were dissipating.

The No. 2 engine failed to completely feather because of a loss of Bus A. We quickly reset the Bus A, control circuit breaker to let the prop feather and then tried again. We opened the aux vent to help get the fumes out of the aircraft as quickly as possible.

We already were pointed toward home and, because we had only been 70 miles away when this thing started, we quickly declared an emergency and had an uneventful 112K landing. Afterward, the IFT and SS1 reported some symptoms of smoke inhalation, so I directed the whole crew to see the corpsman. Everyone was medically cleared by the next day.

> I don't know what caused the fire to keep going. At the time of the emergency, my concerns were a fire in the main-load center that wouldn't extinguish, the safety of the crew, and getting the aircraft on deck.

Having an emergency like this wasn't on my top-10 list of things to do.

We learned a few things that day. Our NATOPS has undergone continuous refinement for 40 years. Its preface will tell you that procedures are only guides to action, "not a substitute for sound judgment." NATOPS can't possibly cover everything that can fail on an aircraft, especially an aging aircraft like the mighty P-3. Increasingly, we see malfunctions and emergencies not addressed in NATOPS. When something unusual happens, we must fall back on fundamental systems knowledge. NATOPS procedures are written from systems knowledge, not the other way around; a specific malfunction and situation may require a modification of NATOPS procedures.

Crew coordination was a major factor in handling this emergency, and we all were on the same page as the emergency progressed. The only time it got a little strained was during our three-way seat swap. You always hear people say, "Oh, that never will happen." But, unlikely things can and do happen all the time.

I've done plenty of fire-of-unknown-origin drills but never one where I wasn't in the seat or where the fire didn't go out. Everyone knew their job, how their role fit, and everyone contributed. This was our first fire on board an aircraft as a crew; we won't complain if we don't see another one.

LCdr. Moore flies with VP-10.

Great timely article submission via Approach. *LCdr. Moore also submitted this hazard in a hazrep in WESS. BZ to VP-10 for reporting. Thanks for helping us all gain from your experience.—RAdm. Rico Mayer, Naval Safety Center.*