

After-Action Report

Surface/Air Operation

5 August 2007

Auxiliary Aircraft 25FOXTROT

Warren Bruce
Bill Cunniff
Fred Hoon

Auxiliary OPFAC 22914

Bill Woodhouse
Kevin O'Connell
Dale Stavey

Auxiliary Radio Facilities

Joe Mazzei (SO-CM)
Caleb Strittmatter
Christine Fisher
Bob Fetterman
George Stern
Jim Beecher

Prepared and Submitted by

Bill Cunniff, AUXAIR
Dan Meigs, SO-OP

8 August 2007

Planned Exercise:

The operations plan for this exercise is at <http://www.seapath.com/faq/>

On-scene Weather:

Visibility: 10 nm, high haze.

Winds: light and variable.

Sea state: ~2' at 7 seconds

Results:

Finding a PIW from an aircraft is a very difficult task. The cockpit workload is very high and only communications with the participating surface vessel can be allowed.

Communications from the aircraft to a range of ground stations along the coast is very reliable and is possible from ranges exceeding 25 NM.

The added coordination complexity of this exercise was dealt with easily. In particular, the SO-CM was able to establish a 5-station radio watch, on very short notice that was very responsive to the Plan's requirements.

Narrative:

25FOXTROT notified the SO-OP at 0935 that they would be taking off from New Bern within the next few minutes to fly to the Brunswick County Airport to pick up an Observer. SO-OP contacted the SO-CM representative, Caleb Strittmatter, who in turn alerted the radio operators previously identified as shore station participants.

25FOXTROT, prior to departing Craven County Regional Airport (EWN) at 0935, contacted SNC and CG Station Elizabeth City (ECG) to advise them of the Cape Fear River Patrol and the joint training exercise with Div 10. SNC Radio Guard would be started upon arriving at the starting point for the patrol, which was the Wilmington VOR. Enroute ATC via "Flight Following" would be the Radio Guard.

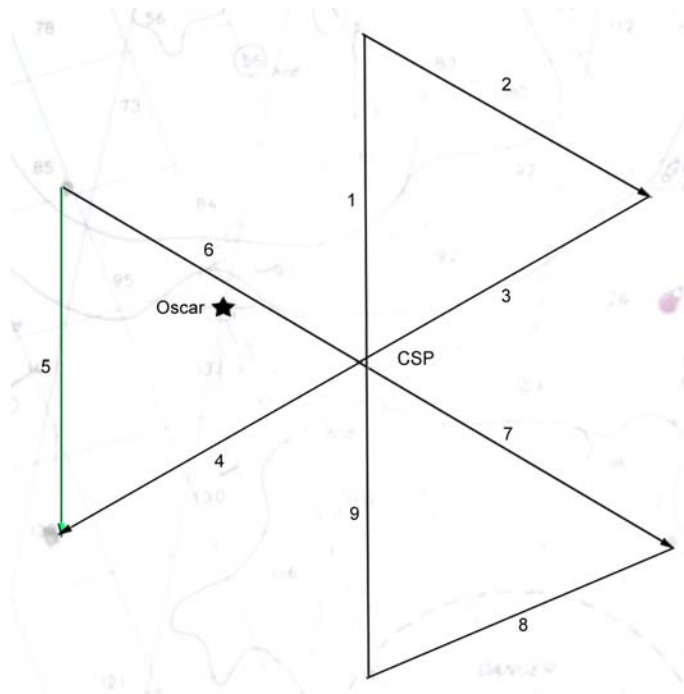
Upon arriving at ILM, SNC was contacted on Channel 16. Radio Guard duty was accepted and the channel was switched to 83A. 25FOXTROT proceeded down the River noting one vessel departing Wilmington. There was very little activity on the River. Upon arriving at the mouth of the River and when making a position report, SNC was advised that 25FOXTROT would be landing at Oak Island Airport (SUT) to pick up a Trainee and that comm would be reestablished upon departing SUT. This activity proceeded as planned.

Departing SUT there was a cluster of Recreational Vessels about 5 miles offshore apparently fishing. 25FOXTROT then proceeded on the SAR exercise, described in detail below. Upon completion of the SAR exercise 25FOXTROT proceeded to SUT and while enroute did not observe any activity that needed reporting. Position Reports were made on time. 25FOXTROT landed at SUT and a critique was made by the PIC. Shortly 25FOXTROT departed SUT, reestablished comm with SNC and continued the Cape Fear Patrol. The up-river flight was uneventful other than the ATC activity became very active and 25FOXTROT was required to deviate to comply with the controller's instruction. Upon leaving the ILM area S-NC was advised that we could secure their Radio Guard and ATC via Flight Following would be our Guard. 25F proceeded to EWN uneventfully. Upon securing 25FOXTROT at EWN, ECG and S-NC were advise. The weather enroute was hazy with about five miles visibility.

22914 got underway at that time from Forest Sound Marina south in the ICW. 914 began to hear 25FOXTROT exchanges with SNC and make calls to Auxiliary Long Beach Radio beginning at approximately 1015. 22914 could read the aircraft, but with difficulty through cabin background noise but did not hear the reply from any of the ground stations throughout the morning. Communications from 914 with Station Wrightsville Beach and Sector North Carolina were L&C. 22914 heard 25FOXTROT inform Sector that they were letting down to the Brunswick County Airport and also heard 25FOXTROT report their take-off to resume the exercise.

Throughout the period, 25FOXTROT made calls to specific shore station call signs to assess the quality and range of communications between the aircraft and the particular ground station.

22914 stopped by Station Wrightsville Beach and took Oscar aboard and traveled toward the CSP given in the Plan. By agreement, Oscar would be placed some distance from the CSP so that the aircraft would not find Oscar until a number of legs of the planned Sector search pattern were completed. The Plan called for 1.5 minute legs, at the 100 kts reported, 2.5 nm, with a first leg at 000°.



CSP: 34° 06.200N 077° 46.100W (SSE of Masonboro Sea Buoy).

Oscar: 34° 06.548N 077° 47.058W (placed in water 1.0 nm at 295° from CSP).

Oscar: 34° 06.650N 077° 47.038W (drifted to location)

With these parameters, 25FOXTROT would have passed within the corrected sweep width of 0.1 NM on the 5th and 6th leg of a Sector pattern.

25FOXTROT completed a full VS pattern from 1000' MSL of 9 legs without seeing Oscar. While 25FOXTROT was repositioning the PIW was detected and the location was confirmed to 22914.

Oscar was retrieved by 22914 from a position a few hundred yards' drift from original position.

In a real situation where the first complete VS failed to find the target, 25FOXTROT would have continued with another Sector pattern rotated 30° to the right.

Lessons learned:

Plan Format and Distribution:

1. It would be helpful to group a synopsis and all the contact information on a single page for printing to take aboard the aircraft and the boats as a quick reference.
2. Where there are instructions being given to participants by different functional elements, it is important that all the instructions be placed into a single reference document, the Operations

Plan, and that all the participants become accustomed to going to that single reference document throughout the planning for the exercise. Also, each functional element should assure that all its participants are fully briefed on the Plan.

3. Plan publishing. More effort is needed to be confident that all the participants are reviewing the most recent version of the Plan.

Aircraft Search:

1. During the execution of a pattern, the workload is so high within the cockpit that there can be no radio communications other than that from the aircraft to a vessel participating in the search. The PIC, of course, must monitor and reply to Air Traffic Control traffic, but that is not on the VHF channels. The demands of piloting, Air Traffic Control, time-keeping, calculating the next heading and time-to-turn and looking for the target are all-consuming.
2. Locating a PIW from an aircraft is a *very* difficult task. It would be productive to run an exercise with both a vessel and an aircraft running coordinated search patterns (CSC). This would be a combination of the aircraft running a creeping line pattern from near shore to offshore as the long axis with the vessel moving offshore along the center of the leg length. In this case the speed of advance of the vessel is equal to the creep of the aircraft.

Communications:

1. The cockpit background noise difficulty persisted although most of the messages that were received were readable. If the vessel and the aircraft were engaged in a cooperative pattern, communications would be adequate.
2. During the search pattern, the aircraft and the vessel, while in the search area had adequate communications.
3. Essentially all the shore stations can hear the aircraft from essentially any location within the two AORs. If the aircraft is in the northeastern portion of Station Wrightsville Beach's AOR, far southern Brunswick County Stations would be out of range and vice versa. There is probably a centrally located single station that could provide reliable communications with the aircraft throughout the two AORs. Kure Beach could hear 25FOXTROT talk to Long Beach, Long Beach could hear 25FOXTROT talk to Kure Beach. Both could hear 25FOXTROT talk to 22914 while neither Kure Beach nor Long Beach could hear 22914.
4. The aircraft would be an excellent platform for radio relay across the area.
5. Two of the shore stations reported that they never heard the aircraft call them. The aircraft did, however, call all the Stations.
6. Several of the shore stations did not hear most of the other shore stations.

7. 22914 did not hear any of the shore stations, except for the one who called the aircraft during the search. That particular signal was exceptionally clear.
8. It was very helpful to have an aircrew member aboard the surface vessel. 22914 had arranged for Kevin O'Connell to be aboard for this mission and he was asked to man the radio for communicating with 25FOXTROT during the search.
9. A way must be found to ask all the shore stations, including SNC and the two CG Stations to suspend their attempts to contact the aircraft and the vessel during the active search phase. We intend to propose a standard broadcast call protocol to SNC for their approval. This protocol would have the aircraft make a call similar to the following:

“Hello All Stations
Hello All Stations
Hello All Stations

This is Auxiliary aircraft _____ (Auxiliary vessel _____)

The Coast Guard (United States Coast Guard) Auxiliary will be conducting search and rescue training exercises in the vicinity of
_____ **location** _____ from _____ **start time** _____ through _____ **end time** _____ (time of day).

Request you refrain from calls on _____ channel to aircraft _____ call sign (and vessel _____ call sign) during this exercise period.

Auxiliary aircraft _____ **call sign** (auxiliary vessel _____ **call sign**) OUT”

At the conclusion of the exercise, the following call would be made:

“Hello All Stations, Hello All Stations, Hello All Stations.

This is Auxiliary aircraft _____ **call sign** (or Auxiliary vessel _____ **call sign** _____)

The search and rescue training exercises underway in the vicinity of _____ **location** _____ are ended.”