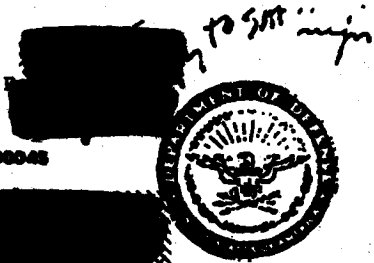


DEPARTMENT OF THE AIR FORCE  
HQ AIR FORCE SATELLITE CONTROL FACILITY (AFSC)  
AIR FORCE UNIT POST OFFICE, LOS ANGELES, CALIFORNIA 90045



REPLY TO  
ATTN OF: SNOB [REDACTED] (307)

SUBJECT: Surface Recovery Ships

re: SP-3

**URGENT**

In accordance with a telephone conversation between Col Holin and [REDACTED] at July 1967, the attached information, relative to the requirement for subject vessels is forwarded.



[REDACTED], USAF  
Chief, Recovery Development Ofc  
Director for Development

1 Atch  
a/s

1. The two Surface Recovery Ships, Sunnyvale and Longview, equipped with CH-3B helicopters, presently represent the only reliable means to effect a timely recovery of a water-impacted re-entry vehicle over 70% of the Hawaiian Recovery Area, commonly referred to as the Recovery Ball Park. The remainder is within the range of land-based helicopters. A helicopter-equipped ship is deployed to follow the location of each successive day's recovery opportunity from launch day to the day when recovery occurs. The water recovery capability is designed around an inseparable combination: surface recovery ships (victory ships converted to provide a helicopter hangar, a flight deck, and maintenance and fueling capability) and CH-3B helicopters (amphibians, with folding rotor blades to permit their entry into the shipboard hangar). An adjunct to the water recovery capability is the team of pararescue personnel who, surface winds (below 25 kt) permitting, jump into the ocean and secure the water-impacted capsule, if there will be any time lag prior to the arrival of the helicopters. Factors bearing on the importance of the ship/helicopter combination are:

a. Helicopters have a limited weather capability. Hence, their quoted 250 nm radius of action is often severely reduced, when operating from a fixed location (land-based), by the requirement to fly around weather. The helicopters can ride through weather on the ship, and the ship can carry the helicopters to a suitable launch point.

b. The North-South location of any particular recovery impact point can be shifted as much as 200 nm on short notice. The ship represents the best means to move the helicopter launch point toward (and often within range of) the revised recovery point. An additional consideration is the requirement to recover deployed pararescue personnel from the ocean within 24 hours.

Other side advantages that accrue from having a surface recovery ship in or near the predicted recovery area are the ship's capability to report in real time re-entry vehicle telemetry events as well as the ship's capability to make real time surface weather and sea state condition reports. It should be noted that certain recoverable programs stipulate surface recovery as primary; e.g., MBRV.

2. The requirement for a water recovery capability has been revalidated as recently as June 1967 during AFWR Op. 3559-II. Whether the helicopter which effected the recovery could have been land-based is not really material to the question. The fact remains that, even under ideal weather conditions, 50% of the primary recovery area presently lies outside the coverage of land-based helicopters.

**3. Alternatives to maintaining the two ships are:**

**a. Abandon water impacted re-entry vehicles. (They sink within a specified period of time and could, presumably, be made to sink immediately).**

**b. Shrink the size of the Hawaiian Recovery Area so that the primary recovery area falls totally within the radius of action of the CH-3B helicopters. This would mean that certain "on-orbit" days would pass without a recovery opportunity, and implies the abandoning, in many cases, of re-entry vehicles that water impact outside the area.**

**c. Replace the CH-3B helicopters with others of greater radius of action and/or an in-flight refueling capability, thereby insuring land-based helicopter coverage of as much of the ballpark as desired.**