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Senator John McCain
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Dear Senator McCain:

I am writing to you and a number of other members of Congress to express my deep concern over Air Force's choice of the HH-47 to replace the HH-60 in the combat search and rescue (CSAR) role, a decision that is utterly inexplicable in view of the demands of the CSAR mission.

My concern is rooted in experience as an Air Force pilot with two Southeast Asia combat tours flying "Jolly Green" HH-3E and CH-53 helicopters in the long range rescue role. As detailed in the attached biosketch, I logged some 130 combat missions over a span of nine years. First as a serving officer and now as an academic, I have studied and written about CSAR for over forty years. I would point to my participation in the Gulf War Air Power Survey, the Secretary of the Air Force sponsored study of the impact of air power on the first Gulf War. Part of my Task Force's charter was an in depth examination of CSAR in that conflict.

It is my understanding that the HH-47 was awarded the contract largely on the basis of its advantage over the US101 and S92 in range and payload. That is to utterly miss the point of combat rescue. First, unrefueled range is a non-issue in the age of helicopter air-to-air refueling. Second, above and beyond the ability to carry a basic crew, defensive armament, limited armor protection, and a reasonable number of survivors—which all three contenders can do—payload is not a critical issue for a CSAR helicopter and never has been. The HH-47's advantage in payload is a direct reflection of its size, and *size is a liability not an advantage.*

The critical issue in CSAR is not how much you can carry and how far you can carry it. The critical issue is survival in the terminal area: can you get in, make the rescue and get out without being shot down. In that sense, the HH-47 has crippling liabilities that in my judgment should preclude its consideration as a CSAR helicopter. Both the S92 and US101 are single rotor helicopters with fully articulated rotor heads which, in combination with the positive yaw authority conferred by a tail rotor, confer superior maneuverability and agility. By contrast, apart from its considerable weight, the H-47 is cumbersome by virtue of its design. It is, in fact, a big, slow target. Using an automobile analogy, procuring the HH-47 for the CSAR mission makes as much sense as entering a Winnebago in a NASCAR race.

The HH-47's liabilities extend beyond size and lack of agility. It has more violent rotor downwash than the other contenders, a reflection of its weight and tandem rotor design. Partly in consequence, it is far more susceptible to brownout (a lethal condition in which pilots lose visual contact with the ground during landing or takeoff due to dust and dirt blown aloft by rotor wash). The combination of violent downwash and interaction between the counter-rotating columns of descending air from its two lifting rotors make it a poor platform for rescue hoist operations, the bread and butter of sea rescue and overland combat aircrew recovery. It has a

significantly higher vibration level than the other contenders, a matter of serious concern in terms of crew fatigue. The fields of fire of its defensive armament are significantly more constricted than those of the other contenders. Its aural signature is significantly greater, affording the enemy more warning on low altitude ingress. Lastly, it requires a much larger landing zone than the other contenders, seriously constricting its use in urban areas and from shipboard (the thought of having had to conduct the Saigon evacuation, in which I participated, with H-47s is truly frightening).

Finally, some historical perspective. The tandem rotor configuration is dated: the H-47 has been in service since the mid-1960s and to my knowledge it is the last tandem rotor helicopter to enter production. I will be astonished if we ever see another. The US Army has operated the H-47 for over forty years and has never used it for battlefield casualty evacuation, let alone for combat insertions and extractions under fire except, recently, as a desperate expedient in the absence of alternatives. It is worth noting that the Army tried using heavily armed H-47s as gunships in Vietnam... and quickly terminated the experiment.

By contrast, the S92 is a lineal descendant of two helicopters, the HH-3 and HH-53, that were extremely successful in the CSAR role—to which I can testify from personal experience. That having been said, nothing trumps actual operational success and the US101's worth in the CSAR role has been amply demonstrated by the Royal Air Force in the current war in Iraq.

CSAR helicopter operations are among the most demanding missions faced by our men and women in combat, I would argue the limiting case in terms of hazard to aircraft and crew. The Air Force has led the way in this mission since the mid-1960s with remarkable success, bringing back thousands of friendly personnel, notable among them US aircrew members, who would otherwise have been lost to enemy action. Beyond the courage and skill of our helicopter crews, the critical integer of success was the speed and agility of their helicopters. To ignore the vital importance of these qualities—as we have done in the decision to procure the HH-47—is to needlessly place our rescue personnel at risk and to compromise their chances of mission success. In my considered judgment, to field the HH-47 as a CSAR platform would have disastrous consequences.

I would note in closing that while I have friends and acquaintances in the employ of all three contenders for the CSAR helicopter contract and have discussed it with some of them—and with fellow CSAR veterans of Vietnam—I have no personal economic stake in the matter. The views presented above are mine and mine alone.

If I can be of assistance in the matter, please do not hesitate to contact me.

Sincerely,

JOHN F. GUILMARTIN, JR., Lt Col USAF(Ret)
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encl. Biosketch

Additional addressees:

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John F. Guilmartin, Jr.

Biosketch

Dr. Guilmartin is a professor of history at The Ohio State University where he teaches early modern European history, military history, and the history of the Vietnam War. He received his commission as a second lieutenant and Bachelor of Science degree from the US Air Force Academy in 1962. He was awarded the MA and PhD (with distinction) by Princeton University in 1969 and 1971, respectively. His publications include *Gunpowder and Galleys: Changing Technology and Mediterranean Warfare at Sea in the Sixteenth Century* (1974; second, revised, edition 2004); *A Historical Chronology of the Space Shuttle, from the earliest beginnings through letter contract finalization, July 1973: an analytical compilation of key technical, political and policy events,* five volumes, co-authored with John W. Mauer (1988); *America in Vietnam: The Fifteen Year War* (1991); and *A Very Short War: The* Mayaguez *and the Battle of Koh Tang* (1995). He was editor-in-chief and principal author of Volume IV of the US Air Force *Gulf War Air Power Survey Report, Weapons, Tactics and Training* (1993) and is presently writing a history of the Vietnam War under contract to Harvard University Press.

Guilmartin retired from the Air Force in 1983 as a senior pilot and lieutenant colonel. His staff assignments included teaching duty with the History Department, US Air Force Academy, in 1970-74 and service as Chief of Tactics, Aerospace Rescue and Recovery Service (ARRS), 1977-79. He is a graduate of USAF Undergraduate Pilot Training (1963) and the USAF Helicopter School (1964). His operational career included two Southeast Asia combat tours flying "Jolly Green Giant" helicopters in the long range rescue role. The first was in 1965-66 flying HH-3Es with Detachment 5, 38th Air Rescue Squadron, Udorn Royal Thai Air Force Base (RTAFB) during which he logged over 124 combat missions, 115 of them over Laos and North Vietnam. The second was in 1975 flying HH-53C "Super Jolly Greens" with the 40th Aerospace Rescue and Recovery Squadron, Nakhon Phanom RTAFB. He flew in the 12 April 1975 Phnom Penh evacuation and in the 29 April Saigon evacuation, operating from the USS *Midway* and logging six combat missions in the latter operation. His element of HH-53 Jolly Greens, two helicopters among some ninety involved in the evacuation, was credited by USS *Midway* intelligence debriefers with having delivered eighty percent of all reported return fire; according to the best available evidence, his element's gunners fired the last American shots of the war on Vietnamese soil. His decorations include the Silver Star with one Oak Leaf Cluster, the Legion of Merit, and the Air Medal with five Oak Leaf Clusters. He was named an Honorary Pararescueman by the USAF Pararescue Association in 2004.