



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

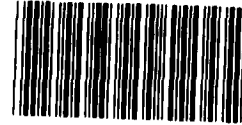
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NATIONAL SECURITY AND  
INTERNATIONAL AFFAIRS DIVISION

JUL 19 1983

B-212339

The Honorable Lawrence J. Korb  
The Assistant Secretary of Defense  
(Manpower, Reserve Affairs & Logistics)



121942

Dear Mr. Korb:

Subject: The Air Force and Navy Should Have Coordinated  
and Better Managed Their Hush House Programs  
(GAO/NSIAD-83-27)

On July 22, 1982, we wrote to you and expressed our concerns regarding the millions of dollars being spent for hush houses, which suppress noise generated in testing aircraft jet engines. We were mainly concerned because the Air Force planned to spend more than \$223 million to buy 124 hush houses, without having firmly established their requirements. Moreover, the Air Force and the Navy did not coordinate their programs and, as a result, differently designed houses were developed and built. (See enclosure I.)

While nice to have, few hush houses can be justified as being needed to comply with environmental regulations. The Air Force and Navy, however, have their own policies regarding noise suppression. The Air Force requires noise suppression for all of its aircraft engines. In contrast, the Navy provides noise suppression only if required by the community.

In our opinion, the services can save millions of dollars by buying only those hush houses that are environmentally required, by establishing requirements based on actual need instead of the number of aircraft assigned, and by using a standard hush house to the maximum extent possible at both Air Force and Navy installations.

On October 20, 1982, your office informed us that the Department of Defense (DOD) is taking positive action on these matters and that:

(943114)

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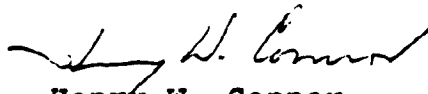
- The Air Force is conducting a comprehensive base by base evaluation of its hush house requirement, as we recommended.
- The Navy is buying an Air Force designed hush house for its Jacksonville, Florida installation and is working with the contractor to develop a modified Air Force hush house design to accommodate unique Navy requirements at Bethpage, New York.
- The Office of the Secretary of Defense will continue to examine these on-going actions to insure that DOD builds the minimum required hush houses at the lowest possible cost. (See enclosure II.)

During March 1983, Air Force officials informed us that it had recently validated the requirements for the 79 hush houses it has purchased and that it does not plan to buy any more for several years.

The actions taken as a result of our letter of inquiry are commendable. Therefore, we plan no further work in this area. However, we trust that DOD and the services will insure that any future purchases of hush houses are fully justified.

Copies of this report are being sent to the Secretaries of the Air Force and the Navy.

Sincerely yours,



Henry W. Connor  
Senior Associate Director

Enclosures



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

PROCUREMENT, LOGISTICS,  
AND READINESS DIVISION

JUL 22 1982

The Honorable Lawrence J. Korb  
The Assistant Secretary of Defense  
(Manpower, Reserve Affairs & Logistics)

Dear Mr. Korb:

The U.S. General Accounting Office is currently reviewing the Department of Defense aircraft hush house program (assignment code 943114). During the course of our review, we identified certain matters concerning the management of the Air Force and Navy programs which we believe warrant your immediate attention. These matters are detailed below.

BACKGROUND

The Navy and Air Force are spending millions of dollars to construct hush houses, which suppress noise generated in testing aircraft jet engines. The hush house is a building made of acoustical panels, which has fresh-air intake baffles, a test bay area, and an air exhaust cylinder. The Navy has four different types of hush houses, ranging in cost from about \$4 million to \$9.6 million. The Air Force uses one standard hush house for all of its fighter aircraft, which costs about \$2.5 million.

Two objectives of our review were to determine (1) whether valid requirements have been established for the total number of hush houses the services plan to procure and (2) the feasibility of combining the Navy and Air Force hush house programs in order to procure a standard unit that will meet the needs of both services.

EVALUATION OF HUSH  
HOUSE REQUIREMENTS

The Air Force plans to buy 124 hush houses for fighter aircraft at an estimated cost of \$223 million. This figure does not include ground preparation and foundation work, but does include about \$2 million for the hush house design rights. Included are 46 hush houses for the Air National Guard, 38 for

the Tactical Air Command, and 22 for the U.S. Air Forces in Europe. The remaining 18 will be procured for various other Air Force commands. All of the Air Force's hush houses are identical, and all are procured with equipment funds. The foundations, however, are procured with military construction funds.

In February 1979, the Air Force issued an emergency purchase request for 25 hush houses, which was protested to GAO by three companies. GAO denied the bid protests in a decision dated February 19, 1980. The Air Force then awarded a sole-source contract for the hush houses. Since then, 11 of the original 25 bases cited as needing a hush house immediately in the emergency purchase request were replaced by other locations. These location changes raise questions regarding the need for the emergency purchase. Six hush houses have been constructed and five are in various stages of construction. The Air Force plans to award a competitive contract on September 30, 1982, for 54 more hush houses.

The Air Force has established its requirements on a "basis of issue" of one hush house for each active Air Force fighter squadron, each Air National Guard and Air Force Reserve location having fighter aircraft, and two hush houses for each wing of 72 fighter aircraft. Establishing requirements on this basis, however, may overstate the actual need for hush houses. For example, Bergstrom Air Force Base, Austin, Texas, is scheduled to receive three hush houses--two for the Tactical Air Command and one for the Air Force Reserve. Since the Reserve has only 18 to 24 aircraft, it would have minimal use for a hush house. Moreover, its requirements could be satisfied through joint use of the two hush houses scheduled for the Tactical Air Command. Thus, it seems that the requirement at Bergstrom could be cut to two hush houses thereby saving about \$2.5 million.

The Air National Guard is scheduled to receive a hush house at each of its 46 fighter aircraft locations. We found, however, that the requirement for a hush house for the Guard at the New Orleans Naval Air Station, Louisiana, is questionable. Both Guard and Navy aircraft engines at this location are presently tested unsuppressed, and no ground noise complaints have been received by the base, which is located in a remote area. Further, New Orleans Guard officials did not request a hush house and do not believe they need one. Since Air National Guard units generally have a limited number of aircraft, their use of a hush house would be minimal, and procuring such a facility at every Guard fighter location may not be justifiable.

The Navy has constructed three hush houses, has one under construction, and has requirements for at least 14 more for a total estimated cost of \$73 million. Because the Navy uses decentralized planning by which requirements for hush houses are identified and originated by the installation, we were unable to determine the total Navy requirements. The Navy hush houses vary in design and are procured entirely with military construction funds.

FEASIBILITY OF USING A  
STANDARD HUSH HOUSE

A number of Navy installations scheduled to receive hush houses are assigned the type of aircraft that could use the standard Air Force hush house, thereby saving millions of dollars in construction costs. The following table identifies these locations and the potential savings.

Potential Savings From Using the Air Force

Hush House at Navy Installations

<u>Installation</u>	<u>Aircraft assigned</u>	<u>Cost of Navy hush house</u>	<u>Cost of AF hush house</u>	<u>Potential savings</u>
----- (000 omitted) -----				
Jacksonville, NARF	A-7, F/A-18	\$ 7,300	\$ 2,500	\$ 4,800
NAS Cecil Field <u>a/</u>	A-7, A-4, S-3.	6,100	2,500	3,600
NAS Chase Field	TA-4, T2-C	4,000	2,500	1,500
NAS Chase Field	TA-4, T2-C	4,000	2,500	1,500
NAS Lemoore	A-7, F/A-18, A-4	4,500	2,500	2,000
NAS Lemoore <u>b/</u>	A-7, F/A-18, A-4	4,500	2,500	2,000
		<u>\$30,400</u>	<u>\$15,000</u>	<u>\$15,400</u>

We also found that, with a few modifications estimated to cost about \$250,000, the Air Force hush house could be altered for use by aircraft assigned to other Navy bases. The following table identifies these installations and the potential savings.

a/ NAS Cecil Field has requested a Navy hush house to test the A-7 aircraft and the F/A-18 aircraft. The S-3 aircraft, with its relatively quiet engines, can be run-up unsuppressed.

b/ The Military Construction Program shows one hush house is needed at NAS Lemoore, but NAS Lemoore officials said they require two hush houses.

Potential Savings From Using a Modified  
Air Force Hush House at Navy Installations

<u>Installations</u>	<u>Aircraft assigned</u>	<u>Cost of Navy hush house</u>	<u>Cost of AF hush house</u>	<u>Potential savings</u>
----- (000 omitted) -----				
NAS Mirimar	F-14, A-4, F-4, F-8, F-5	\$ 5,000	\$ 2,750	\$ 2,250
North Island, NARF	F-4, F-14, F/A-18	5,000	2,750	2,250
North Island, NARF	F-4, F-14, F/A-18	5,000	2,750	2,250
Alameda, NARF	A-6	4,000	2,750	1,250
Alameda, NARF	A-3, A-4, A-7	4,000	2,750	1,250
Norfolk, NARF	A-6, F-14	5,000	2,750	2,250
Norfolk, NARF	A-6, F-14	5,000	2,750	2,250
Grumman	A-6, F-14	9,600	2,750	6,850
		<u>\$42,600</u>	<u>\$22,000</u>	<u>\$20,600</u>

Despite the potential savings available by using the Air Force hush houses, the Navy has not acquired them because some elements of the Navy have questioned whether they will meet the Navy's needs. For example, the Naval Facilities Engineering Command, which designed the Navy's hush houses, has questioned whether the Air Force hush house can be used by the Navy.

On March 23, 1982, the Naval Aviation Logistics Center held a joint Air Force-Navy conference on hush house acquisition programs. Navy personnel indicated that the Air Force hush house showed good potential for Navy application, even though it did not, as presently configured, provide all the features of the Navy design.

On April 15, 1982, the Naval Air Engineering Center reported on its evaluation of joint usage of Air Force hush houses by Naval Air Reserve activities. It recommended that Naval Air Reserve units participate in joint usage of the Air Force hush house at sites where the two services share facilities. Although some obstacles were noted, the obstacles were not considered serious and could easily be overcome.

As of June 1982, the Navy had made no decision about acquiring the Air Force hush house.

MATTERS FOR CONSIDERATION

It appears that the Air Force hush house provides an effective and economical method for suppressing aircraft engine noise. However, because the Air Force has not made a comprehensive base by base evaluation of the requirements for hush houses some of them may not be needed. Further, because of disagreements concerning certain Air Force hush house design features the Navy has taken no steps to acquire it.

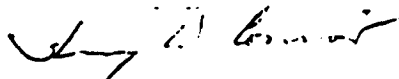
An impasse now exists, and high level management attention is needed to timely evaluate the Air Force hush house requirements and its possible use by the Navy.

For example, both the Naval Air Rework Facility in Jacksonville, Florida, and Grumman Aerospace Corporation, a Navy contractor at Bethpage, New York, have been authorized Navy hush houses at an estimated cost of \$16.8 million. Both have requested the Navy to allow them to buy and install Air Force hush houses at an estimated cost of less than \$6.1 million, or a savings of \$10.7 million, just for two hush houses.

The Navy had not approved these requests, as of July 16, 1982. If approval is not given soon, it may be too late to incorporate these requirements with those of the Air Force.

We would appreciate having your written comments regarding the matters discussed in this letter within 30 days. We also wish to acknowledge the cooperation and courtesies extended to our representatives during this ongoing review.

Sincerely yours,



Henry W. Connor  
Senior Associate Director



## ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

MANPOWER  
RESERVE AFFAIRS  
AND LOGISTICS

20 OCT 1982

Mr. Henry W. Conner  
Senior Associate Director  
Procurement, Logistics and Readiness Division  
U.S. General Accounting Office  
Washington, D.C. 20540

Dear Mr. Conner:

Reference your July 22, 1982 letter report on the "Aircraft Hush House Program", Code 943114 (OSD #6029). The Department of Defense is taking positive action on the two matters for consideration in your report. The Air Force is now conducting a comprehensive base by base evaluation of Hush House requirements as recommended in your report. Furthermore, the Navy is procuring an Air Force designed Hush House for their Jacksonville, Florida installation and is working with the Air Force contractor to develop a modified Air Force design to accommodate unique Navy requirements at Bethpage, New York. The Office of the Secretary of Defense will continue to examine these on-going actions to insure that DoD builds the minimum required Hush Houses at the lowest possible cost. Additional details are provided in the attached comments.

Sincerely,

James N. Juliana  
Principal Deputy Assistant Secretary of Defense  
(Manpower, Reserve Affairs & Logistics)

Attachment



DoD Comments  
on  
Matters for Consideration  
GAO Letter Report, July 22, 1982

1. Matter: Because the Air Force has not made a comprehensive base by base evaluation of the requirements for Hush Houses, some of them may not be needed.

Comment: The Air Force is presently reexamining all Hush House requirements. All major Commands are required to submit detailed justification for each Hush House at every base. Justification will be reviewed by Air Force headquarters for adequacy in mid November 1982 and periodically in the future. If there are any reductions in requirements, it will be reflected in out-year buy programs rather than near-term buy programs since the Air Force is only in the second year of a six year program of purchasing Hush Houses.

2. Matter: Because of disagreements concerning certain Air Force Hush House Design features the Navy has taken no steps to acquire it.

Comment: The Naval Air Systems Command and the Naval Facilities Engineering Command have completed a preliminary evaluation of the Air Force Hush House design and concluded that for some applications it can be adapted to meet Navy requirements. The Navy has initiated action to include the Air Force Hush House design with minor modifications into the design for the Naval Air Rework Facility, Jacksonville, Florida project. Additionally, the Air Force contractor has been approached to discuss required changes to the basic enclosure to adapt it to the joint Navy/Grumman project at Calverton, Long Island. The results of the Jacksonville efforts will be analyzed and results applied to Navy's Hush House Program beginning in the 1983 fiscal year. At this stage, however, it appears that the Air Force design may not be usable for every Navy Hush House due to the differences in size and configuration of the aircraft involved. For Example, the Air Force Hush House is designed for its tactical aircraft with centerline-mounted engines. The Navy design, however, must accommodate several aircrafts of different size and configuration. The extent of the modification to the Air Force design might be sufficiently extensive in the case of certain of the Navy's Hush Houses to make that approach less than fully cost effective as compared to adopting the Navy design directly.