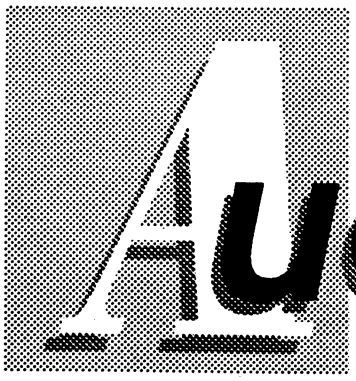

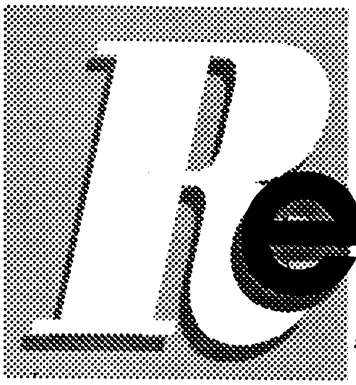

OFFICE OF THE INSPECTOR GENERAL

NAVY MANAGEMENT OF MISSILE STORAGE, HANDLING, AND INSPECTIONS

Report No. 96-025 November 27, 1995

Department of Defense

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Acronyms

ADCAP	Additional Capacity Torpedo
AMRAAM	Advance Medium Range Air-to-Air Missile
JSOW	Joint Standoff Weapon
NAVSEA	Naval Sea Systems Command

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

November 27, 1995

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (COMPTROLLER)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on the Navy Management of Missile Storage, Handling, and Inspections (Report No. 96-025)

We are providing this final report for your review and comments. We considered comments from the Assistant Deputy Comptroller (Program/Budget) and the Deputy Assistant Secretary of the Navy (Installations and Facilities) on a draft of this report in preparing the final report.

DoD Directive 7650.3 requires that all recommendations and potential monetary benefits be resolved promptly. To do so, we need additional comments from the Navy. We ask the Navy to provide additional comments on Recommendations 2. and 3. by January 29, 1996.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Rayburn H. Stricklin, Audit Program Director, at (703) 604-9051 (DSN 664-9051) or Ms. Delpha W. Martin, Audit Project Manager, at (703) 604-9018 (DSN 664-9018). See Appendix G for the report distribution. The audit team members are listed inside the back cover.

David K. Steensma

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 96-025 **November 27, 1995**
(Project No. 5AL-0005)

Navy Management of Missile Storage, Handling, and Inspections

Executive Summary

Introduction. The Navy had 4,573 explosive ordnance structures at 102 sites worldwide. Of the 102 sites, 23 sites were major storage points that had 2,865 explosive ordnance structures.

The Navy had $83.5 million for 22 high-explosive ordnance structures in the Future Years Defense Program for FYs 1996 through 2001. However, in the Office of the Inspector General, DoD, Report No. 95-083, "Acquisition of the Standard Missile II Upgrades," January 24, 1995, we recommended that the Commander, Naval Sea Systems Command, cancel military construction funding for seven structures in which the Navy planned to store Standard Missiles. The Navy concurred with the recommendation stating that it would cancel the $22 million of funds for the structures. After doing so, the Navy still had $61.5 million planned for 15 high-explosive ordnance structures within the Future Years Defense Program. The construction projects for the 15 structures were justified based on missile production projections of specific weapon systems from the President's FY 1996 Budget.

Objectives. The primary audit objectives were to evaluate the Navy management of missile storage and to assess the need for planned construction of new explosive ordnance structures. In addition, we evaluated the use of special handling equipment required for each missile system and determined whether the Navy could achieve greater commonality in the equipment, thereby reducing costs. Also, we evaluated the consistency of procedures for testing and inspecting missiles that were reissued to the fleet. We also evaluated management controls related to those objectives.

Audit Results. We did not identify any problems associated with special handling equipment and with testing and inspecting practices. However, the Navy requirements for explosive ordnance structures were not valid. As a result, the Navy could put to better use $61.5 million in Military Construction funds planned for 15 unneeded explosive ordnance structures, dispose of excess ordnance, increase available space in ordnance structures, and consolidate the management of ordnance structures. The Navy could improve its management control program by periodically assessing its storage requirements and uses and by disposing of unneeded ordnance. A summary of potential benefits is detailed in Appendix E.

Summary of Recommendations. We recommend that the Under Secretary of Defense (Comptroller) cancel the 15 construction structures. We also recommend that various officials in the Navy establish the Commander, Naval Ordnance Center, Indian Head, Maryland, as the worldwide manager of the Navy shore-based ordnance; establish procedures to validate planned construction of explosive ordnance structures; develop a policy requiring timely disposal of excess ordnance; dispose of excess ordnance; cancel

plans to reactivate a construction project; revise procedures for reporting the use of ordnance structures; relocate small arms munitions to less costly structures; and update the load plan for Naval Magazine, Lualualei, Hawaii.

Management Comments. The Assistant Deputy Comptroller (Program/Budget) generally agreed with the results of the audit and the audit recommendations. However, he stated that canceling funding for the 15 structures would be inappropriate now because funding does not usually become an issue until the funds are budgeted or appropriated. Despite that position, he added that his staff would carefully review any construction projects proposed by the Navy for ordnance structures during future program and budget reviews.

The Deputy Assistant Secretary of the Navy (Installations and Facilities) commented on the recommendations to the Navy. The Deputy Assistant Secretary nonconcurred with recommendations involving the cancellation of the 15 structures, the cancellation of plans to reactivate a construction project, the revision of procedures for reporting the use of ordnance structures, and the relocation of small arms munitions to less costly structures. The Deputy Assistant Secretary concurred with recommendations involving the establishment of the Commander, Naval Ordnance Center, as the worldwide manager of the Navy shore-based ordnance; the establishment of procedures to validate planned construction of explosive ordnance structures; the development of a policy requiring timely disposal of excess ordnance; the disposal of excess ordnance; and the update of the load plan for Naval Magazine, Lualualei, Hawaii. The Navy also stated it completed a milestone review of the Navy global ordnance infrastructure and compared current and future (2003) ordnance storage requirements. As a result of the review, the Navy canceled $56.0 million of construction projects for ordnance storage and moved some projects beyond the Future Years Defense Plan.

See Part I for a more detailed discussion of managements' comments and Part III for the complete text of managements' comments.

Audit Response. No further comments are required from the Under Secretary of Defense (Comptroller). However, due to the nonconcurrences and the nonresponsiveness of some of the comments from the Deputy Assistant Secretary, we ask the Assistant Secretary of the Navy (Installations and Environment) to comment on the recommendations to the Navy except for the recommendation dealing with the load plan for Naval Magazine, Lualualei. We ask the Assistant Secretary to provide the comments by January 29, 1996.

We commend the Navy for canceling $56.0 million of construction projects. Included in the canceled projects were provisions for 11 of the 15 structures reviewed during this audit. The Navy had programmed to spend $48.0 million on those 11 structures. We request that the Navy determine how it can use the available space in existing ordnance structures and cancel the remaining four structures, currently estimated by the Navy to cost $14.3 million, and four other structures that the Navy included in construction projects since our audit. The Navy estimated that the four additional structures will cost $12.5 million.

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Part I - Audit Results

Audit Background

As of May 31, 1995, the Navy had 4,573 explosive ordnance structures at 102 sites worldwide. Of the 102 sites, 23 were major storage points that had 2,865 explosive ordnance structures. The explosive ordnance structures at these 23 major storage points were of 3 general structural types: missile, box, and arched roof. Appendix A provides a list of the 23 major storage points and the quantities of structures at each major storage point.

Missile. These structures are generally rectangular, earth-covered concrete magazines in which assembled missiles are stored. The magazines have special door sizes and interior column spacing to facilitate storage and handling the assembled and containerized missiles. The Navy has 112 missile structures at 12 of the 23 major storage points.

Box. These structures are earth-covered concrete magazines and are 50 feet by 100 feet with 10 interior columns and have two doors. The structures were designed to store smokeless powder and projectiles. They can be used for the storage of missiles, but their layout and size may physically restrict the number of missiles that can be stored. The Navy has 538 box structures at 18 of the 23 major storage points.

Arched Roof. These structures are earth-covered "igloo" or "Quonset hut"-shaped structures. Because of shape and size, they are not recommended for storage of missiles. The Navy has 2,215 arched roof structures at 22 of the 23 major storage points.

The Future Years Defense Program for FYs 1996 through 2001 included $61.5 million for the Navy to construct 15 missile high-explosive ordnance structures. The construction projects for the structures were justified based on projections of production of specific weapon systems: Advance Medium Range Air-to-Air Missile (AMRAAM), Mark-48, Mark-50, Joint Standoff Weapon (JSOW), and Tomahawk.

Audit Objectives

The primary audit objectives were to evaluate the Navy management of missile storage and to assess the need for planned construction of new missile storage structures. In addition, we evaluated the use of special handling equipment required for each missile system and determined whether the Navy could achieve greater commonality in the equipment, thereby reducing costs. Also, we evaluated the consistency of procedures for testing and inspecting missiles that were reissued to the fleet. We also evaluated management controls related to those objectives. See Appendix A for the Audit Scope and Methodology. Prior coverage related to audit objectives is in Appendix B.

Construction Requirements for Explosive Ordnance Structures

The Navy planned to construct explosive ordnance structures that it did not need. The unneeded construction projects resulted from the Navy overstating its use of explosive ordnance structures and not using existing structures as intended. Another reason for the invalid construction projects was fragmented responsibilities for ordnance structures. As a result, the Navy could unnecessarily spend $61.5 million in military construction funds for FYs 1998 through 2000.

Planned Explosive Ordnance Budget

The Navy planned, as of December 1994, to construct 15 explosive ordnance structures that would add 149,130 square feet of ordnance storage.

Table 1. Planned Explosive Ordnance Structures Military Construction Budget

Project Number	FY Defense Plan	Site	Description	Military Construction Funds (Millions)	Square Feet
P-773	1998	Point Mugu	1 Missile Structure	$1.2	5,590
P-436	1998	Yorktown	1 AMRAAM Structure	2.2	10,866
P-502	1999	Yorktown	2 Mark-48 Structures	6.6	18,600
P-508	1999	Yorktown	2 JSOW Structures	6.4	21,732
P-200	1999	Fallbrook	2 JSOW Structures	6.7	21,732
P-320	1999	Port Hadlock	1 Tomahawk Structure	3.6	10,866
P-191	1999	Seal Beach	1 Tomahawk Structure	12.0	10,866
P-202	1999	Seal Beach	1 AMRAAM Structure	2.5	10,866
P-143	1999	Laulaulei	1 Mark-50 Structure	3.1	5,414
P-453	2000	Yorktown	1 Tomahawk Structure	3.3	10,866
P-190	2000	Seal Beach	1 Tomahawk Structure	11.0	10,866
P-430	2000	New London	1 Missile Structure	2.9	10,866
Totals			**15**	**$61.5**	**149,130**

DoD Instruction 7040.4, "Military Construction Authorization and Appropriation," March 5, 1979, emphasizes the DoD policy to efficiently use all existing installations and structures. The Instruction also specifies that officials shall not expend military construction funds until full consideration is given to converting or altering existing structures to satisfy new requirements.

Validity of Construction Requirements

The Navy planned to construct 15 additional explosive ordnance structures that it did not need. Based on our evaluations of space in 85 randomly selected ordnance structures at nine sites, the Navy had more than sufficient space to satisfy the square footages specified in the construction projects. As shown in Table 2, 5 of the 9 ordnance sites had 506,401 square feet available to satisfy the requirements being used to justify construction projects for 13 ordnance structures that would add 132,674 square feet to the Navy real property inventory.

Table 2. Space Available at Ordnance Activities with Construction Requirements

	Square Feet		
Site	Unused	Requested	Remaining
Yorktown	133,675	62,064	71,611
Fallbrook	212,516	21,732	190,784
Lualualei	82,018	5,414	76,604
Seal Beach	49,419	32,598	16,821
Port Hadlock	28,773	10,866	17,907
Total	**506,401**	**132,674**	**373,727**

The Navy also could not justify the other two construction projects, P-430 and P-773, that it had planned for Naval Submarine Surface Facility, New London, Connecticut, and Naval Air Warfare Center, Point Mugu, California. Those two construction projects would provide two structures with a total of 16,456 square feet of storage space. However, the five ordnance sites detailed in Table 2 had 373,727 square feet of excess space. Also, an additional 1,031,473 square feet of space was available at the other four naval weapons stations as shown in Table 3.

Other factors also indicated that projects P-430 and P-773 for Naval Submarine Surface Facility, New London, and Naval Air Warfare Center, Point Mugu, were not needed. The structure for Naval Submarine Surface Facility, New London, was planned to support the Sea Wolf Submarine Program. However, storage for ordnance for the Sea Wolf Submarine Program had been moved to other sites, and no site survey had been completed to justify the project at Naval Submarine Surface Facility, New London. As for project P-773, a site survey at Naval Air Warfare Center, Point Mugu, showed the need for one structure to support testing functions. However, Naval Air Warfare Center, Point Mugu, was located near two major storage points, Naval Weapons Station, Seal Beach,

California, and Naval Ordnance Center Detachment, Fallbrook, California, which had 261,935 square feet available to support Naval Air Warfare Center, Point Mugu.

Table 3. Existing Space Available at Ordnance Sites

Site	Available Space (Square Feet)
Keyport	395,560
Earle	25,641
Charleston	223,232
Concord	387,040
Total	**1,031,473**

For the Navy to use the available space at other ordnance sites to meet some of the requirements cited for the planned construction projects, some movement or repositioning of ordnance would be required. However, representatives of the Commander in Chief, U.S. Atlantic Fleet, said repositioning would not have a negative effect on fleet operations.

Uses of Planned Ordnance Structures

Of the 15 structures that the Navy planned to construct, 13 were for 5 different weapon systems for which no additional structures would be needed.

o The Navy planned two structures for the Mark-48 Program at Naval Weapons Station, Yorktown, Virginia. However, the Navy did not need additional structures because the program was for updates to existing torpedoes, not for increases in the number of torpedoes.

o The Navy planned four structures for the JSOW Program. However, the JSOW is replacing munitions (the Maverick, the Paveway, the Skipper, and the Walleye) that occupy more than four structures. Therefore, the JSOW Program does not need the new structures.

o The Navy planned four structures for the Tomahawk Program: two structures at Naval Weapons Station, Seal Beach; one structure at Naval Ordnance Center Detachment, Port Hadlock, Washington; and one structure at Naval Weapons Station, Yorktown. However, as noted above, unused square footage at those three locations showed that the the Navy could not justify the four structures.

o The Navy planned two structures for the AMRAAM Program: one structure at Naval Weapons Station, Yorktown, and one structure at Naval Weapons Station, Seal Beach. However, as shown above, unused square footage at the two locations showed that the two structures were not needed.

o The Navy planned one structure at Naval Magazine, Lualualei, for Mark-50 torpedoes. The construction was based on an increased maintenance function for Mark-50 torpedoes at Naval Magazine, Lualualei, that has since been eliminated. In addition, Naval Magazine, Lualualei, did not have a current load plan to determine excess ordnance. The load plan for Naval Magazine, Lualualei, had not been updated since 1989. Therefore, construction should not be considered until the load plan is updated and the construction need is reevaluated.

The Navy did not specify the weapon systems that it would store in two structures planned for Naval Air Warfare Center Weapons Division, Point Mugu, and Naval Submarine Surface Facility, New London. However, as we discussed, sufficient space was available at other sites to satisfy the requirements.

We realize that additional space may be needed when receiving new ordnance and disposing of ordnance that was replaced. However, with more than 1.5 million square feet of storage available, a shortage of storage space does not exist.

Detailed Storage Requirements

Current and projected load plans also showed that the Navy could not justify the construction projects for the 15 structures. A load plan specifies the high and low stock levels, as set by Chief of Naval Operations Instruction S8010.12E, "The Approved Basic Stock Level of Ammunition," April 20, 1987. As shown in Figure 1, if the total load plan is considered, Naval Ordnance Center Detachment, Port Hadlock, and Naval Weapons Station, Earle, New Jersey, would need the magazines requested.

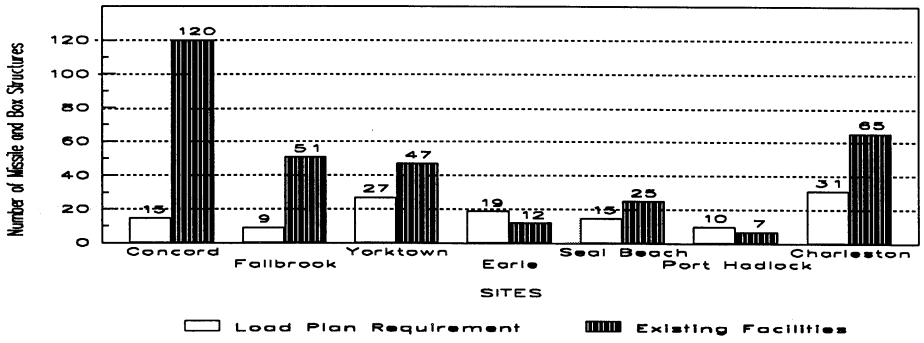

Figure 1. Analysis of Existing Structures Storing Load Plan

Although the load plans indicated that the Navy needed two structures at Naval Ordnance Center Detachment, Port Hadlock, and seven structures at Naval Weapons Station, Earle, the deficits would only occur if the ordnance sites stored ordnance at the maximum level of the load plans. The master plan indicated that the maximum load plans will never be achieved. In addition, the Navy has sufficient space available at other major storage points to more than satisfy the shortages at Naval Ordnance Center Detachment, Port Hadlock, and at Naval Weapons Station, Earle. In accordance with DoD Instruction 7040.4, the Navy should fully consider existing structures before expending military construction funds.

Bases of Planned Construction Projects

The construction projects for the unneeded structures resulted from the Navy overstating its use of explosive ordnance structures and not using those structures as intended.

Overstated Use. Since 1991, 14 of the 23 major storage points, which reported the amount of space used in structures, reported an average of 64 percent utilization in the structures. However, the Naval Ordnance Center stated that actual utilization was 20 percent higher or 84 percent because the 14 ordnance sites did not consider the aisle space required for handling and storage. Based on our evaluations of space in 85 randomly selected structures at 9 ordnance sites, the ordnance organizations used only 52 percent of available space for storage and 20 percent for space for aisles. In total, the organizations used 72 percent of the available space, as demonstrated in Figure 2 and explained in Appendix A.

Naval Sea Systems Command Instruction 8023.7A, "Ammunition Storage Structures," December 4, 1986, provides instruction, procedures, and schedules for major storage points to report their capacity and utilization of explosive

ordnance structures. The instruction failed to define how sites should report storage density or identify standard grids that will provide consistent and accurate usage data.

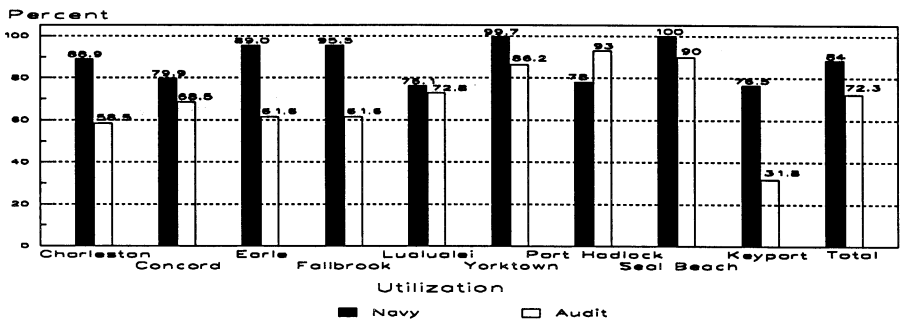

Figure 2. Navy Reported Utilization Versus Audit's Observed Utilization

Space Not Used as Intended. Approximately one-third of the used space was not used for its intended purposes. The Navy stored excess and inert items in 26 percent of the available space.

Excess Items. Excess items represented 16 percent of the space that was not used for its intended purpose. Examples are in Appendix C. The excess items were at the ordnance sites because the program offices responsible for the items had not funded excess items to be removed and disposed of, including by demilitarization. Representatives of the program offices maintained that they could not move the items until the Navy decides on disposal of the items through demilitarization, reuse, or foreign sale.

Representatives of the program offices asked who would fund the disposal of ordnance that were being replaced by a major acquisition. For instance, the Navy planned for the JSOW Program to replace four munitions. According to DoD Instruction 5160.65M, "Single Manager for Conventional Ammunition," November 17, 1981, the JSOW Program Office should provide a demilitarization plan to dispose of the JSOW munitions once the munitions become obsolete. However, the Instruction did not specify who was responsible for disposing of the munitions being replaced. The four munitions that were being replaced (Maverick, Paveway, Skipper, and Walleye) still have program offices, but the program offices developed the munitions before DoD Instruction 5160.65M required demilitarization plans.

We agree with the representatives of the program offices that the items cannot be removed from storage until the Navy decides on their disposition and funds are provided for their removal. However, decisions are needed on the disposition and funding. The results of our random sample showed that 392 of 420 excess items had been at the sites for extensive periods. Specifically, 199 items exceeded load plan requirements for 24 months or more. The other 193 items had been stored for 12 to 24 months. The Navy needs to dispose of the excess items to avoid unnecessary construction costs and environmental consequences.

Selective positioning could be used to handle the excess and obsolete items until the Navy decides and funds disposal actions. Selective positioning could place excess or obsolete items at facilities that have excess space until necessary disposal action can be taken. As we discussed, the Navy had 1.5 million square feet of usable space with new requirements justifying only 149,130 square feet, leaving 1.35 million square feet of usable space.

Demilitarization or disposal should be implemented as early as possible. The inherent explosive danger of ordnance and explosive weight require costly, extensive safety plans for ordnance removal and the employment of highly trained explosive ordnance disposal technicians. The Navy had over-aged ordnance that exploded. One recent instance was at the Naval Ordnance Center and was due in part to the ordnance not being properly disposed of. Other instances resulted in the Navy not being able to transport ordnance for proper disposal.

Inert Items. Small arms munitions represented the other 10 percent of space that was not used for its intended purposes. The Navy was storing small arms munitions in 9 of the 85 structures that we visited. Small arms munitions are considered inert for storage purposes and can be stored in less expensive, secure structures. Projecting our results to the total 503 structures at the 9 major storage points showed that the Navy was using about 53 explosive ordnance structures (about 265,000 square feet) to store small arms ammunition at the sites we visited.

In total, we determined that 54 percent (100-72=28; 28 percent not used + 26 percent [16 percent excess and 10 percent inert] not used as intended = 54 percent) of the space in the structures at the nine ordnance sites was available for other uses, as shown in Figure 3.

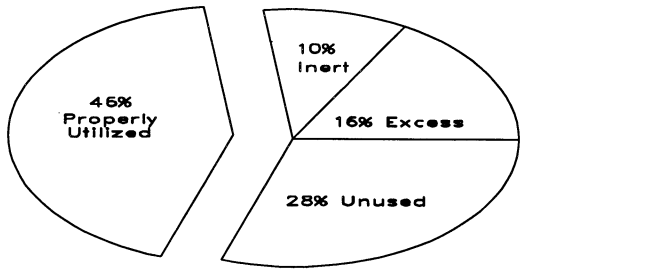

Figure 3. Use of Space

Responsibilities for Ordnance Structures

Fragmented responsibilities for naval ordnance structures also caused the overprogramming for construction projects.

In October 1993, the Secretary of the Navy established the Naval Ordnance Center (the Center), as the ordnance support agent for the Fleet Commanders in Chief, Chief of Naval Operations, Commandant of the Marine Corps, and program executive officers. As the ordnance support agent, the Commander of the Center was to become the worldwide manager of the Navy shore-based ordnance inventories. However, the Center was not fully implemented.

Responsibility for naval ordnance structures remained fragmented. The Center had responsibility for seven naval ordnance sites within the continental United States while the Fleet Commanders in Chief had responsibility for 10 naval ordnance sites overseas and one naval ordnance site within the continental United States. Also, within the continental United States, the Naval Sea Systems Command had responsibility for four ordnance sites and the Naval Air Systems Command had responsibility for one ordnance site. With the responsibilities for ordnance sites spread over different commands, the Commander of the Center was not able to manage shore-based ordnance inventories worldwide.

Since various sites have the authority to initiate construction projects, the Navy did not have a specific agency to validate its requirements for constructing ordnance structures.

Although the Center had only recently been established, it had developed a master plan, "Naval Ordnance Center Ordnance Storage Master Plan," February 15, 1995 (the Plan). The Plan was created to consolidate and coordinate a Navy-wide view of requirements for constructing ordnance structures. The Plan showed construction requirements based on reports of utilization of structures at the 23 major storage points.

The Plan recommended that Navy officials pursue a scaled-down, long-term, modernization and replacement program to build additional state-of-the-art ordnance structures at only a few key sites. More specifically, the Plan recommended that the Navy construct 21 structures: 15 structures at Naval Weapons Station, Yorktown; 3 structures at Naval Weapons Station, Earle; 2 structures at Naval Ordnance Center Detachment, Fallbrook; and 1 structure at Naval Ordnance Center Detachment, Port Hadlock. The Navy recommended that the structures be built from FYs 1998 through 2003 and estimated that the structures would cost about $75 million.

Based on the 1.35 million square feet of space available remaining at the nine ordnance sites that we visited, the Navy did not justify the need for the 21 structures that the Naval Ordnance Center recommended in the Plan.

Other Construction Requirements

The Navy also planned to reactivate a $8.7 million construction project for three ordnance structures that it previously canceled based on a recommendation from the Naval Audit Service Audit Report 019-S-94, "Military Construction, Navy Project Proposed for Fiscal Year 1995," December 22, 1993. See Appendix B.

We question the need for the three ordnance structures at Naval Weapons Station, Earle. The Naval Audit Service report stated that documentation was inadequate to support the three structures. Also, we found that the site had 25,641 square feet of unused space or about 79 percent of the 32,598 square feet that the Navy requested for the three ordnance structures. Further, the Navy had 1.35 million square feet of space at other sites available to satisfy the requirements.

Conclusions

Fragmented management of ordnance structures led to overprogramming for new construction. The overprogramming could cause the Navy to unnecessarily spend $61.5 million in military construction funds.

Recommendations, Management Comments, and Audit Responses

1. We recommend that the Under Secretary of Defense (Comptroller) cancel funding for all 15 explosive ordnance structures.

Office of the Under Secretary of Defense (Comptroller) Comments. The Assistant Deputy Comptroller (Program/Budget) generally agreed with the results of the audit and the audit recommendations. However, he stated that it would be inappropriate to cancel funding for the 15 structures now because funding is not usually an issue until the funds are budgeted or appropriated. The Assistant Deputy Comptroller added that his staff would carefully review future programs and budgets of any ordnance projects proposed by the Navy. The full text of his comments is in Part III.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) also provided comments on the recommendation. The Deputy Assistant Secretary nonconcurred with this recommendation. He maintained that the recommendation was based on an erroneous assumption that, if any empty space existed in any magazine within the Navy, then military construction was not necessary. He also said that the auditors did not properly consider the requirement to leave 20 percent of the space in an ordnance

structure for safe internal movement of the stored material. Additionally, he said that the auditors based their conclusions on utilization on a given day and not on the amounts of space required to satisfy the fleets' load plans.

Although the Deputy Assistant Secretary nonconcurred with the recommendation, he explained that the Navy had taken various actions to ensure that its planned construction projects were valid. More specifically, he stated that the Navy had established its Ordnance Storage Master Plan. The Deputy Assistant Secretary added that while developing the Ordnance Storage Master Plan, the Navy canceled $48.0 million of construction projects for 11 of the 15 structures that we recommended the Under Secretary of Defense (Comptroller) cancel. The Navy Ordnance Storage Master Plan now lists five projects, estimated to cost $26.8 million for eight ordnance structures with a total of 76,062 square feet.

The full text of the Deputy Assistant Secretary's comments is in Part III.

Audit Response. We considered the comments from the Assistant Deputy Comptroller (Program/Budget) to be responsive to the intent of the recommendation. Therefore, additional comments are not required on the recommendation.

Regarding the Navy actions, we commend the Navy for canceling the construction projects for 11 of the 15 structures that it had programmed for FYs 1998 through 2000. However, we request that the Navy reconsider its needs for the five projects now listed in the Navy Ordnance Storage Master Plan. Our reasons follow.

o Three projects, estimated to cost $13.9 million, were for three structures to provide 32,598 square feet of ordnance storage space at Naval Weapons Station, Yorktown. The structures were not needed because Naval Weapons Station, Yorktown, had 133,675 square feet of unused space, as shown on page 4 of this report.

o One project, estimated to cost $4.2 million, was for one structure to provide 10,866 square feet of ordnance storage space at Naval Ordnance Center Detachment, Port Hadlock. The structure was not needed because Naval Ordnance Center Detachment, Port Hadlock, had 28,773 square feet of unused space, as shown on page 4 of this report.

o The other project, estimated to cost $8.7 million, was for three structures to provide 32,598 square feet of ordnance storage space at Naval Weapons Station, Earle. At least two structures were not needed because Naval Weapons Station, Earle, had 25,641 square feet of unused space, as shown on page 5 of this report. As for the requirement for the other structure at Naval Weapons Station, Earle, the Navy needs to determine the extent that it can use existing facilites at other locations before programming the structure. As discussed in this report, the Navy had more than 1.35 million square feet of unused space to store containerized missiles. More specifically, on the east coast, the Navy had 223,232 square feet and 133,675 square feet of unused space at Naval Weapons Stations, Charleston, South Carolina, and Yorktown,

respectively. With such extensive unused capacity available at the two east coast weapons stations, the Navy has great opportunities to avoid the cost of new construction. Also, as stated on page 5 of this report, representatives of the Commander in Chief, U.S. Atlantic Fleet, said that the use of other ports would not have a negative effect on fleet operations.

We disagree with the Deputy Assistant Secretary's comments on the basis for our audit conclusions. We did not base our audit conclusions on the assumption that if any empty space existed in any ordnance structure within the Navy, then military construction was not necessary. We based our audit conclusions on various factors, including calculations of space used at selected ordnance activities and scheduled deliveries from major acquisition programs. In addition, we used random sampling techniques to select the structures from which we measured space utilization. Also, our calculations provided for 20 percent of the storage space in each structure to be available for safe internal movement of material. Last, we showed on page 6 in this final report that we considered the fleets' load plans.

2. We recommend that the the Assistant Secretary of the Navy (Installations and Environment):

a. Establish the Commander, Naval Ordnance Center, as the worldwide manager of shore-based ordnance and require the Commander to validate the need for all future Navy construction projects for ordnance structures.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) concurred with the recommendation and stated that:

> It is the intent that for future reviews, the Navy's OSMP [Ordnance Storage Master Plan] will be the primary source for Navy magazine MILCON [Military Construction] validation. However, individual claimants, particularly the operating Commanders-in-Chief, establish their own operations and training support storage needs, and therefore, are authorized to submit projects. The Navy's Shore Facilities Programming Board is the forum within which all claimants brief and justify their respective MILCON projects, not just magazine MILCON. Each project must compete for the limited available MILCON funding.

Audit Response. Although the Deputy Assistant Secretary concurred with the recommendation, his comments were not responsive. He indicated that the Navy did not plan new action in response to the recommendation. We still maintain that the Commander, Naval Ordnance Center, should validate all construction projects for ordnance structures because his organization is the only organization in the Navy with direct knowledge of unused space at other ordnance activities. If the Commander, Naval Ordnance Center, is not assigned the responsibility and given the authority to validate all construction projects for ordnance structures, the need for the Naval Ordnance Center becomes questionable.

We ask the Assistant Secretary of the Navy (Installations and Environment) to provide additional comments in response to this report.

b. Establish a policy requiring the timely disposition of excess ordnance.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) concurred with the recommendation and stated that the Navy is already committed to expediting the disposition and disposal of excess material. He also stated that the Navy had made major progress in disposing of excess and obsolete gun ammunition in the last 2 years. However, he added that reductions in funding would constrain future disposal regardless of the Navy policy to the contrary.

Audit Response. The Deputy Assistant Secretary's comments on this recommendation were similar to his comments on the preceding recommendation in that the Navy did not plan new action in response to the recommendation. We question this inaction. The Deputy Assistant Secretary supports the expenditure of funds for new ordnance structures that would not be needed if the Navy would dispose of excess and obsolete munitions. However, the Deputy Assistant Secretary will not arrange for the Navy to establish a policy that would provide disposal actions with the priority to obtain the funding needed to dispose of the excess and obsolete munitions.

We ask the Assistant Secretary of the Navy (Installations and Environment) to provide additional comments in response to this report.

c. Dispose of excess ordnance.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) concurred with the recommendation and stated that "the Navy is in the best shape from a disposal or demilitarization standpoint in many years." The Deputy Assistant Secretary stated that obsolete napalm munitions at Naval Ordnance Center Detachment, Fallbrook, alone represents more than 80 percent of the excess material at primary storage sites. He added that the napalm project was highly constrained by environmental regulations and would not be completed until 1999.

Audit Response. While the Deputy Assistant Secretary may be correct in stating that the Navy disposal of munitions is in much better shape now than in previous years, the need remains to continue identifying and removing the excess and obsolete munitions from ordnance structures. His comments on napalm munitions are not related to the issues in this report because napalm is an obsolete ordnance that is currently stored outside at Naval Ordnance Center Detachment, Fallbrook. He did not address excess missiles that are stored in missile magazines or the timetable for their disposal. Examples of these excess missiles are shown in Appendix C.

We ask the Assistant Secretary of the Navy (Installations and Environment) to provide additional comments on the recommendation in response to this report.

d. Cancel plans to reactivate the construction project for three ordnance structures at Naval Weapons Station, Earle, New Jersey.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) nonconcurred with this recommendation. The Deputy Assistant Secretary stated that the Navy is finalizing plans to increase homeporting of explosive cargo ships to Naval Weapons Station, Earle. He also stated that the Navy had difficulty at Naval Weapons Station, Earle, in supporting Operations Desert Shield and Desert Storm. He explained that the storage structures at Naval Weapons Station, Earle, do not match the weapons mix that the Navy plans to store there. Specifically, he stated that 88 percent of the structures at the station were antiquated, arched-type magazines, 59 percent of which had blast shields installed that limited their use to smaller, older, palletized weapons. He added that more than 20 percent of the capacity at Naval Weapons Station, Earle, needs to be box-type magazines that are suited for storing larger, containerized weapons.

Audit Response. We disagree with the Deputy Assistant Secretary's comments for the same reasons specified in the audit response to the Deputy Assistant Secretary's comments to Recommendation 1. As such, we ask the Assistant Secretary of the Navy (Installations and Environment) to comment on the recommendation in response to this report.

3. We recommend that the Commander, Naval Ordnance Center:

a. Revise procedures in Naval Sea Systems Command Instruction 8023.7A for reporting use of ordnance structures.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) nonconcurred with this recommendation stating that the instruction does not need revision since it is administered proactively and by exception.

Audit Response. Although the Deputy Assistant Secretary nonconcurred with the recommendation, the Naval Ordnance Center issued a tasking to Naval Weapons Station, Earle, on December 27, 1994, to revise the Naval Sea Systems Command Instruction 8024.2, "Magazine Stowage Layout Standard," January 13, 1992. This revision should provide a recommended layout that ordnance organizations can use to store containerized missiles. However, the Naval Ordnance Center did not direct changes to the parts of Naval Sea Systems Command (NAVSEA) Instruction 8023.7A that address standard grids or density for storing containerized missiles. Currently, NAVSEA Instruction 8023.7A is based on grids for standard palletized material whose size is 48 inches long by 40 inches wide. Without identification of grids for containerized missiles and the standardization of reporting storage density, standard grid reporting cannot be achieved; therefore, reports to Navy management will be inconsistent. During our review, we noted that each ordnance activity developed a unique form of reporting utilization that ranged from personnel guessing the percentage of floor space utilized to personnel developing grid layout criteria.

While the planned revision of NAVSEA Instruction 8024.2 is a positive step, the Navy still needs to address in NAVSEA Instruction 8023.7A the definition of grids for containerized missiles to prevent inconsistent reporting of magazine utilization. Accordingly, we ask the Assistant Secretary of the Navy (Installations and Environment) to provide additional comments on the recommendation in response to this final report.

b. Relocate small arms munitions from missile and box structures to less costly structures.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) nonconcurred with the recommendation stating that the Navy would continue to store small arms ammunition in missile magazines when the magazines are not needed for missile storage. The Deputy Assistant Secretary also stated the Navy had not and would not justify any construction project because small arms ammunitions were stored in magazines that should be used to store missiles. The Deputy Assistant Secretary stated:

> On page 12 of the report [and page 8 of this final report], the auditors report finding several situations where storage activities held small arms ammunition in magazines instead of in other secure storage. The report erroneously states that it is "inert material," and was not intended to be stored in magazines. Although most small arms ammunition can be stored in secure storage other than magazines, there is no prohibition to doing so, on a not-to-interfere basis with other storage needs. The report concludes that this material was taking up space, which if used for other ordnance storage would reduce magazine MILCON requirements also. This is not true. Small arms ammunition largely consists of high-demand Marine Corps deployment and training, as well as, Navy security training items. When a storage site's load plan requires, and sufficient quantity is on hand, it is most efficient to access it and prepare it for shipment in a conveniently located, large space designed for similar operations. Hence, in such cases, it is and will continue to be appropriately stored in magazines.

Audit Response. If the Navy has a valid need for additional storage for small arms ammunition, then it should plan to construct the appropriate structures for storing the ammunition. To store small arms ammunitions in structures constructed for storing containerized missiles is inefficient use of these higher cost structures. At present, condoning such use distorts utilization rates of structures for storing containerized missiles. We could agree to storing small arms ammunitions in missile storage space if reports will show that space is available for missile storage. We ask the Assistant Secretary of the Navy (Installations and Environment) to provide additional comments on the recommendation in response to this final report.

4. We recommend that the Commander in Chief, U.S. Pacific Fleet, develop a new load plan for Naval Magazine, Lualualei.

Navy Comments. The Deputy Assistant Secretary of the Navy (Installations and Facilities) concurred with the recommendation and stated that the plan was updated on May 30, 1995.

Audit Response. The Deputy Assistant Secretary's comments were responsive to the recommendation. Therefore, additional comments are not required on this recommendation.

Other Management Comments

The Deputy Assistant Secretary of the Navy (Installations and Facilities) also questioned some reasons that we presented in our report for concluding that the Navy did not need the planned structures. Those reasons, the Deputy Assistant Secretary's comments on those reasons, and our responses to his comments are in Appendix D.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope

We conducted this economy and efficiency audit from November 1994 through May 1995. The audit was made in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, Department of Defense, and accordingly included a review of management controls. Appendix F lists the organizations that we visited or contacted during the audit.

The scope of our audit was limited to structures most appropriate for the economical storage of containerized missiles: missile and box structures. Further, we based all calculations of space utilization on 80 percent of the space in a structure being used for storage and the remaining 20 percent of the space being used for movement and handling.

Methodology

We reviewed records and supporting documentation, dated from November 1981 through May 1995. Specifically, we reviewed inventory records, results of independent inventories, storage requirements (load plans), utilization reports, records showing the capacities of missile and box structures, and the Ordnance Storage Master Plan.

We judgmentally selected 9 of the 23 major storage points shown in Table A-1 for various tests.

Table A-1. Number of Magazines Located at Activity by Site

Activity	Missile	Box	Arched Roof	Totals
*1. Naval Weapons Station, Yorktown	47	0	238	285
*2. Naval Weapons Station, Charleston	15	50	79	144
*3. Naval Weapons Station, Earle	12	0	232	244
*4. Naval Ordnance Center, Fallbrook Detachment	11	40	128	179
*5. Naval Weapons Station, Seal Beach	8	17	207	232
*6. Naval Ordnance Center, Port Hadlock Detachment	5	3	100	108
*7. Naval Weapons Station, Concord	4	116	144	264
*8. Naval Magazine, Lualualei	3	56	408	467
9. Fleet Activities, Yokosuka	3	0	21	24
10. Naval Air Station, Oceana	2	1	12	15
11. Naval Magazine, Guam	1	9	115	125
12. Naval Air Warfare Center, China Lake	1	32	78	111
13. Naval Service Warfare Center Detachment, Crane	0	28	103	131
14. Naval Service Warfare Center Detachment, Dahlgren	0	8	8	16
15. Naval Service Warfare Center Detachment, Indian Head	0	34	82	116
16. Naval Station, Guantanamo Bay	0	0	76	76
17. Naval Station, Roosevelt Roads	0	19	46	65
*18. Naval Undersea Warfare Center, Keyport	0	116	0	116
19. Naval Air Station, North Island	0	3	27	30
20. Fleet Activities, Sasebo	0	0	12	12
21. North Atlantic Treaty Organization, Augusta Bay	0	0	27	27
22. Naval Station, Rota	0	6	33	39
23. North Atlantic Treaty Organization, Souda Bay	0	0	39	39
Totals	**112**	**538**	**2,215**	**2,865**

*Storage points judgmentally selected for review.

The 9 storage points had 105 of the 112 missile explosive structures (94 percent) and 398 of the 538 box explosive structures (74 percent) or 77 percent of total storage capacity at the major storage points. At those nine storage points, we validated on-hand balances in inventory records by making physical inventories of ordnance in 14 of 85 statistically selected structures. At seven of the nine major storage points, we randomly selected 420 items from inventory records on 5,241 excess items to determine how long the items had been at the storage points.

For the 9 storage points that we judgmentally selected, we used computer-generated random numbers to select 85 of 503 storage structures. Thus, our statistical projections refer only to the nine storage points identified with an asterisk in Table A-1. The random selection of structures enabled us to project the available space at the nine major sites.

All statistical results used in the report are in Table A-2 with the required confidence bounds (precision) and with a 90-percent confidence level.

Table A-2. Statistical Projections

Report Section	Item Projected with 90-Percent Confidence
a. Actual Use (Page 7)	Percent space used is 72 percent $\pm$ 8 percent of the available space.
b. Unused Space (28 Percent) and Space Not Used as Intended (26 Percent)* (Page 8)	Percent of space available for use is 54 percent $\pm$ 11 percent of the available space. Amount (in square feet) of space unused or not used as intended is 1.5 million square feet $\pm$ 0.3 million square feet at 9 sites.
c. Inert Items (Page 9)	Universe is 503 missile or box structures at 9 major storage points. Percent space used for small arms is 10.6 percent $\pm$ 5.5 percent.

*26 percent represents ordnance that was 16 percent excess and 10 percent inert.

We used computer-processed data from the Conventional Ammunition Integrated Management System (referred to by Navy officials as CAIMS) to determine the ordnance on hand at selected sites. To determine the reliability of the computer-processed data, we made physical inventories and reviewed reports on the results of independent inventories. We found reliability of inventory data to be about 96 percent.

Management Control Program

We evaluated management controls over handling, testing, inspecting, and storing missiles. In assessing the controls, we reviewed the vulnerability assessments of the Program Executive Officers for Conventional Strike Weapons, for Cruise Missiles and Unmanned Aerial Vehicles, for Tactical Aircraft Programs, and for Undersea Warfare to determine the levels of risk that their responsible officials assigned to their organizations' functional responsibilities. We also reviewed vulnerability assessments of the Executive Directors of the Naval Ordnance Center's Atlantic and Pacific Divisions to

make the same determinations. The officials did not identify handling, testing, inspecting, and storing missiles as assessable functions. We also reviewed the Program Executive Officers' and Executive Directors' last annual certifications on management controls to determine whether they reported material weaknesses related to handling, testing, inspecting, and storing missiles. They did not report deficiencies related to those matters.

Our audit identified a material control weakness as defined by DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987. The Navy had not established a control to ensure that it did not acquire unneeded explosive ordnance structures. We believe that the weakness existed because management had not conducted a management control review of the risks associated with the acquisition of explosive ordnance structures. Implementation of Recommendations 2, 3, and 4 in the finding will correct the weakness. We will provide a copy of our final report to the senior official responsible for management controls in the Navy.

Appendix B. Summary of Prior Audits

General Accounting Office

The General Accounting Office had an ongoing audit, Job Code 703064, "Ammunition Management." The objective of the audit was to determine whether the wholesale ammunition stockpile of the DoD meets wartime readiness requirements.

Inspector General, DoD

Office of the Inspector General, DoD, Report No. 95-196, "Defense Base Realignment and Closure Budget Data for the Closure of Naval Air Station Alameda, California, and Realignment to Puget Sound Naval Shipyard, Washington," May 17, 1995. The report states the Navy identified valid base realignment and closure construction requirements, adequately documented the basic structure requirements, and considered existing structures when planning the scope of a project that will provide two additional high-explosive ordnance structures at Port Hadlock Detachment, Washington. The report contains no recommendations.

Office of the Inspector General, DoD, Report No. 95-083, "Acquisition of the Standard Missile II Upgrades," January 24, 1995. The report states the Navy had sufficient missile storage structures at various sites, without constructing additional structures. The report recommends the Commander, Naval Sea Systems Command, cancel Military Construction funding for seven new structures in the Navy Program Objective Memorandum for FY 1996. The Assistant Secretary of the Navy (Research, Development and Acquisition) concurred with the recommendation. The Navy canceled the funding ($22 million) for the seven structures.

Naval Audit Service

Naval Audit Service, Report 019-S-94, "Military Construction, Navy Projects Proposed for Fiscal Year 1995," December 22, 1993. The report states that a military construction project for three explosive ordnance structures at Naval Weapons Station, Earle, New Jersey, was not valid because the organization could not correlate the AOE-6 ships' missile load and storage requirements. The report recommends that the Navy cancel the project. The

Navy concurred with the recommendation and canceled the project. Subsequently, the Navy stated it planned to reinstate the project in the Future Years Defense Program for construction in FY 1998.

Appendix C. Examples of Excess Ordnance

Naval Weapons Station, Seal Beach

Terrier Fleet Standard Missiles occupy four box magazines at Naval Weapons Station, Seal Beach. The Navy should dispose of the missiles because the Navy decommissioned the ships that used the missiles. The Navy had not sold the Terrier systems to foreign governments; so, foreign governments would be unlikely to buy the missiles. The Naval Air Systems Command stated that the missiles were not candidates to be used as targets. Inspector General, DoD, Report No. 95-083, "Acquisition of the Standard Missile II Upgrades," January 24, 1995, recommended that the Navy dismantle the missiles and use usable parts in the production of other missiles. Action is pending on this recommendation.

Naval Weapons Station, Yorktown

Officials at the Naval Weapons Station, Yorktown, could free one missile magazine by disposing of 400 excess Harm missiles. Item managers denied requests from the Naval Weapons Station, Yorktown, to transfer the missiles. The item managers told officials at the Naval Weapons Station, Yorktown, either to transfer the missiles to a disposal account or retain the missiles in a holding account at the weapons station. Neither option will remove the excess missiles from the Naval Weapons Station, Yorktown. Placing the missiles in a holding account would occupy space needed to store ordnance that were not excess. Additionally, in our random audit sample of structures at the Naval Weapons Station, Yorktown, 154 excess Sidewinders and 124 excess Hellfire missiles were occupying needed space in the structures.

Naval Ordnance Center Detachment, Port Hadlock

Inert Skipper missiles were occupying a box magazine at Naval Ordnance Center Detachment, Port Hadlock. The Navy transferred the Skipper missiles to Naval Ordnance Center Detachment, Port Hadlock, from August 1993 through December 1994 from an Army holding area in anticipation that the missiles would be retrofitted to a current program. The Navy had not yet decided whether to retrofit the missiles. In 1998, the Skipper missiles will be replaced by the JSOW, making a retrofit program uneconomical to fund.

Appendix D. Other Management Comments and Audit Response

The following paragraphs address the Navy comments about statements on pages 8 and 9 of the draft and pages 5 and 6 of the final reports that address other reasons why the Navy did not need 13 of the 15 planned construction projects.

Audit Statement 1

The Navy planned two structures for the Mark-48 Program at Naval Weapons Station, Yorktown. However, the Navy did not need additional structures because the program was for updates to existing torpedoes, not for increases in the number of torpedoes.

Navy Comments.

> Although it is true that generally MK48 Heavyweight Torpedoes will be used to build MK48 Additional Capacity (ADCAP) weapons, other ADCAPS will be procured directly. However, more importantly, Weapons Station Yorktown will have a significant increase in its torpedo storage requirements, since the station has been designated the primary Intermediate-level maintenance site for the East Coast.

Audit Response. Even though the Navy stated that it intends to procure some Mark-48 ADCAP torpedoes and the Naval Weapons Station, Yorktown, will have a significant increase in its torpedo requirements, Naval Weapons Station, Yorktown, did not need additional storage space. As discussed and shown on page 4 of this report, the Navy should have 71,611 square feet remaining after satisfying the requirements for all construction projects planned for the Naval Weapons Station, Yorktown. To build additional ordnance structures before using available space would only result in unneeded spending.

Audit Statement 2

The Navy planned four structures for the JSOW Program. However, the JSOW is replacing munitions (the Maverick, the Paveway, the Skipper, and the Walleye) that occupy more than four structures. Therefore, the JSOW Program does not need the new structures.

Navy Comments.

> The second reason indicates that since the Joint Standoff Weapon (JSOW) program is "replacing" Maverick, Paveway (referring to laser guided bombs), Skipper, and Walleye, and these other weapons take up more than the requested new magazines, the JSOW MILCON project is not needed. Obviously that assumes that these other weapons will be instantaneously removed from the inventory when it "replaces" all of the other weapons. This is not true. Depending on future conflicts where such munitions would be expended, they will remain in the inventory for their full service life which extends well into the next century for most items.

Audit Response. We recognize that the weapons that JSOW is replacing will not immediately be removed from the inventory. However, the entire requirement for JSOW will not be delivered immediately either. It will be a gradual movement of these older weapons to long-term storage or to demilitarization with the transfer of the new weapons from the contractor's facilities. Since the Navy canceled its plans to construct the four explosive ordnance structures at Naval Weapons Station, Yorktown, and Naval Ordnance Center Detachment, Fallbrook, for the JSOW, this is no longer an issue.

Audit Statement 3

The Navy planned four structures for the Tomahawk Program: two structures at Naval Weapons Station, Seal Beach; one structure at Naval Ordnance Center Detachment, Port Hadlock; and one structure at Naval Weapons Station, Yorktown. However, unused square footage at those three sites did not justify the structures, as noted above.

Navy Comments.

> The third reason deals with Tomahawk missiles, where the report again erroneously assumes that if there is currently unoccupied space at any of the sites where Tomahawk magazine MILCON is requested, then the projects are invalid. The Seal Beach project has already been eliminated as a result of the Navy's Ordnance Storage Master Plan (OSMP) review.

Audit Response. We commend the Navy for canceling the projects for two ordnance structures at Naval Weapons Station, Seal Beach, for Tomahawk missiles. However, we affirm our recommendation to cancel the other two projects for the Tomahawk because Naval Weapons Station, Yorktown, and Naval Ordnance Center Detachment, Port Hadlock, had 89,518 square feet of storage capacity remaining after satisfying all planned construction projects with unused space (see page 4 of this report).

Audit Statement 4

The Navy planned two structures for the AMRAAM Program: one structure at Naval Weapons Station, Yorktown, and one structure at Naval Weapons Station, Seal Beach. However, unused square footage at the two sites did not justify additional construction, as noted above.

Navy Comments. "The fourth reason related to the Advanced Medium-Range Air-to-Air Missile (AMRAAM) uses the same flawed reasoning, although again the Seal Beach project has already been eliminated from the IPL [Integrated Priority List], for other reasons."

Audit Response. Other comments from the Navy indicate that the Navy canceled both projects, not only the one at Naval Weapons Station, Seal Beach (see page 46 of this report). We commend the Navy for canceling the projects.

Audit Statement 5

The Navy planned one structure at Naval Magazine, Lualualei, for Mark-50 torpedoes. The construction was based on an increased maintenance function for Mark-50 torpedoes at Naval Magazine, Lualualei, that has since been eliminated. In addition, Naval Magazine, Lualualei, did not have a current load plan to determine excess ordnance. Therefore, construction should be considered after the load plan is updated and the construction need is reevaluated.

Navy Comments. "The fifth reason dealt with a MK50 Torpedo MILCON at NAVMAG Lualualei, Hawaii. This project was not in the NAVSEASYSCOM claimancy, but has been subsequently modified by CINCPACFLT and is no longer a MK50 torpedo project."

Audit Response. We commend the Navy for canceling the project.

Appendix E. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
1.	Economy and Efficiency. Will ensure military construction funds are not spent for unneeded structures.	The Navy could put $61.5 million of the funds to better use (FYs 1998 through 2000 Military Construction funds).
2.a.	Program Results and Management Control. Will verify the need to construct additional ordnance structures.	Nonmonetary.
2.b.	Economy and Efficiency and Management Control. Will provide additional space in ordnance structures for fleet support.	Nonmonetary.
2.c.	Economy and Efficiency and Management Control. Will require the timely disposal of excess ordnance.	Nonmonetary.
2.d.	Economy and Efficiency and Management Control. Will prevent the Navy from programmming three unnecessary ordnance structures at Naval Weapons Station, Earle, New Jersey.	Nonmonetary.
3.a.	Program Results and Management Control. Will enable the Navy to obtain accurate reporting on utilization of explosive ordnance structures.	Nonmonetary.

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
3.b.	Economy and Efficiency and Management Control. Will move inert small arms munitions to less costly storage structures and provide additional space in more costly storage structures for fleet support.	Undeterminable because future Navy actions will determine the benefits.
4.	Economy and Efficiency and Management Control. Will provide Navy sites the information needed to determine excess ordnance.	Nonmonetary.

Appendix F. Organizations Visited or Contacted

Office of the Secretary of Defense

Ballistic Missile Defense Organization, Washington, DC

Department of the Navy

Office of the Chief of Naval Operations, Washington, DC
- Office of the Deputy Chief of Naval Operations (Logistics), Arlington, VA
- Office of the Commander in Chief, U.S. Atlantic Fleet, Norfolk, VA
- Office of the Commander in Chief, U.S. Pacific Fleet, Honolulu, HI
  - Naval Magazine, Guam
  - Naval Magazine, Lualualei, HI
  - Naval Weapons Station, Roosevelt Roads, Puerto Rico
- Program Executive Office, Conventional Strike Weapons Office, Arlington, VA
  - Joint Standoff Weapons Program Office, Arlington, VA
  - Skipper Program Office, Arlington, VA
- Program Executive Office, Cruise Missile and Unmanned Aerial Vehicles, Arlington, VA
  - Harpoon Program Office, Arlington, VA
  - Tomahawk Program Office, Arlington, VA
- Program Executive Office, Tactical Aircraft Programs, Eglin Air Force Base, FL
  - Advance Medium Range Air-to-Air Missile System Program Office, Eglin Air Force Base, FL
- Program Executive Office, Theater Air Defense, Arlington, VA
  - Standard Missile Program Office, Arlington, VA
- Program Executive Office, Undersea Warfare, Arlington, VA
  - Mark-46 Torpedo Program Office, Arlington, VA
  - Mark-48 Torpedo Program Office, Arlington, VA

Naval Ordnance Center, Indian Head, MD
- Naval Ordnance Center, Atlantic Division, Yorktown, VA
  - Naval Weapons Station, Charleston, SC
  - Naval Weapons Station, Earle, NJ
  - Naval Weapons Station, Yorktown, VA
- Naval Ordnance Center, Pacific Division, Seal Beach, CA
  - Naval Weapons Station, Concord, CA
  - Naval Weapons Station, Seal Beach, CA
  - Naval Ordnance Center Detachment, Fallbrook, CA
  - Naval Ordnance Center Detachment, Port Hadlock, WA
  - Naval Ordnance Center, Inventory Management and Systems Division, Mechanicsburg, PA

Department of the Navy (cont'd)

Naval Air Warfare Center, Weapons Division, China Lake, CA
Naval Air Warfare Center, Weapons Division, Point Mugu, CA
Naval Surface Warfare Center, Crane, IN
Naval Surface Warfare Center, Dahlgren, VA
Naval Surface Warfare Center, Indian Head, MD
Naval Surface Warfare Center, Port Hueneme, CA
Naval Undersea Warfare Center, Keyport, WA
Naval Air Station, North Island, CA
Naval Air Station, Oceana, VA
Naval Station, Guantanamo Bay, Cuba
Naval Station, Rota, Spain
Fleet Activities, Sasebo, Japan
Fleet Activities, Yokosuka, Japan

Department of the Air Force

Aeronautics System Center, Eglin Air Force Base, FL
  Advance Medium Range Air-to-Air Missile System, Eglin Air Force Base, FL

Non-Defense Organizations

North Atlantic Treaty Organization, Augusta Bay, Crete
North Atlantic Treaty Organization, Souda Bay, Crete
GenCorp Aerojet, Rancho Cordova, CA

Appendix G. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense for Policy
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Assistant to the Secretary of Defense (Public Affairs)
Director, Ballistic Missile Defense Organization

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Assistant Secretary of the Navy (Installation and Environment)
Deputy Chief of Naval Operations (Logistics)
Commander in Chief, U.S. Atlantic Fleet
Commander in Chief, U.S. Pacific Fleet
Auditor General, Department of the Navy
Commander, Naval Facilities Engineering Command
Commander, Naval Ordnance Center
  Commander, Naval Ordnance Center, Atlantic Division
    Commander, Naval Weapons Station, Charleston, SC
    Commander, Naval Weapons Station, Earle, NJ
    Commander, Naval Weapons Station, Yorktown, VA
  Commander, Naval Ordnance Center, Pacific Division, Seal Beach, CA
    Commander, Naval Weapons Station, Concord, CA
    Commander, Naval Weapons Station, Seal Beach, CA
    Commander, Naval Ordnance Center Detachment, Fallbrook, CA
    Commander, Naval Ordnance Center Detachment, Port Hadlock, WA

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency

Non-Defense Federal Organizations

Office of Management and Budget
Technical Information Center, National Security and International Affairs Division,
  U.S. General Accounting Office

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Committee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Part III - Management Comments

Under Secretary of Defense (Comptroller) Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE
1100 DEFENSE PENTAGON
WASHINGTON, DC 20301-1100

COMPTROLLER
(Program/Budget)

AUG 23 1995

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DOD IG

SUBJECT: Draft Audit Report on the Navy's Management of Missile Storage, Handling, and Inspections (Project No. 5AL-0005)

This responds to your June 22, 1995, memorandum requesting our comments on the subject report.

The audit recommends that the USD Comptroller cancel funding for all 15 construction projects for explosive ordnance structures.

We generally agree with the audit and recommendations. However, we feel that it is inappropriate for the Comptroller to cancel funding for these projects at this time. As you are aware, funding does not usually become an issue until the funds are requested in a budget submission or Congress has provided appropriations. In this case the projects are programmed in the future years. We believe that the recommendation should stand but without specific direction as to who should cancel the funding. However, based on your findings, we plan to carefully review any ordnance projects proposed by the Navy during future program/budget reviews.

BRUCE A. DAUER
ASSISTANT DEPUTY COMPTROLLER
(PROGRAM/BUDGET)

cc:
Director, PA&E

Department of the Navy Comments

DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(INSTALLATIONS AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, D.C. 20350-1000

AUG 21 1995

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE ASSISTANT INSPECTOR GENERAL FOR AUDITING

SUBJECT: DoDIG Draft Audit Report on the Navy's Management of Missile Storage, Handling, and Inspections (Project No. 5AL-0005)

Attachment "1" is the request for a response to the draft audit report concerning the Navy's management of missile storage, handling and inspections. The Department of the Navy's response is provided as Attachment "2." We concur with some of the recommendations and non-concur with others. Reasons for the Navy's non-concurrence are provided in the response.

Duncan Holaday
Deputy Assistant Secretary
(Installations and Facilities)

Attachments:
1. DoDIG memo of 22 Jun 1995
2. DoN response to Draft Audit

Copy to:
NAVINSGEN
CNO (N411)
ASN (FM) (FMO-13)
CINCPACFLT (Code N00QIO)
NAVSEA (SEA OON3)

DEPARTMENT OF THE NAVY RESPONSE
TO
DODIG DRAFT REPORT 5AL-0005
"NAVY'S MANAGEMENT OF MISSILE STORAGE, HANDLING, AND INSPECTIONS" (PROJECT NO. 5AL-0005)

DODIG Audit Recommendation A.1:

We recommend that the Under Secretary of Defense (Comptroller) cancel funding for all 15 construction projects for explosive ordnance structures.

DON RESPONSE:

Do not concur. This recommendation is based on the erroneous assumption that if there exists any empty space, in any magazines, anywhere within the Navy Department's ordnance storage infrastructure, then excess storage capacity exists and no other magazine military construction is necessary. Space utilization is restricted by the need to keep a minimum of 20 percent of the magazine floor space open for the safe internal movement of material handling equipment and the material itself, and the explosive quantity distance restrictions imposed on some magazines (e.g., the amount of specific types of explosive material authorized for a given magazine is often less than what could physically fill the entire magazine space).

Since ordnance material constantly is being moved in and out of storage activities, naturally there will always exist varying amounts of empty space at any given activity. The requirement to store munitions at a given activity, which is driven by the Fleet positioning plans and the resultant base load plan, is different than the quantity on hand in any given day. Hence, auditors that observe empty magazine space should not automatically conclude that "excess" space exists now or in the future.

On page 8 of the report, under "Uses of Planned Ordnance Structures," five reasons are listed for why 13 of the 15 structures planned were not needed. The first dealt with MK-48 torpedoes which the report indicates will only be for "updates" of currently existing weapons. Although it is true that generally MK48

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Heavyweight Torpedoes will be used to build MK48 Additional Capacity (ADCAP) weapons, other ADCAPS will be procured directly. However, more importantly, Weapons Station Yorktown will have a significant increase in its torpedo storage requirements, since the station has been designated the primary Intermediate-level maintenance site for the East Coast.

The second reason indicates that since the Joint Standoff Weapon (JSOW) program is "replacing" Maverick, Paveway (referring to laser guided bombs), Skipper, and Walleye, and these other weapons take up more than the requested new magazines, the JSOW MILCON project is not needed. Obviously that assumes that these other weapons will be instantaneously removed from the inventory when it "replaces" all of the other weapons. This is not true. Depending on future conflicts where such munitions would be expended, they will remain in the inventory for their full service life which extends well into the next century for most items.

The third reason deals with Tomahawk missiles, where the report again erroneously assumes that if there is currently unoccupied space at any of the sites where Tomahawk magazine MILCON is requested, then the projects are invalid. The Seal Beach project has already been eliminated as a result of the Navy's Ordnance Storage Master Plan (OSMP) review.

The fourth reason related to the Advanced Medium-Range Air-To-Air Missile (AMRAAM) uses the same flawed reasoning, although again the Seal Beach project has already been eliminated from the IPL, for other reasons.

The fifth reason dealt with a MK50 Torpedo MILCON at NAVMAG Lualualei, Hawaii. This project was not in the NAVSEASYSCOM claimancy, but has been subsequently modified by CINCPACFLT and is no longer a MK50 Torpedo project.

This theme of not accepting MILCON anywhere if somewhere there is currently empty space was carried throughout the report and distorted the results.

On page 12 of the report, the auditors report finding several situations where storage activities held small arms ammunition in magazines instead of in other secure storage. The report erroneously states that it is "inert material," and was not intended

to be stored in magazines. Although most small arms ammunition can be stored in secure storage other than magazines, there is no prohibition to doing so, on a not-to-interfere basis with other storage needs. The report concludes that this material was taking up space, which if used for other ordnance storage would reduce magazine MILCON requirements also. This is not true. Small arms ammunition largely consists of high-demand Marine Corps deployment and training, as well as, Navy security training items. When a storage site's load plan requires, and sufficient quantity is on hand, it is most efficient to access it and prepare it for shipment in a conveniently located, large space designed for similar operations. Hence, in such cases, it is and will continue to be appropriately stored in magazines.

DODIG Audit Recommendation A.2:

We recommend that the Assistant Secretary of the Navy (Installation and Environment):

a. Establish the Commander, Naval Ordnance Center, as the worldwide manager of shore-based ordnance and require the Commander to validate the need for all future Navy construction projects for ordnance structures.

DON RESPONSE:

Concur. It is the intent that for future reviews, the Navy's OSMP will be the primary source for Navy magazine MILCON validation. However, individual claimants, particularly the operating Commanders-In-Chief, establish their own operations and training support storage needs, and therefore, are authorized to submit projects. The Navy's Shore Facilities Programming Board is the forum within which all claimants brief and justify their respective MILCON projects, not just magazine MILCON. Each project must compete for the limited available MILCON funding.

b. Establish a policy requiring the timely disposition of excess ordnance.

DON RESPONSE:

Concur. The Navy is already committed to expediting disposition and disposal of excess material. Major progress has been made in this area, particularly in the last two years relative to excess or obsolete gun ammunition. Even so, reductions in Receipt, Storage,

Segregation and Issue (RSS&I) and Service-Wide Transportation (SWT) funding, projected Army "deep Storage" site closures, and the remaining sites nearing their full limits, will continue to constrain response time in the foreseeable future regardless of policies to the contrary.

c. Dispose of excess ordnance

DON RESPONSE:

Concur. The Navy is in the best shape from a disposal or demilitarization standpoint in many years. The disposal of obsolete Napalm munitions at NAVORDCEN DET Fallbrook alone represents over 80 percent of the excess material still outstanding at the primary storage sites. The Napalm DEMIL project is highly constrained by environmental regulations and will not be completed until 1999 as a result.

d. Cancel plans to reactivate the construction project for three ordnance structures at Naval Weapons Station, Earle, New Jersey.

DON RESPONSE:

Do not concur. The Navy is currently finalizing plans for major re-homeporting of explosive cargo ships to Earle. Associated with this proposed move is a pier extension project to support these ships and NATO-related wartime logistics needs. The Desert Shield/Storm lessons learned included the recognition that, during the initial surge, Weapons Station Earle had difficulty handling the receipt of the large quantities of ordnance delivered from other sites while simultaneously outloading multiple, large cargo ships needed for early battle group support. If all load plan material had been initially on hand, mission effectiveness would have been greatly improved. However, Earle's storage structures do not match the weapons mix required to be stored there. The current Earle infrastructure is made up of 88 percent antiquated, arched-type magazines, 59 percent of which have blast shields installed which limit their efficient use to smaller, older, palletized weapons only. More than 20 percent of Earle's capacity needs to be made up of box-type magazines for adequate efficient storage of the larger, containerized weapons in their load plan. To eliminate this MILCON project will significantly reduce Earle's capacity to provide both peacetime and wartime mission support, compel other sites to store

part of Earle's requirement, and increase the overall inter-site transportation expenses and on-site operating costs.

DODIG Audit Recommendation 3:

We recommend that the Commander, Naval Ordnance Center:

a. Revise procedures in Naval Sea Systems Command Instruction 8023.7A for reporting use of ordnance structures.

DON RESPONSE:

Do not concur that the instruction needs revision in order to ensure all storage sites are aware that they must comply. The current instruction is administered proactively and "by exception." Every storage site is sent a copy of their last 8023 Report and required to change those portions that have been altered in the interim.

b. Relocate small arms munitions from missile and box structures to less costly structures.

DON RESPONSE:

Do not concur. When magazines are not needed at the moment for missile storage, then small arms storage will remain authorized, if handling efficiencies can be gained. Nevertheless, no MILCON projects have or will be justified in the future because small arms ammo is temporarily stored in missile or box magazines.

DODIG Audit Recommendation 4:

We recommend that the Commander in Chief, U. S. Pacific Fleet, develop a new load plan for Naval Magazine, Lualualei.

DON RESPONSE:

Concur. Load plans for all Pacific Fleet ordnance activities are defined in the CINCPACFLT Ordnance Positioning Plan. The plan was recently updated and distribution effected by CINCPACFLT letter Serial N42/C003 of 30 May 1995. Naval Magazine, Lualualei is currently in the process of implementing the Plan. Action on this recommendation is considered complete.

OTHER COMMENTS CONCERNING THE FINDING AND RECOMMENDATIONS:

During FY94, the Naval Ordnance Center conducted a milestone review of the Navy Department's global ordnance infrastructure (location, capacity, configuration, general age and condition). This information was compared to current and future (through 2003) ordnance storage requirements, based on Fleet positioning plans, joint service requirements, and other government agency needs. The review resulted in the formulation of the Navy's Ordnance Storage Master Plan (OSMP). It determined that there existed enough storage space worldwide to store the Navy's future requirement. However, the material would not be able to be stored in the optimum locations required by the Fleets, including specific weapons near ship homeports and high priority operating areas. In addition, half of the total magazine space consists of antiquated arched-type magazines (with an average age of over 50 years, most with small doors, blast shields which limit access, no loading platform for safer handling operations, and inefficient storage capability when modern weapons must be placed in them). It was found that the total tonnage on-hand projections and the relative amount of larger, containerized and more sophisticated weapons would increase markedly at some locations. As a result, in 2003 several of the primary storage sites would have either more storage requirements than space available or inadequate modern magazine space to efficiently store the increases in containerized weapons.

During the master plan development and review, $56 million worth of magazine military construction (MILCON) projects were removed from the NAVSEASYSCOM Integrated Priority List (IPL). The remaining requirements were reprioritized and some moved further out in the Future Year Defense Plan (FYDP), and beyond, to better match the revised delivery schedules of new weapons. Other alternatives for obtaining sufficient storage space in some regions were investigated. As an example, Weapons Station Charleston, SC could gain additional storage at the current Polaris Missile Facility, Atlantic (POMFLANT). Hence, Charleston has no magazine MILCON projects recommended. Magazines currently leased to other services or agencies were reviewed to identify potential additional space that could again be made available for Navy use. As future requirements and storage capacities evolve, the major claimant's integrated priority lists will be updated accordingly before any new magazines are approved for construction. The OSMP prognosis is that the total FYDP magazine MILCON project requirements list will grow even smaller, based on the pursuit of emerging alternatives and the continuation of prudent resource allocation.

The following list includes FYDP MILCON projects within the NAVSEASYSCOM claimancy. It reflects further decreases in pending projects and the recommended deferral of several projects beyond the FYDP period.

NAVSEA'S MILCON LIST (MAGAZINE CONSTRUCTION)

FY	Project	Location	UIC	Project Description	FYDP ($ 000)
98					
	501	Yorktown	00109	MK-48 ADCAP	3,800
99					
	416	Yorktown	00109	TOMAHAWK Mag	3,500
	502	Yorktown	00109	MK-48 ADCAP	6,580
	320	Pt Hadlock	32013	TOMAHAWK Mag	4,200
	926	Earle	60478	Missile Mags	8,700
		Total Magazine Construction Costs			26,780

Note: No magazine construction projects programmed in FY97 or in FY00-01.

Considerable effort and technical expertise were employed in compiling the OSMP for the specific purpose of ensuring that the Navy's requirements for magazine MILCON were not overstated. The OSMP demonstrated that if a few specific locations do not modernize and improve their storage capacity, a greater potential will exist for the unnecessary expenditure of categories of Navy funds, other than MILCON. The Navy will have to spend more of its very limited handling, transportation and other operating funds unnecessarily because the right ordnance is not stored at the right place. Continually moving ordnance in from other storage sites to fill outloading requirements is inefficient and expensive. Also, Fleet readiness cannot be easily assessed using dollars as a unit of measure, but taking logistics support risks can be costly nonetheless. Not having the right weapons on hand at a storage site when they are needed to be outloaded can mean the difference between a unit's mission success or failure.

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Audit Team Members

This report was prepared by the Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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