GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

June 18, 2004

The Honorable Jerry Lewis
Chairman
Subcommittee on Defense
Committee on Appropriations
House of Representatives

Subject: *Defense Logistics: GAO's Observations on Maintenance Aspects of the Navy's Fleet Response Plan*

Dear Mr. Chairman:

The terrorist attacks of September 11, 2001, and Operation Iraqi Freedom have prompted major changes in the employment of naval forces around the globe. These two events resulted in an ultimate surging to deploy seven carrier strike groups and the largest amphibious task force assembled in decades. According to the Navy, at the time of the September 11 attacks and in preparation for Operation Iraqi Freedom, only a small number of ships at peak readiness were forward deployed. However, most of the Navy's ships were not available for use because they were in early stages of their training cycles. This prompted the Navy, in March 2003, to develop a concept to enhance its deployment readiness strategy. The Navy's Fleet Response Plan, implemented in May 2003, evolved from a concept to institutionalize an enhanced surge capability.

The Fleet Response Plan modifies the Navy's pre-2001 rotational deployment policy, replacing 6-month routine deployments with more flexible deployment options that provide the capability to deploy as many as eight carrier strike groups when and where needed. Although we focused our review of the maintenance impacts of the Fleet Response Plan on aircraft carriers, the plan applies to all ship classes except submarines.[1] The plan changes the manner in which the Navy maintains, trains, staffs, and deploys its ships to allow a greater availability of the fleet to meet Homeland Defense and Defense Guidance requirements. As it relates to maintenance, the plan relies on increased continuous maintenance during pier dockings. Primarily, the plan alters the Navy's prior 6-month rotational deployment and presence policy to the

[1] Navy officials informed us that maintenance processes do not change under the Fleet Response Plan for the submarine force because of the nature and criticality of submarine systems.

current policy of being forward deployed and capable of surging substantial forces—a "6 plus 2" carrier strike force versus a "3 to 4" carrier strike force—when and where they are needed. The 6 plus 2 force concept signifies that six carrier strike groups are available to deploy within 30 days of notification, and two additional groups are available within 90 days of notification. The 3 to 4 force that preceded the Fleet Response Plan generally had only three or four carrier strike groups available for deployment when needed.

The emphasis of the Fleet Response Plan is on readiness and speed of response. It assumes a deployment mind-set of quickly—within 3 to 4 months after completing its maintenance—making a carrier available to surge, if necessary. This mind-set differs from that of the traditional rotational deployment process where, in the case of a carrier, the ship would undergo maintenance, training, and staffing preparations to be ready for the next scheduled deployment in about 1 year after completing its maintenance period. The Navy attained the 6 plus 2 carrier strike force capability in November 2003.

Because of potential budget implications, you asked us to review the assumption that the Navy's implementation of its Fleet Response Plan would reduce the duration of aircraft carrier depot maintenance intervals between deployment periods from approximately 18 months to 9 months. Specifically, our objectives were to identify

- the likely impacts and risks for the Navy's logistics requirements that could result from shortened maintenance cycles between deployments;

- the Navy's plan for fulfilling major repair and maintenance requirements; upgrading and modernizing weapons, communications, and engineering systems; and performing nuclear refueling in the shortened maintenance cycle; and

- how the Navy's budget supports its plan to shorten maintenance cycles.

On April 6, 2004, we provided your office with a briefing on our observations regarding the maintenance impacts associated with the plan. This report summarizes and updates the information we provided you in that briefing. A copy of the briefing is included in enclosure I to this report.

To address our objectives, we held discussions with officials from key Department of Defense and Navy organizations responsible for conceptualizing and implementing the Navy's plan. While the scope of our work did not include an assessment of the impact of staff assignments or the training aspects of the Fleet Response Plan, we plan to initiate a separate review to assess the plan's effect on staffing, training, and meeting the theater commanders' needs. In addition, we did not independently assess the reliability of the workload data that we obtained for the Puget Sound and Norfolk Naval Shipyards. For purposes of this assignment, we considered the data sufficiently reliable to determine the extent to which workloads changed.

We performed our work from November 2003 through April 2004 in accordance with generally accepted government auditing standards.

The Navy's Fleet Response Plan Does Not Shorten Maintenance Intervals

The Navy's Fleet Response Plan does not shorten preexisting time frames for performing aircraft carrier maintenance. Furthermore, it does not alter existing major repair and maintenance requirements; methods of upgrading and modernizing weapons, communications, and engineering systems; or methods of performing nuclear refueling. At this time, the potential impact of the plan on the Navy's budget is uncertain.

Maintenance Intervals Remain the Same

The Navy's Fleet Response Plan does not reduce depot maintenance intervals between deployment cycles as was initially assumed. Navy officials informed us that the concept of reducing maintenance intervals in order to deploy ships more quickly if needed was considered during early discussions of what was to become the plan, but it was quickly dismissed as an unviable option. The Navy recognized that shortened maintenance cycles might adversely affect fleet readiness and would not meet the intent of the plan.

Overall, the Navy's Fleet Response Plan alters how the Navy assigns personnel, accomplishes training, and manages maintenance to provide a more ready force. With respect to maintenance intervals, we obtained data regarding changes that had occurred after the implementation of the plan. Prior to the plan, the Navy had a notional 24-month Inter-Deployment Training Cycle for its nuclear carriers—the majority of its carrier fleet. This cycle normally included a 6-month maintenance period and an 18-month operational cycle, which incorporated training and a 6-month deployment. However, the Navy was actually performing a 27-month cycle instead of the notional 24-month cycle. Under the Fleet Response Plan, in essence, the Navy formalized the 27-month cycle that it was already performing—revising its name to "Inter-Deployment Readiness Cycle." This change formally extended the operational interval for a nuclear carrier by about 3 months.[2] However, it did not alter the 6-month depot-level maintenance period that existed prior to the implementation of the plan.

Major Repair, Upgrading Systems, and Nuclear Refueling Process Remain Unchanged under Fleet Response Plan

The implementation of the Navy's Fleet Response Plan does not alter existing repair and maintenance requirements; methods for upgrading and modernizing weapons, communications, and engineering systems; or methods for performing nuclear refueling. These aspects of Navy ship maintenance requirements will continue to be

[2] The Navy is assessing its capability to achieve a 32-month Inter-Deployment Readiness Cycle. This would extend carrier operational availability by an additional 5 months.

conducted in accordance with Chief of Naval Operations guidance for naval ships.[3] However, Chief of Naval Operations and Naval Sea Systems Command officials informed us that under the Fleet Response Plan, the Navy intends to provide needed depot maintenance—called continuous maintenance—more frequently during scheduled, shorter-duration pier dockings, instead of deferring this maintenance until the normal 6-month maintenance period arrives. Intensification of the preexisting continuous maintenance process constitutes the essential core of the Fleet Response Plan's maintenance component. Navy officials stated that additional carrier operational availability is being achieved through intensified continuous depot-level maintenance.

As an additional measure to obtain an indication of the Fleet Response Plan's impact on depot-level maintenance, we conducted a limited review of total workload data at the Puget Sound and Norfolk Naval Shipyards before and after the implementation of the plan for the period of fiscal years 2003 projected through 2009. The "snapshot" data we obtained indicated that although the scheduled maintenance workloads varied somewhat on an annual basis, the total and average maintenance workload, in terms of staff-days, increased only by about 1 percent and remained relatively constant over this period. Naval Sea Systems Command officials stated that workload adjustments are a routine business function among shipyards that occurred before the plan was implemented and will continue to occur.

Impact of Fleet Response Plan on Navy's Budget Is Unknown

There are no present indications that the implementation of the plan will affect the Navy's budget. Navy and Office of the Secretary Defense (OSD) budget officials stated that the plan was relatively new and they were unaware of any specific budgetary implications at this time. However, Program Budget Decision 709R, dated December 22, 2003, asserts that the plan might generate a "bow-wave" of maintenance requirements in future years. This assertion stems from an assumption that the longer the time between maintenance periods, the more repair work may be required. Discussion with an OSD budget official revealed that the assertion was not supported by analysis, but rather was based on the official's prior experience with the development of new Navy programs, and on the official's understanding that the Fleet Response Plan focused on streamlining ship maintenance and extending operational cycles. The official raised the bow-wave issue in Program Budget Decision 709R to provide impetus for improving the plan implementation. However, based on the Navy's intensification of its continuous maintenance process, the OSD budget official in retrospect agreed that the Fleet Response Plan probably would not generate a bow-wave of maintenance requirements. Program Budget Decision 709R states that, prior to the Fiscal Year 2006 Program Review, the Navy should evaluate the impact of the plan on (1) sea-shore rotations and manning; (2) intermediate, organizational, and depot maintenance; and (3) readiness. OSD and Navy officials stated that such assessments would not require formal studies but would occur during the normal budget review process. The officials from the various organizations we visited stated

[3] Office of the Chief of Naval Operations (OPNAV) NOTICE 4700, Representative Intervals, Durations, Maintenance Cycles, and Repair Man-Days for Depot Level Maintenance Availabilities of U.S. Navy Ships, June 16, 2003.

that it might take several years of experience to assess the effects that result from implementing the plan.

Scope and Methodology

To address the assumption that the duration of aircraft carrier depot maintenance cycles between deployments would be reduced from approximately 18 months to 9 months and the effects that such a reduction would have on the Navy's maintenance operations and budget, we relied on data gathered through our visits and interviews with key personnel within the Office of the Secretary of Defense; Office of the Chief of Naval Operations; Office of the Navy Comptroller; Naval Sea Systems Command; and Commander, U.S. Fleet Forces Command. We reviewed the Navy's Fleet Response Plan, policies, procedures, and pertinent articles and obtained briefings to understand ship maintenance practices and intervals before and after the implementation of the plan. Also, because shipyards perform the bulk of depot-level maintenance, we completed a limited analysis of workload data for two public shipyards—Puget Sound and Norfolk Naval Shipyards—to determine potential workload impacts associated with the implementation of the Fleet Response Plan. The workload data developed by the Naval Sea Systems Command are used to make adjustments in workload among the shipyards. We used the data to determine if significant changes occurred in shipyard workloads as a result of the Navy's implementation of its Fleet Response Plan. For purposes of this assignment, we considered the data sufficiently reliable to determine the extent to which workloads changed.

To address the effects of shortened maintenance cycles on the Navy's major repair and maintenance requirements; upgrading and modernizing weapons, communications, and engineering systems; and performing nuclear refueling, we relied on data gathered through our visits and interviews with key Navy personnel within the Office of the Chief of Naval Operations; Naval Sea Systems Command; and Commander, U.S. Fleet Forces Command. We reviewed the Navy's Fleet Response Plan, policies, procedures, and pertinent articles and briefings. Because the Fleet Response Plan does not shorten ship maintenance cycles, we did not perform any additional work regarding this objective. These types of maintenance activities continue to be performed in the normal scheduled maintenance intervals.

To determine budget implications associated with the Fleet Response Plan, we interviewed Under Secretary of Defense and Navy Comptroller officials and reviewed and discussed Program Budget Decisions that approved the Navy's implementation of the Fleet Response Plan.

We performed our work from November 2003 through April 2004 in accordance with generally accepted government auditing standards.

Agency Comments

In written comments on this report, the Department of Defense concurred with the draft report. The department provided technical comments, which we incorporated as appropriate. The Deputy Under Secretary's comments are included in enclosure II.

– – – – –

We are sending copies of this report to the Chairmen and Ranking Minority Members of other Senate and House committees and subcommittees that have jurisdiction and oversight responsibilities for the Department of Defense. We are also sending copies to the Secretary of Defense and the Director of the Office of Management and Budget. Copies will also be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any question about this report, please contact me at (202) 512-8365 or e-mail me at solisw@gao.gov. Key contributors to this report were David Schmitt, Dudley Roache, Patricia Albritton, Cheryl Weissman, and Julio Luna.

Sincerely yours,

William M. Solis
Director, Defense Capabilities and Management

Enclosures - 2

Briefing Slides

GAO
Accountability * Integrity * Reliability

GAO's Observations on Maintenance Aspects of the Navy's Fleet Response Plan

Briefing to the Subcommittee on Defense House Appropriations Committee

April 6, 2004

1

Briefing Outline

- Objectives, Scope, and Methodology
- Organizations Visited
- Background
- Results of Our Work

2

Objectives, Scope, and Methodology

- Overall objectives: To review the assumption that the Navy's implementation of its Fleet Response Plan (FRP) would **reduce** carrier depot maintenance periods between deployments from about 18 months to 9 months, and to assess any potential impacts such a reduction would have on the Navy's maintenance budget. To investigate this, we
  - met with officials from key organizations responsible for the Navy's development and implementation of the FRP and its budgetary impacts;
  - reviewed the Navy's FRP, policies, procedures, and pertinent briefings and literature to gain an understanding of ship maintenance cycles before and after the implementation of the FRP. We did not review the training and manning changes incorporated in the FRP;
  - completed a limited analysis of public shipyards' workload data to determine indications of workload impacts associated with implementing the FRP.

3

Organizations Visited

- Office of the Assistant Deputy Under Secretary of Defense, Logistics and Materiel Readiness, Pentagon
- Office of the Under Secretary of Defense (Comptroller), Pentagon
- Department of the Navy (Navy Comptroller), Pentagon
- Office of the Secretary of Defense, Program Analysis and Evaluation (PA&E), Pentagon
- Chief of Naval Operations (CNO), Pentagon
- Naval Sea Systems Command (NAVSEA), Washington, D.C., and
- Commander, Fleet Forces Command (CFFC), Norfolk, Virginia

4

Background

- CNO tasked CFFC in March 2003 to create a more employment-capable and responsive force after the terrorist attacks of 9/11 and the launching of Operation Iraqi Freedom.
- The FRP evolved from the CNO tasking and was implemented in May 2003 to meet Homeland Defense and Defense Guidance requirements by creating a “6 plus 2” carrier strike force ready to surge when and where needed.
- The FRP’s emphasis is on readiness and speed; how soon a ship can be surged, if necessary, upon returning from deployment.
- The FRP involves revising ship Inter-Deployment Training (now called Readiness—from IDTC to IDRC) Cycle processes—a paradigm change in the Navy’s maintenance, training, and manning processes.

5

Results of Our Work: Ship Operations and Maintenance Cycles Before and After the FRP Implementation

- FRP does not reduce carrier depot maintenance periods between deployments.
- Before implementation of the FRP, the Navy used notional 21-month and 24-month operational and maintenance cycles for its 2 conventional and 10 nuclear carriers, respectively.
- FRP formalizes the 27-month operational and maintenance cycle that the Navy has actually been practicing in lieu of the notional cycles. The Navy refers to this 27-month cycle under FRP as the Inter-Deployment Readiness Cycle. This cycle involves:
  - Alternating operating intervals and depot-level maintenance periods.
  - Short stand-down period (end of deployment period).
  - Maintenance period (involves various maintenance strategies: e.g., Selected Restricted Availability, Engineered Operational Cycle, and Incremental Maintenance Program).
  - Interdeployment training (basic, intermediate, and advanced).
  - Cyclical manning before FRP (causing under-manning in early phase of IDTC). "At Sea" manning leveled out under FRP.

6

Results of Our Work: Notional Ship Maintenance Cycles Remain the Same Before and After the FRP Implementation

Alternating Operating and Depot-level Maintenance Intervals

	Aircraft carrier type	
Operating and maintenance Intervals (no change before and after FRP)	**Conventional** [a]	**Nuclear** [b]
Operating	18 months	18 months
Maintenance	3 months	6 months
Operating	18 months	18 months
Maintenance	3 months	6 months
Operating	18 months	18 months
Extended maintenance	12 months	10.5 months
Total	**72 months**	**76.5 months**

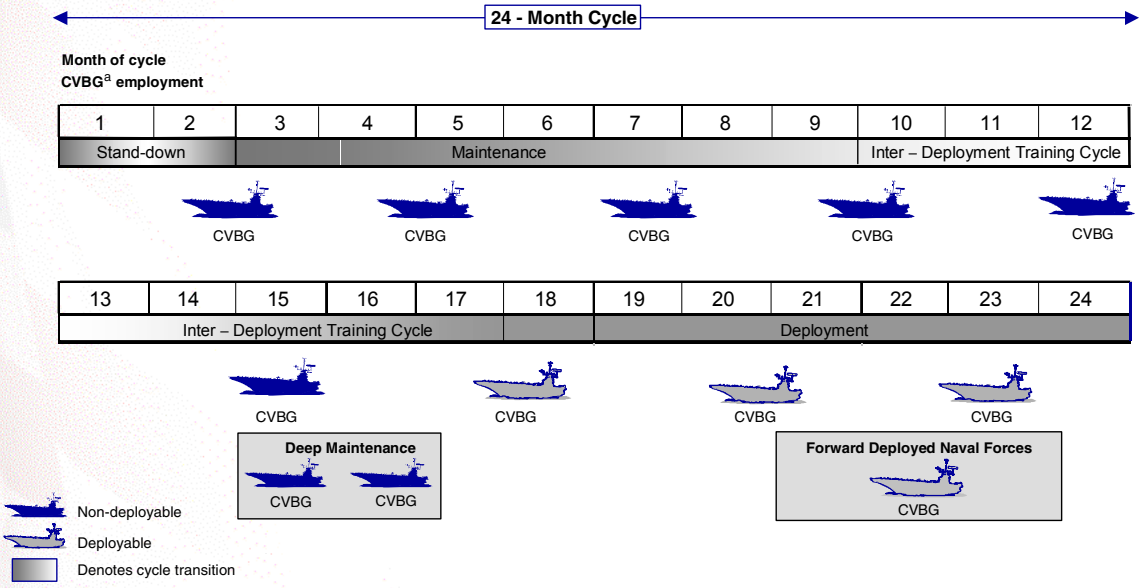
[a] There are two conventional carriers – *U.S.S. Kennedy* and *U.S.S. Kitty Hawk*. The *U.S.S. Kitty Hawk* is a forward deployed aircraft carrier that uses a unique 120 days (4-month) annual maintenance period.

[b] Of the ten nuclear carriers, one carrier – the *U.S.S. Enterprise* – uses a different maintenance strategy, but the interval remains the same as the nine *Nimitz Class Carriers*.

7

GAO
Accountability * Integrity * Reliability

Results of Our Work: Maintenance, Training, and Deployment Cycle before FRP – Four Carrier Battle Groups Available to Deploy



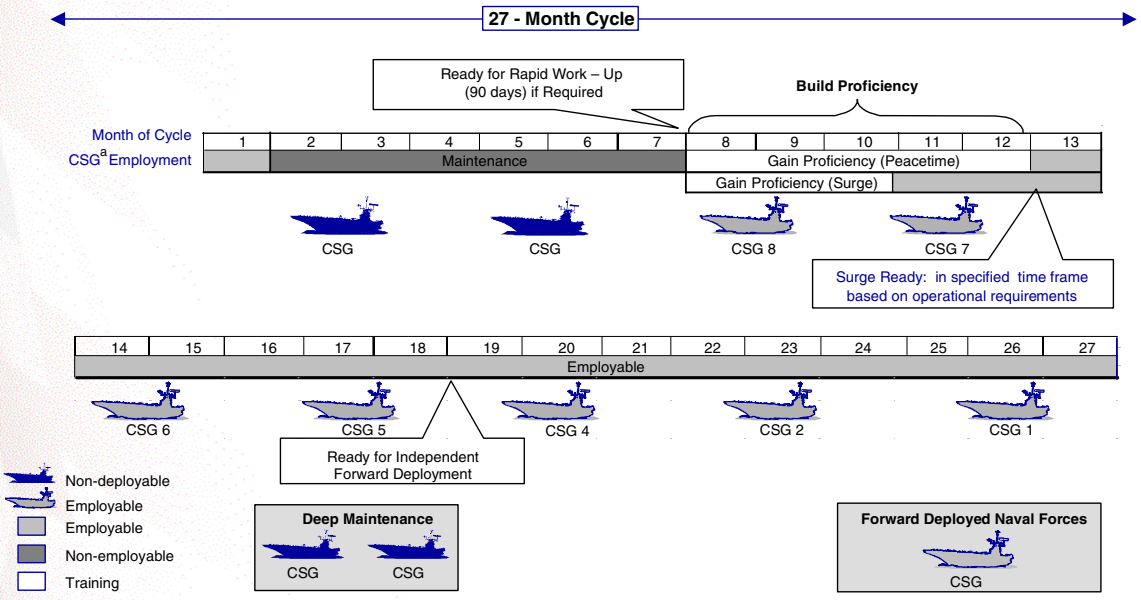
Source: GAO based on Navy data.

[a] Carrier Battle Group

8

GAO
Accountability * Integrity * Reliability

Results of Our Work: Maintenance, Training, and Deployment Cycle after FRP – Eight Carrier Strike Groups Available for Employment



Source: GAO based on Navy data.
[a]Carrier Strike Group

9

Results of Our Work: Scheduling to Achieve "6 + 2" Surge Capability

Fleet Response Plan Cycle

Aircraft Carrier	3MOS	6MOS	9MOS	12MOS	15MOS	18MOS	21MOS	24MOS	27MOS
1	D	D	M	M	BP	IP/S	AP/S	SUS	SUS
2	SUS	D	D	M	M	BP	IP/S	AP/S	SUS
3	SUS	SUS	D	D	M	M	BP	IP/S	AP/S
4	AP/S	SUS	SUS	D	D	M	M	BP	IP/S
5	M	BP	IP/S	AP/S	SUS	D	D	M	M	M
6	BP	IP/S	AP/S	SUS	SUS	D	D	M	M
7	M	BP	IP/S	AP/S	SUS	SUS	D	D	M
8	M	M	BP	IP/S	AP/S	SUS	SUS	D	D
9	D	M	M	M	M	BP	IP/S	AP/S	SUS	D
10									
11									
12									
Available for employment	6+1	6+2	6+2	7+1	7+1	7+1	7	7	6+1	6+2	6+2	7+1	7+1	7+1	7+1	7+1	7	7

D	Deploy
M	Maintenance
BP	Basic Training Phase
IP/S	Intermediate Training Phase/Sustain
AP/S	Advanced Training Phase/Sustain
SUS	Sustain
FDNF	Forward Deployed Naval Forces
	Extended Maintenance

Source: GAO based on Navy data.

10

GAO
Accountability * Integrity * Reliability

Results of Our Work: Impact of FRP on the Navy's Maintenance Budget to Be Determined

- The impact of the FRP on the Navy's maintenance budget is unknown at this time. The FRP was implemented in May 2003. The *U.S.S. Abraham Lincoln was the* first carrier to enter maintenance under the FRP.
- The FRP does not reduce carrier maintenance durations but does require changes in the timing and methodology of providing maintenance—Continuous Maintenance.
- Budget, PA&E, CNO, and CFFC officials all stated that there may be impacts associated with implementing FRP but it will likely take several years' experience under FRP to assess the impacts.
- Program Budget Decision 709R, dated 12/22/03, states that the Navy, prior to the 2006 Program Review, should evaluate the impact of FRP on (1) sea-shore rotations and manning, (2) intermediate/organizational/depot maintenance, and (3) readiness.

11

Results of Our Work: Impact of FRP to Be Determined

- "Snapshot" data (man-days) for workloads at the Puget Sound and Norfolk Naval Shipyards show that although annual workloads vary somewhat, total and average workloads, in terms of man-days, increased only about 1 percent and remained relatively constant over the FY 03 – FY 09 period.

- NAVSEA officials stated that workload adjustments among shipyards is a routine business function. Such adjustments continue under FRP.

12

Results of Our Work: Observations

- Aircraft carrier maintenance intervals are not impacted by the implementation of the Navy's FRP. Maintenance intervals under the FRP are basically the same as the intervals before the FRP was implemented.
- The Navy's FRP does alter the Navy's prior deployment practices to achieve greater availability of carrier strike groups to better meet Homeland Defense and Defense Guidance.
- The impact of the FRP on the Navy's maintenance budget is unknown at this time. This plan is relatively new; it was implemented in May 2003, and the 6 + 2 carrier strike force goal was achieved in November 2003. The Navy's FRP has not been implemented long enough to assess the results of maintenance strategies or to quantify impacts.

13

Comments from the Department of Defense

DEPUTY UNDER SECRETARY OF DEFENSE FOR
LOGISTICS AND MATERIEL READINESS
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

JUN 4 2004

Mr. William Solis
Director, Defense Capabilities and Management
U.S. General Accounting Office
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Solis:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "DEFENSE LOGISTICS: GAO's Observations on Maintenance Aspects of the Navy's Fleet Response Plan," (GAO Code 350466/GAO 04-724R).

The Department concurs with the report subject to the technical correction described in the attachment. The Department appreciates the opportunity to comment on the draft report.

Sincerely,

Bradley Berkson
Acting

Attachment:
As stated

Technical corrections for
GAO audit GAO Draft Report, GAO-04-724R
"DEFENSE LOGISTICS: GAO's Observations on Maintenance Aspects of the Navy's Fleet Response Plan"
(GAO Code 350466)

Page two, second paragraph, second and third sentences should read:
"It assumes a deployment mind-set of quickly—within three to four months after completing its maintenance—making a carrier available to surge, if necessary. This mind-set differs from that of the traditional rotational deployment process where, in the case of a carrier, the ship would undergo maintenance, training, and staffing preparations to be ready for the next scheduled deployment in about one year after completing its maintenance period."

(350466)

GAO's Mission

The General Accounting Office, the audit, evaluation and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to e-mail alerts" under the "Order GAO Products" heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone:	Voice:	(202) 512-6000
	TDD:	(202) 512-2537
	Fax:	(202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, Managing Director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548