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April 5, 2002

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# **Supply Inventory Management**

Quality Deficiency Reporting  
Procedures for Naval Repair Parts  
(D-2002-080)

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Department of Defense  
Office of the Inspector General

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*Quality*

*Integrity*

*Accountability*

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### **Acronyms**

NSN  
PDREP

National Stock Number  
Program Data Reporting and Evaluation Program



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

April 5, 2002

MEMORANDUM FOR DIRECTOR, DEFENSE LOGISTICS AGENCY  
NAVAL INSPECTOR GENERAL

SUBJECT: Audit Report on Quality Deficiency Reporting Procedures for Naval  
Repair Parts (Report No. D-2002-080)

We are providing this report for review and comment. We considered management comments on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. As a result of management comments, we request that the Navy provide additional comments on Recommendations B.1. and B.2. and comment on Recommendation D.1. We also request that the Defense Logistics Agency provide comments for Recommendations D.2. and D.3. We request that management provide the comments by June 5, 2002.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Nicholas E. Como at (703) 604-9215 (DSN 664-9215) (ncomo@dodig.osd.mil) or Mr. Terry L. McKinney at (703) 604-9288 (DSN 664-9288) (tmckinney@dodig.osd.mil). See Appendix E for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, appearing to read "Thomas F. Gimble", is positioned above the typed name.

Thomas F. Gimble

Acting

Deputy Assistant Inspector General  
for Auditing

## Office of the Inspector General, DoD

**Report No. D-2002-080**  
(Project No. D2001CF-0090)

**April 5, 2002**

### **Quality Deficiency Reporting Procedures for Naval Repair Parts**

#### **Executive Summary**

**Introduction.** This report addresses the Navy and Marine Corps quality assurance programs for the effective reporting and tracking of deficient repair parts. It discusses the use of deficiency reports to remove nonconforming items from inventory and to prevent those items from reentering the supply system. In FY 2000, the Navy recorded over 8,200 product deficiency reports involving new or newly reworked repair parts.

**Objectives.** Our objective was to determine whether the Navy and Marine Corps were effectively reporting and tracking deficient repair parts within their commands. Specifically, we determined whether logistics managers and quality assurance specialists use deficiency reports to remove nonconforming inventory from depots and screen potentially defective inventory from reentering depots. We also reviewed the management control program as it relates to the audit objective.

**Results.** The Navy Nuclear and Submarine Product Quality Deficiency Programs were effectively managed for tracking and reporting deficient repair parts. However, other Navy and Marine Corps elements were not effectively reporting and tracking repair parts and were not removing the nonconforming items from inventory. In addition, there was no assurance that items reentering the inventory were screened to ensure that they were not nonconforming. Overall, databases were inaccurate, oversight was lacking, communication between entities was broken down, and spare parts inventories had as many as 1.4 million potentially nonconforming items valued at \$345 million.

The Naval Air Systems Command's current staffing shortages, coupled with the lack of emphasis and oversight, contributed to overall ineffective management of the quality deficiency reporting program. As a result, potentially nonconforming items, valued at as much as \$163 million and involving as many as 138,000 individual items, were not screened, nor given consideration for removal from inventory (finding A).

Quality assurance staff at the Naval Inventory Control Point, Mechanicsburg, Pennsylvania, did not establish management control procedures to ensure that Naval Sea Systems Command-managed items that were previously identified as nonconforming were removed from Navy depots and supply inventories. As a result, as many as 331,000 potentially nonconforming items, valued at as much as \$66 million, were either issued to or remained available for issue to Navy users (finding B).

Procedures to identify, investigate, and resolve nonconforming items procured with contractor warranties were ineffective at the Marine Corps Logistics Base, Albany, Georgia. The Marine Corps has no assurance that nonconforming items procured with contractor warranties were corrected or eliminated from inventory. In addition, the Marine Corps may have as many as 8,800 items in inventory or in use with a procurement value of as much as \$87 million that are deficient and unreliable (finding C).

Finally, during the period of February 2000 to August 2001, the Navy did not ensure that nonconforming Defense Logistics Agency-managed items were posted to the Defense Distribution Depots logistical database for screening or removal. As a result, as many as 965,000 potentially nonconforming items, valued at as much as \$29 million, purchased from 372 contracts were not screened, removed, or prohibited from reentry into the DoD supply system (finding D).

See Appendix A for details of the management control program as it relates to the identification and removal of items previously identified as nonconforming from Navy use.

**Management Action.** In response to our Interim Results Memorandum of July 2, 2001, the Naval Air Systems Command acknowledged the breakdown of the technical, managerial, and administrative functions of the Naval Quality Deficiency Reporting Program. The command took appropriate action to increase management awareness, training, and support of the program. The command also resolved the 89 Category 1 deficiencies reported in the memorandum. Regarding the issue in the Interim Results Memorandum of removing defective emergency escape breathing devices, the Naval Supply Systems Command agreed that it could not account for all 87,000 devices that were procured but disagreed that there are potentially 42,000 devices remaining in the Navy fleet. The Navy stated that 7,095 of the devices were unaccounted for. However, the command took action to identify the manufacturer, physically inspect, and remove breathing devices that were previously determined to be defective.

**Summary of Recommendations.** We recommend that the Assistant Secretary of the Navy for Research, Development, and Acquisition direct the Naval Inventory Control Point, Philadelphia, Pennsylvania, to be the centralized activity for management control and oversight functions for the Naval Air Systems Command's quality deficiency reporting program. We recommend that the Naval Air Systems Command complete a one-time review to determine whether nonconforming items are still stocked in inventory. We recommend that the Commander, Naval Inventory Control Point Mechanicsburg, Pennsylvania, develop and implement a comprehensive followup system to track quantities of nonconforming items, implement notification procedures, and provide appropriate disposition instructions to DoD customers based on procurement quantities of the items. We recommend that the Commanding General, Marine Corps Logistics Base develop and implement a comprehensive trend analysis system to identify trends of potentially nonconforming items and establish procedures to screen these items; notify the Defense Contract Management Agency of potential contractor-related deficiencies; and make maximum use of existing contractor warranties. We also recommend that the Commanders, Defense Supply Centers serve

as action points to ensure that screening alerts are initiated and to reclassify or remove defective material from inventory. Also, we recommend that the supply centers work with the Navy to reconcile items in the Navy Defective Material Summary Report. We further recommend that the Commander, Defense Distribution Center monitor the Defense Supply Centers and the Military Departments to ensure timely and appropriate actions be taken.

**Management Comments.** The Navy nonconcurred with centralizing the management and control of the Naval Air Systems Command quality deficiency reporting program at the Naval Inventory Control Point, Philadelphia, Pennsylvania. However, the Navy agreed to develop a system to track quantities of nonconforming items based on procurement quantities of the items. The Navy also concurred with completing a one-time review of unprocessed deficiency reports and take necessary screening actions. The Navy also partially concurred with implementing a notification procedure to activities that were issued nonconforming items and providing appropriate disposition instructions to the activities but stated the current stock screening was adequate. Finally, the Navy agreed to develop and implement comprehensive quality assurance procedures for all Marine Corps weapon systems by September 30, 2002. The Director, Defense Logistics Agency agreed with the intent of draft report recommendation to ensure that deficiency reports are reported to the distribution centers and proposed alternative corrective actions. See the Finding section of the report for a discussion of management comments and to the Management Comments section of the report for a complete text of the comments.

**Audit Response.** Implementation of a system to track nonconforming items is an acceptable alternative action because it satisfies the intent of the recommendation to improve management control and oversight of the Naval Air Systems Command quality deficiency reporting program. We do not agree that the current Navy followup and tracking systems for nonconforming assets are uniformly applied and request the Navy to provide additional comments on the recommendation. We also requested the Navy to comment on a new recommendation to provide the Defense Supply Centers with screening alerts contained in its Defective Material Summary Reports. Finally, we agree with the alternative corrective actions proposed by the Defense Logistics Agency but request additional detail on the proposed actions. We request that the Navy and the Defense Logistics Agency provide comments on the final report by June 5, 2002.

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## Background

**Navy Quality Deficiency Reporting Program.** Activities use deficiency reports to identify deficiencies in supplies and repair parts that may indicate nonconformance with contractual or specification requirements or substandard workmanship. Deficiency reports are targeted toward reporting possible deficiencies in quality assurance that occurred during the manufacturing or rework process. The Naval Air Systems Command uses quality deficiency reports for new or newly reworked items, whereas the Naval Sea Systems Command and the Marine Corps use the reports for not only new and reworked items but also for items that do not fulfill their expected purpose or fail prematurely. The goal of the deficiency reporting program is to improve the quality of work done by contractors and depot maintenance activities as well as to sustain sufficient repair parts inventory in a positive readiness condition. The Navy uses the Product Data Reporting and Evaluation Program (PDREP) to electronically report all deficiency reports in one, consolidated database.

**Product Data Reporting and Evaluation Program.** The Navy established the PDREP to decrease material ownership costs, measure the effectiveness of the reporting system, initiate corrective action, and evaluate contractor performance. One segment of the PDREP provides a standardized database for deficiency reports to improve component quality and ensure quality parts to all Navy ships and organizations.

**Screening and Action Point Responsibilities.** In order to obtain information required by PDREP, the Navy has implemented an extensive organizational network to process deficiency reports. Deficiency reports are submitted to a screening point, based on the type and intended use of the item found to be deficient. The screening point ensures that:

- adequate and accurate information is reported or can be obtained regarding the deficient item,
- defective items are available and can be produced for an investigation, and
- current information is available on the contractor who supplied the item.

The screening point assigns the deficiency report to an action point for the independent investigation and resolution of the reported deficiency. In FY 2000, the Navy reported that more than 65 activities functioned as action points. The action point may enlist assistance for completing the investigation through activities designated as support points. Support points can include contract administration offices, engineering support activities, contracting activities, and supply activities. The action point is also required to notify the appropriate screening point of the investigation that would alert its users and storage depots and request screening and/or suspension of depot stock of like items, as appropriate. Finally, pertinent information regarding the deficiency investigation and resolution is reported to the screening point where the deficiency report is closed.

**DoD Initiative.** On December 3, 2001, the Department of Defense Business Initiative Council, Executive Steering Committee, approved a DoD-wide initiative to improve the inter-service product quality deficiency reporting business process. Specifically, the initiative emphasized developing and implementing methodology to seamlessly share quality deficiency data among all Military Departments and Defense agencies. These improvements can occur if Joint Service regulations are amended as necessary to allow for the seamless sharing of quality deficiency data.

## Objectives

Our objective was to determine whether the Navy and Marine Corps were effectively reporting and tracking deficient repair parts within their commands. Specifically, we determined whether logistics managers and quality assurance specialists use deficiency reports to remove nonconforming inventory from depots and screen potentially defective inventory from reentering depots. We also reviewed the management control program as it relates to the audit objectives. See Appendix A for a discussion of the audit process and the management control program review. See Appendix B for prior coverage related to the audit objectives.

## Summary of Results

We visited six screening and action points for the Naval Air Systems Command, Naval Sea Systems Command, and the Marine Corps to review quality deficiency reports. The six activities served as both screening and action points. We also visited six Defense Distribution Depots to determine whether deficient items at screening and actions points were removed from inventory. Because each condition was unique to each command, we presented these conditions in four separate findings. Table 1 summarizes the deficiency reports related to new or reworked items closed in FY 2000 for the activities visited, the number of deficiency reports reviewed at each activity, and the number of national stock numbers (NSNs) described in the deficiency reports. It also summarizes those NSNs with multiple deficiency reports.

| Naval Activity                             | Reported<br>FY 2000<br>Deficiency<br>Reports | Deficiency<br>Reports<br>Reviewed | NSNs       |  |
|--|--|-----------------------------------|------------|--|
|  |  |                                   | Reviewed   | With Multiple<br>Deficiency<br>Reports |
| Headquarters, Naval Air<br>Systems Command | 43   | 29                                | 25         | 3                                      |
| Aviation Depot–Cherry Point                | 1,029  | 58                                | 45         | 9                                      |
| Aviation Depot–Jacksonville                | 497  | 35                                | 28         | 5                                      |
| Aviation Depot–North Island                | 578  | 49                                | 31         | 8                                      |
| Inventory Control Point,<br>Mechanicsburg  | 947  | 94                                | 40         | 12                                     |
| Marine Corps Logistics Base–<br>Albany     | <u>1,087</u>                                 | <u>272</u>                        | <u>30</u>  | <u>24</u>                              |
| <b>Total</b>                               | <b>4,181</b>                                 | <b>537</b>                        | <b>199</b> | <b>61</b>                              |

The Navy Nuclear and Submarine Product Quality Deficiency Program was effectively managed for tracking and reporting deficient repair parts. However, other Navy and the Marine Corps elements were not effectively reporting and tracking deficient repair parts within their commands.

- Naval Air Systems Command Headquarters understaffing and lack of emphasis and oversight contributed to a backlog of unprocessed deficiency reports and resulted in potentially defective items being undetected. In addition, the lack of oversight by the Command Headquarters to the Aviation Depots resulted in inconsistent quality assurance procedures when the defective item was recommended for screening.
- Naval Inventory Control Point, Mechanicsburg, Pennsylvania, followup procedures did not ensure that all applicable and previously identified defective items were removed from inventory.
- The Marine Corps Logistics Base, Albany, Georgia, did not effectively identify, investigate, and resolve items reported on deficiency reports as nonconforming when a contractor warranty was involved. In addition, Marine Corps did not implement trend analyses to identify systemic causes of multiple deficiencies.
- During the period of February 2000 to August 2001, the Navy did not ensure that nonconforming Defense Logistics Agency-managed items were posted to the Defense Distribution Depots logistical database for screening or removal.

Table 2 summarizes 274 NSNs that may be deficient and were not properly screened and removed from Naval use. The 274 NSNs included as many as 1,443,000 items purchased, with a total procurement value of \$345.5 million.

| Synopsis of Deficiency         | NSNs            |                  |                       |
|--------------------------------|-----------------|------------------|-----------------------|
|                                | Number Impacted | Units Purchased  | Total Cost (millions) |
| NSNs not screened              | 36              | 146,000          | \$246.5               |
| Deficient NSNs not followed-up | 7               | 332,000          | 69.7                  |
| Deficient NSNs not identified  | <u>231*</u>     | <u>965,000</u>   | <u>29.3</u>           |
| <b>Total</b>                   | <b>274</b>      | <b>1,443,000</b> | <b>\$345.5</b>        |

\*Deficiency reports were not reviewed. The NSNs were identified by the Navy, but not provided to the Defense Distribution Depots (finding D).

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## **A. Adequacy of the Naval Air Systems Command Product Quality Deficiency Reporting Program**

The Naval Air Systems Command did not have an effective product quality deficiency reporting program. The program was ineffective because the Command had not adequately staffed and funded it. As a result, a backlog of deficiency reports accumulated, and potential defects went undetected. Also, potentially nonconforming items, valued at more than \$163.1 million and involving as many as 138,000 individual items, were either not screened or confirmed to be removed from inventory. Therefore, these potentially nonconforming items were available for issue, and their use could impact system performance and readiness.

### **Criteria for Deficiency Reporting**

Secretary of the Navy Instruction 4855.5B, "Product Quality Deficiency Report Program," May 1997, provides policy guidance for reporting, processing, and investigating procedures for nonconforming items identified by deficiency reports. The Instruction states the Navy will:

- conduct an investigation, if necessary, to pinpoint the cause of the deficiency,
- determine the responsibility for the cause of the deficiency,
- determine whether the deficiency has recurred and has been previously reported,
- take necessary action to correct the existing deficiency and preclude its recurrence, and
- issue notifications to users of the items, if applicable.

Chief of Naval Operations Instruction 4790.2H, "The Naval Aviation Maintenance Program," April 2001, defines the roles that specific Naval Aviation activities serve in the deficiency reporting process. The instruction emphasizes that Naval Aviation Depots' quality assurance organizations serve as the focal point for coordinating the internal effort to ensure that deficiency reports are processed, investigated, and responded to within established deadlines. The instruction also requires that Navy supply activities conduct screening actions for nonconforming items.

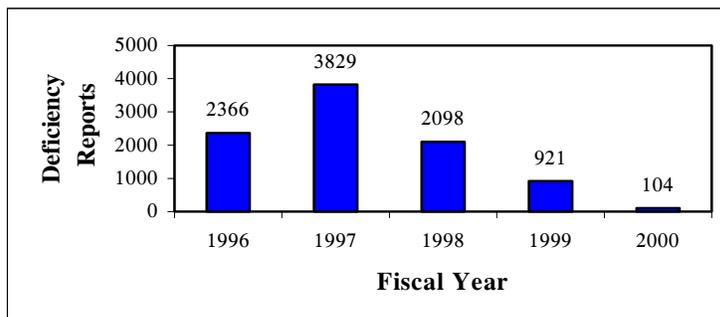
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## Management of the Headquarters, Naval Air Systems Command Quality Deficiency Reporting Program

At Headquarters, Naval Air Systems Command, a complete breakdown in the technical, managerial, and administrative functions of the Naval quality deficiency reporting program existed as of mid-2001. Specifically, staffing and contractual funding reductions had rendered administration of the Command's product quality deficiency reporting program non-operational. The Command Headquarters Quality Division neither maintained a deficiency reporting function as required, nor directed item screening when warranted.

**Staffing and Funding Reduction.** The Naval Air Systems Command's Systems Engineering Department has functional responsibility for the management of the deficiency reporting program. However, Department managers had de-emphasized the deficiency reporting program. In February 1999, the Systems Engineering Department experienced funding reductions that led to a reduction in the in-house staff from seven to three and terminated the support service contract. Prior to the funding reduction, the quality deficiency program was staffed with 5 to 7 in-house quality assurance staff and 10 contractor employees. Since February 1999, staff reductions and program de-emphasis have caused backlogs of at least 1,069 unprocessed quality deficiency reports, potentially affecting thousands of Navy items.

**Deficiency Report Backlog.** The Product Data Reporting and Evaluation Program (PDREP) database shows that the Command Headquarters closed 104 Naval Air Systems Command system-wide deficiency reports during FY 2000. We identified at least 1,069 unprocessed deficiency reports submitted to Command Headquarters from the Naval Aviation Depots. In addition, the Naval Aviation Depots reported a total of 2,104 deficiency reports closed in FY 2000 from their local databases. As a result, the Command Headquarters could not account for the total Naval Air Systems Command-wide deficiency reports. We further determined the number of deficiency reports closed by the Command in prior years. Figure 1 shows the number of deficiency reports that the Command closed from FY 1996 through FY 2000. Note the downward trend beginning in FY 1998.



**Figure 1. Headquarters, Naval Air Systems Command, Deficiency Reports Processed in the Product Data Reporting and Evaluation Program**

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We addressed our concerns regarding the backlog of deficiency reports in a July 2, 2001, memorandum to the Secretary of the Navy. The Naval Air Systems Command took prompt corrective action and assigned additional staff to reduce the deficiency report backlog and to process daily receipts of new deficiency reports. Therefore, we will make no recommendation in this report regarding the deficiency report backlog at the Command Headquarters. See Appendix C for our memorandum addressing the breakdown of the deficiency reporting program at the Command Headquarters, and Appendix D for the August 20, 2001, Navy reply.

**Screening Procedures.** Chief of Naval Operations Instruction 4790.2H, “The Naval Aviation Maintenance Program,” defines the procedures and responsibilities of the Headquarters, Naval Air Systems Command, regarding the processing of deficiency reports. The instruction requires the Command Headquarters to serve as a screening point and action point for the aircraft parts for which it maintains accountability.

We reviewed 29 of the 43 deficiency reports for new item procurements processed at the Command Headquarters. The 29 deficiency reports related to 25 NSNs. Nine of the 29 deficiency reports showed that an investigation was conducted, of which only 3 deficiency reports identified the root cause of the deficiency. Root causes for the remaining six deficiency reports were not investigated because the deficiencies were considered as isolated incidents that could not be duplicated, the items were covered by contractor warranties, or information on the deficiencies was lost or was not made available. The quality assurance specialists recommended neither screening nor inventory removal for 4 of the 25 NSNs, consisting of 119 individual items valued at \$42.5 million, even when these actions were warranted.

For example, the Navy received a deficiency report for night vision goggles that were assembled with a type of glue that rendered the lens assemblies inoperative. The investigation reported the root cause as improper materials workmanship. The corrective action for this deficiency required the contractor to change its manufacturing procedures. There was no screening action recommended by the quality assurance specialist, and no attempt was made to determine the quantity of goggles on-hand with the deficiency.

The Defense Contract Management Agency, Northern Europe submitted two deficiency reports addressing a nonconformance with technical specifications for the F-18 Aircraft engine. Command Headquarters conducted no investigation for either deficiency report. Furthermore, there was no evidence that the 20 engines, with a procurement value of \$42 million, in inventory at the activity were examined.

## **Deficiency Reporting at Naval Aviation Depots**

Chief of Naval Operations Instruction 4790.2H requires Headquarters, Naval Air Systems Command to enter into the PDREP database all information involving Naval Aviation deficiency reports, including deficiency reports generated from the three Naval Aviation Depots: Cherry Point, North Carolina; Jacksonville, Florida; and North Island, California. The Command

Headquarters is also responsible for coordinating deficiency report processing between the Naval Aviation Depots and Naval Inventory Control Point. Therefore, it is the responsibility of the aviation depots to forward all deficiency reporting information to the Command Headquarters for processing into the automated database. Each of the three aviation depots has the responsibility for acting as the screening and action point for the repairable items for which they maintain accountability.

**Screening Nonconforming Items.** The Navy has not published specific guidance that dictates when the quality assurance specialist should screen a potentially nonconforming item. Rather, the decision to screen a potentially nonconforming item must be initiated by quality assurance specialists, exercising sound judgment. As a result, we determined that two of the three Naval aviation depots did not recommend potentially nonconforming items for screening. Table 3 shows the number of deficiency reports we reviewed at the aviation depots, the number of NSNs related to the deficiency reports, and the number of NSNs we believe warranted a screening action.

| Naval Aviation Depots | Deficiency Reports Reviewed | Nonconforming NSNs |                           |                     |
|-----------------------|-----------------------------|--------------------|---------------------------|---------------------|
|                       |                             | Reviewed           | Did not Confirm Screening | Warranted Screening |
| Cherry Point          | 58                          | 45                 | 2                         | 0                   |
| Jacksonville          | 35                          | 28                 | 0                         | 12                  |
| North Island          | <u>49</u>                   | <u>31</u>          | <u>0</u>                  | <u>6</u>            |
| <b>Total</b>          | <b>142</b>                  | <b>104</b>         | <b>2</b>                  | <b>18</b>           |

**Naval Aviation Depot, Cherry Point.** The Cherry Point Aviation Depot was the only aviation depot we visited that recommended that nonconforming items be screened and possibly removed from inventory. The Depot quality assurance division recommended to the inventory managers that nonconforming items be screened. However, the inventory managers did not report to the depot when nonconforming items were screened. The quality assurance division at the aviation depot did not follow up with the inventory managers to ensure that their recommendations were completed. We reviewed deficiency reports for 44 nonconforming NSNs, 3 of which the aviation depot recommended a screening action. No documentation existed to confirm that two of the three nonconforming NSNs, involving as many as 1,159 individual items valued at more than \$3.8 million, were screened.

**Naval Aviation Depot, Jacksonville.** The Jacksonville Aviation Depot quality assurance staff did not recommend that a potentially nonconforming item be screened unless the item incurred one Category I deficiency report (given when the nature of the deficiency is life threatening) or three Category II deficiency reports (all other deficiencies). We reviewed 35 deficiency reports for 28 NSNs and believe that 12 NSNs, affecting as many as 135,934 items, valued at more than \$72.5 million, warranted screening actions. Five of the 12 NSNs incurred more than 1 deficiency report but were not screened. The

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remaining seven NSNs also required screening, but had only one deficiency report. At our exit conference, the Depot Quality Competency Director officially prohibited the current practice of not recommending screening actions when fewer than three Category II deficiencies were reported. Therefore, no recommendation will be made on delaying screening actions until three deficiency reports are reported.

For example, two deficiency reports that were submitted to the Jacksonville Aviation Depot cited a deficient radar receiver. The Defense Contract Management Agency did not perform an investigation on the receiver because the contractor no longer manufactured the item. The Defense Contract Management Agency recommended that the Navy issue a repair contract to be paid by the original parts contractor to fix the nonconforming receiver. No action was taken on this deficiency report recommendation because only two deficiency reports were submitted to the aviation depot. The Navy procured 135 radar receivers for \$9.6 million. In July 2001, 21 receivers were still in stock at Naval depots and were available for issue. Because the depot took no action to screen on-hand items, defective items could be issued to Navy activities.

**Naval Aviation Depot, North Island.** The North Island Aviation Depot quality assurance specialists stated that they requested a screening action if the Defense Contract Management Agency quality assurance staff recommended an item be screened. However, the Defense Contract Management Agency quality assurance staff were not responsible for recommending a screening action. The North Island quality assurance staff were responsible for making the necessary screening decision and forwarding the recommendation to the inventory managers. We reviewed 49 deficiency reports relating to 31 NSNs. We believe that 6 of the 31 NSNs, affecting as many as 1,163 items valued at more than \$44.4 million, warranted screening actions.

For example, two of the deficiency reports that were submitted to the North Island Aviation Depot were for a circuit card assembly. The deficiency was that the circuit cards produced error messages. These malfunctioning circuit card assemblies could pose a considerable problem when inoperable in a deployment situation. The Defense Contract Management Agency initiated an investigation and determined that the contractor who supplied these circuit card assemblies was no longer in business. According to Navy procurement staff, these circuit card assemblies were purchased from a different contractor, but the investigation did not identify this contractor. Both deficiency reports were closed by quality assurance specialists at the North Island Aviation Depot and will remain closed unless additional information is made available. The inventory manager was not notified of these deficient circuit card assemblies or requested to screen like circuit card assemblies in inventory. We identified three potentially defective circuit card assemblies in inventory at two locations that were available for issue to Navy users.

**Potentially Nonconforming Items not Screened.** Table 4 lists the total quantity and costs of the potentially nonconforming items that were not screened by or confirmed to be removed from inventory by Command Headquarters and the three Aviation Depots.

| <b>Table 4. Value of Potentially Nonconforming Items Not Screened</b> |                           |                    |                            |
|---|---------------------------|--------------------|----------------------------|
| Action Point  | Item                      | Items Purchased    | Total Cost<br>(in dollars) |
| HQ  | Electrical Contact Ring   | 79                 | \$ 48,348                  |
| HQ  | Lens Assembly             | Data Not Available | 189,000                    |
| HQ  | Aircraft Panel Assembly   | 20                 | 237,780                    |
| HQ  | F-18 Engine               | 20                 | 42,000,000                 |
| Cherry Point  | Ball Bearings*            | 1,049              | 1,085,191                  |
| Cherry Point  | Gas Turbine Nozzle*       | 110                | 2,685,900                  |
| Jacksonville  | Fuel Cell                 | 56                 | 431,872                    |
| Jacksonville  | Shaft Support             | 1,387              | 403,757                    |
| Jacksonville  | Pump                      | 83                 | 357,704                    |
| Jacksonville  | Fuel Pump                 | 7                  | 224,148                    |
| Jacksonville  | Jet Engine Component      | 269                | 6,534,204                  |
| Jacksonville  | Electric Tube Transmitter | 263                | 3,218,448                  |
| Jacksonville  | Fan Valve                 | 19,387             | 2,658,360                  |
| Jacksonville  | Sleeve Valve              | 62                 | 278,504                    |
| Jacksonville  | Turbine Rotor Blade       | 114,259            | 48,721,194                 |
| Jacksonville  | Cylinder                  | 26                 | 85,892                     |
| Jacksonville  | Interface Device Panel    | Data Not Available |                            |
| Jacksonville  | Radar Receiver            | 135                | 9,612,810                  |
| North Island  | Receiver                  | 952                | 41,897,794                 |
| North Island  | Circuit Card Assembly     | Data Not Available |                            |
| North Island  | Computer Converter        | Data Not Available |                            |
| North Island  | Pylon                     | 21                 | 867,573                    |
| North Island  | Piston                    | 170                | 1,462,000                  |
| North Island  | Antenna                   | 20                 | 126,100                    |
| <b>Total</b>  |                           | <b>138,375</b>     | <b>\$163,126,579</b>       |

\*Screening recommended but not confirmed

## Naval Inventory Control Point, Philadelphia

**Criteria for Naval Inventory Control Point.** Naval Inventory Control Point Instruction 4400.73, "Processing Quality Deficiency Reports on Aviation Material," August 13, 1999, provides the organizational framework and assigns responsibility for coordinating aviation-related deficiency reports to the Inventory Control Point quality department. The instruction further states that the Engineering and Product Directorate, Product Quality Department, Naval Inventory Control Point, Philadelphia, Pennsylvania, will:

- have program responsibility and function as the coordination component within the Naval Inventory Control Point for all aviation-related deficiency report actions. The coordination responsibilities include receiving incoming deficiency reports and forwarding all non-Navy or misdirected deficiency reports to appropriate activities for action;

- 
- direct the appropriate inventory manager to take specific action to include item returns to vendors, screening, suspension, or disposal of existing items stocked in inventory, as warranted;
  - provide a coordinated response of the deficiency report results to responsible Navy field activities; and
  - maintain history files of deficiency report actions and related items and forward this information for inclusion in the automated database.

**Current Responsibilities of Naval Inventory Control Point, Philadelphia.**

The Engineering and Product Directorate, Product Quality Department, Naval Inventory Control Point, Philadelphia, Pennsylvania, has not performed the functions outlined in the instruction because the Product Quality Department had not received a deficiency report from the aviation depots since 1994. We conducted a limited test on 10 of the 20 repairable NSNs that were identified by deficiency reports from the 3 Naval Aviation Depots, which warranted screening of existing inventory. We determined that the inventory managers either did not receive or comply with directions to screen 8 of the 10 repairable NSNs. We believe that the deficiency reporting program would be well served by an expanded role of the Engineering and Product Directorate.

## Summary

The limited emphasis that was placed on the quality program did not permit the effective initiation, processing, completion, or closure of deficiency reports within Naval Air Systems Command aviation depots. The centralized authority designated to the Headquarters, Naval Air Systems Command did not effectively account for or coordinate deficiency report processing between the Naval Aviation Depots and the Naval Inventory Control Point. Providing additional staffing and resources to the Engineering and Product Directorate and a centralized office, co-located with Naval Air Systems Command inventory management functions, would provide for unified accountability for all required actions involving the deficiency reporting process. Currently, quality assurance departments at each Naval Aviation Depot are communicating deficiency report data to the Headquarters, Naval Air Systems Command during the deficiency report initiation, processing, completion, or closure. However, the Command Headquarters is not functioning as outlined in the Naval Aviation Maintenance Program. By not having one organization centrally accounting for deficiency reports in the PDREP database, appropriate corrective actions were not taken and not communicated to the customers who may have been receiving nonconforming items.

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## Recommendations, Management Comments, and Audit Response

**A.1. We recommend that the Assistant Secretary of the Navy for Research, Development, and Acquisition provide the resources to the Engineering and Product Directorate, Product Quality Department, Naval Inventory Control Point, Philadelphia, Pennsylvania, for centralized management, accountability, control, and oversight functions for the Naval Air Systems Command Headquarters deficiency reports, as prescribed in the Naval Inventory Control Point Instruction 4400.73, "Process Quality Deficiency Reports on Aviation Material," August 13, 1999.**

**Management Comments.** The Navy nonconcurred but proposed an alternative solution for the centralized management, accountability, control, and oversight of the Naval Air Systems Command Headquarters Product Quality Deficiency Reports. The Navy stated that it is developing an automated information technology system that it expects will centrally account and control deficiency reports from inception to conclusion. The Navy estimated that the proposed system will be completed and deployed within 18 months and, because the Inventory Control Point, Philadelphia is a critical partner in the automated process, there is no benefit to transfer functions.

**Audit Response.** Although the Navy nonconcurred with the recommendation, actions proposed to account for and control the Naval Air Systems Command deficiency reporting process satisfies the intent of the recommendation.

**A.2. We recommend that the Commander, Naval Air Systems Command complete a one-time review of Naval Air Systems Command inventory of repair parts identified as deficient from the unprocessed quality deficiency reports and determine whether nonconforming parts are still stocked in inventory and should be eliminated.**

**Management Comments.** The Navy partially concurred and stated that it completed its review of the deficiency report backlog and directed stock screening recommendations when appropriate.

**Audit Response.** Although the Navy partially concurred, the Navy comments are responsive. The recommendation did not imply that all deficiency reports would result in a stock screening action but that a determination to screen would be necessary.

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## B. Adequacy of Screening and Removing Nonconforming Items

The Naval Inventory Control Point, Mechanicsburg, Pennsylvania, quality assurance staff did not establish management control procedures to ensure that Naval Sea Systems Command-managed items, previously identified as nonconforming, were completely removed from inventory. This occurred because quality assurance staff at the inventory control point did not follow up on previous quality assurance decisions to identify and remove nonconforming items from inventory. As a result, 5 of the 40 NSNs we reviewed, involving as many as 331,000 potentially nonconforming items valued at as much as \$65.9 million, were either issued to or remained available for issue to Navy users.

### Criteria for Processing Deficiency Reports

Naval Inventory Control Point Instruction 4440.479C (untitled), March 16, 1998, describes the procedures for processing deficiency reports and removing nonconforming items from inventory. The instruction requires that the quality assurance specialist at the action point investigate the reported nonconforming items and take corrective action that may include a recommendation to the inventory manager to screen suspect items and remove the identified nonconforming item. The inventory manager is responsible for notifying activities that have possession of nonconforming items, ensuring that the nonconforming items are prohibited from use by Navy customers, and prohibiting the reentry of nonconforming items into inventory.

### Management of the Quality Deficiency Reporting Program

The Naval Inventory Control Point Mechanicsburg is the screening point for all Navy-managed items and Defense Logistics Agency-managed items except for aircraft parts and air-launched ordnance. The deficiency reporting process at the inventory control point is divided into three, separately managed programs: nuclear items, submarine items, and non-nuclear items. We reviewed 94 deficiency reports closed in FY 2000 that were obtained from either PDREP or the local database. The 94 deficiency reports identified 40 nonconforming NSNs.

**Nuclear and Submarine Items.** Managers of the nuclear and submarine programs correctly managed their respective deficiency reporting programs. We reviewed 28 deficiency reports for 20 nuclear NSNs and 1 deficiency report on 1 submarine NSN that required screening or removal from inventory. Quality assurance specialists in the nuclear and submarine programs took appropriate actions to eliminate deficient items from the supply system for the 21 nonconforming NSNs. The quality assurance specialist properly screened the 21 nonconforming NSNs, which related to 37,104 items on hand, valued at \$3.3 million, as of November 2001. The quality assurance specialists also issued letters to applicable depots stocking the nonconforming items. For the nuclear items found to be nonconforming, the quality assurance specialist also

notified all responsible staff assigned to the nuclear ships and boats. Finally, the quality assurance specialist at the nuclear and submarine programs tracked replies from activities regarding the stock status on the nonconforming items that were removed from inventory and required activities to confirm that the nonconforming items on-hand were suspended and no longer available for use. This thorough process ensured that all inventory points and users were notified of the potentially nonconforming items in stock, and that appropriate actions were taken to remove the nonconforming items and prohibit their reentry into the Navy supply system.

**Non-nuclear Items.** The non-nuclear quality assurance specialists and responsible inventory managers did not take proper action to eliminate nonconforming items from inventory or from use. The quality assurance specialists at the non-nuclear division contacted the inventory managers to screen and/or remove items from inventory. However, the specialists never confirmed that the items were screened or removed. We reviewed 65 closed, non-nuclear deficiency reports addressing 19 NSNs. Forty-five deficiency reports addressing 5 NSNs resulted in a screen or removal from inventory. The remaining 16 deficiency reports, related to 14 NSNs, did not require screening or no information was available to further pursue the deficiency. Table 5 lists the quantity and value of the five potentially nonconforming NSNs resulting in a screen or removal from inventory.

| <b>Table 5. Nonconforming Items</b> |                    |                 |                         |
|-------------------------------------|--------------------|-----------------|-------------------------|
| Item                                | Deficiency Reports | Items Purchased | Total cost (in Dollars) |
| Breathing device (fire hazard)      | 5                  | 87,095          | \$12,396,418            |
| Breathing device (air leakage)      | 17*                | 242,917         | 53,198,823              |
| Life raft valve                     | 14                 | 1,074           | 100,881                 |
| Motor shaft                         | 5                  | 16              | 12,624                  |
| Windspeed transmitter               | <u>4</u>           | <u>21</u>       | <u>237,550</u>          |
| <b>Total</b>                        | <b>45</b>          | <b>331,123</b>  | <b>\$65,946,296</b>     |

\*11 of the 17 deficiency reports were recorded as Category I deficiencies

**Notification Procedures for Screening of Nonconforming Items.** The inventory control point instruction requires the inventory managers to notify stock points of screening actions for nonconforming items. Inventory managers did not notify stock points to screen two of the five nonconforming NSNs where the quality assurance specialist requested screening actions. We interviewed the inventory managers for a motor shaft and a wind speed transmitter, and the inventory managers could not provide documentation that messages were issued to the stock point or to the users of the nonconforming items. In addition, the

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quality assurance specialist at the non-nuclear division did not confirm that screening actions on the two nonconforming NSNs occurred.

**Accounting for Screening Actions.** Inventory managers could not accurately account for three nonconforming NSNs that required screening. In addition, neither the quality assurance specialist nor the inventory managers were aware of the actual quantity of nonconforming items that required screening or removal from inventory. For example, in 1994, the Naval Inventory Control Point, Mechanicsburg, initiated removal of an emergency escape breathing device after two incidents occurred when the devices ignited and caught fire. During FY 2000, the inventory control point continued to receive deficiency reports for the breathing device although the Navy directed in 1994 that all breathing devices be shipped back to Naval depots. Two of six Defense Distribution Depots had the breathing devices in inventory after receiving notification to return them to the Navy. One of the depots had issued the breathing device as recently as March 2001. Furthermore, the Navy could not fully account for all of the breathing devices that were purchased. We brought this issue to the attention of the Secretary of the Navy in our July 2, 2001, memorandum. The Navy took appropriate action to remove the item from inventory and from use; therefore, we are making no recommendation regarding the breathing device. Our memorandum and the Navy reply are contained in Appendixes C and D.

Inventory managers also could not accurately account for a deficient life raft valve that caused rafts to prematurely inflate. The contractor identified the delivery order of the specific nonconforming valves and agreed to repair them. The inventory control point sent a message to the three depots that stocked the valves. At the time the message was issued, however, the contract delivery order and contract modifications showed that additional activities received the deficient valves. The inventory control point could not accurately account for the number of valves that the contractor repaired. The deficiency reports and the contract file showed different information on the quantity of the valves, and the contracting officer could not reconcile the difference. The contracting officer acknowledged that it had been 2 years since the valves were recalled, and the inventory control point did not know how many valves were still in need of repair. Without accurate accounting for screening actions, there was no assurance that the nonconforming items were removed from inventory.

**Deficiency Report Database.** The action point has the capability to track the progress of screening actions through the use of a purge code in its local deficiency reporting database. According to the inventory control point instruction, the action point is responsible for annotating in the database that the inventory manager removed the nonconforming item from inventory. Three of the five NSNs where screening actions were requested were not identified in the database as removed from inventory.

## **Adequacy of Management Controls**

The inventory control point did not have adequate management controls to ensure that previously identified nonconforming items were completely removed from inventory. The inventory control point did not follow up on previous

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inventory removal decisions. We consider this management control weakness to be material. If the inventory control point does not implement a thorough followup system to ensure that nonconforming items do not become available for issue or use, the Navy will continue to receive sub-standard items that could be life threatening and could impact fleet readiness.

## **Recommendation, Management Comments, and Audit Response**

### **B. We recommend that the Commander, Naval Inventory Control Point:**

**1. Develop and implement a comprehensive followup system to track quantities of nonconforming items and, based on procurement quantities of the items, develop a full accounting for them.**

**Management Comments.** The Navy concurred in principle that a comprehensive followup system is critical to track nonconforming items but contended that the current stock screening process meets the necessary requirements.

**Audit Response.** Although the Navy concurred in principle with the recommendation, the followup system employed by quality assurance specialists and inventory managers of the non-nuclear program was unsatisfactory. Therefore, we request that the Navy provide additional comments in response to the final report. The comments should identify specific requirements addressing followup actions that were found to be deficient during this audit.

**2. Implement a notification procedure to activities that were issued nonconforming items and provide appropriate disposition instructions to the users.**

**Management Comments.** The Navy partially concurred with the recommendation and stated that the inventory control point ensures adequate screening notification for supply system material through various methods including the Naval Message and the Defective Material Summary Report.

**Audit Response.** Although the Navy partially concurred with the recommendation, accounting for previously issued nonconforming items and providing for the items' disposition were not uniformly applied at the inventory control point. Notification procedures available to the Navy were not always used or, if used, were not retained to account for the total quantity of previously issued nonconforming items. Coordination among acquisition, material management, and quality assurance personnel and recipients of the nonconforming item was deficient. Therefore, we request that the Navy provide additional comments in response to the final report. The comments should identify specific procedures addressing the notification to users of nonconforming items and appropriate disposition instructions.

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## **C. Adequacy of Quality Assurance Procedures–Items with Recurring Deficiencies Procured with Contractor Warranties**

Marine Corps Logistics Base quality assurance procedures for identifying, investigating, and resolving nonconforming items procured with contractor warranties were ineffective. This occurred because quality assurance specialists did not establish management control procedures to analyze the nonconforming items in sufficient detail to address the systemic cause of the deficiency. In addition, quality assurance specialists did not direct that items in Marine Corps depots and items issued to users be screened to determine whether like deficiencies existed. Instead, quality assurance specialists returned the nonconforming items to the contractor for replacement without assessing the nature and extent of the deficiency. As a result, the Marine Corps had no assurance that systemic deficiencies had been corrected. Also, the Marine Corps may have had as many as 8,800 items in inventory with a procurement value of \$87.1 million that were deficient and unreliable. The Marine Corps will assume the financial risk for repairing items out of warranty.

### **Marine Corps Quality Deficiency Reporting Program**

**Criteria for the Quality Deficiency Reporting Program.** Marine Corps Logistics Base Policy Statement 12-00, “Product Quality Deficiency Report Program,” September 27, 2000, defines responsibilities and provides procedures for the Marine Corps to manage its quality deficiency program. The policy statement provides that quality assurance specialists who are assigned to the screening point at the Logistics Base are responsible for:

- maintaining an audit trail for every deficiency report received,
- conducting trend analyses of reported like deficiencies to determine if warranted essential performance characteristics of the weapon system and/or components are being met, and
- releasing stock screening messages on nonconforming items stocked at Marine Corps depots.

The policy statement also provides that the Logistics Base action point is concurrently responsible for:

- investigating the cause of the nonconforming item deficiency,
- determining the appropriate corrective action required to preclude the recurrence of the reported deficiency, and

- 
- evaluating trend analyses prepared by the screening point addressing the nonconforming item and directing management action toward resolution of recurring problems or adverse quality trends disclosed in the analysis.

**FY 2000 Deficiency Reporting.** The Marine Corps Logistics Base, Albany, Georgia, is the screening point for all Marine Corps items associated with ground weapon systems. Quality assurance staff at the Marine Corps Logistics Base reported 1,087 deficiency reports closed in FY 2000. We reviewed 272 of the 1,087 deficiency reports that addressed deficiencies in 30 potentially nonconforming NSNs. For 2 of the 30 NSNs identified as nonconforming, quality assurance specialists properly identified the cause of the deficiency and initiated screening actions for the nonconforming items to its depots. For 14 of the 30 NSNs, the quality assurance specialists either identified problems associated with the use of the item, considered the problem an isolated incident, or could not confirm the item's deficiency. However, for the remaining 14 NSNs, the Marine Corps quality assurance staff did not initiate screening actions or determine the cause of the nonconformance. We also determined that Marine Corps quality assurance staff did not screen 11 of the 14 nonconforming items when the item was procured with a contractor warranty.

## **Trend Analysis for Nonconforming Items**

**Marine Corps Policy.** The Marine Corps policy statement addresses the use of trend analyses as an analytical tool when processing deficiency reports. A trend analysis of multiple reported deficiencies addressing a single item defect aids the quality assurance specialist in determining whether a systemic deficiency is apparent with the nonconforming item. This analysis can also assist in identifying a deficient contractor manufacturing process or identifying substandard material used to construct the item. Knowledge of the extent of the nonconforming items with recurring and systemic deficiencies is a key factor in deciding to screen the item in inventory or in the possession of Marine Corps users.

**Review of Multiple Deficiencies.** Of the 1,087 FY 2000 deficiency reports, 201 addressed deficiencies involving 14 Marine Corps-managed NSNs. At least 226 of the 1,087 deficiency reports were marked "For Information Only." We also determined that 14 NSNs reviewed had more than one deficiency report addressing a single specific deficiency, and 4 of the 14 NSNs had multiple deficiency reports that addressed a single, specific deficiency. Table 6 lists the four NSNs with multiple deficiency reports when more than a single specific deficiency was addressed. The table also includes the total deficiencies reported on the NSN during FY 2000.

| <b>Table 6. Multiple Deficiency Reports</b> |   |                                    |                                   |  |
|---|---|------------------------------------|-----------------------------------|--|
| Item  | Deficiency Reports with Specific Deficiencies |                                    |                                   | Total Deficiency Reports Closed in FY 2000 |
|   | First Type of Deficiency Reported             | Second Type of Deficiency Reported | Third Type of Deficiency Reported |  |
| Land Navigation System                      | 22  | 15                                 | 14                                | 100  |
| Radio Receiver                              | 11  | 2                                  | 2                                 | 32   |
| Satellite Navigation Set                    | 4   | 3                                  | 2                                 | 10   |
| Power Supply                                | 3   | 3                                  | 2                                 | 13   |

Marine Corps quality assurance specialists did not conduct a trend analysis to isolate and address recurring and potentially systemic deficiencies for the NSNs incurring multiple deficiency reports. The specialists only counted the number of deficiency reports received for an individual NSN. In addition to the deficiency reports citing item defects, the quality assurance staff did not pursue any aspect of information contained in the 226 deficiency reports entitled “For Information Only.” Information on these reports could have informed the quality assurance staff of recurring and systemic deficiencies.

**Land Navigation System.** The Marine Corps purchased 4,900 units of the land navigation system from a 1993 contract. Quality assurance staff received 100 deficiency reports addressing defects in the land navigation system during FY 2000. The quality assurance staff did not analyze the deficiency reports to determine whether recurring deficiencies were being reported. We analyzed the 100 deficiency reports for the land navigation system and determined that 51 deficiency reports addressed 3 specific and recurring deficiencies. The remaining 49 deficiency reports identified 26 miscellaneous deficiencies. The three specific and recurring deficiencies for the land navigation system involved:

- liquid crystal diode screens that were broken or cracked (22 deficiencies),
- units not powering up (15 deficiencies), and
- units not locking onto satellites or not tracking (14 deficiencies).

We also reviewed the PDREP database to determine the prior year frequency and type of deficiency reported for the land navigation system. Between 1995 and 2001, 86 Marine Corps activities submitted 620 deficiency reports, of which 328 deficiency reports discussed the 3 recurring deficiencies. A trend analysis would have alerted Marine Corps quality assurance staff that at least three specific deficiencies prevented the land navigation system from operating as intended. Quality assurance specialists did not recommend screening of inventory quantities for the land navigation system because the items were

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procured with a contractor warranty. After the warranty period expired, the Marine Corps had to pay the contractor \$329 per unit to repair the land navigation system. From FY 1996 to 2001, the Marine Corps paid \$256,620 for the repair of 780 land navigation systems no longer under the contractor warranty. A thorough trend analysis coupled with screening procedures of Marine Corps inventory would have isolated specific deficiencies of the land navigation system and would have initiated necessary repair prior to the expiration of the contractor warranty period.

**Defense Contract Management Agency.** We contacted the Defense Contract Management Agency Office that has oversight responsibility for the contractor of the land navigation system. We determined that the Marine Corps had not notified them of the item's recurring defects involving broken crystal diode screens or operational malfunctions, which could be the result of substandard material or faulty contractor workmanship. The office maintained notices of deficiencies since 1997. The Marine Corps received 455 deficiency reports citing defects with the land navigation system since January 1997.

## Items Procured with Contractor Warranties

**Implementing Procedures.** Quality assurance staff at the Logistics Base maintained that if an item was procured with a contractor warranty, the contractor was only required to repair or replace the item when it was determined to be nonconforming. They did not require the contractor to determine and report a root cause for the item nonconformance. As a result, quality assurance specialists initiated no investigation or analysis until after the contractor warranty period expired, and deficiency reports continued to be submitted on the item.

**Review of Warranted Items.** We confirmed that 9 of the 14 nonconforming NSNs with multiple deficiencies were repaired or replaced by exercising a contractor warranty. The quality assurance specialist evaluated each nonconforming item on an individual basis but did not attempt to determine the extent or cause of the deficiency or inform depots or users of the potentially nonconforming items. Proper determination of the extent of the potentially nonconforming items should have been recommended by the quality assurance specialist while the contractor warranty was still valid. For example, a radar transmitter was not powering up to contract specifications. This nonconformity was reported on three deficiency reports in FY 2000. In each instance, the item was repaired or replaced by the contractor because it was covered by a valid contractor warranty. There was no evidence that the quality assurance staff considered:

- the total procurement quantity of the radar transmitter,
- the warranty period expiration date, or
- whether other radar transmitters were experiencing similar power up problems and would require screening actions.

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**Effective Use of Contractor Warranties.** In order to take full advantage of protection offered for items procured with contractor warranties, the quality assurance specialist should be more proactive in determining the quantity of items that are potentially nonconforming. Furthermore, the quality assurance specialist should first conduct a trend analysis to properly account for the type of nonconformance and the quantity of items that may be affected. After learning the extent of the potentially nonconforming items, screening orders should be issued to determine the overall need for item repair or replacement while the warranty period is still valid.

## **Adequacy of Management Controls**

The quality assurance specialists at the Marine Corps Logistics Base, Albany, did not have adequate management controls to ensure that nonconforming items were analyzed in sufficient detail to address the systemic cause of the quality deficiency. Specifically, the quality assurance specialists did not implement trend analysis procedures that would adequately detect and measure the extent of the systemic cause of an item's deficiency. We consider this management control weakness to be material. If the quality assurance specialists do not establish trend analyses procedures for items with multiple quality deficiencies, the Marine Corps will continue to stock and issue items that will subsequently be deemed deficient and unreliable.

## **Recommendation and Management Comments**

### **C. We recommend that the Commanding General, Marine Corps Logistics Base:**

- 1. Develop and implement comprehensive trend analysis procedures that enable quality assurance staff to identify trends of reported potentially nonconforming items by specific deficiency.**
- 2. Notify the Defense Contract Management Agency when quality deficiency reports identify deficiencies that may be related to substandard or faulty workmanship.**
- 3. Establish procedures to screen nonconforming items, based on information obtained from trend analyses, while contractor warranties for the items are still valid.**

**Management Comments.** The Navy concurred and stated that the Marine Corps will develop and implement comprehensive procedures to ensure that quality assurance is in place for all weapon systems. Trend analyses of nonconforming items will be enhanced by improving access to the product data reporting and evaluation program. The Navy estimated that the comprehensive quality assurance program for the Marine Corps would be completed by September 30, 2002.

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## D. Nonconforming Defense Logistics Agency-Managed Items

During the period of February 2000 to August 2001, the Navy did not ensure that data relating to nonconforming Defense Logistics Agency-managed items were posted to the Defense Distribution Depots logistical database for screening or removal. Data on nonconforming items were not transmitted because the Navy listing of the nonconforming Defense Logistics Agency-managed items was not electronically entered into the logistical database supporting the Defense Distribution Depots. As a result, as many as 965,000 nonconforming items valued at \$29.3 million purchased from 372 contracts, were not screened, removed, or prohibited from reentry into the inventory.

### Nonconforming Defense Logistics Agency-Managed Items

**Defective Material Summary Report.** The Naval Inventory Control Point Mechanicsburg, Pennsylvania, issues the “Defective Material Summary” report, a bimonthly report listing nonconforming Defense Logistics Agency-managed items identified and used by the Navy. The listing identifies the nonconforming item by NSN and the contractor who supplied the item. The Defective Material Summary Report is a valuable tool for removing nonconforming items from inventory and prohibiting nonconforming items from reentering the inventory via customer returns. The Naval Inventory Control Point, Quality Assurance Division, forwards the Defective Material Summary Report listing to the Fleet Material Support Office, Mechanicsburg, Pennsylvania, where the data are electronically transferred to the Defense Information Systems Agency megacenters in Mechanicsburg, Pennsylvania, and Ogden, Utah. The megacenters process the NSNs into the depot logistical database (the Distribution Standard System) for depots that stock primarily Navy items, so that nonconforming items currently in inventory and nonconforming items received via customer returns can be properly identified and suspended from issue, if necessary.

**FY 2000 Identification of Nonconforming Defense Logistics Agency-Managed Items.** The 6 bimonthly Defective Material Summary Reports for FY 2000 listed 231 NSNs that the Navy found to be nonconforming. We reviewed 47 of the 231 nonconforming NSNs at the Defense Distribution Depot, Jacksonville, Florida. Only 10 of the 47 NSNs were identified as nonconforming at the Jacksonville depot. We subsequently reviewed all 231 nonconforming NSNs at the Defense Distribution Depot, Cherry Point, North Carolina. Only 20 of the 231 NSNs reviewed were identified as nonconforming at the Cherry Point depot.

**Electronic Transmission of Nonconforming Item Data.** As a result of our review at the Jacksonville and Cherry Point depots, we contacted the Naval Inventory Control Point, Mechanicsburg, Pennsylvania, to determine why the majority of the FY 2000 listing of nonconforming NSNs were not identified on

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the depot databases. The inventory control point discovered that although the Navy electronically transferred the list of nonconforming NSNs, existing computer firewall and access restrictions had prohibited posting of these records into the depot logistical database since February 2000. In addition, no followup inquiries were made by activities responsible for either compiling or transmitting the bimonthly listing of nonconforming NSNs over the 20-month period: February 2000 to August 2001. We obtained procurement histories for the 231 nonconforming NSNs by the specific contractor that supplied the item. The 231 NSNs involved the procurement of 964,923 individual items from 372 contracts with a total procurement value of \$29.3 million. As a result, nonconforming items were not screened or removed from inventory.

**Current Distribution of Nonconforming Item Listings.** The list of nonconforming items is currently distributed to the depots that stock primarily Navy items and not to the other depots that stock items for other military components. Thus, we reviewed 10 of the 231 nonconforming NSNs at the Defense Distribution Depot, Albany, Georgia, a depot that stocks items used by the Marine Corps. None of the 10 NSNs were identified at the Albany depot as nonconforming. However, Headquarters, Defense Distribution Center, New Cumberland, Pennsylvania, confirmed that the Albany depot did stock 5 of the 231 NSNs during FY 2000. The Albany depot staff were not aware of the bimonthly Defective Material Summary Report and never received an electronic or paper copy. The Headquarters, Defense Distribution Center, was also not aware of the Defective Material Summary Report. The Naval Inventory Control Point staff believed that because the nonconforming item listings contained only Navy items, only those depots that stock primarily Navy items should receive the listing.

## Summary

By August 2001, the Naval Inventory Control Point directed the correction of electronic transmission problems that prevented the distribution of the Defective Material Summary Report of nonconforming items to Navy depots. During our subsequent visits to the Defense Distribution Depots Puget Sound, Washington, and San Diego, California, we verified that the report listing was updated, and that nonconforming items were identified and being eliminated from inventory. Therefore, no recommendation is being made regarding the transmission and use of the list for nonconforming items in Navy depots. However, the Navy still needs to provide the DLA Supply Centers with the listing of nonconforming items to ensure that screening alerts are initiated and actions are taken to reclassify or remove defective material from all depots. The Commander, Defense Distribution Center should also monitor the screening alerts to ensure that all depots take proper action.

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## Recommendation, Management Comments, and Audit Response

**Revised and Added Recommendations.** As a result of management comments, we revised draft Recommendation D.1. and readdressed it to the Naval Supply System Command to provide the Defense Supply Centers with Navy Defective Material Summary Reports. In addition, we added Recommendations D.2. and D.3. which are addressed to the Defense Logistics Agency.

**D.1. We recommend that the Commander, Naval Supply Systems Command provide the Defense Logistics Agency Defense Supply Centers with the Navy Defective Material Summary Reports to ensure that screening alerts are initiated and actions are taken to reclassify or remove defective material from all depots.**

**D.2. We recommend that the Commanders, Defense Supply Centers serve as the Action Points, consistent with the Joint Service Directive Instruction 4155.24, “Product Quality Deficiency Report Program,” to ensure that screening alerts are initiated and action is taken as soon as possible to reclassify or remove defective material held in inventory on Defense Logistics Agency-managed items. We also recommend that the Defense Supply Centers work with the Navy to reconcile data concerning Defense Logistics Agency-managed items listed in the Navy Defective Material Summary Report.**

**D.3. We recommend that the Commander, Defense Distribution Center monitor Defense Logistics Agency and Military Service screening alerts to ensure that inspection is timely, and reclassification actions are completed by the Defense Distribution Center storage activities.**

**Management Comments.** The Defense Logistics Agency concurred with the intent of the draft report recommendation to ensure that valid Product Quality Deficiency Reports be provided to Defense Distribution Centers to ensure screening actions were complete. However, alternate actions would more effectively accomplish the actions by having the Defense Supply Centers serve as action points and the Commander, Defense Distribution Center monitor the screening alerts to ensure timely inspection and completion of reclassification actions.

**Audit Response.** We appreciate the constructive comments and modified the recommendations as shown above. We request that the Commander, Naval Supply Systems Command, provide comments to Recommendation D.1. We also request that the Defense Logistics Agency provide comments on the proposed corrective actions and a completion date for Recommendations D.2. and D.3.

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## Appendix A. Audit Process

### Scope

**Work Performed.** We analyzed the execution of the Naval Product Quality Deficiency Program. From the PDREP database, we initially extracted 8,242 deficiency reports closed in FY 2000, comprised of 7,304 reports addressing deficiencies involving new procurements and 938 reports addressing deficiencies involving the repair or rebuild of Naval items. At the Naval Inventory Control Point, Mechanicsburg, Pennsylvania, and Headquarters, Naval Air Systems Command, Patuxent River, Maryland, we determined that the PDREP database did not accurately represent the FY 2000 closed deficiency reports (see Methodology, Use of Computer-Processed Data). At each screening and action point we visited, we established a universe of FY 2000 closed deficiency reports from data available. We analyzed records from FY 1995 to FY 2001 relating to Marine Corps items with contractor warranties. We also analyzed 19 FY 2001 deficiency reports at the Jacksonville Aviation Depot due to the limited number of deficiency reports for FY 2000. We identified 4,181 deficiency reports closed in FY 2000 and analyzed the managerial action taken for the execution and completion of 537 deficiency reports at the 6 Naval activities visited. We analyzed decisions rendered by quality assurance staff at Naval activities where deficiency reports were evaluated, and any subsequent actions taken by quality assurance staff for these deficient items.

For our analysis of depot screening procedures for Naval-managed items, we analyzed 26 screening actions where the depot was instructed to screen the potentially defective items, and 39 screening actions where we found that the depot should have been instructed to screen or follow up screening the items. We progressively increased the review of the number of items requiring screening actions at each successive depot we visited by including the previous depots' listed items that required screening actions. In addition, we reviewed screening actions for the 231 FY 2000 Defense Logistics Agency-managed items previously deemed as defective at 6 depots. To determine the total quantity and unit costs of items that were potentially defective and not screened, we obtained procurement histories from contract files or from a commercial database that listed defense contract information.

**High-Risk Area.** The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Defense Inventory Management high-risk area.

### Methodology

**Use of Computer-Processed Data.** To achieve the audit objectives, we initially used computer-processed data contained in the Navy PDREP database system. Except for the Marine Corps listing of deficiency reports contained in PDREP, we determined that the data maintained on the system was incomplete and

inaccurate. The table below shows the large difference between deficiency reports maintained on the PDREP database versus local databases. These differences illustrate a high error rate that casts doubt on the data's validity. However, because of the availability and reliability of local database applications, we were able to draw accurate conclusions and recommendations.

Secretary of the Navy Instruction 4855.3A, "Product Data and Reporting Evaluation Program," July 9, 1998, establishes PDREP as the uniform database for Naval activities reporting deficiency reports. Naval Sea Systems Command initially entered deficiency report information into a local database and then transferred the data into PDREP. Naval Air Systems Command required its aviation depots to forward deficiency report information to the headquarters where the information would be entered into PDREP. However, neither command's deficiency report data in PDREP accurately reflected the true universe of deficiency reports for FY 2000. The Marine Corps was the only Naval activity that entered deficiency reporting information directly into PDREP. The following table shows the difference between the total deficiency reports that were compiled in PDREP versus the total deficiency reports that were compiled in the activities' local databases for FY 2000.

| <b>Total Deficiency Reports contained in PDREP versus<br/>Local Data Applications</b> |                             |                                |       |
|---|-----------------------------|--------------------------------|-------|
| Naval Activity  | Deficiency<br>Reports PDREP | Deficiency Reports<br>Database | Local |
| Mechanicsburg   | 967                         | 947                            |       |
| Patuxent River  | 43                          | Cannot be determined           |       |
| Aviation Depot-Cherry Point   | 0                           | 1029                           |       |
| Aviation Depot-Jacksonville   | 11                          | 497                            |       |
| Aviation Depot-North Island   | 38                          | 578                            |       |
| Marine Corps Logistics Base-Albany  | 1086                        | 1087                           |       |

While the Naval Sea Systems Command inventory control point had compatibility problems between its local database and PDREP, Headquarters, Naval Air Systems Command did not physically enter deficiency report information as required. See Appendix C for details. Thus, we relied on the local data applications for FY 2000 closed deficiency reports for the audit.

**Audit Type, Dates, and Standards.** We performed this program audit from March through December 2001, in accordance with generally accepted government auditing standards.

**Contacts During the Audit.** We visited or contacted individuals and organizations within DoD. Further details are available upon request.

## Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a

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comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

**Scope of the Review of the Management Control Program.** We reviewed the adequacy of the management controls addressing quality deficiency reporting for Naval screening and action points and management controls addressing purging of nonconforming items for depot facilities. Specifically, we reviewed the procedures and controls used to direct the investigation and evaluation of quality problems at Naval screening and action points. For depot facilities, we reviewed procedures and controls used to screen nonconforming items from depots and controls to prevent reentry of nonconforming items into depot storage. We also reviewed management's self-evaluation applicable to those controls.

**Adequacy of Management Controls.** We identified a material management control weakness, as defined by DoD Instruction 5010.40, at the Naval Air Systems Command, Patuxent River, Maryland; the Naval Inventory Control Point, Mechanicsburg, Pennsylvania; and at the Marine Corps Logistics Base, Albany, Georgia. The Naval Air Systems Command, Patuxent River, management controls were not adequate due to an absence of procedures addressing the quality deficiency reporting process. The Naval Inventory Control Point, Mechanicsburg, management controls for confirming and necessary followup of initially identified nonconforming items were not adequate to ensure that the items were properly removed from inventory. The quality assurance specialists at the Marine Corps Logistics Base, Albany, did not analyze the nonconforming items in sufficient detail, including using trend analyses, to address the systemic cause of quality deficiencies. The alternative action proposed by management in Recommendation A.1., if implemented, will increase support for management, accountability, control, and oversight functions for the Headquarters, Naval Aviation Systems Command quality deficiency program. Recommendation B.1., if implemented, will improve the inventory control point screening of nonconforming items. Recommendation C.1., if implemented, will improve the quality assurance specialists' ability to detect and measure the extent of the systemic cause of an item's deficiency. A copy of the report will be provided to the senior official responsible for management controls in the Navy and Marine Corps.

**Adequacy of Management Self-Evaluation.** Officials of the Naval Inventory control points identified general deficiency reporting procedures and depot screening actions as assessable units. However, in its evaluation, the inventory control point officials did not identify the specific material management control weakness identified by the audit because the inventory control point evaluation covered a much broader area. The following table lists the activities we visited that evaluated management controls addressing deficiency reporting and depot screening actions and whether self-evaluations of the management controls were performed.

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**Management Controls–Self Evaluation**

| Naval Activity      | Deficiency Reporting Function | <u>Assessable Unit</u> |                 | Self-Evaluation Performed |
|---------------------|-------------------------------|------------------------|-----------------|---------------------------|
|                     |                               | Deficiency Reporting   | Depot Screening |                           |
| Mechanicsburg       | Screening                     | Yes                    |                 | Yes                       |
| Patuxent River      | Screening                     | Yes                    |                 | Undetermined              |
| Cherry Point        | Action                        | Yes                    |                 | Yes                       |
| Jacksonville        | Action                        | Yes                    |                 | Yes                       |
| North Island        | Action                        | No                     |                 | No                        |
| Marine Corps-Albany | Action                        | No                     |                 | No                        |
| Puget Sound         | Action                        | No                     |                 | No                        |
| Cherry Point        | Depot                         |                        | Yes             | Yes                       |
| Jacksonville        | Depot                         |                        | Yes             | Yes                       |
| North Island        | Depot                         |                        | No              | No                        |
| Marine Corps-Albany | Depot                         |                        | Yes             | Yes                       |
| Puget Sound         | Depot                         |                        | No              | No                        |
| Norfolk             | Depot                         |                        | Yes             | Yes                       |

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## **Appendix B. Prior Coverage**

### **General Accounting Office**

Report No. 01-923, "Defense Inventory: Navy Spare Parts Quality Deficiency Reporting Program Needs Improvement," August 16, 2001

### **Inspector General, DoD**

Report No. D-2002-013, "The Defense Supply Center Richmond Qualified Products List Program," November 2, 2001

Report No. D-2001-054, "Defense Logistics Agency Product Verification Program," February 21, 2001

Report No. D-2001-002, "Defense Logistics Agency Customer Returns Improvement Initiative Program," October 12, 2000

Report No. 98-063, "Defense Logistics Agency Product Quality Deficiency Program," February 5, 1998

### **Air Force Audit Agency**

Report No. 01062009, "Commodity Quality Deficiency Management," August 10, 2001

Report No. 99062011, "Quality Deficiency Reporting," July 7, 2000

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# Appendix C. Interim Results

## Memorandum on Navy Quality Deficiency Reporting Program



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

JUL 2 2001

MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: Navy Quality Deficiency Reporting Program

As part of our audit of the Quality Deficiency Reporting Procedures for Naval Repair Parts, we observed two ongoing conditions that warrant immediate attention. At Headquarters, Naval Air Systems Command (NAVAIR), we noted a complete breakdown in the technical, managerial and administrative functions of the Naval Quality Deficiency Reporting Program. Specifically, we found that staffing and contractual funding reductions have rendered administration of the NAVAIR Quality Deficiency Reporting Program nonoperational. In addition, at the Naval Inventory Control Point (NAVICP), Mechanicsburg, Pennsylvania, we found an asset proven to contain a major safety defect in 1994 and scheduled to be completely removed from inventory still in current supply and available for use.

The Systems Engineering Department has functional responsibility for the management of quality deficiencies at the Headquarters, NAVAIR. Prior to February 1999, the Quality Deficiency Program was staffed with 5 to 7 in-house quality assurance personnel plus 10 additional contract personnel. In February 1999, the Systems Engineering Department reduced the in-house personnel staff to three and rescinded the service contract. Since February 1999, personnel staff reductions and program deemphasis has caused backlogs of at least 1,069 unprocessed quality deficiency reports. The Navy uses the Product Data Reporting and Evaluation Program (PDREP) database to collect and evaluate quality deficiency information. As of June 2001, NAVAIR reported 102 closed cases in PDREP for FY 2000. In contrast, in the three fiscal years prior to the personnel and funding reductions (FYs 1996 through 1998 inclusive), NAVAIR reported 2,366, 3,829, and 2,098 reports closed and entered in PDREP.

NAVAIR personnel estimated that between 1,800 to 2,000 deficiency reports were backlogged where no investigation had been requested, completed or finalized. As an interim measure, NAVAIR began shipping deficiency reports in February 2000, to the Naval Sea Logistics Command Detachment, Portsmouth Naval Shipyard, (the Program Office for the PDREP database). Portsmouth assisted by entering each backlogged deficiency report into the database. However, Portsmouth ceased this assistance in September 2000 and all deficiency report files were returned.

We attempted to determine the number of deficiency reports that were backlogged. We reviewed the deficiency reports that were returned from Portsmouth and documented each report control number, category code (severity of the discrepancy), and stock number. As of May 2001, our review showed that at least 1,069 deficiency reports were backlogged with only 183 of the 1,069 reported as finalized, some dated back as far as 1999. According to Portsmouth documentation, 135 of the 183 finalized reports have not been entered into PDREP. Furthermore, 89 of the 1,069 reports were listed as Category 1 deficiencies. Category 1 deficiencies are classified as "major deficiencies," that could lead to weapon system failures or injury to users. The 89 Category 1 deficiencies affected all of the following: aircraft components involving airframe structure, jet engines, navigational, communication, hydraulic, fuel and electrical systems, aircraft landing gears and helicopter rotor blades.

We believe you should initiate actions to have the Commander, NAVAIR appraise the resources shortfall in this program, its resulting consequences in terms of risk to the fleet, and what can be done to meet the workload requirements.

Our second concern arose during our visit to the NAVICP, Mechanicsburg, where we reviewed defective naval assets to determine the adequacy and completeness of actions taken to remove the items from the Naval inventory. We reviewed the Emergency Escape Breathing Device, which is a self-contained apparatus that provides oxygen when the user is in an oxygen depleted environment (for example, a fire aboard ship). According to a 1995 investigation report, two such breathing devices ignited and caught fire during two different training exercises conducted during September 1995. As a result of the incidents, the Navy directed that the breathing devices be removed from use and from inventory stock.

During FY 2000, NAVICP received five deficiency reports indicating that the breathing devices were still available for use. The deficiency reports were submitted 6 years after the Navy directed removal of the devices from inventory. We reviewed the procedures that NAVICP implemented to locate the defective breathing devices. NAVICP transmitted 2 world-wide notifications to 13 Naval facilities in 1994 that explicitly stated that the breathing devices posed a potential life threatening hazard. The notifications required that all owners identify the quantities of breathing devices in their possession. Six of the 13 facilities responded and the 7 remaining facilities were issued a third notification in 1994. The breathing devices that were turned in to the Navy were stored at the Cheatham Annex, Williamsburg, Virginia.

The NAVICP cannot be assured that it has completely identified and removed all breathing devices from its inventory or from users. The contract for the breathing devices indicated that 87,095 breathing devices had been purchased from the contractor when the recall decision was made. Personnel at the Cheatham Annex indicated that approximately 45,000 breathing devices were returned and are in storage at the facility. NAVICP could not produce documentation indicating the quantity of breathing devices that were identified and returned, nor was there any evidence of communication between NAVICP, the contracting officer, or the material manager, that addressed the quantity of the breathing devices that were still outstanding. Finally, inventory personnel at the Cheatham Annex did not track the source, dates, and exact quantities of the breathing devices that were returned. This information would have been useful for locating and accounting for the outstanding items.

As of May 2001, there may be as many as 42,000 potentially defective breathing devices still available for use in the fleet. In our opinion, the Navy should immediately locate and recall these breathing devices.

We would like to acknowledge Navy corrective actions in our audit report. Therefore we would appreciate receiving information on any actions taken by August 17, 2001. If you have any questions on this matter, contact me or Mr. Terry McKinney, Office of Assistant Inspector General for Auditing, at (703) 604-9288.



Robert J. Lieberman  
Deputy Inspector General

cc: Commander, Naval Air Systems Command  
Commander, Naval Sea Systems Command  
Naval Inspector General

# Appendix D. Navy Response to Interim Results Memorandum



DEPARTMENT OF THE NAVY  
NAVAL INSPECTOR GENERAL  
1014 N STREET SE SUITE 100  
WASHINGTON NAVY YARD DC 20374-5006

IN REPLY REFER TO:  
5740  
Ser N4/ 1384  
20 AUG 2001

From: Naval Inspector General  
To: Deputy Inspector General, Department of Defense  
Subj: NAVY QUALITY DEFICIENCY REPORTING PROGRAM  
Ref: (a) Deputy Inspector General, DoD memo dtd 2 Jul 01  
Encl: (1) Naval Air Systems Command Audit Follow-up Status Report  
(2) Naval Supply Systems Command Audit Follow-up Status Report

1. As requested in reference (a), enclosures (1) and (2) are provided. Questions concerning this matter may be addressed to Ms. Cluster Davies at (202) 433-4834.

  
JILL VINES LOFTUS  
DEPUTY NAVAL INSPECTOR GENERAL

Copy to:  
COMNAVAIRSYSCOM  
COMNAVSUPSYSCOM  
COMNAVSEASYSYSCOM  
NAVICP

NAVAL AIR SYSTEMS COMMAND  
COMMENTS ON  
DODIG MEMORANDUM OF 2 JULY 2001  
ON  
NAVY QUALITY DEFICIENCY REPORTING PROGRAM

The Naval Air Systems Command (NAVAIR) concurs with the conclusions and recommendations as reported. NAVAIR is taking immediate action to increase management awareness, training, and support for the Product Quality Deficiency Reporting (PQDR) program. NAVAIR will ensure that management emphasis is applied to identify the root causes and trends of product deficiencies and that corrective action is taken. NAVAIR will work with other Navy and DoD agencies involved in the implementation and execution of the PQDR program.

NAVAIR has taken immediate action to address and resolve the 89 Category 1 deficiencies as reported in the DoDIG memorandum. Of the 89 Category 1 deficiencies identified by DoDIG as being unprocessed, 29 have been completed, and 40 are in process (21 of which have interim reports completed). One deficiency was a duplicate. Fourteen (14) were not processed but have subsequently been recorded, screened, and assigned to NAVAIR organizations for action. NAVAIR will continue to reconcile the five (5) remaining deficiencies existing between our files and the DoDIG listing.

NAVAIR has assigned additional personnel to reduce the backlog of PQDRs as well as process the daily receipt of new PQDRs. Monthly metrics will be established to monitor the status of the PQDR program. NAVAIR management will review these metrics.

NAVAIR recently reengineered the process for investigating in-service product deficiencies and will expand this effort to address the full range of deficiencies covered by the PQDR program.

Enclosure (1)

**NAVAL SUPPLY SYSTEMS COMMAND (NAVSUP) COMMENTS**  
**ON**  
**DODIG MEMORANDUM OF 2 JULY 2001**  
**ON**  
**NAVY QUALITY DEFICIENCY REPORTING PROGRAM**

**Finding**

At Naval Inventory Control Point (NAVICP), Mechanicsburg, PA, we found an asset proven to contain a major safety defect in 1994 and scheduled to be completely removed from inventory still in current supply and available for use.

At NAVICP Mechanicsburg, we reviewed defective naval assets to determine the adequacy and completeness of actions taken to remove the items from the naval inventory. We reviewed the Emergency Escape Breathing Device (EEBD), which is a self-contained apparatus that provides oxygen when the user is in an oxygen-depleted environment (for example, a fire aboard ship). According to a 1995 investigation report, two such breathing devices ignited and caught fire during two different training exercises conducted during September 1995. As a result of the incidents, the Navy directed the breathing devices be removed from use and from inventory stock.

During fiscal year 2000, NAVICP received five deficiency reports indicating the breathing devices were still available for use. The deficiency reports were submitted 6 years after the Navy directed removal of the devices from inventory. We reviewed procedures the NAVICP implemented to locate the defective breathing devices. NAVICP transmitted 2 worldwide notifications to 13 naval facilities in 1994 that explicitly stated the breathing devices posed a potential life-threatening hazard. The notifications required that all owners identify the quantities of breathing devices in their possession. Six of the 13 facilities responded and the 7 remaining facilities were issued a third notification in 1994. The breathing devices turned in to the Navy were stored at the Cheatham Annex, Williamsburg, VA.

The NAVICP cannot be assured it has completely identified and removed all breathing devices from its inventory or from users. The contract for the breathing devices indicated 87,095 breathing devices had been purchased from the contractor when the recall decision was made. Personnel at the Cheatham Annex indicated approximately 45,000 breathing devices were returned and are in storage at the facility. NAVICP could not produce documentation indicating the quantity of breathing devices that were identified and returned, nor was there any evidence of communication between NAVICP, the contracting officer, or the material manager, that addressed the quantity of the breathing devices still outstanding. Finally, inventory personnel at the Cheatham Annex did not track the source, dates, and exact quantities of the breathing devices returned. This information

**Enclosure (2)**

would have been useful for locating and accounting for the outstanding items.

By May 2001, there may be as many as 42,000 potentially defective breathing devices still available for use in the fleet. In our opinion the Navy should immediately locate and recall these breathing devices.

**NAVSUP Comment**

NAVSUP agrees we cannot account for all 87,095 EEBDs, but disagrees there are potentially 42,000 still in the Fleet. We conducted an extensive review of available records and estimate the number to be 7,095. The results are as follows:

|  |        |
|--|--------|
| - Total S-Tron EEBDs received:   | 87,095 |
| - S-Tron EEBDs recalled and collected  | 45,000 |
| - Documented EEBDs consumed in testing   | 500    |
| - EEBDs consumed training/normal Fleet consumption based on annual demand rate | 32,000 |
| - Coast Guard EEBD returns from recall   | 2,500  |
| - Net unaccounted for S-Tron EEBDs   | 7,095  |

While we cannot specifically account for the 7,095 indicated above, we believe they were turned in or disposed of outside of our collection process and therefore not accounted in the numbers above. The EEBD recall was a high visibility issue that was announced to the Fleet in several naval messages in 1994-95. The use of S-tron EEBDs was initially suspended by the Naval Safety Center (NAVSAFECEN) in September 1994. A Naval Sea Systems Command (NAVSEA) recall was directed on 21 July 1995 and turn-in instructions were issued by NAVSUP in December 1995. Collection teams were dispatched to ships and closely monitored the collection process over an 18-month period. While the completeness of the Navy collection efforts are being questioned in the audit finding, there have been no Navy Quality Deficiency Reports (QDR) received since 1995. In 1999 the United States Coast Guard (USCG) reissued their recall in conjunction with a message introducing the new Ocenco EEBD which resulted in the identification and turn in of 2,500 S-tron EEBDs as noted above. The IG finding indicated that five subsequent QDRs were received, our research found however, six additional USCG QDRs surfaced in 2000, but there have been none since. Based on the wide dissemination of messages, rigorous collection procedures and lack of QDR submissions since the end of FY 2000, we conclude there is a very low probability there are any S-tron EEBDs left in the Fleet.

Since NAVICP cannot conclusively determine that all effected EEBDs have been removed from service, NAVSEA 05 has agreed to change the EEBD Maintenance Requirement Card (MRC) to include a manufacturer inspection. The change directs S-tron EEBDs be immediately removed from service. This change will be incorporated in the next Planned Maintenance Schedule (PMS)

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update scheduled for release in January 2002. In the interim, NAVSEA 05 has directed a pen and ink change to the MRC and immediate implementation of the new inspection procedure via message (COMNAVSEASYSCOM Washington DC 020557Z Aug 01). In addition, NAVSEA has informed USCG of this audit finding, our assessment and the new inspection procedures.

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## **Appendix E. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense (Comptroller)  
Deputy Chief Financial Officer  
Deputy Comptroller (Program/Budget)  
Under Secretary of Defense for Acquisition, Technology, and Logistics  
Deputy Under Secretary of Defense (Logistics)

### **Department of the Army**

Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Research, Development, and Acquisition)  
Assistant Secretary of the Navy (Financial Management and Comptroller)  
Commandant, Marine Corps  
Commanding General, Marine Corps Logistics Base Albany Georgia  
Naval Inspector General  
Auditor General, Department of the Navy  
Commander, Naval Inventory Control Point  
Commander, Naval Air Systems Command  
Commander, Naval Aviation Depot Jacksonville  
Commander, Naval Aviation Depot Cherry Point  
Commander, Naval Aviation Depot North Island  
Commander, Naval Sea Systems Command  
Commander, Naval Shipyard Puget Sound  
Commander, Naval Supply Systems Command

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force

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## **Other Defense Organizations**

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
  Director, Defense Supply Center Columbus  
  Director, Defense Supply Center Philadelphia  
  Director, Defense Supply Center Richmond  
  Commander, Headquarters Defense Distribution Center  
    Commander, Defense Distribution Depot Norfolk  
    Commander, Defense Distribution Depot Cherry Point  
    Commander, Defense Distribution Depot Jacksonville  
    Commander, Defense Distribution Depot Puget Sound  
    Commander, Defense Distribution Depot San Diego  
    Commander, Defense Distribution Depot Albany

## **Non-Defense Federal Organization**

Office of Management and Budget

## **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

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 Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Reform  
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform  
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform  
House Subcommittee on Technology and Procurement Policy, Committee on Government Reform

# Department of the Navy Comments



DEPARTMENT OF THE NAVY  
OFFICE OF THE ASSISTANT SECRETARY  
RESEARCH, DEVELOPMENT AND ACQUISITION  
1000 NAVY PENTAGON  
WASHINGTON DC 20350-1000

28 FEB 2002

MEMORANDUM FOR DoD INSPECTOR GENERAL

Subj: DODIG DRAFT REPORT ON QUALITY DEFICIENCY REPORTING  
PROCEDURES FOR NAVAL REPAIR PARTS (Project No.  
D2001CF-0090)

This memorandum is responding to your request for comments to the Draft Report on Quality Deficiency Reporting Procedures for Naval Repair Parts, Project No. D2001CF-0090 dated December 21, 2001. The enclosed summary report incorporates the views of the Commander, Naval Air Systems Command, Commander, Naval Inventory Control Point, and Commanding General of the Marine Corps Logistics Base. The summary addresses findings A-C for the Navy. Finding D response is the responsibility of the Defense Logistics Agency. There is no information contained in the summary report that should be exempt from public release.

The audit report addresses various shortfalls in the Navy's Quality Deficiency Reporting Procedures, and I am pleased to report that the Navy has taken the findings and recommendations seriously, and we are responding with a focused and proactive approach for significant process improvement.

I appreciate the opportunity to provide my views on the draft report. If you desire additional information or clarification, please contact Ms. Kim Bloomer at (703) 693-0896 (bloomer.kim@hq.navy.mil).

A handwritten signature in cursive script, reading "William A. Stussie".

William A. Stussie  
Deputy Assistant Secretary of the Navy  
For (Air Programs)

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**Assistant Secretary of the Navy  
Comments to DOD IG Audit Report on  
Quality Deficiency Reporting Procedures for Naval Repair Parts  
Project No. D2001CF-0090**

**FINDING A**

The Naval Air Systems Command's current staffing shortages, coupled with the lack of emphasis and oversight, contributed to an overall ineffective management of the product quality deficiency reporting program. As a result, potentially nonconforming items, valued at as much as \$163 million and involving as many as 138,000 individual items, were not screened, nor given consideration for removal from inventory

**ASN RDA RESPONSE**

Partially concur with the finding. I agree that Naval Air Systems Command (NAVAIR) did not perform the Product Quality Deficiency Reporting (PQDR) Screening Point responsibilities efficiently. The screening point is an administrative function to confirm PQDRs are properly prepared, assigned to the correct technical organization for investigation (i.e. the Action Point), and properly entered, closed, and tracked in the Product Data Reporting and Evaluation Program (PDREP) database. While they were deficient in some aspects of these functions, NAVAIR effectively performed the more crucial Action Point responsibilities. PQDRs were investigated in a timely manner to identify the cause and responsibility of the reported deficiencies. Where they failed was in not recording or tracking the PQDR data into the PDREP system in a timely manner.

**Action Completed to date**

NAVAIR has eliminated their exposure to large backlogs of reports not keyed into PDREP with an Information Technology (IT) solution at the Aviation Depots and Warfare Centers. In the previous manual process PQDR originators sent PQDRs to the technical experts, the Fleet Support Teams (FST)'s, who in turn sent copies of PQDRs and replies to NAVAIR HQ for entry into PDREP. This new IT solution allows for transferring data from local database systems to PDREP in electronic media. Through the IT solution, the PDREP will be populated with incoming PQDRS, and replies, to preclude backlog. In addition, they have added additional manpower resources to support other PQDR processing functions.

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### **Action Planned or in Progress**

To further improve the PQDR process NAVAIR has commenced a PQDR reengineering process that leverages off their successful Engineering Investigation reengineering effort and benefits from those lessons learned. The PQDR reengineering effort includes NAVICP in this effort. The goal of this effort is to identify and leverage currently used methodologies and technologies to optimize the process. The result of this reengineering effort will be a single Naval aviation focal point responsible for all customer PQDRs and the incorporation of a tracking system to provide current status of all outstanding PQDRs. The introduction of web-enabled technologies and workflow management practices will make the program less resource dependent, while greatly improving its effectiveness.

In addition to the PQDR reengineering, a function requirement for report distribution is automating the Screening Point selection and deficiency report distribution. The approach to resolving the Deficiency Report screening and distribution problem is by implementing the DoD Business Initiative Council (BIC) initiative to establish a common interface for transferring PQDR data across DoD Service Component Lines. The data elements required to establish the common interface have been identified and agreed upon by the DoD Components, Defense Contract Management Agency, Defense Logistics Agency, Federal Aviation Administration, and General Services Administration. The required IT solution is available and is currently support other very similar data exchange applications across DoD.

### **DOD IG RECOMMENDATION**

A.1.

We recommend that the Assistant Secretary of the Navy for Research, Development, and Acquisition provide the resources to the Engineering and Product Directorate, Product Quality Department, Naval Inventory Control Point, Philadelphia, Pennsylvania, for centralized management, accountability, control, and oversight functions for the Naval Aviation Systems Command Headquarters deficiency reports, as prescribed in all the Naval Inventory Control Point Instruction 4400.73, "Process Quality Deficiency Reports on Aviation Material," August 13, 1999.

### **ASN RDA RESPONSE**

Do not concur with the recommendation. I disagree that the recommendation to centralize PQDR management, accountability, control and oversight functions at the Naval Inventory Control Point (NAVICP), Philadelphia will improve Navy's management of the PQDR process. The ongoing PQDR reengineering process will complete and deploy within 18 months and since NAVICP is a critical partner

in the upcoming automated process, there is no apparent benefit to transferring functions to the NAVICP. Further, as a result of the audit, NAVAIR has combined Screening and Action Point responsibilities at their technical activities (FSTs) which has streamlined the PQDR process and establishes one organization accountable for both administrative and technical PQDR responsibilities. NAVAIR has taken action to revise OPNAVINST 4790.2H to ensure all Navy organizations are aware of the process improvements.

A.2.

We recommend that the Commander, Naval Air Systems Command complete a one-time review of Naval Air Systems Command inventory of repair parts identified as deficient from the unprocessed quality deficiency reports and determine whether nonconforming parts are still stocked in inventory and should be eliminated.

#### **ASN RDA Response**

Partially concur. NAVAIR has reviewed the PQDR backlog, which revealed the following:

1. Deficiency reports assigned to the field activities had been processed and nonconforming material dispositions provided, but these deficiency reports had not been entered in the PDREP data system. When stock screening was the appropriate action, the stock screening recommendation was addressed to the Quality Assurance at NAVICP.

2. There was a backlog of unprocessed deficiency reports assigned that were not entered in PDREP. Deficiency reports assigned to NAVAIR are typically reports of nonconforming Government Furnished Equipment sent from Original Equipment Manufacturers (OEM) to Primes for Aircraft integration. Screening is not appropriate action for this type of material because contract warranties allow return of these products to the OEM for no cost resolutions.

#### **Action Planned or In Progress**

As mentioned previously, NAVAIR has developed an IT solution to eliminate the backlog of reports not keyed into PDREP. Once all backlogged reports have been entered into PDREP, NAVAIR will study their quality data to identify trends or recurring nonconformance conditions, and recommend screening actions where appropriate. NAVAIR in cooperation with NAVICP will determine whether nonconforming parts are still stocked and should be eliminated.

As part of the PQDR reengineering process, NAVAIR has established a team led by NAVICP to resolve current problems with stock screening and carcass tracking. This team will actively identify and resolve those issues that preclude effective shipment and tracking of exhibits, screening of discrepant materials,

and carcass crediting. This team has also been tasked to improve the overall effectiveness of this part of the PQDR process.

**Points of Clarification**

On page 11, paragraph titled *Current Responsibilities of Naval Inventory Control Point, Philadelphia*, in the first sentence, request change "...has not performed the functions outlined in the instruction because the Product Quality Department had not received a deficiency report from the aviation depots since 1994." To "...has not performed the stock screening function outlined in the instruction because the Product Quality Department had not received a request for stock screening from the aviation depots since 1994."

The instruction identifies several actions, or functions, that the Product Quality Department performs on a routine basis at the request of the aviation depots. As written, the report implies that no functions are being performed, which is inaccurate. It is accurate, however, to state that stock screen actions have not been performed because the aviation depots have not made such a request since 1994.

Also, as a point of correction, the recommendation implies that management, accountability, control and oversight functions for the NAVAIR deficiency reports are prescribed in NAVICP Instruction 4400.73, "Process Quality Deficiency Reports on Aviation Material," August 13, 1999. That is not the case. The instruction covers only those functions NAVICP performs in support of NAVAIR's program.

**FINDING B**

Quality assurance staff at the Naval Inventory Control Point, Mechanicsburg, Pennsylvania, did not establish management control procedures to ensure that Naval Sea Systems Command-managed items that were previously identified as nonconforming were removed from Navy depots and supply inventories. As a result, as many as 331,000 potentially nonconforming items, valued at as much as \$66 million, were either issued to or remained available for issue to Navy users.

**DOD IG RECOMMENDATION**

**B.1**

Develop and implement a comprehensive followup system to track quantities of nonconforming items and, based upon procurement quantities of the items, develop a full accounting for them.

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**ASN RDA Response**

Concur in principle that a comprehensive followup system is critical to track nonconforming items. I feel the current stock screening process at NAVICP, when initiated by the Integrated Material Manager (IMM), meets the necessary requirements. The level of screening and follow-up is currently performed based on technical, contractual and efficiency factors. In many cases, screening is designed to recover items with some level of non-conformance for return/rework by the vendor, or to remove items with minor design discrepancies from further dissemination. For these and similar cases, less intensive screening, perhaps only of the wholesale system, is the appropriate and most cost-effect approach.

The finding specifically referenced NAVSEA-managed assets. This material is generally limited to large, complex end-items, and is normally installed at time of shipbuilding or overhaul. If found to be defective, NAVICP can perform screening at any level designated by the In-Service Engineering Activity.

**B.2.**

Implement a notification procedure to activities that were issued nonconforming items and provide appropriate disposition instructions to the users.

**ASN RDA Response**

Partially concur with the recommendation. The NAVICP ensures adequate screening notification for supply system material through various methods. The primary vehicle for notification is Naval Message, or similar traffic, by the Integrated Material Manager, to all holders of record of the material. In addition, all defective material screenings are summarized in a bi-monthly document, the Defective Material Summary (DMS), which is electronically available to all Navy activities and distributed in hard copy format to 765 separate addressees. Through these vehicles, the wholesale and retail system, along with the end-user is notified of the existence of defective material and the need for screening. To further improve on the existing system, NAVICP is currently working with NAVSEALOGCEN Portsmouth to link the DMS from their extranet to their web page, providing another venue for customers.

**FINDING C**

Procedures to identify, investigate, and resolve nonconforming items procured with contractor warranties were ineffective at the Marine Corps Logistics Base, Albany, Georgia. The Marine Corps has no assurance that nonconforming items procured with contractor warranties were corrected or eliminated from inventory. In addition, the Marine Corps may have as many as 8,800 items in inventory or in use with a procurement value of as much as \$87 million that are deficient and unreliable.

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**DOD IG RECOMMENDATION:**

C.1

Develop and implement comprehensive trend analysis procedures that enable quality assurance staff to identify trends of reported potentially nonconforming items by specific deficiency.

C.2

Notify the Defense Contract Management Agency when quality deficiency reports identify deficiencies that may be related to substandard or faulty workmanship.

C.3

Establish procedures to screen nonconforming items, based on information obtained from trend analysis, while contractor warranties for the item are still valid.

**ASN RDA Response**

Concur. The Marine Corps will develop and implement comprehensive procedures to ensure quality assurance is in place for all weapon systems. Estimated completion date of this effort is 30 September 2002. There is currently in staffing a draft Memorandum of Agreement between Naval Sea Logistics Center Detachment, Portsmouth and the Marine Corps to automate the Product Data Reporting and Evaluation Program (PDREP) and provide access to the Marine Corps via easily accessible on-line reports. Once on-line access to PDREP is completed, any Marine Corps agency granted access to PDREP will be able to track PQDRs and performance history based on National Stock Number, Federal Stock Class, and Commercial and Government Entity codes.

# Defense Logistics Agency Comments



DEFENSE LOGISTICS AGENCY  
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MAR 15 2002

IN REPLY  
REFER TO J-33

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING  
DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report No. D2001CF-0090, Quality Deficiency Reporting  
Procedures for Naval Repair Parts, December 21, 2001

The Defense Logistics Agency (DLA) concurs with the intent of the DoDIG Recommendation D to ensure that valid Product Quality Deficiency Reports (PQDRs) be provided to DDC to ensure screening actions are completed. However, elements within the Navy's Defective Material Summary Report highlight either pending and/or valid PQDRs against DLA-managed items and should be addressed by the DLA Supply Centers. Therefore, alternative recommendations are proposed as follows:

- a. We recommend that the Commanders, Defense Supply Centers (DSCs) serve as the Action Points, consistent with the Joint Service Directive/Instruction, DLAD/I 4155.24, Product Quality Deficiency Report Program, to ensure screening alerts are initiated and action taken as soon as possible to reclassify/remove defective material held in inventory on DLA-managed items. It is also recommended that the DSCs work with the Navy to reconcile data concerning DLA-managed items listed in the Navy's Defective Material Summary Report.
- b. We recommend that the Commander, Defense Distribution Center (DDC) monitor DLA and Military Service screening alerts to ensure inspection is timely and reclassification actions are completed by the DDC storage activities.

We appreciate the opportunity to comment on the draft report. Questions may be referred to Mr. Larry D. Clark, Technical and Quality Policy Division, (703) 767-2630, Ms. Carolyn Farley, Distribution Management, (703) 767-2553, or Ms. Peggy Hayes, Internal Review Office, (703) 767-6262.

CLAUDIA S. KNOTT  
Executive Director  
Logistics Policy and Acquisition Management

Added  
Recom-  
mendation  
D.2

Added  
Recom-  
mendation  
D.3

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## **Audit Team Members**

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