

# Inspector General

United States  
Department of Defense



Rapid Acquisition and Fielding of Materiel Solutions  
by the Navy

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## Acronyms and Abbreviations

ASN (RD&A)	Assistant Secretary of the Navy (Research, Development, and Acquisition)
C4I	Command, Control, Computers, Communications, and Intelligence
CNO	Chief of Naval Operations
COMOPTEVFOR	Commander, Operational Test and Evaluation Force
CVN PDR	Carrier Vessel Nuclear Periscope Detection Radar
DAMTC	Direct Attack Moving Target Capability
EMIO	Expanded Maritime Intercept Operations
LRIP	Low-Rate Initial Production
PEO	Program Executive Officer
QRA	Quick Reaction Assessment
RDC	Rapid Deployment Capability
RDD	Rapid Development and Deployment
SECNAV	Secretary of the Navy
SNR HFIP	Sub Net Relay High Frequency Internet Protocol
SSESM/SEI	Small Ship Electronic Support Measure/Specific Emitter Identification
TRL	Technology Readiness Level
U.S.C.	United States Code
WRBS	Wireless Reachback System



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

December 15, 2009

MEMORANDUM FOR NAVAL INSPECTOR GENERAL

SUBJECT: Rapid Acquisition and Fielding of Materiel Solutions by the Navy  
(Report No. D-2010-028)

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. The comments from the Executive Director, Acquisition and Logistics, were not responsive to Recommendations A.1.a and A.3 and were only partially responsive to Recommendations A.2, B.1.a.1, B.2, and C. Additionally, we revised Recommendation A.1.b. based on the Executive Director's comments. Therefore, we request additional comments as indicated in the recommendations table on page ii by January 15, 2010.

If possible, send your comments in electronic format (.pdf file only) to [audacm@dodig.mil](mailto:audacm@dodig.mil). Copies of your comments must have the actual signature of the authorizing official for your organization. We are unable to accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9201 (DSN 664-9201).

A handwritten signature in cursive script that reads "Richard B. Jolliffe".

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management

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# Results in Brief: Rapid Acquisition and Fielding of Materiel Solutions by the Navy

## What We Did

We reviewed the Navy's process for rapidly acquiring and fielding materiel solutions to meet urgent needs in support of the operations in Southwest Asia and to ensure the safety of naval forces. Specifically, we evaluated the effectiveness of Navy procedures for identifying and validating urgent needs, acquiring materiel solutions to meet those needs, and complying with DOD requirements and acquisition policies. Since 2004, the Navy has initiated 13 rapid acquisition efforts with total funding of \$104.8 million for research, development, test, and evaluation, and \$172.4 million for procurement.

## What We Found

The Navy had adequate procedures for identifying and validating urgent capability needs and was following these procedures. However, internal controls in the following areas still need improvement.

Navy Program Executive Officers, through their approval of rapid acquisition strategies, did not attempt to control initially procured quantities to mitigate the risks of procuring large quantities of not fully proven materiel solutions. Controls over initially procured quantities were needed to prevent significant acquisitions of equipment whose operational performance was not known.

The Assistant Secretary of the Navy (Research, Development, and Acquisition) did not provide specific guidance or lessons learned for planning and executing acquisition strategies for fulfilling urgent needs requests. Acquisition managers need this specific guidance and institutional knowledge to facilitate the timely and effective planning and execution of urgent needs acquisitions. Navy program sponsors did not request that the Commander, Operational Test and Evaluation Force, perform quick

reaction assessments of materiel solutions designated as rapid development and deployment efforts. The quick reaction assessments were needed to provide an independent early evaluation of the operational effectiveness and suitability of materiel solutions before the solutions were deployed.

## What We Recommend

The Assistant Secretary of the Navy (Research, Development, and Acquisition) should:

- limit planned procurement under rapid acquisition strategies to the low-rate initial production of items to meet the immediate urgent need, and document how the initial procurement quantities tie to the threat that is driving the urgent needs request;
- provide guidance to Navy acquisition officials for implementing streamlined acquisition strategies to meet urgent needs and for the transition from urgent needs acquisitions to programs of record; and
- revise policy to require the Commander, Operational Test and Evaluation Force, to independently plan quick reaction assessments for rapid development and deployment solutions to meet urgent needs.

## Management Comments and Our Responses

The Navy agreed or partially agreed with recommendations for documenting how planned rapid acquisition procurement quantities tie to the threat, providing enhanced guidance and procedures for implementing rapid acquisition strategies, and involving operational testers in assessing rapidly acquired items. The Navy disagreed with recommendations for limiting quantities of items procured through rapid acquisition. We request additional comments as indicated in the table on page ii.

## Recommendations Table

<b>Management</b>	<b>Recommendations Requiring Comment</b>	<b>No Additional Comments Required</b>
Assistant Secretary of the Navy (Research, Development, and Acquisition)	A.1.a, A.1.b, A.2, A.3, B.1.a.1, B.2, and C	A.1.c, B.1.a.2, and B.1.b

Please provide required comments by January 15, 2010.

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# Introduction

## Objectives

The objective of the audit was to evaluate the overall management of the Navy's process for rapidly acquiring and fielding materiel solutions to meet urgent needs in support of the operations in Southwest Asia and to ensure safe operation of naval forces.

Specifically, the audit evaluated the effectiveness of Navy procedures for identifying and validating urgent capability needs, contracting and acquiring materiel solutions to meet those needs, and complying with DOD requirements and acquisition policies. See Appendix A for a discussion of the audit scope and methodology.

## Background

### ***Public Law on Rapid Acquisition***

Public Law 107-314, "The Bob Stump National Defense Authorization Act for Fiscal Year 2003," December 2, 2002, requires in section 806, "Rapid Acquisition and Deployment Procedures," that the Secretary of Defense prescribe procedures for rapid acquisition and deployment of items that are:

- currently under development by the DOD or available from the commercial sector, and
- urgently needed to react to enemy threats or to respond to significant and urgent safety situations.

Public Law 108-375, "The Ronald Reagan National Defense Authorization Act for Fiscal Year 2005," October 28, 2004, amended Public Law 107-314 through section 811, "Rapid Acquisition Authority to Respond to Combat Emergencies," giving the Secretary of Defense authority to rapidly acquire equipment to respond to combat emergencies. Specifically, section 811 states that if the Secretary of Defense determines that any equipment is urgently needed to eliminate a combat capability deficiency that has resulted in combat fatalities, the Secretary can use the procedures the section provides to rapidly acquire and deploy needed equipment. Section 811 procedures allow the Secretary of Defense to waive any provision of law, policy, directive, or regulation for equipment requirements; research, development, test, and evaluation; and contracting. Appendix B provides the full text of sections 806 and 811 of the respective public laws.

### ***Navy Policy and Guidance***

In 1996, the Navy established policy to react immediately to newly discovered or potential threats and to respond to significant and urgent safety situations. This policy, defined in Secretary of the Navy (SECNAV) Instruction 5000.2B, "Implementation of Mandatory Procedures for Major and Non-Major Defense Acquisition Programs and Major and Non-Major Information Technology Acquisition Programs,"

December 6, 1996, allowed program managers to use tailored acquisition procedures that streamlined and expedited requirements, acquisition, budgeting, and contracting through a rapid deployment capability (RDC) process.

As defined, Navy program managers could use the RDC process to acquire commercial or developmental products as materiel solutions for reacting to new enemy threats. The Instruction provided a tailored process for initiating and managing development of capabilities for rapid deployment. The tailored approach was designed to:

- streamline the dialogue among the requirements, the budgeting, and the acquisition management communities;
- expedite technical, programmatic, and financial decisions;
- expedite the procurement and contracting processes;
- provide oversight of critical events and activities; and
- ensure equipment is interoperable and capable of being integrated with other systems as urgency permits.

To implement the RDC process, the Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN [RD&A]) assigned Program Executive Officers (PEOs) and Program Managers the responsibility to plan and execute rapid acquisition efforts. Since 1996, the Navy has updated and improved the RDC process through updates to SECNAV Instruction 5000.2B, memoranda from the ASN (RD&A) and the Chief of Naval Operations (CNO), and a SECNAV Notice. The SECNAV Notice, the most recent of these updates, established a uniform process for responding to urgent needs requests within the Navy and the Marine Corps.

SECNAV Notice 5000, “Department of the Navy Urgent Needs Process,” March 12, 2009, states that the Navy’s uniform process for meeting urgent needs synchronizes abbreviated and overlapping requirements, resourcing, and acquisition processes to address mission-critical warfighting capability gaps more rapidly than through traditional processes. The Chairman of the Joint Chiefs of Staff Instruction 3170.01G, “Joint Capabilities Integration and Development System,” March 1, 2009, and the DOD 5000 series of acquisition guidance define the traditional process. The SECNAV Notice identifies three phases for filling capability gaps through the urgent needs process. The three phases are needs identification and certification, solution strategy development and resourcing, and solution execution. Appendix C provides a flowchart of the Navy’s urgent needs process and provides descriptions of the three phases for addressing capability gaps.

Appendix D highlights improvements the Navy has made in its policy and guidance for meeting urgent needs since 1996. Additionally, Appendix E lists the 13 rapid acquisitions to meet urgent needs that the Navy initiated between 2004 and the start of our audit in August 2008. Total funding for the 13 acquisition efforts was \$104.8 million for research, development, test, and evaluation, and \$172.4 million for procurement.

## **Procedures for Identifying and Validating Urgent Capability Needs**

During the initial phase of the audit, we determined that the Navy's procedures for identifying and validating urgent capability needs were adequate and that the Navy staff from the offices of the CNO, the ASN (RD&A), and the Fleet Forces Command were following those procedures.

## **Review of Internal Controls**

DOD Instruction 5010.40, "Managers' Internal Control Program Procedures," January 4, 2006, requires DOD organizations to implement a comprehensive system of internal controls that provides a reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified internal control weaknesses in the Navy's process for rapidly acquiring and fielding materiel solutions to urgent needs requests. Navy policy and procedures allowed PEOs to approve risky solution strategies. The strategies permitted managers for rapid acquisitions to exceed the quantities required for low-rate initial production (LRIP) without documenting or justifying the excessive quantities, heightening the risk of procuring large quantities of not fully proven materiel solutions.

Additionally, ASN (RD&A) did not provide PEOs with specific guidance and procedures for planning and executing acquisition solutions, and did not give the Commander, Operational Test and Evaluation Force (COMOPTEVFOR), authority to conduct quick reaction assessments (QRAs) of Navy rapid development and deployment (RDD) acquisitions. Implementing our recommendations in Findings A, B, and C will ensure acquisition officials limit initial procurements of not fully proven materiel solutions to the quantities required to satisfy immediate urgent needs, adequately plan and execute acquisition strategies responding to urgent needs requests, and authorize the COMOPTEVFOR to plan and perform QRAs in support of RDD acquisitions. We will provide a copy of the report to the senior official responsible for internal controls in the Department of the Navy.

## **Finding A. Limiting and Justifying the Quantities of Items Initially Procured to Satisfy Urgent Needs Requests**

Navy PEOs did not control quantities initially procured to satisfy urgent needs requests. Specifically, they could have tailored RDC acquisition strategies to mitigate the risks associated with procuring large quantities of not fully proven materiel solutions. The PEOs:

- allowed acquisition managers to procure quantities of items that exceeded quantities typically required for LRIP, where LRIP quantities are the quantities that are necessary to provide production items for initial operational test and evaluation, to establish an initial production base, and to permit an orderly increase in the production rate for the systems; and
- did not include the acquisition managers' justification for the quantities of items planned for initial acquisition in any of the eight acquisition strategies we reviewed.

Legislation authorizing DOD organizations to rapidly acquire items to support urgent needs specifies that rapid acquisition procedures should be used to procure only those quantities established for LRIP of a system. The policy of limiting production ensures that DOD organizations perform sufficient operational testing before making a substantial investment in a system. Conformance with the policy allows organizations to ensure that systems meet warfighter capability requirements without requiring substantial retrofits. The PEOs approved RDC acquisition strategies without limiting initial production quantities because the ASN (RD&A) program guidance did not emphasize that PEOs should consider program risk, including technology maturity as measured by technology readiness levels (TRLs) of items, in making decisions concerning the initial quantities of items to procure. As a result, Navy PEOs committed to acquiring large quantities of equipment before knowing how well the equipment performed, thereby increasing the risk of not meeting warfighter capability requirements without costly retrofits.

### **Policy on Procurements**

To limit program risk, public law, defense policy, and Navy policy limit the quantity of items acquisition managers can initially procure in response to urgent needs requests.

#### ***Public Law***

Provisions in section 806 of Public Law 107-314 limit the quantities of items acquisition managers can rapidly procure in response to urgent needs requests. Section 806 states that the quantity of items procured using rapid acquisition procedures may not exceed the number established for LRIP. While section 806 sets quantity limitations on rapid procurements, the Public Law gives the Secretary of Defense the authority to waive the LRIP quantity limitation for urgently needed items. Specifically, section 811 of Public Law 108-375 states that, in the case of equipment that the Secretary of Defense has

determined is urgently needed to eliminate a capability deficiency that has resulted in combat fatalities, the Secretary can authorize DOD officials to waive any law, policy, or regulation regarding establishing requirements, performing test and evaluation, and procuring the equipment.

### ***Defense Policy***

DOD has a long history of accepting high technology risk and suffering the consequences. To minimize risk, DOD issued Instruction 5000.02, "Operation of the Defense Acquisition System," December 8, 2008. It defines LRIP as the minimum quantity necessary to:

- provide production items for operational testing,
- establish an initial production base, and
- permit an orderly increase to full-rate production upon successful completion of operational testing.

DOD Instruction 5000.02 also states that acquisition officials must manage and mitigate technology risk. This requirement allows less costly and less time-consuming systems development and is especially relevant to meeting program cost and schedule goals. The Instruction further requires that acquisition officials conduct objective assessments of technology maturity and risk as a routine aspect of DOD acquisition through technology readiness assessments, which include an assessment of TRLs. Appendix F lists the TRLs for hardware, ranging from 1 to 9 in order of increasing technical maturity. The higher the TRL a system demonstrates during testing, the lower the risk that the system will fail to satisfy warfighter capability requirements when produced and fielded.

### ***Navy Policy***

ASN (RD&A) memorandum, "Rapid Acquisition Processing Update," August 1, 2007, established quantity limitations for acquisition efforts designated as RDCs and funded at or above the level of a major system. The memorandum states that for those programs, RDC quantities should be less than 10 percent of the total planned production quantities. The memorandum also requires that Navy commanders include an explanation, in the quantities required section of all urgent needs requests, regardless of funding level, of how the quantities tie to the threat or urgency that is driving the urgent needs request.

SECNAV Notice 5000 defines an urgent need as an exceptional request from a Navy or Marine Corps component commander for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions and may increase the probability of casualties and loss of life. The SECNAV Notice states that processing and responding to urgent needs take precedence over deliberate capability development. The SECNAV Notice further states that, under the deliberate process, the traditional capability development process is used to provide long-term capabilities. The traditional process, as defined in Chairman of the Joint Chiefs of Staff Instruction 3170.01G requires that the Navy obtain Joint Requirement Oversight Council approval of capability requirements through the Joint Capabilities

Integration and Development System process. Under the urgent needs process, the Navy can initiate developmental efforts and procurement of initial item quantities without first going through the Joint Capabilities Integration and Development System process. The Navy's urgent needs process streamlines the requirements, resources, and acquisition processes, but it is still subject to statutes and regulations. The Navy's urgent needs solution strategies include procuring RDCs, which are slightly modified commercial off-the-shelf and nondevelopmental items, and RDDs, which are test prototype solutions undergoing development and integration. SECNAV Notice 5000 states that RDC solution candidates typically have a TRL of 8 or 9. A TRL of 8 means that the actual system has been proven to work in its final form and under expected conditions. A TRL of 9 means that the actual system has also been used under mission conditions. For RDDs, the SECNAV Notice states that solution candidates typically have a TRL of 6 or 7. A TRL of 6 means that a prototype system has been demonstrated in a relevant environment such as a laboratory simulation. A TRL of 7 means that the prototype system has also been demonstrated in an actual operational environment.

## **Use of Quick Reaction Assessments**

For decisions to field items acquired through RDC efforts, Navy milestone decision authorities depend on the QRAs that COMOPTEVFOR performs. The QRA is a quick assessment that examines specific operational considerations and capabilities of a system. The QRA therefore does not provide the determination of a system's operational effectiveness and suitability that acquisition managers need to support full-rate production. SECNAV Instruction 5000.2D, "Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System," October 16, 2008, states that QRAs do not obviate or replace the operational testing that COMOPTEVFOR will perform for acquisition programs of record before milestone decision authorities make full-rate production decisions.

## **Item Quantities and Justification**

Navy PEOs allowed acquisition managers to procure quantities of items that exceeded quantities typically required for LRIP, where LRIP quantities are the quantities necessary to provide production items for initial operational test and evaluation, to establish an initial production base, and to permit an orderly increase in the production rate for the systems. Further, the Navy PEOs did not request that acquisition managers justify the initial procurement of the increased quantities.\*

### ***Item Quantities***

The table that follows shows that acquisition strategies for five of the eight RDC acquisitions reviewed had RDC quantities approved by the PEO that exceeded 20 percent of the expected total production quantities. Most significantly, three of the RDC acquisitions had RDC quantities that were 50 to 100 percent of the expected total production quantities. Total production quantities included quantities procured to meet

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\* As a frame of reference, section 2400, title 10, United States Code, states that for major systems acquisitions, DOD must provide reasons when the LRIP quantity exceeds 10 percent of the total planned production.

an urgent needs request and quantities to be procured after the RDC acquisitions' transition to programs of record. Navy PEOs had not determined that the five RDC acquisitions were urgently needed to eliminate a capability deficiency that had resulted in combat fatalities, and therefore had not sought a waiver of LRIP quantity limitations from the Secretary of Defense.

### Quantities Approved in RDC Acquisition Strategies

Program	Date of PEO Approval	Approved RDC Quantity	Total Production	RDC Quantity as a Percent of Total
1. Small Ship Electronic Support Measure / Specific Emitter Identification (SSESM/SEI)	March 31, 2005	23	23	100.0
2. Carrier Vessel Nuclear Periscope Detection Radar (CVN PDR)	August 4, 2009	11	11	100.0*
3. Automatic Identification System	December 14, 2006	154	304	50.7*
4. Expanded Maritime Intercept Operations (EMIO) Biometrics Identity Dominance Toolset	December 15, 2006	140	468	29.9
5. Commercial Broadband Satellite Program	July 3, 2007	49	233	21.0
6. Sub Net Relay High Frequency Internet Protocol (SNR HFIP)	August 17, 2007	35	243	14.4
7. EMIO Wireless Reachback System (WRBS)	May 25, 2008	20	139	14.4
8. Direct Attack Moving Target Capability (DAMTC)	October 1, 2007	400	7,351	5.4

\*For two of the eight RDC acquisitions, the CVN PDR and the Automatic Identification System, the RDC quantity as a percent of total production may fall from 100 percent and 50.7 percent, respectively, because the Navy is considering adding the equipment to additional ship classes. Also, for the EMIO WRBS, the 139 includes 14 funded by Army RDT&E.

As with normal programs of record, quantities in excess of LRIP requirements should not be procured until the completion of a dedicated initial operational test and evaluation that determines that the items are operationally effective and suitable. Initial procurements exceeded quantities that are typically required for LRIP because the Navy issued guidance that did not apply the LRIP quantity levels to RDCs not funded as major systems. By applying the quantity levels only to RDCs funded as major systems, the Navy did not effectively implement the LRIP quantity limitation in section 806 of Public Law 107-314. Specifically, under the ASN (RD&A) criteria, none of the eight RDC acquisitions we reviewed would have had their RDC acquisition quantities restricted to quantities needed to satisfy the immediate urgent need because none of the RDC

acquisitions were funded at or above the level of a major system. Unlike the Navy policy, section 806 of Public Law 107-314 did not limit the LRIP quantity restriction to programs funded at or above the level of a major system.

### ***Justification for Quantities***

Acquisition managers for all eight RDC acquisition programs reviewed did not document in their acquisition strategies the rationale for the quantities of items needed to satisfy the immediate urgent need, nor did the managers of seven RDCs justify their procurement of item quantities in excess of quantities typically required for LRIP. PEOs approved four of the eight acquisition strategies before the ASN (RD&A) established the policy requiring acquisition managers to justify planned RDC procurement quantities. The PEOs for the remaining four programs that had acquisition strategies approved after August 1, 2007, did not enforce the August 1, 2007, ASN (RD&A) memorandum requiring RDC acquisition managers to document in their acquisition strategies the rationale for the quantities of items they planned to procure in response to urgent needs.

### **Increased Program Risk**

Navy acquisition officials increased the risk that quantities in excess of those needed to satisfy the immediate urgent need will be procured and later require costly retrofits before the items will fully satisfy warfighter capability requirements. Costly retrofits may be needed because at least one of the eight RDCs was assessed at a TRL of 7, denoting that a system prototype, rather than an actual system, was demonstrated in an operational environment. At TRL 7, therefore, testers have not proven that the system technology works in its final form and under expected conditions. Further, the DOD's "Technology Readiness Assessment Deskbook," May 2005, does not recommend going beyond LRIP until a system has at least attained a TRL of 8, which requires proving the technology in final form and under expected conditions. We did not find TRL assessments for the other seven RDCs. Officials increased risk through their reliance on QRAs that COMOPTEVFOR conducted for the RDCs to support up to 100 percent of planned program production. Unlike full testing of all effectiveness and suitability requirements applicable to initial operational test and evaluation, QRAs test only selected requirements. QRAs for five of the eight RDCs did not test whether the equipment met all reliability, availability, and maintainability operational requirements. Properly used, QRAs do assess operational considerations and capabilities of the system and thus help decrease the risk in initial procurement quantities. For example, one QRA identified problems with the interoperability of the equipment with other systems. Examples of recommendations made in QRAs to program offices included making design improvements to address interoperability, performing additional QRAs, and performing dedicated initial operational test and evaluation as part of a program of record to substantiate the QRA test results. However, QRAs are not intended to determine whether the equipment items are operationally effective and suitable under mission conditions, as required for TRL 8, so QRAs cannot be used to support procurement of total quantities. The Navy would not need to use the urgent needs process to acquire items as RDCs if the equipment had already been demonstrated to be operationally effective and suitable under mission conditions and assessed at a TRL of 9. Accordingly, the Navy needs to limit



initial RDC acquisition quantities to those needed to satisfy the immediate urgent need to reduce program risks until COMOPTEVFOR has determined that the systems are operationally effective and suitable under mission conditions.

## **Conclusion**

The Navy's implementation of the urgent needs process speeds up the initial acquisition of items to satisfy urgent needs even if initial procurement quantities are limited to LRIP quantities. The process is faster because the Navy does not have to obtain Joint Requirement Oversight Council approval of the capability requirement through the Joint Capabilities Integration and Development System process before initiating developmental efforts and procuring initial item quantities. Navy PEOs, however, allowed acquisition managers to procure initial items in excess of quantities that are typically required for LRIP to satisfy the immediate urgent needs. As a result, Navy PEOs committed to acquiring large quantities of not fully proven items of equipment, thus increasing program risk. The QRAs that RDC milestone decision authorities depend on to make initial procurement decisions provide only a quick assessment of the operational considerations and capabilities of equipment. Because of the limitations inherent in QRAs, milestone decision authorities are less certain that the items, when fielded, will satisfy warfighter requirements. Thus, there is increased risk of costly, unplanned retrofits of equipment to satisfy warfighter requirements. For this reason, staff in the Office of the DOD Director of Operational Test and Evaluation stated that acquisition managers for RDC programs should limit RDC production quantities until they know the equipment's proven capabilities. PEOs should enforce the ASN (RD&A) memorandum, "Rapid Acquisition Processing Update," August 1, 2007, which requires acquisition managers to document, in the acquisition strategies, how the RDC procurement quantities tie to those needed to directly respond to a documented threat. If the equipment is urgently needed to eliminate a capability deficiency that has resulted in combat fatalities, Navy acquisition officials should request a waiver from the Secretary of Defense, authorizing them to rapidly acquire items in excess of LRIP quantity limitations in accordance with section 811 of Public Law 108-375.

## **Recommendations, Management Comments, and Our Response**

### ***Revised Recommendations***

As a result of management comments, we revised Recommendation A.1.b. to delete references to a Public Law that limits rapid acquisition of items to 10 percent of total planned production. This limitation applies only to major systems.

#### **A. We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition):**

- 1. Revise the Assistant Secretary of the Navy (Research, Development, and Acquisition) memorandum, "Rapid Acquisition Processing Update," August 1, 2007, to require Program Executive Officers, when approving acquisition strategies for all rapid deployment capability acquisitions, to:**

- a. **Limit the procurement of items to meet urgent needs request to the number of items required for low-rate initial production in accordance with section 806 of Public Law 107-314, “Rapid Acquisition and Deployment Procedures,” December 2, 2002, regardless of funding level.**
- b. **Require acquisition managers to provide written justification when the planned procurement of rapid deployment capability items exceeds the quantity required to support initial operational test and evaluation, to establish an initial production base, and to permit an orderly increase in the production rate for the systems.**

### ***Management Comments***

The Executive Director for Acquisition and Logistics Management, responding for the Assistant Secretary of the Navy (Research, Development, and Acquisition), disagreed. He stated that the recommendations do not apply to the RDCs because none of the RDC programs is a “major system” or a “major defense acquisition program,” as defined by section 2400, section 2432 (“Selected Acquisition Reports”), subsection (5) of section 2302 (“Definitions”), and section 2302d (“Major system: definitional threshold amounts”), title 10, United States Code. Additionally, the Executive Director stated that section 806 of Public Law 107-314 does not reference section 2400, title 10, United States Code (10 U.S.C. 2400).

### ***Our Response***

The Executive Director’s comments were not responsive to Recommendation A.1.a. The provisions of section 806 of Public Law 107-314, “Rapid Acquisition and Deployment Procedures,” December 2, 2002, which state that the quantity of items of a system procured using rapid acquisition procedures may not exceed the number established for LRIP, are not limited to major programs and accordingly apply to all Navy RDC programs. The Executive Director correctly stated that section 806 does not reference 10 U.S.C. 2400, or specify major systems when it places the LRIP limitation on the rapid acquisition process. Implementing the LRIP limitation mandated in section 806 is important to reducing acquisition risk. As stated in DOD Instruction 5000.02, use of LRIP provides acquisition milestone decision authorities the opportunity to assess the cost and benefits of a break in production, if a system has not demonstrated readiness to proceed to full-rate production.

As a result of the Executive Director’s comments, we revised Recommendation A.1.b. to delete references to 10 U.S.C. 2400, which sets a 10-percent limitation on LRIP for major programs. Instead, we recommend requiring acquisition managers to provide written justifications when planned procurement of RDC items exceeds the quantity required for

initial operational testing, establishing an initial production base, and production ramp up. Accordingly, we request that the Navy reconsider its position on Recommendation A.1.a and respond to the revised Recommendation A.1.b in response to the final report.

- c. **Enforce the requirement for acquisition managers to document how the procurement quantities tie to the threat that is driving the urgent needs request.**

### ***Management Comments***

The Executive Director agreed, stating that the Navy recognizes the importance of obtaining procurement quantities sufficient to meet the urgent need without creating excess inventory. He added that the Navy will consider proper implementation policy during the next update of SECNAV Instruction 5000.2D.

### ***Our Response***

The Executive Director's comments were responsive to the recommendation.

2. **Revise Secretary of the Navy Instruction 5000.2D, "Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System," October 16, 2008, to reference the revised policy on rapid deployment capability acquisition quantities resulting from Recommendation A.1.**

### ***Management Comments***

The Executive Director partially agreed. After reiterating his comments on Recommendations A.1.a and A.1.b, he stated that the Navy does not plan to modify SECNAV Instruction 5000.2D to include the policy revisions that would result from implementing these recommendations. The Executive Director stated that the Navy was reviewing and discussing the next revision of the SECNAV Instruction 5000.2D for inclusion of appropriate material regarding tying the procurement quantities to the threat, in accordance with Recommendation A.1.c.

### ***Our Response***

The Executive Director's comments were responsive regarding the planned update of SECNAV Instruction 5000.2D to reference the revised policy on rapid acquisition resulting from implementing Recommendation A.1.c. The nonresponsive portions of the Executive Director's comments relate to his comments on Recommendations A.1.a and A.1.b. We request that the Navy provide additional comments in response to the final report, reconsidering its response to Recommendation A.1.a. and responding to the revised version of Recommendation A.1.b.

3. **Direct Navy acquisition officials to seek a waiver of low-rate initial production quantity limitations from the Secretary of Defense authorizing them to procure rapid deployment capability equipment when the equipment is urgently needed to eliminate a capability**

**deficiency that has resulted in combat fatalities, in accordance with section 811 of Public Law 108-375, “Rapid Acquisition Authority to Respond to Combat Emergencies,” October 28, 2004.**

### ***Management Comments***

The Executive Director disagreed, citing the same rationale that he provided in his comments on Recommendations A.1.a and A.1.b. He disagreed that a waiver of LRIP quantities is required.

### ***Our Response***

The Executive Director’s comments were not responsive. Section 811 of Public Law 108-375 does not specify major systems or reference 10 U.S.C. 2400 when it authorizes the Secretary of Defense to waive statutes, laws, directives, and policies in order to rapidly acquire and field equipment to eliminate combat deficiencies that have resulted in combat fatalities. Section 811 allows rapidly acquiring any type of equipment that DOD needs to minimize future additional fatalities. We therefore believe that the Navy should always seek the waiver available through section 811 from the Secretary of Defense to more rapidly acquire RDC equipment quantities in excess of LRIP quantity limitations when a capability deficiency has resulted in combat fatalities. Accordingly, we request that the Navy reconsider its position on the recommendation and provide comments on the final report.

## **B. Improving Guidance on Planning and Executing Acquisition Strategies to Meet Urgent Needs Requests**

The ASN (RD&A) did not provide PEOs with complete guidance and procedures for planning and executing acquisition strategies for fulfilling urgent needs requests. Specifically, SECNAV Instruction 5000.2D and SECNAV Notice 5000 do not contain sufficient guidance and procedures for streamlining and implementing acquisition strategies to manage the development of capabilities for rapid deployment. Because PEOs lacked complete guidance and procedures for streamlining and implementing acquisition strategies to meet urgent needs requests, the acquisition strategies for the eight programs we reviewed varied significantly in the content and timeliness of PEO approval. Further, ASN (RD&A) had yet to collect lessons learned from acquisition managers with experience planning and executing acquisition strategies that could be used as a reference for acquisition managers of current and future rapid acquisitions. ASN (RD&A) staff stated that they had not emphasized developing formal guidance and procedures for planning and executing acquisition strategies because of the limited number of rapid acquisition solutions. The Navy had approved three from FY 2001 through FY 2005. As a result, PEOs and their staffs experienced unnecessary confusion and delays in approving RDC acquisition strategies and readying rapid acquisition efforts for the transition to programs of record.

### **Policies and Procedures**

SECNAV Instruction 5000.2D and SECNAV Notice 5000 authorize Navy PEOs to use streamlined acquisition approaches to rapidly acquire equipment necessary to meet warfighter needs that the CNO has approved as urgent. This authority allowed PEOs to streamline the policies and guidance in the DOD 5000 series of acquisition guidance when planning and executing acquisition solution strategies (acquisition strategies) to provide materiel for meeting urgent warfighter needs.

#### ***SECNAV Instruction 5000.2D***

SECNAV Instruction 5000.2D requires that PEOs develop and approve acquisition strategies that include these six planning elements:

- overall acquisition strategy and specific expediting measures;
- roles and responsibilities of program oversight officials;
- acquisition program milestones;
- plans for making the transition from acquisition effort to acquisition program of record, if appropriate;
- logistics and long-term maintenance support plans, including demilitarization and disposal; and
- test planning, including interoperability, integration, safety, and QRA.

## **SECNAV Notice 5000**

SECNAV Notice 5000 identifies the solution execution phase as the third phase for addressing capability gaps through the urgent needs process. According to the SECNAV Notice, the solution execution phase:

begins with the authority to execute the solution and ends with the delivery of a solution meeting an acceptable level of capability, timeline, and quantities, as defined by the operating forces, and includes a handoff for sustainment and consideration within the deliberate process.

ASN (RD&A) plans to cancel SECNAV Notice 5000 in March 2010. ASN (RD&A) staff explained that the ASN (RD&A) plans to review the policy after 1 year of implementation, update the policy as necessary, and establish it in a SECNAV Instruction.

## **Guidance on Planning and Executing Acquisition Strategies to Meet Urgent Needs Requests**

The ASN (RD&A) did not provide PEOs with guidance and procedures for streamlining the planning and execution of acquisition strategies for fulfilling urgent needs requests. Specifically, SECNAV Instruction 5000.2D did not provide streamlined guidance and procedures for implementing the six planning elements required in an acquisition strategy in the rapid acquisition process. Similarly, SECNAV Notice 5000 provided a definition of the solution execution phase, but did not reference or contain guidance and procedures for streamlining and implementing acquisition strategies to manage the development and acquisition of capabilities for rapid deployment.

Because PEOs lacked guidance from the ASN (RD&A) on streamlining acquisition strategies to meet urgent needs requests, the acquisition strategies for the eight programs we reviewed varied significantly in content and timeliness of PEO approval. We believe that the following testimonies from Naval Sea Systems Command acquisition staff summarize the challenges that acquisition managers encountered when trying to use available policy and guidance to formulate acquisition strategies to fulfill approved urgent needs requests.

It was difficult to determine what level of detail was required for the RDC strategy and no specific guidance was provided or found other than SECNAV Instruction 5000.2C.

In short, there is little guidance available on how to manage an RDC program and it seems like we are being required to reinvent the wheel.

These quotes pertained to planning efforts in late 2006 and 2007. Subsequent issuance of SECNAV Instruction 5000.2D to update SECNAV Instruction 5000.2C, “Implementation and Operation of the Defense Acquisition System and the Joint

Capabilities Integration and Development System,” November 19, 2004, and SECNAV Notice 5000 provided little additional guidance on how to streamline and implement the solution execution phase for meeting urgent needs requests.

### ***Content of Acquisition Strategies***

Our review showed significant variation in the content and format of the eight acquisition strategies we reviewed. Specifically, in reference to the six planning elements listed in SECNAV Instruction 5000.2D:

- seven acquisition strategies that PEOs approved contained brief to detailed explanations of plans, and
- one acquisition strategy that the PEO had approved contained brief bulleted statements in PowerPoint slides.

To illustrate the variability of the content of acquisition strategies, we compared the testing sections of the eight acquisition strategies to determine whether planning content was consistent among acquisition strategies and whether the testing sections covered interoperability, integration, and safety.

In comparing the testing sections of the acquisition strategies, we found that the planning content varied significantly and that the strategies did not always address interoperability, integration, and safety.

- The Commercial Broadband Satellite Program and the SNR HFIP had the most complete test strategies. Not only did they include interoperability, integration, and safety testing, but they also included general descriptions of how the testers would perform each test.
- The SSES/SEI, the DAMTC, and the CVN PDR acquisition strategies included the required test planning for interoperability, integration, and safety testing, but did not include general descriptions of how the testers would perform each test.
- The Automatic Identification System and EMIO Biometrics Identity Dominance Toolset acquisition strategies contained the least complete test strategies. Neither of the strategies addressed integration or safety testing requirements. Additionally, the EMIO Biometrics Identity Dominance Toolset did not address interoperability.

We did not assess the testing section of the acquisition strategy for the EMIO WRBS because the Joint Interoperability Test Command had exempted the effort from interoperability and integration testing.

### ***Timeliness of Approval of Acquisition Strategies***

The timeliness of PEO approvals of acquisition strategies also varied greatly because the ASN (RD&A) did not establish a set time frame for PEOs to approve or disapprove acquisition strategies submitted by acquisition managers. PEO approval for the eight acquisition strategies we reviewed varied from 11 to 991 days after the ASN (RD&A) had approved initiating the acquisition of the materiel solution, with an average PEO

approval time of 300 days. During the audit discussions with us, ASN (RD&A) staff agreed that a set time frame for PEO approval of acquisition strategies is warranted, and they stated that the time frame should be no more than 90 days after the ASN (RD&A) approves the acquisition of a materiel solution under the RDC acquisition process.

## **Lessons Learned**

ASN (RD&A) has yet to collect lessons learned from acquisition managers with experience planning and executing rapid acquisition strategies. Lessons learned could be used as a reference for managers of current and future rapid acquisitions. The PEO for Command, Control, Computers, Communications, and Intelligence (C4I) had the most experience with this type of acquisition. The PEO's staff gave us a summary of lessons learned in planning and executing the Automatic Identification System as an RDC effort. General lessons learned in the summary included:

- providing acquisition managers with early and specific senior-level guidance;
- coordinating early and regularly with key stakeholders, including action officers in the requirements, acquisition, testing, and resource communities;
- working with the Fleet to demonstrate prototype performance even before beginning the actual acquisition efforts;
- exercising discipline in defining operational requirements to avoid "requirements creep"; and
- studying lessons learned from earlier "RDC-like" programs.

Additionally, PEO staff provided us with lessons learned on planning and developing logistical support in acquisition strategies for RDC efforts.

Notable logistical lessons learned included:

- immediately creating and supporting an integrated logistics support strategy, and
- having logistics staff involved in contract development to ensure adequate logistical support for the initially installed materiel solutions.

Appendix G provides further details on lessons learned from the staff of the PEO for C4I.

During auditor discussions on January 15, 2009, ASN (RD&A) staff also agreed that collecting and disseminating lessons learned would be helpful to PEOs and acquisition managers currently planning and executing acquisition efforts in response to urgent needs requests.

## **Emphasis by the Office of the Assistant Secretary**

Because of the limited number of rapid acquisition solutions, ASN (RD&A) staff stated that they had not emphasized developing detailed guidance and procedures for PEOs and acquisition managers to use in streamlining the planning and execution of acquisition strategies to meet urgent needs requests. The Navy had approved only three requests from FY 2001 through FY 2005. ASN (RD&A) staff also had not collected lessons



learned. Instead, ASN (RD&A) staff had worked with staff of the CNO to develop administrative procedures for processing urgent needs requests. Specifically, on July 26, 2007, the ASN (RD&A) and the Deputy CNO (Integration of Capabilities and Resources) issued a joint memorandum, "Navy Urgent Needs Process Implementation," which detailed procedures for preparing and approving urgent needs requests and provided Component commanders with a template showing the desired format and content for urgent needs request submissions. This joint memorandum and the ASN (RD&A) memorandum, "Rapid Acquisition Processing Update," provided guidance for preparing and processing urgent needs requests. However, the memoranda did not fully meet the intent of section 806 of Public Law 107-314, "Rapid Acquisition and Deployment Procedures," which also requires that DOD develop procedures for rapidly acquiring, demonstrating, and deploying items to meet urgent needs requests. During discussions with us on August 21, 2008, and January 15, 2009, ASN (RD&A) staff agreed that, because eight additional acquisition efforts had begun in FY 2007, staff needed to provide PEOs and acquisition managers with additional guidance and procedures for streamlining and implementing acquisitions to meet urgent need requests.

ASN (RD&A) also had not emphasized providing guidance to PEOs on making the transition from acquisition efforts designed to meet urgent needs to acquisition programs of record. In the memorandum, "Updated Rapid Deployment Capability Execution Guidance for Subnet Relay and High Frequency Internet Protocol (SNR-HFIP), Automatic Identification System, Commercial Broadband Satellite Program, and Expanded Maritime Interceptions Operation," April 24, 2008 (the Updated Capability Execution Guidance Memorandum), the Acting ASN (RD&A) acknowledged that Navy policy (then SECNAV Instruction 5000.2C) did not provide tailored procedures for making the transition from acquisition efforts to acquisition programs of record, but stated that he had directed the development of a process for this transition. When asked about this process development, ASN (RD&A) staff stated that SECNAV Notice 5000 documented the transition process. As of the date of this report, however, SECNAV Notice 5000 still did not contain tailored procedures for converting acquisition efforts to acquisition programs of record.

Tailored procedures for converting to programs of record are essential because significant time is required to develop and obtain approval of documents. Documents needed before a low- or full-rate production decisions can be made include:

- system threat assessment;
- capability production document;
- acquisition strategy;
- test and evaluation master plan;
- systems engineering plan;
- programmatic environment, safety, and occupational health evaluation;
- affordability assessment;
- information support plan; and
- independent logistics assessments and logistics certification.

In this regard, the Acting ASN (RD&A) granted extensions ranging from 6 to 10 months on making the transition to programs of record for three of the four acquisition efforts the PEO for C4I was managing. All three extensions included the need for acquisition managers to complete and gain approval of documents. Additionally, the lessons learned, provided by the PEO's staff and included in Appendix G, emphasized the need for early transition planning because of the time needed for preparing and reviewing the documents that statute and regulations require for programs of record.

## **Management Actions**

Although ASN (RD&A) approved the acquisition of the CVN PDR on November 17, 2006, during the audit the PEO had not yet approved the RDC strategy for the CVN PDR. On August 4, 2009, after the discussion draft was issued, the PEO for Integrated Warfare Systems 2.0 took corrective action by approving the RDC strategy for the CVN PDR.

## **Conclusion**

Without complete guidance and procedures for streamlining and implementing acquisition strategies to meet urgent needs requests, PEOs and acquisition managers experienced unnecessary confusion and delays in approving RDC acquisition strategies and readying acquisition efforts for the transition to programs of record. Specifically, the PEOs were unnecessarily "reinventing the wheel" in determining how they should plan and execute these acquisitions. The confusion and delay in the planning process contributed to unplanned delays in the transition of acquisition efforts to programs of record.

The Navy plans to cancel SECNAV Notice 5000 in March 2010 and to subsequently issue a SECNAV Instruction addressing the urgent needs process. We believe that, as part of the new SECNAV Instruction, the Navy should provide the guidance and procedures that acquisition managers need for streamlining and implementing acquisition strategies to manage the development and acquisition of capabilities for rapid deployment.

## **Recommendations, Management Comments, and Our Response**

### **B. We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition):**

- 1. Include in the planned Secretary of the Navy Instruction on the urgent needs process:**
  - a. Guidance and procedures for:**
    - (1) Streamlining and implementing acquisition strategy planning elements required in the Secretary of the Navy Instruction 5000.2D, "Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System," October 16, 2008, to fully meet**

**the intent of Public Law 107-314, “The Bob Stump National Defense Authorization Act for Fiscal Year 2003,” which requires DOD to develop procedures for rapidly acquiring, demonstrating, and deploying items to meet urgent needs.**

### ***Management Comments***

The Executive Director for Acquisition and Logistics Management, responding for the Assistant Secretary of the Navy (Research, Development, and Acquisition), partially agreed, stating that the Navy is considering including definitions of the urgent needs process and procedures in of a revision to SECNAV Instruction 5000.2D.

### ***Our Response***

The Executive Director’s comments were partially responsive. Specifically, the comments indicate only that the Navy is “considering” including definitions of the urgent needs process and procedures in a revision to the Secretary of the Navy Instruction 5000.2D.” In response to the final report, we request that the Navy commit to specific actions and planned completion dates for defining the urgent needs process and procedures in the revised SECNAV Instruction 5000.2D.

- (2) Making the transition from acquisition efforts to meet urgent needs to acquisition programs of record, as the Acting Assistant Secretary of the Navy (Research, Development, and Acquisition) discussed in the memorandum, “Updated Rapid Deployment Capability Execution Guidance for Subnet Relay and High Frequency Internet Protocol, Automatic Identification System, Commercial Broadband Satellite Program, and Expanded Maritime Interceptions Operation,” April 24, 2008.**

### ***Management Comments***

The Executive Director agreed, stating that appropriate language supporting this recommendation has been submitted and is being considered in the rewrite of the next iteration of the stated instruction.

### ***Our Response***

The Executive Director’s comments were responsive to the recommendation.

- b. A requirement that Program Executive Officers approve or disapprove acquisition strategies submitted by acquisition managers within 90 days of receiving a rapid development capability initiation memorandum.**

### ***Management Comments***

The Executive Director agreed, stating that he appreciates the necessity for coordination and awareness of planned rapid acquisitions among PMs, PEOs, and acquisition and requirements managers.

### ***Our Response***

The Executive Director's comments were responsive to the recommendation.

- 2. Establish and maintain a lessons learned database for acquisition managers to enhance their planning and execution of acquisition strategies to meet urgent needs requests.**

### ***Management Comments***

The Executive Director partially agreed, stating that the Navy is assessing the need for this information and the resources to support this recommendation. The Navy is developing an online tracking system that will provide access to previous urgent needs response information and documents.

### ***Our Response***

The Executive Director's comments were partially responsive. Specifically, instead of committing to a specific corrective action, the comments indicate only that the Navy is "assessing" the need for a lessons learned database. The comments do not commit to a specific course of action. In response to the final report, we request that the Navy commit to specific actions and completion dates regarding establishing and maintaining a lessons learned database, or other resources, to help acquisition managers plan and execute acquisition strategies to meet urgent needs requests.

## **C. Obtaining Quick Reaction Assessments to Support Rapid Development and Deployment Acquisitions**

For the four RDD acquisitions reviewed, program sponsors did not request that COMOPTEVFOR perform QRAs of the materiel solutions before the acquisition decision authorities made or planned to make production and deployment decisions. Requests were not made because Navy acquisition policy did not require program sponsors to request COMOPTEVFOR to perform QRAs for equipment acquired through the RDD acquisition process. As a result, the ASN (RD&A) allowed the Naval Innovation Laboratory to deploy materiel solutions for two RDD acquisitions and plan deployment for the other two RDD acquisitions without first having information from a COMOPTEVFOR independent operational assessment. Consequently, the materiel solutions deployed may be subject to unexpected capability limitations and not fully responsive to urgent needs requests submitted by warfighters.

### **Public Law and Policy**

DOD and the Navy, following congressional direction, issued policy and guidance to define the role of the COMOPTEVFOR, as the commander of the Navy's independent operational test agency, in planning and performing operational tests and assessments of systems before milestone decision authorities make decisions to produce and deploy the systems.

#### ***Public Law***

Section 806 of Public Law 107-314 requires that rapid acquisition procedures implemented by the Military Departments include a process for demonstrating and evaluating the performance of items for operational purposes before acquisition milestone decision authorities make procurement decisions.

#### ***Policy***

DOD Instruction 5000.02 requires that an independent organization, separate from the development activity and from user commands, be responsible for all operational test and evaluations. Within the Navy, COMOPTEVFOR is the independent organization responsible for operational test and evaluations.

SECNAV Instruction 5000.2D, October 16, 2008, and its predecessor policy SECNAV Instruction 5000.2C, November 19, 2004, state that it may be necessary to modify the established operational testing process to rapidly deliver a system to the Fleet to meet an urgent operational need.

COMOPTEVFOR Instruction 3980.1, "Operational Test Director's Manual," April 23, 2008, establishes Navy policy and guidance for planning and executing QRAs. The

Instruction states that a QRA is a quick assessment that examines specific operational considerations and capabilities of a system and that the Navy uses QRAs when operational necessity dictates deploying a rapid capability in the Fleet.

## **Quick Reaction Assessments of RDD Acquisitions**

At the time of our audit, ASN (RD&A) had authorized the Naval Innovation Laboratory to oversee the development, integration, testing, and deployment of the following four RDD acquisition efforts:

- the Tactical Biometric Collection and Matching System;
- the Portable (Chemical, Biological, Radiological, Nuclear, Explosive; and Weapons of Mass Destruction) Detection Capability;
- the Acoustic Loud Hailer; and
- the Small Unmanned Aerial Vehicle Radio Frequency Reconnaissance.

The Naval Innovation Laboratory had delivered materiel solutions for the first and second programs and was still developing the other two.

Although COMOPTEVFOR Instruction 3980.1 states that that Navy program sponsors can request QRAs when operational necessity dictates rapid deployment, COMOPTEVFOR staff stated that program sponsors had not requested that COMOPTEVFOR perform QRAs for the RDD acquisitions. Requests were not made because SECNAV Instructions 5000.2 C and D required program sponsors to obtain a QRA from COMOPTEVFOR only for RDC acquisition efforts. Section 806 of Public Law 107-314 mandates operational assessments for developmental items, which the Navy designated as RDD items, under its rapid acquisition and deployment procedures. Accordingly, SECNAV Instruction 5000.2D needs to specifically require that program sponsors request COMOPTEVFOR to perform QRAs for RDD acquisitions.

During the audit, ASN (RD&A) and COMOPTEVFOR staff both agreed that program sponsors and acquisition managers needed to involve COMOPTEVFOR in assessing the readiness of RDD items to be deployed to satisfy urgent needs requests of the warfighter.

## **Conclusion**

Navy policies and procedures for operational testing and assessments of RDD items need to be improved to fully comply with section 806 of Public Law 107-314. Specifically, program sponsors and acquisition managers should be required to have COMOPTEVFOR perform QRAs of RDD items that will be deployed to satisfy urgent needs requests before making decisions to deploy the systems. The performance of QRAs will ensure that acquisition decision authorities have information from an independent evaluation on the capabilities and limitations of items before they make deployment decisions.

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

**C. We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) revise the Secretary of the Navy Instruction 5000.2D, “Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System,” October 16, 2008, to require program sponsors and acquisition managers to request the Commander, Operational Test and Evaluation Force, to perform quick reaction assessments of equipment that the Navy is acquiring through the rapid development and deployment process.**

### ***Management Comments***

The Executive Director for Acquisition and Logistics Management, responding for the Assistant Secretary of the Navy (Research, Development, and Acquisition), agreed in part, stating that for those time-sensitive operational needs that can be effectively addressed through the RDD process, acquisition managers should consider performance of a QRA by the operational test agency (COMOPTEVFOR) in the RDD timeline and goals for rapid response. He further stated that representation from the test and evaluation community is now part of the vetting process for urgent needs.

### ***Our Response***

The Executive Director’s comments were not responsive. Specifically, while the Executive Director stated that performance of a QRA should be “considered” when planning to use RDDs to meet operational needs, section 806 of Public Law 107-314 requires that the rapid acquisition procedures of Military Departments include a process for demonstrating and evaluating the performance of items for operational purposes before acquisition milestone decision authorities make deployment decisions. The QRA is the Navy’s method for evaluating rapid acquisition efforts for operational purposes. Additionally, the Director’s comments do not address updating SECNAV Instruction 5000.2D, as discussed in the recommendation. Further, the Director’s comments are unclear regarding the role of COMOPTEVFOR in the urgent needs process. Although the comments state that “representation from the test and evaluation community is now part of the vetting process for urgent needs,” it is unclear whether this representation includes COMOPTEVFOR. Accordingly, we request that the Navy reconsider its position on the recommendation and provide additional comments in response to the final report.

## Appendix A. Scope and Methodology

We conducted this performance audit from July 2008 through September 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

During the audit, we evaluated the Navy's procedures for identifying and validating urgent capability needs, contracting for and acquiring materiel solutions to meet those needs, and complying with DOD requirements and acquisition policies once materiel solutions are fielded. We reviewed Navy policies and program documentation, as well as requirements and capabilities, testing, contracting, acquisition strategy, and funding documents for rapid deployment capability (RDC) and rapid development and deployment (RDD) acquisitions dated from December 1996 through March 2009. We also interviewed staff from the offices of the Director, Operational Test and Evaluation; the Chief of Naval Operations (CNO); the Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN [RD&A]); the Fleet Forces Command; the Commander, Operational Test and Evaluation Force; the Naval Air Systems Command; the Naval Sea Systems Command; the Space and Naval Warfare Systems Command; the Naval Innovation Laboratory; and the Defense Contract Management Agency. Additionally, to assess their experiences with the Navy's urgent needs process, we surveyed personnel from the following commands: Pacific Fleet; U.S. Naval Forces Europe; U.S. Naval Forces Central Command; U.S. Naval Forces Southern Command; and U.S. Naval Special Warfare Command.

During the initial phase of the audit, we determined that the Navy's procedures for identifying and validating urgent capability needs were adequate and that the Navy staff from the offices of the CNO, the ASN (RD&A), and the Fleet Forces Command were following those procedures. However, we also noted the potential for improving the Navy's management of contracting for and acquiring materiel solutions to meet urgent needs and its compliance with DOD requirements and acquisition policies once materiel solutions are fielded. The Navy initiated 13 acquisition efforts to meet urgent needs between 2004 and the start of our audit in August 2008. Of these, the Navy classified nine as RDC acquisition efforts, with funding of \$86.1 million for research, development, test, and evaluation and \$172.4 million for procurement. The Navy classified the other four as RDD acquisition efforts, with funding of \$18.7 million for research, development, test, and evaluation. Appendix C provides information on the definitions and uses of RDC and RDD acquisition efforts.

We judgmentally selected eight RDC acquisition programs for detailed review to evaluate the efforts of the different management chains within Navy acquisition, emphasizing acquisitions with significant funding. The eight RDC acquisitions were managed by five different Program Executive Officers and involved 75.1 percent of the research, development, test, and evaluation funding and 99.4 percent of procurement



funding for the 13 rapid acquisition efforts the Navy had initiated since 2004. For the eight RDC acquisitions, we performed detailed reviews of their planning and execution, including evaluating the acquisition strategies and test and evaluation, and planning for their transition from rapid acquisition solutions to acquisition programs of record, as defined in the DOD 5000 series of acquisition guidance. Additionally, for four of the eight selected RDC acquisitions, we also reviewed contracting and planned logistical support. In addition to the RDC acquisitions, we reviewed whether quick reaction assessments were performed for all four of the RDD acquisition programs that the ASN (RD&A) had authorized.

## **Use of Computer-Processed Data**

We did not use computer-processed data to perform this audit.

## **Use of Technical Assistance**

An electronics engineer and a computer engineer from the Technical Assessment Directorate, Department of Defense Office of Inspector General assisted in the audit. The engineers supported the audit team on audit planning, objectives, and methodologies, and reviewed test programs and acquisition strategies for acquisition solutions selected for review.

## **Prior Coverage**

No audits have been conducted on the rapid acquisition and fielding of materiel solutions by the Navy during the last 5 years.

## Appendix B. Public Law on Rapid Acquisition

The paragraphs below provide the language of Section 806 of Public Law 107-314 and section 811 of Public Law 108-375. Both address DOD's rapid acquisition of items that warfighters urgently need to react to enemy threats or to respond to significant and urgent safety risks. Public Law 108-375 amends Public Law 107-314 to allow for waivers of certain acquisition-related statutes and regulations in response to combat emergencies.

### SEC. 806. RAPID ACQUISITION AND DEPLOYMENT PROCEDURES

- (a) REQUIREMENT TO ESTABLISH PROCEDURES.—Not later than 180 days after the date of the enactment of this Act, the Secretary of Defense shall prescribe procedures for the rapid acquisition and deployment of items that are—
- (1) currently under development by the Department of Defense or available from the commercial sector; and
  - (2) urgently needed to react to an enemy threat or to respond to significant and urgent safety situations.
- (b) ISSUES TO BE ADDRESSED.—The procedures prescribed under subsection (a) shall include the following:
- (1) A process for streamlined communications between the Chairman of the Joint Chiefs of Staff, the acquisition community, and the research and development community, including—
    - (A) a process for the commanders of the combatant commands and the Joint Chiefs of Staff to communicate their needs to the acquisition community and the research and development community; and
    - (B) a process for the acquisition community and the research and development community to propose items that meet the needs communicated by the combatant commands and the Joint Chiefs of Staff.
  - (2) Procedures for demonstrating, rapidly acquiring, and deploying items proposed pursuant to paragraph (1)(B), including—
    - (A) a process for demonstrating performance and evaluating for current operational purposes the existing capability of an item;
    - (B) a process for developing an acquisition and funding strategy for the deployment of an item; and
    - (C) a process for making deployment determinations based on information obtained pursuant to subparagraphs (A) and (B).
- (c) TESTING REQUIREMENT.—
- (1) The process for demonstrating performance and evaluating for current operational purposes the existing capability of an item prescribed under subsection (b)(2)(A) shall include—
    - (A) an operational assessment in accordance with procedures prescribed by the Director of Operational Test and Evaluation; and

(B) a requirement to provide information about any deficiency of the item in meeting the original requirements for the item (as stated in an operational requirements document or similar document) to the deployment decisionmaking authority.

(2) The process may not include a requirement for any deficiency of an item to be the determining factor in deciding whether to deploy the item.

(d) LIMITATION.—The quantity of items of a system procured using the procedures prescribed pursuant to this section may not exceed the number established for low-rate initial production for the system. Any such items shall be counted for purposes of the number of items of the system that may be procured through low-rate initial production.

## **SEC. 811. RAPID ACQUISITION AUTHORITY TO RESPOND TO COMBAT EMERGENCIES**

Section 806 of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (10 U.S.C. 2302 note) is amended—

(1) by redesignating subsections (c) and (d) as subsections (e) and (f), respectively; and

(2) by inserting after subsection (b) the following new subsections (c) and (d):

“(c) RESPONSE TO COMBAT EMERGENCIES.—(1) In the case of any equipment that, as determined in writing by the Secretary of Defense without delegation, is urgently needed to eliminate a combat capability deficiency that has resulted in combat fatalities, the Secretary shall use the procedures developed under this section in order to accomplish the rapid acquisition and deployment of the needed equipment.

“(2)(A) Whenever the Secretary makes a determination under paragraph (1) that certain equipment is urgently needed to eliminate a combat capability deficiency that has resulted in combat fatalities, the Secretary shall designate a senior official of the Department of Defense to ensure that the needed equipment is acquired and deployed as quickly as possible, with a goal of awarding a contract for the acquisition of the equipment within 15 days.

“(B) Upon designation of a senior official under subparagraph (A), the Secretary shall authorize that official to waive any provision of law, policy, directive, or regulation described in subsection (d) that such official determines in writing would unnecessarily impede the rapid acquisition and deployment of the needed equipment. In a case in which the needed equipment cannot be acquired without an extensive delay, the senior official shall require that an interim solution be implemented and deployed using the procedures developed under this section to minimize the combat capability deficiency and combat fatalities.

“(3) The authority of this section may not be used to acquire equipment in an amount aggregating more than \$100,000,000 during any fiscal year. For acquisitions of equipment under this section during the fiscal year in which the Secretary makes the determination described in paragraph (1) with respect to such equipment, the Secretary may use any funds available to the Department of Defense for that fiscal year.

“(4) The Secretary of Defense shall notify the congressional defense committees within 15 days after each determination made under paragraph (1). Each such notice shall identify—

“(A) the equipment to be acquired;

“(B) the amount anticipated to be expended for the acquisition; and

“(C) the source of funds for the acquisition.

“(5) Any acquisition initiated under this subsection shall transition to the normal acquisition system not later than two years after the date on which the Secretary makes the determination described in paragraph (1) with respect to that equipment.

“(d) WAIVER OF CERTAIN STATUTES AND REGULATIONS.—

(1) Upon a determination described in subsection (c)(1), the senior official designated in accordance with subsection (c)(2) with respect to that designation is authorized to waive any provision of law, policy, directive or regulation addressing—

“(A) the establishment of the requirement for the equipment;

“(B) the research, development, test, and evaluation of the equipment; or

“(C) the solicitation and selection of sources, and the award of the contract, for procurement of the equipment.

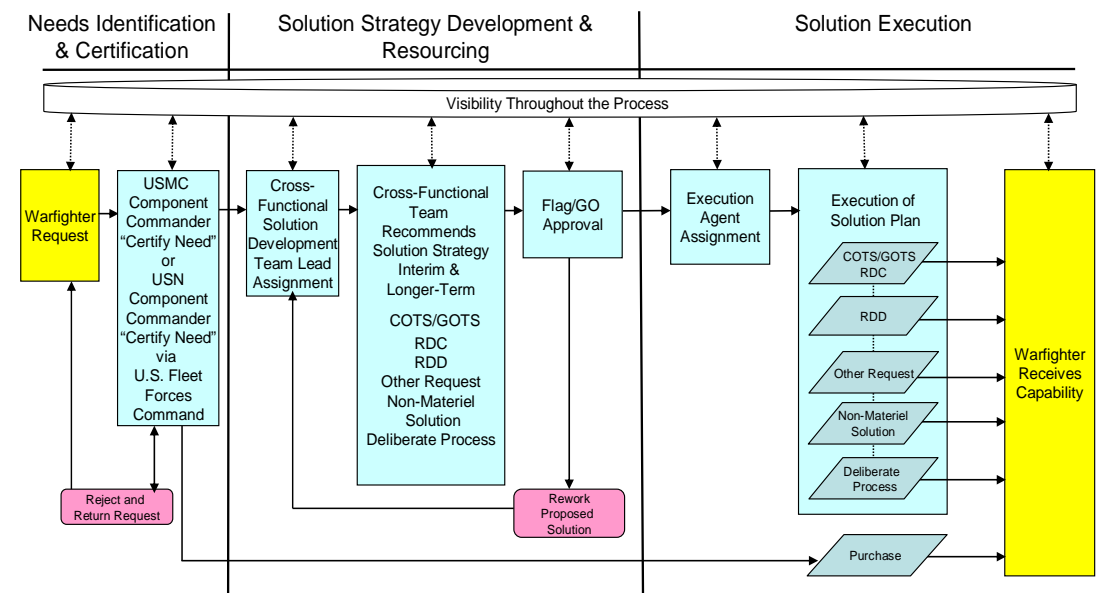
“(2) Nothing in this subsection authorizes the waiver of—

“(A) the requirements of this section or the regulations implementing this section; or

“(B) any provision of law imposing civil or criminal penalties.”

# Appendix C. The Navy's Urgent Needs Process

The flowchart below is included as Enclosure 1 to SECNAV Notice 5000, and provides a graphic representation of the Navy's urgent needs process. As depicted, the process begins with a warfighter request and concludes with the warfighter receiving a capability to meet the request. The flowchart shows the customers, activities, and outputs involved in the three phases of the Navy's urgent needs process, which include needs identification and certification, solution strategy development and resourcing, and solution execution. A discussion of the activities occurring in each of the three phases follows the flowchart. Because the SECNAV Notice establishes the urgent needs process at the Department of the Navy level, the Navy and Marine Corps use the same process for meeting urgent warfighter needs.



Source: SECNAV Notice 5000

- COTS Commercial Off-the-Shelf
- GO General Officer
- GOTS Government Off-the-Shelf
- USMC U.S. Marine Corps
- USN U.S. Navy

## Needs Identification and Certification Phase

In the identification and certification phase, Navy activities that recognize gaps in warfighting capabilities then identify urgent needs through their chain of command to the applicable Component commander. Navy Component commanders include the U.S. Fleet Forces Command; Commander, Pacific Fleet; Commander, U.S. Naval Forces Europe; Commander, U.S. Naval Forces Central Command; Commander, U.S. Naval Forces Southern Command; and Commander, U.S. Naval Special Warfare Command. The Component commanders are responsible for certifying that each urgent need received from Navy activities meets the definition of urgency and cannot be solved internally or with existing resources. Component commanders, when certifying the urgent needs Navy activities have identified, use the following definition of urgent need:

An urgent need is an exceptional request from a Navy or Marine Corps component commander for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions or increases the probability of casualties and loss of life.

## Solution Strategy Development and Resourcing Phase

The solution strategy development and resourcing phase involves using a cross-functional team to develop the solution strategy. The staff of the CNO forms the cross-functional team (which is made up of members from the operating forces; acquisition, financial management, technology, and legal communities; and the resource sponsor) to provide the best available solution. The cross-functional team is responsible for refining the details of the capability gap and providing a recommendation for solution development to fill the gap. Within the development of the solution strategy, the team will make a recommendation to consider a combination of any or all of the following options:

- Commercial Off-The-Shelf / Government Off-The-Shelf,
- Rapid Deployment Capability (RDC),
- Rapid Development and Deployment (RDD),
- Other (Research and Development), and
- Deliberate Process (the traditional process under Chairman of the Joint Chiefs of Staff Instruction 3170.01G and the DOD 5000 series of directives)

Because the acquisition solution efforts ongoing or recently completed at the time of our audit were using the RDC and RDD options, we provide further description of those options below.

### ***RDC Option***

SECNAV Notice 5000 states that acquisition managers may use the RDC option to facilitate rapid acquisitions of slightly modified COTS or other nondevelopmental items as materiel solutions. Candidate materiel solutions for the RDC option typically involve technology that is at least at Technology Readiness Level 8. Technology Readiness Level 8 indicates that the technology has been proven to work in its final form and under

expected conditions. As of April 2009, the Navy was tracking nine acquisition solutions designated as using the RDC option. Together, these solutions had received \$86.1 million in research, development, test, and evaluation funding and \$172.4 million in procurement funding.

### ***RDD Option***

SECNAV Notice 5000 states that acquisition managers may use the RDD option to rapidly develop, integrate, and test prototype solutions when commercial solutions are not immediately available. Candidate solutions for the RDD option typically involve technology that is at least at Technology Readiness Level 6, meaning that a representative model or prototype system has been demonstrated in a relevant environment. As of April 2009, the Navy was tracking four acquisition solutions using the RDD option. Together, these four solutions had received \$18.7 million in research, development, test, and evaluation funding. Because of the developmental nature of RDD solutions, no procurement funding was included in the funding estimates. The Navy started funding RDD solutions in 2007.

### **Solution Execution Phase**

The solution execution phase begins when the ASN (RD&A) assigns the authority to execute an acquisition solution to the appropriate PEO. The PEO staff then formulate an acquisition strategy, which the PEO approves and his staff execute, resulting in delivery of a sustainable solution to the warfighter. The solution execution phase also includes considering the need to move the acquisition solution into the deliberate process as an acquisition program of record. The deliberate process is defined in Chairman of the Joint Chiefs of Staff Instruction 3170.01G and the DOD 5000 series of acquisition guidance.

## **Appendix D. Improvements to the Navy's Urgent Needs Process Since 1996**

Since issuing SECNAV Instruction 5000.2B in 1996, the Navy has continued to improve and refine the process for meeting urgent needs requests from warfighters. These improvements have included updating the SECNAV Instruction, issuing memoranda on urgent needs processing, and issuing SECNAV Notice 5000. The Navy's issuance of additional policy memoranda has done much to assist Navy activities in submitting urgent needs requests and acquisition managers in meeting urgent needs requests. The memoranda more clearly defined the roles of the CNO and the ASN (RD&A) in the Navy's urgent needs process. The sections below provide further details on the SECNAV Instruction and the processing memoranda. The Background section and Appendix C of this report discuss the SECNAV Notice.

### **SECNAV Instruction**

SECNAV Instruction 5000.2C, November 19, 2004, updated SECNAV Instruction 5000.2B and was the policy in effect when the Navy initiated the urgent needs solutions efforts reviewed in our audit. The updated Instruction expanded the policy for planning and executing the Navy's urgent needs process to include:

- testing interoperability between rapidly acquired systems and other operational systems,
- planning the transition of RDC programs to acquisition programs of record, and
- planning for eventual demilitarization and disposal of the materiel solutions.

Additionally, the updated Instruction required the COMOPTEVFOR to provide QRAs of the operational effectiveness and suitability of equipment to meet urgent needs before delivery to the Fleet.

SECNAV Instruction 5000.2D, October 16, 2008, updated SECNAV Instruction 5000.2C to provide the current policy for planning and executing the Navy's urgent needs process. The updated SECNAV Instruction added the requirement to execute a plan to determine net-centric (information exchange) performance requirements for acquisition solutions to meet urgent needs.

### **Urgent Needs Processing Memoranda**

The CNO and the ASN (RD&A) issued a joint memorandum on urgent needs processing that defined responsibilities for responding to urgent needs requests. Additionally, the ASN (RD&A) issued a memorandum providing guidance for expediting the processing of urgent needs requests.

#### ***Joint Memorandum***

The joint memorandum between the CNO and the ASN (RD&A), "Navy Urgent Needs Process Implementation," July 26, 2007, defined cooperative roles for the CNO and the



ASN (RD&A) in responding to urgent needs requests from Navy activities. Specifically, the joint memorandum provided guidance for the administrative procedures and timelines regarding processing urgent needs requests. The joint memorandum also outlined the procedures for the following three ways urgent needs requests are generated through the Navy:

- Navy activities submitting urgent needs requests through their Component Commanders;
- CNO staff submitting requests, based on information from Navy operational units; and
- joint urgent operational needs of the combatant commanders being assigned to the Navy through the joint urgent operational needs process established in Chairman of the Joint Chiefs of Staff Instruction 3470.01, “Rapid Validation and Resourcing of Joint Urgent Operational Needs in the Year of Execution,” July 15 2005.

The joint memorandum also assigned the Associate Director of the Assessments Division within the office of the CNO as the Navy urgent needs gatekeeper. The gatekeeper’s responsibilities include:

- serving as the CNO’s single point of receipt for urgent needs requests;
- screening urgent needs requests to ensure compliance with applicable instructions and policy; and
- tracking rapid acquisition documents within the CNO staff to ensure they are processed in a timely manner.

Additionally, the joint memorandum stated that, for each urgent need request, the gatekeeper assigns a rapid action team lead, who will coordinate with ASN (RD&A) staff to form a rapid acquisition team. The rapid acquisition team then further defines the urgent need, identifies potential materiel solutions, develops a cost estimate, and recommends a rapid acquisition path. (SECNAV Notice 5000, March 12, 2009, subsequently designated the rapid acquisition team as the cross-functional solution development team.)

### ***ASN (RD&A) Memorandum***

The ASN (RD&A) memorandum, “Rapid Acquisition Processing Update,” August 1, 2007, provided Navy activities with a list of 12 global RDC rules for use in preparing urgent needs requests. The memorandum also provided detailed guidance regarding the informational content of urgent needs requests, including the suggested documentation to explain each of the following request elements:

- description of the threat or urgency;
- description of the requirement and whether it is a Service or joint requirement;
- description of known products, domestic and foreign, that can provide the capability;
- item quantities required;

- identification of funding (amount and source);
- required deployment date;
- description of all testing;
- description or concept of logistics support required;
- description or concept of support required for long-term maintenance;
- a statement that a plan will be developed for conducting a quick reaction assessment to verify that deployment of the items will not adversely affect interoperability and integration, compatibility, or safety; and
- consideration of manpower, personnel, and training requirements for fielding the item.

Together, the checklist and global RDC rules create a more formalized process for Navy activities to follow in preparing urgent needs requests to fill mission-critical capability gaps.

# Appendix E. Acquisition Efforts Using the Urgent Needs Process

The following table lists the RDC and RDD acquisitions that the Navy initiated between FY 2004 and the start of our audit in July 2008.

Program Name	PEO	Description	RDT&E Funding (millions)	Procurement Funding (millions)
<b>RDC Acquisition Efforts</b>				
<b>Automatic Identification System</b>	C4I	Transceiver that transmits and receives vessel navigational information over maritime frequencies.	\$14.1	\$33.9
<b>Commercial Broadband Satellite Program</b>	C4I	New commercial satellite communication capability that replaces aging terminals.	6.5	49.6
<b>Carrier Vessel Nuclear Periscope Detection Radar</b>	IWS 2.0	High scan rate antenna, and a high performance processor to alert ships of targets of importance.	52.0	47.7
<b>Direct Attack Moving Target Capability</b>	U&W	Weapon that provides targeting flexibility to engage fixed, mobile, and moving targets.		16.9
<b>Expanded Maritime Intercept Operations Toolset</b>	LMW	Provides naval forces a biometric-based capability to positively identify unknown individuals encountered in naval operations.		5.6
<b>Expanded Maritime Intercept Operations Wireless Reachback System</b>	C4I	Provides a secure, wireless transmission system capable of transmitting biometric data from boarding teams on target vessels.	4.6	3.9
<b>Intrepid Tiger Pods<sup>1</sup></b>	PEO (T)	Provides aircraft with multiplatform offensive and defensive airborne electronic combat mission support.	7.4	1.0
<b>Sub-net Relay High Frequency Internet Protocol</b>	C4I	Provides tactical ship-to-ship networking capability using several frequencies to increase information sharing.	1.5	6.3

Note: See the list of acronyms at the end of the appendix.

<sup>1</sup> We did not review the Intrepid Tiger Pods acquisition effort because the majority of program documentation was lost in a crash of the Secret Internet Protocol Router Network.

<b>Small Ship Electronic Support Measure / Specific Emitter Identification</b>	IWS	Identifies radar signals and creates a hardware-specific “fingerprint” for that unit’s signal.		7.5
		<b>Total RDCs</b>	<b>\$86.1</b>	<b>\$172.4</b>
<b>RDD Acquisition Efforts<sup>2</sup></b>				
<b>Acoustic Loud Hailer</b>	NaIL	Helicopter-mounted acoustic hailing device.	\$3.5	
<b>Portable CBRNE Detection Capability</b>	NaIL	Full spectrum chemical, biological, radiological, nuclear, and explosive detection capability; with detail specific sensor communication network.	5.4	
<b>Small Unmanned Aerial Vehicle (UAV) Radio Frequency Reconnaissance</b>	NaIL	Reconnaissance package mounted on UAV to transmit radio signals.	3.8	
<b>Tactical Biometric Collection and Matching System</b>	NaIL	Portable biometric verification device that will facilitate mobile verification of individuals.	6.0	
		<b>Total RDD efforts</b>	<b>\$18.7</b>	<b>\$0</b>
		<b>Total</b>	<b>\$104.8</b>	<b>\$172.4</b>

C4I – Command, Control, Communications, Computers, and Intelligence  
 CBRNE – Chemical, Biological, Radiological, Nuclear, and Explosive  
 IWS – Integrated Warfare Systems  
 LMW – Littoral Mine Warfare  
 PEO(T) – Advanced Tactical Aircraft Protection Systems  
 NaIL – Naval Innovation Laboratory  
 U&W – Strike Weapons and Unmanned Aviation

<sup>2</sup> Because of the developmental nature of RDD solutions, the Navy was required to use RDT&E funding.

## Appendix F. Technology Readiness Levels

Technology readiness levels (TRLs) are a measure of technical maturity. Technology maturity is a measure of the degree to which proposed critical technologies meet program objectives. Technology maturity is also a principal element of program risk. A technology readiness assessment examines program concepts, technology requirements, and demonstrated technology capabilities to determine technological maturity. TRLs are reported in technology readiness assessments as part of the program's technical risk assessment. The use of TRLs enables consistent, uniform discussions of technical maturity across types of technologies. There are three sets of TRL definitions, one each for hardware, software, and manufacturing technology. The table below describes the TRLs for hardware. TRLs range from 1 to 9 in increasing order of technical maturity.

Technology Readiness Level	Definition	Description
<b>Hardware</b>		
1	Basic principles observed and reported.	Lowest level of technology readiness. Scientific research begins to be translated into applied research and development (R&D). Examples might include paper studies of a technology's basic properties.
2	Technology concept and/or application formulated.	Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions. Examples are limited to analytic studies.
3	Analytical and experimental critical function and/or characteristic proof of concept.	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate the analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
4	Component and/or breadboard* validation in a laboratory environment.	Basic technological components are integrated to establish that they will work together. This is relatively low fidelity compared with the eventual system. Examples include integration of ad hoc hardware in the laboratory.
5	Component and/or breadboard validation in a relevant environment.	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so they can be tested in a simulated environment. Examples include high-fidelity laboratory integration of components.

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\* A breadboard is defined as the integrated components that provide a representation of a system/subsystem and that can be used to determine concept feasibility and to develop technical data. A breadboard is typically configured for laboratory use to demonstrate the technical principles of immediate interest. A breadboard may resemble final system/subsystem in function only.

6	System/subsystem model or prototype demonstration in a relevant environment.	Representative model or prototype system, which is well beyond that of TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a high-fidelity laboratory environment or in a simulated operational environment.
7	System prototype demonstration in an operational environment.	Prototype near or at planned operational system. Represents a major step up from TRL 6 by requiring demonstration of an actual system prototype in an operational environment (e.g., in an aircraft, in a vehicle, or in space). Examples include testing the prototype in a test bed aircraft.
8	Actual system completed and qualified through test and demonstration.	Technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development. Examples include developmental test and evaluation of the system in its intended weapon system to determine if it meets design specifications.
9	Actual system proven through successful mission operations.	Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation (OT&E). Examples include using the system under operational mission conditions.

# **Appendix G. Lessons Learned From the Program Executive Officer for Command, Control, Communications, Computers, and Intelligence**

The staff of the PEO for Command, Control, Communications, Computers, and Intelligence provided us with general lessons learned in planning and executing the Automatic Identification System as an RDC effort. The staff also provided lessons learned specific to planning and executing logistical support for the Automatic Identification System and a listing of recommended logistics actions that should begin after key program events. The sections below provide synopses of the general and logistics lessons learned and recommended logistical actions.

## **General Lessons Learned**

1. Providing acquisition managers with early and specific senior-level guidance is important to success. PEO staff believed that explicit CNO guidance in July 2005 was the key enabler for planning the RDC effort for the Automatic Identification System. Further, after the Automatic Identification System became an RDC effort, senior leadership within CNO provided critical hands-on support in expediting the acquisition of the system.
2. Regular communication between requirements, acquisition, and resource communities kept stakeholders current on cost, schedule, and performance status.
3. Maintaining discipline over requests to add additional capabilities was necessary to preserve the rapid aspect of the RDC effort. Specifically, it was important to involve the combatant commands early in the capabilities development, acquisition, and budget cycles; to allow early input from those that will operate the system; and to team with the operator, acquisition, and resource communities to quickly adjudicate requests to add capabilities.
4. Studying lessons learned of earlier “RDC-like” programs helped optimize the capability Automatic Identification System provided to the Fleet.
5. Performing prototyping and proof of concept exercises very early in the RDC process proved the military utility of the Automatic Identification System and garnered early stakeholder support. Also, after early installation of a preliminary version of the system, there were valuable lessons learned for future installations.
6. Fencing funding provided for rapid acquisitions needed budget stability. Specifically, for the Automatic Identification System, the difference between success and failure was obtaining funding from congressional and Global War on Terrorism supplements, research labs, and below-threshold reprogramming.

7. Involving the operational test community early in the RDC effort gave the COMOPTEVFOR's staff the product knowledge they needed to better plan the QRA to assess system operational effectiveness and suitability. Further, the performance of appropriate levels of operational testing before system procurement and fielding resulted in better informed system installations, training, and logistics planning.
8. Managing as if the RDC effort was a program of record helps the transition process. PEO staff recommended staffing the RDC effort with the number and quality of senior and experienced military and civilian personnel necessary to field the RDC units and prepare for the transition of the RDC effort to program of record status. Additionally, they recommended completing a plan of action and milestones for the transition to a program of record, as part of the RDC acquisition strategy, to jump-start early transition planning. They stated that early transition planning is important because of the time needed to prepare and review documents that statute and regulation require for programs of record.
9. Planning early for challenges and risks in completing the capability production document was key. Early planning was necessary because the lengthy Joint Capabilities Integration and Development System process conflicted with the time allotted for the RDC effort's transition to a program of record. For the Automatic Identification System, one of the top risks was a poorly written capability production document, which could adversely affect testers, cost estimators, and program management staff. The team completing the capability production document should be the team assisting the procuring contract officer on the contract specification. In formulating capability requirements, the team should list just those performance thresholds that current mature technology can field today. Stretch goals from immature technology should be considered performance objectives or placed in a later increment.
10. Collaborating with other program offices and Systems Commands providing similar products and services would have increased product knowledge, provided lessons learned, and reduced program risk.
11. Providing regular cost, schedule, and performance status reports to senior Navy leaders and action officers would have better managed stakeholder expectations and reduced questions and requests for briefings.

## **Lessons Learned for Logistics Support**

1. Immediately create and document an integrated logistics support strategy.
2. Be involved in developing the RDC strategy. Recommend that the acquisition strategy include a plan for logistics and long-term maintenance. The plan should cover maintenance concept, integrated logistics support, manpower estimate, inventory management, configuration management, data management, operator and maintenance training, and demilitarization and disposal.



3. Work closely with the requirements team and the systems engineers.
4. Plan how to procure spares to support initial system installations, including ensuring availability of funds to buy spares.
5. Develop initial requirements by using projected unit cost and estimated quantities.
6. Ensure there is an assigned Naval Inventory Control Point program manager.
7. Draft the logistics parts of the capability production document.
8. Develop a preliminary parts allowance list to support initial RDC installations, and a full allowance parts list once the provisioning technical documentation is developed and made available to the Naval Inventory Control Point.
9. Be involved in contract development, and focus on areas such as warranty provisions, lead times for required spares, supplemental logistics products and services offered, and the quality of technical data provided with the product.
10. Be sure to utilize commercial warranties. In addition to parts support, vendor warranties can be written to include technical support and engineering services.
11. If the system design is heavily commercial off-the-shelf, leverage the use of existing vendor documentation and products to support the system during the RDC phase and then determine a plan to update and incorporate them to support the transition to a program of record.
12. Cooperate and work closely with COMOPTEVFOR in support of any QRA requirements.
13. Use advanced individual training to achieve initial training requirements. Develop plans to shift training requirements to formal training. Since RDCs are new requirements, getting early buy-in from affected schoolhouses and communities is difficult.
14. Identify and document manning requirements.

## **Logistical Actions After Key Program Events**

1. ASN (RD&A) RDC Approval
  - start drafting integrated logistics support plan;
  - determine funding source for buying spares;
  - start establishing in-service infrastructure;
  - forecast reliability, maintainability, and availability objectives;
  - participate in acquisition integrated project teams established for the RDC;

- request assignment of a program manager for the Naval Inventory Control Point; and
  - assist in drafting integrated logistics support and training portions of the contract statement of work.
2. Contract Award
    - serve on the technical evaluation board, with specific emphasis on the contractor's proposal for warranty provisions, lead times, quality of technical data, and other technical support;
    - participate in any contract meetings; and
    - ensure that spares and spares funding are adequately addressed and provided on time.
  3. Initial Fielding
    - work with the Regional Maintenance and Modernization Coordination Office to ensure that there are no delays in getting onboard platforms for alteration installation teams to perform system installations,
    - use alteration installation team training to achieve initial training requirements, and
    - deliver commercial off-the-shelf technical manuals to support initial system installation.
  4. Integrated Logistics Support Certification
    - use the RDC approval letter as authorization for timeline waivers for integrated logistics support certifications, and
    - pursue integrated logistics support certifications once support products are complete.
  5. QRA Requirement
    - ensure that all integrated logistics support certifications are available to the QRA team,
    - ensure that the operators using the system are well trained, and
    - brief COMOPTEVFOR on the integrated logistics support strategy and the status of all logistics products.
  6. Milestone Decision (transition to Program of Record)
    - Ensure that an independent logistics assessment is appropriately scheduled 3 months before the milestone decision point.

# 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

OCT 13 2009

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL OF THE  
DEPARTMENT OF DEFENSE

Subj: REPORT ON RAPID ACQUISITION AND FIELDING OF MATERIEL  
SOLUTIONS BY THE NAVY

Ref: (a) DODIG Draft Report No. D2008-D000AE-0247.000 of Sep 3, 2009

Encl: (1) Summary of Recommendations and Actions for DODIG No.  
D2008-D000AE-0247.000 Draft Report  
(2) Summary of Comments to Various Findings in subject Draft Report

In response to reference (a), enclosures (1) and (2) are forwarded listing the  
comments, recommendations and status of action taken. Questions concerning  
this letter should be directed to

[REDACTED]

*Elliott B. Branch*

Elliott B. Branch  
Executive Director  
Acquisition & Logistics Management

Copy to:  
NAVIG  
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AIR OOG4  
SEA 00N3C

DEPARTMENT OF THE NAVY RESPONSE TO RECOMMENDATIONS  
AND ACTION TAKEN REGARDING DODIG DRAFT REPORT ON RAPID  
ACQUISITION AND FIELDING OF MATERIEL SOLUTIONS BY THE  
NAVY (PROJECT NO. D2008-D000AE-0247.000)

Recommendation A.1:

“We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) revise the Assistant Secretary of the Navy (Research, Development, and Acquisition memorandum, “Rapid Acquisition Processing Update,” August 1, 2007, to require Program Executive Officers, when approving acquisition strategies for all rapid deployment capability acquisitions, to: . . . “

Recommendation A.1.a:

“Limit to the number of items required for low-rate initial production the procurement of items needed to satisfy the immediate quantity in the urgent needs request, in accordance with section 806 of Public Law 107-314, “Rapid Acquisition and Deployment Procedures,” December 2, 2002, regardless of funding level.”

Recommendation A.1.b :

“Require acquisition managers to provide written justification when the planned procurement of rapid deployment capability items to satisfy the immediate urgent need is expected to exceed 10 percent of total planned production, in accordance with section 2400 of title 10, United States Code, “Low-Rate Initial Production of New Systems.”

DON Comments:

Navy does not Concur. The DoD IG Finding A is that Navy PEOs allowed acquisition managers to procure RDC program quantities in excess of a 10% low rate initial production (LRIP) limit. One DoD IG recommendation is for written justification when RDC LRIP is expected to exceed the 10% limit in accordance with section 2400 of title 10, United States Code, “Low-Rate Initial Production of New Systems. However, the DoD IG inserts a reference to Section 2400 of 10 U.S.C in their findings/recommendations when there’s no reference to Section 2400 of 10 U.S.C. in Section 806 of Public Law 107-314.

The DoD IG Finding(s) and Recommendation(s) do not apply to RDCs because none of the Rapid Deployment Capability (RDC) programs is a ‘major system’ or ‘major defense acquisition program’ as defined by section 2400, section 2432,

subsection (5) of section 2302, and section 2302d, of title 10, U. S. Code. Section 806 of Public Law 107-314 does not reference section 2400 of title 10, U. S. Code.

Recommendation A.1.c:

“Enforce the requirement for acquisition managers to document how the procurement quantities tie to the threat that is driving the urgent needs request.”

DON Comments:

Navy concurs. Navy recognizes the importance of properly balancing procurement quantities sufficient to meet the urgent need without creating unnecessary excess inventory. We agree with this recommendation and we will consider proper implementation policy in the next update of the SECNAVINST 5000.2D

Recommendation A.2:

“We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) revise Secretary of the Navy Instruction 5000.2D, “Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System, “ October 16, 2008, to reference the revised policy on rapid deployment capability acquisition quantities resulting from Recommendation A.1.”

DON Comments:

Navy partially concurs. The DoD IG Finding(s) and Recommendation(s) do not apply to RDCs because none of the Rapid Deployment Capability (RDC) programs is a ‘major system’ or ‘major defense acquisition program’ as defined by section 2400, section 2432, subsection (5) of section 2302, and section 2302d, of title 10, U. S. Code. Section 806 of Public Law 107-314 does not reference section 2400 of title 10, U. S. Code. As this section does not apply, this language will not be added to the Navy Instruction. We are reviewing and discussing the next revision of the stated instruction for inclusion of appropriate material regarding tying the procurement quantities to the threat.

Recommendation A.3:

“We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) direct Navy acquisition officials to seek a waiver of low-rate

initial production quantity limitations from the Secretary of Defense authorizing them to procure rapid deployment capability equipment when the equipment is urgently needed to eliminate a capability deficiency that has resulted in combat fatalities, in accordance with section 811 of Public Law 108-375, "Rapid Acquisition Authority to Respond to Combat Emergencies," October 28, 2004."

DON Comments:

Navy does not Concur. We do not agree that the DoD IG Finding(s) and Recommendation(s) apply to RDCs because none of the Rapid Deployment Capability (RDC) programs is a 'major system' or 'major defense acquisition program' as defined by section 2400, section 2432, subsection (5) of section 2302, and section 2302d, of title 10, U. S. Code. Plus, Section 806 of Public Law 107-314 does not reference section 2400 of title 10, U. S. Code. We do not agree that such a waiver of low-rate initial production quantities is required.

Recommendation B.1.a.1:

"We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) include in the planned Secretary of the Navy Instruction on the urgent needs process guidance and procedures for streamlining and implementing acquisition strategy planning elements required in the Secretary of the Navy Instruction 5000.2D, "Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System,:" October 16, 2008, to fully meet the intent of Public Law 107-314, "The Bob Stump National Defense Authorization Act for Fiscal Year 2003," which requires DOD to develop procedures for rapidly acquiring, demonstrating, and deploying items to meet urgent needs.

DON Comments:

Navy concurs in part. We are currently developing revisions for the Secretary of the Navy Instruction 5000.2D. Definition of the urgent needs process and procedures are being considered for incorporation in this revision.

Recommendation B.1.a.2:

"We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) include in the planned Secretary of the Navy Instruction on the urgent needs process guidance and procedures for making the transition from acquisition efforts to meet urgent needs to acquisition programs of record, as the

Acting Assistant Secretary of the Navy (Research, Development, and Acquisition) discussed in the memorandum, "Updated Rapid Deployment Capability Execution Guidance for Subnet Relay and High Frequency Internet Protocol, Automatic Identification System, Commercial Broadband Satellite Program and Expanded Maritime Interceptions Operation," April 24, 2008."

DON Comments:

Navy concurs. Appropriate language supporting this recommendation has been submitted and is being considered in the rewrite of the next iteration of the stated instruction.

Recommendation B.1.b:

"We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) include in the planned Secretary of the Navy Instruction on the urgent needs process a requirement that Program Executive Officers approve or disapprove acquisition strategies submitted by acquisition managers within 90 days of receiving a rapid development capability initiation memorandum."

DON Comments:

Navy concurs. We agree with the recommended requirement and appreciate the necessity for coordination and awareness of planned rapid acquisitions between PMs, PEOs, and acquisition and requirements managers.

Recommendation B.2:

"We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition) establish and maintain a lessons learned database for acquisition managers to enhance their planning and execution of acquisition strategies to meet urgent needs requests."

DON Comments:

Navy concurs in part. We are assessing the need for this information and the resources required to support this recommendation. To aid in providing visibility of previous urgent needs response actions to acquisition managers, we are developing an online tracking system that will provide access to previous urgent needs response information and documents.

Recommendation C:

“We recommend that the Assistant Secretary of the Navy (research, Development, and Acquisition) revise the Secretary of the Navy Instruction 5000.2D, “Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System,” October 16, 2008, to require program sponsors and acquisition managers to request the Commander, Operational Test and Evaluation Force to perform quick reaction assessments of equipment that the Navy is acquiring through the rapid development and deployment process.”

DON Comments:

Navy concurs in part: For those time sensitive operational needs which can be effectively addressed through the RDDC process, Navy concurs performance of a Quick Reaction Assessment by the OTA, as coordinated with the program sponsor and acquisition manager, should be considered in the RDDC timeline and goals for rapid response, as appropriate. In addition, representation from the test and evaluation community is now part of the vetting process for urgent needs.



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# Inspector General Department of Defense

