Audit Report

YEAR 2000 ISSUES WITHIN U.S. ATLANTIC COMMAND AND THE SERVICE COMPONENTS

Report No. 99-232 August 16, 1999

Office of the Inspector General
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Acronyms

ACC	Air Combat Command
COMNAVAIRLANT	Commander, Naval Air Force, Atlantic
COMSUBLANT	Commander, Submarine Force, Atlantic
COMNAVSURFLANT	Commander, Naval Surface Force, Atlantic
FORSCOM	U.S. Army Forces Command
LANTFLT	U.S. Atlantic Fleet
MARFORLANT	U.S. Marine Forces, Atlantic
OPEVAL	Operational Evaluation
USACOM	U.S. Atlantic Command
Y2K	Year 2000

INSPECTOR GENERAL
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August 16, 1999

MEMORANDUM FOR COMMANDER IN CHIEF, U.S. ATLANTIC COMMAND
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT AND COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Year 2000 Issues Within U.S. Atlantic Command and the Service Components (Report No. 99-232)

We are providing this report for information and use. This is a follow-on audit to Inspector General, DoD, Report No. 98-194, "U.S. Atlantic Command Year 2000 Issues," August 27, 1998. We considered management comments on a draft of this report when preparing the final report.

Management comments conformed to the requirements of DoD Directive 7650.3 and no reply to this report is required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Harlan M. Geyer at (703) 604-9593 (DSN 664-9593), email hgeyer@dodig.osd.mil, or Mr. Donald A. Bloomer at (703) 604-9477 (DSN 664-9477), email dbloomer@dodig.osd.mil. See Appendix D for the report distribution. Audit team members are listed inside the back cover.

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Office of the Inspector General, DoD

Report No. 99-232 **August 16, 1999**
(Project No. 9LA-5032)

Year 2000 Issues Within U.S. Atlantic Command and the Service Components

Executive Summary

Introduction. This is one in a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge. For a list of audit projects addressing the issue, see the year 2000 web pages on the IGnet at http://www.ignet.gov.

Objectives. This is a follow-on audit to Inspector General, DoD, Report No. 98-194, "U.S. Atlantic Command Year 2000 Issues," August 27, 1998. The overall audit objective was to evaluate the ability of the U.S. Atlantic Command to resolve year 2000 issues to avoid undue disruption of its mission.

Results. The U.S. Atlantic Command headquarters was making progress in addressing its year 2000 problems. Coordination within, and among, the Component commands needed improvement to ensure that all year 2000 problems within the command are resolved. In order to mitigate risk, U.S. Atlantic Command and its Component commands needed to intensify their efforts in the limited time remaining before the year 2000. See the Finding section for details.

Summary of Recommendations. We recommend that the Commander in Chief, U.S. Atlantic Command, ensure that the system thin lines submitted by the Component commands meet the requirements of the U.S. Atlantic Command and that the thin lines sufficiently replicate the day-to-day operating environment of the systems to be tested; continue to identify all interfaces for mission-critical systems; continue to monitor mission-critical systems to ensure they are reported correctly; obtain contingency plans for all U.S. Atlantic Command mission-critical systems, including systems identified by supporting commands; continue to provide oversight of the year 2000 programs of the Component commands so that all year 2000 problems identified by the Component commands are resolved; and ensure that all installations with facilities and infrastructure essential to the mission of the U.S. Atlantic Command have any year 2000 problems identified and remediated.

We also recommend that the Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command, obtain contingency plans for mission-critical systems using existing databases; continue to develop continuity of operations plans for all mission-critical systems; identify all interfaces and system dependencies necessary to support U.S. Atlantic Command; ensure that any testing conducted by their parent Service include interfaces and system dependencies; and identify procedures for reporting accurate information regarding the

year 2000 compliance of installations supporting the U.S. Atlantic Command. Finally, we recommend that the Commander in Chief, U.S. Atlantic Fleet, obtain year 2000 compliance status of the fleet, subordinate commands, and individual classes of ships.

Management Comments. The Commander in Chief, U.S. Atlantic Command, concurred with the finding and recommendations and provided details on efforts to ensure that the system thin lines submitted by the Component commands meet the U.S. Atlantic Command requirements and that the thin lines sufficiently replicate the day-to-day operating environment of the systems to be tested; to identify all interfaces for mission-critical systems; to continue to monitor reporting of mission-critical systems to ensure correctness; to obtain contingency plans for all U.S. Atlantic Command mission-critical systems; to continue to provide oversight of the year 2000 programs of the Component commands; and to ensure that any year 2000 problems for installations with facilities and infrastructure essential to the mission of the U.S. Atlantic Command are identified and remediated. The Commander, U.S. Army Forces Command; the Commander in Chief, U.S. Atlantic Fleet; and the Commander, Air Combat Command, concurred with the finding and recommendations and provided details on their progress in obtaining contingency system plans and developing continuity of operations plans for all mission-critical systems; identifying and testing all system interfaces and dependencies; and implementing procedures to report year 2000 compliance of installations supporting the U.S. Atlantic Command. The Commander in Chief, U.S. Atlantic Fleet, also provided details on procedures used to obtain year 2000 compliance status of the fleet, subordinates commands, and individual classes of ships. A discussion of management comments is in the Finding section of the report and the complete text is in the Management Comments section.

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Background

The U.S. military is highly dependent upon information technology - computer hardware and software. That information technology may not work if the programming cannot handle the year 2000 (Y2K) date rollover. Because military operations depend on an infrastructure driven by information technology, commanders must ensure continuity of their mission capability despite Y2K risks of system or infrastructure degradation and failure.

Because of the potential failure of computers to run or function throughout the Government, the President issued an Executive Order, "Year 2000 Conversion," February 4, 1998, making it policy that Federal agencies ensure that no critical Federal program experiences disruption because of the Y2K problem. The Executive Order also requires that the head of each agency ensure that efforts to address the Y2K problem receive the highest priority attention in the agency.

DoD Y2K Management Strategy. In his role as the DoD Chief Information Officer, the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) is coordinating the overall DoD Y2K conversion effort. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) issued various iterations of a Y2K management plan to provide direction and make the DoD Components responsible for implementing the five-phase Y2K management process. The "DoD Year 2000 Management Plan, Version 2.0" (DoD Management Plan), December 1998, is the most current iteration. The target completion date for implementation of mission-critical systems was December 31, 1998, and for nonmission-critical systems was March 31, 1999.

The Joint Chiefs of Staff. The Chairman of the Joint Chiefs of Staff is the principal military adviser to the President, the Secretary of Defense, and the National Security Council. The Joint Chiefs of Staff have no executive authority to command the combatant forces. The Secretaries of the Military Departments assign all forces under their jurisdiction to the unified commands to perform missions assigned to those commands. The Joint Staff assists the Chairman of the Joint Chiefs of Staff with unified strategic direction of the combatant forces, unified operation of the combatant commands, and integration into an efficient team of air, land, and sea forces.

The "Joint Staff Year 2000 Action Plan" (the Action Plan), March 1998, provides the unified commands and Joint Staff directorates with the corporate strategy and management approach for addressing the Y2K problem. The Action Plan uses the same target completion date for the implementation phase as the DoD Management Plan. The Action Plan states that the goal is to have all warfighting (mission-critical) systems certified as Y2K compliant not later than December 31, 1998.

Office of the Secretary of Defense Memorandums. The Secretary of Defense and the Deputy Secretary of Defense have issued memorandums on DoD Y2K efforts. In the Secretary of Defense memorandum "Year 2000 Compliance," August 7, 1998, the Secretary of Defense stated that DoD was making insufficient progress on Y2K conversion, which he termed "a critical national defense issue." He directed a number of actions, including that the commander in chief of each unified command shall review the status of Y2K implementation within the command and subordinate units and formulate a Y2K operational evaluation plan. The Deputy Secretary of Defense issued a memorandum, "Year 2000 (Y2K) Verification of National Security Capabilities," August 24, 1998, which directed the principal staff assistants of the Office of the Secretary of Defense to verify that all functions under their purview will continue unaffected by Y2K issues. Each principal staff assistant was required to provide the Deputy Secretary of Defense with plans for Y2K-related end-to-end testing of each process within communications, health/medical, intelligence, logistics, and personnel.

U.S. Atlantic Command. The U.S. Atlantic Command (USACOM) is one of nine unified commands in DoD. The USACOM general area of responsibility includes the Atlantic Ocean west of 17 degrees east longitude (excluding the waters adjoining South and Central America south of 8 degrees north latitude and west of 30 degrees west longitude), the Arctic Ocean east of 95 degrees west longitude and west of 100 degrees east longitude, and Greenland and other islands (except Great Britain and Ireland) in all assigned water areas. The Commander in Chief, USACOM, reports through the Chairman of the Joint Chiefs of Staff to the Secretary of Defense. USACOM is supported by Component commands from each Service that provide forces as required to conduct operations. USACOM Component commands are U.S. Army Forces Command (FORSCOM); U.S. Atlantic Fleet (LANTFLT); Air Combat Command (ACC); U.S. Marine Forces, Atlantic (MARFORLANT); and U.S. Special Operations Command, Atlantic Command.

Objectives

This is a follow-on audit to Inspector General, DoD, Report No. 98-194, "U.S. Atlantic Command Year 2000 Issues," August 27, 1998. The overall audit objective was to evaluate the ability of USACOM to resolve Y2K issues to avoid undue disruption of its mission. See Appendix A for a discussion of the audit scope and methodology and Appendix B for a summary of prior coverage.

Status and Coordination of Year 2000 Issues Within U.S. Atlantic Command

USACOM was making progress in addressing its Y2K problems. However, the level of Y2K efforts within USACOM and its Component commands varied in scope and continued to develop. Coordination between USACOM and its Component commands and within and among the Component commands needed improvement to ensure that all Y2K problems are resolved. In order to mitigate risk, USACOM and its Component commands needed to intensify their efforts in the limited time remaining before the year 2000.

USACOM Y2K Efforts

Follow-On Audit Effort. From April through June 1998, the Inspector General, DoD, conducted an audit to evaluate the status of the progress of USACOM in resolving its Y2K computing issues. Inspector General, DoD, Report No. 98-194 made numerous recommendations to USACOM. USACOM concurred with all the recommendations except one. USACOM nonconcurred with a recommendation to join with functional counterparts at other unified commands to obtain the status of mission-critical systems from the Services and Defense agencies. USACOM proposed instead that the Joint Staff provide that information simultaneously to all the unified commands. That proposal was accepted by the Inspector General, DoD. USACOM was incorporating actions necessary to implement agreed-upon recommendations into its overall Y2K efforts.

Actions USACOM had taken in response to that audit included:

- establishing procedures to monitor and track the status of mission-critical systems that the Services and Defense agencies own;

- establishing offices of primary responsibility for nonstandard commercial off-the-shelf products and completing reconciliation of compliance discrepancies;

- developing system and operational contingency plans that establish alternative procedures to successfully accomplish the mission if Y2K disruptions occur; and

- using selected command and joint exercises to test Y2K scenarios and contingency plans in operational environments.

Task Force. USACOM formed a Y2K task force composed of operators, planners, and technical experts to provide oversight and to better focus the

overall USACOM Y2K effort. The Y2K Director within the Communications Directorate leads the USACOM Y2K task force. The task force is composed of seven branches.

- Chairman's Contingency Assessment[1]
- Commander in Chief Y2K Operational Evaluation (OPEVAL)
- Commercial Off-The-Shelf/Government Off-The-Shelf Compliance
- Engineering Evaluations
- Global Command and Control System OPEVAL
- Joint User Switch Exercise '99[2]
- Nuclear Systems Y2K OPEVAL

Critical Mission and Functions Thin-Line Approach. USACOM identified its critical missions, functions, and tasks. Those critical missions, functions, and tasks were derived from the Joint Strategic Capabilities Plan and the associated Joint Mission Essential Task Listing. For example, critical missions include the force provider mission; critical tasks include identifying, selecting, and deploying forces based in the continental United States. See Appendix C for a complete list of the two missions and the associated critical tasks to be evaluated by USACOM. As of March 1999, USACOM had identified 83 mission-critical systems that support critical missions and tasks. In April 1999 the Component commands submitted to USACOM the thin lines of systems that the Component commands developed to support the USACOM OPEVAL. As of April 14, 1999, USACOM had not completed reviewing the Component command thin lines to ensure that all necessary missions, tasks, and functions were addressed by the Components.

Operational Evaluations. USACOM had conducted one of its OPEVALs and was in the planning stages for the second. USACOM was tasked by the Joint Staff to perform OPEVALs on two critical missions: force provider operations and area of responsibility operations. The first phase of the USACOM OPEVAL was conducted by USACOM headquarters in February 1999, with no active participation by the Component commands. USACOM simulated Component command participation in the OPEVAL. During Phase 1, USACOM tested 5 dates on 10 systems.

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[1] The Chairman's contingency assessment is an exercise to be conducted involving the unified commands and the Services The two initial phases will focus on mobilization and deployment

[2] The Joint User Switch Exercise '99 is the 1999 version of an annual exercise sponsored by the Executive Agent for Tactical Switch Systems/Joint Network Management conducted as part of the mandate of the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) to test all new software releases

The ability of USACOM to successfully engage the Component commands in the second phase of the OPEVAL, scheduled to occur in June 1999, had already been restricted. In a March 16, 1999, message to the unified commands that were not involved in the Communications Enterprise Test,[3] the Joint Staff instructed them to "not roll clocks forward on backbone communications networks; [because] corruption of other user nodes may result." Because USACOM is not involved in the Communications Enterprise Test, it is not allowed to advance the clocks on its backbone communications systems when Phase 2 of the OPEVAL is conducted. The ability to communicate outside of USACOM headquarters will be vital to successfully demonstrating the command's ability to operate in a Y2K environment. The missions that USACOM is going to evaluate for Y2K problems involve different end users. The force provider mission supports other unified commands and any coordination with other commands would potentially be via classified means. The area of responsibility mission, and more specifically in the counter-drug, humanitarian assistance, military support to civil authorities, and military assistance for civil disturbances tasks, USACOM supports military, civilian, and foreign users. For the area of responsibility mission, communications between USACOM and the supported groups would be primarily through unclassified voice and data means.

Unless USACOM and its Component commands are able to replicate all of the communications interfaces and system dependencies involved in executing either of the USACOM missions, the ability of the OPEVAL process to demonstrate USACOM and Component command capabilities to function in a Y2K environment will not be assured.

USACOM Component Commands' Ongoing Y2K Efforts

Y2K Program Management. The status of Y2K efforts within the USACOM Component commands varied. Some USACOM Component commands developed their own Y2K plans while others used the Y2K programs developed by their Service headquarters. All of the USACOM Component commands' programs were, however, developed as a result of direction received from their Service headquarters. Because of the various methods used to address the Y2K problem, monitoring and oversight by USACOM must continue to ensure that the Components' Y2K programs meet the requirements and needs of USACOM.

FORSCOM. The FORSCOM Y2K program is a combination of centralized and decentralized oversight. The "FORSCOM Y2K Implementation Plan, Version 3" (the FORSCOM Plan), November 10, 1998, formally

[3] The Communications Enterprise Test is a test of major backbone systems. The test will occur in an isolated environment and will incorporate public switched network interfaces. Participants were to include Bellcore Laboratories, the Joint Interoperability Test Command, the U S. European Command, the U S Pacific Command, and the U.S. Strategic Command

established a Y2K task force. The FORSCOM Deputy Chief of Staff for Command, Control, Communications, and Computers leads the FORSCOM Y2K program. The FORSCOM Plan identified two categories of Y2K issues, information technology systems (led by the Deputy Chief of Staff for Command, Control, Communications, and Computers) and noninformation technology (led by the Deputy Chief of Staff for Personnel and Installation Management). A project management team was established by the Deputy Chief of Staff for Command, Control, Communications, and Computers that included members from the various staff sections (for example, the personnel and installation management directorate, the intelligence directorate, and the operations directorate) and the U.S. Army Reserve Command. In addition, FORSCOM identified points of contact for information technology and noninformation technology issues at each FORSCOM installation. All information technology and noninformation technology systems must go through the same five-phase process of awareness, assessment, renovation, validation, and implementation mandated by DoD, the Joint Staff, and the Army. The FORSCOM Plan promulgated requirements that were to be met by major subordinate commands for information technology and noninformation technology systems to be considered Y2K compliant. Among those requirements were the following:

- execute the FORSCOM Plan;
- appoint a Y2K project officer and establish a Y2K working group;
- appoint a noninformation technology project officer;
- establish and maintain information technology and noninformation technology database inventories;
- identify mission-critical systems;
- ensure the decision to execute a Y2K correction, replacement, or retirement is consistent;
- ensure all interfaces are identified and documented in a written interface agreement;
- address Y2K issues with subordinate installations and units;
- purchase and develop only Y2K compliant systems;
- ensure contracts have the Y2K clause;
- oversee Y2K testing; and
- ensure exit criteria are met and documented before a system is moved to the next phase.

FORSCOM had provided Y2K status reports on systems and installations to the Army. FORSCOM used a color coding system to report system status using the colors green (compliant), yellow (noncompliant, but scheduled to become compliant by the rollover date), and red (noncompliant). Confusion among FORSCOM units on how to report systems by color recently led FORSCOM to change the reporting process so that systems were reported according to the phase the system was in. Another problem FORSCOM identified and resolved concerned contingency plans. Version 2 of the FORSCOM Plan required contingency plans only for systems that would not meet the DoD mandated December 1998 date for system compliance. Version 3 of the FORSCOM Plan requires contingency plans for all mission-critical systems.

LANTFLT. The LANTFLT Y2K program is structured to provide centralized monitoring at LANTFLT of the decentralized implementation by subordinate commands and organizations. As a force provider to other geographical commanders in chief (for example, U.S. Central Command), LANTFLT is responsible for providing personnel with Y2K compliant equipment when transferring operational command to another unified command. To address the Y2K problem, the LANTFLT Directorate of Communications (N-6) was assigned responsibility for the coordination of Y2K efforts. The N-6 established a Y2K Program Management Office and issued the "CINCLANTFLT Y2K Program Management Office Master Plan," November 1998, identifying the responsibilities of the office. Additionally, LANTFLT used a combination of the DoD Management Plan and Department of the Navy Y2K-related guidance to resolve Y2K issues within LANTFLT. An N-6 official was designated as the head of the LANTFLT Program Management Office action team on a full-time basis. Other Y2K action team members include personnel from the subordinate commands, shore commands, and MARFORLANT. Some of the subordinate commands, such as the Commander, Naval Surface Force, Atlantic (COMNAVSURFLANT), dedicated personnel solely to Y2K activities. Other commands established programs assigning participation as additional duties for their personnel.

LANTFLT decentralized its Y2K program to allow each subordinate command to implement Y2K programs based on their mission. Accordingly, LANTFLT had not disseminated structured guidance to its subordinate commands for the overseeing or managing of their Y2K programs. For example, COMNAVSURFLANT; Commander, Naval Air Force, Atlantic (COMNAVAIRLANT); Commander, Submarine Force, Atlantic (COMSUBLANT); and Commander, Mid-Atlantic Region, individually developed inventory and tracking systems that do not interface with one another. As a result of the decision to employ a decentralized approach to the Y2K issue, LANTFLT lacked a cohesive effort to achieve its Y2K compliance. Additionally, LANTFLT could not provide its Y2K compliance status nor that of subordinate commands and individual classes of ships.

ACC. The ACC Y2K program is a combination of centralized and decentralized oversight. To address the Y2K problem, ACC established a formal Y2K program and issued the "Air Combat Command Y2K Program

Management Plan" (the ACC Plan), January 1998. The ACC Plan assigns the ACC Y2K Program Management Office the responsibility for managing the ACC Y2K initiative and implementing the Air Force Y2K management strategy. The plan formalizes a Y2K task force that is composed entirely of Communications Directorate personnel. Coordination with other ACC command sections, such as the Operations Directorate, is carried out for the implementation of the Y2K program. For example, the Operations Directorate is involved in the planning for Y2K testing in the upcoming exercises and OPEVALs. In addition, to assist the Y2K task force in addressing the Y2K needs of ACC, all ACC base and tenant units have designated a Y2K-dedicated individual responsible for overseeing the Y2K issues of their base or unit. Each ACC base and tenant unit also has a designated representative from each functional area (for example, logistics), who oversees Y2K issues for that functional area.

For Y2K issues, ACC was following the guidance contained in the "Air Force Year 2000 Infrastructure MAJCOM [Major Command]/Wing Commanders Guidance Package," version 1.2.1, October 29, 1997. That guidance tasks Air Force major commands and their subordinate units to:

- inventory items;
- determine mission impact;
- fix, replace, or ignore; and
- plan for contingencies.

MARFORLANT. The MARFORLANT Y2K program is a combination of centralized and decentralized oversight. To address the Y2K problem, MARFORLANT is implementing the Y2K program established by the Commanding General, MARFORLANT, and the DoD Management Plan. The Marine Corps' Y2K executive, who has overall responsibility for Y2K problem resolution, is the Assistant Chief of Staff for Command, Communications, Computers and Intelligence/Chief Information Officer, Headquarters, U.S. Marine Corps. The MARFORLANT Communications Directorate is the Y2K action office that oversees progress and provides Y2K-related guidance for subordinate commands. The office coordinates the efforts of subordinate commands of MARFORLANT: U.S. Marine Forces, South; Fleet Marine Forces, Atlantic; and Marine Corps Bases, Atlantic. The MARFORLANT Plans and Operations Directorate is responsible for exercise and OPEVAL coordination while the MARFORLANT Logistics Directorate is responsible for base and station facility Y2K issues. The MARFORLANT Y2K Advisory Group, composed of representatives from each division in MARFORLANT, assists the Y2K action office in the resolution of Y2K-related cross-functional issues and facilitates the sharing of information within MARFORLANT. MARFORLANT and other Marine Forces, including program managers, report their Y2K status to the Marine Corps Computer and Telecommunications Activity, Quantico, Virginia. The Marine Corps Computer and

Telecommunications Activity tracks the daily Y2K status for the Marine Corps Chief Information Officer via the Marine Corps Y2K web site. The Marine Corps Computer and Telecommunications Activity is responsible for preparing the Marine Corps weekly Y2K status report that is submitted to the Marine Corps Chief Information Officer.

Identification of Mission-Critical Systems. Although each USACOM Component command had engaged in identifying and inventorying mission-critical information systems, the adequacy of the identification process varied. In its primary role as a force provider to other unified commands, the number of systems USACOM uses will be less than the number of systems other unified commands will use in conducting their OPEVALs. The Component commands, however, need to ensure that their systems are Y2K compliant for multiple organizational structures. First, the Component commands must ensure that the systems used in the force provider role in support of USACOM are Y2K compliant. Second, the Component commands must ensure that the systems used by their forces, when those forces are provided to the other unified commands, are still Y2K compliant when integrated into those commands' structures.

FORSCOM. FORSCOM had not completed identifying the thin line of mission-critical systems that FORSCOM units would require to support USACOM. FORSCOM was using the 24 mission threads that the Army had issued to identify the systems associated with the mission threads. According to an Army official, those 24 mission threads would support any of the missions that the Army would have to perform to support the unified commands. FORSCOM had developed a mission-critical list within FORSCOM and merged it with the Army's mission-critical list, which identified 401 mission-critical systems. For systems that FORSCOM did not manage, FORSCOM relied on the DoD database and the Army Y2K database to determine whether the systems were Y2K compliant. Initially, FORSCOM identified 79 FORSCOM-managed information systems. Of the 79 systems, FORSCOM identified only 3 systems as mission critical. Those systems had completed the five-phase process required by the FORSCOM Plan.

As of April 1, 1999, FORSCOM had begun developing thin lines of mission-critical systems to support USACOM, using the information contained in the Army mission threads. FORSCOM had performed system testing on the three mission-critical systems and testing on the nonmission-critical systems it initially identified. However, FORSCOM had not performed integration testing. FORSCOM was relying on integration testing to be conducted as part of the "U.S. Army Operation Order 99-01, Millennium Passage," January 4, 1999, testing program, which will include integration testing of the various mission threads identified by the Army.

LANTFLT. LANTFLT had not completely identified the Y2K status (compliant/noncompliant) of systems required to support USACOM or the other unified commands. LANTFLT was following Navy guidance for identifying mission-critical systems. The Navy guidance placed systems used in the Navy

into two categories, Program of Record systems and Non-Program of Record systems. The guidance states that the Naval Sea Systems Command is responsible for tracking and monitoring the Program of Record systems. LANTFLT had not identified any mission-critical systems under its own management. All systems identified as mission critical were managed by commands such as the Naval Sea Systems Command or the Naval Air Systems Command.

Program of Record Systems.[4] As of January 9, 1999, the Naval Sea Systems Command had identified 621 mission-critical systems. Of the 621 systems, 533 were Y2K compliant and 40 were not Y2K compliant. However, as of April 1, 1999, the Naval Sea Systems Command's listing had grown to 724 Program of Record mission-critical systems (625 identified as compliant, 10 identified as inactive or to be retired, and 89 identified as late) and 1,992 Program of Record mission-support systems (1,449 identified as compliant, 324 identified as inactive or to be retired, and 219 systems identified as late). LANTFLT, however, had not identified how many of the 724 mission-critical systems applied to vessels in its fleet. For example, COMNAVSURFLANT was responsible for tracking the systems on the 125 surface ships in the command. As of April 7, 1999, COMNAVSURFLANT had identified 88 Program of Record mission-critical systems susceptible to Y2K problems. However, COMNAVSURFLANT was not able to identify whether each of the 88 systems on board the vessels in its command had been remediated for Y2K-related problems. In contrast, COMNAVAIRLANT had awarded a contract to inventory the six aircraft carriers in its command. The contractor had already identified all Program of Record mission-critical systems and their compliance status for the six aircraft carriers. As of April 28, 1999, the USS *Kennedy* for example, which is the primary focus for LANTFLT because the USS *Kennedy* Battle Group is to be Y2K compliant prior to deployment in September 1999, was reporting 49 mission-critical systems. Of the 49 systems, 32 were compliant and 17 were not compliant. LANTFLT officials stated that the other ships will be upgraded as time and availability allow.

Non-Program of Record Systems.[5] LANTFLT and its subordinate commands and organizations had not fully identified the Non-Program of Record systems that would be used to conduct operations in support of a unified command. Fleet commanders were given the responsibility in the "Department of the Navy Y2K Action Plan" (the Navy Plan) for oversight of Non-Program of Record systems. In an attempt to address the problems posed by the Non-Program of Record systems, LANTFLT gave COMNAVSURFLANT, COMNAVAIRLANT, and COMSUBLANT responsibility for identifying the Non-Program of Record systems under their

[4] Program of Record systems are deliverable systems that are formal system command development programs

[5] Non-Program of Record systems are systems that have typically been purchased and installed directly by Fleet units

command and control. As of April 7, 1999, LANTFLT had not identified any Non-Program of Record systems as mission critical. However, some Non-Program of Record systems (such as the Contingency Tactical Automated Planning System/Theater Battle Management Core System) were identified by COMNAVSURFLANT as "mission important." Those systems were defined as mission important because they were important to a mission, but not to the point of being considered critical to the mission. Although the Non-Program of Record systems may not be mission critical, it is important that the command identify all of them to ensure that all interfaces and system dependencies are adequately addressed. For example, as a result of a detailed inventory, COMNAVSURFLANT identified more than 10,000 Non-Program of Record items in its command. Such efforts need to be continued so that all interfaces and system dependencies in all elements of LANTFLT are identified.

Thin Lines of Systems and Integration Testing. LANTFLT had not developed thin lines of all systems that its subordinate commands and organizations would use to support a unified command. A LANTFLT official stated that the command was taking a larger, all-encompassing view of the systems necessary to support multiple missions rather than the limited view of systems required to support a single mission. For example, the Second Fleet, which is part of LANTFLT, could be assigned to support U.S. Central Command's area of responsibility or could be tasked as a force provider to develop a thin line of systems to support USACOM. By recognizing and planning for those scenarios, LANTFLT officials believe that they would be better prepared than if they focused their efforts on the thin lines of systems that support only one unified command. LANTFLT, and its subordinate commands and activities, should develop thin lines of systems for the tasks they will be required to execute to support USACOM. The thin line ought to be truly representative of the systems used to support a task regardless of the systems' Program of Record or Non-Program of Record status.

The Navy Plan states that LANTFLT is required to perform integration testing of mission-critical systems. LANTFLT had determined that integration testing for each class of ship in the fleet would be conducted during a pierside "fast cruise" and the end-to-end validation would occur during the Battle Group Systems Integration Testing. For example, each class of ship in the USS *Kennedy* Battle Group was scheduled to undergo pierside certification (integrated testing) prior to the Battle Group Systems Integration Testing in July 1999. The Battle Group Systems Integration Testing process incorporates the Chief of Naval Operations-directed Y2K operational validation tests for all participants in the Battle Group. The Battle Group Systems Integration Testing operational validation, which begins with a baseline assessment, includes advancing the clocks, performing system validations, and restoring the clocks to the correct date and time. The Battle Group Systems Integration Testing was planned to include COMNAVSURFLANT, COMSUBLANT, and COMNAVAIRLANT. LANTFLT officials stated that the USACOM OPEVALs would involve only LANTFLT headquarters personnel and would

not affect the Battle Group Systems Integration Testing at the unit level. That was due in part to the fact that the OPEVAL and Battle Group Systems Integration Testing were not scheduled to occur simultaneously.

ACC. ACC had not completed identifying the thin lines of mission-critical systems that ACC units would require to support USACOM. ACC used a variety of categories to designate the criticality of the systems to ACC units. To identify the mission-critical systems ACC units would require, ACC tasked its subordinate units to inventory all systems that could be date or time dependent. Each system in the inventory was then designated as Category 1 through 4, depicting its significance to the unit's mission. Those categories were defined as follows:

- Category 1: Mission Critical
- Category 2: Mission Essential
- Category 3: Mission Impaired
- Category 4: Non-Mission Essential

As the information was received from subordinate units, ACC Y2K Program Office personnel noted many cases in which systems that were considered essential to the cognizant individuals, but which did not affect immediate wartime action, were designated Category 1. ACC worked with its subordinate commands to refine the lists, ensuring that Category 1 items were systems that were absolutely necessary for conduct of the wartime mission. Three ACC-managed systems were identified as mission-critical systems. As of April 1, 1999, ACC had certified two of the three systems as Y2K compliant.

ACC developed thin lines of systems for U.S. Air Force headquarters after the systems in the command were classified for mission criticality. ACC later developed thin lines of systems for several of the unified commands. The thin lines that ACC developed for U.S. Air Force headquarters were developed in conjunction with an Air Force-wide effort to identify mission-critical systems to ensure that all Air Force mission tasks and related systems were sufficiently evaluated. The Air Force assigned selected major commands responsibility for specific Air Force mission taskings. As of April 1, 1999, ACC was responsible for 13 of the 25 identified mission taskings. ACC then submitted a list of mission-critical systems to the Air Force that supported the ACC-assigned mission taskings. ACC used the data to determine which taskings and systems were not sufficiently evaluated in commander in chief OPEVALs. The Air Force established a "Y2K flag" concept to assist major commands, such as ACC, in identifying those areas for improvement. The Y2K flag concept combines all commander in chief OPEVALs and Air Force exercises to depict how all Air Force mission taskings and mission-critical systems were to be evaluated. As of April 1, 1999, ACC had not developed system architectures showing system interfaces and dependencies in support of the Air Force tasks. The thin lines developed for USACOM were essentially subsets of the entire set

of thin lines developed for the Air Force. ACC participated in 4 of the 11 major tasks to be included in the USACOM OPEVALs. As of April 1, 1999, the thin lines ACC developed to support the USACOM OPEVALs were not completed, although system interfaces had been identified.

ACC monitored the systems included on the ACC thin lines, but managed by other Air Force organizations, using the Air Force Communications Agency database. In those cases, however, it was more difficult for ACC to compile data on the overall status of the thin lines because the Air Force Communications Agency database did not indicate which organizations used a particular system, only which organization had responsibility for the system. Additionally, for systems that the Air Force or Joint Staff did not manage, ACC had to go through the Air Force chain of command to determine system status. As a result, ACC did not have efficient oversight of the status of the systems on its thin lines. Although the wings provided input into categorizing system inventories, the thin lines were developed without the assistance of ACC subordinate units. The ACC Y2K Program Office stated that a video teleconference confirmed that the wing commanders would have identified the same systems as ACC, but the wings had not formally reviewed the thin lines to verify their specifics. Further, the thin lines did not identify specific types of aircraft. Unless the thin lines included all systems to be used to support a unified command, any test of system thin lines would not be complete. As a result, confirmations of system compliance for a specific task would be premature. ACC had requested clarification on the issue from the Air Force.

MARFORLANT. MARFORLANT had identified the thin lines of mission-critical systems that MARFORLANT units would use to support USACOM. MARFORLANT used a variety of categories to designate the criticality of the systems to MARFORLANT units. The Marine Corps Enterprise List is a listing of those systems for which the Marine Corps had Y2K certification responsibilities and which are "unique to the Marine Corps." The listing reflected the current Y2K status of systems reported in the Navy Year 2000 Tracking System Database. As of April 1, 1999, the Marine Corps Computer and Telecommunications Activity was tracking and reporting on 147 Marine Corps systems in the Navy Year 2000 Tracking System Database for all Marine forces. There were 70 mission-critical systems identified, of which 60 had completed the five phases of the DoD Management Plan. The remaining 10 mission-critical systems had a completion date of not later than July 1999. In addition, there were 56 mission-support systems, of which 44 had completed the five phases of the DoD Management Plan. The remaining 12 support systems had a completion date of not later than August 1999. The Marine Corps had identified 21 other systems and subsystems under development that will be Y2K compliant when fielded.

MARFORLANT had developed thin lines of systems to support the USACOM OPEVALs. A conference, sponsored by Marine Corps headquarters, was held in January 1999 to determine which Marine Corps systems were to be evaluated and when the evaluations would be conducted. As of March 28, 1999, the Marine Corps had identified 140 systems to be tested during OPEVALs

sponsored by the Marine Corps and others (for example, the commanders in chief of the unified commands). In addition, 79 of those systems were identified to specific thin lines supporting Marine Corps forces. As of March 28, 1999, MARFORLANT was scheduled to participate in two Battle Group Systems Integration Testing exercises, two commanders in chief OPEVALs, one joint test, and three Service Y2K tests.

Contingency Planning and Continuity of Operations Plans. As of May 1999, the USACOM Component commands had not completed developing contingency and continuity of operations plans for systems and missions that may be affected by Y2K problems. Y2K contingency planning addresses two areas of risk: known or suspected sources of disruption, and unknown or unforeseen disruptions. It is also important that the continuity of operations plans identify the necessary workarounds for systems that may fail due to Y2K problems. Documenting contingency plans and continuity of operations plans will assist in mitigating risks and provide workarounds in the event of the loss of essential services or resources due to Y2K problems. To ensure that Y2K problems will not cause undue impairment of the ability of the Component commands to support the USACOM mission, the Component commands need to develop Y2K contingency plans. The Component commands also need to perform Y2K risk assessments on the Y2K contingency planning process in order to identify system-related risks before they adversely impact execution of the mission. Addressing those risks may include renovating or replacing a system, devising workarounds, or a combination of those activities.

FORSCOM. FORSCOM had not completed development of contingency plans and continuity of operations plans. As previously discussed, FORSCOM had initially identified only three mission-critical systems. Each of those systems had contingency plans that identified the risks if the system was lost, the needed additional resources in the event of a system failure, and how the mission would be performed without those systems. FORSCOM had not received contingency plans for the Army mission-critical systems, nor obtained all system contingency plans available on the Army database. Specifically, contingency and continuity of operations plans had not been developed or documented for a Y2K scenario. Y2K risk assessments had not been performed to ensure that all affected mission-critical systems were Y2K compliant or sufficient workarounds had been planned for and documented. FORSCOM installations were in the process of developing installation continuity of operation plans. Additional FORSCOM efforts are required to provide a sufficient level of assurance that its ability to conduct its mission will not be compromised by Y2K problems.

LANTFLT. LANTFLT had not completed development of contingency plans and continuity of operations plans. LANTFLT could not ensure its ability to execute its critical missions and functions if systems failed as a result of Y2K problems. As of April 1, 1999, LANTFLT had received system contingency

plans from the system commands[6] for 722 of the 724 mission-critical systems. LANTFLT officials stated that several of the contingency plans received from the system commands were not complete enough to provide assistance to system operators in the event of a Y2K-related failure.

The "Navy Y2K Contingency and Continuity of Operations Planning Guide" (the Planning Guide), November 1998, states that the "[n]umbered Fleet Commanders must also develop and distribute an OPTASK [operational task] Y2K, in order to assist commands in developing individual" continuity of operations plans. In a joint effort, LANTFLT and the Commander in Chief, U.S. Pacific Fleet, developed generic continuity of operations plans for 16 operational tasks. For example, the Second Fleet was responsible for the logistics task and developed eight continuity of operations plans that included sustainment of material, ordnance logistics management, and maintenance reporting and tracking systems. The Planning Guide further states that "TYCOM [type command] staffs must prepare generic continuity of operations plans for all systems/equipment supporting mission critical functions/processes that are fielded force-wide." The Planning Guide also states that "unit COOPs [continuity of operations plans] must be developed for all systems/equipment supporting mission critical functions/processes."

LANTFLT conducted a "table-top" exercise in March 1999 with COMNAVSURFLANT, COMNAVAIRLANT, COMSUBLANT and the regional ashore commanders to exercise their continuity of operations plans. The table-top exercise was to assist in identifying and addressing the areas and personnel that were missed in development of the continuity of operations plans. The ashore continuity of operations plans were to conduct exercises similar to hurricane drills. Personnel would be trained to move to the appropriate areas and take appropriate action given a certain contingency. The afloat continuity of operations plans were scheduled to be tested during the pierside fast cruises and the Battle Group Systems Integration Testing. LANTFLT stated that approximately 30 days were planned between fast cruises and the Battle Group Systems Integration Testing. LANTFLT officials stated that all mission-critical systems will be compliant for the battle group testing. However, LANTFLT officials also stated that the Global Command and Control System-Maritime will not be Y2K compliant on all ships until September 30, 1999, after the USS *Kennedy* Battle Group is scheduled to complete the Battle Group Systems Integration Testing exercise.

ACC. ACC had not completed development of contingency plans and the continuity of operations plans. Therefore, it could not be sure of its ability to execute its critical missions and functions if systems failed as a result of Y2K problems.

[6] System commands are the organizations responsible for managing the development, acquisition, and fielding of a system

Continuity of Operations Plans. Air Force Instruction 10-232, "Year 2000 Continuity of Operations Plans," states that each major command, numbered Air Force, and wing commander must have detailed continuity of operations plans to ensure that Y2K rollover problems do not cause mission failures. ACC, an Air Force major command, had required the ACC headquarters directorates and wing commanders to develop continuity of operations plans. ACC had begun to receive contingency plans and continuity of operations plans from its bases and numbered Air Forces. Although the ACC Y2K Program Office stated that the continuity of operations plans are living documents, most merely identified vulnerabilities if systems failed and did not address specific actions needed to offset the vulnerabilities to ensure operations continue. In January 1999, ACC Y2K officials stated that the continuity of operations plans had not been reviewed sufficiently to determine whether they were valid or met Air Force requirements for continuity of operations plans. The ACC officials stated that of the plans that had been reviewed, some were vague and needed more work.

ACC Headquarters Continuity of Operations Plans. Each directorate at ACC headquarters was developing functional contingency plans that will be used to meet Y2K evaluation requirements. As of April 1999, 10 of the 14 directorates at ACC headquarters that were required to have contingency plans had completed them. The remaining four directorates had not cited a completion date for theirs, nor had ACC established a required completion date. The functional contingency plans should identify mission-critical systems used by each staff section and the associated workaround if the system were to fail as a result of a Y2K contingency. In addition, the plans should detail contingency execution actions to be taken in the event of a Y2K contingency, contingency preparation actions that the command should take prior to the year 2000, and recovery actions necessary to return operations to normal. The functional contingency plans are a critical part of the entire Y2K evaluation process and must be completed before ACC participates in any Y2K-related evaluations.

MARFORLANT. MARFORLANT had developed contingency plans and continuity of operations plans. As of April 1, 1999, the Marine Corps Computer and Telecommunications Activity was tracking and reporting on 147 Marine Corps systems in the Navy database that are in MARFORLANT and other Marine forces inventories. The Marine Corps Computer and Telecommunications Activity had received contingency plans for 145 systems. The remaining two systems' contingency plans will be developed once system configuration stabilizes. In addition, a draft functional contingency plan was under review at Marine Corps headquarters. Four additional functional contingency plans had already been completed. The Marine Corps had been proactive in posting contingency plans and continuity of operations plans to the Marine Corps Y2K web site. That allowed Marine commanders the opportunity to review the plans to ensure that the plans addressed all Y2K problems that might be encountered at all levels of the Marine Corps. By contrast, Marine commanders must contact either a program or system manager to obtain contingency plans on tactical systems for systems managed by the other Services.

Using Selected Command and Joint Exercises for Y2K Operational Evaluations

Using selected command and joint exercises to test Y2K scenarios may assist USACOM to make further progress in identifying and resolving Y2K problems. In addition, using selected command and joint exercises would provide USACOM and the other unified commands with the opportunity to correct Y2K interoperability issues or to identify alternative measures if resolution of Y2K issues is not timely. Other unified command Y2K reports issued by the Inspector General, DoD (see Appendix B), recommended that the Joint Staff and unified commands integrate Y2K scenarios into operational requirements for joint exercises to determine the impact and extent of Y2K problems on warfighting capabilities. The Joint Staff and the unified commands concurred with the recommendations.

The Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105-261) (the Public Law) directed the Secretary of Defense to submit:

> a plan for the execution of a simulated year 2000 as part of military exercises in order to evaluate, in an operational environment, the extent to which information technology and national security systems involved in those exercises will successfully operate during the actual year 2000, including the ability of those systems to access and transmit information from point of origin to point of termination

The Public Law also directed that at least 25 of those exercises "are conducted so as to include a simulated year 2000 [and] at least two of those exercises are conducted by the commander of each unified or specified combatant command." Lastly, the Public Law also states that "all mission critical systems that are expected to be used if the Armed Forces are involved in a conflict in a major theater of war are tested in at least two exercises."

Performing command and joint exercises to test Y2K interoperability of system interdependencies and interfaces may not be possible if the Services and Defense agencies have not implemented the necessary Y2K corrections to the required systems. In such cases, contingency plans should be tested in an operational environment to help USACOM assess its capability to continue operations if systems fail because of Y2K problems. Evaluations such as the USACOM OPEVALs can provide the opportunity for the testing of those contingency plans.

FORSCOM. Army Y2K testing will allow FORSCOM to identify and test thin lines of hardware and software that are critical to the warfighting mission of the unified commands. FORSCOM has been tasked by the U.S. Army Operation Order 99-01, Millennium Passage, to conduct and participate in testing and

OPEVALs. There are five distinct, mutually supporting phases: Army system testing, functional end-to-end testing, commanders in chief OPEVALs, Army OPEVALs, and the Chairman's contingency assessments.

- Phase 1 was Army system testing. The Office of Information Systems Command, Control, Communications, and Computers will coordinate system testing with the program executive offices and the program managers. Originally scheduled to end in December 1998, Phase 1 was extended for some systems to March 1999.

- Phase 2 is functional end-to-end testing. The principal staff assistants, through the Assistant Secretaries of the Army, will conduct functional testing for the communications, health/medical, intelligence, logistics, and personnel functional areas. Phase 2 was scheduled to begin in September 1998 and continue through August 1999.

- Phase 3 is the commanders in chief OPEVALs, a series of evaluations that exercise the unified commands' strategic theater missions. Phase 3 was scheduled to begin in October 1998 and continue through July 1999, with additional dates through September 1999, if needed.

- Phase 4 is Army OPEVALs, which are designed to demonstrate the ability to employ, integrate, and synchronize Army forces to accomplish critical combat missions. Phase 4 was scheduled to begin in September 1998 and continue through August 1999.

- Phase 5 is the Chairman's contingency assessments, which will evaluate the ability of DoD to go to war in an environment degraded by Y2K failures. Phase 5 was scheduled to begin in September 1998 and continue through July 1999.

FORSCOM was to complete thin lines of mission-critical systems and develop workarounds for all mission-critical systems for each OPEVAL. The Army designed a Y2K evaluation timeline that starts 65 days before the test or OPEVAL. Some key events in the timeline are: D-45, identify mission threads and system strings; D-40, identify any system that may have a date dependency; and D-5, review evaluation plan. FORSCOM will test air defense, combat support services, fire support, intelligence, maneuver battle command, and mobility and survivability mission threads for the Army OPEVAL. All of the systems that support those mission threads should be tested at some time during one of the unified command OPEVALs.

LANTFLT. Navy Y2K testing could enable LANTFLT to identify and test thin lines of hardware and software that are critical to the warfighting mission of the unified commands. LANTFLT was not involved with the first USACOM OPEVAL. The second USACOM OPEVAL was not scheduled to involve the LANTFLT Battle Group Systems Integration Testing in July 1999. LANTFLT had cancelled its August 1999 Battle Group Systems Integration Testing, the last phase in the deployment verification, and planned to include that final

verification in the June 1999 Battle Group Systems Integration Testing. LANTFLT officials stated that it was unlikely they could completely verify the readiness of the battle group for deployment, meet their Navy requirement to do integrated operational systems Y2K testing, and fulfill the commanders in chief OPEVAL requirements. During the June 1999 Battle Group Systems Integration Testing exercise, LANTFLT planned to validate only those systems that are Y2K compliant and the associated continuity of operations plans in accordance with Navy guidance. As of April 1, 1999, there were no plans to include systems that did not have initialization procedures in place. Initialization procedures are detailed protocols that sailors would follow during the Battle Group Systems Integration Testing. It was unclear when the noncompliant systems would be validated and tested or even whether the compliant systems would be tested in an integrated operational setting.

ACC. ACC participation in the commanders in chief OPEVALs will allow ACC to identify and test thin lines of hardware and software critical to the warfighting mission of the unified commands. ACC was not involved with the first USACOM OPEVAL. In the second OPEVAL, ACC expected USACOM to require ACC involvement. In March 1999, ACC attended the USACOM concept development conference for the second OPEVAL. ACC provided a list of critical systems that support its force provider role. However, as of April 1, 1999, ACC involvement in the OPEVAL had not been fully determined.

MARFORLANT. Marine Corps OPEVALs will allow the Marine Corps to identify and test thin lines of hardware and software that are critical to the warfighting mission of the unified commands. Marine Corps OPEVALs will be conducted to assess Y2K issues across the six Marine Corps Staff Training Program warfighting functions. Those functions are command and control, fire, force protection, intelligence, logistics, and maneuver. MARFORLANT was scheduled to participate in three Service OPEVALs; one joint OPEVAL; two commanders in chief OPEVALs; and two Battle Group Systems Integration Testing exercises, which began in February 1999 and will continue through December 1999. The Battle Group Systems Integration Testing exercises will test the ability of Navy and Marine Corps systems to operate in a Y2K environment while afloat and ashore. Marine Corps OPEVALs will focus on operational forces and their equipment. The Marine Corps OPEVALs will not verify and certify Y2K compliance but focus on reducing risk, ensuring unified and Component commanders that they can perform their mission at minimum risk.

Component Command Installation Y2K Compliance

Although the USACOM Component commands had executed programs to identify and resolve Y2K-related problems on their installations, the adequacy of the programs varied. The Component commands were implementing the

programs of their Services for resolving Y2K-related issues on their installations. The programs did not consider all possible impacts of Y2K-related failures that could adversely affect the USACOM Component commands.

DoD Management Plan Guidance. The DoD Management Plan established policies for inventorying and reporting devices used in the infrastructure of DoD installations. In a November 12, 1998, memorandum, the Deputy Under Secretary of Defense (Industrial Affairs and Installations) reiterated the need for the Services to ensure that certain procedures are carried out regarding Y2K efforts for installations and issued a detailed set of criteria that must be accomplished before an installation can be certified as Y2K compliant.[7] For example, the memorandum charged installation commanders with responsibilities that included:

- conducting Y2K inventories at their installations,
- reporting regularly on Y2K progress,
- developing and exercising continuity of operations plans, and
- certifying the Y2K compliance of installations.

FORSCOM. FORSCOM installations were encountering difficulties in resolving Y2K-related problems. In accordance with the FORSCOM Plan, a noninformation technology project officer was designated for all FORSCOM installations and activities. FORSCOM has monitored the noninformation technology Y2K compliance on the 15 installations it controls and noted the deficiencies. All 15 installations were having trouble receiving assurances from utility companies that the installations will have uninterrupted service on January 1, 2000. In addition, nine of the installations were having problems with security systems, such as intrusion detection and card keys. Finally, seven installations had problems with their fire emergency and 911 emergency systems.

LANTFLT. The Y2K status of LANTFLT installations and organizations could not be readily determined based on the information available. As a result of a reorganization, the installations and organizations of LANTFLT were grouped into three regions: Northeast, Mid-Atlantic, and Southeast. Under the regionalization, program managers were established in each regional office for 11 core business areas (for example, aviation, public works, and safety and security). For Y2K issues, those program managers were responsible for certifying the Y2K compliance of their respective business areas and the installation commander was only certifying the Y2K compliance of systems on the installation that were not included in the 11 core business areas. That was in conflict with the DoD Management Plan, which places responsibility for certifying installations on the installation commander. Officials at Mid-Atlantic

[7] Included in the areas to be certified for each installation were subsystems that provide mission support (energy sources, water, and waste water), safety (fire protection), and security (physical security)

Region were not able to identify any systems that were not included in the 11 core business areas. In addition, information provided at LANTFLT indicated that most installations were either compliant or nearly so. That information was difficult to reconcile with information provided by Mid-Atlantic Region. According to Mid-Atlantic Region officials, 800 of the 1,700 buildings in Mid-Atlantic Region were initially identified as mission critical. Of those 800 buildings, fewer than 100 had been remediated for Y2K issues as of April 8, 1999. However, a briefing to the Deputy Commander in Chief, U.S. Atlantic Fleet, on April 13, 1999, identified every base as compliant except Roosevelt Roads Naval Station, Puerto Rico, and Submarine Base, New London, Connecticut. A detailed review of the status of LANTFLT installations and activities must be performed to correct erroneous information.

Another area of concern for LANTFLT installations and organizations involved the continuity of operations plans. As a result of the regionalization, the program managers for the core business areas developed and approved the continuity of operations plans. Although a level of expertise is available in the program manager's office, having one office responsible for developing continuity of operations plans for all installations and organizations in a region can present problems. For example, the program manager would have to know every system interface at each installation and organization for the respective systems. Officials at Mid-Atlantic Region illustrated one of the problems by citing an instance of a single program manager who reviewed and signed 84 continuity of operations plans on one day. In addition to the procedural problems associated with regionalization, the effect for Y2K-related problems was that installation commanders would certify their installations as Y2K compliant based on information provided by others. The installation commanders would not have first-hand knowledge, although they would be accountable for the Y2K status of their installations.

ACC. ACC installations were still working toward certifying installations as Y2K compliant. In addition to the criteria established in the DoD Management Plan for certifying an installation as Y2K compliant, the Air Force promulgated additional criteria in Appendix O of the Air Force Implementation Plan that base commanders must meet for their bases to be considered Y2K compliant by the Air Force. The DoD criteria is referred to as a "Part A" certification and the additional Air Force criteria is referred to as a "Part B" certification. All of the Part A certifications were due to ACC by March 31, 1999. As of April 1, 1999, 12 of the 17 ACC bases had submitted a Part A certification. The remaining five bases had established dates for completion of Part A certification. Part B certifications were to be completed by June 30, 1999.

MARFORLANT. MARFORLANT installations were working toward being certified as Y2K compliant. As of April 1, 1999, MARFORLANT reported that all installations within MARFORLANT had completed their inventories and assessments of systems and had completed contingency plans. The installations were scheduled to complete their testing by September 1999. The Marine Corps also reported that contingency plans and continuity of operations plans for facilities at Marine Corps installations was an ongoing effort.

Conclusion

USACOM had improved the overall focus and direction of its Y2K efforts. It is important, however, to ensure that the level of intensity continues. USACOM must ensure that the system thin lines submitted by the Component commands to support Phase 2 of the OPEVAL process meet the requirements of USACOM. Similarly, USACOM must ensure that the thin lines that support Phase 2 sufficiently replicate the day-to-day operating environment of the systems tested. USACOM must also ensure that the systems identified by the Component commands support the tasks identified by USACOM that will be evaluated during the USACOM OPEVAL. Similarly, USACOM and the Component commands must also ensure that contingency plans are developed for all systems, not just those systems that did not meet milestones for remediation. The Component commands must continue to develop and document the contingency plans and continuity of operations plans that may be required in the event of a Y2K-related system failure. USACOM and its Component commands must take full advantage of system testing conducted by the Services for systems identified in USACOM thin lines. Each Component command must make certain that the Services' Y2K testing incorporates all interfaces and system dependencies that exist in the environment in which the Component commands operate. USACOM must ensure that installations identified with facilities and infrastructures critical to USACOM and its Component commands undergo remediation of all Y2K-related problems. Additionally, the Component commands must ensure that accurate information about the status of Y2K compliance is reported through their Service chain of command for all installations and organizations in their commands.

Recommendations and Management Comments

1. We recommend that the Commander in Chief, U.S. Atlantic Command:

a. Ensure that the system thin lines submitted by the Component commands meet the requirements of the U.S. Atlantic Command and that they sufficiently replicate the day-to-day operating environment of the systems to be tested.

U.S. Atlantic Command Comments. USACOM concurred, stating that USACOM and its Component commands had completed Phase 2 of the OPEVAL, and they had determined that the 83 system thin lines were completed and sufficient to execute the mission-critical tasks through which USACOM completes its force provider and area of responsibility critical missions.

b. Continue to identify all interfaces for mission-critical systems.

U.S. Atlantic Command Comments. USACOM concurred, stating that during preparations for the OPEVAL, the USACOM thin line was refined and digital interfaces were identified and traced, and replicated during the OPEVAL conducted in June 1999.

c. Continue to monitor the year 2000 status of mission-critical systems to ensure they are reported correctly.

U.S. Atlantic Command Comments. USACOM concurred, stating that the Directorate of Communications was currently monitoring mission-critical systems to ensure complete and accurate reporting.

d. Obtain contingency plans for all mission-critical systems identified by supporting commands.

U.S. Atlantic Command Comments. USACOM concurred, stating that the USACOM Component commands were tasked to provide functional contingency plans for all identified thin line systems.

e. Continue to provide oversight of the year 2000 programs of the Component commands so that all year 2000 problems identified by the Component commands are resolved.

U.S. Atlantic Command Comments. USACOM concurred, stating that the USACOM Y2K Task Force provides continuous oversight.

f. Ensure that all installations with facilities and infrastructure essential to the mission of the U.S. Atlantic Command identify and remediate any year 2000 problems.

U.S. Atlantic Command Comments. USACOM concurred, stating that all USACOM supporting commands were tasked to provide facilities and infrastructure status.

2. We recommend that the Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command:

a. Use existing databases to obtain contingency plans for mission-critical systems.

Management Comments. FORSCOM, LANTFLT, and ACC concurred. FORSCOM stated that it will continue to coordinate with the Army to obtain contingency plans for mission-critical systems supporting USACOM. LANTFLT stated that contingency plans for all mission-critical systems have been obtained and distributed throughout LANTFLT via the type commands. LANTFLT also stated that the Y2K status of mission-critical and mission

support systems is continually monitored using databases maintained by Navy system commands. ACC stated that it uses the Air Force Automated Systems Inventory to monitor the status of required system contingency plans.

b. Continue to develop continuity of operations plans for all mission-critical systems.

Management Comments. FORSCOM, LANTFLT and ACC concurred. FORSCOM stated that it had taken several initiatives, including ensuring that all continuity of operations plans contain guidance to mitigate potential Y2K problems for mission-critical systems and developing operational contingency plans for systems identified as mission critical. LANTFLT stated that the numbered fleet commanders, in cooperation with LANTFLT and the U.S. Pacific Fleet, completed an executive review of continuity of operations plans during quarterly conferences in March and June 1999. ACC stated that each ACC wing, numbered Air Force, and headquarters directorate were required to complete, and test in a table-top and walk-through venue, continuity of operations plans by June 30, 1999.

c. Identify all interfaces and system dependencies necessary to support the U.S. Atlantic Command.

Management Comments. FORSCOM, LANTFLT, and ACC concurred. FORSCOM stated that it viewed identifying dependencies and developing system agreements as a continuous process. If it identifies the need for an agreement, the required steps are taken to develop and implement the agreement. LANTFLT stated that it worked closely with USACOM to identify all systems and interfaces required for mission accomplishment. LANTFLT stated that for the thin line systems tested during the OPEVAL conducted in June 1999, all interfaces were closely reviewed and, where possible, included in the test. LANTFLT also stated that in addition to the USACOM OPEVAL, the thin line systems have undergone or will undergo one or more operational validations to confirm Y2K compliance. ACC stated that an operational and system architecture defining system dependencies and interfaces had been developed and refined.

d. Ensure that any testing conducted by their parent Service include the interfaces and system dependencies identified in Recommendation 2.c.

Management Comments. FORSCOM, LANTFLT, and ACC concurred. FORSCOM stated that it emphasized the need to ensure that system interfaces do not cause Y2K failures and placed a strong emphasis on testing those interfaces. LANTFLT stated that LANFLT and the U.S. Pacific Fleet will conduct a total of five Battle Group Systems Integration Testing exercises by October 1999 that will operationally validate all mission-critical systems at least twice. LANTFLT stated that, whenever possible, all interfaces afloat and ashore are integrated into the test events. ACC stated that available thin line systems were tested during Phase 2 of the USACOM OPEVAL, June 1-9, 1999. ACC also stated that Air Force personnel systems on the USACOM thin line

were integrated into the U.S. Air Force Personnel Center's test, conducted June 5-25, 1999. ACC also stated that it would conduct a base-level assessment to test thin line logistics systems July 26-30, 1999.

e. Identify procedures for reporting accurate information regarding the year 2000 compliance of installations supporting the U.S. Atlantic Command.

Management Comments. FORSCOM, LANTFLT, and ACC concurred. FORSCOM stated that FORSCOM installations had conducted post-wide Y2K testing of mission-essential systems. FORSCOM also stated that the certification and testing status of all FORSCOM installations was reported to the Army and the Office of the Secretary of Defense by June 30, 1999. LANTFLT stated that it was complying with guidance provided by the Navy and DoD. ACC stated that all its bases report installation certification status to the ACC Y2K Program Office on a monthly basis. ACC also stated that, as of July 15, 1999, all installation commanders had completed both Part A and Part B certifications.

3. We recommend that the Commander in Chief, U.S. Atlantic Fleet, obtain year 2000 compliance status of the fleet, subordinate commands, and individual classes of ships.

U.S. Atlantic Fleet Comments. LANTFLT concurred, stating that the command uses several databases to monitor the Y2K compliance of systems and cross checks the information to confirm the accuracy of the data within the Chief of Naval Operations Navy Y2K Tracking System. In addition, type commanders have integrated information from their subordinate units as well as the Navy-wide databases to portray an accurate picture of operational units' compliance information.

Appendix A. Audit Process

This is one in a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the Y2K computing challenge. For a list of audit projects addressing the issue, see the Y2K web pages on the IGnet at http://www/ignet.gov.

Scope

We reviewed and evaluated the ability of USACOM and its Component commands to resolve Y2K issues to avoid undue disruption of its mission. We reviewed the President's Executive Order, "Year 2000 Conversion," February 4, 1998, and the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105-261), October 17, 1998. We reviewed and evaluated DoD, Service, and Joint Staff directives, policies, and processes related to Y2K activities dated from March 1998 through April 1999. For this report, we visited the headquarters of USACOM, FORSCOM, LANTFLT, ACC, and MARFORLANT.

DoD-Wide Corporate-Level Goals. In response to the Government Performance and Results Act, DoD established 6 DoD-wide corporate-level performance objectives and 14 goals for meeting the objectives. This report pertains to achievement of the following objective and goal.

> **Objective:** Prepare now for an uncertain future. **Goal:** Pursue a focused modernization effort that maintains U.S. qualitative superiority in key war fighting capabilities. **(DoD-3)**

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to achievement of the following objectives and goals in the Information Management Functional Area.

- **Objective:** Become a mission partner. **Goal:** Serve mission information users as customers. **(ITM-1.2)**

- **Objective:** Provide services that satisfy customer information needs. **Goal:** Modernize and integrate Defense information infrastructure. **(ITM-2.2)**

- **Objective:** Provide services that satisfy customer information needs. **Goal:** Upgrade technology base. **(ITM-2.3)**

High-Risk Area. In its identification of risk areas, the General Accounting Office has specifically designated risk in resolution of the Y2K problem as high. This report provides coverage of that problem and of the overall Information Management and Technology high-risk area.

Methodology

We focused our review of USACOM on the Y2K efforts of the unified command headquarters and its Component commands. We assessed the progress of USACOM since the most recent Inspector General, DoD, review of the unified command's Y2K issues. We reviewed the process employed by USACOM and its Component commands to identify mission-critical systems, develop system contingency plans, develop continuity of operations plans, and conduct risk assessments. To determine the Y2K status of the Component commands, we reviewed their respective criteria and processes for identifying and reporting Y2K compliance activities. We interviewed the leadership and members of the Y2K entities established at USACOM and its Component commands. We also interviewed members of the unified command and Component command staffs to determine the respective command's level of involvement and interest in addressing Y2K problems, to assess the Y2K impact on joint force architectures, and to identify any mission-critical systems not previously considered. We reviewed the impact and influence of supported commands on USACOM Y2K compliance and testing efforts. We did not use computer-processed data to perform this audit.

Audit Type, Dates, and Standards. We performed this program audit from November 1998 through April 1999 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

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

Management Control Program. We did not review the management control program related to the overall audit objective because DoD recognized the Y2K issue as a material management control weakness area in the FY 1998 Annual Statement of Assurance.

Appendix B. Summary of Prior Coverage

The General Accounting Office and the Inspector General, DoD, have conducted multiple reviews related to Y2K issues. General Accounting Office reports can be accessed over the Internet at http://www.gao.gov. Inspector General, DoD, reports can be accessed over the Internet at http://www.dodig.osd.mil. The following Y2K reports have been issued on summary Y2K issues or on other unified commands.

Inspector General, DoD

Report No. 99-145, "Year 2000 Issues Within U.S. European Command and Its Service Components," April 30, 1999.

Report No. 99-141, "Year 2000 Issues Within U.S. Central Command and the Service Components," April 22, 1999.

Report No. 99-125, "Year 2000 Issues Within the U.S. Pacific Command's Area of Responsibility: U.S. Forces Korea," April 7, 1999.

Report No. 99-126, "Year 2000 Issues Within the U.S. Pacific Command's Area of Responsibility: Strategic Communications Organizations," April 6, 1999.

Report No. 99-122, "Year 2000 Readiness Reporting," April 2, 1999.

Report No. 99-115, "Summary of DoD Year 2000 Audit and Inspection Reports II," March 29, 1999.

Report No. 99-059, "Summary of DoD Year 2000 Conversion - Audit and Inspection Results," December 24, 1998.

Report No. 98-194, "U.S. Atlantic Command Year 2000 Issues," August 27, 1998.

Appendix C. U.S. Atlantic Command Missions and Critical Tasks

Force Provider Mission	Critical Tasks
	Identify, Select, and Deploy Continental U.S.-Based Forces
	Provide Cruise Missile Mission Planning Support
	Sustain Theater Forces
	Support DoD, Inter-Agency and Multinational Operations
	Provide Command and Control for Deploying Forces

Area of Responsibility Mission	Critical Tasks
	Strategic Deterrence
	Theater Strategic Support and Planning
	Counter Terrorism
	Counter Proliferation
	Counter Drug
	Humanitarian/Disaster Relief, MSCA, MACDIS*

*MSCA is Military Support to Civil Authorities, and MACDIS is Military Assistance for Civil Disorder

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Under Secretary of Defense for Personnel and Readiness
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
  Deputy Chief Information Officer and Deputy Assistant Secretary of Defense (Chief Information Officer Policy and Implementation)
    Principal Director for Year 2000

Joint Staff

Director, Joint Staff

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
Commander, U.S. Army Forces Command
Chief, National Guard Bureau
Inspector General, National Guard Bureau
Auditor General, Department of the Army
Chief Information Officer, Army
Inspector General, Department of the Army

Department of the Navy

Commander in Chief, U.S. Atlantic Fleet
Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy
Chief Information Officer, Navy
Inspector General, Department of the Navy

Marine Corps

Commandant of the Marine Corps
Commanding General, U.S. Marine Forces, Atlantic
Inspector General, Marine Corps

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Commander, Air Combat Command
Auditor General, Department of the Air Force
Chief Information Officer, Air Force
Inspector General, Department of the Air Force

Unified Commands

Commander in Chief, U.S. European Command
Commander in Chief, U.S. Pacific Command
Commander in Chief, U.S. Atlantic Command
  Commander, U.S. Special Operations Command, Atlantic Command
Commander in Chief, U.S. Southern Command
Commander in Chief, U.S. Central Command
Commander in Chief, U.S. Space Command
Commander in Chief, U.S. Special Operations Command
Commander in Chief, U.S. Transportation Command
Commander in Chief, U.S. Strategic Command

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Information Systems Agency
  Inspector General, Defense Information Systems Agency
  Chief Information Officer, Defense Information Systems Agency
  United Kingdom Liaison Officer, Defense Information Systems Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency
Inspector General, National Imagery and Mapping Agency
Inspector General, National Reconnaissance Office

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
  Office of Information and Regulatory Affairs
General Accounting Office
  National Security and International Affairs Division
    Technical Information Center
  Accounting and Information Management Division
    Director, Defense Information and Financial Management Systems

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Senate Special Committee on the Year 2000 Technology Problem
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform
House Subcommittee on Technology, Committee on Science

U.S. Atlantic Command Comments

DEPARTMENT OF DEFENSE

COMMANDER IN CHIEF
U. S. ATLANTIC COMMAND
1562 MITSCHER AVENUE SUITE 200
NORFOLK, VA. 23551 - 2488

J00IG4
7 July 1999

MEMORANDUM FOR: Inspector General, Department of Defense
(Attn: Don Bloomer)

Subject: Audit Report on Year 2000 Issues Within U.S. Atlantic Command and the Service Components (Project No. 9LA-5032)

1. In response to DODIG memo dated 11 June 1999, comments on subject report are Attached.

2. My point of contact is Eva Griffin, J00IG4, (757) 836-5940 or DSN 836-5940.

RONALD N. BRAUNHARDT
Colonel, U.S. Air Force
Inspector General

Attachment JY2KA 1 Jul 99 memo (Comments)

DEPARTMENT OF DEFENSE
COMMANDER IN CHIEF
U.S. ATLANTIC COMMAND
1562 MITSCHER AVENUE SUITE 200
NORFOLK, VA 23551-2488

IN REPLY REFER TO:

JY2KA
1 Jul 99

MEMORANDUM FOR: USACOM J00IG4 (Attn: Colonel Braunhardt)

Subject: Comments on DoD Inspector General's Draft Report, Year 2000 Issues within U.S. Atlantic Command and the Service Components (Project No. 9LA-5032)

1. This is in reply to comments on subject report for submission to the DoD IG. The following paragraphs address individual recommendations for USACOM.

2. Recommendation 1a. Concur. Subsequent to the 14 April DoD IG visit, the following events have occurred in this regard:

a. Main Planning Conference, 20-22 April
b. Final Planning Conference, 11-13 May
c. Phase II OPEVL, 1-13 June

During the above events, USACOM and the Component services determined that the 83 *thin line systems* were completed and sufficient to execute the *mission critical tasks* through which USACOM completes the *Critical Missions of Force Provider* and *AOR*. Flag-level concurrence was obtained from each Component.

3. Recommendations 1b. Concur. During the Phase II OPEVAL preparations, the USACOM *thin line* was refined down through the Component service headquarters, and to the *execution level*. Digital interfaces were identified and traced, and these were replicated during the Phase II OPEVAL.

4. Recommendation 1c. Concur. USACOM J6 is currently monitoring mission-critical systems to ensure correct and complete reporting.

5. Recommendation 1d. Concur. All Components have been tasked to provide Functional Contingency Plans for all identified thin line systems as per the Joint Staff OPEVAL Guide.

6. Recommendation 1e. Concur. USACOM Y2K Task Force provides continuous oversight.

7. Recommendation 1f. Concur. All Supporting commands have been tasked to provide facilities and infrastructure status.

DENNIS M. McCARTHY
Major General, U.S. Marine Corps Reserve
Director for Operations and Plans

Department of the Army Comments

DEPARTMENT OF THE ARMY
OFFICE OF THE SECRETARY OF THE ARMY
107 ARMY PENTAGON
WASHINGTON DC 20310-0107

Office, Director of Information
Systems for Command, Control,
Communications, & Computers

14 Jul 99

SAIS-IIAC

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE,
400 ARMY NAVY DRIVE, ARLINGTON, VA 22202

SUBJECT: Draft Audit Report on Year 2000 Issues Within U. S. Atlantic Command and the Service Components (Project No 9LA-5032)

Reference DODIG Memorandum, June 11, 1999, subject: Audit Report on Year 2000 Issues Within U S Atlantic Command and the Service Components (Project No 9LA-5032). As requested, the following Army response to subject draft report is provided:

Recommendation 2a: We recommend that Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command use existing databases to obtain contingency plans for mission-critical systems.

Response: Concur. HQ FORSCOM will continue to coordinate with HQDA to obtain contingency plans for mission-critical systems supporting USACOM. The Army Y2K Project Office is collecting copies of all contingency plans for Army mission critical systems and will work to ensure that HQ FORSCOM receives all necessary contingency plans

Recommendation 2b: We recommend that Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command continue to develop continuity of operations plans for all mission critical systems.

Response: Concur. FORSCOM has taken several initiatives to implement this recommendation HQ FORSCOM's Y2K office has concluded a review of continuity of operations plans (COOP) at subordinate installations. As of 30 June 99, all installation COOP plans contain adequate guidance to mitigate potential Y2K problems for mission essential systems Furthermore, FORSCOM has developed Operational Contingency Plans (OCP) for systems identified as mission critical as discussed on page 14 of the draft report The OCP provides a plan on what steps to take if the system becomes inoperable and how the mission will be accomplished In addition, FORSCOM installations will use recently completed Y2K testing results of mission essential systems to make any required adjustments to the plans.

Recommendation 2c: We recommend that Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command identify all interfaces and system dependencies necessary to support the U.S. Atlantic Command.

Response: Concur FORSCOM has long recognized the need to identify system dependencies and develop interface agreements For example, FORSCOM had developed interface agreements as far back as 1997 Identification of dependencies and development of system agreements are viewed as a

continuous process. If the need for an agreement is identified, required steps are taken to develop and implement the agreement

Recommendation 2d: We recommend that Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command ensure that any testing conducted by their parent Service include the interfaces and system dependencies identified in Recommendation 2.c.

Response: Concur. FORSCOM has emphasized the need to insure that systems interfaces do not cause Y2K failures As a result, a strong emphasis has been placed on testing these interfaces This emphasis will continue as testing is conducted

Recommendation 2e: We recommend that Commander, U.S. Army Forces Command; Commander in Chief, U.S. Atlantic Fleet; and Commander, Air Combat Command identify procedures for reporting accurate information regarding the year 2000 compliance of installations supporting the U.S. Atlantic Command.

Response: Concur FORSCOM has recognized the need to insure that both Information Technology (IT) and non-IT resources are Y2K compliant. This has been strongly emphasized to all FORSCOM installations All FORSCOM installations have been certified and have conducted post-wide Y2K testing of mission essential systems as required by Army and OSD Y2K policies for installations Certification and testing status of all FORSCOM installations has been reported to HQDA and OSD as of 30 June 1999. Complete installation test results are also available on FORSCOM's Y2K web page: (Http://freddie.forscom.army.mil:/Y2K/).

My point of contact for this action is Mr. William Dates, 275-9483

Miriam F Browning
Director for Information Management

CF: SAAG-PMO-S
CDR FORSCOM, ATTN: AFCS-IR
CDR FORSCOM, ATTN: AFCI-R

Department of the Navy Comments

DEPARTMENT OF THE NAVY
COMMANDER IN CHIEF
U S ATLANTIC FLEET
1562 MITSCHER AVENUE SUITE 250
NORFOLK, VA 23551-2487

7000
Ser N00IG12/153
JUL 8 1999

From: Commander in Chief, U.S. Atlantic Fleet
To: Inspector General, Department of Defense (IGDOD), ATTN: Mr. Harlan M. Geyer, 400 Army Navy Drive, Arlington, VA 22202-2884

Subj: IGDOD DRAFT AUDIT REPORT, YEAR 2000 ISSUES WITHIN U.S. ATLANTIC COMMAND AND THE SERVICE COMPONENTS, PROJECT NO. 9LA-5032

Ref (a) IGDOD ltr of 11 Jun 99

1. In response to reference (a), the following comments, prepared by CINCLANTFLT (N6), are provided:

a. **Recommendation No. 2: We recommend that the Commander, U. S. Army Forces Command; Commander in Chief, U. S. Atlantic Fleet; and Commander, Air Combat Command:**

(1) **Use existing databases to obtain contingency plans for mission-critical systems.**

Concur with this recommendation. Commander in Chief, U. S. Atlantic Fleet (CINCLANTFLT) and Type Commanders have contingency plans for all 645 navy mission critical systems. These contingency plans were developed by Navy Systems Commands for CINCLANTFLT, Type Commanders and/or Regional Commanders review. Comments were provided to the appropriate Systems Commands and Major Claimant who incorporated changes in the APR 99 timeframe. The contingency plans have been distributed throughout the Atlantic Fleet via Type Commanders. The contingency plans have been placed on a secure (SIPRNET) web site. In addition, all 645 mission critical systems and 1700 mission support systems are continually monitored for Y2K compliance status utilizing databases maintained by NAVSEA, SPAWAR, CNO and other Systems Commands.

(2) **Continue to develop continuity of operations plans (COOPS) for all mission-critical systems.**

Concur with this recommendation. Numbered Fleet Commanders in cooperation with CINCLANTFLT and CINCPACFLT completed an executive review of COOPs during quarterly conferences in March

and June 1999. These COOPs cover all the following 13 warfighting areas: Amphibious Operations, Air Warfare/Air Defense, Logistics, Air/Strike Ops, SUW/Surface Ops/MIO, Comms and Info systems, IW/C2W, USW/Mine Warfare, FOTC, Intel, Crypto, METOC, and TLAM. As the COOPs are further exercised, subsequent revisions will be incorporated, as needed. CINCLANTFLT Regional Commanders and shore installations completed COOP development for all mission essential systems and core business areas at the 23 shore installations on 01 May 99. All COOPs were trained/exercised by 30 June 99 in conjunction with ashore integrated testing. COOPs will continue to be fine-tuned to ensure that we can operate in a Y2K environment.

(3) **Identify all interfaces and system dependencies necessary to support the U. S. Atlantic Command.**

Concur with this recommendation. CINCLANTFLT has worked closely with USACOM to identify all the systems and interfaces required for mission accomplishment. A successful Operational Evaluation (OPEVAL Phase II) was conducted June 1999 by USACOM with participation by CINCLANTFLT. During this OPEVAL the "Thin Line" of 13 systems required by CINCLANTFLT to support USACOM, was successfully tested for performance in the year 2000. For the Thin Line systems tested, all interfaces were closely reviewed and, where possible, included in the test. In addition to testing in support of the USACOM OPEVAL, the Thin Lines systems have/will undergo one or more operational validations to confirm Y2K compliance.

(4) **Ensure that any testing conducted by their parent Service include the interfaces and system dependencies identified in Recommendation 2.c.**

Concur with this recommendation. Navy Battle Group Systems Integration Testing (BGSIT) within the Atlantic Fleet to date, has operationally validated the compliance and integration of more than 200 mission critical systems. CINCLANTFLT and CINCPACFLT will conduct a combined total of five BGSITs by OCT 99 that will operationally validate all mission critical systems at least twice. Whenever possible all interfaces afloat and ashore are integrated into the test events. The Navy tracks more than 2000 interfaces to all its missions critical and mission support systems to ensure that they are Y2K compliant.

(5) **Identify procedures for reporting accurate information regarding the year 2000 compliance of installations supporting the U. S. Atlantic Command.**

Concur with this recommendation. As required, CINCLANTFLT used the existing chain of command to ensure accurate reporting of the Y2K readiness of shore installations. In the Northeast and Southeast regions Installation Commanding Officers reported Y2K readiness through the Regional Commanders. In accordance with DON approved regionalization program the Mid-Atlantic region Installation Commanders, acting as program managers, certified each program for the Hampton Roads Metropolitan Area while remote Installation Commanders certified their individual installations. As of 01 May 99 all shore installations certified that they were Y2K ready as defined in the 12 Nov 98 OSD memorandum titled "Guidance for Facilities and Installations Y2K Compliance. All CINCLANTFLT shore installations completed integrated testing of mission essential systems by 30 June 99.
CINCLANTFLT is continually updating the Navy Y2K Tracking System data to reflect the best information available. As of 6 July 99 CINCLANTFLT has 27,787 records representing 61,528 individual devices/systems in the Navy Y2K Tracking System (NY2KTS). CINCLANTFLT provides weekly updates to the NY2KTS and is continually working with the data in this complex database to reflect the fact that shore installations are Y2K ready. CINCLANTFLT is continuing to execute its Y2K program in accordance with guidance provided by DON and DOD and seeks to maintain the highest degree of integrity in the data that it reports.

b. **Recommendation No. 3: We recommend that the Commander in Chief, U. S. Atlantic Fleet, obtain year 2000 compliance status of the fleet, subordinate commands, and individual classes of ships.**

Concur with this recommendation. CINCLANFLT has closely monitored several navywide and local databases for compliance information on program of record (POR) systems. The NAVSEA 05 Timeline Summary (updated weekly) records ships' status by Battle Group, and individual ship within the Battle Group. CINCLANTFLT regularly obtains compliance information from this database by classes of ships, battle groups, ordnance, and battle group aircraft. This database also shows the operational validations being done for each system. Another source of compliance data is obtained from a SPAWAR 04 database that tracks information on systems for which SPAWAR is responsible. Also used for compliance status is the SCLSIS database, maintained by NAVSEALOGCEN, which shows compliance data for systems on 165 CINCLANTFLT afloat UIC's, down to the system component level. These three databases, NAVSEA 05's, SPAWAR's and SCLSIS are cross checked to confirm the accuracy of the data within the navywide CNO NY2KTS

which shows compliance status of all 645 Mission Critical Navy Systems and 1700 Missions Support Navy Systems. Type Commanders have developed local databases to augment the information found in navywide databases. COMNAVAIRLANT, COMNAVSURFLANT and COMNAVSUBLANT have all integrated information from their subordinate units as well as the navywide databases to portray an accurate picture of operational units' compliance information. In addition to POR, non-program of record systems have been reviewed by CINCLANTFLT and Type Commanders and none were found to be mission critical. The compliancy status of NPOR was determined by review of databases maintained by NAVFAC, BUMED, and through extensive vendor cross checking. Local databases have been developed to record compliance information and are shared throughout the fleet. The progress of remediation of these NPOR systems is being monitored at the Type commander and unit commander level.

2. Point of contact for technical matters related to this project is LCDR Donna Cannon (N65), (757) 836-0621. My audit liaison representative is Ms. Debra Arnold (757) 836-3571.

B. O. BOATWRIGHT
Inspector General
Deputy

Copy to:
CINCLANTFLT (N65)

Department of the Air Force Comments

HEADQUARTERS UNITED STATES AIR FORCE

21 JUL 1999

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

FROM: HQ USAF/SC
1250 Air Force Pentagon
Washington DC 20330-1250

SUBJECT: Year 2000 Issues Within the U.S. Atlantic Command and the Service Components, (Project 9LA-5032)

This is in reply to your memorandum requesting the Assistant Secretary of the Air Force (Financial Management and Comptroller) to provide Air Force comments on subject report.

We concur with the recommendations and additional comments are attached. My point of contact is Major Karen Cook, AF Y2K Office. She may be reached at 703-602-2207 or DSN 332-2207.

WILLIAM J. DONAHUE, Lt Gen, USAF
Director, Communications and Information

Attachment:
Air Force Comments

Air Force Comments
On
DODIG Draft Audit Report on Year 2000 Issues Within U.S. Atlantic Command And the Service components

Recommendation 2. We recommend that the Commander, Air Combat Command:

a Use existing databases to obtain contingency plans for mission-critical systems.

Air Force Response. Concur ACC uses the Air Force Automated Systems Inventory database to obtain the status of required systems contingency plans and points of contact to obtain a copy for review and incorporation into unit contingency plans. ACC implemented this methodology prior to subject report.

b. Continue to develop continuity of operations plans for all mission-critical systems.

Air Force Response. Concur. Every ACC wing, NAF, and HQ directorate were required to complete, test in a table top and walk-through venue, Continuity of Operations Plans (COOPS) by the end of Jun 99. All units and installations, except one wing, have completed and tested COOPs Estimated completion date for remaining wing is 30 Jul 99. For USACOM's OPEVAL thin line systems, ACC submitted all COOPs as of 25 Jun 99.

c. Identify all interfaces and system dependencies necessary to support the U.S. Atlantic Command.

Air Force Response. Concur ACC submitted an operational and system architecture defining system dependencies and interfaces during the USACOM Y2K Main Planning Conference, 20 Apr 99. ACC updated/refined the architectures at the final planning conference on 10 May 99.

d. Ensure that any testing conducted by their parent Service include the interfaces and system dependencies identified in Recommendation 2 c.

Air Force Response. Concur ACC tested available thin line systems during USACOM OPEVAL Phase III, 1-9 Jun 99. The Air Force personnel systems on USACOM's thin line were integrated into the Air Force Personnel Center's test that occurred 5-25 Jun 99. ACC will conduct a base-level assessment 26-30 Jul 99 using the required testbed at the Standard Systems Group, Gunter Annex, AL, to test thin line logistics systems. These efforts ensure ACC assesses all interfaces and system dependencies in support of USACOM.

e. Identify procedures for reporting accurate information regarding the year 2000 compliance of installations supporting the U.S. Atlantic Command.

Air Force Response. Concur. All ACC bases report installation certification status to the ACC Y2K Program Office on a monthly basis. Every wing commander provides readiness information via the Operational Risk Management procedures outlined in the Wing Commander's Tool Kit and are briefed regularly to the Commander, ACC. The installation commander's assessment of his readiness to perform the mission is graphically displayed on ACC's SIPRNET web site. As of 15 Jul 99, all installation commanders have completed parts A and B certifications. ACC procedures to address installation readiness issues were established in Oct 98.

Additional Air Force comments. Nonconcur with the statement on Page 15, Continuity of Operations Plan: "ACC Y2K officials stated that continuity of operations plans had not been reviewed sufficiently to determine whether they were valid or met Air Force requirements for continuity of operations plans." Although not all final copies of COOPs were reviewed, the ACC Y2K Program Office had reviewed and commented on the majority of draft COOPs received earlier in the year.

Page 16
Revised

Audit Team Members

This report was prepared by the Readiness and Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD. Personnel of the Office of the Inspector General, DoD, who contributed to the report are listed below.

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