Audit Report

OFFICE OF THE INSPECTOR GENERAL

ENGINEERING DESIGN CHANGES IN THE RAPID EXECUTION AND COMBAT TARGETING PROGRAM

Report No. 96-027 November 27, 1995

Department of Defense

Additional Copies

To obtain additional copies of this audit report, contact the Secondary Reports Distribution Unit, Analysis, Planning, and Technical Support Directorate, at (703) 604-8937 (DSN 664-8937) or FAX (703) 604-8932.

Suggestions for Future Audits

To suggest ideas for or to request future audits, contact the Planning and Coordination Branch, Analysis, Planning, and Technical Support Directorate, at (703) 604-8939 (DSN 664-8939) or FAX (703) 604-8932. Ideas and requests can also be mailed to:

Inspector General, Department of Defense
OAIG-AUD (ATTN: APTS Audit Suggestions)
400 Army Navy Drive (Room 801)
Arlington, Virginia 22202-2884

Defense Hotline

To report fraud, waste, or abuse, contact the Defense Hotline by calling (800) 424-9098; by sending an electronic message to Hotline@DODIG.OSD.MIL; or by writing the Defense Hotline, The Pentagon, Washington, D.C. 20301-1900. We fully protect the identity of each writer and caller.

Acronyms

DCMAO	Defense Contract Management Area Operations
DCMO	Defense Contract Management Office
ECO	Engineering Change Order
ECP	Engineering Change Proposal
LCC	Launch Control Center
PCO	Procuring Contracting Officer
REACT	Rapid Execution and Combat Targeting
WSP	Weapon System Processor

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

Report No. 96-027 **November 27, 1995**

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Audit Report on Engineering Design Changes in the Rapid Execution and Combat Targeting Program (Project No. 5AE-8018)

Introduction

We are providing this report for your information and use. We performed this audit in response to allegations made to the DoD Hotline that DoD was not properly managing and controlling engineering design changes on the Rapid Execution and Combat Targeting (REACT) Program. The complainant alleged that Loral Command and Control Systems (Loral), Colorado Springs, Colorado, the prime contractor for the REACT hardware, routinely attributed REACT production problems to REACT console-hardware design and specification deficiencies. The complainant alleged that those production problems did not result from hardware design and specification deficiencies, but, instead, from poor workmanship by the contractor and its subcontractors. As a result of those manufacturing problems, the complainant alleged that the prime contractor attempted to get relief by:

o requesting that the Defense Contract Management Office (DCMO), Colorado Springs, Colorado, concur with class II engineering change orders (ECOs) to change hardware drawings instead of requesting that the REACT Program Office approve a waiver or deviation of the design specification in exchange for contractor consideration and

o submitting claims for design deficiencies under the prior effects clause of the production contract.

Enclosure 1 provides definitions of technical terms used in this report.

Audit Results

The results of our review did not substantiate the allegations. The REACT Program Office and the DCMO were adequately managing and controlling Loral's requests for engineering design changes on REACT hardware. For the ECOs and prior effects claims we reviewed, Loral correctly attributed the cause of production problems mainly to hardware design and specification discrepancies and did not attempt to obtain relief from poor workmanship by it and its subcontractors.

Objective

The audit objective was to evaluate allegations made to the DoD Hotline concerning the effectiveness of DoD management and controls over contractor requests for engineering changes on REACT hardware. We evaluated whether the prime contractor:

o incorrectly attributed REACT production problems to REACT console-hardware design and specification deficiencies and

o attempted to obtain relief for those production problems by submitting ECOs and prior effects claims to change the engineering design of REACT configuration items.

Scope

We conducted this audit from July through September 1995 and reviewed data dated from April 1989 through August 1995. To accomplish the objective, we:

o examined the full-scale development contract F04704-91-C-0048, valued at about $155 million, and the production contract F04704-91-C-0037, valued at about $195 million, with Loral, including statements of work, contract data requirements lists, contract line items, and related correspondence;

o reviewed 29 ECOs and 20 prior effects claims from a universe of approximately 2,450 ECOs and 193 prior effects claims, respectively;

o reviewed engineering change proposals (ECPs), contract modifications, deficiency notices, hardware problem reports, minutes of contractor Design Control Board meetings, and production inspection/rejection reports;

o reviewed the minutes of the functional and physical configuration audits conducted on the REACT Program and the action items generated during those audits; and

o discussed issues relating to the effectiveness of the management of requests for engineering changes on REACT hardware with program, technical, and contracting officials at Headquarters, Air Force Space Command, Peterson Air Force Base, Colorado (the user); Silo-Based Intercontinental Ballistic Missile System Program Office, Hill Air Force Base, Utah (the Program Director); Air Force Detachment 10, Development Systems Organization, Hill Air Force Base, Utah (the system developer); REACT Program Office, Hill Air Force Base, Utah; Defense Contract Management Area Operations (DCMAO), Denver, Colorado (the supervisory contract administrator); DCMO, Colorado Springs, Colorado (the contract administrator); Loral, Colorado Springs, Colorado; and TRW [Thompson, Ramo, Woodridge], REACT Program, Hill Air Force Base, Utah (the technical support contractor).

Methodology

We conducted this program audit in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, and accordingly included such tests of management controls as we deemed necessary. We did not rely on computer-processed data to develop conclusions on this audit. Technical experts from the Quantitative Methods and the Technical Assessment Divisions, Inspector General, DoD, assisted in the review of the engineering changes on REACT hardware. The technical experts, having engineering, configuration management, and manufacturing experience, accompanied the auditors on their visits to the REACT Program Office, the DCMO, and Loral.

Management Control Program

Requirement for Management Control Review. DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and evaluate the adequacy of the management controls.

Scope of Review of Management Control Program. We limited our review of management controls as a result of an on-going audit, Project No. 5AE-0009, "Implementation of the DoD Management Control Program for Major Defense Acquisition Programs." That audit evaluated the effectiveness of the management control program that the Defense Acquisition Executive and the Service Acquisition Executives use for major Defense acquisition programs. Accordingly, we limited our review to management controls over the engineering change and prior effects process at the REACT Program Office and the DCMO. The DCMO provides contract administration responsibilities for the REACT Program and is a field organization of the DCMAO.

Adequacy of Management Controls. The management controls over engineering changes and prior effects claims at the REACT Program Office and the DCMO were adequate as they apply to the primary audit objective.

Program Office. The REACT Program Office conducted semiannual self-inspections in accordance with the Ballistic Missile Organization Regulation 123-1, "BMO [Ballistic Missile Organization] Self-Inspection Program," December 19, 1991. The Regulation did not require the Program Office to make vulnerability assessments of each functional or program area. However, the Program Office did conduct self-inspections in accordance with the Regulation that covered, in part, the configuration management process, including class I ECPs, the Government configuration control board process, and engineering data management. In October 1995, the REACT Program Office moved to the Silo-Based Intercontinental Ballistic Missile System Program Office, Hill Air Force Base, Utah. After that move, the REACT Program Office was covered under the System Program Office's vulnerability assessments and Management Control Program.

Defense Contract Management Office. The DCMO, Colorado Springs, was covered under management control reviews conducted by the DCMAO, Denver. The DCMAO conducted its management control reviews based on assessable units specified in the Defense Logistics Agency Management Control Plan for FYs 1993 through 1997.

Prior Audit Coverage

During the last 5 years, the General Accounting Office; the Office of the Inspector General, DoD; and the Air Force Audit Agency have not issued reports on the REACT Program addressing engineering design changes.

Audit Background

Rapid Execution and Combat Targeting Program. The REACT Program is an upgrade to Minuteman III launch control centers (LCCs) to improve intercontinental ballistic missile war fighting responsiveness and flexibility, emergency war order effectiveness, and weapon system operability and supportability. The REACT Program modifies equipment and software at the LCCs to permit more efficient two-crew-member console (workstation) operations, improve missile retargeting capabilities, and provide rapid message processing capabilities. The REACT Program is divided into two elements: an upgrade of the Weapons System Control Element (Control Element) for the launch-control-center consoles and development of the Higher Authority Communications/Rapid Message Processing Element (Processing Element). The development contractors for the Control Element and the Processing Element were Loral, Colorado Springs, Colorado, and General Telephone and Electronics, Government Systems Division, Needham, Massachusetts, respectively.

In FY 1991, the Air Force awarded the production contract for the launch-control-center consoles to Loral. The Air Force plans to upgrade 50 LCCs and 4 test facilities with REACT consoles and acquire 13 REACT consoles as trainers at an estimated total program cost of $640 million. Through August 1995, the Air Force had upgraded 27 of the 50 LCCs and 4 test facilities. All upgrades are scheduled to be completed by August 1996. Enclosure 2 shows a diagram of the REACT console.

Configuration Control Guidance. Military Standard 480B, "Configuration Control - Engineering Changes, Deviations and Waivers," July 15, 1988, contains configuration control requirements and instructions for preparing and submitting proposed engineering changes. The purpose of configuration control is to enable program managers to manage changes effectively to configuration items to maintain and enhance system reliability, performance, interoperability, supportability, or operational readiness. Configuration control begins at contract award and continues throughout the life of the configuration item.

Engineering Change Procedures. System configuration design changes are controlled and approved through engineering change procedures. Review and approval procedures vary by class of requested engineering change.

Class I Engineering Change. A class I engineering change affects the form, fit, and function of a configuration item and includes cost and schedule considerations. For a class I engineering change, Loral submits an ECP to the REACT Program Office Configuration Control Board for approval or disapproval. If approved, the ECP is forwarded to the procuring contracting officer (PCO) in the REACT Program Office for appropriate contract actions that usually increase the contract cost to the Government. Loral then generates ECOs to implement the appropriate engineering change.

Class II Engineering Change. A class II engineering change is primarily an administrative change to a configuration document that does not affect the form, fit, and function of a configuration item and related cost and schedule. For a class II engineering change, Loral submits a proposed ECO to the program integrator at the DCMO for review and concurrence with Loral's classification of the ECO. Loral then makes the appropriate engineering change at no cost to the Government.

These engineering change procedures apply after DoD establishes the product baseline for the configuration item.

Prior Effects Claim Procedures. A prior effects contractual clause was in the REACT production contract to mitigate the risk between the REACT Program Office and Loral for concurrently developing and producing the REACT. The prior effects clause allows Loral to recover costs to correct REACT design deficiencies that are identified after the production decision and during weapon system testing and configuration audits. Under the clause, Loral can submit a prior effects claim when the Program Office or Loral identifies a design deficiency for a production configuration item for which a product baseline has not yet been established. Loral submits claims by preparing a technical description of the design deficiency; proposing actions, including estimated costs, that should be taken to correct the deficiency; and proposing one or more ECOs. Loral submits the claim to the PCO, who reviews the claim to determine whether it is contractually acceptable. The PCO also has the technical engineers in the REACT Program Office review the appropriateness of Loral's proposed corrective action. If the engineers recommend approval, they provide the PCO an estimate of the cost-range to correct the deficiency. Based on the engineers' advice, the PCO instructs the administrative contracting officer to issue a work request to Loral and negotiate consideration with Loral.

Loral will not be able to submit prior effects claims after December 1995. In December 1995, the REACT Program Office is scheduled to conduct its last physical configuration audit for REACT configuration items, assuming no schedule slip. Accordingly, a product baseline will be established for all console configuration items. Subsequently, Loral will have to submit an ECP to the REACT Program Office for approval to implement any design or engineering changes to the baselined configuration items.

Discussion

Our review did not substantiate the allegation made to the DoD Hotline that the DoD was not properly managing and controlling REACT engineering design changes and that Loral:

o incorrectly attributed REACT production problems to REACT console-hardware design and specification deficiencies and

o attempted to obtain relief for those problems by submitting ECOs and prior effects claims.

Engineering Change Orders. From a universe of approximately 2,450 ECOs prepared by Loral in FY 1995, we systematically sampled 29 REACT ECOs (Enclosure 3). We determined whether:

o Loral had inappropriately submitted class II engineering changes to administratively change hardware drawings instead of requesting a waiver or deviation to the design specification in exchange for contractor consideration;

o the REACT Program Office had appropriately reviewed and approved the class I engineering changes; and

o the program integrator had appropriately reviewed and concurred with the class II engineering changes.

By analyzing the ECO process and conducting technical reviews of the ECOs, we determined that Loral appropriately classified the ECOs, that the REACT Program Office properly reviewed and approved the class I engineering changes, and that the program integrator properly reviewed and concurred with the class II engineering changes. As part of the ECO request, the Loral engineers provided adequate rationale and support for the origination and classification of the ECOs. Further, the REACT Program Office and the program integrator had the appropriate technical officials review the engineering changes.

Prior Effects Claims. From a universe of 193 prior effects claims, we subjectively sampled 20 prior effects claims (Enclosure 4) to determine whether:

o Loral had inappropriately identified a production problem as a design or specification deficiency,

o the design deficiency related to a production configuration item for which a product baseline has not yet been established, and

o the REACT Program Office had properly reviewed and approved the claim.

Our technical experts conducted technical reviews of the 20 prior effects claims and determined that Loral had appropriately identified manufacturing problems as design deficiencies for 19 of the prior effect claims reviewed. The design

deficiencies were for production configuration items for which product baselines had not yet been established. The Loral engineers provided adequate rationale and support for the claims. We did note, however, that for 3 of the 19 claims, Loral verbally submitted the claims to the REACT Program Office. In response, the REACT Program Office verbally approved the claims with PCO concurrence pending receipt of written claim documentation from Loral. Loral began implementing the claims with the understanding that written PCO direction would follow. However, after reviewing written claim documentation from Loral, the PCO determined that the claims were not necessary and disapproved them. As a result, Loral implemented those claims at no cost to the Government.

Our technical experts concluded that the remaining claim resulted from a design deficiency and, to a limited extent, a material and tooling problem. For a design deficiency, the REACT Program Office compensates Loral to rework or retrofit the affected configuration items. However, for material and tooling problems, Loral is responsible for correcting the problem at no cost to the Government. As of November 1995, the REACT Program Office had not definitized this remaining claim, estimated by Loral to cost $72,000. This remaining claim identifies a problem with Corloks. Corloks are special blind nut fasteners designed to attach two metal parts together. From interviews conducted and documentation reviewed, the Corlok problem resulted from four factors.

o A design problem in that the console assembly drawings incorrectly identified the use of Corlok fasteners. Specifically, the drawings did not identify the different thicknesses of metal combined to form the console cabinets. The cabinet assembly required more than one size of Corlok fasteners to meet both the initial manufacturing requirements and the rework requirements. Additionally, the console drawings were not specific enough to manufacture the cabinets using the Corloks.

o A design to rework or replace defective Corloks and to correct defective Corlok installations was not available.

o A material problem related to manufacturing the Corloks was not detected until after the console was in production.

o Tooling problems identified to the console-frame-manufacturer affected installation of the Corlok fasteners.

We discussed the Corlok problem with user representatives at the Air Force Space Command who indicated that Corlok fastener retrofitting was underway to correct the Corlok problem. They were satisfied with the Corlok corrective actions for the consoles Loral retrofitted.

Conclusion

Overall, the REACT Program Office and the DCMO were effectively managing and controlling Loral's requests for engineering design changes on REACT

hardware even though the REACT Program Office sometimes allowed Loral to proceed with corrective action for prior effect claims before PCO approval. After the REACT Program Office conducts its final physical configuration audit for REACT configuration items in December 1995, assuming no schedule slip, the Program Office will no longer process prior effects claims because a product baseline will have been established for all configuration items. After the final physical configuration audit, Loral will be required to submit ECPs to implement design or engineering changes instead of preparing prior effects claims.

With the exception of the Corlok prior effects claim, Loral correctly attributed its ECOs and prior effects claims that we reviewed to production problems resulting from REACT console-hardware design and specification discrepancies. Because the Corlok claim appeared to have resulted primarily from a design problem and secondarily from material and tooling problems, the PCO should require the administrative contracting officer to take into account the Corlok material and tooling problem when negotiating the settlement for the Corlok prior effect claim with Loral.

Management Comments

We provided a draft of this report to you on October 23, 1995. Because the report contains no findings and recommendations, written comments were not required and none were received. Therefore, we are publishing this memorandum report in final form.

We appreciate the courtesies extended to the audit staff. If you have questions on this report, please contact Mr. John E. Meling, Audit Program Director, at (703) 604-9091 (DSN 664-9091) or Mr. Jack D. Snider, Audit Project Manager, at (703) 604-9087 (DSN 664-9087). Enclosure 5 lists the distribution of this report. The audit team members are listed inside the back cover.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosures

Definitions of Technical Terms

Configuration Control Board. A Government or contractor board composed of technical and administrative representatives who recommend approval or disapproval of proposed engineering changes to a configuration item's current approved configuration documentation. The board also recommends approval or disapproval of proposed waivers and deviations from a configuration item's current approved configuration documentation.

Configuration Item. An aggregation of hardware, firmware, or computer software or any of their discrete portions that satisfies an end use function and the Government designated for separate configuration management.

Configuration Management. Technical and administrative direction and surveillance actions taken to identify and document functional and physical characteristics of an item, to control changes to a item and its characteristics, and to record and report change processing and implementation status.

Design Control Board. An engineering review board that oversees hardware design and the preparation of engineering drawings and other technical data for a configuration item.

Deviation. A written authorization, granted before the manufacture of an item, to depart from a particular performance or design requirement of a specification, drawing, or other document for a specific number of units or a specified period.

Engineering Change Order. A form that documents proposed engineering and non-engineering changes to original drawings and associated parts lists. The engineering change may influence item configuration, limits, tolerances, manufacturing standards, processes, procedures, parts, and material definitions and instructions. Engineering change orders are comprised of classes I and II as identified in Military Standard 480B. A class I engineering change order implements an approved engineering change proposal that affects the form, fit, and function of a configuration item and includes cost and schedule considerations. A class II engineering change order is primarily an administrative change to a configuration document that does not affect the form, fit, and function of a configuration item and related cost and schedule.

Engineering Change Proposal. A contractor document describing and justifying a proposed engineering change and applicable costs that is submitted to the Government for approval or disapproval.

Prior Effects. A contractual clause in the REACT production contract to mitigate the risk between the REACT Program Office and Loral for concurrent development and production. The prior effects clause allows Loral to recover costs to correct REACT design deficiencies that were identified after the production decision and during weapon system testing and configuration audits. The prior effects clause was in the REACT production contract because the REACT Program Office approved REACT production before establishing the

product baseline. Under the prior effects clause, the REACT Program Office compensates the contractor for recurring production costs related to rework or retrofit of pre-product-baselined configuration items resulting from design deficiencies identified under the production contract before the product baseline is established. After the configuration item undergoes a physical configuration audit, the prior effects clause is no longer applicable to that item. Any engineering change to that configuration item would then be made using the engineering change proposal process.

Physical Configuration Audit. A formal examination to verify that the configuration item "as built" conforms to the technical documentation that defines the item. The physical configuration audit includes a detailed audit of engineering drawings, specifications, technical data, and tests utilized in production of the item.

Product Baseline. The baseline established at the physical configuration audit that includes product, process, and material specifications and engineering drawings. Approval of the configuration item product specification by the Government program office and satisfactory completion of the physical configuration audit establish the product baseline.

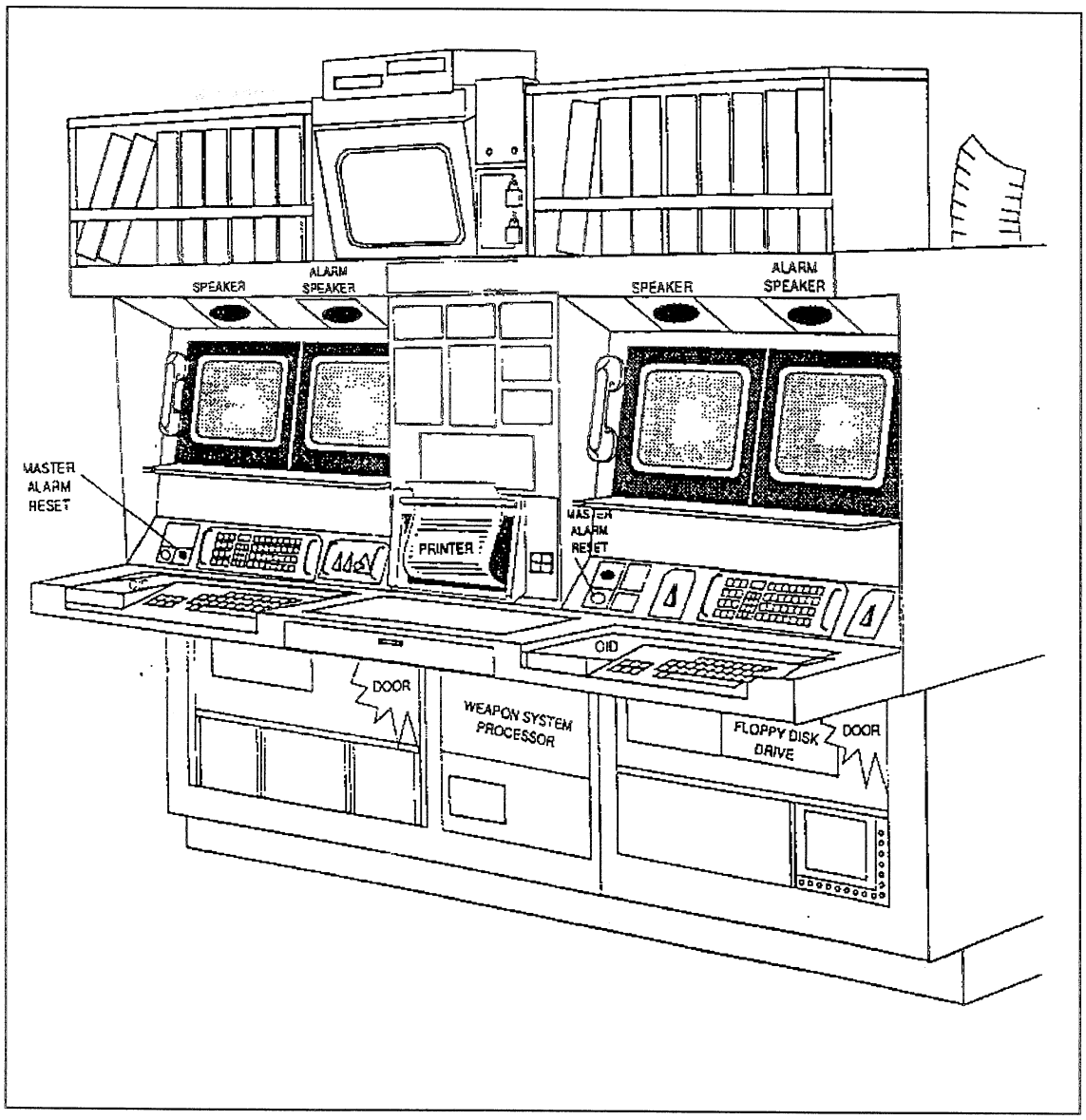
Retrofit. A modification of a configuration item to incorporate changes made in later production items.

Rework. Any corrections of defective work either before, during, or after inspection.

Specification. A document intended primarily for use in procurement that clearly and accurately describes the essential technical requirements for items, materials, or services, including the procedures for determining whether the requirements have been met.

Waiver. A written authorization to accept a configuration item that departs from specified requirements. The item may be considered suitable "as is" or after rework by an approved method.

Rapid Execution and Combat Targeting Program Console



Engineering Change Orders Reviewed

Engineering Change Order Number	Class	Description
C-12019	I	To reduce weapon system processor (WSP) power supply noise values in drawing C003048.
C-12020	I	To reduce WSP power supply noise values in drawing C003007.
C-12021	I	To reduce WSP power supply noise values in drawing C003878.
C-12022	I	To reduce WSP power supply noise values in drawing PLC004625-01.
C-12025	I	To reduce WSP power supply noise values in drawing PLC003002-01.
C-12026	I	To correct a part number in ECO C-12019.
C-12029	I	To provide conversion kits to upgrade the auxiliary alarm panel.
C-12251	II	To change the drawing administratively to show the different types of nickel plating authorized on the console subassembly.
C-12290	II	To change the drawing administratively to show the reduced tolerances for the site-modification-kit.
C-12296	II	To change the drawing administratively to show the software source code and revision level.
C-12474	II	To change the Corlok drawing administratively to show rework and repair option parts as well as application data.
C-12496	II	To change the drawing administratively to show the correct part number for the self-locking plate nut.
C-12511	II	To change the drawing administratively to add the missing voice control panel parts list.
C-12513	II	To change the drawing administratively to add the voice control panel bent radius.
C-12520	I	To add the engineering prototype board to the auxiliary alarm panel.
C-12527	I	To replace stainless steel bolts used as the mounting bolts for the WSP with black oxide steel mounting bolts.
C-12528	I	To identify black oxide finish mounting bolts as an alternate part for the WSP.
C-12529	II	To change the drawing administratively to show that cadmium-plated mounting bolts are the primary bolts for the WSP.
C-12530	II	To change the drawing administratively to show the change in the WSP mounting-bolt material from stainless steel to cadmium-plated.

Engineering Change Orders Reviewed

Engineering Change Order Number	Class	Description
C-12550	II	To change the drawing administratively to show a reduction in the console subassembly torque.
C-12551	II	To change the voice communication control panel drawing administratively to add a missing dimension line.
C-12553	II	To change the console subassembly drawing administratively to show the actual torque value.
C-12578	I	To revise drawing parameters for bar restraint to accommodate a taller file cabinet.
C-12606	II	To change the console subassembly drawing administratively to show a series of small ridges on the lever.
C-12648	II	To change the voice control panel drawing administratively to show that the "Microcircuit, Programmable Logic Array Caution-Electrostatic Sensitive Part" was superseded by a faster part.
C-12690	I	To change the cable assembly drawing to reflect the proof of production unit.
C-12701	II	To change the drawing administratively to add an alternate part number to the video display unit controller.
C-12869	II	To change the drawing administratively to show the thread length of the WSP-screw correction.
C-12871	I	To change the cable assembly drawings after the torque specifications were deleted.

Prior Effects Claims Reviewed

Prior Effects Claim Number	Value (dollars)	Description
024	0[1]	Redesign identification plate on the console.
048	12,537	Add new identification plate requirements on the console.
063	71,813[2]	Corlok redesign and rework.
152	30,539	Redesign and rework weapon system processor (WSP) chassis subassembly.
153	62,892	Rework WSP internal cable.
157	54,919	Replace WSP wedge-lock with special black hard coat anodized finish.
162	0[1]	Rework printer air neoprene seal.
163	38,951	Replace the WSP silver nut plates with dry film-type nut plates.
166	185,000	Redesign kitchen service group rack shocks.
177	6,128	Redesign type III auxiliary alarm panel labels.
181	10,006	Redesign console operating program black discrete frame error indicator.
192	0[3]	Redesign and rework file cabinet tie-down bolts.
193	0[3]	Re-identification of the power and signal distribution unit.
197	0[1]	Redesign and rework push-to-test lamps on the missile procedure trainer.
198	0[3]	Redesign and rework voice control panel secure phone functions.
202	311,371	Redesign and rework voice control panel to correct incoming-ring malfunctions.
205	35,000[2]	Redesign modification kits nomenclature assignments.
207	45,000[2]	Redesign and rework console subassembly left hand panel assembly.
208	330,000[2]	Correct auxiliary alarm panel anomalies.
210	70,000[2]	Incorporate missing voice control panel return lines.

[1]Prior effects claim that the Procuring Contracting Officer at the REACT Program Office disapproved.
[2]Prior effects claim that has not yet been negotiated as of August 1995.
[3]Prior effects claim that Loral verbally submitted to the REACT Program Office. In response, the Program Office verbally approved the claim with procuring contracting officer concurrence pending receipt of written claim documentation from Loral. However, after reviewing written documentation, the procuring contracting officer determined that the claim was not necessary and disapproved it.

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)
Assistant to the Secretary of Defense (Public Affairs)

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force
Program Director, Silo-Based Intercontinental Ballistic Missile System Program Office
  Chief, Detachment 10, Development Systems Organization
    Program Manager, Rapid Execution and Combat Targeting Program Office

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
  Defense Contract Management Command
    Defense Contract Management Area Operations, Denver, CO
      Defense Contract Management Office, Colorado, Springs, CO

Audit Team Members

The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report.

Donald E. Reed
John E. Meling
Jack D. Snider
John J. Dzik
Debbie A. Calhoun
Christopher E. Johnson
Gregory R. Donnellon
Garry D. Durfey
Mary Ann Hourclé
Teresa D. Bone