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Defense Acquisition Executive Summary (DAES) Report

PATRIOT PAC-3

Submission Date: 25 February 1997

1. DoD Component BMDO Class: [U]

2. Program Manager (PM) Information Class: [U]

PM Name: COL STEPHEN J. KUFFNER
Address: PROJECT MANAGER
PATRIOT PROJECT OFFICE
ATTN: SFAE-AMD-PA
HUNTSVILLE, AL 35807-3801
Comm Phone: (205) 955-3240 DSN: 645-3240
Date Assigned: 27 Jul 95

3. Program Manager's Point of Contact (POC) Information Class: [U]

POC Name: MR. W A (BUD) CARROLL
Address: PEO, AIR AND MISSILE DEFENSE
ATTN: SFAE-AMD-DP-R
P. O. BOX 1500
HUNTSVILLE, AL 35807-3801
Comm Phone: (205) 722-1498 DSN: 788-1498

4. Program Executive Officer (PEO) Information Class: [U]

PEO Name: BG DANIEL L. MONTGOMERY
Address: PROGRAM EXECUTIVE OFFICE
AIR AND MISSILE DEFENSE
ATTN: SFAE-AMD
HUNTSVILLE, AL 35807-3801
Comm Phone: (205) 722-1015 DSN: 788-1015

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U6202

19980309 042

Accession Number: 6202

Publication Date: Feb 25, 1997

Title: Defense Acquisition Executive Summary (DAES) Report; PATRIOT PAC-3

Corporate Author Or Publisher: Patriot Project Office, Huntsville, AL 35807-3801

Descriptors, Keywords: DAES PATRIOT PAC-3 Acquisition Funding Configuration 2 Configuration 3
IPT Fire Unit Program Schedule Milestones Acquisition Cost Appropriation RDT&E Contract
Identification Data

Pages: 38

Cataloged Date: May 30, 1997

Copyrighted or Not: NO

Document Type: HC

Number of Copies In Library: 000001

Record ID: 44537

1. Executive Summary

a. Program Issues

[U] PROGRAM SCHEDULE STATUS: Analysis of the PAC-3 missile development progress currently indicates the first missile flight test will occur in Jun 97. An assessment of the requisite program activities is ongoing to determine potential impacts to the remaining schedule. Overall, the program continues to be on track to achieving all parameters established by the 20 Aug 96 approved Acquisition Program Baseline.

b. Significant Developments Since Last Report

[U] PAC-3 MISSILE DEVELOPMENT: While the PAC-3 Missile software for the first flight is being verified on schedule in the LMVS hardware-in-the-loop lab, the resolution of fabrication and acceptance test issues delayed the integration of the Radio Frequency Data Link (RFDL) into the flight test missile. All components, subassemblies and software of the PAC-3 missile segment have been manufactured/coded and have passed all acceptance tests, and are being assembled into the first Developmental Test (DT-1) missile in preparation for pre-flight environmental testing. All other aspects of the PAC-3 missile segment (performance simulation development, production pilot line verification, and preparation for fielding) remain on schedule.

The PAC-3 Missile Solid Rocket Motor (SRM) composite motor case has passed all flightworthiness tests, but a bonding problem was identified which has since been resolved. This will delay the delivery of the SRM to be used for the first flight by three weeks, but does not further impact the first flight test date. Hardware and software integration is proceeding smoothly as the Enhanced Launcher Electronics System (ELES) #1 and Fire Solution Computer (FSC) #1 completed LMVS integration testing and were shipped to Raytheon. They have successfully passed all integration tests to date at Raytheon, logging over 1,000 hours on the ELES and 7,000 hours on the FSC without a failure. The fourth brassboard seeker completed acceptance testing and has been shipped to the Millimeter Simulation System-2 (MSS-2) government Hardware-in-the-Loop facility which began integration in Dec 96. The Guidance Processor Unit has been delivered. The Pacific Scientific Attitude Control Motors (ACM's) have passed environmental tests and deliveries are underway. Though progress is satisfactory for most components, the cumulative effect of the problems experienced in subsystem development has delayed the first missile flight until Jun 97.

Procurement decisions are planned during the next quarter for the Command and Launch System and Initial Production Facility in accordance with the 10 Dec 96 approved PAC-3 Program Rebaselining

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The contractual change order to implement the FY96 PBD-224 guidance was completed in Jan 97. The complex, large, change order was used to successfully demonstrate the dramatically reduced time required to definitize letter contracts using Alpha Pricing.

CONFIGURATION 2 STATUS: On 27 Nov 96 MG Link, MICOM Commander, approved the conditional release of PATRIOT Advanced Capability-3 Configuration 2. The Configuration 2 First Unit Equipped (FUE) was declared on 5 Dec 96. Fielding of Configuration 2 has also been completed to 5/52 ADA Bn, at Fort Bliss. The remaining PATRIOT units will be fielded expeditiously in accordance with the New Equipment Training and Fielding Plan. The fielding decision was supported by a comprehensive series of engineering and operational testing. The 18-month test series culminated in a full operational test conducted by independent evaluators. Throughout these tests PATRIOT capabilities were stressed and analyzed, ensuring that the system which goes to the troops will perform as designed. Operational capabilities were assessed in hot, cold, and humid environments. Road march, emplacement, and endurance testing was performed. Live missile flights were flown against threat representative targets. Although minor problems were identified during this test series, overall performance of the system was exemplary, leading to the decision to field the system immediately. The minor problems associated with the conditional release will be corrected through subsequent software releases. With this fielding, two of the three phases of the PATRIOT Growth Program have been implemented.

CONFIGURATION 3 STATUS: The Classification, Discrimination, and Identification Phase 3 (CDI-3) Engineering and Manufacturing Development (EMD) program continues to make good technical progress. Hardware fabrication of EMD kits is complete. All radar resident software design/coding is complete. Software integration and checkout is ongoing. Schedule delays resulting from this effort were due to normal integration problems and are not due to technical problems. Test plans for Logistics/Maintainability Demo and Physical Qualification Test (PQT) are complete. A Limited Procurement Authorization (LPA) II decision was approved by the PEO-AMD on 19 Dec 96. The LPA II authorized procurement and installation of modification kits, and a system support package for 12 radars. A letter contract was signed with Raytheon on 24 Dec 96. Preparations for supporting the Tactical Ballistic Missile Countermeasures Mitigation Program (TCMP) at KMR continue.

The Remote Launch/Communications Enhancement Upgrade (RL/CEU) design is complete. An LPA decision was approved by the PEO-AMD in Oct 96 for modification kits, initial spares, and associated nonrecurring engineering, tooling, and test equipment to support system level testing. The LPA production contract was awarded on 27 Nov 96. The

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development contract with Raytheon was definitized on 23 Dec 96. The Contractor Verification Test (CVT) and PQT Plans have been iterated several times. The final version of the CVT Plan is expected in Mar 97.

THAAD/PATRIOT INTEROPERABILITY: THAAD and PATRIOT radars conducted a successful EMI interference test at WSMR and no interference was noted. A wide band interference test is scheduled at Kwajalein Missile Range, Feb-Mar 97. The THAAD UOES/PATRIOT PDB-5 Interface Control Plan has been completed and is in the process of gaining approval. Formal interoperability testing in preparation for exercise Roving Sands 97 is scheduled for Jan-Feb 97.

JOINT INTEROPERABILITY: PATRIOT continues to support the Army/CEC Study activities as well as the Joint Integrated Air Defense System (IADS) Working Group which will improve the exercise ASCIET 97. TADIL-A TBM messages have been resolved with the Navy and are now being implemented into PDB-5.

PATRIOT INTEGRATING IPT (IIPT)/ASARC-BMDARC COORDINATION TEAM (ABCT): The PAC-3 Program Rebaselining action item was reviewed by the OIPT and approved by Mr. Longuemare, USD(A&T), on 10 Dec 96. The rebaselining action addressed the PAC-3 IPT approach, revised LRIP and FRP exit criteria, EMD benchmarks and milestone documentation. The PATRIOT Acquisition Planning IPT recently met and revised the PAC-3 Missile Acquisition Strategy. This new strategy has been approved by the PAC-3 Missile PM, PATRIOT PM, and the PEO-AMD. It has been forwarded to BMDO and the Army for approval. The proposed strategy reintroduces a Long Lead decision in Aug 97 which will allow the LRIP DAB to be postponed up to 90 days without affecting PAC-3 FUE. This essentially reduces the risk of the DAB decision by allowing the potential for more test data to be considered before making the commitment to LRIP. Strategy approval and release of the RFP are expected in Feb 97.

PROGRAM FUNDING: The PBD 224 C3 moved Defense Agency (BMDO) Procurement funding to the Army Missile Procurement for FYs 98-03. This change is reflected in funding sections of this report.

2. Baseline Information/History

[U] Program Type: DAB

Next Review: SEP 97 Review Type: P/R

Next RFP: FEB 97

No Data Entered.

FIRE UNIT

Initial Development APB Date: 22 Feb 95

Current Development APB Date: 20 Aug 96

Total Number of Baselines: 2

Total Number of Current Parameters: 44

Cost: 6

Performance Characteristics: 16

Milestones: 22

[U] □

3. Mission and Description

[U] PATRIOT, the centerpiece of the Army's corps and theater air defense forces, is an extremely capable high-to-medium altitude, long-range air defense missile system which provides air defense of ground combat forces and high-value assets against the air threat of the 1990s and beyond. PATRIOT is designed to cope with enemy defense suppression tactics that may include tactical ballistic missiles (TBM), cruise missiles, anti-radiation missiles, advanced aircraft employing saturation, maneuver, sophisticated electronic countermeasures (ECM), and low radar cross-section. In the Field Army, PATRIOT air defenses will be complemented by short-range, low altitude forward area defense weapons and will be integrated with other ground and air assets in the overall air defense of the theater of operations. The system can conduct multiple simultaneous engagements of high performance air breathing targets and TBMs with a high probability of target kill. The system will provide air defense protection in all weather conditions and in hostile ECM environments. At the battery level or Fire Unit (FU) level, the PATRIOT missile system consists of an Engagement Control Station (ECS), one Radar Set (RS), an Electric Power Plant (EPP), eight Launching Stations (LS), and associated communications equipment. At the battalion level, command and control is exercised through the Information and Coordination Central (ICC) and associated communications equipment including Communications Relay Groups (CRG). The PATRIOT RS is a multifunction phased array radar which performs a variety of surveillance, acquisition, and guidance tasks. The only manned element of the FU during air battle, the ECS, provides the human interface for control of automated operations.

The PATRIOT Advanced Capability (PAC-3) program is the result of a series of integrated, phased system improvements in combination with the PAC-3 missile (formerly ERINT). The PAC-3 missile is a high velocity hit-to-kill, surface-to-air missile capable of intercepting and destroying tactical missiles and air breathing threats. The PAC-3 missile provides the range, accuracy, and lethality to effectively

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defend against tactical missiles with nuclear, conventional high explosive, biological and chemical warheads. The missile uses a solid propellant rocket motor, aerodynamic vane controls, and inertial guidance to navigate to an intercept point. Shortly before arrival at the intercept point, the missile's rate of spin is increased, the on-board radar homing seeker acquires the target, and terminal homing guidance is initiated to achieve hit-to-kill by high resolution maneuvers.

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Section 2 - Assessments

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FIRE UNIT

Program Assessment Indicators	Assessment	Class
Performance Characteristics	G	[U]
Test & Evaluation	G	[U]
Logistics Requirements & Readiness Objectives	G	[U]
Cost	YA	[U]
Funding	G	[U]
Schedule	G	[U]
Contracts	G	[U]
Production	G	[U]
Management Structure	G	[U]

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FIRE UNIT

[U] Explanation of YA in Cost

- [U] The cost on the FY89 Engineering Development contract exceeds the target value of the contract. The Radar Enhancement Phase III effort, which caused the majority of the contract overrun, completed in Nov 95. The Classification, Discrimination, and Identification Phase 3 (CDI-3) task is the remaining effort in this contract. This effort is currently projected to exceed the target cost by \$6M. After share ratio adjustments, the overrun impact is 3% of total contract value. Through actions within the authority of the PM/PEO the cost growth can be accommodated within the current program funding level.

Although the PAC-3 Missile EMD contract performance has experienced unfavorable trends to date, preliminary Dec 96 data indicates a significant improvement in both cost and schedule performance. However, an aggressive plan will continue to put pressure on cost and schedule performance through mid-3rd quarter FY97 as design, fabrication, and integration activities culminate in preparation for the first missile flight test in Jun 97. Based on the preliminary Dec 96 data, the cumulative schedule variance is -3.1% and the cumulative cost variance is -6.8%. The PM's current estimate-at-completion projects an unfavorable variance of approximately 5% based on performance trends to date. Management Reserve will be used as an offset against the current performance. Improved efficiencies are expected throughout the remaining integration, assembly, and test phases of the program due to the repetitive nature of these tasks and the learning curve associated with repeating basic flight test and subsequent lot productions which should partially offset the performance inefficiencies to date.

[U] Explanation of G in Schedule

- [U] The PM's Current Estimate was changed for the following APB milestones as a result of moving the first missile flight test to Jun 97. Service Final DT&E - Start, from Apr 97 to Jun 97; Low Rate Initial Production Decision (DAB), from Sep 97 to Dec 97; and Low Rate Initial Production Contract Award, from Oct 97 to Jan 98.

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No Data Entered.

Section 4 - CAE Comments

FIRE UNIT

[U] The following are major events that took place in the PAC-3 program during this reporting period:

-On 5 Dec 96, the Configuration 2 First Unit Equipped (FUE) received final approval by the Army Missile Command following the formal release of PDB-4 software. The FUE has been implemented under a conditional release pending the results of further reliability testing. Based on the Get/Well Status Report for Configuration 2, fielding three conditional release items will extend full material release in 4Q/98. The three conditional release items are 1) contractor maintenance support will remain in place for the JTIDS and Switch Multiplexer Unit (SMU) until organic support is available in 4Q/98, 2) additional reliability testing of the Routing Logic Radio Interface Unit (RLRIU-U) will be done in conjunction with Configuration 3 regression testing during FY97, and 3) Guidance Enhancement Missile (GEM) using PDB-4 software is flown against a threat representative target during Willow Dune (scheduled in March 1997).

-On 10 Dec 96, USD(A&T) approved the Program Manager's re-baseline plan for exit criteria, EMD benchmarks, and milestone documentation. On 13 Dec 96, BMDO concurred with the PEO-AMD decision to proceed with limited procurement authority (LPA) for the Command Launch System (CLS) and Classification, Discrimination, and Identification Phase 3 (CDI-3).

-On 8 Feb 97, the first Systems Integration Test (SIT) family-of-systems test for CY-97 was successfully executed as part of the Willow Dune program. Target launch and flyout were nominal. A PAC-2 missile followed by a GEM (using PDB-4 software) were launched against a threat representative target. The PAC-2 missile successfully engaged and destroyed the target preventing the GEM from acquiring and intercepting. All SIT-97 objectives were met by this test.

-On 11 Feb 97, the Program Manager briefed the IIPT on the revised PAC-3 Acquisition Strategy and BMDO signed the revised plan on 18 Feb 97. After Army review and signature the revised Acquisition Strategy will be forwarded to USD/A&T for approval. The new strategy, derived from the original Jul 94 Acquisition Decision Memorandum, reinstates a missile long lead decision in Aug 97 to protect the 4Q/99 FUE date. The required long lead items will include the seeker, Inertial Measurement Unit, and components of the aft section, with the seeker requiring the longest production cycle of 17 months. The long lead decision authority will be shared by Army and BMDO.

-Recent engineering delays with the Radio Frequency Data Link (RFDL) subsystem on the missile have delayed the start of DT&E to Jun 97. The first Controlled Test Flight (CTF-1) is now scheduled for Jun 97. CTF-2 and GTF-1 are scheduled to fly in Aug 97 and Oct 97 respectively. The DAB decision for LRIP, has moved to Dec 97 from the APB objective date of Sep

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Section 4 - CAE Comments

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97. This DAB is dependent on a successful intercept in Oct 97 during GTF-1 which is an exit criteria for the LRIP DAB.

As the executing agent for PAC-3, PEO-AMD primarily manages the missile segment (PAC-3 missiles, canisters, ELES, FSC) and other ground equipment (Radar Enhancements, CDI-3, RL/CEU) for the PAC-3 program. The DAES information for these components is provided PEO-AMD. In reporting the total program status, BMDO, which centrally manages the targets program, provides target information for the DAES. The PAC-3 TMD targets, while not directly managed by PEO-AMD, are included in the program baseline.

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Section 5 - Approved Program Data
2. Program Schedule Milestones

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Approved Program Schedule Milestones

Schedule Milestones	Initial Development APB Objective	Current Development APB Objective/ Threshold	PM's Current Estimate	
MISSILE				[U]
Milestone II (Missile) (DAB)	MAY 94	MAY 94 /NOV 94	MAY 94	[U]
Development Contract Award	SEP 94	SEP 94 /MAR 95	OCT 94	[U]
Preliminary Design Review Complete	SEP 95	SEP 95 /MAR 96	OCT 95	[U]
Critical Design Review Complete	MAR 96	MAR 96 /SEP 96	MAR 96	[U]
Service Final DT&E				[U]
Start	JAN 97	APR 97 /OCT 97	JUN 97	[U]
Complete	DEC 97	DEC 98 /JUN 99	DEC 98	[U]
Low Rate Initial Production	JUN 97	SEP 97 /MAR 98	DEC 97	[U]
Decision (DAB)				
Low Rate Initial Production	JUL 97	OCT 97 /APR 98	JAN 98	[U]
Contract Award				
Low Rate Production First Delivery	MAY 98	APR 99 /OCT 99	APR 99	[U]
IOT&E				[U]
Start	JAN 98	FEB 99 /AUG 99	FEB 99	[U]
Complete	JUN 98	MAR 99 /SEP 99	MAR 99	[U]
Milestone III Production Decision	AUG 98	JUN 99 /DEC 99	JUN 99	[U]
Full Rate Production Contract	AUG 98	OCT 99 /APR 00	OCT 99	[U]
Award				
First Unit Equipped	SEP 98	JUL 99 /JAN 00	JUL 99	[U]
Service Depot Support	SEP 01	JUL 02 /JAN 03	JUL 02	[U]
OTHER UPGRADES				[U]
Configuration 1 Production	MAR 95	MAR 95 /SEP 95	MAY 95	[U]
Confirmatory Test				
Configuration 1 First Unit	JUN 95	JUN 95 /DEC 95	DEC 95	[U]
Equipped				
Configuration 2 Follow On Test	DEC 95	DEC 95 /JUN 96	MAY 96	[U]
Configuration 2 First Unit	JUN 96	JUN 96 /DEC 96	DEC 96	[U]
Equipped				
Configuration 3 Follow On Test	JUN 98	FEB 99 /AUG 99	FEB 99	[U]
Configuration 3 First Unit	SEP 98	JUL 99 /JAN 00	JUL 99	[U]
Equipped				

Other Significant Schedule Milestones

No data entered.

[U] The Initial Development APB Objectives are the 22 Feb 95 approved APB

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Section 5 - Approved Program Data
2. Program Schedule Milestones

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milestone dates. The Current Development APB Objectives and Thresholds are the 20 Aug 96 approved APB milestone dates.

On 27 Nov 96 the MICOM Commander approved the conditional release of PAC-3 Configuration 2 and FUE was declared on 5 Dec 96.

The PM's Current Estimate was changed for the following APB milestones as a result of moving the first missile flight test to Jun 97. Service Final DT&E - Start, from Apr 97 to Jun 97; Low Rate Initial Production Decision (DAB), from Sep 97 to Dec 97; and Low Rate Initial Production Contract Award, from Oct 97 to Jan 98.

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 Section 5 - Approved Program Data
 3. Approved Program Acquisition Cost

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 Prepared: 05 Feb 97

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Program Base Year: 1988

	Initial Development APB Objective	Current Development APB Objective/ Threshold	PM's Current Estimate	Class
Base Year Costs				
Development (RDT&E):	2015.6	2332.3/2511.0	2384.5	[U]
Procurement (PROC):	2783.2	3122.7/3278.8	3197.9	[U]
MILCON:	0.0	0.0/0.0	0.0	[U]
Acquisition O&M:				[U]
Total Base Year Costs:	4798.8	5455.0/5789.8	5582.4	[U]
Acquisition O&S:				[U]
Total BY Life Cycle Costs:	4798.8	5455.0/5789.8	5582.4	[U]
Then Year Costs				
Development (RDT&E):	2435.8	2860.8	2932.4	[U]
Procurement (PROC):	3945.8	4392.6	4504.2	[U]
MILCON:	0.0	0.0	0.0	[U]
Acquisition O&M:	0.0	0.0	0.0	[U]
Total Then Year Costs:	6381.6	7253.4	7436.6	[U]
Quantities				
Development (RDT&E):	0	0		[U]
Procurement (PROC):	54	54	54	[U]
Unit Cost				
Avg Proc Unit Cost (BY \$M):	51.500	57.828/62.165	59.220	[U]
Avg Proc Unit Cost (TY \$M):	N/A	N/A	83.411	[U]

[U] The Initial Development APB Objective column reflects the 22 Feb 95 APB approved values. The Current Development APB Objectives and Thresholds reflect the 20 Aug 96 approved APB.

The PM's Current Estimate is the President's Budget (14 Jan 97 BMDO CPS-PB 98-99, and Army Jan 97 PB).

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Section 6 - Program Background Data
1. Track To Budget

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a. RDT&E Program Element (PE) & Project Data

PE/Proj Num	PE/Project Name	SAR
0603216C		Y [U]
0604216C		Y [U]
0604225C		Y [U]
0604865C		Y [U]
0604866C		Y [U]
23801D036		Y [U]

b. Procurement Annex Line Item (PALI) Data

Appn Code	Item Number	Control Type	Cost BA BSA	PALI Name	SAR
0300D	0208060C				Y [U]
2032A	C50700				Y [U]
2032A	CA0267				Y [U]

c. MILCON Program Element (PE) Data

No current MILCON PEs.

d. O&M Program Element (PE) Data

No current O&M PEs.

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 2. Unit Cost Report - (Dollars in Millions)

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Classification: [U]

	Current Estimate FEB 97	UCR Baseline AUG 96 APB	Percent Change
a. Program Acquisition			
Unit Cost (PAUC)			
(1) Cost (BY\$)	5582.4	5455.0	
(2) Quantity	54	54	
(3) Unit Cost	103.378	101.019	2.34
b. Average Procurement			
Unit Cost (APUC)			
(1) Cost (BY\$)	3197.9	3122.7	
(2) Quantity	54	54	
(3) Unit Cost	59.2204	57.8278	2.41

[U] The UCR Baseline Cost for the PAC-3 missile procurement quantity of 1200 missiles is \$1754.0M BY88. The Current Estimate for PAC-3 missile procurement is \$1756.7M BY88.

The data shown for the UCR Baseline is the 20 Aug 96 APB.

The Program Acquisition Unit Cost (PAUC) and the Average Unit Procurement Cost (AUPC) unit of measure is tactical Fire Units (FUs). All FUs have been procured and fielded. The FUs are undergoing modification to PAC-3 configuration.

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3. Procurement Delivery Information

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No data entered.

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4. Program and Contract Cost Info Summary - (TY Dollars in Millions)

Appropriation: RDT&E

	PMCEPAC Budgeted by PM	PMCEPAC Budgeted by Other Sources	Class
a. Completed Contracts	176.4	709.4	[U]
b. Large Active Contracts			
(1) FY89 ENGINEERING DEVEL DAAH01-89-C-0458 CPIF	36.9	148.7	[U]
(2) PAC-3 MISSILE EMD DAAH01-95-C-0021 CPIF/AF	0.0	693.1	[U]
(3) PAC-3 MSL INTEGRATION DAAH01-95-C-0022 CPIF/AF	0.0	138.2	[U]
(4) REM LCH COMMO ENH UPGRAD DAAH01-96-C-0018 CPIF	0.0	66.5	[U]
(5) RADAR ENH PH3 MOD KITS DAAH01-95-C-0446 FFP			[U]
c. Small Active Contracts	6.2	72.6	[U]
d. Non-contract Cost	29.9	257.6	[U]
e. Management Reserve	0.0	0.0	[U]
f. Future Contract Effort	139.5	457.4	[U]
g. Total RDT&E	388.9	2543.5	[U]

[U] 1. The PMCEPAC Budgeted by Other Sources for Large Active Contracts is BMDO funds as follows:

a. The \$148.7M in FY89 Engineering Development is for Radar Enhancement Phase III and Classification, Discrimination, and Identification Phase 3.

b. The \$693.1M for PAC-3 Missile EMD is for the negotiated contract Target Price plus the Not-to-Exceed Price for contract modifications for Risk Mitigation, two additional flight tests, update of the Security Classification Guide, and the Risk Abatement contract change order.

c. The \$138.2M for PAC-3 Missile Integration includes \$104.8M for the negotiated contract plus the Not-to-Exceed of \$33.4M for the risk abatement modification.

d. The \$66.5M for Remote Launch Communications Enhancement Upgrade (RLCEU) is for the negotiated Target Price.

2. The PMCEPAC Budgeted by Other Sources for Small Active Contracts of \$72.6M includes \$62.8M for targets supplied to the PAC-3 program under the Coleman Research contract (DASC50-92-C-0217).

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4. Program and Contract Cost Info Summary - (TY Dollars in Millions)

Appropriation: Procurement

	PMCEPAC Budgeted by PM	PMCEPAC Budgeted by Other Sources	Class
a. Completed Contracts	323.2	69.5	[U]
b. Large Active Contracts			
(1) FY89 ENGINEERING DEVEL DAAH01-89-C-0458 CPIF			[U]
(2) PAC-3 MISSILE EMD DAAH01-95-C-0021 CPIF/AF			[U]
(3) PAC-3 MSL INTEGRATION DAAH01-95-C-0022 CPIF/AF			[U]
(4) REM LCH COMMO ENH UPGRAD DAAH01-96-C-0018 CPIF			[U]
(5) RADAR ENH PH3 MOD KITS DAAH01-95-C-0446 FFP	0.0	201.3	[U]
c. Small Active Contracts	13.3	258.6	[U]
d. Non-contract Cost	46.7	443.3	[U]
e. Management Reserve	0.0	0.0	[U]
f. Future Contract Effort	<u>3148.3</u>	<u>0.0</u>	[U]
g. Total Procurement	3531.5	972.7	[U]

[U] 1. The \$201.3M PMCEPAC Budgeted by Other Sources for Large Active Contracts represents BMDO funds for the negotiated value for the Radar Enhancement Phase III modification kit production contract.

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5. International Cooperative Program

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Prepared: 05 Feb 97

No data entered.

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Section 6 - Program Background Data
6. Joint Potential Designation

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Class

- a. Proposed Other Component Involvement: None
- b. Date of JROC Assessment of Designation: None

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Section 6 - Program Background Data
7. Procurement/Platform Support

February 1997
Prepared: 05 Feb 97

FIRE UNIT

No data entered.

6 - 7 - 1

*** UNCLASSIFIED ***

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PATRIOT PAC-3
Section 7 - Supplemental Contract Cost Information

February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME FY89 ENGINEERING DEVEL		3. CONTRACTOR (NAME & LOCATION) RAYTHEON Co.	
4a. CONTRACT NUM DAAH01-89-C-0458	4c. CONTRACT TYPE CPIF	4d. CONTRACT DEL TOT QTY: 0 PLAN QTY: 0 DEL QTY: 0		ELECTRONIC SYSTEMS DIVISION BEDFORD, MA 01730-	
4b. CHANGE ORDER NUM P00054				8. TARGET PRICE 185.6	
5. PROGRAM PHASE DEVELOPMENT	6. NEGOTIATED COST: 149.6	7. AUTHORIZED UNPRICED WORK: 0.0		CEILING PRICE 0.0	

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 10 Apr 89	11. CRITICAL MILESTONE 1: SEE PARAGRAPH 7	12. CRITICAL MILESTONE 2: SEE PARAGRAPH 7	13. SIG EFF COMPLETION DATE: JUN 97
10. WORK START DATE: APR 89	N/A	N/A	14. EST COMPLETION DATE: JUN 97

** CONTRACT PERFORMANCE DATA **

	15. Report Date 31 Dec 96	16. Source Document CPR	17. Data Verification Review Type: SAR Review Date: JUN 92
18. BCWS 148.1	19. BCWP 146.0	20. ACWP 172.6	21. Mgt Reserve 0.0
22. Cont Budg Base 149.6	23. Total All Budg 149.6	24. Contr's Est Cost 178.9	25. PM's Est Cost Current: 178.9 Best: 177.9 Worst: 180.9

** CONTRACT VARIANCE DATA **

Cost Variance =	-26.6	Schedule Variance =	-2.1
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*** UNCLASSIFIED ***

27. Contract Comments

- [U] 1. The Negotiated Cost, Authorized/Unpriced Work, Target Price, Contract Budget Base, and Total Allocated Budget are unchanged from the Nov 96 report. The Target Price includes the negotiated cost, fee, and estimated overrun.
2. The Contractor's Estimated Cost of \$178.9M reflects an increase of \$2.2M from the Nov 96 report for incorporation of the revised completion estimate for the Classification, Discrimination, and Identification Phase 3 (CDI-3) task. The increase is due to software development activities requiring more extensive revisions than planned, delays of simulator testing of operational scenarios due to integration problems, and extension of the test program through mid-97 due to slips in integration and testing.
3. This contract is task oriented, therefore, the Estimated Costs at Completion (ECACs) are calculated for the individual tasks and summarized to the total cost level.

a. The tasks in this contract are Pulse Doppler Processor (PDP), Expanded Weapon Control Computer (EWCC), Responsive Threat Analysis, Radar Enhancement Phase III, and CDI-3. The PDP, EWCC, Responsive Threat, and Radar Enhancement tasks are complete.

b. The cumulative cost performance data, percent complete, and PM's ECAC for each task are as follows:

TASK	BCWS	BCWP	ACWP	BAC	LRE	% COMP	PM ECAC
PDP	16.1	16.1	17.4	16.1	17.4	100%	17.4
EWCC	13.8	13.8	14.1	13.8	14.1	100%	14.1
RESP THRT	2.6	2.6	2.7	2.6	2.7	100%	2.7
RADAR PH 3	56.7	56.7	78.0	56.8	78.0	100%	78.4
CDI 3	58.9	56.8	60.4	60.3	66.7	94%	66.3

c. The Project Manager's current, best, and worst case ECACs of \$178.9M, \$177.9M, and \$180.9M, respectively, are unchanged.

d. The independent ECAC projection by the DCMC-Raytheon is \$177.5M. The ECAC calculated using the cumulative CPI is \$176.6M.

4. The cumulative cost variance of \$-26.6 reflects an unfavorable change of \$1.3M from the Nov 96 report. The change is primarily due to greater than planned effort in CDI-3 operational, maintenance, and radar resident software development to correct problems found in testing and additional labor and materials required for rework to assemblies to meet performance specifications.

5. The cumulative schedule variance of \$-2.1M reflects an unfavorable change of \$0.5M from the Nov 96 report. The change is primarily due to

delays in radar resident software activity to correct problems revealed in system integration and test.

6. Top challenges to meet contract objectives:

a. Develop a fully integrated ultra wide band transmitter, receiver, and processor subsystem utilizing wide band transmit signal generation, wide band mono pulse receiving, and high speed signal processing.

b. Develop a system integration concept to provide TBM and debris discrimination that will enhance overall ATM performance.

7. Several growth tasks are assigned to Contract DAAH01-89-C-0458, each task being independent of the other. Milestones are associated with each task.

8. This contract has met the 90% completion criteria, therefore this is the final report for this contract.

28. Unit Cost Report Requirements

Classification: [U]

- a. Contract Cost Baseline Established On: 10 Apr 89
- b. There have been no breaches of the contract cost baseline.
- c. Variance analysis since baseline report

	Values as of 31 Dec 94 APB	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	-17.8	N/A	-26.6	-8.8	N/A
Percent (%)	-17.04	N/A	-18.22	-1.18	N/A
Schedule Variance					
\$ in millions	-4.1	N/A	-2.1	2.0	N/A
Percent (%)	-3.75	N/A	-1.42	2.33	N/A

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PATRIOT PAC-3
Section 7 - Supplemental Contract Cost Information

February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME PAC-3 MISSILE EMD		3. CONTRACTOR (NAME & LOCATION) VOUGHT SYSTEMS	
4a. CONTRACT NUM DAAH01-95-C-0021	4c. CONTRACT TYPE CPIF/AF	4d. CONTRACT DEL TOT QTY: 0 PLAN QTY: 0 DEL QTY: 0		DALLAS, TX 75265-0003	
4b. CHANGE ORDER NUM P00025				8. TARGET PRICE 693.1	
5. PROGRAM PHASE DEVELOPMENT		6. NEGOTIATED COST: 484.1	7. AUTHORIZED UNPRICED WORK: 144.9		8. CEILING PRICE 0.0

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 07 Nov 95	11. CRITICAL MILESTONE 1: DEVEL TEST FLT-1 JUN 97	12. CRITICAL MILESTONE 2: DEVEL TEST FLT-2 AUG 97	13. SIG EFF COMPLETION DATE: APR 99
10. WORK START DATE: NOV 94			14. EST COMPLETION DATE: APR 99

** CONTRACT PERFORMANCE DATA **

	15. Report Date 24 Nov 96	16. Source Document CPR	17. Data Verification Review Type: IBR Review Date: OCT 95
18. BCWS 365.4	19. BCWP 341.6	20. ACWP 370.8	21. Mgt Reserve 34.0
22. Cont Budg Base 629.0	23. Total All Budg 629.0	24. Contr's Est Cost 629.0	25. PM's Est Cost Current: 658.2 Best: 658.2 Worst: 681.9

** CONTRACT VARIANCE DATA **

Cost Variance =	-29.2	Schedule Variance =	-23.8
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27. Contract Comments

[U] **NOTE:** Due to the contractor's end of accounting year closeout activity, final Dec 96 Cost Performance Report (CPR) data was unavailable for inclusion in the Feb 97 DAES report. However, the contractor has submitted preliminary Dec 96 performance data which indicates significant improvement over the Nov 96 CPR data. The preliminary data indicates a cumulative cost variance of \$-24.4M (-6.8%), an improvement of 1% from the Nov 96 DAES report, which was the last report to OSD. The cumulative schedule variance of \$-11.5M (-3.1%) indicates an improvement of 2.2% from the Nov 96 DAES report.

The contract performance analysis below is based on the contractor's latest official CPR data submission which is Nov 96, and does not reflect the Dec 96 preliminary data.

Analysis:

1. The total authorized price of the PAC-3 EMD Missile Contract of \$693.1M is unchanged from the Nov 96 report.

2. The Program Manager's current, best, and worst case Estimates-at-Completion (EACs) are \$658.2M, \$658.2M, and \$681.9M, respectively. The PM's current EAC projects a variance at completion of -\$29.2M or -4.7% based on acknowledgment of the nonrecoverable cost variance from past performance.

The unfavorable cost performance is associated with an extended engineering design phase to address problems encountered in environmental testing, to reduce weight, lower production costs, design refinements, rework and the overtime required to resolve first article fabrication issues. Activities after design engineering and first article fabrication will be more repetitive in nature (like production runs and flight tests) and allow efficiencies associated with the learning curve. The PM expects the repetitive nature of the tasks and the expertise gained to improve performance and partially offset performance to date. The PM will assess performance and closely examine estimates to complete through the ongoing Incremental Integrated Baseline Review (IIBR) process as the Risk Abatement change order is incorporated into the contract performance measurement baseline. The process of informally performing an incremental (approximately 10% of cost accounts per month) IBR on a recurring and sample basis will be used for the rest of the contract period.

3. The cumulative cost variance of -\$29.2M (8.6%) reflects an unfavorable change of -\$5.5M from the Nov 96 report. Cost variance is driven by the Seeker, Missile Guidance Processor Unit (GPU) ELES and ELES. Boeing North America seeker cost variance is paced by the prolonged design refinements to the Master Frequency Generator (MFG), power assembly, antenna, and interface definitions resulting from hardware integration with final software. Fabrication of the first RFDL and GPUs drives both cost and schedule variances. Retention of manpower

to resolve late arising fabrication issues and to regain schedule has driven costs. Extended hardware and software integration effort and engineering labor drive the cost variance for the ELES. Steady improvement is expected in the ELES effort during the next few months.

4. The cumulative schedule variance of -\$23.8M (6.5%) is a -\$6.6M unfavorable change from the Nov 96 report. Most of the current schedule variance is a result of late implementation of PBD-224 program structure in the seeker development due to extended contract negotiations between LMVS and Boeing (concluded in late Dec 96). Other schedule cost drivers are the ELES, Radio Frequency Data Link (RFDL), Guidance Processor Unit (GPU) and Seeker Master Frequency Generator (MFG). The ELES continues to dominate the CLS schedule variance; however, lessons learned in the delivery of the first ELES have accelerated the delivery of subsequent units. Nonrecurring RFDL antenna effort from the vendor is 95% complete. Test set design and test software development are primary contributors to RFDL schedule variance. Redesign and updates of the GPU caused by assembly interference drives the schedule variance. Schedule delays at the MFG supplier (LMMS), due to an extended design phase, continue.

5. The independent EAC calculated by the DCMC using Dec 96 data is \$668.0M. This EAC projects a variance at completion of \$-40.9M or -6.5% overrun. DCMC estimates that all of the Management Reserve will be used to complete the contract.

6. Top challenges to meet contract objectives:

a. On schedule completion of integration and performance verification of first Controlled Test Flight (Developmental Test-1 (DT-1)) and first Guided Test Flight (DT-3) missiles in the prime contractor's Hardware-in-the-Loop Facility.

b. On schedule completion of Production Qualification testing of DT-1 and DT-3 missile subassemblies.

c. Successful intercepts of targets during developmental flight tests.

28. Unit Cost Report Requirements

Classification: [U]

a. Contract Cost Baseline Established On: 18 Jan 96

b. There have been no breaches of the contract cost baseline.

c. Variance analysis since baseline report

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	Values as of 31 Dec 94 APB	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	0.0	N/A	-29.2	-29.2	N/A
Percent (%)	0.00	N/A	-8.55	-8.55	N/A
Schedule Variance					
\$ in millions	0.0	N/A	-23.8	-23.8	N/A
Percent (%)	0.00	N/A	-6.51	-6.51	N/A

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PATRIOT PAC-3
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February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME PAC-3 MSL INTEGRATION		3. CONTRACTOR (NAME & LOCATION) RAYTHEON CO. ELECTRONIC SYSTEMS DIVISION BEDFORD, MA 01730-	
4a. CONTRACT NUM DAAH01-95-C-0022	4c. CONTRACT TYPE CPIF/AF	4d. CONTRACT DEL TOT QTY: 0 PLAN QTY: 0 DEL QTY: 0			
4b. CHANGE ORDER NUM PZ0007				8. TARGET PRICE 138.2 CEILING PRICE N/A	
5. PROGRAM PHASE DEVELOPMENT	6. NEGOTIATED COST: 93.6	7. AUTHORIZED UNPRICED WORK: 29.2			

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 23 Oct 95	11. CRITICAL MILESTONE 1: GTSF CTF RDYSS RVW MAR 97	12. CRITICAL MILESTONE 2: DEV TEST FLT-1 JUN 97	13. SIG EFF COMPLETION DATE: JUL 99
10. WORK START DATE: NOV 94			14. EST COMPLETION DATE: JUL 99

** CONTRACT PERFORMANCE DATA **

	15. Report Date 31 Dec 96	16. Source Document CPR	17. Data Verification Review Type: IBR Review Date: DEC 95
18. BCWS 47.7	19. BCWP 44.5	20. ACWP 43.4	21. Mgt Reserve 1.7
22. Cont Budg Base 122.8	23. Total All Budg 122.8	24. Contr's Est Cost 121.1	25. PM's Est Cost Current: 122.8 Best: 122.8 Worst: 122.8

** CONTRACT VARIANCE DATA **

Cost Variance =	1.1	Schedule Variance =	-3.2
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*** UNCLASSIFIED ***

27. Contract Comments

- [U] 1. The Negotiated Cost and Target Price are unchanged from the Nov 96 report. The Authorized/Unpriced Work, Contract Budget Base, and Total Allocated Budget decreased \$4.2M due to contractor's restatement of the value of the pending risk abatement contract modification at the firm proposal cost. In Aug 96, a contract modification was issued to replan the PAC-3 Integration effort to align the contract activities with the overall PAC-3 program restructure. The contract modification was issued at a Not-to-Exceed price of \$33.4M. The period of performance will be extended through mid-1999, subject to definitization.
2. The Project Manager's Estimated Costs at Completion (ECACs) are shown at the revised contract Target Cost of \$122.8M which reflects a decrease of \$4.2M due to the change in the Authorized/Unpriced effort as discussed in paragraph 1. The independent assessment by the DCMC-Raytheon is \$121.6M.
3. The contractor's ECAC of \$121.1M reflects a decrease of \$4.2M due to the adjustment in Authorized/Unpriced work.
4. The cumulative schedule variance of \$-3.2M (-6.7%) reflects an unfavorable net change of \$0.2M from the Nov 96 report. Unfavorable variances occurred due to delays in beginning fire unit integration at WSMR and less than planned progress in simulation facility upgrade tasks. The schedule variance improved in the areas of hardware manufacturing for completion of proof of design launcher hardware and in software due to completion of several requirements which accelerated development.
5. The cumulative cost variance of \$1.1M (+2.5%) reflects a favorable change of \$0.4M from the Nov 96 report. The change is primarily due to completions in factory test equipment and tooling, progress in software design for the Engagement Control Station, and systems engineering completion of several tactical software concepts.
6. Top challenges to meeting contract objectives:
- a. On schedule completion of integration of Fire Solution Computer (FSC), Enhanced Launcher Electronics System (ELES), first PAC-3 controlled flight test missile and ground software into the PATRIOT System to support the first Development Test Flight (DT-1).
 - b. On schedule completion of Integration of FSC, ELES, first guided test flight missile and ground software to support the first guided test flight (DT-3).
 - c. Completion of Launcher Integration and test, including verification of PAC-2 Launch capability.

28. Unit Cost Report Requirements

Classification: [U]

- a. Contract Cost Baseline Established On: 18 Jan 96
- b. There have been no breaches of the contract cost baseline.
- c. Variance analysis since baseline report

	Values as of 31 Dec 94 APB	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	0.0	N/A	1.1	1.1	N/A
Percent (%)	0.00	N/A	2.47	2.47	N/A
Schedule Variance					
\$ in millions	0.0	N/A	-3.2	-3.2	N/A
Percent (%)	0.00	N/A	-6.71	-6.71	N/A

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PATRIOT PAC-3
Section 7 - Supplemental Contract Cost Information

February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME REM LCH COMMO ENH UPGRAD		3. CONTRACTOR (NAME & LOCATION) RAYTHEON CO.	
4a. CONTRACT NUM DAAH01-96-C-0018	4c. CONTRACT TYPE CPIF	4d. CONTRACT DEL TOT QTY: 0 PLAN QTY: 0 DEL QTY: 0		ELECTRONIC SYSTEMS DIVISION BEDFORD, MA 01730-	
4b. CHANGE ORDER NUM P00004				8. TARGET PRICE 66.5 CEILING PRICE 0.0	
5. PROGRAM PHASE DEVELOPMENT	6. NEGOTIATED COST: 59.6	7. AUTHORIZED UNPRICED WORK: 0.0			

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 23 Dec 96	11. CRITICAL MILESTONE 1: START SYS INTEG DEMO FEB 97	12. CRITICAL MILESTONE 2: PRODUCTION DEC DEC 97	13. SIG EFF COMPLETION DATE: DEC 98
10. WORK START DATE: NOV 95			14. EST COMPLETION DATE: DEC 98

** CONTRACT PERFORMANCE DATA **

	15. Report Date 31 Dec 96	16. Source Document CPR	17. Data Verification Review Type: IBR Review Date: NOV 96
18. BCWS 26.6	19. BCWP 23.8	20. ACWP 23.8	21. Mgt Reserve 0.0
22. Cont Budg Base 59.6	23. Total All Budg 59.6	24. Contr's Est Cost 59.6	25. PM's Est Cost Current: 59.6 Best: 59.6 Worst: 59.6

** CONTRACT VARIANCE DATA **

Cost Variance =	0.0	Schedule Variance =	-2.8
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*** UNCLASSIFIED ***

27. Contract Comments

- [U] 1. The Remote Launch Communications Enhancements Upgrade (RLCEU) development contract was definitized on 23 Dec 96 at a Target Cost of \$59.6M and a Target Price of \$66.5M. Estimates-at-completion for the Program Manager, contractor, and independent DCMC are at contract Target Cost.
2. The cumulative schedule variance of \$-2.8M reflects a worsening of \$1.6M from the Nov 96 report. Schedule has been impacted by delays in integrating new equipment to checkout shelter modifications, additional relocation of hardware in the shelter to accommodate the evolving IDOCS design, and associated delays in cable design due to relocation of equipment.
3. The cumulative cost variance of \$0.0M reflects an unfavorable change of \$0.6M from the Nov 96 report. The change is due to increased manpower to support the Limited Procurement Authorization demonstration and rework of cables for the evolving IDOCS design.
4. The completion of the initial Integrated Baseline Review (IBR) was conducted 18-20 Nov 96. The IBR team found that the contractor had done an adequate job of baseline planning for the effort. The team had concerns with variance causes, impacts, and corrective actions and with review and update of completion estimates. Actions were generated for these issues which will be followed to resolution.

28. Unit Cost Report Requirements

Classification: [U]

- a. Contract Cost Baseline Established On: 23 Jan 97
- b. There have been no breaches of the contract cost baseline.
- c. Variance analysis since baseline report

	Values as of	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	N/A	N/A	0.0	N/A	N/A
Percent (%)	N/A	N/A	0.00	N/A	N/A
Schedule Variance					
\$ in millions	N/A	N/A	-2.8	N/A	N/A
Percent (%)	N/A	N/A	-10.53	N/A	N/A

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PATRIOT PAC-3
Section 7 - Supplemental Contract Cost Information

February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME RADAR ENH PH3 MOD KITS		3. CONTRACTOR (NAME & LOCATION) RAYTHEON Co.	
4a. CONTRACT NUM DAAH01-95-C-0446		4c. CONTRACT TYPE FFP		4d. CONTRACT DEL TOT QTY: 22 PLAN QTY: 0 DEL QTY: 0	
4b. CHANGE ORDER NUM P00004				8. TARGET PRICE 201.3	
5. PROGRAM PHASE PRODUCTION		6. NEGOTIATED COST: 201.3		7. AUTHORIZED UNPRICED WORK: 0.0	
				8. CEILING PRICE 0.0	

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 06 Dec 96		11. CRITICAL MILESTONE 1: START RETROFIT NOV 97		12. CRITICAL MILESTONE 2: COMPLETE RETROFIT SEP 99	
10. WORK START DATE: SEP 95				13. SIG EFF COMPLETION DATE: SEP 99	
				14. EST COMPLETION DATE: SEP 99	

** CONTRACT PERFORMANCE DATA **

		15. Report Date		16. Source Document N/A		17. Data Verification Review Type: N/A Review Date:	
18. BCWS 0.0		19. BCWP 0.0		20. ACWP 0.0		21. Mgt Reserve 0.0	
22. Cont Budg Base 0.0		23. Total All Budg 0.0		24. Contr's Est Cost 0.0		25. PM's Est Cost Current: 201.3 Best: 201.3 Worst: 201.3	

** CONTRACT VARIANCE DATA **

Cost Variance = 0.0		Schedule Variance = 0.0	
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*** UNCLASSIFIED ***

27. Contract Comments

- [U] 1. The Radar Enhancement Phase 3 Modification Kit production contract was awarded to Raytheon in Sep 95, for tooling and test equipment, six modification kits, and associated spares. The contract was modified in Dec 95, to authorize production of an additional 16 modification kits and spares. The contract was definitized on 6 Dec 96 at a value of \$201.3M.
2. This contract is a Firm Fixed Price contract, and no cost performance reporting is required.
3. The Significant Effort Completion and Estimated Completion dates (Blocks 13 & 14) of Sep 99 reflect the completion of planned deliveries for production of 22 kits. Additional kits will be procured in this contract for the balance of the Radar Enhancements modification kits. The additional procurements will be incorporated as options to this contract.

28. Unit Cost Report Requirements

Classification: [U]

- a. Contract Cost Baseline Established On:
- b. There have been no breaches of the contract cost baseline.
- c. Variance analysis since baseline report

	Values as of	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	N/A	N/A	0.0	N/A	N/A
Percent (%)	N/A	N/A	N/A	N/A	N/A
Schedule Variance					
\$ in millions	N/A	N/A	0.0	N/A	N/A
Percent (%)	N/A	N/A	N/A	N/A	N/A

*** UNCLASSIFIED ***

PATRIOT PAC-3
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February 1997
Prepared: 05 Feb 97

** CONTRACT IDENTIFICATION DATA **

1. PROGRAM NAME PATRIOT PAC-3		2. CONTRACT NAME TMD-Targets Program		3. CONTRACTOR (NAME & LOCATION) Coleman Research Corp	
4a. CONTRACT NUM DASC50-92-C-0217	4c. CONTRACT TYPE CPFF	4d. CONTRACT DEL TOT QTY: 25 PLAN QTY: DEL QTY:		Launch Systems Orlando, FL 32819-	
4b. CHANGE ORDER NUM P00041					8. TARGET PRICE 219.2
5. PROGRAM PHASE Fabrication	6. NEGOTIATED COST: 168.8	7. AUTHORIZED UNPRICED WORK: 39.4		CEILING PRICE	

** CONTRACT SCHEDULE DATA **

9. CONTRACT DEFN DATE: 00 00	11. CRITICAL MILESTONE 1: THAAD FT 7 FEB 97	12. CRITICAL MILESTONE 2: THAAD FT 8 JUN 97	13. SIG EFF COMPLETION DATE: JUN 99
10. WORK START DATE:			14. EST COMPLETION DATE: JUN 99

** CONTRACT PERFORMANCE DATA **

	15. Report Date 27 Dec 96	16. Source Document CPR	17. Data Verification Review Type: DEMO Review Date: SEP 94
18. BCWS 139.8	19. BCWP 135.9	20. ACWP 141.3	21. Mgt Reserve 6.2
22. Cont Budg Base 208.2	23. Total All Budg 208.2	24. Contr's Est Cost 208.2	25. PM's Est Cost Current: 214.0 Best: 208.2 Worst: 220.0

** CONTRACT VARIANCE DATA **

Cost Variance =	-5.4	Schedule Variance =	-3.9
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PATRIOT PAC-3
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February 1997
Prepared: 05 Feb 97

27. Contract Comments

28. Unit Cost Report Requirements

Classification: [U]

- a. Contract Cost Baseline Established On:
- b. There have been no breaches of the contract cost baseline.
- c. Variance analysis since baseline report

	Values as of	Values as of Last Unit Cost Breach	Current Values	Changes Since Baseline SAR	Changes Since Last Unit Cost Breach
Cost Variance					
\$ in millions	N/A	N/A	-5.4	N/A	N/A
Percent (%)	N/A	N/A	-3.97	N/A	N/A
Schedule Variance					
\$ in millions	N/A	N/A	-3.9	N/A	N/A
Percent (%)	N/A	N/A	-2.79	N/A	N/A

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*** UNCLASSIFIED ***

PATRIOT PAC-3

February 1997

Section 8 - Annual President's Budget Program Funding Summary prepared: 05 Feb 97

No data entered.

*** UNCLASSIFIED ***