CONGRESSIONAL BUDGET OFFICE
U.S. CONGRESS
WASHINGTON, D.C. 20515

Robert D. Reischauer
Director

May 3, 1990

MEMORANDUM FOR THE RECORD

FROM: Mick Miller
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SUBJECT: Annual SAR Review

The Selected Acquisition Reports (SARs) were submitted to the Congress on April 2, 1990 in support of the fiscal year 1991 budget request. As part of our continued efforts to assist the Congressional staff, we have examined these reports in detail. Our examination indicates that the Department of Defense (DoD) projects total program costs about 1 percent above levels of a year ago, but cost projections for individual systems vary widely. However, this result is not conclusive because, for the most part, the SAR estimates do not reflect the Administration's decisions that are necessary to lower the costs to meet the President's targeted funding levels. These decisions will be made during the upcoming program and budget review in support of next year's 1992/1993 budget submission.

This memorandum presents the results of our analysis, highlighting aggregate cost changes and individual weapons system program changes. All costs are in current budget authority, unless otherwise noted.

AGGREGATE COST CHANGES

The total program costs provided in the SARs include research and development, procurement, military construction, and operation and maintenance appropriations. Total program costs reflect actual and projected costs of selected weapon systems from the development phase through the final buy. This year, the SARs cover 99 programs that have been reported previously and four additional reports being submitted for the first time, for a total of 103 systems. The systems' costs represent nearly 53 percent of the Administration's 1991 request for weapons procurement. Excluding systems that were first included in the SARs in the past year, our analysis shows that DoD projections of total program costs have increased by about 1 percent ($7.9 billion) over the past year, unadjusted for inflation and quantity changes.

The Defense Department reports projected cost changes in seven basic categories. The categories and their contribution to this year's cost changes are as follows:

- Economic changes are cost changes resulting from a difference between actual and previously projected price growth, and from differences between past and current economic projections. These two differences combine to increase projected costs in the SARs by about $24.0 billion.

- Quantity changes refer to changes in the quantity of weapons to be procured. The SARs show that the planned quantity changes decrease costs by $14.8 billion.

- Schedule changes are changes in procurement delivery schedules, production completion date, or intermediate development or production milestones. These changes combine to increase costs by nearly $0.2 billion.

- Engineering changes are changes in the physical or functional characteristics of the system, which this year decrease costs by $3.1 billion.

- Estimating changes are changes in total program cost due to a correction of error in preparing the original estimate, refinement of a previous estimate, or a change in program or cost-estimating assumptions and techniques not provided for in the other cost-change categories. For these reasons, DoD has increased its previous cost estimates by $8.6 billion.

- Support changes are cost changes associated with training and training equipment, peculiar support equipment, activation of an operational site, and initial spares and repair parts. These changes decrease costs by $8.8 billion.

- Other changes are changes in program cost not provided for in the other cost variance categories. These changes increase costs by $1.9 billion.

Setting aside cost changes due to updated inflation assumptions and procurement quantities, total program cost projections are almost unchanged--down about 0.2 percent ($1.3 billion) compared with a 3 percent ($20.0 billion) increase a year ago. Army systems would grow about 2 percent or $2.5 billion, Navy systems would decrease 1.4 percent or $5.4 billion, and Air Force systems would increase less than 1 percent or $1.6 billion. The analysis should be interpreted with three points in mind. First, DoD adjusted last year's estimates only for inflation and consistency with the 1991 budget request. Decisions on the quantities and funding levels to request for the years beyond 1991 have not been made yet. Second, because the costs reported in the SARs include DoD's projections of future costs, the accuracy of these projections will not be known until all of the weapons have been produced and delivered. Third, because the SAR data cover a limited part of the Department's spending for weapons acquisition, there may be increases or offsetting cost reductions in other programs.

Nevertheless, the information contained in the SARs is very valuable. The SARs are useful for monitoring cost changes and other developments in weapons acquisition programs, and for providing rough indicators of overall cost growth in procurement programs.

COST CHANGES FOR INDIVIDUAL WEAPONS

Congressional staff have found certain data from past reviews to be especially useful in helping them cope with the volumes of data contained in the SARs. These data are highlighted in the summary tables provided in this memorandum. The Army, Navy, and Air Force data are presented in Tables 1 through 3, respectively, and include:

- o unit cost changes based on procurement and total program funding,
- o program status relative to established milestones and weapons deliveries,
- o effects of production rate changes,
- o expected contract overruns and underruns, and
- o excluded costs.

Unit Cost Growth

The SARs reveal that five systems violate the thresholds enacted into law to help Congress cope with its cost growth concerns. Current law requires that Congress be notified when projections of either total program acquisition unit costs or current fiscal year procurement unit costs are more than 15 percent higher than the baseline for a particular program. (The projected costs in the December SAR of the preceding fiscal year or in the first SAR submitted on the program is the baseline). The Army's Tactical Missile System (ATACMS) costs exceed the procurement threshold by 46 percent. This is due solely to an Army decision to have a second year of low rate initial production. Four other systems exceed the total program threshold--the Army's Family of Medium Tactical Vehicles (FMTV) program (87 percent), the Navy's AMRAAM missile (35 percent) and the Air Force's AMRAAM missile (26 percent), and the Air Force's Sensor Fused Weapon (21 percent). The services have indicated that they are aggressively pursuing opportunities to reduce AMRAAM's costs. The FMTV breach is due partly because of a change in the mix of vehicles to buy, resulting in the procurement of more expensive trucks. Several systems came very close to breaking the threshold, including five Army systems--the data distribution system (12 percent), ADATS air defense system (13 percent), AHIP helicopter (13 percent), which would be terminated, SINCGARS radio (12 percent), and UH-60A/L helicopter (13 percent); two Navy systems--the AOE-6 fast combat support ship (12 percent) and SSN-21 Seawolf submarine (13 percent); and one Air Force system--the C-17A aircraft (12 percent). Three other Navy systems came very near to breaching the threshold--the SH-60F helicopter, E-2C aircraft, and T45 training aircraft--but because of security classifications, specific percentages can not be provided.

Recent proposals announced by Secretary Cheney, indicate that the Air Force's B-2 bomber and C-17A airlift aircraft will exceed the total program threshold as a result of reductions in quantities. According to Administration estimates, dropping quantities for the B-2 from a plan of 132 to 75, could increase unit costs by 42 percent but save $14.3 billion, while reducing the C-17 from a plan of 210 to 120 could increase unit costs by 25 percent but save $11.9 billion. These examples illustrate a problem in reducing the budget deficit by decreasing program quantities. The proposals save money but drive up unit costs because of at least two factors--1) fixed costs such as tooling, research and development, and military construction, are spread over a smaller number of units; and 2) "learning curve" effects--earlier planes in a production run are more expensive than the later planes.

Schedule Performance

Unit cost increases might be anticipated in systems that are behind in completing key program milestones. The status of major milestones, such as completion of testing, production deliveries, and contract award dates, are indicators of overall program execution, and, specifically acquisition costs. For example, a delay caused by technical, material, or manpower problems may require additional funds to resolve, but other delays such as a three month delay in initial flight testing may not involve additional costs. Tables 1 through 3 show that about 60 percent of all SAR systems are behind in at least one milestone and that only a few are ahead.

Another measure of schedule performance is the degree to which contractors are meeting the planned delivery schedules. According to the SARs, most of the systems remain on or ahead of delivery plans, with about 25 percent behind schedule--most notably the Army's Stinger Reprogrammable Microprocessor (RMP) and the Navy's Trident II missile program. The Trident II missile initial operating capability date was delayed because of scheduled corrective action for prior missile failures.

Effects of Production Rates on Costs

Unit costs are also affected by changes to the production rates which can occur for many reasons, including material or labor shortages, production line changes, changes in technology, or budgetary ceilings that result in reallocating dollars to fewer systems. When production rates are stepped-up, savings generally occur because the use of facilities comes closer to their capacities and the work force becomes more efficient. For this reason, DoD's management initiatives include economic production rates. The SARs show that costs have been reduced by about $2.5 billion due to production rate changes for 17 systems, most notably the Navy's C/MH-53 helicopter ($450.3 million), the Navy's F-14D aircraft ($429.9 million), and the Navy's Tomahawk missile ($543.0 million). In contrast, the SARs also provide evidence that the production rates for 32 programs have been slowed, raising costs by about $6.7 billion, most notably the Army's medium tactical vehicle program ($1,480.2 million), the Navy's F/A-18 aircraft ($437.4 million) and the MK-48 torpedo ($397.7 million) and the Air Force's C-17A aircraft ($1,526.2 million).

Contract Cost Performance

Under current law, DoD must report contractor cost information for the six largest (in dollar value) contracts in each program. Of the contracts affected by this reporting requirement, program managers estimate five times as many contract cost overruns as underruns (108 versus 20). The unclassified estimates that are published in the SARs show that expected overruns would cost about $5.8 billion compared to $300 million in savings from expected underruns.

However, this picture of contractor cost performance is incomplete because limiting the report to six contracts may exclude other large contracts. While six contracts may include a major portion of the contract effort of a small program like the Army's TOW-2 missile, this is not the case with large programs like the Air Force's Peacekeeper missile or the Navy's Trident submarine. In these cases, the reporting requirement effectively limits the inclusion of cost performance of several large contracts.

Costs Excluded

The SARs are most useful when they accurately describe the total costs of individual systems. Failure to report certain costs clouds measurement of unit costs, comparisons of total costs between periods, and cost growth calculations. Tables 1 through 3 provide the excluded costs we were able to find by comparing the SARs with the Congressional Data Sheets and other budget justification materials. However, we caution the reader that these costs may not be realized because of fiscal constraints and recent developments in Europe. For example, the Army's Patriot missile costs were understated by $670.4 million. The SAR excludes the costs of missiles procured with NATO air base defense funds--$185 million--and the costs of radar and fire control units purchased on behalf of Italy in exchange for other considerations--$485 million. Several Navy ship programs excluded advance procurement in the current plan for ships to be procured beyond 1994, as well as the procurement costs for those ships. Since the budget justification materials did not identify the procurement costs, we estimated these costs based on historical data. Based on these estimates, for example, the SSN-21 submarine program excluded the procurement costs for 6 ships in 1995, totaling about $8.7 billion, the Trident submarine program excluded the procurement cost for the 22nd and 23rd ships, totaling $3.3 billion, the LHD-1 Amphibious assault ship program excluded the procurement cost for a ship in 1995, totaling $1.1 billion, and the LSD-41 cargo variant landing ship program excluded the costs for 1 ship each in 1995-1998, totaling $1.4 billion. The Air Force excluded all MX costs prior to April 1983, or nearly $4.6 billion.

We estimate that $20.3 billion in costs are excluded from the program costs for 14 systems. Tables 1 through 3 identify the amount and the percent increase that would result if these costs were included in the current program.

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226-2840
21-May-90

TABLE 1. DECEMBER 1989 SELECTED ACQUISITION REPORT (SAR) REVIEW SUMMARY, ARMY

SYSTEM NAME	NUNN-McCURDY AMENDMENT UNIT COST CHANGES (PERCENT)		SCHEDULE PERFORMANCE				DIFFERENCES IN ACTUAL DELIVERIES BETWEEN SARS AND 1991 CONGRESSIONAL DATA SHEETS		EFFECTS OF PRODUCTION RATE CHANGES			EXPECTED CONTRACT OVERRUNS			EXPECTED CONTRACT UNDERRUNS			COSTS EXCLUDED FROM SARS	
			NUMBER OF MILESTONES		DELIVERY STATUS														
	1990 PROCUREMENT	TOTAL PROGRAM	AHEAD	BEHIND	% AHEAD	% BEHIND	UNITS	PERCENT	COSTS ($M)	SAVINGS ($M)	PERCENT OF DEC 88 ESTIMATE	NUMBER OF CONTRACTS	% OVER TARGET PRICES	TOTAL AMOUNT OF OVERRUN ($M)	NUMBER OF CONTRACTS	% UNDER TARGET PRICES	TOTAL AMOUNT OF UNDERRUN ($M)	AMOUNT ($M)	PERCENT OF CURRENT ESTIMATE
Advanced Antitank Weapons System - AAWSM	a/	5.7%	---	---	---	---	---	---	---	5.9	0.2%	1	2.3%	4.0	---	---	---	13.7	0.3%
Army Data Distribution System (ADDS)	a/	11.6%	---	18	a/	a/	c/	---	128.3	---	5.1%	---	---	---	---	---	---	---	---
AH-64 Helicopter	---	2.7%	---	---	---	1.3%	-7	-1.3%	---	---	---	---	---	---	---	---	---	---	---
All Source Analysis System (ASAS)	a/	b/	---	4	h/	h/	c/	---	---	---	---	---	---	---	---	---	---	---	---
Army Tactical Missile System (ATACMS)	46.2%	5.5%	---	12	---	---	---	---	23.8	---	2.3%	2	8.4%	26.3	---	---	---	---	---
Bradley Fighting Vehicle System (BFVS)	---	0.3%	3	4	---	1.1%	---	---	---	12.2	0.1%	---	---	---	---	---	---	---	---
CH-47D Helicopter	---	-1.0%	1	2	---	2.4%	c/	---	---	---	---	---	---	---	---	---	---	---	---
Forward Area Air Defense Systems (FAADS):																			
Command, Control, and Intelligence	a/	a/	---	30	a/	a/	c/	---	---	---	---	1	14.2%	18.2	---	---	---	---	---
Air Defense System Heavy (LOS-F-H)	---	13.4%	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pedestal Mounted Stinger (LOS-R)	---	1.8%	---	7	5.0%	---	9	22.5%	2.8	---	0.2%	---	---	---	---	---	---	4.7	0.4%
Fiber Optic Guided Missile (NLOS)	a/	g/	6	2	---	---	c/	---	---	---	---	1	22.7%	30.4	---	---	---	---	---
Palletized Load System (PLS/FMTV)	a/	5.5%	---	13	---	---	c/	---	---	---	---	h/	h/	h/	h/	h/	h/	---	---
Family of Medium Tactical Vehicles (FMTV)	a/	86.7%	---	13	---	---	c/	---	1480.2	---	17.4%	---	---	---	---	---	---	---	---
Hellfire Modular Missile System (HMMMS)	---	0.5%	2	8	12.0%	---	---	---	---	151.0	6.8%	1	4.6%	1.9	---	---	---	78.6	2.9%
Light Helicopter Program (LHX)	g/	g/	---	1	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
Longbow (AAWWS)	g/	g/	---	---	a/	a/	c/	---	---	---	---	1	5.1%	11.4	---	---	---	---	---
M1 Tank	---	-7.6%	---	4	0.5%	---	30	0.5%	---	41.9	0.2%	---	---	---	---	---	---	28.7	0.1%
Multiple Launch Rocket System (MLRS)	---	-12.4%	---	3	6.9%	---	44352	12.8%	0.5	---	0.0%	---	---	---	---	---	---	4.5	0.1%
MLRS Terminal Guidance Warhead (TGW)	g/	g/	---	6	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
Mobile Subscriber Equipment (MSE)	---	-3.3%	---	3	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
AHIP Helicopter (OH-58)	---	12.9%	---	2	1.9%	---	c/	---	---	---	---	---	---	---	---	---	---	---	---
Patriot Missile	---	0.2%	10	---	---	---	82	2.8%	---	---	---	1	1.4%	0.2	1	0.0%	---	670.4	5.4%
Sense and Destroy Armor (SADARM)			---	15	---	---	c/	---	21.4	---	1.9%	2	20.8%	63.7	---	---	---	---	---
MLRS Rocket	a/	9.5%	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above
155mm Projectile	a/	-56.8%	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above	above
SINCGARS Radio	---	11.9%	6	8	---	2.6%	c/	---	181.0	---	3.2%	---	---	---	---	---	---	---	---
Stinger RMP Missile	---	-0.1%	1	6	---	82.2%	c/	---	51.0	---	2.0%	1	1.3%	3.1	1	1.8%	1.5	---	---
TOW 2 Missile	---	9.0%	---	8	---	11.8%	4384	4.9%	---	---	---	1	30.0%	11.4	---	---	---	---	---
UH-60A Helicopter	---	12.9%	4	2	---	---	---	---	---	---	---	---	---	---	---	---	---	18.8	0.1%
JSTARS Radar	a/	-4.8%	included under Air Force JSTARS.																

NOTES:
a/ Not applicable.
b/ Classified data.
c/ No Congressional data sheet.
d/ To be determined data.
e/ No contract has been awarded as of this date.
f/ Less than one-tenth of one percent (0.1%).
g/ Total program costs include only research and development effort.
h/ Data was not reported.
i/ Comparison not possible.
j/ Program was terminated.

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226-2840
02-May-90

TABLE 2. DECEMBER 1989 SELECTED ACQUISITION REPORT (SAR) REVIEW SUMMARY, NAVY

SYSTEM NAME	NUNN-McCURDY AMENDMENT UNIT COST CHANGES (PERCENT)		SCHEDULE PERFORMANCE				DIFFERENCES IN ACTUAL DELIVERIES BETWEEN SARS AND 1991 CONGRESSIONAL DATA SHEETS		EFFECTS OF PRODUCTION RATE CHANGES			EXPECTED CONTRACT OVERRUNS			EXPECTED CONTRACT UNDERRUNS			COSTS EXCLUDED FROM SARS	
			NUMBER OF MILESTONES		DELIVERY STATUS														
	1990 PROCUREMENT	TOTAL PROGRAM	AHEAD	BEHIND	% AHEAD	% BEHIND	UNITS	PERCENT	COSTS ($M)	SAVINGS ($M)	PERCENT OF DEC 88 ESTIMATE	NUMBER OF CONTRACTS	% OVER TARGET PRICES	TOTAL AMOUNT OF OVERRUN ($M)	NUMBER OF CONTRACTS	% UNDER TARGET PRICES	TOTAL AMOUNT OF UNDERRUN ($M)	AMOUNT ($M)	PERCENT OF CURRENT ESTIMATE
AMRAAM Missile	---	34.8%	included under Air Force AMRAAM.				---	---	---	---	---							---	---
AN/BSY-1 Submarine Combat System	a/	a/	b/	b/	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
AN/BSY-2 Submarine Combat System	a/	a/	---	---	a/	a/	c/	---	---	---	---	1	5.6%	54.3	1	0.0%	0.1	---	---
AN/SQQ-89 Surface Ship ASW Combat System:			---	---	---	---	c/	---				1	26.1%	33.3	3	7.6%	16.7		
Basic AN/SQQ-89	a/	3.3%	above	above	above	above	above	above	57.0	---	1.6%	above	above	above	above	above	above	---	---
Improved AN/SQQ-89	a/	a/	above	above	above	above	above	above	---	---	---	above	above	above	above	above	above	---	---
AOE-6 Fast Combat Support Ship	---	12.4%	---	5	a/	a/	a/	---	1.2	---	0.0%	1	12.6%	89.8	---	---	---	---	---
Airborne Self-protection Jammer (ASPJ)	g/	g/	---	2	a/	a/	c/	---	---	---	---	1	46.1%	81.4	---	---	---	---	---
AV-8B Aircraft	---	0.5%	---	---	0.5%	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C/MH-53E Helicopter	---	a/	---	---	---	---	c/	---	---	450.3	16.8%	---	---	---	---	---	---	---	---
CG 47 AEGIS Cruiser	a/	-2.4%	---	---	---	---	---	---	---	---	---	5	3.6%	103.9	1	4.0%	20.0	---	---
SH-60F Helicopter (CV Helo)	a/	b/	---	---	---	---	1	9.1%	39.0	---	1.3%	---	---	---	---	---	---	---	---
CVN Aircraft Carriers:																			
CVN-72/73 Carriers	a/	-0.9%	2	3	---	---	---	---	---	---	---	1	6.6%	217.7	---	---	---	---	---
CVN-74/75 Carriers	a/	-0.3%	---	---	---	---	a/	---	---	---	---	---	---	---	---	---	---	---	---
DDG 51 Destroyer	---	-0.3%	---	1	a/	a/	a/	---	---	131.1	0.5%	6	23.9%	641.0	---	---	---	---	---
E-2C Aircraft	---	b/	---	---	---	---	---	---	224.4	---	3.3%	---	---	---	---	---	---	---	---
E-6A Aircraft	a/	1.0%	---	2	---	68.8%	---	---	---	---	---	---	---	---	---	---	---	---	---
EA-6B Aircraft	a/	b/	---	11	---	---	c/	---	---	---	---	---	---	---	---	---	---	---	---
F-14D Aircraft	---	b/	1	3	---	---	a/	---	---	429.9	1.9%	---	---	---	---	---	---	---	---
F/A-18 Aircraft	---	b/	---	---	---	0.5%	-7	-1.2%	437.4	---	1.2%	---	---	---	---	---	---	---	---
Fixed Distributed System (FDS)	g/	g/	1	---	---	---	c/	---	---	---	---	---	---	---	---	---	---	---	---
HARM Missile	---	0.6%	---	2	---	0.1%	311	3.9%	36.8	---	0.6%	---	---	---	---	---	---	---	---
Harpoon Missile	---	-2.6%	---	1	---	0.8%	34	1.1%	197.1	---	4.9%	---	---	---	---	---	---	---	---
LAMPS MK III System	---	3.8%	---	---	---	---	-8	-6.5%	---	---	---	---	---	---	---	---	---	---	---
Landing Craft Air Cushion (LCAC)	---	-2.3%	---	2	---	10.5%	i/	---	---	4.8	0.2%	---	---	---	---	---	---	---	---
LHD 1 Amphibious Assault Ship	a/	0.2%	---	5	a/	a/	a/	---	---	17.8	0.3%	4	5.1%	114.9	---	---	---	1068.7	17.6%
LSD 41 Dock Landing Ship	a/	-0.7%	---	---	a/	a/	a/	---	---	---	---	---	---	---	---	---	---	---	---
LSD 41 (Cargo Variant) Dock Landing Ship	---	3.3%	---	3	a/	a/	a/	---	---	---	---	2	11.9%	32.8	---	---	---	1429.5	84.3%
MCM 1 Mine Countermeasures Ship	---	1.2%	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MK 48 ADCAP Torpedo	b/	b/	---	---	---	---	---	---	397.7	---	7.1%	1	13.8%	7.6	---	---	---	---	---
MK 50 Torpedo	---	b/	---	3	---	8.7%	---	---	76.4	---	1.5%	1	0.4%	2.7	2	9.7%	28.9	---	---
NATO Anti-Air Warfare System (NAAWS)	g/	g/	---	---	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
P-3C Aircraft	a/	-0.1%	---	---	---	3.3%	i/	---	---	---	---	a/	a/	a/	a/	a/	a/	---	---
P-7A LRAACA Aircraft	a/	b/	---	---	---	---	---	---	---	---	---	---	---	---	1	2.5%	16.7	---	---
Phalanx CIWS System	---	-0.1%	---	1	---	2.3%	162	32.3%	---	21.1	1.7%	1	1.0%	2.1	1	3.3%	5.9	---	---
Phoenix Missile	---	-2.0%	---	---	---	3.3%	i/	---	---	---	---	1	9.7%	16.4	---	---	---	---	---
Sea Lance ASW Standoff Weapon	a/	j/	---	---	---	---	c/	---	---	---	---	1	14.7%	82.0	---	---	---	---	---
Supersonic Low Altitude Target (SLAT)	g/	g/	---	---	a/	a/	c/	---	43.8	---	---	1	31.0%	51.3	---	---	---	---	---
Sparrow Missile	a/	0.7%	---	---	---	9.8%	1418	10.1%	---	---	---	---	---	---	---	---	---	---	---
SSN 21 Submarine	a/	12.8%	---	---	a/	a/	a/	---	---	211.9	1.3%	3	65.0%	478.6	---	---	---	8729.7	54.6%
SSN 688 Submarine	---	-0.5%	---	1	---	---	---	---	---	---	---	6	12.5%	717.0	---	---	---	---	---
Standard Missile (SM-2 NR/ER)	---	-1.9%	---	---	---	---	840	16.5%	---	104.5	1.2%	1	11.7%	33.9	---	---	---	---	---
T45TS Training Aircraft	a/	b/	---	6	---	---	0	0.0%	105.0	---	2.3%	---	---	---	---	---	---	---	---
T-AO 187 Fleet Oiler	a/	3.6%	---	---	a/	a/	a/	---	---	---	---	---	---	---	1	0.4%	1.3	---	---
Tomahawk Missile	---	0.8%	---	---	---	---	-129	-10.2%	---	563.0	6.2%	---	---	---	---	---	---	---	---
Trident II Missile	f/	5.1%	---	---	---	44.6%	-5	-45.5%	192.4	---	0.8%	5	1.7%	104.2	1	0.5%	7.4	378.3	1.0%
Trident II Submarine	---	1.9%	---	1	a/	a/	a/	---	---	---	---	2	2.5%	47.6	1	3.8%	64.9	3284.1	18.6%
UHF Follow-on Communication Satellite	f/	0.3%	---	2	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
V-22 Aircraft	a/	j/	---	---	---	---	---	---	239.1	---	1.0%	j/	j/	j/	j/	j/	j/	---	---

NOTES: See Tables 1 or 3 for note descriptions.

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226-2840
21-May-90

TABLE 3. DECEMBER 1989 SELECTED ACQUISITION REPORT (SAR) REVIEW SUMMARY, AIR FORCE

SYSTEM NAME	NUNN-McCURDY AMENDMENT UNIT COST CHANGES (PERCENT)		SCHEDULE PERFORMANCE				DIFFERENCES IN ACTUAL DELIVERIES BETWEEN SARS AND 1991 CONGRESSIONAL DATA SHEETS		EFFECTS OF PRODUCTION RATE CHANGES			EXPECTED CONTRACT OVERRUNS			EXPECTED CONTRACT UNDERRUNS			COSTS EXCLUDED FROM SARS	
			NUMBER OF MILESTONES		DELIVERY STATUS														
	1990 PROCUREMENT	TOTAL PROGRAM	AHEAD	BEHIND	% AHEAD	% BEHIND	UNITS	PERCENT	COSTS ($M)	SAVINGS ($M)	PERCENT OF DEC 88 ESTIMATE	NUMBER OF CONTRACTS	% OVER TARGET PRICES	TOTAL AMOUNT OF OVERRUN ($M)	NUMBER OF CONTRACTS	% UNDER TARGET PRICES	TOTAL AMOUNT OF UNDERRUN ($M)	AMOUNT ($M)	PERCENT OF CURRENT ESTIMATE
Advanced Cruise Missile (ACM)	---	2.7%	---	3	---	15.1%	-2	-5.0%	---	---	---	5	13.0%	249.0	---	---	---	1.2	f/
AMRAAM Missile	---	26.4%	---	3	---	---	---	---	138.4	---	1.3%	1	1.2%	2.2	---	---	---	---	---
ATARS Tactical Air Reconnaissance System			---	---	a/	a/	c/	---				---	---	---	---	---	---		
Tactical ARS (TARS)	g/	g/	above	above	above	above	above	above	---	---	---	above	above	above	above	above	above	---	---
Unmanned ARS (UARS)	a/	a/	above	above	above	above	above	above	---	---	---	above	above	above	above	above	above	---	---
Advanced Tactical Fighter	g/	g/	---	1	a/	a/	c/	---	349.6	---	---	---	---	---	---	---	---	---	---
B-1B Aircraft	a/	f/	---	3	---	---	c/	---	---	22.6	0.1%	3	3.3%	646.5	2	2.1%	61.2	---	---
C-17A Aircraft	-0.2%	11.6%	---	5	---	---	---	---	1526.2	---	4.8%	2	13.2%	647.3	---	---	---	---	---
Cheyenne Mountain Upgrade (CMU) Program	g/	g/	a/	a/	a/	a/	c/	---	---	---		4	7.7%	41.2	---	---	---	---	---
DMSP Satellite Program	---	-2.6%	1	2	a/	a/	c/	---	---	---	---	2	1.1%	1.2	3	4.7%	16.2	---	---
DSCS III Satellite	a/	1.1%	1	4	a/	a/	c/	---	---	---	---	2	3.7%	3.2	---	---	---	---	---
Defense Support Program	---	4.1%	---	2	a/	a/	c/	---	41.8	---	0.7%	6	3.7%	82.1	---	---	---	---	---
E-3A Radar System Improvement Program	a/	---	a/	a/	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---
F-15 Aircraft	---	-3.7%	3	---	0.1%	---	1	0.1%	---	---	---	2	11.0%	92.7	---	---	---	---	---
F-16 Aircraft	---	-1.4%	---	---	---	0.1%	-16	-1.0%	---	---	---	2	1.0%	23.1	---	---	---	---	---
IR Maverick Missile	---	4.8%	---	---	---	2.2%	193	1.8%	---	50.9	1.7%	---	---	---	---	---	---	---	---
Inertial Upper Stage (IUS) Rocket Booster	a/	2.8%	---	---	a/	a/	c/	---	---	---	---	1	6.5%	58.3	---	---	---	---	---
JSTARS Radar	a/	3.4%	1	15	---	---	---	---	---	---	---	2	19.8%	180.2	---	---	---	---	---
JTIDS Information System	a/	-9.4%	---	6	---	6.0%	c/	---	---	---	---	---	---	---	---	---	---	---	---
KC-135A Aircraft Modernization Program	---	-1.3%	---	---	---	---	c/	---	---	222.2	1.8%	---	---	---	---	---	---	---	---
LANTIRN Navigation & Targeting System	---	10.8%	---	---	---	1.0%	c/	---	20.2	---	0.6%	---	---	---	---	---	---	---	---
Mark XV IFF System	a/	j/	---	---	---	---	c/	---	---	---	---	1	38.9%	63.2	---	---	---	---	---
Navstar Global Positioning System (GPS):							c/	---				2	5.5%	23.4	---	---	---		
Air Force Satellite	a/	-1.8%	1	---	---	28.6%	above	above	---	---	---	above	above	above	above	above	above	---	---
Tri-service User Equipment	---	-34.9%	---	4	---	20.6%	above	above	479.1	---	16.8%	above	above	above	above	above	above	---	---
OTH-B Radar	---	11.3%	3	3	a/	a/	c/	---	6.5	---	0.5%	---	---	---	---	---	---	---	---
Peacekeeper Missile	---	10.2%	---	---	---	---	6	9.2%	---	---	---	3	5.9%	34.2	1	1.8%	9.8	4598.7	23.5%
Peacekeeper Rail Garrison Equipment	a/	4.4%	---	4	a/	a/	a/	---	36.0	---	1.0%	3	8.8%	61.2	---	---	---	---	---
Sensor Fuzed Weapon (SFW)	a/	20.8%	---	5	---	28.6%	c/	---	101.8	---	3.4%	1	80.9%	72.0	---	---	---	---	---
Small ICBM	g/	g/	---	1	a/	a/	c/	---	---	---	---	5	1.9%	16.5	---	---	---	---	---
SRAM II Missile	a/	-3.9%	---	5	---	---	---	---	---	65.3	4.9%	1	10.1%	29.4	---	---	---	---	---
Tacit Rainbow Missile	a/	h/	---	4	---	57.5%	h/	h/	23.9	---	1.5%	2	0.8%	4.4	---	---	---	---	---
Titan IV Missile	---	5.9%	---	9	---	---	c/	---	51.2	---	0.5%	1	7.7%	412.8	---	---	---	---	---
TRI-TAC Communications Program							c/	---											
Troposcatter Radio Terminal	a/	-0.5%	---	---	---	---	above	above	---	---	f/	---	---	---	---	---	---	---	---
Support Systems Integration/Other	d/	d/	---	---	h/	h/	above	above	---	---	---	---	---	---	---	---	---	---	---
WWMCCS ADP Modernization (WAM)	h/	h/	---	---	a/	a/	c/	---	---	---	---	---	---	---	---	---	---	---	---

NOTES:
a/ Not applicable.
b/ Classified data.
c/ No Congressional data sheet.
d/ To be determined data.
e/ No contract has been awarded as of this date.
f/ Less than one-tenth of one percent (0.1%).
g/ Total program costs include only research and development effort.
h/ Data was not reported.
i/ Comparison not possible.
j/ Program was terminated.