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DEPARTMENT OF THE AIR FORCE

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1988/1989 SUBMITTED TO CONGRESS JANUARY 1987

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Aircraft Procurement, Air Force

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DEPARTMENT OF THE AIR FORCE

AIRCRAFT PROCUREMENT, AIR FORCE

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AIRCRAFT PROCUREMENT, AIR FORCE

For construction, procurement, and modification of aircraft and equipment, including armor and armament, specialized ground handling equipment and training devices, spare parts, and accessories therefor; specialized equipment; expansion of public and private plants, Government-owned equipment and installation therefor in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to the approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things; $14,191,371,000, of which $625,819,000 shall be available only for the Air National Guard and Air Force Reserve, to remain available for obligation until September 30, 1990.

Further, for the foregoing purposes, $17,221,426,000, of which $743,197,000 shall be available only for the Air National Guard and Air Force Reserve, to become available for obligation of October 1, 1988, and to remain available for obligation until September 30, 1991. (10 U.S.C. 2271-79; 2353, 2386, 2663, 2672, 2672a, 8013, 8062, 9501-02, 9532, 9741-42; 50 U.S.C. 451, 453, 455; Department of Defense Appropriations Act, 1987, as included in Public Laws 99-500 and 99-591, section 101(c); additional authorizing legislation to be proposed.)

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Aircraft Procurement, Air Force — 05 Jan 87

Program and Financing (in Thousands of dollars) SUMMARY

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed) 1986 actual	1987 est.	1988 est.	1989 est.	Obligations 1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct program:								
00.0101 Combat aircraft	9,025,646	5,080,414	4,887,262	5,225,077	9,040,640	6,109,145	5,759,942	6,080,655
00.0201 Airlift aircraft	2,092,000	1,932,891	750,100	1,069,100	2,296,025	1,514,186	660,993	1,413,051
00.0301 Trainer aircraft	169,936				6,260	193,337	35,687	
00.0401 Other aircraft	600,193	89,454	11,300	13,100	617,743	199,192	179,592	28,141
00.0402 Modification of inservice aircraft	2,698,698	3,066,753	1,907,628	3,470,611	2,476,032	3,297,491	3,369,086	3,403,477
00.0501 Aircraft spares and repair parts	3,469,922	2,972,446	3,965,967	3,393,159	4,478,988	3,072,536	3,960,486	3,334,000
00.0701 Aircraft support equipment and facilities	3,561,573	3,919,973	3,669,108	5,152,579	3,540,563	3,759,457	3,635,787	4,012,514
10.0101 Total direct program	21,617,604	17,041,941	14,191,371	17,221,426	21,401,251	18,005,205	15,591,487	16,861,638
01.0101 Reimbursable program	223,122	224,062	215,086	210,333	213,919	442,939	215,086	210,333
10.0001 Total	21,840,726	17,266,003	14,406,457	17,448,759	21,694,170	18,528,244	15,806,573	17,080,771
Financing:								
Offsetting collections from:								
11.8001 Federal funds(-)	-107,595	-205,039	-195,720	-199,593	-107,999	-205,039	-195,720	-197,593
13.0001 Trust funds(-)	-35,575	-16,909	-17,207	-17,547	-19,311	-16,909	-17,207	-17,547
14.0001 Non-Federal sources(-)	-41	-2,114	-2,151	-2,193	300	-2,114	-2,151	-2,193
17.0001 Recovery of prior year obligations					-975,984			
Unobligated balance available, start of year:								
21.4000 For completion of prior year budget plans					-8,385,897	-8,997,935	-7,735,696	-6,335,578
21.4001 Available to finance new budget plans	-1,113,588	-1,356,262	-159,400	-159,400	-1,113,588	-1,356,262	-159,400	-159,400
21.4007 Reprograming from/to,prior year budget plans	-1,210,495							
22.4001 Unobligated balance transferred to other accounts	926,779	223,442			926,779	223,442		
23.4001 Unobligated balance rescinded: Appropriation		1,132,000				1,132,000		
23.4002 Reduction pursuant to P.L. 99-177 in unob bal: Apn	500,069				500,069			
Unobligated balance available, end of year:								
24.4000 For completion of prior year budget plans					8,997,935	7,735,696	6,335,578	6,695,566
24.4001 Available to finance subsequent year budget plans	1,356,262	159,400	159,400	159,400	1,356,262	159,400	159,400	159,400
25.4001 Unobligated balance lapsing	239,657				239,657			
39.0001 Budget authority	22,116,361	17,201,341	14,191,371	17,221,426	22,116,361	17,201,341	14,191,371	17,221,426
Budget authority:								
40.0001 Appropriation	22,115,988	17,121,201	14,191,371	17,221,426	22,115,988	17,121,201	14,191,371	17,221,426
41.0001 Transferred to other accounts(-)	-10,147				-10,147			
42.0001 Transferred from other accounts	10,520	79,940			10,520	79,940		
43.0002 Appropriation (adjusted)	22,116,361	17,201,341	14,191,371	17,221,426	22,116,361	17,201,341	14,191,371	17,221,426
Relation of obligations to outlays:								
71.0001 Obligations incurred, net					21,490,180	18,304,103	15,591,487	16,861,638
72.4001 Obligated balance, start of year					31,157,796	32,556,978	31,682,760	29,816,975
74.4001 Obligated balance, end of year					-32,556,978	-31,682,760	-29,816,975	-31,095,716
77.0001 Adjustments in expired accounts					-235,642			
78.0001 Adjustments in unexpired accounts					-975,984			

Aircraft Procurement, Air Force
Program and Financing (in Thousands of dollars) SUMMARY

05 Jan 87

Identification code 57-3010-0-1-051		1986 actual	1987 est.	1988 est.	1989 est.
90.0001	Outlays	18,919,553	19,178,300	17,459,272	15,580,697

Aircraft Procurement, Air Force
Object Classification (in thousands of dollars) SUMMARY

05 Jan 87

Identification code 57-3010-0-1-051	1986 actual	1987 est.	1988 est.	1989 est
Direct obligations:				
131.001 Equipment	21,481,151	18,385,305	15,591,487	16,861,438
199.001 Total direct obligations	21,481,151	18,085,305	15,591,487	16,861,438
Reimbursable obligations:				
231.001 Equipment	212,939	442,939	215,086	219,333
299.001 Total reimbursable obligations	212,939	442,939	215,086	219,333
999.001 Total obligations	21,694,190	18,528,244	15,806,573	17,080,771

05 JAN 87

Aircraft Procurement, Air Force
Program and Financing (in Thousands of Dollars) FISCAL YEAR 1986

Identification code 57-3010-0-1-051	1985 actual	Budget Plan (amounts for PROCUREMENT actions programmed) 1987 est.	1988 est.	1989 est.	Obligations 1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct program:								
00.0101 Combat aircraft					717,345			
00.0201 Airlift aircraft					513,483			
00.0401 Other aircraft					10,585			
00.0501 Modification of inservice aircraft					834,395			
00.0601 Aircraft spares and repair parts					633,339			
00.0701 Aircraft support equipment and facilities					333,536			
00.9101 Total direct program					2,344,673			
01.0101 Reimbursable program					38,551			
10.0001 Total					2,383,224			
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)					-6,189			
13.0001 Trust funds(-)					-15,992			
14.0001 Non-Federal sources(-)					-338			
17.0001 Recovery of prior year obligations					-219,142			
Unobligated balance available, start of year:					-2,462,878			
21.4001 For completion of prior year budget plans	-269,500				-269,500			
21.4002 Available to finance new budget plans	-356,417				237,626			
21.4003 Replenishing from/to prior year budget plans	237,626				138,836			
22.1001 Unobligated balance transferred to other accounts	138,836				239,693			
22.4002 Reduction pursuant to P.L. 99-177 in unob bal: Apn	239,693							
25.0001 Unobligated balance lapsing								
39.0001 Budget authority								

Aircraft Procurement, Air Force — 05 Jan 87

Program and Financing (in thousands of dollars) FISCAL YEAR 1985

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)				Obligations			
	1986 actual	1987 est.	1988 est.	1989 est.	1986 accual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct programs:								
00.0101 Combat aircraft					811,860	1,603,035		
00.0201 Airlift aircraft					7,225	116,613		
00.0301 Trainer aircraft					4,266	19,088		
00.0401 Other aircraft					65,293	35,914		
00.0501 Modification of inservice aircraft					567,622	626,401		
00.0601 Aircraft spares and repair parts					1,117,536	879,639		
00.0701 Aircraft support equipment and facilities					504,960	539,306		
00.0101 Total direct program					3,077,956	3,820,076		
01.0101 Reimbursable program					115,421	54,723		
10.0001 Total					3,193,377	3,874,799		
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)					-3,682			
13.0001 Trust funds(-)					313			
14.0001 Non-Federal sources(-)					111			
17.0001 Recovery of prior year obligations					-656,762			
Unobligated balance available, start of year:								
21.2002 For completion of prior year budget plans					-6,862,227	-3,474,799		
21.4001 Available to finance new budget plans	-866,000	-657,485			-866,000	-657,485		
21.3001 Reprograming from/to prior year budget plans	-934,073							
22.4001 Unobligated balance transferred to other accounts	889,353	144,185			889,353	144,185		
23.4001 Unobligated balance recinded: Appropriation		513,300				513,300		
23.4002 Reduction pursuant to P.L. 99-177 in unob bal: Apn	371,235				371,235			
Unobligated balance available, end of year:								
24.4002 For completion of prior year budget plans					3,474,799			
24.4003 Available to finance subsequent year budget plans	657,485				657,485			
39.0001 Budget authority								

Aircraft Procurement, Air Force — 05 Jan 87

Program and Financing (in thousands of dollars) FISCAL YEAR 1988

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)				Obligations			
	1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct program:								
00.0101 Combat aircraft	9,825,646				7,513,339	820,276	1,693,135	
00.0201 Airlift aircraft	2,092,084				2,075,317	16,767		
00.0301 Trainer aircraft	169,936					134,249	35,687	
00.0401 Other aircraft	600,153				341,865	100,515	157,773	
00.0501 Modification of inservice aircraft	2,698,490				1,676,015	411,470	613,305	
00.0601 Aircraft spares and repair parts	3,469,822				2,739,123	286,160	444,339	
00.0701 Aircraft support equipment and facilities	2,561,373				1,730,067	333,013	498,494	
00.9101 Total direct program	21,417,604				16,958 622	2,112,469	3,246,533	
01.9101 Reimbursable program	223,122				58,967	164,155		
10.0001 Total	21,640,726				16,117,589	2,276,624	3,246,533	
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)	-187,506				-187,506			
13.0001 Trust funds(-)	-35,575				-35,575			
14.0001 Non-Federal sources(-)	-41				-41			
Unobligated balance available, start of year:								
21.4002 For completion of prior year budget plans						-5,523,137	-3,246,533	
21.4003 Available to finance new budget plans		-698,757				-698,757		
23.4001 Unobligated balance transferred to other accounts		79,253				79,253		
23.4001 Unobligated balance rescinded: Appropriation		619,500				619,500		
Unobligated balance available, end of year:								
24.4002 For completion of prior year budget plans					5,523,137	3,246,533		
24.4003 Available to finance subsequent year budget plans	698,757				698,757			
39.0001 Budget authority	22,116,361				22,116,361			
Budget authority:								
40.0001 Appropriation	22,115,908				22,115,908			
41.0001 Transferred to other accounts(-)	-10,147				-10,147			
42.0001 Transferred from other accounts	10,600				10,600			
43.0001 Appropriation (adjusted)	22,116,361				22,116,361			

Aircraft Procurement, Air Force
Program and Financing (in Thousands of Dollars) FISCAL YEAR 1987

05 Jan 87

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)				Obligations			
	1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct programs:								
00.0101 Combat aircraft		5,080,414				3,765,836	669,779	844,862
00.0201 Airlift aircraft		1,932,891				1,380,806	108,919	443,166
00.0301 Other aircraft		89,464				62,764	9,496	17,200
00.0401 Modification of inservice aircraft		3,046,753				2,259,508	341,867	445,386
00.0501 Aircraft spares and repair parts		2,972,446				2,196,737	332,371	441,338
00.0601 Aircraft support equipment and facilities		3,919,973				2,887,139	436,830	596,004
00.9101 Total direct program		17,041,941				12,552,788	1,899,261	2,589,900
01.0101 Reimbursable program		324,062				224,062		
10.0001 Total		17,366,003				12,776,862	1,899,261	2,589,900
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)		-205,039				-205,039		
13.0001 Trust funds(-)		-16,909				-16,909		
14.0001 Non-Federal sources(-)		-2,114				-2,114		
Unobligated balance available, start of year:								
21.4002 For completion of prior year budget plans			-159,400	-159,400			-4,489,161	-2,589,900
21.4003 Available to finance new budget plans							-159,400	-159,400
Unobligated balance available, end of year:						4,489,161	2,589,900	
24.4002 For completion of prior year budget plans		159,400	159,400	159,400		159,400	159,400	159,400
24.4003 Available to finance subsequent year budget plans								
39.0001 Budget authority		17,201,341				17,201,341		
Budget authority:								
40.0001 Appropriation		17,131,281				17,131,281		
42.0001 Transferred from other accounts		70,060				70,060		
43.0001 Appropriation (adjusted)		17,201,341				17,201,341		

Aircraft Procurement, Air Force
Program and Financing (in thousands of dollars) FISCAL YEAR 1988

05 Jan 87

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)				Obligations			
	1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct program:								
00.0101 Combat aircraft			6,807,268				3,597,039	561,259
00.0201 Airlift aircraft			750,100				552,076	82,511
00.0401 Other aircraft			11,300				8,317	1,243
00.0501 Modification of inservice aircraft			1,907,638				1,406,814	209,839
00.0601 Aircraft spares and repair parts			2,965,967				2,183,796	326,256
00.0701 Aircraft support equipment and facilities			3,669,100				2,700,663	403,402
00.0101 Total direct program			14,191,371				10,445,693	1,584,710
01.0101 Reimbursable program			215,086				215,086	
10.0001 Total			14,406,457				10,660,779	1,584,710
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)			-195,728				-195,728	
13.0001 Trust funds(-)			-17,207				-17,207	
14.0001 Non-Federal sources(-)			-2,151				-2,151	
Unobligated balance available, start of year:								-3,745,678
21.4002 For completion of prior year budget plans							3,745,678	2,160,968
Unobligated balance available, end of year:								
24.4002 For completion of prior year budget plans			14,191,371				14,191,371	
40.0001 Budget authority (Appropriation)								

Aircraft Procurement, Air Force
Program and Financing (in Thousands of dollars) FISCAL YEAR 1989

05 Jan 87

Identification code 57-3010-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)				Obligations			
	1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:								
Direct program:								
00.0101 Combat aircraft				5,226,077				3,682,594
00.0201 Airlift aircraft				1,065,106				888,174
00.0401 Other aircraft				13,100				9,694
00.0501 Modification of inservice aircraft				2,470,611				1,820,253
00.0601 Aircraft spares and repair parts				3,293,159				3,465,206
00.0701 Aircraft support equipment and facilit.es				5,152,579				3,812,930
00.9101 Total direct program				17,221,426				12,686,820
01.0101 Reimbursable program				219,333				219,333
10.0001 Total				17,440,759				12,906,161
Financing:								
Offsetting collections from:								
11.0001 Federal funds(-)				-199,593				-199,593
13.0001 Trust funds(-)				-17,567				-17,567
14.0001 Non-federal sources(-)				-3,193				-3,193
Unobligated balance available, end of year:								
24.4001 For completion of prior year budget plans								4,534,598
40.0001 Budget authority (Appropriation)				17,221,426				17,221,426

	(In Thousands of Dollars)
Program Estimate - FY 89 ...	$ 5,226,877
Program Estimate - FY 88 ...	4,887,268
Program Estimate - FY 87 ...	5,080,414
Program Actual - FY 86 ...	9,825,646

ACTIVITY: Combat Aircraft

PART I PURPOSE AND SCOPE

This activity provides for the procurement of new aircraft, associated flight simulation devices, and other peculiar training and support equipment for modernization of the U.S. combat forces and to improve the efficiency of training programs.

Combat aircraft are required to attain and maintain air superiority, interdict enemy supply lines, provide reconnaissance of enemy forces, and furnish close air support to ground forces. The aircraft can be used to counter a variety of threats and offer options of response ranging from the use of diversified conventional weapons through, in the case of U.S. forces, a variety of nuclear weapons.

The FY 1988 and FY 1989 programs include funds for the procurement of F-15, F-16, MC-130H, and AC-130H Gunship. The programs also include funds for procurement of flight simulators for F-15 and F-16 aircraft. The F-16 request is a multiyear procurement.

PART II JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 and FY 1989 funding requirements for procurement of combat aircraft, related support items, and advance procurement in support of the following year's program are: FY 1988 - $4,887.3 million; FY 1989 - $5,226.9 million. Details are as follow:

F-15C/D/E (FY 1988 - 42 aircraft, $1,538.4 million; FY 1989 - 42 aircraft, $1,620.4 million):

The F-15 is a twin engine, single crew, fixed swept wing aircraft designed specifically for high maneuverability in air-to-air combat. Its two Pratt & Whitney F-100 turbofan engines are each capable of thrust in the 25,000 lb. class. The F-15 is able to reach a dash speed of Mach 2.5. It is equipped with a balanced mix of medium and short range missiles and a rapid firing 20mm cannon. The avionics system includes an advanced radar, a visual head-up display, and an automatic built-in test system. The F-15 has the maneuverability, armament, and fire control needed to surpass the expected capability of enemy aircraft in the 1980s. Avionics updates being incorporated under a multi-staged improvement program assure aircraft viability well into the 1990s. The F-15E will be a high performance, highly maneuverable fighter equipped with a mix of air-to-air and air-to-surface weapons. The F-15E configuration is under development & test and will include a two man crew with redesigned cockpits, Low Altitude Navigation, Targeting, and Infrared for Night (LANTIRN) capability, automatic terrain following/terrain avoidance (auto TF/TA), and other air-to-ground improvements.

F-16C/D (FY 1988 - 180 aircraft, $2,699.6 million; FY 1989 - 180 aircraft, $3,153.3 million):

The F-16 Multimission Fighter is a single seat, fixed wing, high performance, single engine fighter aircraft. The design, optimized for the .8 Mach to 1.6 Mach speed range, incorporated advanced technology features to enhance its combat capability while minimizing its acquisition, operating and support costs. The advanced technology features include a blended wing-body and a fly-by-wire flight control system. The design also includes a high visibility, high "g" cockpit. The F-16 armament consists of a 20mm cannon, AIM-9L heat seeking air-to-air missiles, and approximately 11,000 pounds of conventional and guided air-to-surface ordinance. The F-16 will replace the F-4s in the active inventory as well as modernize the reserve forces. The FY 1989 request includes economic order quantity funding to commence the third multi-year procurement of F-16 aircraft.

MC-130 (FY 1988 - 7 aircraft, $372.3 million; FY 1989 - 4 aircraft, $200.0 million):

This aircraft is a medium size tactical transport powered by four T-56-A-15 turboprop engines. It has a ferry range of approximately 4,200NM; a service ceiling of 35,000 feet, and a cruise speed of 290 knots. Its cargo compartment length, width and height are 41, 10, and 9 feet, respectively, and can carry a payload of 25,000 pounds. The normal crew of seven consists of a pilot, a copilot, flight engineer, one navigator, electronic warfare officer, and two loadmasters. Aircraft features include an integral ramp and cargo door, a pressurized crew and cargo compartment, ground and in-flight air conditioning, thermal de-icing system, a single-point refueling, and auto pilot. Additional features of this specially modified C-130 are precision navigation with an infrared detection system, terrain following/terrain aviodance radar, electronic counter measures (ECM) subsystems and in-flight refueling.

AC-130U (FY 1988 - 5 aircraft, $277.0 million; FY 1989 - 6 aircraft, $245.2 million):

The basic aircraft is a C-130H powered by four T-56-A-15 turboprop engines. The new AC-130U aircraft will have an enhanced capability, improved reliability, and maintain ability, more survivability than the existing AC-130H aircraft and be more deployable than the older AC-130A gunships. The new aircraft subsystems will include precision navigation, target acquisition radar, fire control computers integrated on the 1553B data base electronic countermeasures, infrared countermeasures, aerial refueling, covert lighting, trainable weapons, and secure communications systems. These subsystems ill provide the Gunship the capability to strike targets with surgical accuracy, to loiter safely in the target area for extended time periods, and to perform these tasks in night adverse weather conditions. Where practical every effort will be made to adapt off-the-shelf equipment, and to the maximum extent, these subsystems will be common with systems on other Air Force SOF aircraft.

(In Thousands of Dollars)

Program Estimate - FY 89 ...	$1,065,100
Program Estimate - FY 88 ...	750,100
Program Estimate - FY 87 ...	1,932,891
Program Actual - FY 86 ...	2,092,084

ACTIVITY: Airlift Aircraft

PART I PURPOSE AND SCOPE

This activity provides for the procurement of new aircraft and support items to continue improvement of the U.S. airlift forces. The FY 1988 and FY 1989 programs include funds for the procurement of C-17 and C-27 aircraft.

PART II JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 and FY 1989 fund requirements for procurement of airlift aircraft, related support items, and advance procurement funding in support of the following year's program are: FY 1988 - $750.1 million; FY 1989 - $1,065.1 million. Details are as follow:

C-27 (FY 1988 - 5 aircraft, $65.9 million; FY 1989 - 5 aircraft, $65.1 million):

The C-STOL Intratheater Transport aircraft program was established to procure ten off-the-shelf aircraft to provide responsive airlift in support of Low Intensity Conflict (LIC) worldwide. Experience shows that operating into areas where access is extremely limited, particularly by surface means, is characteristic of LIC. These Third World or undeveloped nations are characterized by poor surface transportation infrastructures which are virtually nonexistent in terms of providing force mobility. The unstructured, undefinable, irregular, often guerrilla nature of LIC requires fast, flexible response which can only be assured by effective airlift. Current assets lack the capability to respond quickly in order to positively influence the outcome of an LIC engagement.

C-17 (FY 1988 - 2 aircraft, $684.2 million; FY 1989 - 4 aircraft, $1,000.0 million):

The C-17A will be a multi-engine turbo fan wide body aircraft capable of airlifting a substantial payload over intercontinental ranges without refueling and will be specifically designed to move outsize combat equipment/cargo into and within an austere airfield environment. The C-17 will be capable of performing the full spectrum of airlift missions and is specifically designed to effectively and efficiently operate in both the inter and intratheater environments. The aircraft will be equipped with receiver inflight refueling capability to increase its range/payload capability. Configuration variations will permit the aircraft to air deliver a variety of outsize/oversize combat/support equipment. An important aircraft characteristic is the flexibility to perform either the airland or airdrop/extraction mission. The C-17A design will employ existing technology, i.e., FAA certified commercial engines and current civil/military avionics, to the maximum extent possible.

(In Thousands of Dollars)

Program Estimate	- FY 89 ...	0
Program Estimate	- FY 88 ...	0
Program Estimate	- FY 87 ...	0
Program Actual	- FY 86 ...	$169,936

ACTIVITY: Trainer Aircraft

Part I Purpose and Scope

This activity provides for the procurement of new aircraft, associated flight simulation devices, and support equipment required for flight training.

Part II Justification of Funds Requested

No funds are requested for trainer aircraft procurement in FY 1988 or FY 1989.

	(In Thousands of Dollars)
Program Estimate - FY 89 ...	$13,100
Program Estimate - FY 88 ...	11,300
Program Estimate - FY 87 ...	89,464
Program Actual - FY 86 ...	500,153

ACTIVITY: Other Aircraft

PART I PURPOSE AND SCOPE

This activity provides for the procurement of TR-1/U-2R sensors and EW equipment and Civil Air Patrol aircraft in FY 1988 and FY 1989.

PART II JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 and FY 1989 fund requirements for procurement of other aircraft equipment, related support equipment, and advance procurement funding in support of the following year's program are: FY 1988 - $11.3 million; FY 1989 - $13.1 million. Details are as follows:

TR-1/U-2R (FY 1988 - $10.7 million; FY 1989 - $12.6 million):

The TR-1/U-2 is a single engine, single crew, fixed wing aircraft specifically designed for high altitude, standoff surveillance missions. Except for three dual-seat training aircraft, all TR-1 aircraft can be equipped with a reconnaissance sensor package. The TR-1 is the tactical variant of the highly reliable, versatile U-2R aircraft currently in the strategic reconnaissance inventory. The tactical reconnaissance TR-1, equipped with the latest sensors, will provide a battlefield surveillance system available to the theater/tactical commander into the 1990s. The U-2R is a national reconnaissance asset used in direct support of national command authorities and/or in direct support of theater commanders. Pratt & Whitney modified J75 engines, available from within the Air Force inventory, provide high maneuverability, and sufficient power for accessory/sensor operations. The FY 1988 and FY 1989 programs will fund the procurement of sensors and EW equipment.

Civil Air Patrol Aircraft (FY 1988 - 38 aircraft, $.6 million; FY 1989 - 38 aircraft, $.5 million):

These aircraft are commercial new or used propeller driven aircraft used by the Civil Air Patrol (CAP). CAP is a private, nonprofit corporation which also functions as an official civilian auxiliary of the Air Force. CAP's best known Air Force mission is search & rescue.

PROGRAM: Modification of In-Service Aircraft

Program Est	- FY 89:	$2,470,611
Program Est	- FY 88:	$1,907,628
Program Est	- FY 87:	$3,046,753
Program Actual	- FY 86:	$2,698,690

PART I PURPOSE AND SCOPE:

This budget activity provides for modification and modernization of in-service aircraft, training devices and support equipment necessary for safety, extension of service life, and to incorporate operational improvements after an aircraft has entered service. The program is designed to maintain the Air Force aircraft inventory at the most modern configuration level at the minimum cost.

PART II JUSTIFICATION OF FUNDS REQUEST

Modifications are necessary to enable the strategic offense, defense, tactical, and support forces to maintain superiority over hostile forces, to extend the active service life of aircraft, and to keep abreast of changing mission requirements. To ensure maximum safety for the aircraft and crews and to enhance capabilities of aircraft in a combat environment, priority modifications are necessary. Modifications are closely examined and priorities established so that only those most essential are accomplished with the funds available.

The FY 1988 program, to a large extent, consists of follow-on requirements for previously initiated modifications.

There is also a significant effort included to improve aircraft survivability in a hostile environment by upgrade to the electronic defensive capabilities on various aircraft. Funding also is requested to continue enhancement of peacetime readiness of an aging aircraft inventory. Other significant efforts impacting the program total include:

(1) Modifications to provide NAVSTAR Global Positioning System (GPS) capability have begun on additional weapon systems.

(2) Service life extension modifications to allow aircraft to meet their programmed service life requirements.

(3) Enhancements to Special Operations Forces (SOF) aircraft.

(4) Avionics Modernization Program for F/FB-111 aircraft to upgrade the bomb navigation system to improve operational readiness by replacing high failure, high cost, and technologically outdated components.

Aircraft modification kits are procured on a phased basis, lead time away from installation which is scheduled concurrently with normal depot maintenance programs to the maximum extent possible. Complex modifications are installed at Air Force depots or contractor facilities, concurrently with programmed depot maintenance. Where the installation tasks are less complex or require a relatively small number of man-hours, they are accomplished in the field by assigned personnel or specialized teams dispatched from the depot or provided by contractors.

All known and forecast Engineering Change Proposals (ECPs) not yet on contract are reflected on the ECO line on all modifications. Changes already on contract are included in the applicable line items (Group A, Group B, support equipment, etc.).

During FY 1987, the Air Force has aggressively pursued the use of existing modern hardware to upgrade aging aircraft components and competitive procurement for modification hardware to control costs and maximize the benefits of the resources provided for modifications. While much of this effort has resulted in slower obligations, it has provided firm priced contracts at more attractive prices. The Air Force remains committed to using the pressure of the competitive marketplace to control costs.

B-52 (FY 1988 - $270.7 million; FY 1989 - $194.5 million). The FY 1988 program includes: continuation of modification for Pave Mint electronic countermeasure equipment for the B-52G in the amount of $75.9 million, ALQ-172 electronic countermeasures equipment for the B-52H in the amount of $51.1 million, integration of internal Air Launched Cruise Missile Carriage capability in the amount of $73.2 million, integrated conventional stores management system in the amount of $36.8 million, and $13.1 million for Navstar Global Positioning System. FY 1988 also starts the Very Low Frequency/Low Frequency (VLF/LF) Miniature Receive Terminals ($10.4 million).

The FY 1989 program continues existing modifications.

FB-111 (FY 1988 - $.8 million; FY 1989 $8.2 million). The FY 1988 program continues modifications to electronic countermeasures dispenser systems started in FY 1986.

FY 89 starts another electronic countermeasure upgrade ($2.2 million) and NAVSTAR GPS ($6.0 million).

B-1B (FY 1988 - $4.6 million; FY 1989 - $106.1 million). The FY 1988 program continues funding to incorporate several modifications to make early aircraft common with later production aircraft.

The FY 1989 program begins the VLF/LF Miniature Receive Terminals ($8.0M), ALCM/ACM Incorporation ($81.5M), Common Strat Rotary Launcher Redesign ($3.5M) and continues the modification to bring all aircraft to a common configuration.

A-7 (FY 1988 - $.7 million; FY 1989 - $21.0 million). FY 1988 funding provides funding for the VINSON capability for the A-7. FY 1989 funding continues the Inertial Navigation System (INS) program and starts a safety modification for the bird resistant windscreen.

A-10 (FY 1988 - $13.6 million; FY 1989 - $20.1 illion). The FY 1988 program initiates a safety modification to the Fuel Foam, to reduce electrostatic arcing and possible fuel fire and finishes the AIM-9L mod started in FY 85.

FY 1989 resumes the Low Altitude Safety Target Enhancement which is a combination of the ground collision avoidance system and two target enhancement capabilities and starts two reliability mods ($2.9 million).

F/RF-4 (FY 1988 - $10.4 million; FY 1989 - $21.8 million). The FY 1988 program of $10.4 million continues funding for various safety, reliability, and supportability improvements. Three new Class IV safety modifications are initiated.

The FY 1989 program continues existing modifications and initiates the ALE-40 countermeasure dispenser modification on the RF-4C (Programmable CMD) and two reliability, supportab ity enhancements.

F-5 (FY 1988 - $4.3 million; FY 1989 - $4.9 million). The FY 1988 program adds a new modification to equip the F-5E with airborne radar electronic counter countermeasures.

The FY 1989 program of $4.9 million consist of various safety, reliability and supportability improvements.

F-15 (FY 1988 - $161.2 million; FY 1989 - $272.4 million). The FY 1988 program provides $86.0 million to continue the Multi-Stage Improvement Program to various series of the F-15 to provide continued combat effectiveness; $58.0 million for the Joint Tactical ID System; and $14.2 million for various safety, reliability, and maintainability improvements. The latter includes improvements to the Radar Receiver System, Electric Lighting and Circuitry Safety, Wing Fuel Transfer Pump and various other modifications that are also being incorporated into the production line aircraft..

The FY 1989 program continues the Multi-Stage Improvement Program and the various reliability improvement modifications and also provides for two Class V new starts: AN/ALE-45 ($6.1 million) and NAVSTAR GPS ($3.0 million). Funds also are provided for Class IV new start modifications to the High Pressure Water Separator ($3.3 million), Radar Antenna ($3.0 million); and Landing Gear Actuators ($1.5 million).

F-16 (FY 1988 - $76.3 million; FY 1989 - $109.1 million). In FY 1988, $58.6 million continues the modification for the Operational Capability Upgrade of the aircraft to be assigned to the Air Defense role, and continues several reliability, maintainability and

update modifications to both the aircraft and engine. Funding of $2.7 million initiates the Global Positioning System (GPS) modification which will significantly enhance F-16 weapons delivery and navigation accuracy while providing a second navigation source, while $1.7 million accomplishes three required safety modifications.

The FY 1989 program completes the Operational Capability Upgrade (OCU) modification ($36.7 million) and continues the GPS modification. Funding of $16.8 million initiates the Airborne Self-Protection Jammer (ASPJ) to provide the F-16 an electronic countermeasures capability, $10.6 million starts the Lethality/Survivability Upgrade to provide the F-16 survivability enhancements for the current and future threat environment and $6.9 million to initiate the retrofit of the present F-16 Radar Threat Warning Receiver set. FY 89 also initiates four reliability/supportability modifications including the Fire Control Radar Low Power Radio Frequency (LPRF) redesign.

F-111 (FY 1988 - $253.1 million; FY 1989 - $169.6 million). The FY 1988 and FY 1989 programs include follow-on modifications for the Avionics Modernization Program ($188.2 and $100.9 million). Funding of $22.2 million is for the continuation of a simulator upgrade program for the currently non-supportable F/FB-111 system. The program continues two modifications, Countermeasures Dispenser and NAVSTAR started in FY 1986. Funding of $1.2 million is requested for reconfiguration of test aircraft to an operational configuration.

The FY 1989 program initiates reliability/supportability improvements. Pave Tack capability ($30.1 million) and modifications to transfer the FB-111 to a tactical role ($4.5 million) are also initiated.

EF-111 (FY 1989 - $26.4 million). The FY 1989 program initiates a performance upgrade program to provide jamming improvements to meet current and projected threats.

TR-1 (FY 1988 - $10.9 million; FY 1989 - $20.3 million) The FY 1988 program continues the modification for aircraft weight reduction ($1.2 million), the NAVSTAR Global Positioning System (GPS) ($1.3 million); improved sensor system called Senior Glass ($4.6 million); Airborne Recorders ($.9 million); and Avionics ($.9 million).

The FY 1989 program continues all on-going modification programs and provides funds for a new Defensive System ($5.1 million).

C-5 (FY 1988 - $16.9 million; FY 1989 - $108.3 million). FY 1988 funding continues efforts on reliability improvements for the C-5A Main Landing Gear Door Actuation System ($13.2 million).

In FY 1989, continues funding for the MLG Door ($18.3 million); the Malfunction Detection, Analysis and Recording System (MADARS) ($52.4 million) and the Expanded Fan Speed Indicator for the engine ($10.6 million). The FY 1989 program initiates reliability and maintainability modifications for both the engine and aircraft and to provide commonality with the C-5B. The Automatic Communications Processor improvement also will be added.

C-141 (FY 1988 - $17.1 million; FY 1989 - $41.7 million). The FY 88 program continues a C-141 Special Operations Forces (SOF) Low Level modification ($16.2 million) started by the FY 87 Supplement. Three enhanced reliability/maintainability modifications are continued ($.9 million).

FY 1989 program initiates the Auto Comm Processor modification ($10.1 million) on the C-141 and a reliability/maintainability improvement to the All Weather Landing System/ Auto Pilot ($13.4 million).

T-38 (FY 1988 - $13.8 million; FY 1989 - $34.9 million). Funding will continue for the Aluminum Flight Control System (FY88 - $2.0 million; FY89 -$5.1 million), Dorsal Longeron Replacement ($5.1 million) and begins a much needed improvement on the flight simulator ($5.0 million).

The FY 1989 funding resumes a series of structural modifications to ensure the service life of the T-38 beyond the 1990s. These include modifications for a Take Off Auxiliary Air Door ($5.6 million), and Improved Brakes ($4.0 million).

C-130 (FY 1988 - $217.5 million; FY 1989 - $232.8 million). The FY 1988 program continues the following modification programs: improved capabilities for the Special Operations Forces ($47.5 million); IFR/Avionics Upgrade (VS/CL) ($6.3 million), MC-130H Sensor Improvements, Phase II ($30.9 million), World Wide Color TV ($8.5 million); a Self-Contained Navigation System (SCNS) to allow the C-130 to operate without external navigation aids in battle zone where navigation aids may be shut down or jammed ($33.7 million); the conversion of the T56-A9 Engine Torquemeter to reduce vibration and wear ($1.6 million). Various new start modifications are funded by the FY 87 Supplement: C-130 SOLL II ($12.0 million), HC-130 P/N Improvements ($22.2 million) are continued in FY 88. FY 88 New Start Modifications: MC-130E Tanker Upgrade ($9.8 million); NAVSTAR GPS for SOF aircraft ($1.3 million); MC-130E Phase II ($30.7 million); New ABCCC Capsules ($16.2 million) because the existing ones are beyond economical repair and behind state-of-the-art; APQ-150 Radar Replacement ($5.5 million); ASD-5 Replacement ($7.2 million).

FY 1989 funds continues existing modifications and initiates programs to provide NAVSTAR Global Positioning System (GPS) ($3.4 million); Microwave Landing System ($8.2 million); New Airborne Command, Control and Communications Capsules, ($16.8 million);

Auto Comm Processor ($3.5 million); New Life History Recorder ($4.2 million); a more effective replacement for the ASD-5 ($4.3 million); a replacement for the APQ-150 Radar ($5.4 million); and starts a reliability improvement on the Circuit Temperature Datum Control ($3.4 million).

C-135 (FY 1988 - $629.5 million; FY 1989 - $672.9 million). Funding of $629.5 million in FY 1988 is for continuation of the re-engining of the KC-135 tanker aircraft with CFM-56 engine ($579.2 million). This program, which also includes modification of over 25 subsystems necessary to incorporate the new engine provides an increase of off-load capability equivalent of one and one-half times the current KC-135A configuration. Other modification programs being continued are: Nuclear Hardening/UHF Radio Replacement for EC-135 series ($20.2 million), replacement of the lower wing skin to extend service life ($.6 million), incorporation of ICBM Airborne Launch Control Capability into EC-135 A/C/B aircraft in the amount of $19.9 million, upgrade of the MB-26 flight simulators ($4.4 million), and WWABNCP WIM ($5.2 million).

The FY 1989 program continues existing modifications and initiates new programs for: EC-135C Groundwave Emergency Network Capability ($9.2 million) and the Milstar UHF Command Post Transition Upgrade ($49.4 million).

C-137 (FY 1988 - $1.8 million; FY 1989 - $2.7 million). FY 1988 funds Federal Aviation Agency (FAA) directed service bulletins that are issued against all C-137 type commercial and military aircraft.

FY 1989 funds Search Radar Replacement ($1.7 million), service bulletins and miscellaneous reliability and maintainability modifications.

C-9 (FY 1988 - $2.7 million; FY 1989 - $8.4 million). FY 1988 program initiated a Forward/Aft Galley Upgrade ($.7 million); and the FY 1989 program initiates funding for a number of communication upgrades which replace old unsupportable technology, improve reliability/maintainability and to take care of Federal Aviation Administration directed changes ($7.7 million).

E-3A (FY 1988 - $27.7 million; FY 1989 - $40.7 million). The FY 1988 program includes $20.8 million to fund a modification to provide HAVE QUICK A-NEFS for an improved Anti-Jam capability, $.9 million for a modification to provide the E-3 surveillance operator a real time indication of radar range, $4.8 million for a reliability modification to start replacement of the magnetic tape transport and $1.2 million for miscellaneous reliability modifications.

The FY 1989 program continues modifications initiated in previous fiscal years.

E-4B (FY 1988 - $0.0 million; FY 1989 - $28.7 million). The FY 1989 program funds the MILSTAR UHF transition ($26.9 million) and the Auto Comm Processor ($1.8 million).

H-1 (FY 1988 - $1.7 million; FY 1989 - $6.1 million). The FY 1988 program includes two ongoing safety modifications: Crashworthy Armored Seat ($.6 million); fuel system improvements ($.8 million) and miscellaneous Class IV modifications ($.3 million).

FY 89 continues these modifications and provides for one new start, NAVSTAR Global Positioning System ($5.4 million).

HH-53 (FY 1988 - $.4 millior; FY 1989 - $32.7 million). FY 1988 funds $.4 million for miscellaneous Class IV modifications. Pave Low III funding under a FY87 supplement ($192.5 million after the add) will upgrade the entire HH-53 fleet to Pave Low III configuration with FY 1987 funding.

FY 1989 continues FY87 funding for the modification to extend the service life of the H-53 ($30.5 million) and initiates two new start programs: a new Engine Torque Indicator ($.8 million); and an Intercom System Replacement System ($1.2 million).

KC-10 (FY 1988 - $13.2 million; FY 1989 - $26.2 million). Funding of $6.0 million is requested to initiate a modification to install refueling pods on the KC-10 aircraft. Another $1.8 million is requested for service bulletins required on all commercial and military DC-10 type aircraft. FY 1988 continues the cargo loading system modification ($5.4 million).

FY 1989 continues existing modifications.

Other Aircraft (FY 1988 - $62.0 million; FY 1989 - $101.9 million). In FY 1988, funds are required for follow-on costs of previously initiated modifications as follows: $6.3 million for HAVE QUICK New Control Head, $7.9 million to improve the reliability of the TTU-205 Field Test Set for Pressure and Temperature used for testing all first line aircraft prior to take-off, $3.5 million for a reliability improvement to the AAQ-10 system to enhance reliability on this Special Operations Forces system, and $40.3 million to replace HF radios with highly reliable state-of-the-art radios.

The FY 1989 program continues modifications started in previous fiscal years and would initiate ten new efforts which include: MILSTAR EHF Force Element Upgrade ($20.5 million); HAVE QUICK II Faster Hopping and Increased Power ($23.4 million); ALQ-155. R&M deficiency corrections ($4.6 million); ALE-40 Deficiencies ($4.4 million); and Support Equipment Upgrade ($1.2 million).

T/AT-37 (FY 1988 - $12.4 million; FY 1989 - $13.6 million). FY 1988 initiates the structural life extension program ($11.8 million) to ensure the service life of the T-37 and preclude flight safety structural problems after 1991. FY 89 initiates a simulator computer replacement ($1.8 million) for reliability and supportability improvements.

T-43 (FY 1988 - $0.4 million; FY 1989 - $10.0 million). FY 1988 funds Federal Aviation Agency (FAA)-directed service bulletins that are issued against all B-737 commercial and military (T-43) aircraft.

FY 1989 funds FAA-directed service bulletins and replaces an Airborne Training Computer ($9.8 million).

Classified Projects (FY 1988 - $83.7 million; FY 1989 - $133.6 million). These funds are required for the modification of a variety of aircraft and airborne systems used in classified missions which, because of their sensitivity, require the application of special management and security safeguards.

The following table summarizes funds requirements for Fiscal Years 1986, 1987, 1988, and 1989 by aircraft/category:

MODIFICATIONS OF IN-SERVICE AIRCRAFT

($ IN MILLIONS)

Aircraft/Category	FY 86	FY 87	FY 88	FY 89
A-7	57.0	14.1	.7	21.0
A-10	54.5	65.3	13.6	20.1
B-52	393.3	397.2	270.7	194.5
FB-111	7.0	3.9	.8	8.2
B-1	29.9	88.0	4.6	106.1
C-5	7.7	46.3	16.9	108.3
C-9	-	.2	2.7	8.4
KC-10	1.0	6.7	13.2	26.2
C-130	160.8	181.1	217.5	232.8
C-135	837.9	976.8	629.5	672.9
C-137	-	1.6	1.8	2.7
C-141	1.4	10.1	17.1	41.7
C[illegible]S	103.0	90.2	83.7	133.6
E-3	.9	33.5	27.7	40.7
E-4	20.9	4.0	-	28.7

MODIFICATIONS OF IN-SERVICE AIRCRAFT (CONT)

Aircraft/Category	FY 86	FY 87	FY 88	FY 89
F-4	167.0	137.9	10.4	21.8
F-5	32.0	4.4	4.3	4.9
F-15	133.1	255.1	161.2	272.4
F-16	48.2	84.9	76.3	109.1
F-111	283.3	271.9	253.1	169.6
EF-111	-	-	-	26.4
H-1	-	8.1	1.7	6.1
H-3	-	-	.2	-
HH-53	79.3	158.2	.4	32.7
OTHER	110.2	164.5	62.0	101.9
TR-1	10.5	12.6	10.9	20.3
T/AT-37	-	-	12.4	13.6
T-38	16.1	29.8	13.8	34.9
T-43	-	.4	.4	10.0
C-12	1.4	-	-	-
CRAF	142.3	-	-	-
C-22	-	-	-	1.0
TOTAL	2698.7	3046.8	1907.6	2470.6

STATUS OF AIRCRAFT MODIFICATION PROGRAMS

FY 1985 Modification of Aircraft

Programs as of 30 Sep 86

($ in millions)

Program	Total Program Appropriated	Total Reprogramming 1/	Total Value	Obligations	Expenditures
Budget Activity No. 5					
P-1 No. 33-65	3,020.3	-129.9	2890.4	2,290.6	724.6

1/ Adjustments result from the following actions:

- Congressional reprogramming as part of the SECDEF $4.4B reduction ($8.7M).
- F/RF-4 ALR-74 RWR Upgrade ($8.2M).
- Congressional reprogramming to correct the FY 86 PB ($14.0M).
- Congressional reprogramming directed by PBD 686. Funds transferred to RDT&E (-$3.9M).
- Transfer from BP 1200 for C-135 Centcom aircraft ($7.3M).
- E-4 STU-II Comm Upgrade ($10.0M).
- Transfer of funds to Reserve Forces for C-131 aircraft (-$8.0M).
- FY 87 appropriation, prior year savings reduction due to inflation (-$20.7M).
- FY 87 appropriation rescinded due to contract savings on B-52 modification (-$61.2M).
- Reduction due to Gramm-Rudman-Hollings (-$64.8M).

STATUS OF AIRCRAFT MODIFICATION PROGRAMS

FY 1986 Modification of Aircraft
Programs as of 30 Sep 86
($ in millions)

Program	Total Program Appropriated	Total Reprogramming 1/	Total Value	Obligations	Expenditures
Budget Activity No. 5 P-1 No. 33-65	3,034.7	-331.2	2703.5	0	69.6

1/ Adjustments consist of:

- FY 86 congressionally-directed undistributed reduction (-$114.9M).
- Reduction due to Gramm-Rudman-Hollings (-$146.5M).
- Gramm-Rudman reduction on F-15 ASAT reprogramming not done (-$2.8).
- Prior years savings rescinded on CRAF (-$7.3M) and C-131 (-$12.0) which should have been applied against the ANG appropriation.
- FY 87 appropriations undistributed reduction for inflation (-$47.7M).

STATUS OF AIRCRAFT MODIFICATION PROGRAMS

FY 1987 Modification of Aircraft
Programs as of 30 Oct 86
($ in millions)

Program	Total Program Appropriated	Total Reprogramming 1/	Total Value	Obligations	Expenditures
Budget Activity No. 5					
P-1 No. 33-65	3,104.1	-57.3	3046.8	0	0

1/ Adjustments result from the following actions:
- FY 87 congressional adjustment for savings due to inflation (-$38.1M) and profit policy (-$19.2M).

(In Millions of Dollars)

Program Estimate - FY89	3293.2
Program Estimate - FY88	2966.1*
Program Estimate - FY87	2972.4
Program Actual - FY86	3469.5

ACTIVITY: Aircraft Spares and Repair Parts

PURPOSE AND SCOPE: This activity provides funds to buy spare engines and other investment items used to repair aircraft and aircraft support equipment. Investment items are defined as reparable assemblies that are centrally procured and managed. The account has two categories: initial spares and replenishment spares. The initial spares category funds spare engines and spares needed to support initial operations of new aircraft, new aircraft modifications and new airborne equipment purchased through the Other Production Charges account (Electronic Counter Measure Pods, for example). The second category, replenishment spares, provides follow-on spares support for all aircraft and aircraft support equipment. The replenishment spares account finances the bulk of peacetime spares requirements and all wartime spares requirements.

JUSTIFICATION OF FUNDS REQUESTED: The initial spares segment of the account has four parts. Part one, "Initial Weapon System Spares," funds spare engines as well as spare parts required to support initial operations of new aircraft. Included in the latter are aircraft spares, engine spare parts and peculiar ground support equipment spares. The second part, "Modification Spares," funds spare parts needed during initial operation of modified airborne systems. Spares to support initial operations are included in part three, "Common GSE Spares," while initial operations of equipment financed in the "Other Production Charges' account (such as Electronic Counter Measure Pods) are supported through part four, "Other Production Spares."

The replenishment spares segment of the account has three categories of spares. The first category, Peacetime Operating Stock (POS), supports the peacetime flying hour program; FY88 and FY89 funding support FY90 and FY91 flying hours respectively. The second category, War Readiness Spares Kits (WRSK) and Base Level Self-Sufficiency Spares (BLSS), support initial wartime operations. Funds are required for new FY90 and FY91 kit authorizations and updates. The first two categories of replenishment spares provide our readiness posture. The last category, Other War Reserve Materiel (OWRM), provides spares and repair parts to continue wartime operations until the industrial base can meet wartime production spares. This is the key to sustainability. Due to fiscal constraints, no funds are requested for OWRM.

*Does not agree with the P-1 due to rounding.

The following table compares program funding/requests by fiscal year:

AIRCRAFT SPARES AND REPAIR PARTS
(In Millions of Dollars)

	FY86	FY87	FY88	FY89
Initial Aircraft Spares	868.2	738.6	563.2	750.8
Replenishment Aircraft Spares	2601.3	2233.8	2402.9	2542.4
Total	3469.5	2972.4	2966.1**	3293.2

Initial Aircraft Spares: The initial spares funding requirements are presented in more detail in the following table:

INITIAL AIRCRAFT SPARES
(In Millions of Dollars)

	FY86	FY87	FY88	FY89
Initial Weapon System Spares*	588.6	426.6*	386.4*	504.6*
Initial Modification Spares	173.3	203.1	86.7	151.9
Initial Common GSE Spares	33.9	26.2	16.0	16.6
Initial Other Production Spares	72.4	82.7	74.1	77.7
Total Initial Spares	868.2	738.6	563.2	750.8

*Includes a new segment, "New Acceptance Spares", which are those items currently in the inventory whose inventory level must be increased to support aircraft deliveries. New acceptance spares were previously budgeted and funded by replenishment spares.

**Does not agree with the P-1 due to rounding.

The largest segment of the FY88 and FY89 request is for Initial Weapon System Spares. Requested funding of $386.4 million in FY88 and $504.6 million in FY 89 will support initial operations of the in-production aircraft shown in the following table:

INITIAL AIRCRAFT SPARES REQUIREMENTS
(In Millions of Dollars)

	FY87		FY88		FY89	
Aircraft	Proc	Request	Proc	Request	Proc	Request
ADCA	-	36.4	-	-	-	-
C-17	-	-	2	39.5	4	93.7
F-15	42	116.3	42	116.5	42	113.6
F-16	180	245.0	180	185.6	180	263.4
KC-10	8	0	-	-	-	-
AC-130U	0	0	5	9.1	6	13.5
MC-130H	7	6.7	7	31.1	4	16.0
C-5B	21	16.4	-	-	-	-
TR-1/U-2	3	5.8	-	-	-	-
C-27	-	-	5	4.6	5	4.4
Totals		426.6		386.4		504.6

The second largest driver of initial spares requirements is the aircraft modification program. To support initial operations of over 100 modified systems, new spares inventory valued at $86.7 million in FY88 and $151.9 million in FY89 will be required. The KC-135R re-engining requires $21.9 million in FY88 and $44.9 million in FY89 to buy spare engines for the modified aircraft. The modifications to special operations aircraft to enhance their effectiveness requires new spares valued at $15.1 million in FY88 and $22.8 million in FY89. Classified modifications to current systems will require $18.8 million in FY88 and $16.3 million in FY89 for new spares to insure support of the modified systems. Modification spares for the above examples represent 64% and 55% of the total modification initial spares request.

A third segment of the request, "Initial Other Production Spares," continues providing spares support for the Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN). Spare parts inventory costing $55.9 million is needed for LANTIRN early-on spares support in FY88 and $36.5 million in FY89.

Spares and Repair Parts for Air National Guard and Air Force Reserve:

Within the Initial Spares and Replenishment Spares accounts are dollars to support the Air National Guard (ANG) and Air Force Reserve (AFR). However, it's important to recognize that our item specific spares requirements are based upon worldwide need and not broken down by command or component. We buy spares to fill the inventories and provide assets to users based on their designated distribution priority. These priorities are established annually for every Active, Guard or Reserve unit based on the unit's assigned mission, alert status and wartime mission. Indeed, some Guard and Reserve units have distribution priorities higher than active units. The bottom line is that we compute requirements and buy items to provide balanced support to all Air Force units regardless of the user. In short, our computational system is "user-blind".

To calculate the ANG/AFR dollars that are displayed on the President's Budget P-1R Exhibit, therefore, we estimate using historical factors for initial modification spares and cost per flying hour for replenishment spares.

	FY88	FY89
Initial Spares	8.9	17.0
Replenishment Spares	366.4	363.1
Total	375.3	380.1

Replenishment Aircraft Spares: The FY88/89 Budget reflects the cumulative effects of reduced appropriations in FY87 and reductions in fiscal guidance in FY88. Overall, the replenishment spares account is funded at 52% of the total FY88 requirement and 45% of the FY89 requirement. Funding allocations represent a decision to finance POS at 100% both years, and 17%/11% of the WRSK/BLSS in FY88/89 respectively. There are no dollars available for OWRM. The replenishment spares funding requirements are presented in more detail in the following table:

REPLENISHMENT AIRCRAFT SPARES

(In Millions of Dollars)

	FY86	FY87	FY88	FY89
POS	2098.1	1892.1	2109.4	2276.5
WRSK/BLSS	503.2	341.7	293.5	265.9
OWRM	0.0	0.0	0.0	0.0
TOTAL REPLEN SPARES	2601.3	2233.8	2402.9	2542.4

A complete breakout of all weapon system requirements and funding follows the narrative discussion.

Peacetime Operating Stock (POS)

The FY88/89 replenishment spares program supports the Air Force's peacetime training with full funding of Peacetime Operating Stock. The requirement is based on an item based, failure/demand driven computation that supports the flying hour program lead time away. The FY90 program of 3.4 million flying hours will be supported with FY88 funds, assuming an average two year leadtime; the FY91 program of 3.4 million flying hours will be supported with FY89 funds. This is a 6 percent reduction from the flying hours planned in the FY87 budget, due to reduced force structure and programmed growth. Failure to provide funds will result in inadequate spares levels to support critical combat training. Without these spares, available wartime stocks will be used excessively to support peacetime combat training, degrading readiness and sustainability. The largest drivers of the POS spares request are the B-1B, F-15, F-16 and their supporting engines. Even as the Air Force increases its inventory for these systems, however, continued investment is required to replenish and augment other existing inventory.

War Readiness Spares Kits/Base Level Self-Sufficiency Spares (WRSK/BLSS): WRSK/BLSS is the segment of war reserve materiel maintained at base level for units tasked with wartime missions.

a. War Readiness Spares Kits are air transportable packages of spares that will support specific units tasked to deploy for the first 30 days of a war. The basic configuration of a WRSK is determined by the maintenance concept of the spares, i.e., Remove and Replace (RR) as opposed to Remove, Repair and Replace (RRR). The WRSKs are configured and include both the RR and RRR maintenance concepts depending on the base level repair available at the deployed site. The using major commands and the Air Force Logistics Command determine those essential items to be included in the WRSK. These represent only a small portion of the total number of spares used on a day-to-day basis in peacetime. The quantity of items included in the WRSK are computed using factors such as item wartime failure rates, number of items per aircraft, the wartime flying hour program, base repair time, and item pipeline time. These factors are reviewed annually with the using commands and System Program Manager to insure that item mix and quantities support the wartime scenario.

b. Base Level Self-sufficiency Spares (BLSS) are spares designed to augment peacetime assets to support the initial increased wartime activity for units that will fight the war in-place. BLSS requirements consider the same factors as those used in the WRSK computation, but also consider existing peacetime capability. Those units which are authorized a WRSK are not authorized a BLSS.

The FY88/89 budget request provides minimum essential support for WRSK/BLSS requirements. The FY88 request for $293.5M will fund all new WRSK/BLSS kits authorized for FY90 deliveries of F-15, F-16, KC-135R and MC-130 aircraft. Remaining funds will be used for strategic, mobility and tactical kit updates. The FY89 request supports proposed new kits authorized for FY91.

Other War Reserve Materiel (OWRM) OWRM is the prestocked segment of war reserve materiel stored in the AFLC depots. These spares are required to sustain forces at wartime levels after peacetime and prepositioned assets are used and until the production base can be expanded to satisfy and wartime consumption. Like WRSK/BLSS, OWRM requirements are also jointly reviewed by the using major command and Air Force Logistics Command to ensure only combat essential items are designated for OWRM. The resulting OWRM requirements are then reduced by assets available from production, peacetime levels and WRSK/BLSS levels. The Defense Guidance constrains the requirement objective based on mid-term and long range resource plans. For FY88/89, OWRM requirements reflect needs to satisfy the mid-term sustainability objectives although no funding is requested due to fiscal constraints.

14 JAN 87
8805

AIR FORCE
BP1500 AIRCRAFT REPLENISHMENT SPARES: FY88
($ IN MILLIONS)

WEAPON SYSTEM	POS CURRENT RQMT	POS CURRENT FUNDING	WRSK/ BLSS TOTAL RQMT	WRSK/ BLSS CURRENT FUNDING	OWRM TOTAL RQMT	OWRM CURRENT FUNDING
A007	20.6	20.6	19.2	0.0	2.7	0.0
A010	24.3	24.3	39.5	0.0	9.1	0.0
B01B	425.1	425.1	0.0	0.0	0.0	0.0
B052	68.2	68.2	196.3	0.0	18.0	0.0
B111	9.3	9.3	0.0	0.0	0.0	0.0
E111	7.8	7.8	80.0	0.0	1.3	0.0
F111	168.2	168.2	156.9	0.0	77.8	0.0
C005	90.2	90.2	16.7	2.0	32.2	0.0
C017	0.0	0.0	0.0	0.0	0.0	0.0
C130	75.0	75.0	80.6	15.3	12.9	0.0
C135	128.1	128.1	41.1	25.1	147.5	0.0
C141	25.7	25.7	3.1	1.4	10.6	0.0
E003	10.0	10.0	37.6	3.7	1.6	0.0
E004	2.9	2.9	0.0	0.0	0.0	0.0
F004	26.9	26.9	117.3	0.0	4.6	0.0
F005	16.5	16.5	0.1	0.0	0.0	0.0
F015	84.0	84.0	143.1	125.2	46.1	0.0
F016	153.2	153.2	364.2	107.0	89.4	0.0
H001	1.0	1.0	0.5	0.0	0.1	0.0
H003	1.6	1.6	0.3	0.0	0.8	0.0
H053	11.8	11.8	1.8	0.0	0.9	0.0
H060	0.0	0.0	0.1	0.0	0.0	0.0
OTHR	104.1	104.1	10.3	0.0	1.5	0.0
T033	1.0	1.0	0.0	0.0	0.0	0.0
T037	3.0	3.0	0.0	0.0	0.0	0.0
T038	18.3	18.3	0.0	0.0	0.0	0.0
T039	0.0	0.0	0.0	0.0	0.0	0.0
F100	503.2	503.2	15.2	13.8	5.7	0.0
F110	71.3	71.3	0.5	0.0	29.5	0.0
COMN	228.1	228.1	452.2	0.0	223.5	0.0
TOTAL	2279.4	2279.4	1776.7	293.5	715.8	0.0

TOTAL BP15 RQMTS 4601.9
TOTAL BP15 FUNDING 2402.9
TOTAL BP15 UNFUND 2199.0
PERCENT FUNDED 52%
POS REQUIREMENTS AND FUNDING INCLUDE $170M BP18

14 JAN 87
8829

AIR FORCE
BP1500 AIRCRAFT REPLENISHMENT SPARES: FY87**
($ IN MILLIONS)

WEAPON SYSTEM	POS CURRENT RQMT	POS CURRENT FUNDING	WRSK/ BLSS TOTAL RQMT	WRSK/ BLSS CURRENT FUNDING	OWRM TOTAL RQMT	OWRM CURRENT FUNDING
A007	20.0	20.0	3.0	0.5	1.9	0.0
A010	28.6	28.6	19.5	4.7	6.7	0.0
B01B	126.9	126.9	0.0	0.0	0.0	0.0
B052	42.0	42.0	87.2	20.5	13.2	0.0
B111	71.8	71.8	0.0	0.0	0.0	0.0
E111	2.0	2.0	6.9	2.8	0.9	0.0
F111	145.3	145.3	80.7	30.8	57.2	0.0
C005	173.8	173.8	38.9	25.0	23.7	0.0
C017	0.0	0.0	0.0	0.0	0.0	0.0
C130	76.5	76.5	82.7	21.9	9.5	0.0
C135	80.1	80.1	35.4	17.4	108.4	0.0
C141	60.0	60.0	3.1	1.0	7.8	0.0
E003	31.0	31.0	26.6	16.8	1.1	0.0
E004	3.8	3.8	0.0	0.0	0.0	0.0
F004	39.7	39.7	28.4	4.7	3.4	0.0
F005	31.5	31.5	0.1	0.0	0.0	0.0
F015	158.1	158.1	65.7	40.1	33.9	0.0
F016	113.0	113.0	225.6	122.8	65.7	0.0
H001	2.5	2.5	0.6	0.4	0.1	0.0
H003	2.3	2.3	0.3	0.2	0.6	0.0
H053	3.8	3.8	1.3	1.1	0.3	0.0
H060	0.0	0.0	0.0	0.0	0.0	0.0
OTHR	130.1	130.1	0.3	0.3	1.1	0.0
T003	1.0	1.0	0.0	0.0	0.0	0.0
T037	16.6	16.6	0.0	0.0	0.0	0.0
T038	18.6	18.6	0.0	0.0	0.0	0.0
T039	0.0	0.0	0.0	0.0	0.0	0.0
F100	505.9	505.9	19.4	4.8	4.3	0.0
F110	4.0	4.0	0.7	0.2	21.6	0.0
COMN	173.2	173.2	131.1	25.7	164.3	0.0
TOTAL	2062.1	2062.1	858.1	341.7	526.1	0.0

TOTAL BP15 RQMTS 3276.3
TOTAL BP15 FUNDING 2233.8
TOTAL BP15 UNFUND 1042.5
PERCENT FUNDED 68%
POS REQUIREMENTS AND FUNDING INCLUDE $170M BP18
** W/O SOF SUPPLEMENTAL OF $44.6M

14 JAN 87
8825

AIR FORCE
BP1500 AIRCRAFT REPLENISHMENT SPARES: FY89
($ IN MILLIONS)

WEAPON SYSTEM	POS CURRENT RQMT	POS CURRENT FUNDING	WRSK/ BLSS TOTAL RQMT	WRSK/ BLSS CURRENT FUNDING	OWRM TOTAL RQMT	OWRM CURRENT FUNDING
A007	24.9	24.9	21.9	0.0	3.0	0.0
A010	34.5	34.5	74.2	0.0	10.1	0.0
B015	557.6	557.6	0.0	0.0	0.0	0.0
B052	69.7	69.7	269.3	0.0	19.9	0.0
B111	14.8	14.8	0.0	0.0	0.0	0.0
E111	11.5	11.5	90.1	0.0	1.4	0.0
F111	178.0	178.0	176.0	0.0	86.3	0.0
C005	49.5	49.5	24.3	0.0	35.7	0.0
C017	0.0	0.0	0.0	0.0	0.0	0.0
C130	122.0	122.0	84.0	7.4	14.4	0.0
C135	126.8	126.8	44.7	44.7	163.7	0.0
C141	32.4	32.4	7.7	0.0	11.8	0.0
E003	17.5	17.5	37.3	0.0	1.8	0.0
E004	6.0	6.0	0.0	0.0	0.0	0.0
F004	29.2	29.2	215.5	0.0	5.1	0.0
F005	21.1	21.1	0.1	0.0	0.0	0.0
F015	92.3	92.3	170.6	51.6	51.2	0.0
F016	104.5	104.5	629.6	153.1	99.1	0.0
H001	2.2	2.2	1.5	0.0	0.1	0.0
H003	2.8	2.8	1.6	0.0	0.9	0.0
H052	15.1	15.1	3.3	0.0	0.9	0.0
H060	0.1	0.1	0.1	0.0	0.0	0.0
OTHR	109.8	109.8	13.5	0.0	1.8	0.0
T033	2.2	2.2	0.0	0.0	0.0	0.0
T037	5.1	5.1	0.0	0.0	0.0	0.0
T038	22.0	22.0	0.0	0.0	0.0	0.0
T039	0.5	0.5	0.0	0.0	0.0	0.0
F100	518.5	518.5	10.5	0.0	6.4	0.0
F110	85.2	85.2	0.9	0.0	32.6	0.0
COMN	190.7	190.7	655.0	9.1	247.9	0.0
TOTAL	2446.3	2446.5	2531.8	265.9	794.1	0.0

TOTAL BP15 RQMTS 3602.4
TOTAL BP15 FUNDING 3542.4
TOTAL BP15 UNFUND 3060.0
PERCENT FUNDED 45%
POS REQUIPEMENTS AND FUNDING INCLUDE $170M BP18

WAR RESERVE - SECONDARY ITEMS
AIR FORCE
($ IN MILLIONS)

CATEGORY	STOCK FUND				PROCUREMENT FUNDED				TOTAL			
	FY86	FY87	FY88	FY89	FY86	FY87	FY88	FY89	FY86	FY87	FY88	FY89
AIRCRAFT SPARES & REPAIR PARTS												
Requirements	503.0	593.0	769.7	966.5	7233.1	8020.5	9451.8	10517.7	7736.1	8603.5	10221.5	11484.2
Applicable Assets	350.1	505.0	534.1	629.2	4203.5	4886.5	5498.8	5913.0	4553.6	5391.5	6032.9	6542.2
Funding Requested	54.1	0.0	60.3	62.3	615.0	341.7	293.5	265.9	669.1	341.7	353.8	328.2
MISSILE SPARES & REPAIR PARTS												
Requirements	*	*	*	*	50.1	53.9	53.9	53.9	50.1	53.9	53.9	53.9
Applicable Assets	*	*	*	*	39.4	51.1	53.8	53.8	39.4	51.1	53.8	53.8
Funding Requested	*	*	*	*	10.7	2.8	0.1	0.1	10.7	2.8	0.1	0.1
GROUND EQUIPMENT SPARES												
Requirements	*	*	*	*	142.5	205.9	274.1	348.4	142.5	205.9	274.1	348.4
Applicable Assets	*	*	*	*	110.9	131.3	205.2	223.5	110.9	131.3	205.2	223.5
Funding Requested	*	*	*	*	20.4	73.9	18.4	0.0	20.4	73.3	18.4	0.0
MEDICAL SUPPORT												
Requirements	229.9	272.9	323.3	346.9	*	*	*	*	229.9	272.9	323.3	346.9
Applicable Assets	131.1	239.1	256.1	288.3	*	*	*	*	131.1	239.1	256.1	288.3
Funding Requested	35.1	0.0	35.4	28.8	*	*	*	*	35.1	0.0	35.4	28.8

CATEGORY	STOCK FUND				PROCUREMENT FUNDED				TOTAL			
	FY86	FY87	FY88	FY89	FY86	FY87	FY88	FY89	FY86	FY87	FY88	FY89
FUELS												
Requirements	464.3	471.9	406.0	457.7	*	*	*	*	464.3	471.9	406.0	457.7
Applicable Assets	455.0	444.3	384.9	434.4	*	*	*	*	455.0	444.3	384.9	434.4
Funding Requested	39.9	0.0	57.6	10.2	*	*	*	*	39.9	0.0	57.6	10.2
COMMISSARY												
									0.0	0.0	0.0	0.0
Requirements	100.9	102.9	105.0	107.1	*	*	*	*	100.9	102.9	105.0	107.1
Applicable Assets	26.4	42.8	43.7	58.4	*	*	*	*	26.4	42.8	43.7	58.4
Funding Requested	3.1	0.0	13.6	13.0	*	*	*	*	9.1	0.0	13.6	13.0
TOTAL AIR FORCES												
Requirements	1293.1	1430.7	1604.0	1878.2	7425.7	8280.3	9779.8	10920.0	8723.0	9711.0	11383.3	12798.2
Applicable Assets	962.6	1231.2	1218.8	1410.3	4353.8	5068.9	5757.8	6190.3	5316.4	6300.1	6976.6	7600.6
Funding Requested	132.2	0.0	186.9	114.3	646.1	418.4	312.0	266.0	778.3	418.4	478.9	380.3

*Not Separately Identifiable

(In Thousands of Dollars)

Program Estimate	- FY 89 ...	$5,152,579
Program Estimate	- FY 88 ...	3,669,108
Program Estimate	- FY 87 ...	3,919,973
Program Actual	- FY 86 ...	2,561,573

ACTIVITY: Aircraft Support Equipment and Facilities

PART I PURPOSE AND SCOPE

This activity provides for common support equipment required to service and test aircraft and their components; for refurbishment and rehabilitation of industrial machinery, equipment and facilities required in the manufacture of items funded by this appropriation; for those war consumable items required to be on hand for immediate use in the event of war; and for other charges such as electronic countermeasure equipment. The activity also provides for procurement of flight simulation equipment for aircraft that are no longer in production except for the B-1B, and for programs not associated with one specific weapon system.

PART II JUSTIFICATION OF FUNDS REQUESTED

The estimate for this activity is comprised of the following items: (In Millions of Dollars)

LINE ITEM	FY 1986	FY 1987	FY 1988	FY 1989
Common Ground Equipment	$487.2	$292.4	$221.3	$234.8
Industrial Responsiveness	57.7	41.7	40.0	36.5
War Consumables	75.4	46.1	50.0	49.4
Other Production Charges	1,941.3	3,539.8	3,135.9	4,565.3
Common ECM Equipment			221.9	266.6
ACTIVITY TOTALS	$2,561.6	$3,920.0	$3,669.1	$5,152.6

Common Ground Equipment

This program is for the procurement of organizational and base level support equipment, both common and peculiar, for out-of-production aircraft, as well as common support equipment for new aircraft entering the inventory. The equipment is used on the flight line and in maintenance shops. The program also provides for the procurement of flight simulators and other training devices for the B1B and aircraft models that are out-of-production. Support equipment includes items that are required to assist or provide a service or maintenance to a weapon system while on the ground. Aircraft support equipment is concentrated in the following Federal Supply Groups (FSG):

FSG 17 - Aircraft launching, landing, and ground handling equipment (trailers, platforms, slings).

FSG 41/43 - Compressors, pumps, and air conditioners

FSG 49 - Maintenance and repair shop equipment (test stands, maintenance stands, fixtures, noise suppressors).

FSG 61/66 - Electrical generators and power distribution equipment, instrument and laboratory equipment, hardness testers and non-destructive inspection equipment.

Other FSGs - Gauges, nitrogen servicing units, and specialized tools.

The following table shows a comparison, by year and category, for support equipment:

(In Millions of Dollars)

NOMENCLATURE	FY 1986	FY 1987	FY 1988	FY 1989
FSG 17	61.9	64.0	42.2	29.2
FSG 41/43	47.4	21.3	22.3	15.0
FSG 49	155.3	116.6	49.7	65.2
FSG 61/66	94.4	67.4	25.0	27.8
Other FSGs	51.9	16.9	72.3	90.6
Common Training Equipment (Simulators)*	76.3	6.2	9.8	7.0
TOTAL COMMON GROUND EQUIPMENT	487.2	292.4	221.3	234.8

*FY88/89 Common Training Equipment includes Simulators for the B-1, KC-135, F-4, EF-111, and C-130

Industrial Responsiveness

The Industrial Responsiveness program is part of the Air Force Industrial Base Program. The program goal is to ensure an industrial ability capable of supplying needed quantities of reliable systems and components to operational commanders in peacetime and during times of national emergencies. The program acknowledges the industrial base to be a vital element in national deterrence. Industrial Responsiveness activities provide manufacturing technology, preparedness and productivity analysis to individual weapon system program managers and offer an affordable alternative to procuring prohibitively expensive quantities of fullup war reserves and materials. The program is centralized to give equal consideration to defense acquisition goals that include emphasis on cost reduction, quality, productivity, producibility and preparedness. The Air Force Industrial Base Program attacks these goals cohesively and in an integrated manner to prevent resource duplication. Integrated planning provides the Air Force with an industrial sector snapshot that is not possible from looking at single acquisitions.

The Air Force industrial base strategy involves characterizing segments of the industrial base that are vital to sustainability and have been determined by the Joint Chiefs of Staff and operational commanders to be critical. The resulting data is analyzed and compared with other Service requirements to form hypotheses about weapon system and industrial bottlenecks, deficiencies, strengths, weaknesses, and productivity improvements needs. The analysis is done annually and reported in the Air Force Production Base Analysis to OSD. An investment strategy and recommendations to correct identified industrial deficiencies are part of the analysis. When specific weapon systems are involved, they make the necessary improvements. Generic industrial base improvements, that are beyond the scope of a single program responsibility, are considered for funding through Industrial Responsiveness lines in each procurement appropriation.

The core program includes five critical acquisition initiatives and responsibilities. They are Industrial Base Planning, Government-Owned Industrial Facilities, Manufacturing Technology, Technology Modernization, and Production Surge. Three receive aircraft procurement appropriations. The Manufacturing Technology program is wholly funded with Research, Development, Test and Evaluation appropriations, and the Industrial Surge program has no FY 88 request. Each program has individual objectives and benefits; however, they are managed together to achieve a synergistic effect on the industrial base and the Air Force's ability to procure weapon systems cost-effectively.

The following table and narrative summarize the Industrial Responsiveness aircraft procurement request:

	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
GOVERNMENT OWNED INDUSTRIAL FACILITIES							
MPC 1000 Expansions	8.6	0	0	0	0	0	0
MPC 2000 Packing, Crating & Handling	.2	.1	0	0	.1	.1	.1
MPC 3000 Capital Type Rehabilitation	21.5	8.8	1.4	11.0	33.3	21.1	24.7
MPC 4000 Modernization & Replacement	.1	0	0	0	0	0	0
MPC 7000 Environmental Protection	10.5	20.8	24.0	12.0	9.0	7.0	4.0
MPC 9000 Energy Conservation	0	0	0	.0	1.0	1.0	1.0
SUBTOTAL	40.9	29.7	25.4	23.0	43.4	29.2	29.8
MANUFACTURING TECHNOLOGY							
MPC 5000	0	0	0	0	0	0	0
INDUSTRIAL BASE PLANNING							
MPC 6000	2.9	1.9	2.0	2.0	4.6	5.0	5.2
INDUSTRIAL PRODUCTIVITY AND RESPONSIVENESS (Technology Modernization)							
MPC 8000	13.9	10.1	12.6	11.5	19.7	21.4	21.9
TOTALS	57.7	41.7	40.0	36.5	67.7	55.6	56.9

Industrial Base Planning: Planning is the unifying force in industrial responsiveness. It allows the Air Force to understand industrial base activities going on in the Federal Emergency Management Agency, the Department of Commerce, the General Services Administration, the national security and intelligence agencies, and in the other Services so that Air Force actions complement national objectives. Planning involves identifying critical systems and components and then determining the long, lead pacing items that would hinder rapid production acceleration during times of national emergency. The 400-500 companies and components identified to be critical to sustainability are targeted for study in an annual Production Base Analysis. The industrial characterization that results is used to make program and budget decisions that are designed to correct deficiencies.

Planning ensures that industrial base investments are considered as a viable alternative in determining the best mix of war reserves and hardware to achieve affordable defense. Planning gives the Air Force confidence that various threats can be met and air forces sustained by using the industrial base as a major part of the deterrent strategy. FY 88/89 efforts will include a Production Base Analysis for most items on the Air Force and Joint Chiefs of Staff Critical Items List. This entails integrating industrial sector and critical item studies, surveys, analyses, and forecasts for thousands of DOD suppliers into a cohesive industrial preparedness plan that can be used in decision making and resource allocation. This is a continuing activity.

Facilities: A second element of the Industrial Base Program funds critical activities at the 13 government-owned, contractor-operated industrial plants that the Air Force manages. These plants are the backbone of Air Force weapon system assembly. They are AFP #PJKS (Martin Marietta) in Waterton, CO; AFP #3 (McDonnell Douglas and Rockwell) in Tulsa, OK; AFP #4 (General Dynamics) in Fort Worth, TX; AFP #6 (Lockheed) in Marietta, GA; AFP #19 (General Dynamics) in San Diego, CA; AFP #36 (General Electric) in Evendale, OH; AFP #42 (Rockwell, Lockheed, Northrop, McDonnell Douglas) in Palmdale, CA; AFP #44 (Hughes Aircraft) in Tucson, AZ; AFP #59 (General Electric) in Johnson City, NY; AFP #70 (Aerojet) in Sacramento, CA; AFP #78 (Thiokol) in Lampo Junction, UT; and AFP #85 (Rockwell) in Columbus, OH. The following weapon systems are produced, stored or tested at these facilities: Titan, Peacekeeper, shuttle components, NASA expendable launch vehicles, B1-B, F-15, Harpoon, F-18 components, F-16, F-111, C-130, C-5B, cruise missiles, jet aircraft engines, Minuteman, hydrazine systems, support for U-2 and SR-71, Maverick, WASP, Phoenix, AMRAAM, and TOW.

Ownership of these facilities involves legal and environmental responsibilities for the Air Force even though the burden of maintenance falls on the using contractor. The Air Force facilities policy is to minimize a contractor's reliance on government-owned facilities and to encourage them to replace old, inefficient Air Force owned equipment with privately-owned. The Air Force divested itself of most plants and retains only those that are essential to fulfill production and mobilization requirements. Activities that remain Air Force responsibilities fall into these categories:

- Expansions. These are requirements for real property modifications, brick and mortar-type changes, at the existing Air Force Plants that by Congressional direction may not be done without notification. They include expansions such as an addition of security lighting and electric capacity to increase detection of unauthorized personnel or the construction of a road to improve the traffic flow entering and exiting a major plant. They may also include construction of new buildings to meet the changing manufacturing environment. FY 88/89 funding is not being requested through this budget line for expansions.

- Packing, Crating, & Handling. Required to prepare and transfer idle government-owned equipment to other locations. Unneeded equipment must be removed to make room for new equipment being funded by the contractor. Cost of this activity is about $30,000 per year.

- Capital Type Rehabilitation. These requirements satisfy periodic rehabilitation necessary to maintain the government-owned plants. These projects equate to major repair activities that are beyond the scope of maintenance required for the contractor to do as the tenant. They are landlord magnitude projects. FY 88 projects are reduced from past years because of a temporary higher priority that is being placed on environmental protection projects that have legal and safety considerations and consequences. Projects include the rehabilitation of the overhead crane system at AF Plant #6, Lockheed, GA. The old system was installed during World War II and replacement parts are non-existent unless specially designed at prohibitive costs. Phase II of this project will use FY 89 funds. AF Plant #42, Palmdale, CA, where SR-71, TR-1, U-2 and classified programs are built and stored, requires installation of a new fire sprinkler system to meet National Fire Code standards. The fire suppression system is needed to protect building, contents, and critical government assets. Funds will also upgrade the Palmdale perimeter road to allow better security patrol and to help reduce foreign object damage caused by windblown, loose pavement. Palmdale is used by multiple contractors.

- Modernization and Replacement. This area allows for modernization and replacement of production equipment at Air Force Plants. Air Force policy encourages the contractor to make these investments and no FY 88/89 funds are requested.

- Environmental Protection/Environmental Restoration. Protection calls for the compliance to current federal, state, and local laws that regulate environmental control. Restoration calls for correction of past ground, water, and air pollution. Considerable protection funds are required in FY 88/89. Restoration funds are part of a separate, Congressional-mandated line item under Department of Defense management. Six plants require environmental protection funds. Air Force Plant 42, Palmdale, CA, will replace Polychlorinated Biphenlyl (PCB) transformers, install an environmental-temperature control system, install 10,000 gallon hazardous waste tanks, install a fuel drainage system, and upgrade the material storage area. These projects will allow compliance to Environmental Protection Agency rules, Federal Regulations, Toxic Substance Control Act provisions, and Occupational, Safety and Health Act provisions. An AF Plant #6 project at Marietta, GA (Lockheed), will provide for the construction of a series of 19 chemical storage tank systems, removal of asbestos materials from several buildings, rehabilitation of a sewer filter system, installation of backflow preventers in the fire protection system (Compliance to Georgia Safe Drinking Water Act), and Phase I installation of a water incineration system required to comply with the Resource Conservation and Recovery Act of 1984 (RCRA). At AF Plant #4, Fort Worth, TX (General Dynamics), 10 waste minimization projects are planned all also in response to the RCRA. An asbestos hazard program will also begin at Fort Worth and at AF Plant 85, Columbus, OH (Rockwell). Retrofillings oil in PCB transformers at AF Plant #59, Binghamton, NY (General Electric), will reduce current PCB contamination to below liability and safety levels. A National Pollution Discharge System Flow Metering Station will be constructed as well as an overflow storm waste protection system. At AF Plant #3, Tulsa, OK (McDonnell Douglas), projects will replace underground fuel tanks.

- Energy Conservation. Funds cost reducing opportunities to dramatically improve the energy use at the plants. These projects must be well beyond contractual requirements and must offer substantial benefit/return to the government if accomplished. Returns accrue to programs using facility who will see reduced overhead costs that will result from these projects. No projects to be funded during FY 88/89.

Technology Modernization: This activity is also known as the Industrial Modernization Incentives Program (IMIP). IMIP is a venture between government and industry to accelerate the implementation of modern equipment and management techniques. IMIP is an acquisition tool that contractually encourages aggressive industrial base investments. The program gives contractors financial incentive to achieve cost reduction through investment in productivity-enhancing equipment. IMIP encourages contractors to make capital investment decisions that they are otherwise not financially incentivized to do. Defense contractors' profits are to a large extent a function of their costs. This is a disincentive to invest in cost-reducing and expensive capital equipment. Industry also has to cope with uncertainties in forecasting its DOD business base. The purpose of IMIP is to mitigate or eliminate the effects of negative incentives by offsetting lost profit. This offset is a share of the savings in the form of a productivity savings reward. Its amount is determined in negotiations focused on return on investment calculations. It is paid only if the government is assured that the projected benefits will be achieved.

IMIP's are initiated where competitive market forces are insufficient to bolster independent contractor investment or where significant benefits will accrue to the government such as cost reduction, elimination of production bottlenecks, and improved quality or reliability. The short term goal of IMIP is to reduce cost and lead times of weapon systems. The long term goal is to promote a strong industrial base that can meet surge and mobilization requirements in national emergencies.

Seed funds are often the key to getting IMIP efforts started and to getting contractors and system program offices to take long term looks at production programs and opportunities to do things more efficiently; to think beyond the current contract and to future DOD procurement and industrial capabilities. IMIP funds are programmed to impact present and upcoming production programs. IMIP delivers transferable manufacturing processes and management systems to factories through the development of enabling technologies that remove some of the risk involved in implementing promising new technologies onto a factory floor. This motiviates contractors to make capital investments beyond those normally made. Instant contracts receive some benefits from IMIP; however, by the time capital equipment is brought on line and savings begin to accrue, it is normally future contracts that reap the benefits of IMIP's executed today. Once an IMIP project is complete, learning curves and all future cost estimates are revised and must show the reduced manufacturing hours that are the result of the IMIP-related project. Without IMIP, industry has been reluctant to make the investments needed to remain competitive with foreign producers. Without IMIP, production programs do not show the dramatic, continued productivity learning that is possible. For example, learning curves on the F-16, which has an IMIP, are still an impressive 86% even after producing over 1000 units. IMIP ensures the most efficient manufacturing techniques are used.

IMIP opportunities exceed the funding available to target the entire defense industrial base. However, resources have a multiplier effect in convincing Air Force program managers, where it makes sense and the business base is stable, to include IMIP activities in their own program lines. Industrial Responsiveness funds are targeted for more generic IMIP's and for improving the subcontractor base that supports tri-Service weapon systems. IMIP's planned for FY 88/89 include work with General Electric, Pratt and Whitney and other engine contractors, the bearing and forging industries, F-16 subcontractors, C-17 contractors, the RF microwave and traveling wave tube industries, Joint Stars contractors, the infrared detector industry, and logistics repair and maintenance contractors.

The F-16 IMIP will continue to develop incentive systems for subcontractors to invest in capital equipment, new technology, and cost-reducing manufacturing processes. Twenty-nine subcontractors are currently participating in the F-16 subcontractor effort with benefits going to all DOD business using these facilities: Aerospace Avionics, Bohemia, NY; Airesearch, Torrance, CA; Amfuel, Magnolia, AR; Applied Technology, Sunnyvale, CA; Arkwin Industries, Long Island, NY; Delco Systems, Goleta, CA; Dynamic Controls, South Windsor, CT; Eldec, Lynnwood, WA; Goodyear, Akron, OH; Gull Airborne, Smithtown, NY; Honeywell, St Louis Park, MN; JC Carter, Costa Mesa, CA; Leach, Buena Park, CA; Lear Siegler, Santa Monica, CA and Grand Rapids, MI; Menasco, Fort Worth, TX; National Water Lift, Kalamazoo, MI; OEA, Denver, CO; Parkin Hannifin, Irvine, CA; SCE Systems, Huntsville, AL; Sierracin, Sylmar, CA; Simmonds, Vergennes, VT; Sperry, Albuquerque, NM; Sundstrand, Rockford, IL; Teledyne, Newbury Park, CA; Texstar, Grand Prairie, TX; Tracor, Austin, TX; TRW, Cleveland, OH; and Westinghouse, Lima, OH. The RF/Microwave IMIP will expedite into the manufacturing environment emerging techniques, processes, and controls to improve yields and economically produce RF/Microwave components used on systems such as LANTIRN, F-111 electronic countermeasures and INEWS. In the propulsion bearing IMIP work will focus on fracture toughness, corrosion resistance and extending the life of liquid lubricated metallic rolling element bearings by using improved and automated manufacturing processes. The forging IMIP attacks the cost and lead time driver aspect of that industry and will work with several major forging houses to stimulate advances in the entire industry. Participants include Aluminum Forge, Santa Ana, CA; Arcturus Manufacturing, Oxnard, CA; Chen-Tech, Irvine, CA; Ladish, Los Angeles, CA; and Ontario Forge, Muncie, IN. Likewise, a propulsion IMIP includes modernization activities at Pratt & Whitney, General Electric and important subcontractors TRW, Schlosser Forge, King Fifth Wheel, Schultz Steel, Excello, Cytemp Specialty Steel, Duradyne Technologies, Precision Castparts, Fansteel Precision Metal, Howmet Turbine, Ladish, Walbar, Cameron Iron Works, Timet, Hitchcock Industries, American Welding, and Western Gear. A generic electronic IMIP program with emphasis on Joint Stars contractors Grumman, Norden, Boeing, Control Data, Cubic Defense Systems, Aydin Litton Guidance, Miltrope, and RF Products will be initiated. Logistics-related IMIP's with engine part, wheel and brake, avionics, and electrical suppliers are included in this request.

AIR FORCE PLANTS

DD FORMS 1391

FY 1988

Appropriation 3010

	Amount ($000)
1. AFP 3:	
Remove and Replace Underground Storage Tanks.....	$2,020.0
2. AFP 4:	
Waste Minimization.....	$11,255.0
Remove and Replace Underground Storage Tanks.....	440.0
3. AFP 6:	
Install Waste Incineration System, Phase I of III.....	$3,581.0
4. AFP 42:	
Install Hazardous Waste Holding Tanks.....	$ 233.0

1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 JUL 86

3 INSTALLATION AND LOCATION	4 PROJECT TITLE
AFP 3, McDonnell Douglas Tulsa, OK 74115	MPC 7000, Remove and Replace Underground Storage Tanks

5 PROGRAM	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)
APAF P-1 Line Item #62	221-221		$2,020

9 COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Remove and Replace Underground Fuel Storage Tanks	L/S			$2,020

10 DESCRIPTION OF PROPOSED CONSTRUCTION

Replace eleven (11) 25,000 gallon fuel storage tanks with double-walled tanks and autoalarm leak detection system.

Basis of Need: These underground fuel storage tanks are showing signs of corrosion and leaks. The government is required to remove any underground tanks that may contaminate the earth near the tanks. Failure to accomplish this project will result in inventory loss, willful contamination of the environment and possible civil and/or criminal penalties.

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1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 JUL 86

3 INSTALLATION AND LOCATION	4 PROJECT TITLE
AFP 4, General Dynamics, Fort Worth, TX 76101	MPC 7000, Waste Minimization

5. PROGRAM	6 CATEGORY CODE	7. PROJECT NUMBER	8 PROJECT COST ($000)
APAF P-1 Line Item #62	221-221		$11,255

9 COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Waste Minimization	L/S			$11,255

10 DESCRIPTION & PROPOSED CONSTRUCTION

This Project will provide funding to carry out elements of the hazardous waste minimization plan for Air Force Plant No. 4. These elements are summarized as follows:

1. Chemical milling solution recovery
2. Coolant recovery systems
3. Metal hydroxide sludge volume reduction
4. Hazardous waste incinerator
5. On-site hydraulic oil recovery systems
6. Solvent recovery systems
7. Proportional paint mixing system
8. Empty drum salvage system
9. Chip centrifuge

Basis of Need:

Hazardous and Solid Waste Amendments (HSWA-1984) to the Resource Conservation and Recovery Act (RCRA) require certification and reporting of progress toward waste minimization. The Environmental Protection Agency (EPA) has been tasked to submit a report to Congress by October 1986 on the feasibility and desirability of establishing specific waste minimization regulations.

Even more importantly, the HSWA amendments require banning of land disposal of hazardous waste unless the EPA determines such a ban is not required to protect human health and the environment. The final ban would occur in 1990. Given today's environmental consciousness, a "safe" determination does not

1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 Jul 86

3 INSTALLATION AND LOCATION
AFP 4, General Dynamics, Fort Worth TX 76101

4. PROJECT TITLE	5. PROJECT NUMBER
MPC 7000, Waste Minimization	

appear likely.

If land disposal were to continue, the waste deposited still remains the long term liability of the generator. This situation has created chaos with regard to liability insurance and indemnification.

In 1985, Air Force Plant No. 4 disposed of more than 5,300 tons of hazardous waste in land disposal facilities. It is required that all possible measures be immediately undertaken to eliminate the disposal of the waste. General Dynamics has developed a waste minimization plan based on knowledge of waste streams and a goal of zero discharge. An Air Force sponsored waste minimization audit by an outside contractor, the Earth Technology Corporation, supports and confirms the plan.

1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 Jul 86

3 INSTALLATION AND LOCATION	4. PROJECT TITLE
AFP 4, General Dynamics Fort Worth, TX 76101	MPC 7000, Removal and Replacement of Underground Storage Tanks

5 PROGRAM	6 CATEGORY CODE	7. PROJECT NUMBER	8 PROJECT COST ($000)
APAF P-1 Line Item #62	221-221		$440.0

9 COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Replacement and Removal of 3 Underground Storage Tanks. Phase II estimated at $430 in FY89 Phase III estimated at $430 in FY90 Phase IV estimated at $426 in FY91 Phase V estimated at $423 in FY92	L/S			$440.

10 DESCRIPTION OF PROPOSED CONSTRUCTION

This project is the first phase of a five-year plan to replace all underground tanks that store petroleum or hazardous chemical products. Requirements during the first year are for replacement and closure of one fifth of the tanks and continued monitoring and testing of the remaining tanks. Tank replacement will be prioritized based on expected condition, age, contents, etc. Wherever possible, tanks will be replaced with above ground storage protected with secondary containment. If below surface storage is required, preference will be given to vaulted storage with secondary containment and inspection provisions to be provided by the vault. Three tanks will be replaced in FY88 and four tanks will be replaced in FY89.

Basis of Need:

The Hazardous and Solid Waste Amendments (HSWA) of 1984 require the Environmental Protection Agency (EPA) to publish regulations for underground tanks that store petroleum products or chemical products defined as hazardous by Comprehensive Environmental Response Compensation and Liability Act (CERCLA). The law is based on the concept that all underground tanks will eventually leak, causing release of a hazardous material to the environment. Regulations will require specific leak detection or tank testing for existing tanks. Releases from underground tanks will continue to require expensive remedial action. New underground tanks will be regulated with regard to design standards and leak detection requirements. This project will eliminate or minimize the risk of leaks from underground tanks.

1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 JUL 86

3 INSTALLATION AND LOCATION	4. PROJECT TITLE
AFP 6, Lockheed-Georgia Company, Marietta, GA 30063	MPC 7000, Install Waste Incineration System, Phase I of III

5 PROGRAM	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)
APAF P-1 Line Item 62	221-221		$3,581.0

9 COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Install Waste Incineration System, Phase I of III	L/S			$3,581
Phase II - Heat Recovery Portion, estimated at $5,000 in FY89; Phase III - Ash Handling Portion, estimated at $2,419 in FY90				

10 DESCRIPTION OF PROPOSED CONSTRUCTION

This project provides for the design, development and construction of a fluidized bed combustion system which utilizes the suspension of solids in a gas stream within the reactor chamber at high temperatures. Silica sand or other inert material will serve as a bed media. Because of the turbulent action the bed creates, the water is quickly evaporated and any combustible solids and vapors are oxidized thermally. Emissions from the reactor will be used to preheat, by way of a gas to gas heat exchanger, the make up air for the reactor. Heat recovery will be realized by using a water heat exchanger to produce steam. Waste heat recovery will be followed by venturi scrubbing to remove particulates, which can then be landfilled.

The project can be phased in three parts initially. Phase I will include the acquisition and construction of the reactor, building, and scrubbers with the necessary appurtence. Phase II and III will include the acquisition and construction of heat recovery systems complete with the ash handling projections.

BASIS OF NEED:

Waste oils, solvents, paint sludges and other organic sludges can be reacted similarly by this system. It is anticipated that the system will allow for waste stream reductions up to 85 percent. This project is required to meet resource recovery and waste minimization goals of the Air Force and DOD. The project will contribute toward waste minimization efforts required by Resource Conservation and Recovery Act (RCRA) legislation of 1984.

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1 COMPONENT	FY 1988 FACILITY PROJECT DATA	2 DATE
USAF		17 JUL 86

3 INSTALLATION AND LOCATION	4 PROJECT TITLE
AFP 42, Lockheed-California Company, Palmdale, CA	MPC 7000, Install two (2) 10,000 Gallon Hazardous Waste Storage Tanks

5 PROGRAM	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)
APAF P-1 Line Item #62	221-221		$233.0

9 COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Install two (2) 10,000 Gallon Hazardous Waste Holding Tanks, Site 2 and Site 7A	L/S			$233.0

10 DESCRIPTION OF PROPOSED CONSTRUCTION

Install above ground 10,000 gallon hazardous waste holding tank adjacent to Building 211, Paint Hangar, Site 2, and install above ground 10,000 gallon hazardous waste holding tank adjacent to Building 727, Paint Hangar, Site 7a. Tanks will meet all local, state and federal requirements regarding handling of hazardous waste to include monitoring systems.

BASIS OF NEED:

Project is essential to provide adequate paint waste storage capacity and to comply with local, state and federal requirements.

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DD FORM 1391

PREVIOUS EDITIONS MAY BE USED UNTIL EXHAUSTED

PAGE NO

U.S. G.P.O. 1984-470-970/23678

War Consumables

The funds requested, along with prior funded assets, will provide additional wartime support needed, in the ever of hostilities, to sustain operations. Included in this program are auxiliary fuel tanks, missile launchers, pylons, bomb ejection racks, and adaptors which are consumed during wartime and peacetime operations or are required to provide initial alternate mission equipage for new inventory items.

The following is a breakout, by fiscal year, of the War Consumables program:

BP 1700 WAR CONSUMABLES

1988/89 PRESIDENT'S BUDGET SUBMISSION

($ MILLIONS)

	FY 1986		FY 1987		FY 1988		FY 1989	
	QTY	$	QTY	$	QTY	$	QTY	$
FUEL TANKS								
370 GALLON TANK/PYLON (F-16)	2536	51.092	1152	10.203	3180	29.110	3020	28.600
300 GALLON BIPAC CONTAINER	1000	2.348	-	-	-	-	-	-
MISSILE LAUNCHERS								
LAUNCHER ELECTRONICS UNIT (LEU) FOR LAU-88	1175	14.424	1173	13.978	-	-	-	-
LAU-117 (F-4/A-10/F-16)	541	5.305	454	4.225	-	-	-	-
LAU-118 (F-4G)	96	2.208	-	-	-	-	-	-
LAU-128/129 (F-15/F-16)	-	-	406	17.694	548	20.890	612	20.800
TOTAL		75.377		46.100		50.000		49.400

Other Production Charges

This program provides for items, such as Classified Projects, Alternate Mission Equipment, and Range Improvement, that are not directly related to other procurement lines in this appropriation and cannot be reasonable allocated and charged thereto. It also includes items, such as LANTIRN, NAVSTAR GPS, that are used by more than one weapon system and managed as end items themselves. The following table provides a comparison, by fiscal year, of the items in this program:

(In Millions of Dollars)

	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990
Classified Projects	1334.0	2533.0	2259.0	3735.4	3246.8
ECM Pods	154.4	174.7	-	-	-
Airborne Video Tape Recorder/ Cockpit TV Sensor	5.0	5.5	7.6	7.6	7.6
Alternate Mission Equipment	1.8	6.7	11.9	3.8	4.0
Range Improvement	15.5	7.7	20.8	16.9	6.4
LANTIRN	420.7	761.5	741.4	688.2	514.3
NAVSTAR Global Positioning System	23.1	41.7	95.2	83.1	178.7
Special Operations Forces	-	8.7	-	-	-
Sailplanes	-	0.2	-	-	-
GDU-15 (AGM-130)	-	-	-	25.4	33.0
Training (Offensive)	-	-	-	4.8	5.2
Total Other Production Charges	1954.6	3539.8	3135.9	4565.2	3996.1

Justification for the various line items is as follows:

Classified Projects:

Includes the Air Force Tactical Improvement Program and several National defense projects which are classified Special Access.

ECM Pods:

Includes the procurement of new pods, such as the ALQ-131, and update of inventory pods, such as the ALQ-119, to maintain capability to counter the latest Soviet threats. The pods are used on several tactical strike/reconnaissance aircraft. Starting with FY 88 the pods are a separate P-1 line item.

Airborne Video Tape Recorder (AVTR)/Cockpit TV Sensor (CTVS):

The AVTR records all audio available at the aircrew headset and all video displays on the radar/Electro-Optical display and head-up display (HUD). Aircrews, maintenance crews, and combat and training units use the video tape recordings to analyze mission and training results and for maintenance troubleshooting. The AVTR and CTVS will be common to the entire tactical force. The CTVS will replace the existing gun camera which employs film; the advantage is that no film processing is required, making the data available for use immediately after landing. The CTVS will provide imagery data to the AVTR for recording, including a split-screen presentation for multiple video sources.

Alternate Mission Equipment:

The program procures electronic warfare and airborne photography/reconnaissance equipment to provide countermeasure capabilities against changing enemy electronic defenses or for other unpredicted and urgent operational requirements.

Range Improvement:

This is a joint Air Force/Navy program to procure pods which provide accurate kill/no kill data for assessment of tactics and aircrew training at the Air Combat Maneuvering Range. The pod is mounted on a standard launch rail and transmits attitude, airspeed, altitude, angle of attack, and weapons information to ground sites.

Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN):

Includes procurement of new pods to provide a night, under weather capability on the F-16 and F-15E aircraft to attack ground targets on low level mission in a single pass.

NAVSTAR Global Positioning System:

NAVSTAR GPS is a space-based radionavigation system which will provide users their position (accurate to 16 meters), velocity (.1 meters per sec) and time (.1 microsecond) on a 24 hour per day, all weather, worldwide basis. The GPS satellite segment is in production and will provide an initial operational capability in FY 1987 and its full capability in FY 1988. The DoD policy is for GPS to replace all existing radionavigation systems on military aircraft by the mid 90s. This appropriation funds NAVSTAR GPS user avionics for all USAF aircraft plus the Air Force share of GPS production start-up costs.

Special Operations Forces:

Funds are for nonrecurring engineering support, software development date, and install effort for the gunship and

Sailplanes:

Provides one backup sailplane and one to replace a crash loss to the Air Force Academy for their flight training program.

GBU-15 (AGM-130):

The AGM-130 is a rocket powered version of the GBU-15 (glide bomb unit). It is a data link precision guided weapon. The airborne data link pods, data and associated test equipment provide the applicable aircraft with the standoff capability to guide the AGM-130/GBU-15 to a designated target.

Training (Offensive):

Funds are to support the Strategic Training Route Complex (STRC), and procurement of Seekscore and other training equipment. The STRC will be composed of a multitude of interconnecting low level routes which will be equipped to provide a multi-threat electronic warfare environment and radar bomb scoring capability.

Common ECM Equipment

This program represents a new P-1 line item directed by the Congress in the FY 87 Appropriations Act. Common ECM Equipment will include items such as Electronic Countermeasure ECM pods, test equipment and Self Protection Systems for the B-52 and F/FB/EF-111 aircraft.

(In Millions of Dollars)

	FY 1988	FY 1989	FY 1990
ECM Pods	155.0	194.9	152.9
Self Protection Systems	66.9	71.7	112.6
Total Common ECM Equipment	221.9	266.6	265.5

Justification for the various line items is as follows:

ECM Pods:

Includes the procurement of new pods, such as the ALQ-131, and update of inventory pods, such as the ALQ-119, to maintain capability to counter the latest Soviet threats. The pods are used on several tactical strike/reconnaissance aircraft.

Self Protection Systems (SPS):

This program provides improvements to the F/FB and EF-111 and B-52 SPS to counter increased Soviet threat.

COMPARISON OF FY 1986 PROGRAM REQUIREMENTS AS REFLECTED IN FY 1987 BUDGET WITH FY 1986 PROGRAM REQUIREMENTS AS SHOWN IN FY 1988 BUDGET

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	Total Program Requirements Per 1987 Budget	Total Program Requirements Per 1988 Budget	Increase + or Decrease -
Combat Aircraft	$10,716,500	$9,825,646	-$890,854
Airlift Aircraft	2,476,500	2,092,084	-384,416
Trainer Aircraft	0	169,936	+169,936
Other Aircraft	296,500	600,153	+303,653
Modification of In-Service Aircraft	2,885,317	2,698,690	-186,627
Aircraft Spares and Repair Parts	3,811,105	3,469,522	-341,583
Aircraft Support Equipment and Facilities	2,844,602	2,561,573	-283,029
Reimbursable Program	199,500	223,122	+23,622
Total Fiscal Year Program	$23,230,024	$21,640,726	-$1,589,298

EXPLANATION BY BUDGET ACTIVITY

1. Combat Aircraft - (-$890.9 million). The decrease to the FY 1986 program is a result of Gramm-Rudman reductions (ACM Integration, -4.8 million; B-1B, -248.2 million; Air Defense Competition, -9.4 million; F-15 C/D/E, -94.7 million; F-16 C/D, -150.6 million; KC-10A, -20.9 million; AC-130U, -1.6 million; MC-130H, -2.9 million), recissions (B-1B, -39.8 million; F-15 C/D/E, -77.4 million; F-16 C/D, -123.1 million KC-10A, -3.0 million) and prior approval and below threshold reprogrammings (ACM Integration, -19.8 million; F-15 C/D/E, -9.9 million; F-16 C/D, -17.2 million; AC-130U, -7.0 million; MC-130H, -60.4 million).

2. Airlift Aircraft - (-$384.4 million). The decrease to the FY 1986 program is a net result of Gramm-Rudman reductions (C-5B, -103.4 million; C-20, -7.4 million; Air Force One replacement, -13.7 million), a recission (C-5B, -4.1 million), prior approval and below threshold reprogrammings (C-5B, +5.5 million; C-20, +5.0 million) and the movement of Air Force One replacement into the Other Aircraft line (-266.3 million).

3. Trainer Aircraft - (+$169.9 million). The increase is the net result of Congressional denial of the AF position not to procure the T-46A (+178.9 million) and a Gramm-Rudman reduction for the T-46A (-9.0 million).

4. Other Aircraft - (+$303.7 million). The increase is the net result of Gramm-Rudman reduction (HH-60, -3.2 million; TR-1/U-2, -14.8 million), a recission (TR-1/U-2, -8.1 million), movement to Other Aircraft line of the Air Force One replacement (+266.3 million), prior approval and below threshold reprogrammings (CAP, +9.3 million; TR-1/U-2, -10.1 million) and the denial of an AF reprogramming action (HH-60, +64.4 million).

5. Modification of In-Service Aircraft - (-$186.6 million). The decrease is a net result of Gramm-Rudman reductions (-146.5 million), recissions (-66.5 million), and prior approval and below threshold reprogrammings (+26.4 million).

6. Aircraft Spares and Repair Parts - (-$341.6 million). The decrease is the result of Gramm-Rudman reductions (-191.3 million), recissions (-132.8 million), and prior approval and below threshold reprogrammings (-17.5 million).

7. Aircraft Support Equipment and Facilities - (-$283.0 million). The decrease is the result of Gramm-Rudman reductions (-117.1 million), recissions (-155.7 million), and prior approval and below threshold reprogrammings (-10.3 million).

COMPARISON OF FY 1986 FINANCING AS REFLECTED IN FY 1987 BUDGET WITH FY 1986 FINANCING AS SHOWN IN FY 1988 BUDGET

(In Thousands of Dollars)

	Financing Per FY 1987 Budget	Financing Per FY 1988 Budget	Increase(+) or Decrease(-)
Program Requirements	23,230,024	21,640,726	-1,589,298
Program requirements (Service Account)	(23,030,524)	(21,417,604)	(-1,612,920)
Program requirements (Reimbursable)	(199,500)	(223,122)	(+23,622)
Less:			
Anticipated Reimbursements	199,500	223,122	+23,622
Transferred From Other Accounts	10,600	10,600	0
Add:			
Transferred to other accounts	56,600	10,147	-46,453
Unobligated Balance to finance subsequent year budget plans	178,900	1,356,242	+1,177,342
Appropriation	23,255,424	22,783,993	-471,431

EXPLANATION OF CHANGES IN FINANCING

The Fiscal Year 1986 program has decreased $1,589,298 million since submission of the FY 1987 Budget. Adjustments by category of financing are explained below.

1. Anticipated Reimbursements. The increase of $23,622 thousand is due to receipt of more customer orders than anticipated.

2. Transfer to Other Accounts. The decrease of $46,453 thousand is due to fewer than anticipated reprogrammings from the Aircraft Procurement Appropriation.

3. Unobligated Balance to Finance Subsequent Year Budget Plans. The increase of $1,177,342 million is due to the Air Force deciding not to program funds for procurement of the T-46A, Gramm-Rudman Hollings reductions, and Congressional recissions.

4. Appropriation. The decrease of $471,431 is the result of Congressional adjustments to the FY 1986 Budget.

COMPARISON OF FY 1987 PROGRAM REQUIREMENTS AS REFLECTED IN FY 1987 BUDGET WITH FY 1987 PROGRAM REQUIREMENTS AS *SHOWN IN FY 1988 BUDGET*

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	Total Program Requirements Per 1987 Budget	Total Program Requirements Per 1988 Budget	Increase + or Decrease -
Combat Aircraft	$6,166,500	$5,080,414	-$1,086,086
Airlift Aircraft	2,189,178	1,932,891	-256,287
Trainer Aircraft	0	0	0
Other Aircraft	96,149	89,464	-6,685
Modification of In-Service Aircraft	3,101,311	3,046,753	-54,558
Aircraft Spares and Repair Parts	3,477,903	2,972,446	-505,457
Aircraft Support Equipment and Facilities	4,096,359	3,919,973	-176,386
Reimbursable Program	188,000	224,062	+36,062
Total Fiscal Year Program	$19,315,400	$17,266,003	-$2,049,397

EXPLANATION BY BUDGET ACTIVITY

1. Combat Aircraft - (-$1086.1 million). The decrease is a result of Congressional adjustments to the FY 1987 request (Air Defense Competition, -7.6 million; F-15 D/E, -240.4 million; F-16 C/D, -774.6 million; EC-10A, -17.0 million; AC-130H, -18.2 million; MC-130H, -4.5 million) and the result of prior approval and below threshold reprogrammings (Air Defense Competition, -1.3 million; F-15 D/E, -10.0 million; F-16 C/D, -12.4 million).

2. Airlift Aircraft - (-$256.3 million). The decrease is a result of a Congressional adjustments to the FY 1987 request (C-5B -53.6 million; C-17, -168.2 million; Air Force One replacement, -34.5 million).

3. Trainer Aircraft - (0 million). No change.

4. Other Aircraft - (-$6.7 million). The decrease is a result of Congressional adjustments to the FY 1987 request (TR-1/U-2, -6.7 million).

5. Modification of In-Service Aircraft - (-$54.6 million). The decrease is a result of Congressional adjustments to the FY 1987 request.

6. Aircraft Spares and Repair Parts - (-$505.5 million). The decrease is a result of Congressional adjustments to the FY 1987 request.

7. Aircraft Support Equipment and Facilities - (-$176.4 million). The decrease is the result of Congressional adjustments to the FY 1987 request (-270.1 million) and the result of prior approval and below threshold reprogrammings (+93.8 million).

8. Reimbursable Program - (+$36.1 million). The increase is a result of receipt of more customer orders than anticipated.

COMPARISON OF FY 1987 FINANCING AS REFLECTED IN FY 1987 BUDGET WITH FY 1987 FINANCING AS SHOWN IN FY 1988 BUDGET

(In Thousands of Dollars)

	Financing Per FY 1987 Budget	Financing Per FY 1988 Budget	Increase(+) or Decrease(-)
Program Requirements	19,315,400	17,266,003	-2,049,397
Program requirements (Service Account)	(19,127,400)	(17,041,941)	(-2,085,459)
Program requirements (Reimbursable)	(188,000)	(224,062)	(+36,062)
Less:			
Anticipated Reimbursements	188,000	224,062	+36,062
Transferred from Other Accounts	-	70,060	+70,060
Add:			
Unobligated Balance to Finance Subsequent Year Budget Plan	-	159,400	+159,400
Appropriation	19,127,400	17,131,281	-1,996,119

EXPLANATION OF CHANGES IN FINANCING

The Fiscal Year 1987 program has decreased $2,049,3974 million since submission of the FY 1987 budget. Adjustments by category of financing are explained below:

1. Reimbursements. The increase of $36,062 thousand is due to receipt of more customer orders than anticipated.

2. Transferred from Other Accounts. The increase of $70,060 thousand is due to an anticipated reprogramming into the Aircraft Procurement Appropriation.

3. Unobligated Balance to Finance Subsequent Year Budget Plans. The decrease of $159,400 thousand is the result of Air Force decision not to procure the T-46 aircraft.

4. Appropriation. The decrease of $1,996,119 million is the result of Congressional Adjustment to the FY 1987 Budget.

FLIGHT SIMULATOR AND OTHER AIRCRAFT TRAINING EQUIPMENT
(Dollars in Millions)

APPROPRIATION Aircraft Procurement, Air Force — DATE 5 JAN 87

WEAPON SYSTEM	EQUIPMENT NOMENCLATURE	P-1 LINE ITEM	Prior Year 86 QTY	Prior Year 86 AMT	Current Year 87 QTY	Current Year 87 AMT	Budget Year 88 QTY	Budget Year 88 AMT	Budget Year 89.0 QTY	Budget Year 89.0 AMT
B-1B	WST	61	2.0	58.0		1.5		1.6		4.9
	MT	61	2.0	12.8						
	SPARES	60		2.2						
	TOTAL			72.0		1.5		1.6		4.9
F-15 A/C	OFT	4	1.0	17.0						
F-15E	WST	4	1.0	32.2	1.0	36.7	1.0	32.4	2.0	75.8
	CPT	4		1.7		1.0		0.5		0.5
	TOTAL			50.9		37.7		32.9		76.3
F-16	WST	6	3.0	42.9	2.0	111.2	3.0	44.0	1.0	24.7
	MTE	6		37.1		26.6		29.4		46.2
	TOTAL			80.0		137.8		73.4		70.9
C-130	VIS	61	2.0	13.6						
	ATS	61				1.0		0.4		1.1
	TOTAL			13.6		1.0		0.4		1.1
MC-130	MTE	61				11.3				6.7
AC-130	MTE	61						0.9		5.6
F-4 (GBU-15)		61					2.0	2.5		
F-111 (GBU-15)		61					1.0	2.1		
KC-135	AFLC	61						1.5		1.3
B-52	AFLC	61				3.7				
EF-111	AFLC	61						1.7		
	GRAND TOTAL			216.5		193.0		117.0		166.8

FLIGHT SIMULATOR DATA SHEET

BUDGET YEAR PROGRAM

Simulator Model: F-15E Weapon System Trainer

Aircraft System Supported: F-15E

Description of Simulator: The F-15E WST will train both pilot and weapon system officers and will include Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN) simulation. The trainers will be a modification to the design of the F-15 Operational Flight Trainer already being manufactured by Goodyear Aerospace Corp. Six WSTs will be procured.

Development Status: In FY 1986, the Preliminary Design Review (PDR) and Critical Design Review were completed. Detailed design of the flight station, instructor station, computational system, and LANTIRN simulation continued. Fabrication of cabling assemblies began and the production contract was awarded. In FY 1987, contractors in plant tests will be completed and the production option for unit #3 will be exercised.

Funding Data: (In Millions)	FY 1986	FY 1987	FY 1988	FY 1989
Quantity	(1)	(1)	(1)	(2)
RDT&E	14.6	6.4	0.2	0
Procurement	33.9	37.7	32.9	76.3
MILCON	---	---	---	---
TOTAL	$48.5	$44.1	$33.1	$76.3

Basis for FY 1988/89 Request: In FY 1988 the prototype unit will be delivered and production option for unit 4 will be exercised. In FY 1989, production options for units 5 and 6 will be exercised.

Contract Data: FFP to Goodyear Aerospace Corp.

Cost History Comparison: N/A

FLIGHT SIMULATOR DATA SHEET

BUDGET YEAR PROGRAM

Simulator Model: F-16 Weapon System Trainer (WST).

Aircraft System Supported: F-16 aircraft.

Description of Simulator: The F-16 WST is comprised of an Operational Flight Trainer (OFT), an Electronic Warfare Training Device (EWTD) and a Digital Radar Landmass Simulation (DRLMS). The EWTD will be used to train pilots in the electronic warfare aspects of their mission. The DRLMS will simulate the Air-To-Ground (A/G) modes and displays of the F-16 Fire Control Radar (FCR) using a Defense Mapping Agency (DMA) Digital Data Base (DDB). Three WSTs deployed to the training sites will be equipped with a limited field-of-view Night Visual System (NVS). The WSTs are developed using a "Building-Block" and phased approach in consonance with the Tactical Air Forces (TAF) F-16 aircraft deployment plan.

Development Status: N/A

Funding Data: (In Millions)	FY 1986	FY 1987	FY 1988	FY 1989
Quantity	(3)	(2)	(3)	(1)
RDT&E	---	---	---	---
Procurement	31.7	85.5	32.5	18.3
MILCON	---	---	---	---

Basis for FY 1988/89 Request: F-16 WST FY 1988/89 budget is based on the following requirements:

- F-16C Operational Flight Trainers (OFTs) to provide "safety-of-flight" trainers for active units.

- Improved Electronic Warfare Training Devices (IEWTDs) for F-16C EW training. Requirement for IEWTDs stressed by F-16 WST General Officer Review, Dec 85.

- LANTIRN simulators to be integrated with Block 40 OFTs to provide LANTIRN training.

- Block 40 Operational Flight Trainer (OFT) update for modification and production incorporation. Required to provide "safety-of-flight" OFTs for Block 40 aircraft.

Contract Data:

OFT Blk 10/15 and Blk 25/30	FFP	F33657-84-C-0173, Options
OFT Blk 30G	FFP	F33657-82-C-0138, Options
IEWTD	FFP	New Contract
LANTIRN	FPI	F33657-86-C-2141

The contractor for the Operational Flight Trainer and LANTIRN simulator is the Singer Company Link Division, Binghamton, NY. The DRLMS is built by the General Electric Co, Simulation and Control Systems Department, Daytona Beach, FL. The EWTD is built by the AAI Corporation of Cockeysville, MD.

Cost History Comparison: The changes from FY 87 President's Budget to FY 88 request are done to match the aircraft beddown.