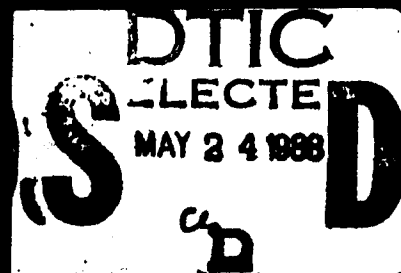


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## REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS N/A	
2a. SECURITY CLASSIFICATION AUTHORITY N/A			3. DISTRIBUTION / AVAILABILITY OF REPORT Unlimited; Approved for Public Distribution	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE N/A				
4. PERFORMING ORGANIZATION REPORT NUMBER(S) N/A			5. MONITORING ORGANIZATION REPORT NUMBER(S) N/A	
6a. NAME OF PERFORMING ORGANIZATION US Army Materiel Command		6b. OFFICE SYMBOL (If applicable) N/A	7a. NAME OF MONITORING ORGANIZATION N/A	
6c. ADDRESS (City, State, and ZIP Code) 5001 Eisenhower Avenue Alexandria, VA 22333			7b. ADDRESS (City, State, and ZIP Code) N/A	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION LABCOM		8b. OFFICE SYMBOL (If applicable) AMLSC-PT-PO	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code) 2800 Powder Mill Rd. Adelphi, MD 20783			10. SOURCE OF FUNDING NUMBERS	
			PROGRAM ELEMENT NO.	PROJECT NO.
11. TITLE (Include Security Classification) (U) DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES				
12. PERSONAL AUTHOR(S) N/A				
13a. TYPE OF REPORT		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 861030
15. PAGE COUNT 156				
16. SUPPLEMENTARY NOTATION Management Analysis Report				
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Research, Military Research, Budgets, Military Budgets, Department of Defense, Research Management, Air Force Research, Army Research, Navy Research, Research	
FIELD	GROUP	SUB-GROUP		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report was prepared for the US Army Materiel Command, at the direction of the Deputy Chief of Staff for Research, Development, and Acquisition. This edition is a continuation of the series of reports that was initiated in 1966. Each in-house RDT&E activity of the Department of Defense is described on one page in this compilation. The data for 1986 are summarized in tables preceding the main text. All current DoD RDT&E activities which meet the report requirement of having at least 25% of their budget in RDT&E funds are listed in the contents alphabetically within each department. Some facilities which do not meet the requirement previously noted are also listed by special request. Organizational changes during FY 1986 appear in Appendix I. Appendix II contains many of the definitions used in this report. Appendix III lists selected abbreviations and acronyms. Appendix IV lists selected key words with page references. Every effort has been made to provide accurate information, particularly fiscal and personnel data. All numbers and statements have been thoroughly examined. It is hoped that, by the means of widespread dissemination, at the				
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL William L. Noll			22b. TELEPHONE (Include Area Code) (202) 694-0205	
			22c. OFFICE SYMBOL ODUSD (R&AT/RLM)	

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18. facilities, laboratories.

19. Director and Commanding Officer level as well as at the bench level, This document will encourage communication concerning common problems of interest both among the laboratories within each Service and among the individual Services.

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DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES

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Prepared for:

US ARMY MATERIEL COMMAND  
5001 Eisenhower Avenue  
Alexandria, Virginia 22333

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## FOREWORD

This report was prepared for the US Army Materiel Command at the direction of the Deputy Chief of Staff for Research, Development, and Acquisition. This edition is a continuation of the series of reports that was initiated in 1966.

Each In-House RDTE Activity of the Department of Defense is described on one page in this compilation. The data for 1986 are summarized in tables preceding the main text.

All current DOD RDTE Activities which meet the report requirement of having at least 25 per cent of their budget in RDTE Funds are listed in the contents alphabetically within each department. Some facilities which do not meet the requirement previously noted are also listed by special request. Organizational changes during FY 1986 appear in appendix I.

DOD instruction 7700.9, which has been the basis for this report since its inception, has been replaced by a tri-service regulation, AR 70-63 NAVCOMPTIST 7044.5E, AFR 80-26, DNA 7700.9A, Entitled DOD In-House RDTE Annual Activities Report, 1 September 1981. Appendix II contains many of the definitions used in this report and is provided as an additional aid in use of the report. Appendix III lists selected abbreviations and acronyms. Appendix IV lists selected key words with page references.

Every effort has been made to provide accurate information, particularly fiscal and personnel data. All numbers and statements have been thoroughly examined.

Although considerably more data is accumulated than published in this report, all data is used by numerous organizations such as the Department of Defense, Office of Technology Assessment, Army Audit Agency, various Committees of the Congress, and the General Accounting Office among others. Availability of this data also allows timely and accurate information to be provided without continual recourse to the appropriate field activity.

It is desired that this publication be given widespread distribution in the DOD Laboratories as an internal management document at the Director and Commanding Officer level as well as at the bench level in order to allow personnel an opportunity to familiarize themselves with the functional capabilities of other DOD Laboratories. It is hoped that by this means laboratory scientists and engineers will be encouraged to communicate with each other on common problems of interest to their service laboratories as well as to communicate with laboratories of the other services.

Additional copies of this document may be obtained by writing the Defense Technical Information Center, Building 5, Cameron Station, Alexandria, Virginia 22314.



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# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

### PROGRAM DATA FOR FY 1986

	(MILLIONS)
TOTAL ANNUAL PROGRAM	15,816.236
TOTAL INHOUSE PROGRAM	6,199.402
TOTAL RDTE PROGRAM	10,227.854
TOTAL INHOUSE RDTE	3,781.582
TOTAL ANNUAL OPERATING_COST	1,391.041

### PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	24676	698	7971
CIVILIAN	74584	3993	33272
TOTAL	99260	4691	41243

### PHYSICAL FACILITIES (END OF FY 1986)

ACRES	6264709
-------	---------

### SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	35,368.538
ADMINISTRATIVE	11,875.224
OTHER	56,004.330
TOTAL	103,248.092

### COST (MILLIONS)

REAL PROPERTY	6,072.806
EQUIPMENT	6,096.988
TOTAL	12,169.794

TABLE 1. ARMY RESEARCH ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	INHOUSE	TOTAL	REVENUE	TOTAL	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	PROP
ABORIGINAL RESEARCH LABORATORY	9,607	6,764	6,075	6,032	69	67	9	12	31	31				
AIR DEFENSE ARTILLERY BOARD	9,972	8,300	5,598	4,486	97	95	0	0	13	15				
AIRBORNE & SPECIAL OPS TEST BOARD	10,381	10,137	3,342	3,098	42	72	0	0	0	10				
ARMAMENT RESEARCH, DEV AND ENG CENTER	376,000	188,150	324,800	162,400	87	4355	0	0	0	62	1986			
ARMOR AND ENGINEER BOARD	17,192	17,192	9,097	9,097	176	129	0	1	62	36				
ARMY RESEARCH OFFICE	121,176	0,096	121,080	0,000	2	129	0	45	1	45				
ATMOSPHERIC SCIENCES LABORATORY	43,045	25,559	43,024	25,538	58	403	0	32	3	127				
AVIATION BOARD	6,752	6,752	4,200	4,200	44	46	0	3	21	23				
AVIATION DEVELOPMENT TEST ACTIVITY	25,902	25,902	11,341	11,341	138	95	0	1	29	36				
AVIATION ENGINEERING FLIGHT ACTIVITY	10,821	9,976	8,040	7,195	63	108	0	0	24	44				
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	104,412	39,769	100,360	37,305	16	354	1	26	9	253				
AVIONICS RAD ACTIVITY	30,677	14,921	21,234	11,626	17	259	0	5	11	146				
BALLISTIC RESEARCH LABORATORY	149,302	63,723	119,199	50,745	19	738	2	109	11	439				
BELVOIR RSCH, DEV AND ACQ CTR	190,262	54,634	140,233	39,504	59	906	2	27	15	416				
BIOLOGICAL RAD LABORATORY	13,104	7,250	10,973	5,919	29	91	4	14	21	41				
CHEMICAL RSCH, DEV AND ENG CTR	218,903	84,806	139,371	62,569	100	1029	3	80	44	693				
CTR FOR COM/AUTOMATIC DATA PROCESSING	82,426	30,717	69,746	22,426	15	469	0	17	9	344				
CTR FOR ELECTRONIC WAREFARE	277,090	14,194	85,554	8,462	27	356	0	0	9	98				
CTR FOR NIGHT VISION & ELECTRO-OPTICS	200,824	91,369	127,927	35,190	33	453	1	35	11	234				
CTR FOR SIGNALS WAREFARE	181,075	6,317	56,718	4,297	46	179	0	0	12	67				
COLD REGIONS RESEARCH & ENGINEERING LAB	23,698	16,476	12,338	7,773	18	278	0	35	5	116				
COLD REGIONS TEST CENTER	15,499	13,499	7,744	7,744	255	25	0	0	35	17				
COMBAT SYSTEMS TEST ACTIVITY	115,080	98,250	52,697	42,855	217	959	6	8	48	337				
COMMUNICATIONS AND ELECTRONICS BOARD	5,360	5,360	1,998	1,998	52	47	0	0	45	14				
CONSTRUCTION ENGINEERING RESEARCH LAB	43,328	24,965	31,288	18,773	4	227	0	34	4	172				
DUGWAY PROVING GROUND	62,583	59,239	52,498	49,154	175	826	3	21	154	104				
ELECTRONIC PROVING GROUND	75,604	53,647	46,804	29,019	599	213	0	1	40	90				
ELECTRONIC TECHNOLOGY & DEVICES LAB	97,454	23,905	89,221	16,359	1	321	0	36	1	185				
ENGINEER TOPOGRAPHIC LABORATORIES	67,099	18,428	62,954	15,662	12	307	0	16	11	149				
ENGINEER WATERWAYS SUPERINTENDENT STA.	121,746	87,013	60,524	42,214	10	1658	1	113	10	644				
FIELD ARTILLERY BOARD	9,524	9,524	3,568	3,568	112	60	0	0	34	6				
HARRY DIAMOND LABORATORIES	166,529	55,282	105,794	32,296	3	666	3	48	3	418				
HUMAN ENGINEERING LABORATORY	22,677	14,219	21,680	13,230	36	169	3	15	18	122				
INFANTRY BOARD	7,168	7,168	3,618	3,618	107	74	0	2	2	9				
INSTITUTE OF OPTICAL RESEARCH	6,570	4,480	4,353	2,263	58	18	9	2	34	4				
INSTITUTE OF SURGICAL RESEARCH	10,228	10,228	3,450	3,450	155	78	17	4	56	25				
INTELLIGENCE AND SECURITY BOARD	10,311	4,827	3,550	3,444	81	35	0	0	54	14				
LETTERMAN ARMY INSTITUTE OF RESEARCH	25,020	18,036	18,128	11,144	142	99	38	20	101	58				
MATERIALS TECHNOLOGY LABORATORY	53,671	38,466	46,235	33,691	15	588	0	69	8	263				
MATERIAL SYSTEMS ANALYSIS ACTIVITY	35,440	23,733	29,678	19,601	28	437	0	16	13	342				
MEDICAL MATERIAL DEVELOPMENT ACTIVITY	55,021	6,501	53,517	4,997	23	33	10	5	31	13				
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	14,977	10,675	8,298	7,226	60	181	23	1	47	32				
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	32,086	19,284	28,177	15,375	85	158	26	22	46	74				
MEDICAL RSCH INST OF INSPECTION DIS.	51,006	30,493	42,122	21,609	293	187	47	38	80	99				
MISSILE RSCH, DEV AND ENG CTR	265,574	100,458	217,641	54,393	54	1319	0	71	33	809				

MATICE RESEARCH, DEVELOPMENT & ENG'G CNTR	90.334	60.361	65.924	41.534	101	977	2	70	30	379
RSCN INST FOR BEHAVIORAL & SOCIAL SCIENCES	73.065	24.308	67.747	72.941	56	342	2	167	36	234
RSCN INST OF ENVIRONMENTAL MEDICINE	10.058	9.124	7.258	6.324	72	81	17	27	44	59
TANK AUTOMOTIVE ROLES CENTER	131.071	38.638	110.183	22.959	27	763	0	14	16	375
TROPIC TEST CENTER	5.692	5.499	3.191	2.998	69	62	0	2	16	36
VULNERABILITY ASSESSMENT LABORATORY	51.369	14.998	49.306	13.783	66	201	0	3	1	118
WALTER REED ARMY INSTITUTES OF RESEARCH	125.641	64.435	104.118	42.912	433	547	99	65	234	227
WHITE SANDS MISSILE RANGE	281.950	220.186	229.764	179.256	706	2671	5	66	281	1093
YUMA PROVING GROUND	77.031	40.292	52.771	27.335	323	651	0	2	38	192

TOTALS	4345.787	1940.605	3109.037	1333.148	5585	25691	333	1402	2015	11933
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TABLE 2. ARMY RESEARCH ACTIVITIES FACILITY DATA, FY 1966

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROPERTY	EQUIPMENT
	ACRES	LABORATORY	ADMIN	OTHER		
AEROMEDICAL RESEARCH LABORATORY	53	87,468	10,120	33,260	7,603	16,356
AIR DEFENSE ARTILLERY BOARD						
PT. BLISS, TX	0	11,220	37,090	46,490	1,692	15,104
ATROCHE & SPECIAL OPS TEST BOARD	27	3,978	40,795	44,183	0.000	7,920
ARMAMENT RESEARCH, DEV AND ENG CENTER	6491	2,410,000	945,000	712,000	712,000	190,000
ARMOR AND ENGINEER BOARD						
PT. KNOX, KY	2	38,062	50,454	88,069	1,646	30,854
ASCH TRIANGLE PREL. BC	2	0.000	29,420	0.000	0.000	0.868
USMA, IN	15	32,379	81,124	46,989	2,298	27,990
AVIATION BOARD						
PT. RUCKER, AL	0	0.000	18,826	20,470	0.000	1,900
AVIATION DEVELOPMENT TEST ACTIVITY						
PT. RUCKER, AL	1194	0.000	53,829	130,529	2,175	39,755
AVIATION ENGINEERING FLIGHT ACTIVITY	19	9,200	1,600	124,800	4,042	9,466
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	127	88,848	58,673	16,370	2,348	16,761
AVIONICS RES ACTIVITY	2	52,450	13,665	19,100	0.000	19,014
BALLISTIC RESEARCH LABORATORY	1970	380,000	117,000	120,000	15,000	70,000
DELVOIR RSCH, DEV AND ACQ CTR	1052	433,533	270,281	84,902	20,238	37,451
BIOMEDICAL RES LABORATORY	5	23,691	42,773	22,569	4,042	6,195
CHEMICAL RSCH, DEV AND ENGR CTR	3471	733,055	294,129	298,821	25,564	63,126
CNTR FOR COM/AUTOMATIC DATA PROCESSING	0	62,000	70,000	40,000	0.000	17,893
CNTR FOR ELECTRONIC WARFARE	106	112,278	35,107	8,189	6,775	8,070
CNTR FOR NIGHT VISION & ELECTRO-OPTICS	0	80,000	44,473	37,000	12,244	42,627
CNTR FOR SIGNALS WARFARE	10	9,710	35,475	7,440	1,896	9,343
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107,797	0.310	0.027	16,684	12,545
COLD REGIONS TEST CENTER	647155	0.000	35,304	167,282	10,336	10,854
COMBAT SYSTEMS TEST ACTIVITY	22865	720,999	4,351	348,742	22,176	44,465
COMMUNICATIONS AND ELECTRONICS BOARD						
PT. GORDON, GA	7	0.000	19,625	1,823	0.253	7,810
CONSTRUCTION ENGINEERING RESEARCH LAB	31	112,949	45,876	30,335	10,000	11,000
BUGWAY PROVING GROUND	808123	159,561	198,388	1,591,684	57,000	43,000
ELECTRONIC PROVING GROUND	35683	2,316	28,042	284,477	11,000	21,700
ELECTRONIC TECHNOLOGY & DEVICES LAB	0	76,919	56,900	15,375	0.000	19,628
ENGINEER TOPOGRAPHIC LABORATORIES	33	90,722	7,000	13,300	14,200	16,400
ENGINEER WATERWAYS EXPERIMENT STA.	3073	1,746,808	353,645	176,809	44,881	53,471
FIELD ARTILLERY BOARD						
PT. BELL, OK	0	13,790	38,080	16,939	0.000	3,522
HARRY DIAMOND LABORATORIES	2316	507,829	112,019	120,512	53,921	60,393
HUMAN ENGINEERING LABORATORY	72	111,524	7,056	21,400	10,826	12,122
INFANTRY BOARD						
PT. BENNING, GA	1	0.000	32,371	37,837	3,000	1,688
INSTITUTE OF ORBITAL RESEARCH	0	10,852	5,696	1,200	0.000	4,455
INSTITUTE OF SURGICAL RESEARCH	1	26,424	1,800	22,400	6,531	6,111
INTELLIGENCE AND SECURITY BOARD	10	4,000	6,627	21,667	0.616	9,710
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	119,204	56,941	112,174	45,661	14,052
MATERIALS TECHNOLOGY LABORATORY	37	352,000	88,261	48,375	40,073	25,280
MATERIEL SYSTEMS ANALYSIS ACTIVITY	4	8,140	1,276	1,715	2,870	2,500
MEDICAL MATERIAL DEVELOPMENT ACTIVITY	0	0.000	12,864	0.000	0.532	0.240
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	0	0.000	71,136	0.000	0.000	0.000
MEDICAL RESEARCH TEST OF CHEMICAL DEFENSE	31	36,246	22,945	99,029	9,384	17,742
MEDICAL RSCH TEST OF INFECTIOUS DIS.	388	104,136	26,618	205,841	21,103	20,575
MISSILE RSCH, DEV AND ENGR CTR	11000	729,000	257,000	200,000	159,232	138,516
NATICE RESEARCH, DEVELOPMENT & ENGR CTR	174	412,870	58,018	335,065	29,190	1,296

RECH INST FOR BEHAVIORAL & SOCIAL SCIENCES	ALEXANDRIA, VA	0	53,155	14,000	6,200	0.735	0.862
RECH INST OF ENVIRONMENTAL MEDICINE	BATICK, WA	1	46,621	6,163	24,790	4.084	10.092
TAKE AUTOMOTIVE ROAD CENTER	WARREN, MI	11	246,562	123,756	125,274	255.173	134,463
TROPIC TEST CENTER	PT. CLAYTON, PANAMA	2624	18,000	35,925	83,756	2.378	4.988
VULNERABILITY ASSESSMENT LABORATORY	NSMR, MN	0	137,000	28,000	39,000	6.386	64,350
WALTER REED ARMY INSTITUTE OF RESEARCH	WASHINGTON, D.C.	203	383,274	61,600	0.000	10.080	31.055
WHITE SANDS MISSILE RANGE	NSMR, NM	1741360	621,292	674,356	4,368,390	239.179	229,942
YUMA PROVING GROUND	YUMA, AZ	837904	1,144	79,427	1,511,678	65.737	129,384
TOTALS		4127645	11,529,206	4,821,390	11,834,477	1972.784	1789.564

TABLE 3. NAVY RDT&amp;E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA											
	TOTAL	INHOUSE	TOTAL RDT&E	INHOUSE RDT&E	TOTAL	CIV	MIL	PND	PND CIV	PND MIL	PROP	PROP CIV	PROP MIL	PROP	PROP CIV	PROP MIL
AEROSPACE MEDICAL RESEARCH LABORATORY	8,999	8,999	7,184	7,184	40	55	12	14	18	32						
AIR DEVELOPMENT CENTER	523,994	213,882	266,762	129,253	261	2568	3	62	56	1524						
AIR PROPULSION CENTER	72,921	46,350	67,939	41,855	8	679	0	1	0	203						
AIR TEST CENTER	348,563	222,385	177,992	110,891	1487	2399	5	5	216	682						
ATLANTIC FLEET WEAPONS TRAINING FACILITY	41,618	6,474	0,350	0,000	94	43	0	0	46	32						
BIODYNAMICS LABORATORY	4,766	4,267	3,909	3,430	34	53	5	4	0	16						
BIOSCIBRUS LABORATORY	3,198	3,198	2,847	2,847	9	4	3	0	9	0						
CIVIL ENGINEERING LABORATORY	50,415	28,724	33,227	19,576	18	380	0	32	8	223						
CLOTHING & TEXTILE RESEARCH FACILITY	4,210	3,711	2,608	2,109	1	56	0	1	1	40						
COASTAL SYSTEMS CENTER	133,931	79,934	75,326	48,269	130	1131	0	47	18	658						
DAVID TAYLOR SHIP R&D CENTER	291,292	188,999	218,385	145,577	77	2769	2	124	23	1501						
DENTAL RESEARCH INSTITUTE	2,399	2,236*	1,112	0,949	29	15	0	4	11	6						
ENVIRONMENTAL PRODUCTION RESEARCH FACILITY	7,960	3,613	6,540	2,673	15	45	0	12	6	40						
EXPLOSIVE ORDNANCE DISPOSAL TECH CTR	37,922	27,680	19,827	10,173	70	206	0	1	13	63						
HEALTH RESEARCH CENTER	5,213	3,811	4,184	2,782	29	63	7	13	10	27						
MEDICAL RESEARCH INSTITUTE	30,428	27,872	20,784	18,228	239	189	39	41	91	99						
MEDICAL RESEARCH UNIT NO. 2	4,489	4,489	3,362	3,362	25	48	9	4	24	44						
MEDICAL RESEARCH UNIT NO. 3	5,427	5,427	4,437	4,437	28	205	9	18	14	66						
NAVAL RESEARCH LABORATORY	354,115	245,601	251,700	164,586	97	3333	1	706	38	1498						
OCEAN R&D ACTIVITY	45,134	23,976	41,662	20,819	15	337	0	72	11	188						
OCEAN SYSTEMS CENTER	484,902	205,794	302,231	135,584	277	2967	3	192	89	1548						
OFFICE OF NAVAL RESEARCH	1315,685	47,324	1313,439	45,078	39	476	4	82	34	124						
ORDNANCE MISSILE TEST STATION	14,814	4,264	9,705	2,911	89	60	0	0	12	4						
PACIFIC MISSILE TEST CENTER	808,632	411,974	270,421	175,400	1043	4091	12	18	392	1132						
PERSONNEL RESEARCH & DEVELOPMENT CTR	38,822	20,829	21,494	15,418	26	320	0	95	12	225						
SUBMARINE MEDICAL RESEARCH LABORATORY	4,817	4,521	3,117	2,853	34	55	9	0	17	18						
SURFACE WEAPONS CENTER	660,883	321,662	348,588	178,870	111	5089	0	239	30	2429						
UNDERSEA RANGERS DEPARTMENT	60,766	13,231	39,343	10,967	25	23	0	2	20	13						
UNDERWATER SYSTEMS CENTER	546,617	238,354	206,996	127,816	84	3477	0	87	76	1919						
WEAPONS CENTER	624,838	318,073	320,924	182,908	584	5039	0	140	34	1811						
WEAPONS EVALUATION FACILITY	16,064	14,485	3,951	3,429	109	132	0	6	40	39						
TOTALS	6545,804	2752,109	4050,346	1620,234	5097	36307	131	2016	1385	16198						

TABLE 4. NAVY RESEARCH ACTIVITIES FACILITY DATA, FY 1966

INSTALLATION	ACRES	LABORATORY	ADMIN	OTHER	SPACE (THOUSANDS OF SQUARE FEET)		COST (MILLIONS \$)	
							REAL PROPERTY	EQUIPMENT
AEROSPACE MEDICAL RESEARCH LABORATORY	1	114.538	3.500	0.164			3.042	7.783
AIR DEVELOPMENT CENTER	921	831.513	92.478	451.353			36.396	91.010
AIR PROPULSION CENTER	60	408.390	27.962	92.016			52.190	11.135
AIR TEST CENTER	7358	1,263.297	453.278	4,372.524			204.291	117.427
ATLANTIC FLEET WEAPONS TRAINING FACILITY	3523	0.000	14.957	232.440			19.962	137.439
BIODYNAMICS LABORATORY	1	35.702	24.452	1.400			2.070	0.279
BIOCHEMICAL LABORATORY	5	77.625	8.731	34.646			1.000	69.624
CIVIL ENGINEERING LABORATORY	32	112.965	7.746	16.493			7.962	4.650
CLOTHING & TEXTILE RESEARCH FACILITY	1	12.660	10.200	3.600			1.054	1.000
COASTAL SYSTEMS CENTER	648	371.889	40.591	625.052			49.346	32.345
DAVID TAYLOR SHIP REP CENTER	325	1,696.000	90.000	319.000			75.900	101.706
DENTAL RESEARCH INSTITUTE	1	21.264	6.001	9.310			0.005	0.062
ENVIRONMENTAL PRODUCTION RESEARCH FACILITY	0	22.000	3.100	5.900			0.000	2.480
EXPLOSIVE ORDNANCE DISPOSAL TECH CTR	1172	71.578	22.176	90.643			5.987	5.281
HEALTH RESEARCH CENTER	1	19.052	7.159	0.000			0.147	1.734
MEDICAL RESEARCH INSTITUTE	4	159.933	11.720	47.210			8.303	16.680
MEDICAL RESEARCH UNIT NO. 2	1	15.439	6.654	2.400			0.000	0.656
MEDICAL RESEARCH UNIT NO. 3	5	89.472	8.962	61.072			9.054	1.184
NAVAL RESEARCH LABORATORY	1182	2,357.807	193.096	402.615			101.603	174.690
OCEAN RESEARCH ACTIVITY	5	157.590	28.100	88.618			17.203	23.000
OCEAN SYSTEMS CENTER	2719	1,354.570	202.400	200.460			64.907	66.181
OFFICE OF NAVAL RESEARCH	0	0.000	80.202	12.165			0.000	6.900
ORDNANCE MISSILE TEST STATION	95	10.324	39.798	166.886			6.213	4.072
PACIFIC MISSILE TEST CENTER	27093	1,287.000	367.700	3,262.600			191.200	178.634
PERSONNEL RESEARCH & DEVELOPMENT CTR	3	79.332	16.417	0.000			7.300	11.791
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000			1.315	2.931
SURFACE WEAPONS CENTER	5103	1,675.581	182.860	1,138.642			119.478	210.132
UNDERSEA RANGES DEPARTMENT	594	82.322	14.968	359.662			30.827	0.000
UNDERWATER SYSTEMS CENTER	372	1,182.476	136.104	630.054			63.468	96.258
WEAPONS CENTER	1127267	2,143.439	193.880	2,907.156			258.755	133.990
WEAPONS EVALUATION FACILITY	7	23.000	34.000	95.000			0.960	2.185
TOTALS	1178508	15,797.372	2,347.691	15,637.609			1342.216	1520.873

TABLE 5. AIR FORCE BUDGET ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTAL	INHOUSE	TOTAL	INHOUSE	TOTAL	MIL	CIV	TOTAL	PND	PND	PND	PND	PROP
AERO PROPULSION LABORATORY	116,878	15,756	15,756	116,092	14,970	55	313	7	21	50	206			
AEROSPACE MEDICAL RESEARCH LABORATORY	32,606	16,770	29,898	10,663	129	153	8	28	50	99				
ARMAMENT DIVISION	2162,117	352,943	465,737	102,927	5112	2164	6	21	1325	1081				
ARMAMENT LABORATORY	119,410	32,655	119,410	32,655	130	379	1	16	97	247				
ARNOLD ENGINEERING DEVELOPMENT CNTR	265,741	72,021	258,649	65,129	153	235	5	3	84	97				
AVIONICS LABORATORY	173,387	25,589	171,126	23,328	147	540	1	32	143	381				
EASTERN SPACE AND MISSILE CNTR	444,442	110,445	0,000	0,000	1068	1118	0	1	151	36				
ENGINEERING AND SERVICES LABORATORY	23,460	4,251	19,234	0,909	67	36	6	0	24	28				
FLIGHT DYNAMICS LABORATORY	241,664	27,560	238,783	24,679	170	588	2	34	128	412				
FLIGHT TEST CENTER	405,309	292,480	232,024	146,261	3408	1901	48	4	875	285				
FRANK J. SILLER RESEARCH LABORATORY	3,341	3,341	1,989	1,989	23	9	9	1	18	4				
GEOPHYSICS LABORATORY	115,851	36,666	108,432	32,503	125	474	2	89	65	264				
HUMAN RESOURCES LABORATORY	66,867	17,604	58,123	12,528	185	235	12	39	105	133				
MATERIALS LABORATORY	108,610	12,853	107,762	12,005	51	286	4	49	45	225				
OFFICE OF SCIENTIFIC RESEARCH	184,667	2,462	182,192	0,000	84	102	23	25	54	36				
ROCKET PROPULSION LABORATORY	105,345	24,425	99,487	18,593	163	265	0	20	83	127				
ROMB AIR DEVELOPMENT CENTER	485,823	73,296	367,289	59,462	214	1053	3	64	167	610				
SCHOOL OF AEROSPACE MEDICINE	60,155	50,762	22,652	13,259	355	354	40	39	116	97				
WEAPONS LABORATORY	358,992	91,340	334,565	66,913	579	546	30	54	418	273				
WESTERN SPACE AND MISSILE CNTR	100,729	99,119	0,000	0,000	541	522	4	0	188	121				
4950TH TEST WING	116,737	101,775	89,203	75,161	888	958	3	8	237	206				
6585TH TEST GROUP	62,695	29,923	30,737	19,399	245	294	0	2	96	109				
TOTALS	5734,826	1408,236	3053,584	813,333	13900	12427	214	552	4519	5077				

TABLE 6. AIR FORCE ROTAS ACTIVITIES FACILITY DATA, FY 1966

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AIRIO PROPULSION LABORATORY	41	261.813	18.850	349.510	83.200	45.073
AEROSPACE MEDICAL RESEARCH LABORATORY	30	118.031	55.513	51.724	16.997	36.239
ARMAMENT DIVISION	456816	248.399	874.800	8,917.098	330.823	461.343
ARMAMENT LABORATORY	0	94.464	72.504	82.285	13.253	0.000
ARNOLD ENGINEERING DEVELOPMENT CNTR	29481	1,141.415	207.183	1,715.051	421.132	86.551
AVIONICS LABORATORY	220	229.369	9.403	405.264	64.750	133.894
EASTERN SPACE AND MISSILE CNTR	26178	220.172	1,177.704	4,789.850	420.186	373.664
ENGINEERING AND SERVICES LABORATORY	3	65.620	37.750	49.550	1.960	2.670
FLIGHT DYNAMICS LABORATORY	76	368.868	204.174	94.319	50.676	53.132
FLIGHT TEST CENTER	297438	187.106	281.979	7,666.612	343.454	182.639
FRANK J. SEILER RESEARCH LABORATORY	0	190.000	3.000	0.000	1.828	3.522
GEOPHYSICS LABORATORY	336	395.732	14.821	25.883	12.171	38.460
HUMAN RESOURCES LABORATORY	5	81.180	65.319	53.232	6.727	115.450
MATERIALS LABORATORY	15	179.980	20.800	1,760.750	260.000	72.060
OPFICS OF SCIENTIFIC RESEARCH	0	0.000	36.688	5.128	0.000	0.000
ROCKET PROPULSION LABORATORY	68345	419.046	86.848	4.780	128.900	29.311
ROME AIR DEVELOPMENT CENTER	1532	764.945	52.839	182.271	29.595	56.680
SCHOOL OF AEROSPACE MEDICINE	1310	422.784	30.279	177.459	53.153	33.338
WEAPONS LABORATORY	782	551.000	110.000	180.000	28.340	94.600
WESTERN SPACE AND MISSILE CNTR	58966	1,536.680	1,224.352	844.146	227.000	480.000
4950TH TEST WING	400	110.465	66.229	1,036.533	21.900	439.630
6585TH TEST GROUP	7052	407.668	39.081	93.979	228.352	111.085
TOTALS	958546	8,015.537	4,690.196	28,475.424	2744.369	2767.341

TABLE 7. DEPARTMENT OF DEFENSE ROTAS ACTIVITY, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL		INHOUSE		TOTAL		INHOUSE		TOTAL		INHOUSE	
	INHOUSE	RDGR	RDGR		MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE	18.452	18.452	14.867		94	159	20	23	52	64		
TOTALS	18.452	18.452	14.867		94	159	20	23	52	64		

# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

### PROGRAM DATA FOR FY 1986

	(MILLIONS)
TOTAL ANNUAL LABORATORY PROGRAM	7,908.795
TOTAL INHOUSE PROGRAM	3,119.393
TOTAL RDTE PROGRAM	5,675.168
TOTAL INHOUSE RDTE	2,138.778
TOTAL ANNUAL OPERATING COST	712.666

### PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	6279	538	3083
CIVILIAN	43878	3290	21933
TOTAL	50157	3828	25016

### PHYSICAL FACILITIES (END OF FY 1986)

ACRES	1235282
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#### SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	24,128.627
ADMINISTRATIVE	5,123.234
OTHER	11,303.335
TOTAL	40,555.196

#### COST (MILLIONS)

REAL PROPERTY	2,982.281
EQUIPMENT	2,571.651
TOTAL	5,553.932



TABLE 1A. ARMY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)			PERSONNEL DATA									
	TOTAL	TOTAL	HOUSE	TOTAL	MIL	CIV	TOTAL	MIL	CIV	TOTAL	MIL	CIV	PROP
	INHOUSE	OUTSIDE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE	INHOUSE
ABDOMINAL RESEARCH LABORATORY	9,007	6,764	6,875	6,032	69	67	9	12	31	31	31	31	31
ARMAMENT RESEARCH, DEV AND REG CENTER	376,000	100,150	324,000	162,400	87	435	0	0	62	1986	1986	1986	1986
ATMOSPHERIC SCIENCES LABORATORY	43,045	25,559	43,024	25,538	58	403	0	32	3	127	127	127	127
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	104,412	39,769	100,560	37,305	16	354	1	26	9	253	253	253	253
AVIONICS R&D ACTIVITY	30,677	14,921	21,234	11,626	17	259	0	3	11	146	146	146	146
BALLISTIC RESEARCH LABORATORY	149,302	63,723	119,199	50,745	19	738	2	109	11	439	439	439	439
BEHAVIORAL RESEARCH, DEV AND ACQ CENTER	190,262	54,634	140,233	39,504	59	906	2	27	15	416	416	416	416
BIOLOGICAL R&D LABORATORY	12,304	7,350	10,973	5,919	29	91	4	14	21	41	41	41	41
CHEMICAL RECH, DEV AND REG CENTER	218,903	84,806	139,371	62,569	100	1029	3	80	44	693	693	693	693
CENTER FOR COMM/AUTOMATIC DATA PROCESSING	82,426	30,717	69,746	22,426	15	469	0	17	9	344	344	344	344
CENTER FOR ELECTRONIC WARFARE	277,090	14,194	85,554	0,462	27	356	0	0	9	9	9	9	9
CENTER FOR NIGHT VISION & ELECTRO-OPTICS	200,024	91,369	127,927	35,190	33	453	1	35	11	234	234	234	234
CENTER FOR SIGNALS WARFARE	181,075	6,317	56,718	4,297	46	179	0	0	12	67	67	67	67
COLD REGIONS RESEARCH & ENGINEERING LAB	23,698	16,476	12,338	7,773	10	278	0	35	5	116	116	116	116
CONSTRUCTION ENGINEERING RESEARCH LAB	43,328	24,965	31,328	10,773	4	227	0	34	4	172	172	172	172
ELECTRONIC TECHNOLOGY & SERVICES LAB	97,454	23,905	89,221	16,359	1	321	0	36	1	185	185	185	185
ENGINEER TOPOGRAPHIC LABORATORIES	67,099	10,428	62,954	15,662	12	307	0	16	11	149	149	149	149
ENGINEER WATERWAYS EXPERIMENT STA.	121,746	87,013	60,524	42,214	10	1658	1	113	10	664	664	664	664
HARRY DIAMOND LABORATORIES	166,529	55,282	105,794	32,296	3	666	3	48	3	410	410	410	410
HUMAN ENGINEERING LABORATORY	22,677	14,219	21,680	13,230	36	169	3	15	10	122	122	122	122
INSTITUTE OF DENTAL RESEARCH	6,570	4,480	4,353	2,263	50	18	9	2	34	4	4	4	4
INSTITUTE OF SURGICAL RESEARCH	10,728	10,228	3,450	3,450	155	78	17	6	56	25	25	25	25
LETTERMAN ARMY INSTITUTE OF RESEARCH	25,020	10,036	18,128	11,144	142	99	30	20	101	50	50	50	50
MATERIALS TECHNOLOGY LABORATORY	53,071	38,466	40,235	33,851	15	588	0	69	8	263	263	263	263
MEDICAL RESEARCH INST OF CHEMICAL DEPTHER	32,086	19,284	28,177	15,375	85	158	26	22	46	74	74	74	74
MEDICAL RECH INST OF INFECTIONS DIS.	51,006	30,493	42,122	21,609	293	187	47	30	80	99	99	99	99
MISSILE RECH, DEV AND REG CENTER	295,574	100,458	217,641	54,393	54	1319	0	71	33	809	809	809	809
NATICE RESEARCH, DEVELOPMENT & REG CENTER	90,334	60,361	65,924	41,554	101	977	2	70	30	379	379	379	379
RECH INST FOR BEHAVIORAL & SOCIAL SCIENCES	73,065	24,380	67,747	22,941	56	342	2	167	36	234	234	234	234
RECH INST OF ENVIRONMENTAL MEDICINE	10,050	9,124	7,258	6,324	72	81	17	27	44	59	59	59	59
TANK AUTOMOTIVE RECH CENTER	131,071	30,638	110,183	22,959	27	783	0	14	18	375	375	375	375
WALTER REED ARMY INSTITUTE OF RESEARCH	135,641	64,435	104,118	42,912	433	547	99	65	234	227	227	227	227
TOTALS	3322,982	1208,052	2347,357	897,135	2150	10542	286	1225	1020	9307	9307	9307	9307

TABLE 2A. ARMY R&amp;D LABORATORIES FACILITY DATA, FY 1966

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY SPACE (THOUSANDS OF SQUARE FEET)	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
ABNOMERICAL RESEARCH LABORATORY	53	87.668	10.120	33.260	7.603	16.356
ARMAMENT RESEARCH, DEV AND SIG CENTER	6491	2,410.000	945.000	712.000	712.000	190.000
ATMOSPHERIC SCIENCES LABORATORY	15	32.379	81.124	46.989	2.290	27.990
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	127	88.848	50.673	16.370	2.348	16.761
AVIONICS R&D ACTIVITY	2	52.450	13.665	19.100	0.000	19.014
BALLISTIC RESEARCH LABORATORY	1920	380.000	117.000	120.000	15.000	70.000
BELVOIR RESCH, DEV AND ACQ CNTR	1052	433.533	270.281	84.902	20.238	37.451
BIOMEDICAL R&D LABORATORY	5	23.691	42.773	22.569	4.042	6.195
CHEMICAL RESCH, DEV AND BEGR CNTR	3471	733.055	294.129	298.821	25.564	63.126
CNTR FOR COM/AUTOMATIC DATA PROCESSING	0	62.000	70.000	40.000	0.000	17.893
CNTR FOR ELECTRONIC WARFARE	106	112.278	35.107	8.189	6.775	8.070
CNTR FOR NIGHT VISION & ELECTRO-OPTICS	0	80.000	44.473	37.000	12.244	42.627
CNTR FOR SIGNALS WARFARE	10	9.710	35.475	7.440	1.896	9.343
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107.797	0.310	0.027	16.684	12.545
CONSTRUCTION ENGINEERING RESEARCH LAB	31	112.949	45.876	30.335	10.000	11.000
ELECTRONIC TECHNOLOGY & DEVICES LAB	0	76.919	56.900	15.375	0.000	19.628
ENGINEER TOPOGRAPHIC LABORATORIES	33	90.722	7.000	13.300	14.200	16.400
ENGINEER WATERWAYS EXPERIMENT STA.	3073	1,746.808	353.645	176.809	44.881	53.471
HARRY DIAMOND LABORATORIES	2316	507.029	112.019	120.512	53.921	60.393
ADAPTI ND	72	111.524	7.056	21.400	10.826	12.122
HUMAN ENGINEERING LABORATORY	0	10.052	5.696	1.200	0.000	4.455
INSTITUTE OF DENTAL RESEARCH	1	26.424	1.800	22.400	6.531	6.111
INSTITUTE OF SURGICAL RESEARCH	9	119.204	56.941	112.174	45.661	14.052
LETTERMAN ARMY INSTITUTE OF RESEARCH	37	352.000	80.261	48.375	40.073	25.280
MATERIALS TECHNOLOGY LABORATORY	31	36.246	22.945	99.029	9.384	17.742
MEDICAL RESEARCH INST OF CHEMICAL DEPRESS	300	104.136	26.618	205.841	21.103	20.575
MEDICAL RESCH INST OF INFECTIOUS DIS.	11000	729.000	257.000	200.000	159.232	138.516
MISSILE RESCH, DEV AND BEGR CNTR	174	412.070	50.018	335.045	39.190	1.296
BATTICE RESEARCH, DEVELOPMENT & BEGR CNTR	0	53.155	14.000	6.200	0.735	0.862
RECH INST FOR BEHAVIORAL & SOCIAL SCIENCES	1	46.621	6.163	24.790	4.084	10.092
RECH INST OF ENVIRONMENTAL MEDICINE	11	246.562	123.756	125.274	255.173	134.463
TANK AUTOMOTIVE ROAD CENTER	203	303.274	61.600	0.000	10.000	31.055
WALTER REED ARMY INSTITUTE OF RESEARCH	30663	9,700.504	3,323.424	3,004.746	1541.766	1114.884
TOTALS						

TABLE 3A. NAVY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTAL INHOUSE	TOTAL RDT&B	INHOUSE RDT&B	TOTAL MIL	TOTAL CIV	PHD MIL	PHD CIV	PROF MIL	PROF CIV	PROP MIL	PROP CIV	TOTAL MIL	TOTAL CIV
AEROSPACE MEDICAL RESEARCH LABORATORY	8,989		7,184	7,184	40	55	12	14	18	32				
AIR PROPULSION CENTER	72,921	46,350	67,939	41,855	8	679	0	1	8	203				
BIODYNAMICS LABORATORY	4,746	4,267	3,909	3,430	34	53	5	4	6	16				
BIOSCIENCES LABORATORY	3,198	3,198	2,847	2,847	9	4	3	0	9	0				
CIVIL ENGINEERING LABORATORY	50,415	28,724	33,727	19,376	18	380	0	32	8	223				
CLOTHING & TEXTILE RESEARCH FACILITY	4,210	3,711	2,688	2,109	1	56	0	1	1	40				
DAVID TAYLOR SHIP R&D CENTER	291,292	188,999	218,385	145,377	77	2769	2	124	23	1581				
DENTAL RESEARCH INSTITUTE	2,399	2,236	1,112	0,949	29	15	6	4	11	6				
HEALTH RESEARCH CENTER	5,213	3,811	4,184	2,782	29	63	7	13	10	27				
MEDICAL RESEARCH INSTITUTE	30,420	27,872	20,784	18,228	239	189	39	41	91	99				
MEDICAL RESEARCH UNIT NO. 2	4,489	4,489	3,362	3,362	25	48	9	4	24	44				
MEDICAL RESEARCH UNIT NO. 3	5,427	5,427	4,437	4,437	28	285	9	18	14	66				
NAVAL RESEARCH LABORATORY	354,115	245,601	251,700	164,586	97	3333	1	786	38	1498				
OCEAN R&D ACTIVITY	45,134	23,976	41,662	20,819	15	337	0	72	11	188				
OCS&D SYSTEMS CENTER	484,902	285,794	302,231	135,584	277	2967	3	192	89	1540				
PERSONNEL RESEARCH & DEVELOPMENT CTR	30,822	20,829	21,494	15,418	26	320	0	95	12	225				
SUBMARINE MEDICAL RESEARCH LABORATORY	4,817	4,521	3,117	2,853	34	55	9	0	17	18				
UNDERWATER SYSTEMS CENTER	546,617	238,354	206,996	127,816	84	3477	0	87	76	1919				
WEAPONS CENTER	624,838	318,073	328,924	182,908	564	5039	0	140	34	1811				
TOTALS	2574,972	1385,321	1518,102	902,320	1634	20044	107	1540	502	9456				

TABLE 4A. NAVY R&amp;D LABORATORIES FACILITY DATA, FY 1986

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY SPACE (THOUSANDS OF SQUARE FEET)	ADMIN SPACE (THOUSANDS OF SQUARE FEET)	OTHER SPACE (THOUSANDS OF SQUARE FEET)	REAL PROPERTY	EQUIPMENT
AEROSPACE MEDICAL RESEARCH LABORATORY						
AIR PROPULSION CENTER						
BIODYNAMICS LABORATORY						
BIOSCIENCES LABORATORY						
CIVIL ENGINEERING LABORATORY						
CLOTHING & TEXTILE RESEARCH FACILITY						
DAVID TAYLOR SHIP R&D CENTER						
DENTAL RESEARCH INSTITUTE						
HEALTH RESEARCH CENTER						
MEDICAL RESEARCH INSTITUTE						
MEDICAL RESEARCH UNIT NO. 2						
MEDICAL RESEARCH UNIT NO. 3						
NAVAL RESEARCH LABORATORY						
OCEAN R&D ACTIVITY						
OCEAN SYSTEMS CENTER						
PERSONNEL RESEARCH & DEVELOPMENT CNTR						
SUBMARINE MEDICAL RESEARCH LABORATORY						
UNDERWATER SYSTEMS CENTER						
WEAPONS CENTER						
PRUSSACOLA, FL	1	114.538	3.500	8.164	3.042	7.783
TRENTON, NJ	68	488.390	27.962	92.816	52.190	11.135
NEW ORLEANS, LA	1	35.702	24.452	1.400	2.070	0.279
NSC OAKLAND, CA	5	77.625	8.731	34.446	1.000	69.624
PORT HUBBARD, CA	32	112.965	7.746	16.493	7.962	4.650
WATICE, MA	1	12.660	10.200	3.600	1.034	1.000
BETHESDA, MD	325	1,696.000	90.000	319.000	75.900	101.700
NSC GREAT LAKES, IL	1	21.264	6.001	9.318	0.005	0.062
SAN DIEGO, CA	1	19.052	7.159	0.000	0.147	1.734
BETHESDA, MD	4	159.933	11.720	47.210	8.303	16.880
MANILA, PHILIPPINES	1	15.439	6.654	2.400	0.000	0.456
CAIRO, EGYPT	5	89.472	8.962	61.072	9.034	1.184
WASHINGTON, D.C.	1182	2,357.807	193.096	402.615	101.883	174.690
SAY ST LOUIS, MS	5	157.590	28.100	88.618	17.203	23.000
SAN DIEGO, CA	2719	1,354.570	202.400	200.460	64.907	66.181
SAN DIEGO, CA	3	79.332	16.417	0.000	7.300	11.791
GROTON, CT	1	40.514	14.099	0.000	1.315	2.931
NEWPORT, RI	372	1,182.476	138.104	630.034	63.468	96.258
CHINA LAKE, CA	1127267	2,143.439	193.880	2,907.156	258.755	133.990
TOTALS	1131994	10,156.766	1,001.583	4,625.072	675.538	725.128

TABLE 5A. AIR FORCE R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1986

INSTALLATION	FUNDING DATA (MILLIONS \$)					PERSONNEL DATA									
	TOTAL	INHOUSE	TOTAL	INHOUSE	TOTAL	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
AERO PROPULSION LABORATORY	116.878	15.756	116.892	14.970	55	313	7	21	50	206					
AEROSPACE MEDICAL RESEARCH LABORATORY	32.606	10.770	29.898	10.663	129	155	8	28	50	99					
ARMAMENT LABORATORY	119.410	32.655	119.410	32.655	138	379	1	16	97	247					
AVIONICS LABORATORY	173.387	25.589	171.126	23.328	147	540	1	32	143	381					
ENGINEERING AND SERVICES LABORATORY	23.460	4.251	19.234	0.909	67	36	6	8	24	28					
FLIGHT DYNAMICS LABORATORY	241.664	27.560	238.783	24.679	170	588	2	34	128	412					
FRANK J. MILLER RESEARCH LABORATORY	3.341	3.341	1.989	1.989	23	9	9	1	18	4					
GEOPHYSICS LABORATORY	115.851	36.666	108.432	32.503	125	474	2	89	65	264					
HUMAN RESOURCES LABORATORY	66.867	17.604	58.123	12.528	185	235	12	39	105	133					
MATERIALS LABORATORY	108.610	12.853	107.762	12.005	51	284	4	49	45	225					
ROCKET PROPULSION LABORATORY	185.345	24.425	99.487	18.593	163	265		20	83	127					
RONS AIR DEVELOPMENT CENTER	665.833	73.296	367.289	59.462	214	1053	3	64	167	610					
SCHOOL OF AEROSPACE MEDICINE	60.135	50.762	22.652	13.259	355	234	40	39	116	97					
WEAPONS LABORATORY	358.992	91.340	334.565	66.913	579	546	30	54	418	273					
TOTALS	1992.389	426.868	1794.842	374.456	2401	5133	125	494	1309	3106					

TABLE 6A. AIR FORCE AND LABORATORIES FACILITY DATA, FY 1966

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROPERTY	EQUIPMENT
	ACRES	LABORATORY	ADMIN	OTHER		
AERO PROPULSION LABORATORY						
WPAFB, OH	41	281.813	18.950	349.510	83.200	45.873
AEROSPACE MEDICAL RESEARCH LABORATORY						
WPAFB, OH	30	118.031	55.513	51.724	16.997	34.239
ARMANSET LABORATORY						
EG-1B APB, FL	0	94.464	72.504	82.265	13.253	0.000
AVIONICS LABORATORY						
WPAFB, OH	220	229.369	9.483	405.264	64.750	133.894
BEGINNERING AND SERVICES LABORATORY						
TYDALL APB, FL	3	65.620	37.750	49.550	1.960	2.676
FLIGHT DYNAMICS LABORATORY						
WPAFB, OH	76	368.868	204.174	94.319	50.676	53.132
FRANK J. SEILER RESEARCH LABORATORY						
USIPA COL SPCS, CO	0	190.000	3.000	0.000	1.820	3.522
GEOPHYSICS LABORATORY						
BEOPOND, MA	336	395.732	14.821	25.883	12.171	38.460
HUMAN RESOURCES LABORATORY						
BROOKS APB, TX	5	81.180	65.319	53.232	6.727	115.450
MATERIALS LABORATORY						
WPAFB, OH	15	179.980	20.800	1,760.750	260.000	72.860
ROCKET PROPULSION LABORATORY						
EDWARDS APB, CA	68345	419.046	86.848	4.780	128.900	29.311
ROMS AIR DEVELOPMENT CENTER						
GRIPPLISS APB, NY	1532	764.945	52.839	182.271	29.595	56.680
SCHOOL OF AEROSPACE MEDICINE						
BROOKS APB, TX	1310	422.784	30.279	177.459	53.153	33.338
WEAPONS LABORATORY						
ALBUQUERQUE, NM	702	551.000	110.000	180.000	28.340	94.600
TOTALS	72615	4,162.832	782.180	3,417.027	751.542	712.429

TABLE 7A. DEPARTMENT OF DEFENSE R&D ACTIVITY FACILITY DATA, FY 1986

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)	
		REAL PROPERTY	EQUIPMENT
ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE	10	13.415	19.210
BETHESDA, MD	10	13.415	19.210
TOTALS	20	26.830	38.420

TABLE 8. ARMY RATE IN-HOUSE/OUT-HOUSE DISTRIBUTION DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)									
	I N H O U S E					O U T H O U S E				
	6.1	6.2	6.3	6.4	6.1	6.1	6.1	6.2	6.2	6.4
						UNIT	INDEBT	UNIT	INDEBT	
ABDOMINAL RESEARCH LABORATORY	0.550	4.909	0.452	0.000	0.229	0.179	0.000	0.146	0.217	0.000
AIR DEFENSE ARTILLERY BOARD	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIRBORNE & SPECIAL OPS TEST BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AMMUNITION RESEARCH, DEV AND ENG CENTER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARMOR AND ENGINEER BOARD	0.056	0.231	0.000	0.256	0.000	0.000	0.000	0.000	0.000	0.000
ARMY RESEARCH OFFICE	0.000	0.000	0.000	0.000	111.122	61.523	20.760	8.500	0.000	0.000
ATMOSPHERIC SCIENCES LABORATORY	3.664	3.247	0.000	0.000	1.991	0.963	1.028	1.828	0.000	0.000
AVIATION BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AVIATION DEVELOPMENT TEST ACTIVITY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AVIATION ENGINEERING FLIGHT ACTIVITY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	6.183	17.700	12.303	0.416	1.302	0.313	0.450	11.140	0.071	43.150
AVIONICS R&D ACTIVITY	0.227	5.537	4.551	0.763	0.071	0.065	0.637	4.965	0.000	1.799
BALLISTIC RESEARCH LABORATORY	6.419	21.792	16.520	2.094	2.242	0.000	0.279	24.175	0.000	0.000
BELVOIR BSCN, DEV AND ACQ CTR	1.339	5.307	0.056	1.904	2.050	0.225	1.459	8.803	0.291	6.866
BIOLOGICAL R&D LABORATORY	1.002	3.170	0.687	0.910	0.500	0.297	0.000	3.023	0.299	0.388
CHEMICAL RSCH, DEV AND ENG CTR	4.309	29.664	10.355	7.315	5.115	0.785	1.995	28.266	2.918	14.129
CTR FOR COMM/AUTOMATIC DATA PROCESSING	1.704	6.766	5.204	5.465	1.294	0.422	0.514	18.352	0.203	11.445
CTR FOR ELECTRONIC WARFARE	0.200	1.568	4.659	0.035	0.200	0.255	0.000	6.238	0.000	0.000
CTR FOR NIGHT VISION & ELECTRO-OPTICS	5.026	4.987	19.378	5.724	12.742	0.350	6.748	21.773	0.175	27.113
CTR FOR SIGNALS WARFARE	0.152	0.654	1.320	0.909	0.511	0.176	0.335	4.115	0.000	4.193
COLD REGIONS RESEARCH & ENGINEERING LAB	3.021	3.745	0.000	0.000	0.451	0.848	0.171	3.320	0.549	0.100
COMBAT SYSTEMS TEST ACTIVITY	0.175	0.250	1.890	2.591	0.036	0.004	0.000	0.330	0.000	0.000
COMMUNICATIONS AND ELECTRONICS BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONSTRUCTION ENGINEERING RESEARCH LAB	0.498	16.022	0.200	0.000	1.000	1.000	0.000	0.401	0.000	0.214
DUGWAY PROVING GROUND	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ELECTRONIC PROVING GROUND	0.871	1.451	0.000	2.902	0.178	0.000	0.000	0.178	0.000	0.000
ELECTRONIC TECHNOLOGY & DEVICES LAB	4.682	7.932	1.982	0.126	1.127	0.675	0.475	12.608	0.000	9.377
ENGINEER TOPOGRAPHIC LABORATORIES	2.457	6.319	5.553	1.333	1.645	0.050	1.447	3.783	2.401	20.549
ENGINEER WATERWAYS EXPERIMENT STA.	1.458	10.201	0.811	0.000	0.537	0.350	0.430	1.438	2.975	0.914
FIELD ARTILLERY BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARRY DIAMOND LABORATORIES	3.855	4.014	14.791	6.038	2.436	0.083	0.946	24.397	1.261	8.754
HUMAN ENGINEERING LABORATORY	1.721	8.070	2.571	0.200	1.100	0.165	0.418	5.160	0.500	1.594
INFANTRY BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INSTITUTE OF DENTAL RESEARCH	0.617	1.360	0.195	0.000	0.942	0.155	0.091	0.648	0.000	0.000
INSTITUTE OF SURGICAL RESEARCH	1.231	2.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INTELLIGENCE AND SECURITY BOARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LETTERMAN ARMY INSTITUTE OF RESEARCH	3.281	6.277	0.922	0.000	0.163	0.076	0.000	5.926	4.746	0.000
MATERIALS TECHNOLOGY LABORATORY	3.101	10.305	10.383	1.105	0.166	0.055	0.000	3.127	0.175	0.950
MATERIAL SYSTEMS ANALYSIS ACTIVITY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEDICAL MATERIAL DEVELOPMENT ACTIVITY	0.000	0.000	3.650	1.347	0.000	0.000	0.000	0.000	0.000	0.000
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	0.000	0.000	0.000	0.000	0.411	0.000	0.000	0.022	0.000	0.011
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	2.077	9.726	2.872	0.191	3.588	2.841	0.000	6.559	5.236	2.655
MEDICAL RSCH INST OF INSPECTIOUS DIS.	5.817	9.733	4.724	0.875	6.776	3.525	0.208	6.252	0.227	7.485
MISSILE RSCH, DEV AND ENG CTR	3.885	17.604	21.818	9.231	5.007	0.373	0.738	84.266	2.483	77.502



BATICK RESEARCH, DEVELOPMENT & ENGR CNTR	2.905	12.029	4.760	9.234	0.249	0.048	0.091	5.942	0.449	3.471	0.289	7.099
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	1.497	5.176	14.517	0.232	4.377	4.000	0.375	6.520	0.146	6.374	22.040	0.134
RSCH INST OF ENVIRONMENTAL MEDICINE	2.532	2.499	1.058	0.000	0.123	0.093	0.000	0.276	0.114	0.033	0.535	0.000
TAKE AUTOMOTIVE ENGR CENTER	1.460	6.223	7.676	1.250	5.384	2.548	2.670	15.334	1.491	12.712	35.286	14.487
TROPIC TEST CENTER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VULNERABILITY ASSESSMENT LABORATORY	0.020	0.000	13.752	0.011	0.000	0.000	0.000	0.000	0.000	0.000	34.806	0.417
WALTER REED ARMY INSTITUTE OF RESEARCH	10.795	12.023	9.313	1.632	5.831	2.897	0.267	9.479	3.118	1.396	45.896	0.000
WHITE SANDS MISSILE RANGE	0.134	0.178	3.947	2.085	0.038	0.000	0.000	0.051	0.000	0.051	1.114	0.589
YUMA PROVING GROUND	0.000	0.547	1.640	1.913	0.000	0.000	0.000	0.509	0.000	0.509	1.526	1.700
TOTALS	96.446	359.332	212.518	70.087	181.612	84.639	42.549	346.316	45.183	205.064	573.853	165.365

TABLE 9. NAVY NITE 10-HOUSE/OUT-HOUSE DISTRIBUTION DATA, FY 1966

INSTALLATION	PUDDING DATA (MILLIONS \$)									
	I N H O U S E					O U T H O U S E				
	6.1	6.2	6.3	6.4	6.1	6.1	6.1	6.2	6.2	6.4
	6.1	6.2	6.3	6.4	6.1	6.1	6.1	6.2	6.2	6.4
AEROSPACE MEDICAL RESEARCH LABORATORY	0.840	1.526	4.098	0.481	0.000	0.000	0.000	0.000	0.000	0.000
AIR DEVELOPMENT CENTER	3.910	24.848	25.380	44.530	1.482	0.119	1.363	27.089	0.323	26.766
AIR PROPELLION CENTER	0.000	0.786	7.562	10.210	0.000	0.000	0.000	4.377	0.000	2.800
AIR TEST CENTER	2.711	0.060	4.756	21.204	1.255	0.000	0.000	0.020	0.000	1.586
ATLANTIC FLEET WEAPONS TRAINING FACILITY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BIOHYDRAULICS LABORATORY	0.037	0.535	2.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BIOCHEMICALS LABORATORY	2.847	8.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CIVIL ENGINEERING LABORATORY	1.100	5.926	8.347	2.279	0.600	0.000	0.034	3.403	0.000	1.996
CLOTHING & TEXTILE RESEARCH FACILITY	0.000	0.423	0.445	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COASTAL SYSTEMS CENTER	5.574	8.386	22.660	4.204	1.372	0.069	0.825	4.820	0.100	0.477
DAVID TAYLOR SHIP RAD CENTER	6.730	34.874	69.510	12.918	1.508	0.261	0.283	18.482	0.512	3.181
DENTAL RESEARCH INSTITUTE	0.050	0.000	0.202	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENVIRONMENTAL PRODUCTION RESEARCH FACILITY	0.000	0.786	1.298	0.000	0.000	0.000	0.000	0.551	0.066	0.000
EXPLOSIVE ORDNANCE DISPOSAL TECH CNTR	0.000	1.812	5.627	2.486	0.000	0.000	0.000	1.117	0.000	0.000
HEALTH RESEARCH CENTER	0.288	0.221	0.996	0.000	0.077	0.070	0.007	0.023	0.023	0.000
MEDICAL RESEARCH INSTITUTE	3.771	2.648	8.978	0.000	0.388	0.000	0.000	1.873	1.417	0.000
MEDICAL RESEARCH UNIT NO. 2	0.715	0.255	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEDICAL RESEARCH UNIT NO. 3	1.118	0.457	0.000	0.290	0.000	0.000	0.000	0.000	0.000	0.000
NAVAL RESEARCH LABORATORY	58.442	36.947	31.089	16.566	11.801	0.678	11.123	16.990	0.462	16.528
OCEAN RAD ACTIVITY	6.667	4.248	6.580	0.369	2.225	0.413	0.548	4.845	1.463	1.463
OCEAN SYSTEMS CENTER	9.531	28.880	30.215	35.362	6.820	0.332	5.465	49.316	0.725	28.845
ORDNANCE MISSILE TEST STATION	0.000	0.000	0.000	0.000	332.753	167.669	19.221	337.840	12.781	7.970
PACIFIC MISSILE TEST CENTER	0.000	0.000	0.000	1.514	0.000	0.000	0.000	0.000	0.000	0.000
PERSONNEL RESEARCH & DEVELOPMENT CNTR	0.240	5.800	6.715	0.789	0.026	0.026	0.000	0.000	0.000	0.000
SUBMARINE MEDICAL RESEARCH LABORATORY	0.054	0.384	0.929	0.000	0.000	0.000	0.000	0.044	0.000	0.000
SURFACE WEAPONS CENTER	7.277	34.146	39.393	74.282	1.997	0.145	1.852	31.608	0.230	31.378
UNDERSEA RANGERS DEPARTMENT	0.000	0.002	0.123	0.056	0.000	0.000	0.000	0.062	0.000	0.062
UNDERWATER SYSTEMS CENTER	3.741	20.834	35.647	58.682	0.156	0.000	0.156	12.287	0.000	12.287
WEAPONS CENTER	6.590	21.492	51.695	39.860	0.517	0.035	0.492	12.136	0.000	12.136
WEAPONS EVALUATION FACILITY	0.000	0.058	0.721	0.336	0.000	0.000	0.000	0.036	0.000	0.031
TOTALS	122.233	236.534	376.646	371.222	352.977	169.807	41.369	519.015	18.402	146.899
										312.562

TABLE 10. AIR FORCE BTE IN-HOUSE/OUT-HOUSE DISTRIBUTION DATA, FY 1966

INSTALLATION	FUNDING DATA (MILLIONS \$)									
	I N H O U S E					O U T H O U S E				
	6.1	6.2	6.3	6.4	6.5	6.1	6.2	6.3	6.4	6.5
ABCO PROPULSION LABORATORY	3.220	11.750	0.000	0.000	0.000	1.974	0.372	36.335	0.928	27.403
AEROSPACE MEDICAL RESEARCH LABORATORY	0.420	10.709	0.206	0.136	0.000	2.262	0.475	13.263	2.805	10.378
ARMAMENT DIVISION	0.000	0.000	5.961	50.433	0.000	0.000	0.000	0.000	0.000	0.000
ARMAMENT LABORATORY	1.170	16.753	12.301	1.197	0.000	2.349	0.704	23.800	0.469	17.678
ARNOLD ENGINEERING DEVELOPMENT CNTR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AVIONICS LABORATORY	1.775	21.555	0.000	0.000	0.000	1.796	4.823	28.171	3.316	20.855
EASTERN SPACE AND MISSILE CNTR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENGINEERING AND SERVICES LABORATORY	0.029	0.297	0.350	0.183	0.000	0.558	0.195	5.668	1.977	1.694
FLIGHT DYNAMICS LABORATORY	2.274	22.405	0.000	0.000	0.000	1.120	0.485	71.753	0.489	17.211
FLIGHT TEST CENTER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FRANK J. BELLER RESEARCH L A B O R A T O R Y	1.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GROPHYSICS LABORATORY	6.422	24.148	1.400	0.186	0.000	11.174	0.000	17.749	0.000	0.000
HUMAN RESOURCES LABORATORY	0.450	10.895	1.144	0.000	0.000	1.466	0.345	22.495	4.017	13.371
MATERIALS LABORATORY	3.241	8.764	0.000	0.000	0.000	5.459	2.987	29.036	6.505	35.448
OFFICE OF SCIENTIFIC RESEARCH	0.000	0.000	0.000	0.000	0.000	162.714	125.805	13.782	2.977	0.406
ROCKET PROPULSION LABORATORY	0.700	13.640	3.044	1.202	0.000	2.374	1.429	0.854	1.744	22.921
ROME AIR DEVELOPMENT CENTER	8.129	22.493	23.889	4.073	0.000	18.426	1.750	3.550	3.200	33.956
SCHOOL OF AEROSPACE MEDICINE	0.442	12.852	0.000	0.022	0.000	0.429	0.800	0.196	2.930	2.865
WEAPOS LABORATORY	0.823	7.212	3.440	3.776	0.000	3.294	0.636	28.850	0.386	28.464
WESTERN SPACE AND MISSILES CNTR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4950TH TEST WING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6505TH TEST GROUP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	31.090	183.473	51.735	61.208	0.000	215.375	140.806	36.538	31.901	232.654
										667.988
										310.735

INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT. RUCKER, AL

CDR. COL DUDLY R. PRICE

DEP. COL J. D. LAMOTHE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	6.875	10.703
TOTAL PROCUREMENT	0.005	0.000
TOTAL O&M	0.068	0.000
TOTAL OTHER	2.659	2.739
TOTAL ANNUAL LAB	9.607	13.442
TOTAL INHOUSE	8.764	10.127
TOTAL INHOUSE RDTE	6.032	7.388
ANNUAL OPERATING COST	3.296	3.311

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	9	31	38
CIVILIAN	67	12	31	36
TOTAL	136	21	62	74

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
53	87.668	10.120	33.260	131.048	7.603	16.356

#### ...MISSION

CONDUCTS MEDICAL RESEARCH INTO MILITARY AVIATION, VEHICLES, AND WEAPONS SYSTEM ENVIRONMENT AND THEIR EFFECTS ON CREWMEMBERS' HEALTH AND PERFORMANCE. PROVIDES TO DEVELOPERS AND USERS OF ARMY SYSTEM, DATA BASES ACQUIRED THROUGH FIELD AND LAB RESEARCH; RSCH ON MED DEF AGNST CW AGTS.

#### ...CURRENT IMPORTANT PROGRAMS

AVIATOR PERFORMANCE EFFECTS OF CHEMICAL AGENT ANTIDOTE THERAPIES  
PHYSIOLOGICAL AND PSYCHOLOGICAL EFFECTS OF COMBAT CREWS IN NBC ENVMT  
INDIVIDUAL AND CREW STRESS/WORKLOAD/PERFORMANCE  
BIOMEDICAL HAZARDS OF COMBAT AIRCRAFT AND VEHICLES  
VISUAL/ACOUSTICAL BIOEFFECTS OF COMBAT MATERIEL AND OPERATIONS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

SINGLE AND MULTI-AXIS VIBRATION SYSTEMS; HELMET DROP TEST TOWER AND IMPACT FACILITY; VARIABLE CENTER OF GRAVITY HELMET DEVICE; CARDIOPULMONARY LAB; BIOCHEMISTRY LAB; HELICOPTER INSTRUMENTED FLIGHT SIMULATOR; HELICOPTER INFIGHT MONITORING SYSTEM; INSTRUMENTED FLIGHT RANGE/FIELD RESEARCH ACTIVITY; EYE MOVEMENT AND TRACKING SYSTEM; MODIFIED AIRCRAFT FOR INFIGHT MEDICAL RESEARCH; DATA ACQUISITION AND BIOTELEMETRY SYSTEM: IN-HOUSE/MOBILE; ON-BOARD OXYGEN GENERATING SYSTEM; VIVARIUM; MODELING FACILITY; HIGH INTENSITY IMPULSE NOISE GENERATOR (SHOCK TUBE); MOBILE ACOUSTICS LAB; ANECHOIC AND REVERBERATION CHAMBERS; BIO-OPTICAL TESTING LAB; OPTICAL FABRICATION LAB; ELECTRO-OPTICAL TESTING LAB; MOBILE VISUAL STUDIES LAB; VISUAL NEUROPHYSIOLOGY LAB; SCIENTIFIC AND MEDICAL RESEARCH INFORMATION CENTER; ANALOGUE AND DIGITAL COMPUTER SYSTEM.

INSTALLATION: AIR DEFENSE ARTILLERY BOARD

FT. BLISS, TX

PRES. COL WILLIAM E. PEDIGO

TECH ADV. MR. ALEJANDRA ESTORGA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	5.598	9.044
TOTAL PROCUREMENT	0.279	0.142
TOTAL O&M	0.581	0.834
TOTAL OTHER	3.514	3.621
TOTAL ANNUAL LAB	9.972	13.641
TOTAL INHOUSE	8.300	9.294
TOTAL INHOUSE RDTE	4.486	5.301
ANNUAL OPERATING COST	0.756	0.795

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	97	0	13	84
CIVILIAN	95	0	15	80
TOTAL	192	0	28	164

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	11.220	37.090	46.690	95.000	1.692	15.184

...MISSION

PLAN, CONDUCT AND REPT ON OPERATIONAL AND OTHER USER TESTS. PARTICIPATE IN OTHER TESTING AS DIR. PROV ADVICE AND GUIDN ON TEST MATTERS TO COMBAT TRAINING AND MAT DEVELOPERS, OTHER SERVICES AND PRIVATE INDUSTRY. CONDUCT OTHER TESTS AND SELECTED SPECIFIC EVAL AS DIR BY CG, TRADOC.

...CURRENT IMPORTANT PROGRAMS

PEDESTAL MOUNTED STINGER

FAAD-LOS-HEAVY

C2I

PATRIOT BATTLEFIELD MANAGEMENT SYSTEM

PRODUCT IMPROVED VULCAN AIR DEFENSE SYSTEM (PIVADS)

...FUNCTIONS/EQUIPMENT/FACILITIES

EQUIPMENT: MULTIPLE TGT TRACKING SYS PROVIDES DATA FROM AIR AND GROUND TGTS, TWO LASER TRACKING SYS PROVIDE DATA FROM COOPERATIVE TGTS; INSTR RADAR SYS THAT PROVIDES HIGH ACCURACY; ONE NIKE-HERC FIRE CON SYS USED WITH RADAR DATA RECORDER; A RANGE TIMING SYS TO PROVIDE A TIMEBASE FOR ALL INSTR SYS; TWO DATA ACQ SYS ACCEPT 59 DIFFERENT SIGNALS, CCTV SYS FOR RANGE SAFETY; TECH PHOTO LAB FOR REQUIRED DATA; RICS PROVIDES NEAR REALTIME DATA OUTPUTS. ADD EQUIP- DLES, IMS, MET STA, SECURE VOICE COMMO SYS, ADPE. FACILITIES AT FORT BLISS: BLDG 1656 HOUSES RICS; RANGE TIMING SYS; DATA REDUCTION SYS; ELECTRONICS CAL AND FABRICATION LAB; MACHINE AND CARPENTER SHOPS; MICROWAVE TERMINAL THAT PROVIDES DATA AND COMMO LINK TO RANGES; BLDG 1658 - PHOTOGRAPHIC LAB; MCGREGOR AND ORO GRANDE RANGES FOR FIRING FORWARD AREA WPNS AT AIR OR GROUND TARGETS.

INSTALLATION: AIRBORNE & SPECIAL OPNS TEST BOARD

FT. BRAGG, NC

PRES. COL GARY B. GILMORE

TECH DIR. MR. KENNETH L. MOORE

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.342	3.199
TOTAL PROCUREMENT	2.124	2.599
TOTAL O&M	2.574	0.997
TOTAL OTHER	2.324	2.551
TOTAL ANNUAL LAB	10.364	9.346
TOTAL INHOUSE	10.137	9.120
TOTAL INHOUSE RDTE	3.098	2.972
ANNUAL OPERATING COST	2.740	2.437

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	42	0	8	34
CIVILIAN	72	0	10	62
TOTAL	114	0	18	96

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27	3.978	40.795	44.183	88.956	0.000	7.920

...MISSION

THE MISSION OF THIS BOARD IS TO PLAN, CONDUCT AND REPORT ON OT I,II, & III FDTE AND OTHER USER-TYPE TESTS OF ABN EQUIP, PROCEDURES, & SYSTEMS; PARTICIPATE IN DT AS DIRECTED; PROVIDE ADVICE AND GUIDANCE ON TEST & EVALUATION MATTERS & CONDUCT OTHER TESTS & EVALUATIONS AS DIRECTED.

...CURRENT IMPORTANT PROGRAMS

LOW ALTITUDE PARACHUTE EXTRACTION SYSTEM  
STANDARD AIRDROP OF SELECTED ITEMS OF EQUIPMENT  
EXTERNAL AIR TRANSPORTABILITY  
INTERNAL AIR TRANSPORTABILITY  
AIRBORNE/AIRMOBILE ENGINEER EQUIPMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE: MAIN OFC BLDG, ABN HANGER, INSTRUMENTATION/DESIGN INTERFACING SECTION, COMBINED SHOP & ADP FACILITY. MAJOR EQUIPMENT INCLUDES: 4 LIGHTWEIGHT OPTICAL TRACKING SYSTEMS, 25-TON CRANE, 2 20-TON MOBILE CRANES, 5-TON WRECKER, 1 40,000 LB ACFT LOADER, 3 T-34C ACFT, 1 UH-1H HELICOPTER, VARIOUS TYPES OF STANDARD PARACHUTES, 9 GASOLINE GENERATORS, DIGITAL THEODOLITES, ELECTRONIC DIAGNOSTIC EQUIPMENT, VOLT-METERS, AMMETERS, SPECTRUM ANALYZERS, SOUND & VIBRATION ANALYZERS, TIME MARK GENERATORS, OSCILLOSCOPES, MULTIMETERS, RANDOM NOISE GENERATORS, POWER SUPPLIES, Q METERS, ATTENUATORS, GRAPHIC LEVEL RECORDERS, 16 MM CAMERAS, FILM ANALYZERS, PORTABLE VIDEO EQUIPMENT, VAN METER, ANALOG TAPE RECORDER, FREQUENCY COUNTERS, SOUND LEVEL CALIBRATORS, METER CALIBRATORS, MEGOHMMETER .

INSTALLATION: ARMAMENT RESEARCH, DEV AND ENG CENTER

DOVER, NJ

BG J. RAFFIANI, JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	324.800	409.200
TOTAL PROCUREMENT	5.700	42.100
TOTAL O&M	45.500	20.700
TOTAL OTHER	12.290	0.700
TOTAL ANNUAL LAB	388.290	472.700
 TOTAL INHOUSE	 188.150	 235.300
TOTAL INHOUSE RDTE	162.400	204.600
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	87	0	62	25
CIVILIAN	4355	0	1986	2369
TOTAL	4442	0	2048	2394

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
6491	2410.000	945.000	712.000	4067.000	712.000	190.000

#### ...MISSION

THE MISSION OF THE CNTR IS THREEFOLD FOR ASSIGNED ARMAMENT SYSTEMS AND COMMODITIES. (1)PRODUCT IMPROVING ITEMS CURRENTLY IN THE INVENTORY, DEV NEW ITEMS & PROVIDING LIFE CYCLE ENG SUP TO ITEMS IN PRODUCTION. (2)BE A SMART BUYER-REMAIN ABREAST OF TECH DEV(3)SOURCE OF TECH ASSIST TO FIELD

#### ...CURRENT IMPORTANT PROGRAMS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

RESPONSIBLE FOR DEVELOPMENT, PRODUCT IMPROVEMENT AND LIFE CYCLE ENGINEERING SUPPORT OF ARTILLERY AND MORTAR SYSTEMS, PRECISION OR SOMETIMES CALLED SMART MUNITIONS, MINES AND DEMOLITION MUNITIONS, AND FIRE CONTRAO FOR ALL WEAPON SYSTEMS, ARMAMENT SYSTEMS AND AMMUNITION FOR TANK AND COMBAT VEHICLES, ANTI-TANK WEAPONS, SMALL ARMS, AUTOMATIC CANNONS, AND GUNS AND AMMUNITION FOR AIR DEFENSE AND AIRCRAFT WEAPONIZATION, EXPLOSIVES, WARHEADS, PYROTECHNICS, PROPELLANTS, FUZES AND AMMUNITION PACKAGING. IN ADDITION, AED MANAGES THE ARDEC TEST AND INSTRUMENTATION FACILITIES USED IN SUPPORTING THE MATERIAL IN THE FIRE SUPPORT AND CLOSE COMBAT ARMAMENTS CENTERS.

INSTALLATION: ARMOR AND ENGINEER BOARD

FT. KNOX, KY

PRES. COL GARRETT E. DUNCAN

SCI ADV. MR. WARREN W. WELLS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	9.097	9.094
TOTAL PROCUREMENT	1.084	0.634
TOTAL O&M	0.862	1.395
TOTAL OTHER	6.149	6.860
TOTAL ANNUAL LAB	17.192	17.983
TOTAL INHOUSE	17.192	17.983
TOTAL INHOUSE RDTE	9.097	9.094
ANNUAL OPERATING COST	0.863	0.911

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	176	0	62	114
CIVILIAN	129	1	36	93
TOTAL	305	1	98	207

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	38.062	50.454	88.069	176.585	1.646	30.854

...MISSION

PLAN CONDUCT & REPORT:OT I,II,III,FDTE,FOE,CEP,PIP,& OTHER USER TESTS OF AR, ENGR, CML, QM & TRANS SCH EQ. PROVIDE GUIDANCE/ADVICE TO DEVELOPERS, PRODUCERS & OTHER SVCS/PRIVATE INDUSTRY. PLAN/COORDINATE/CONDUCT/RPT ON PERFORMANCE TESTS OF TEST BED VEHICLES & ADVANCED TECHNOLOGIES.

...CURRENT IMPORTANT PROGRAMS

LONG TERM TANK GUN ACCURACY  
SIMULATION NET WORKING (SIMNET), CEP  
SURROGATE RESEARCH VEHICLE, PHASE II  
COUNTER OBSTACLE VEHICLE  
INLAND PETROLEUM DISTRIBUTION SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

VIDEO AUTO TGT TRACKING SYS; POSITION LOCATION SYS; HIGH-AGILITY MODULAR INTEGRATED TGT SYS; TK VIDEO SYS; GUN CAMERA; RANGE TIMING EQ; MICROWAVE EQ; 16MM MOTION PICTURE CAMERA W/DATADOORS; GUN ELEVATION LIMITING DEV-ICE; 35MM CAMERA; AUTO FILM ANALYZER & DIGITIZER SYS; DATA ACQ & REDUCT-ION SYS; VAN MOUNTED 6-CHANNEL VIDEO RECORDING SYS; ENVIRONMENTAL MEAS EQ; MICROCOMPUTER DEV LAB; TGT SCORING SYS; DIGITAL VIDEO PROCFSSOR; BT-41 TK CBT SIMULATOR; OPTICAL LIGHTBEAM SPLITTER; FUEL FLOWMETER; LOAD CELL; DATA RECORDER; SURVEY EQ; VIDEO CAMERA; THERMAL IMAGING SYS. ADP CAPABILITIES INCLUDE IN-HOUSE REDUCTION & ANALYSIS OF INSTR GENERATED DATA, TELECOMMUNICATIONS INTERFACE TO CD & T&E NETWORK & CLASSIFIED PRO-CESSING. OTHER CAPABILITIES: 40-TON OVERHEAD CRANE; MACHINE SHOP & MAINT EQ SETS; CBT VEH, TACTICAL WHEELED VEH & ENGR CONSTRUCTION EQ.



INSTALLATION: ARMY RESEARCH OFFICE

RSCH TRIANGLE PRK, NC

DIR. DR. ROBERT E. WEIGLE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	121.080	121.080
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.096	0.096
TOTAL ANNUAL LAB	121.176	121.176
TOTAL INHOUSE	0.096	0.096
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	4.172	4.172

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	1	1
CIVILIAN	129	45	45	84
TOTAL	131	45	46	85

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2	0.000	29.420	0.000	29.420	0.000	0.868

...MISSION

DEVELOP THE AMC RESEARCH PROGRAMS FOR THE PHYSICAL SCIENCES, MATHEMATICS ENGINEERING AND BIOLOGICAL, ATMOSPHERIC AND TERRESTRIAL SCIENCES. ASSESS EVALUATE AND PRIORITIZE THE AMC 6.1 PROGRAM AND EVALUATE AND ASSESS THE TECH BASE (6.1, 6.2 AND 6.3A) PROGRAMS TO INCLUDE THE IMPACT OF IR&D.

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN ARTIFICIAL INTELLIGENCE.

CHEMICAL AND BIOLOGICAL DEFENSE.

ROTARY WING AIRCRAFT RESEARCH.

RESEARCH IN TARGET ACQUISITION

UNIVERSITY RESEARCH INITIATIVE WITH 11 CENTERS IN 10 MAJOR THRUST AREAS.

...FUNCTIONS/EQUIPMENT/FACILITIES

EVALUATION OF RESEARCH PROPOSALS AND RESEARCH PERFORMANCE

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WSMR, NM

CDR. COL TODD D. STONG

TECH DIR. MR. JAMES E. MORRIS

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	43.024	40.353
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.021	0.002
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	43.045	40.355
TOTAL INHOUSE	25.559	21.335
TOTAL INHOUSE RDTE	25.538	21.333
ANNUAL OPERATING COST	4.093	4.094

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	58	0	3	55
CIVILIAN	403	32	127	276
TOTAL	461	32	130	331

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLIONS \$)		
	LAB	ADMIN	OTHER		REAL	PROP	EQUIP
15	32.379	81.124	46.989	160.492		2.298	27.990

...MISSION

PERFORM THAT PORTION OF THE LABCOM MISSION DEVOTED TO (1) RESEARCH AND DEVELOPMENT AIMED AT MINIMIZING ADVERSE ATMOSPHERIC EFFECTS ON WEAPON SYSTEMS; (2) DEVELOPING REMOTE ATMOSPHERIC SENSORS AND TECHNIQUES; AND (3) METEOROLOGICAL MEASUREMENTS AND ANALYSIS FOR RDT&E SUPPORT.

...CURRENT IMPORTANT PROGRAMS

HIGH ENERGY LASER SYSTEM TEST FACILITY

PM SMOKE/OBSCURANTS

PM MLRS

INTEGRATED METEOROLOGICAL SYSTEM (IMETS)

ELECTRO-OPTICAL SYSTEM ATMOSPHERIC EFFECTS LIBRARY (EOSAEL)

...FUNCTIONS/EQUIPMENT/FACILITIES

THE ATMOSPHERIC SCIENCES LABORATORY (ASL) PROVIDES ESSENTIAL SUPPORT IN TESTS OF ARMY WEAPONS AND MATERIAL, HELPING QUANTIFY ATMOSPHERIC EFFECTS AND DETERMINING CORRECTIVE MODIFICATIONS. ASL CONDUCTS BASIC RESEARCH TO IDENTIFY NEW REMOTE METEOROLOGICAL SENSING TECHNIQUES AND TO MODEL THE BEHAVIOR OF SMOKES, CHEMICALS, AND RADIATIONS IN THE ATMOSPHERE. ASL CONDUCTS EXPLORATORY SOFTWARE DEVELOPMENT TO EVALUATE ATMOSPHERIC EFFECTS ON ARMY SYSTEMS, TACTICS AND FUNCTIONS AND TO PROVIDE TACTICAL DECISION AIDS FOR THE BATTLEFIELD COMMANDER. ASL DEVELOPS TACTICAL METEOROLOGICAL SENSOR SYSTEMS WHICH ARE COST EFFECTIVE AND STATE-OF-THE-ART TO SUPPORT THE BATTLEFIELD COMMANDER. ALS PERFORMS ASSESSMENTS OF ATMOSPHERIC IMPACT UPON THE PROPOGATION AND OPERATION OF DIRECTED ENERGY (LASER) WEAPONS.

INSTALLATION: AVIATION BOARD

FT. RUCKER, AL

PRES. COL STANLEY E. GRET

TECH ADV. MR. GEORGE E. SLAGLEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	4.200	4.240
TOTAL PROCUREMENT	0.053	0.000
TOTAL O&M	0.116	3.040
TOTAL OTHER	2.383	2.631
TOTAL ANNUAL LAB	6.752	9.911
 TOTAL INHOUSE	 6.752	 9.911
TOTAL INHOUSE RDTE	4.200	4.240
ANNUAL OPERATING COST	2.475	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	44	0	21	23
CIVILIAN	46	3	23	23
TOTAL	90	3	44	46

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	0.000	18.826	20.470	39.296	0.000	1.900

...MISSION

TO PLAN, CONDUCT AND REPORT ON OPERATIONAL TEST I, II AND IIA AND OTHER NONMAJ SYSTEMS AS DIRECTED BY HQ, TRADOC. AVN BD DESIGNS AND CONDUCTS TESTING AND EVALUATION OF AVIATION SYSTEMS; SUBSYSTEMS AND ANCILLARY EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

AN/APR-34A(KE-1) RADAR WARNING RECEIVER  
FO214C USAA/ASE FDTE  
OTN1019A NOE COMM II  
OTN1085 AH-64 MASK  
OTN1084 SHELTER MAINTENANCE TRANSPORTABLE

...FUNCTIONS/EQUIPMENT/FACILITIES

NO MAJOR EQUIPMENT OR FACILITY.

INSTALLATION: AVIATION DEVELOPMENT TEST ACTIVITY

FT. RUCKER, AL

CDR. COL LAWERENCE KARJALA

TECH DIR. MR. JIM MCCRORY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	11.341	11.323
TOTAL PROCUREMENT	2.657	3.927
TOTAL O&M	5.712	4.997
TOTAL OTHER	6.192	5.671
TOTAL ANNUAL LAB	25.902	25.918
TOTAL INHOUSE	25.902	25.918
TOTAL INHOUSE RDTE	11.341	11.323
ANNUAL OPERATING COST	7.387	6.883

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	138	0	29	109
CIVILIAN	95	1	36	59
TOTAL	233	1	65	168

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP EQUIP
1196	.000	53.829	130.529	184.358	2.175 39.755

...MISSION

PLAN, CONDUCT, AND REPORT ON TESTS OF AVIATION SYSTEMS AND AVIATION RELATED EQUIPMENT FOR ARMY, NON-ARMY, GOVERNMENT AGENCIES AND INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

AH64A LOGISTICS EVAL  
AIR TO AIR STINGER  
PROGRESSIVE PHASE MAINT (PPM)  
LEAD THE FLEET TESTING  
FLIGHT SAFETY PARTS MONITORING

...FUNCTIONS/EQUIPMENT/FACILITIES

TWENTY-THREE FIXED AND ROTARY WING AIRCRAFT ARE ASSIGNED (7UH-1, 1 T-42 3 AH-1S, 1 U-21, 2 CH-47, 5 OH-58, 1 OV-1, 1 UH-60, 2 AH-64) WHICH MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIPMENT OR SUPPLIES APPLICABLE TO THAT A/C SERIES. A MODULAR ENGINE TEST SYSTEM (METS) PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENGINE PERFORMANCE FOR ENGINES UP TO 5000 HP AND WT UP TO 2000 LB. ON SITE DATA PROCESSING & DISPLAY CAPABILITY EXISTS WITH PDP-11 & IBM 4361 COMPUTER SYS. ADMIN & TECHNICAL PHOTOGRAPHIC CAPABILITY IS AVAIL TO INCLUDE VIDEO AND 16MM INSTRUMENTATION CAMERAS. HTE INSTRUMENTATION LAB CAN COLLECT ANALOG AND DIGITAL MEASUREMENTS USING 14-TRACK INSTRUMENTATION RECORDERS AND DIGITAL CASSETTE RECORDERS. HAS B&W COLOR VIDEO RECORDING CAP, STRIP-CHART RECORDERS, C. JILLOGRAPH, AIRINC 514 CRASH REC AND OVER WATER TESTING CAP

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB, CA

CDR. COL ALAN R. TODD

TECH DIR. MR. JAMES S. HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	8.040	9.008
TOTAL PROCUREMENT	0.621	0.655
TOTAL O&M	0.354	0.668
TOTAL OTHER	1.634	1.683
TOTAL ANNUAL LAB	10.649	12.014
TOTAL INHOUSE	9.976	11.732
TOTAL INHOUSE RDTE	7.195	8.599
ANNUAL OPERATING COST	1.550	1.590

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	63	0	24	39
CIVILIAN	108	0	44	64
TOTAL	171	0	68	103

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19	9.200	1.600	124.800	135.600	4.042	9.466

...MISSION

PRODUCE ENGR FLT TEST DATA ON ACFT PERF, HANDLING QUALITIES VIBRATION  
SYS/SUBSYSTEM INTERFACE FOR USE IN ACFT DEVELOPMENT AND QUALIFICATION  
SUSTAIN THE CAPABILITY TO COMPLETELY INSTRUMENT TEST ACFT WITH ONBOARD  
RECORDING/TELEMETRY REAL TIME DATA REDUCTION. CONDUCT PRE-TPS ORIENT.

...CURRENT IMPORTANT PROGRAMS

AIRWORTHINESS AND FLIGHT CHARACTERISTICS UH-1H W/CMRB  
LOSS OF TAIL ROTOR EFFECTIVENESS EVALUATION OF OH58C W/YAW SCAS  
AIRWORTHINESS AND FLIGHT CHARACTERISTICS OF MDHC 530FF  
AIRWORTHINESS AND FLIGHT CHARACTERISTICS U8F EXCALIBUR  
AIRWORTHINESS AND FLIGHT CHARACTERISTICS EH-60A

...FUNCTIONS/EQUIPMENT/FACILITIES

OV-1D JU-21A JAH-1F JCH-47C CH-47D JOH-58C OH-58C JUH-60A JT-34C 2 T-34C  
5 JUH-1H. ACFT MAINTENANCE CAPABILITY.  
ACFT MODIFICATION CAPABILITY.  
ACFT INSTRUMENTATION CAPABILITY.  
CENTRAL ADP/POST-RDAPS COMPUTER FACILITY.  
MOBILE REAL TIME DATA ACQUISITION AND PROCESSING SYSTEM (RDAPS).  
2BRONICA, 4CANON, 5MINOLTA, 1PENTAX, 2POLAROID, 1CPIGR, 2SCOPIC, 2ENLARGERS.  
1DRYER.

INSTALLATION: AVIATION RESEARCH AND TECHNOLOGY ACTIVITY      MOFFET FIELD, CA

DIR. DR. RICHARD M. CARLSON

DEP DIR. COL JEFFREY H. GODFREY

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	100.560	97.830
TOTAL PROCUREMENT	0.807	0.475
TOTAL O&M	2.155	2.627
TOTAL OTHER	0.890	1.104
TOTAL ANNUAL LAB	104.412	102.036
 TOTAL INHOUSE	 39.769	 47.846
TOTAL INHOUSE RDTE	37.305	44.342
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	9	7
CIVILIAN	354	26	253	101
TOTAL	370	27	262	108

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
127	88.848	58.673	16.370	163.891	2.348	16.761

...MISSION

PLAN, DEVELOP, MANAGE, & EXECUTE RESEARCH & DEVELOPMENT PROGRAMS FOR ARMY AVIATION SYSTEMS. PROVIDE TECH SUPPORT TO PROJECT/PRODUCT MANAGERS AND SYSTEMS DEVELOPERS AS REQUIRED. PROVIDE INDEPENDENT TECHNICAL RISK ASSESSMENT TO COMMANDER USA AVSCOM AND HIGHER AUTHORITY.

...CURRENT IMPORTANT PROGRAMS

RSCH IN FUNDAMENTAL ROTOR/ROTORCRAFT AERODYNAMICS, DYNAMICS, AND NOISE. R&D OF ENGINES, SMALL GAS TURBINES, TRANSMISSIONS, AND BEARINGS. R&D TO IMPROVE RELIABILITY & MAINTAINABILITY OF AIRMOBILE SYSTEMS. RSCH COMPOSITES & EVALUATE APPLICATIONS TO IMPROVE STRUCTURES FOR A/C. EVOLVE TECHNOLOGY & CRITERIA TO IMPROVE FLIGHT SAFETY & SURVIVABILITY.

...FUNCTIONS/EQUIPMENT/FACILITIES

THREE DIRECTORATES - AT MOFFET FIELD CA, CLEVELAND OH, HAMPTON VA; COLLOCATED WITH NASA; PARTICIPATING IN AERONAUTICAL RESEARCH AND DISCIPLINES; JOINTLY USING WIND TUNNELS, SIMULATORS, AND LABORATORY TEST FACILITIES, INCLUDING SHOPS, FLIGHT LINE AND HANGER, ENGINE AND TRANSMISSION TEST FACILITIES, AND COMPUTATIONAL EQUIPMENT. FOURTH DIRECTORATE AT FORT EUSTIS VA, PERFORMING ADVANCED APPLICATIONS WORK INCLUDING AIRCRAFT WEAPONIZATION AND MISSION SUPPORT EQUIPMENT. MAJOR EQUIPMENT AND FACILITIES ARE FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETER GROUND STATION, NON-DESTRUCT TESTING FACILITY, AND FLIGHT SAFETY LAB.

INSTALLATION: AVIONICS R&D ACTIVITY

FT. MONMOUTH, NJ

DIR. MR. DAVID V. GAGOIN

DEP DIR. MR. A. CHARLES MAROTTA

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	21.234	21.954
TOTAL PROCUREMENT	4.926	12.347
TOTAL O&M	4.053	1.791
TOTAL OTHER	0.464	0.773
TOTAL ANNUAL LAB	30.677	36.865
TOTAL INHOUSE	14.921	8.785
TOTAL INHOUSE RDTE	11.626	4.880
ANNUAL OPERATING COST	4.480	3.892

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	17	0	11	6
CIVILIAN	259	5	146	113
TOTAL	276	5	157	119

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2	52.450	13.665	19.100	85.215	0.000	19.014

...MISSION

RESPONSIBLE FOR THAT PORTION OF AVSCOM'S MISSION WHICH PERTAINS TO AVIONICS FROM RESEARCH THROUGH FIRST-TIME PRODUCTION. THIS ENCOMPASSES: SYSTEMS ARCHITECTURE; AVIONICS HARDWARE, (I.E. COMM, NAV, COCKPIT INST, A/RB. CMD & CONT) AND SYSTEMS ENGINEERING INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

DIGITAL AVIONICS INTEGRATION.  
INTEGRATED COMMUNICATIONS, NAVIGATION, IDENTIFICATION, AVIONICS.  
AUTOMATED BATTLE CAPTAIN DEMONSTRATION.  
COMMAND AND CONTROL GROUND STATION.  
VOICE-CONTROLLED COCKPIT SYSTEMS.

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT INCLUDES DIGITAL HOT BENCH, AUTOMATED DATA COLLECTION AND REDUCTION EQUIPMENT AND AUDIO/DIGITAL ANALYZERS.  
FACILITIES INCLUDE TACTICAL AVIONICS SYSTEMS SIMULATOR (TASS), SYSTEM TEST BED FOR AVIONICS RESEARCH (STAR), AUDIO ACOUSTIC FACILITY, ADJACENT HELIPORT, AVIONICS INTEGRATION RESEARCH LABORATORY, NAVIGATION VAN, ANTENNA RESEARCH FACILITY AND COCKPIT EVALUATION FACILITY.

INSTALLATION: BALLISTIC RESEARCH LABORATORY

APG, MD

DIR. JOHN T. FRASIER

CDR. & DEP DIR. COL JAMES V. WASSON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	119.199	118.650
TOTAL PROCUREMENT	13.289	15.314
TOTAL O&M	2.299	2.779
TOTAL OTHER	14.515	18.257
TOTAL ANNUAL LAB	149.302	155.000
TOTAL INHOUSE	63.723	87.619
TOTAL INHOUSE RDTE	50.745	67.475
ANNUAL OPERATING COST	9.880	9.871

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	19	2	11	8
CIVILIAN	738	109	439	299
TOTAL	757	111	450	307

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1920	380.000	117.000	120.000	617.000	15.000	70.000

...MISSION

THE BALLISTIC RESEARCH LABORATORY (BRL) IS THE ARMY'S LEAD LABORATORY FOR VULNERABILITY/VULNERABILITY REDUCTION. OUR MISSION TASKS US TO SOLVE MILITARY BALLISTICS RELATED PROBLEMS WHILE MAINTAINING A WEAPONS ORIENTED BASIC RESEARCH PROGRAM IN DEFENSE-RELATED TECHNOLOGIES.

...CURRENT IMPORTANT PROGRAMS

HYPERVELOCITY PROPULSION TECHNOLOGY  
LAUNCH AND FLIGHT DYNAMICS  
WARHEAD TECHNOLOGY  
ARMOR TECHNOLOGY  
SMART WEAPONS SYSTEMS TECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

OUR IMPRESSIVE LIST OF WELL INSTRUMENTED FACILITIES INCLUDES; OPEN RANGES FOR THE DETONATION OF EXPERIMENTAL MUNITIONS, ENCLOSED RANGES WHICH CAN CONTAIN THE DETONATION OF FIFTY LBS. OF EXPLOSIVE(S), A FREE FLIGHT RANGE WHICH CAN PHOTOGRAPH HIGH EXPLOSIVE SHELLS IN FLIGHT AND AN ENCLOSED KE PENETRATOR RANGE FROM WHICH A 120MM DEPLETED URANIUM KE ROUND CAN BE FIRED, SUBSEQUENTLY CONTAINING ALL OF THE PRODUCTS OF THE INTERACTION BETWEEN PENETRATOR AND TARGET. OTHER FACILITIES INCLUDE LARGE AND SMALL SHOCK TUBES TO STUDY AIR BLAST EFFECTS, AN ANECHOIC CHAMBER TO STUDY MM WAVE SENSOR AND SIGNATURE RESEARCH, CHAMBERS AND BURNERS TO STUDY PROPELLANT BURNING, SMALL SCALE GUN RANGES, A FLIGHT SIMULATOR TO STUDY PROJECTILE MOTION FLIGHT, AND AN EXPLOSIVE MODELING FACILITY FOR THE CASTING OF EXPLOSIVES.



INSTALLATION: BELVOIR RSCH, DEV AND ACQ CNTR

FT. BELVOIR, VA

CDR. COL EDWARD M. LEE

TECH DIR. MR. T. W. LOVELACE

PROGRAM DATA BY FISCAL YEAR (MILLION\$)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	140.233	126.047
TOTAL PROCUREMENT	10.292	40.300
TOTAL O&M	32.994	24.700
TOTAL OTHER	6.743	10.000
TOTAL ANNUAL LAB	190.262	201.047
 TOTAL INHOUSE	 54.634	 55.991
TOTAL INHOUSE RDTE	39.504	40.491
ANNUAL OPERATING COST	24.654	25.400

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	59	2	15	44
CIVILIAN	986	27	416	570
TOTAL	1045	29	431	614

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1052	433.533	270.281	84.902	788.716	20.238	37.451

#### ...MISSION

THE CENTER HAS MISSION RESPONSIBILITIES IN 18 COMMODITY-ORIENTED FIELDS OF ENDEAVOR GROUPED INTO 3 PROGRAM AREAS: COMBAT ENGINEERING LOGISTICS SUPPORT MATERIALS, FUELS AND LUBRICANTS. THESE LINK WITH ARMY'S COMBAT SUP ENGR MINE WARFARE COMBAT SVC SUP SPEC OPS FORCES MISSION AREAS.

#### ...CURRENT IMPORTANT PROGRAMS

PHYSICAL SECURITY/FUELS HANDLING EQUIPMENT  
TACTICAL LOGISTICS SYSTEMS  
COUNTERMINE/COUNTEROBSTACLE EQUIPMENT  
TACTICAL ELECTRIC POWER SYSTEMS  
BRIDGING SYSTEMS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

CONTRACT AWARDS INCLUDED FACILITY INTRUSION DETECTION SYSTEM, ARAPHO HELICOPTER SUPPORT SYSTEM, 6000-LB ROUGH TERRAIN FORKLIFT, AND LANDING CRAFT. THE COUNTEROBSTACLE VEHICLE WAS FEATURED AT THE ARMOR CONF AND AT NATL TRNG CTR. NEW FACILITIES INCLUDE A ROBOTICS LAB TO STUDY APPLICATIONS OF ROBOTICS AND ARTIFICIAL INTELLIGENCE, AND AN AUTOMATED CAMOUFLAGE PATTERN GENERATION FACILITY. OTHER FACILITIES INCLUDE SENSOR TEST AREA, RADIO FREQUENCY ANECHOIC CHAMBER, FIRE SUPPRESSION CHAMBER, BRIDGE TEST HANGER, MOBILE STRESS ANALYSIS VAN, TRUCK STABILITY TILT TABLE, VEHICLE TEST TRACKS, SHOCK VIBRATION DYNAMICS SIMULATOR, ENVIRONMENTAL SIMULATOR, RAIL IMPACT TEST FACILITY, MATERIALS RESEARCH LAB, STILL MOTION PICTURE SUPPORT, AND MODEL FABRICATION SHOP.

INSTALLATION: BIOMEDICAL R&D LABORATORY

FT. DETRICK, MD

CDR. COL CARL E. PEDERSEN, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	10.973	11.092
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.093	0.000
TOTAL OTHER	1.249	1.274
TOTAL ANNUAL LAB	12.313	12.366
 TOTAL INHOUSE	 7.250	 6.861
TOTAL INHOUSE RDTE	5.919	5.597
ANNUAL OPERATING COST	2.112	1.949

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	4	21	8
CIVILIAN	91	14	41	50
TOTAL	120	18	62	58

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	23.691	42.773	22.569	89.033	4.042	6.195

...MISSION

CONDUCTS R&D IN FIELD MEDICAL MATERIEL, VECTOR CONTROL SYSTEMS, HEALTH HAZARDS, & ENVIRONMENTAL HEALTH EFFECTS. DEVELOPS, TESTS, & EVALUATES FIELD MEDICAL, DENTAL, WATER TREATMENT, & VECTOR CONTROL EQUIPMENT, METHODS, & MATERIALS. ESTABLISH HEALTH HAZARD DATA BASES.

...CURRENT IMPORTANT PROGRAMS

RESEARCH PROJECTS INCLUDE DEVELOPMENT AND TESTING OF VITAL SIGNS MONITOR, CHEMICAL WARFARE AGENT PROTECTIVE PATIENT WRAP, ARMY COLLAPSIBLE INSECT SURVEILLANCE (ACIS) TRAP, STATE-OF-THE-ART MASS DELOUSER, INTERIM DRINKING WATER STANDARDS FOR MUNITIONS COMPOUNDS, AND ARMORED VEHICLE CREWMAN OCCUPATIONAL EXPOSURE AND PERFORMANCE DECREMENTS.

...FUNCTIONS/EQUIPMENT/FACILITIES

DESIGN, DEVELOP, TEST, & FABRICATE PROTOTYPES, TEST MODELS, & LIMITED QUANTITIES OF FIELD MEDICAL, DENTAL, & VECTOR CONTROL EQUIPMENT, SYSTEMS, AND MATERIALS.

PERFORM HEALTH HAZARD ASSESSMENT ON MILITARY UNIQUE POLLUTANTS. ESTABLISH HEALTH DATA BASES FOR OCCUPATIONAL AND FIELD EXPOSURES TO CHEMICALS AND MICROORGANISMS.

INSTALLATION: CHEMICAL RSCH, DEV AND ENGR CNTR

APG, MD

CDR. BG PETER D. HIDAGLGO

TECH DIR. JOSEPH J. VERVIER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	139.371	128.712
TOTAL PROCUREMENT	66.100	83.700
TOTAL O&M	11.132	11.900
TOTAL OTHER	2.300	2.400
TOTAL ANNUAL LAB	218.903	226.712
TOTAL INHOUSE	84.806	81.857
TOTAL INHOUSE RDTE	62.569	60.057
ANNUAL OPERATING COST	15.000	15.500

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	100	3	44	56
CIVILIAN	1029	80	693	336
TOTAL	1129	83	737	392

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
3471	733.055	294.129	298.821	1326.005	25.564	63.126

#### ...MISSION

A RSCH, DEV AND ENGR LAB PROVIDING US FORCES WITH CAPABILITY TO OPERATE ON A CML/BIOL BATTLEFIELD AND DETER CML ATTACK. PROVIDE LIFE CYCLE ENGR FOR CML WEAPONS AND CML BIOL DEFENSE. ACT AS DOD LEAD LAB FOR CML DEF/ DETERRENCE. CONDUCT SMOKE/OBSCURANT TECH BASE. COORDINATE INTL PROGRAMS.

#### ...CURRENT IMPORTANT PROGRAMS

CB RECONNAISSANCE, DETECTION AND IDENTIFICATION  
INDIVIDUAL/COLLECTIVE PROTECTION  
CB DECONTAMINATION AND CONTAMINATION AVOIDANCE  
SMOKE OBSCURANT SYSTEMS  
CHEMICAL DETERRENT SYSTEMS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

BASIC RESEARCH; SMOKE/OBSCURANT SYSTEMS; CHEMISTRY AND EFFECTS OF THREAT AGENTS; ANALYSIS AND INTEGRATION OF CML DEF SYSTEMS; RECONNAISSANCE, DETECTION, AND IDENTIFICATION; INDIVIDUAL/COLLECTIVE PROTECTION; DECONTAMINATION AND CONTAMINATION AVOIDANCE; CB DATA BASE & SYSTEMS SCIENCE; CHEMICAL DETERRENT SYSTEMS.  
MAJOR EQUIPMENT IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS. INCLUDES CML PILOT PLANTS, AEROSOL CHAMBER, MUNITION FILLING FACILITY, PRODUCTION AND FACILITY DESIGN, CHAMBER FOR STUDIES ON SPEECH TRANSMISSION, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY, SPECIALIZED CHEMICAL AGENT LAB, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, COMPUTERMAN, INDOOR BALLISTIC RANGE, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNEL.

INSTALLATION: CNTR FOR COMM/AUTOMATIC DATA PROCESSING

FT. MONMOUTH, NJ

CDR. MG ROBERT D. MORGAN

TECH DIR. MR. EUGENE FAMOLARI, JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	69.746	64.512
TOTAL PROCUREMENT	7.840	6.474
TOTAL O&M	4.840	2.931
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	82.426	73.917
TOTAL INHOUSE	30.717	30.873
TOTAL INHOUSE RDTE	22.426	25.255
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	9	6
CIVILIAN	469	17	344	125
TOTAL	484	17	353	131

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	62.000	70.000	40.000	172.000	0.000		17.893

...MISSION

CENTER FOR COMM/ADP MISSION IS TO MANAGE AND PERFORM TECH BASE AND ENGRG DEVELOPMENT ACTIVITIES WHICH PROVIDE COMPREHENSIVE TECH SUPPORT FOR TACTICAL C3 EQPTS AND SYSTEMS. RESPONSIBLE FOR R&D IN ANTENNAS HF/UHF AND LINE-OF-SIGHT COMM, SWITCHING SIG PROC, FIBER OPTICS TACT COMP SOFTWARE.

...CURRENT IMPORTANT PROGRAMS

DISTRIBUTED COMM/PROCESSING EXPERIMENTS  
EXPLORATORY DEVELOPMENT PROGRAM FOR A TACTICAL FIBER OPTIC CABLE ASSBLY  
ADVANCED HF RADIO ECCM WAVEFORM  
ESTABLISHED ONE OF THE MOST ADVANCED ARTIFICIAL INTEL GROUPS IN T&E ARMY  
COMSEC LAB-USED TO PERFORM IN-HOUSE DESIGN SYSTEM TROUBLESHOOTING AND

...FUNCTIONS/EQUIPMENT/FACILITIES

EVALUATION OF COMSEC AND ANCILLIARY E-PTSC NET RADIO LAB-DEVOTED TO T&E RDT&E OF HF AND VHF RADIOS, MODEMS, AND ANCILLIARY DEVICES, ACOUSTIC TEST AND MEASUREMENT EQPTS. ELECTROMAGNETIC INTERFERENCE EEMIN LAB-USED TO ASCERTAIN EMI CHARACTERISTICS OF TACTICAL MILITARY SYSTEMS AND EVAL OF NDI EQPTC COMM SYSTEMS DESIGN CTR-PROVIDES ENGRG SUPPORT FOR BOTH DEVELOPING AND FIELDIED COMM SYSTEMS TELEPROCESSING DESIGN CTR- SUPPORTS SOFTWARE DEVELOPMENT AND TEST AND R&D PROGRAMS. ARTIFICIAL INTEL LABS-FACIL TO PERFORM DEVELOPMENT, TEST, AND EVAL, AND TO EXPLORE TECH OF AI IN IMPROVING C2C FIBER OPTICS LAB-DEVELOPT TEST AND EVAL NEW COMPONENTS AND SYSTEMS IN SOLVING ROC AND O&O REQUIREMENTS.

INSTALLATION: CNTR FOR ELECTRONIC WARFARE

FT. MONMOUTH, NJ

CDR. MG ROBERT D. MORGAN

TECH DIR. MR. ROBERT F. GIORDANO

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	85.554	69.296
TOTAL PROCUREMENT	174.141	178.532
TOTAL O&M	17.395	40.650
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	277.090	288.478
TOTAL INHOUSE	14.194	47.534
TOTAL INHOUSE RDTE	8.462	12.059
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	0	9	18
CIVILIAN	356	0	98	258
TOTAL	383	0	107	276

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
106	112.278	35.107	8.189	155.574	6.775	8.070	

...MISSION

MISSION INCLUDES THE DESIGN, DEVELOPMENT, INITIAL ACQUISITION AND FIRST FIELDING OF NONCOMMUNICATIONS AND SELECTED COMMUNICATIONS EW COUNTERMEASURES AND INTELLIGENCE EQUIPMENT ALONG WITH SURVEILLANCE, WEAPON LOCATION DETECTION, AND IDENTIFICATION EQUIPMENTS.

...CURRENT IMPORTANT PROGRAMS

GUARDRAIL  
TEAMPACK  
SELF-PROTECTION WARNING AND JAMMING SYSTEMS  
RADAR APS-94  
STINGRAY

...FUNCTIONS/EQUIPMENT/FACILITIES

VAX 11/730 FOR THREAT DEPLOYMENT SIMULATION AND AI COMPUTING FACILITY.  
SPECIALIZED R&D FACILITY FOR LAUNCHING AND TRACKING MET BALLOONS.  
LASER/ED TEST RANGE LOCATED IN WAYSIDE IS USED FOR LASER & EO FLD TESTS.  
RADAR MEASUREMENT FACILITY IS USED TO RECORD NONCOMMUNICATIONS PULSE ENV  
ANTENNA FACILITY CONSISTS OF AN ANECHOIC CHAMBER AND OUTDOOR MEASUREMENT  
ASSOCIATED INSTRUMENTATION.  
DGTS IS A SOFTWARE-BASED SYSTEM FOR DEVELOPING AND GENERATING BATTLE-  
FIELD SCENARIOS TO SUPPORT DEVELOPMENT AND TESTING OF EW/RSTA SYSTEMS.  
A NEW GAMMA RADIATION SOURCE ENHANCES RADIATION EXPOSURE CAPABILITY FOR  
RADIAC DOSE-RATE AND DOSE SENSOR DEVELOPMENT AND CALIBRATION.  
DATA ANALYSIS AND ALGORITHM DEVELOPMENT FACILITY.  
MULTI-SENSOR INTEGRATION COMPUTER FACILITY.

INSTALLATION: CNTR FOR NIGHT VISION & ELECTRO-OPTICS

FT. BELVOIR, VA

CDR. MG. ROBERT D. MORGAN

TECH DIR. MR. PAUL D. TAVESKY

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	127.927	116.010
TOTAL PROCUREMENT	66.851	13.365
TOTAL O&M	6.046	1.757
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	200.824	131.132
TOTAL INHOUSE	91.369	31.762
TOTAL INHOUSE RDTE	35.190	28.819
ANNUAL OPERATING COST	10.520	0.245

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	33	1	11	22
CIVILIAN	453	35	234	219
TOTAL	486	36	245	241

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	80.000	44.473	37.000	161.473	12.244	42.627

...MISSION

CNVED IS RESPONSIBLE FOR PROVIDING TECHNOLOGY AND EQUIPMENT TO PERMIT NIGHT OPERATION AS EFFECTIVE AS DAY OPERATION AND THROUGH SMOKE AND ADVERSE WEATHER. THE SYSTEMS DEV PROGRAM IS CENTERED AROUND A STRONG TECH BASE OF FIRT ELECTED-OPTICS LASERS VISIONICS, AND SIGNAL PROCESSING.,

...CURRENT IMPORTANT PROGRAMS

R&D OF INFRA-RED SENSORS

AUTOMATION OF FORWARD-LOOKING INFRARED SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR FACILITIES INCLUDE: NIGHT VISION SYSTEM LABT IR DETECTOR FABRICATION AND ANALYSIS FACILITY, JR OPTICAL TEST FACILITY, IMAGE INTENSIFIER TUBE TESTING FACILITY. SEMICONDUCTOR MATERIALS RESEARCH FACILITY, ELECTRONIC TEST FACILITY INTERACTIVE IMAGE PROCESSING FACILITY, LASER RANGES ,3-D MULTISPECTRAL SEARCH SIMULATORT SCIENTIFIC COMPUTER CENTER FIRING TEST RANGE ELECTRO-OPTICAL/INFRARED IMAGE EVALUATION FACILITY AND LASER MATERIAL EVALUATION FACILITY.

INSTALLATION: CNTR FOR SIGNALS WARFARE

WARRENTON, VA

CDR. MG ROBERT D. MORGAN

CHIEF SCI. MR. HERBERT S. HOUEY, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	56.718	59.617
TOTAL PROCUREMENT	110.000	164.800
TOTAL O&M	14.357	15.482
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	181.075	239.899
 TOTAL INHOUSE	 6.317	 11.413
TOTAL INHOUSE RDTE	4.297	9.192
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	46	0	12	34
CIVILIAN	179	0	67	112
TOTAL	225	0	79	146

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL	PROP	EQUIP
	LAB	ADMIN	OTHER				
10	9.710	35.475	7.440	52.625		1.896	9.343

...MISSION

TO PROVIDE US ARMY WITH EFFECTIVE TACTICAL COMMUNICATIONS EW-AND TACTICAL AND STRATEGIC COMMUNICATIONS INTEL MATERIAL CAPABILITY IN SUPPORT OF THE ARMY'S MISSION.

...CURRENT IMPORTANT PROGRAMS

QUICKFIX  
TRAILBLAZER  
TACJAM  
TROJAN  
TRACKWOLF

...FUNCTIONS/EQUIPMENT/FACILITIES

WARRENTON, VA IS A FACILITY UNIQUELY SUITED TO ITS COMMUNICATIONS INTER-CEPT, PROCESSING, COLLECTING, DIRECTION FINDING AND JAMMING MATERIAL MISSION. FACILITIES INCLUDE AN ANTENNA FIELD FOR SIGNALS COLLECTION, A COMPUTERIZED SIGNAL ANALYSIS PROCESSING SYSTEM FOR SIGNALS SIMULATION AND ANALYSIS, AND AN IN-HOUSE FACILITY FOR SYSTEMS SOFTWARE VERIFICATION AND VALIDATION. THE CENTER IS STAFFED WITH ELECTRONIC ENGINEERS, TECHNICAL SIGNAL ANALYSTS, OPERATIONS RESEARCH ANALYSTS, PRODUCT AND QUALITY ASSURANCE TECHNICIANS AND PRODUCTION ENGINEERS TO PROVIDE FOR USEFUL MILITARY EQUIPMENT AND SYSTEMS.

INSTALLATION: COLD REGIONS RESEARCH & ENGINEERING LAB

HANOVER, NH

CDR. COL M. F. ROTH

TECH DIR. DR. L. E. LINK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	12.338	11.925
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.352	1.300
TOTAL OTHER	9.729	9.000
TOTAL ANNUAL LAB	23.419	22.225
TOTAL INHOUSE	16.476	16.005
TOTAL INHOUSE RDTE	7.773	7.513
ANNUAL OPERATING COST	4.581	5.206

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	0	5	13
CIVILIAN	278	35	116	162
TOTAL	296	35	121	175

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
31	107.797	0.310	0.027	108.134	16.684	12.545

#### ...MISSION

AS THE ARMY LAB FOR SCIENCE & TECHNOLOGY IN COLD REGIONS, THE COLD REGIONS R&E LABORATORY CONDUCTS&COORDINATES RESEARCH APPLICABLE TO THE ARMY'S NEED WHERE WINTER WEATHER & COLD PRESENT A SEVERE PROBLEM. MANAGE ARMY COLD REGIONS INFORMATION CENTER

#### ...CURRENT IMPORTANT PROGRAMS

WINTER COMBAT OPERATIONS TECHNOLOGY  
IMPACT OF WINTER ENVIRONMENT ON NEW WEAPON SYSTEM AND OTHER MATERIEL  
FACILITIES CONST. OPERATIONS, & REPAIR IN TEMP & ARCTIC COLD CONDITIONS  
IMPROVE WINTER NAVIGATION  
DEVELOP ENVIRONMENTAL REMOTE SENSING APPLICATIONS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS WHICH CAN BE OPERATED TO 50F, AN ICE ENGINEERING LAB FOR LARGE SCALE ICE MODELING EXPERIMENTS, A CHEM LAB, AN ELECTRON MICROSCOPE LAB, A SOILS PROC.LAB, A WASTEWATER, TREATMENT RSCH FAC. A FROST EFFECTS LAB WHERE 6TO8 FREEZE/THAW CYCLES CAN BE CONDUCTED IN ONE YEAR, A MASS SPECTROMETER, A GAS CHROMATOGRAPH, A SMALL LASER FAC. AND A MATERIALS TESTING FAC. AN IMPACT TEST FAC. CAPABLE OF SIMULATING THE SPACE ENVIRONMENT AND A SNOW DRIFT MODELING WIND TUNNEL. THE CRREL-ALASKA OFFICE AT FAIRBANKS PROVIDES RESEARCH LOGISTICS SUPPORT AND MAINTAINS COORDINATION WITH ALASKA AGENCIES. MILITARY AND CIVILIAN PERSONNEL HAVE EXPERTISE OVER A WIDE RANGE OF SCIENTIFIC AND ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH



INSTALLATION: COLD REGIONS TEST CENTER

APO SEATTLE, WA

CDR. COL WAYNE A. HANSON

TECH ADV. MR. WILLIAM J. HANSLEM

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	7.744	7.166
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.755	5.928
TOTAL ANNUAL LAB	13.499	13.094
TOTAL INHOUSE	13.499	13.094
TOTAL INHOUSE RDTE	7.744	7.166
ANNUAL OPERATING COST	5.943	5.839

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	255	0	35	220
CIVILIAN	25	0	17	8
TOTAL	280	0	52	228

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
647155	0.000	35.384	167.282	202.666	10.336	10.854

#### ...MISSION

PLAN, CONDUCT, AND REPORT THE RESULTS OF COLD REGIONS, MOUNTAIN AND NORTHERN ENVIRONMENTAL PHASES OF DEVELOPMENT AND OTHER TESTS; REVIEW PLANS AND MONITOR DEVELOPMENT TESTING IAW INTEGRATED TESTING CYCLE POLICIES. PROVIDE ADVICE AND GUIDANCE TO GOVT AGENCIES AND PRIVATE IND.

#### ...CURRENT IMPORTANT PROGRAMS

155MM, EXTENDED LONG RANGE XM864 BASE BLEED PROJECTILE CARTRIDGE, 81MM, SCREENING SMOKE XM819 (ARCTIC PHASE) CARTRIDGE, 81MM ILLUMINATING, XM853  
XM139, MULTIPLE DELIVERY MINE SYSTEM (VOLCANO) AIR SYSTEM  
PURSUIT DETERRENT MUNITION (PDM), XM86, MINE, ANTIPERSONNEL (AP)

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITY CAN ACCOMMODATE A WIDE VARIETY AND LARGE NUM TESTS AT ANY ONE TIME. SEVERAL VEH TEST COURSES AND EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSERVED RANGE, LARGE RESTRICTED AIRSPACE WITH UNRESTRICTED FIRING TO 10,000 FT ORDINATE. COORD WITH FAA CAN EFFECT UNRESTRICTED ORDINATE. 1ST, 2ND, OR 3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. PHONE/NON-TAC RADIO AT ALL RANGES AND TEST SITES. AUTODIN, FACSIMILE, TELETYPE, PHOTO LAB AND MAINT FOR MAJORITY OF EQUIP INCL LIMITED ENGR SUPPORT. ARMY AVN/USAF ACFT CAN BE ARRANGED. CALIBRATION AND METEOROLOGICAL SPT AYAIL. INST FOR MOST ITEMS AVAIL, CAN OBTAIN OTHER INSTRUMENTS. MOVING TARGET SYSTEM, EOD, STATISTICAL, MAINT EVALUATION, AND HUMAN FACTORS CAPABILITIES AVAILABLE. COMPUTER SUPPORT AVAILABLE. TEMPERATURES TO -50 DEG FAHR COMMON.

INSTALLATION: COMBAT SYSTEMS TEST ACTIVITY

APG, MD

CDR. COL RICHARD M. GILLIGAN

TECH DIR. MR. DONALD RESCH

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	52.697	55.331
TOTAL PROCUREMENT	45.082	47.336
TOTAL O&M	3.529	3.705
TOTAL OTHER	13.772	14.460
TOTAL ANNUAL LAB	115.080	120.832
TOTAL INHOUSE	98.250	103.163
TOTAL INHOUSE RDTE	42.855	44.998
ANNUAL OPERATING COST	0.253	0.266

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	217	6	48	169
CIVILIAN	959	8	337	622
TOTAL	1176	14	385	791

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLIONS \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
22865	720.999	4.351	248.742	974.092	22.176	44.865

...MISSION

PLAN, CONDUCT & RPT TESTS ON WPNS, WPN SYS, TRACKED & WHEELED VEH, FIRE CONTROL & TARGET ACQUISITION EQUIP, ITEMS OF AMMO & MUNITION COMPONENTS; TRP SPT EQUIP & AR PLATE FOR ALL AMC INSTLS & ACTIVITIES. PROVIDE SPT SVC TO APG ELEMENTS & SPT COMMANDS.

...CURRENT IMPORTANT PROGRAMS

BRADLEY FIGHTING VEHICLE SYSTEM (BVS)  
 ABRAMS TANK SYSTEM (M1A1)  
 120MM MORTAR SYSTEM  
 ABRAMS TANK SYSTEM (M1)  
 VULNERABILITY TANK SYSTEM (M1A1)

...FUNCTIONS/EQUIPMENT/FACILITIES

TEST AREA 68700 ACRES. 22500M RANGE TO LAND IMPACT, 26000M RANGE TO WATER IMPACT. 41 MILES OF AUTO COURSES INCL 27 SPECIAL ENGR TEST CRS/OBSTACLE. VARIOUS TYPES OF ENVIRONMENT/COND EQUIP. SPECIAL CHAMBERS F/SUBJECTING EQUIP TO DUST, SALT SPRAY OR SOLAR RADN. ISOLATED VIBRATION TEST FAC WHICH PERMITS SHAKING EXPLO EQUIP SIMULTANEOUSLY W/TEMP COND FAC F/CONTROLLED TESTS OF ELEC CONTROL & GUID EQUIP. FREQ SOURCE WHICH PERMITS TESTING ALL TYPES OF MAT IN PRESENCE OF HIGH INTENSITY ELEC MAGNETIC RADN. SPECIAL FAC F/TEST OF AR PLATE. SPECIAL VEL & TGT EQUIP IS AVAIL F/OBSERVATION DURING RAPID FIRE OF RKT TRACK F/CONTROLLED TERMINAL BALLISTIC TESTS. FAC AVAIL F/TESTS OF SPECIAL ELEC & FIRE CONTROL EQUIP & RELATED SYS & COMPONENTS. PULSE RADN FAC AVAIL FOR USE IN RADN TEST OF NUCLEAR EFFECTS. SIMULATION REACTOR TECH & RADN PHYSICS.

INSTALLATION: COMMUNICATIONS AND ELECTRONICS BOARD

FT. GORDON, GA

PRES. COL HUMPHREY L. PETERSON, JR.

ENGR ADV. MR. RONNIE E. BRACKETT

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	1.998	3.039
TOTAL PROCUREMENT	0.154	0.117
TOTAL O&M	0.679	1.081
TOTAL OTHER	2.529	2.650
TOTAL ANNUAL LAB	5.360	6.887
 TOTAL INHOUSE	 5.360	 6.887
TOTAL INHOUSE RDTE	1.998	3.039
ANNUAL OPERATING COST	1.403	2.071

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	52	0	45	7
CIVILIAN	47	0	14	33
TOTAL	99	0	59	40

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	0.000	19.625	1.823	21.448	0.253	2.010

...MISSION

PLANS, CONDUCTS AND REPORTS ON INITIAL OPERATIONAL TEST AND EVALUATION (IOTE) FOLLOW-UP TEST AND EVALUATION (FOTE) AND FORCE DEVELOPMENT TEST & EXPERIMENTATION (FDTE) OF C-E SYSTEMS AND EQUIPMENT AS PUBLISHED IN THE DA FIVE YEAR TEST PROGRAM.

...CURRENT IMPORTANT PROGRAMS

UNIT LEVEL COMPUTER, 87-000-0782  
TAMMIS-D, 87-000-0739  
SHORT TERM ANTI-JAM, 88-OTN-1178  
OQ290(V)2 ELECT EQUIP TEST FAC, 87-OTN-1080  
SB-3614, FOE, 87-FOO-1117A

...FUNCTIONS/EQUIPMENT/FACILITIES

MANUAL AND AUTOMATED STIMULUS AND MEASUREMENT EQUIPMENT THAT PROVIDES DATA COLLECTION AND ANALYSIS CAPABILITY OF COMMUNICATIONS-ELECTRONICS CIRCUITS, EQUIPMENT, AND SYSTEMS.

INSTALLATION: CONSTRUCTION ENGINEERING RESEARCH LAB

CHAMPAIGN, IL

DIR. NORMAN C. HINTZ

DEP DIR. LOUIS R. SHAFFER

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	31.288	34.415
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	9.849	10.835
TOTAL OTHER	2.191	2.422
TOTAL ANNUAL LAB	43.328	47.672
TOTAL INHOUSE	24.965	27.460
TOTAL INHOUSE RDTE	18.773	20.648
ANNUAL OPERATING COST	3.000	3.600

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4	0	4	0
CIVILIAN	227	34	172	55
TOTAL	231	34	176	55

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP EQUIP
31	112.949	45.876	30.335	189.160	0.010 11.000

...MISSION

PLAN AND EXECUTE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGINEERING, DESIGN, CONSTRUCTION, OPERATIONS AND MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY ESTABLISHMENT & OTHER AGENCIES AT LEAST COST & TO DISSEMINATE THE RESEARCH RESULTS.

...CURRENT IMPORTANT PROGRAMS

DEVELOP ENERGY CONSERVATION TECHNIQUES/ENERGY SYST FOR MIL INSTALLATIONS  
DEVELOP COMPUTER-AIDED SYSTEMS FOR PLANNING AND DESIGN  
DEVELOP IMPROVED SYSTEMS FOR RPMA OF MIL FACILITIES  
MATERIALS SYSTEMS FOR LAGEE STRUCTURES IN SPACE  
DEVELOP SYSTEMS FOR ENVIRONMENTAL QUALITY MGMT

...FUNCTIONS/EQUIPMENT/FACILITIES

CONTROLLED ENV CHAMBERS, ION PLATING UNIT, 1000000LB CLOSED-LOOP MATERIAL TEST SYS, SCANNING ELECTRON MICROSCOPE, SEMI-AUTO WELDING EQMT, BI-AXIAL SHOCK TEST MACH, NDT FAC, VACUUM INDUCTION FURNACES, METALLOGRAPHIC SAMPLE PREP, METALLOGRAPH XRAY DIFFRACTION & VACUUM SPECTROSCOPY SYSTEM, DYNAMIC TENSION ANAL SYS, DIGITAL RECORDING ANAL EQMT, AND HVAC TEST FACILITY CAPABILITIES INCLUDING SYS BLDG METHODS AND TECHNIQUES, COMPUTER-BASED DESIGN & CONST MGMT TECHNIQUES, ENERGY SYSTEMS DESIGN; ENERGY CONSERVATION & ALTERNATE FUELS; HARDENED FAC ANAL; ENVIRONMENTAL QUAL MGMT, POLLUTION CONTROL ABATEMENT; MIL HSG SYS; TRAINING AREA MAINTENANCE & MGMT; MOBILIZATION FACILITIES; QUALITY OF LIFE AND ARCHITECTURL RES; ELECTROMAGNETIC PULSE RES; PHYSICAL SECURITY; MATERIALS SYSTEMS AND CORROSION CONTROL

INSTALLATION: DUGWAY PROVING GROUND

DUGWAY, UT

CDR. COL JAMES D. TIPTON

SCI DIR. DR. LOTHAR L. SALOMAN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	52.498	57.966
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.588	1.670
TOTAL OTHER	8.497	24.409
TOTAL ANNUAL LAB	62.583	84.045
TOTAL INHOUSE	59.239	65.580
TOTAL INHOUSE RDTE	49.154	55.152
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	175	3	154	21
CIVILIAN	826	21	104	722
TOTAL	1001	24	258	743

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
808123	159.561	198.388	1591.684	1949.633	57.000	43.000

...MISSION

DPG PLANS, CONDUCTS, REPORTS ON APPROVED TESTS TO ACCESS THE MILITARY VALUE OF CML WEAPONS, SMOKE/OBSCUR & CML-BIO DEF SYS. TESTS SPT R&D & PROVIDE BASIS FOR DEVELOP OF NEW OPERATIONAL & LOG CONCEPTS FOR EMPLOY OF TESTED SYS. TESTS & RESPONSIVE TO USER REQUIREMENTS. INST GRIDS FOR

...CURRENT IMPORTANT PROGRAMS

CONDUCTS SERVICE DEV CML CML-BIO DEFENSE SMOKE/OBSCURANT TEST PROGRAMS  
CONDUCTS R & D & LAB INVESTIGATIONS NECESSARY TO SUPPORT MISSION  
CONDUCTS JT OP CML & CML-BIO DEFENSE TESTS/STUDIES FOR CINCS. SERVICES  
CONDUCTS PROG TO SPT ARMY POLL ABATEMENT HAZARD EVAL & DEMIL OPNS  
CONDUCTS ECOLOGICAL & TOXICOLOGICAL SURVL OF DPG AREA

...FUNCTIONS/EQUIPMENT/FACILITIES

CML CML-BIO & SMOKE/OBSCUR: ARTY RG FOR CONVL & CML METAL PARTS.  
BALLISTIC & DISSEM TESTS: W/FIELD SMPL, SMPL MASS ANAL, MET(AUTO DATA ACQ & MESOMET NETWK)SYS. TSPI(RADAR SLAVE PHOTO)SYS;PHYS & ENVIRON TEST FAC(MIL SPEC 810)CHAMBERS FOR TOTAL AGENT CONTAINMENT; OPNS SPTD BY MET RSCH ON BEHAVIOR OF CLOUDS; CML, LIFE SCI TECHN, ECOL SURVL OF DPG; CAPBL FOR PLANNING ANAL,EVAL OF TESTS,OPNS RSCH, LABS EQUIPD FOR WIDE RNG OF CML,MICROBIO,TOXICAL,IMMUNOL,ECOL,POLL CNTR STUDIES. CAP FOR PROD BIO SIMUL AG; TECHN & MASS ASSAY OF FLUORESCENT AIR TRACERS: EXT COMM & RG SAFETY SYS. OUTSTANDING ARE LARGE LAND AREA, RESTRICTED AIR SPACE, LONG & FLAT ARTY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY, DIVERSE TECH & SCIENTIFIC SKILLS.

INSTALLATION: ELECTRONIC PROVING GROUND

FT. HUACHUCA, AZ

CDR. COL ARTHUR J. DOWNEY, JR.

TECH DIR. MR. GRADY H. BANISTER, JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	46.804	41.322
TOTAL PROCUREMENT	3.527	1.757
TOTAL O&M	3.569	1.200
TOTAL OTHER	21.704	26.780
TOTAL ANNUAL LAB	75.604	71.059
TOTAL INHOUSE	53.647	51.031
TOTAL INHOUSE RDTE	29.019	25.620
ANNUAL OPERATING COST	15.781	17.243

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	599	0	48	551
CIVILIAN	213	1	90	123
TOTAL	812	1	138	674

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
35683	2.316	28.042	284.477	314.835	11.000	21.700

...MISSION

PLAN, CONDUCT, EVALUATE AND REPORT ON DEVELOPMENT AND OTHER ENGINEERING. LAB-TYPE TESTS OF GROUND AND AIRBORNE EQUIPMENT AND SYSTEMS THAT UTILIZE ELECTRONIC/ELECTROMAGNETIC TECHNOLOGY. MAINTAIN MODERN TEST FACILITY, INSTRUMENTATION, AND METHODOLOGY CAPABILITY.

...CURRENT IMPORTANT PROGRAMS

TRAILBLAZER, AN/TSQ-114B  
PLRS/JTIDS HYBRID (PJH)  
FACILITY INTRUSION DETECTION SYSTEM (FIDS)  
SINGLE CHANNEL GROUND AIR AIRBORNE RADIO SYSTEMS (SINCGARS)  
JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT TESTS OF HDWR/SOFTWARE, DOCTRINAL CONCEPTS/SCENARIOS TEST CAPABILITY INCL TEST OF COMM, IMAG, IMAGERY INTERPRETATION MET, RADIAC, RDR, LASER INTEL, EW, CMD/CTRL, PWR SOURCES, RPV, GND&SCTY SENSORS SYS/EQUIP INCL EMC, EMI, EMV, ECM, ECCM, TEMPEST AND INTRA/INTEROPERABILITY ANAL AS REQ. TECHNIQUES INCL BENCH AND FLD TEST W/ACCESS TO EXTENSIVE REAL EST, MATH MDL AND SIM FACS INCL: EM, CLIMATIC/STRUCT ENVIRON, INSTRUMENTED SPACE POS RG (3 FPS-16/CAPRI), TEMPEST, C3I SYS TEST INCL A REALISTIC EM BATTLEFIELD, ANTENNA PATTERN, ELECTRO-OPT AND VARIOUS ENVIRON FACILITIES INCL NUC, PERFORM RELIABILITY, AVAILABILITY AND MAINTAINABILITY (INCLUDE MAINT MANUALS, REPAIR PARTS, SPECIAL TOOLS), SAFETY AND HFE TEST, CONDUCT/PARTICIPATE IN RELATED DOCTRINAL AND CONCEPT STUDIES, AND TEST FOR ARMY, OTHER SERVICES AND DOD AGENCIES.

DIR. DR. C.G. THORNTON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	89.221	73.450
TOTAL PROCUREMENT	2.404	3.700
TOTAL O&M	1.702	2.030
TOTAL OTHER	4.127	4.700
TOTAL ANNUAL LAB	97.454	83.880
 TOTAL INHOUSE	 23.905	 35.780
TOTAL INHOUSE RDTE	16.359	29.750
ANNUAL OPERATING COST	2.344	0.000

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	321	36	185	136
TOTAL	322	36	186	136

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLIONS \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
0	76.919	56.900	15.375	149.194	15.831	19.628

## ...MISSION

DEVELOP AND TRANSITION CRITICAL ELECTRONIC TECHNOLOGIES AND DEVICES INTO PRESENT AND FUTURE GENERATION ARMY SYSTEMS: MILLIMETER WAVES, MICROWAVES, PULSE POWER, MICROELECTRONICS, ANALOG SIGNAL PROCESSING, FREQUENCY CONTROL, DISPLAYS, TACTICAL POWER SOURCES.

## ...CURRENT IMPORTANT PROGRAMS

VALIDATION OF MICROCIRCUIT DESIGN AND TESTIBILITY CONCEPTS  
RECHARGEABLE LITHIUM BATTERY COMPONENTS FOR UNIVERSAL BATTERY  
MULTI-COLOR DISPLAY PANEL  
SMART TACTICAL ELECTRONICS SUBMICRON DEVICE RESEARCH  
HIGH CURRENT DENSITY CATHODES

## ...FUNCTIONS/EQUIPMENT/FACILITIES

MOLECULAR BEAM EPITAXY IS AN EMERGING TECHNOLOGY FOR THE PRODUCTION OF ULTRA-THIN, HYPER-ABRUPT LAYERED SEMICONDUCTOR STRUCTURES OF VARIOUS MATERIAL & COMPOSITIONAL PROFILES. THIS TECHNOLOGY IS ADDRESSING A NUMBER OF NEW & ADV ELECTRONIC DEVICE STRUCTURES FOR NEXT-GENERATION ARMY MMW SYSTEMS. A HIGH SPEED, FULLY AUTOMATED, COMPUTER CONTROLLED LITHIUM BATTERY TEST SYSTEM (LBTS) HAS BEEN INSTALLED & BROUGHT ON-LINE. THE LBTS HAS INCREASED THE BATTERY TESTING CAPABILITY BY 800% & DEMONSTRATED A DATA INPUT/OUTPUT CAPABILITY TEN TIMES GREATER THAN THAT OF THE PREVIOUS MANUALLY CONTROLLED SYSTEM. THE PULSE POWER CENTER IS A FACILITY FOR DEVELOPING THE PWR & MICRO/MMW TECH FOR LASER, HI PWR UWAVE, RADAR COMBAT SYSTEMS, ETC. IT HAS SHIELDED HI BAYS, MULTI-MEGAWATT PWR SUPPLIES, DIAGNOSIS & COMPUTER CAPABILITIES & SPECIAL EQUIP FOR COMPONENT & SUBSYSTEM R&D

INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA

CDR. COL ALAN A. LAUBSCHER

TECH DIR. MR. WALTER E. BOGE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	62.954	58.429
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.509	3.094
TOTAL OTHER	0.455	0.397
TOTAL ANNUAL LAB	66.918	61.920
TOTAL INHOUSE	18.428	14.999
TOTAL INHOUSE RDTE	15.662	12.198
ANNUAL OPERATING COST	6.362	4.908

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	0	11	1
CIVILIAN	307	16	149	158
TOTAL	319	16	160	159

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
33	90.722	7.000	13.300	111.022	14.200	16.400

...MISSION

RESEARCH AND DEVELOPMENT IN TOPOGRAPHIC SCIENCES MAPPING, POINT POSITIONING, GEOGRAPHIC INFORMATION, OPERATIONAL SUPPORT TERRAIN ANALYSIS, AND SCIENTIFIC/ADVISORY SERVICES REMOTE SENSING, COMPUTER TECHNOLOGY, AND ENVIRONMENTAL EFFECTS DATA.

...CURRENT IMPORTANT PROGRAMS

SUPPORT TO THE ARMY SPACE PROGRAM  
DIGITAL TOPOGRAPHIC SUPPORT SYSTEM  
AIRLAND BATTLEFIELD ENVIRONMENT  
TERRAIN ANALYSIS PRODUCTION  
SUPPORT TO THE THE DARPA STRATEGIC COMPUTING SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE A CARTOGRAPHIC LABORATORY TO STUDY THE PROBLEMS ASSOCIATED WITH HANDLING DIGITAL CARTOGRAPHIC DATA, A DIGITAL IMAGE PROCESSING LABORATORY TO STUDY THE MANIPULATION AND ENHANCEMENT OF TERRAIN IMAGERY FOR OBTAINING MAPPING AND GEOGRAPHIC DATA, COMPUTER ASSISTED PHOTO-INTERPRETATION STATION FOR EXPERIMENTAL EXTRACTION OF TERRAIN FEATURES, AND AN ARTIFICIAL INTELLIGENCE TEST BED FOR USE IN TERRAIN FEATURE EXTRACTION AND EXPLOITATION EXPERIMENTS. COMPUTATIONAL EQUIPMENT INCLUDES THE CDC CYBER 170/730, DEC PDP 1150, PDP 1170 AND DEC VAX MODELS 750/780/785. OTHER SPECIALIZED EQUIPMENT INCLUDE COM-TALS, PD5 DIGITAL AUTOMATED MICRODENSITOMETER AND PRECISION MENSURATION EQUIPMENT.



INSTALLATION: ENGINEER WATERWAYS EXPERIMENT STA.

VICKSBURG, MS.

CDR. COL D. G. LEE

TECH DIR. DR. R. W. WHALIN

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	60.524	71.050
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.644	1.900
TOTAL OTHER	58.578	59.050
TOTAL ANNUAL LAB	121.746	132.000
TOTAL INHOUSE	87.013	90.189
TOTAL INHOUSE RDTE	42.214	47.053
ANNUAL OPERATING COST	10.615	11.911

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	10	1	10	0
CIVILIAN	1658	113	664	994
TOTAL	1668	114	674	994

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3073	1746.808	353.645	176.809	2277.262	44.881	53.471

...MISSION

MIL & CIV FUNDED R&D IN HYD, ECOLOGY, COASTAL ENG, PAVEMENTS, ROCK, CONCRETE, SOIL, EXPLO WPN EFF & EXCAVATION, VEH MOBILITY, COUNTERMOBILITY, ENV. ASPECTS OF MIL. OPERATIONS. OPERATE TECH LIBRARY & ARMY INFO ANAL CTRS, GOVT CEMENT POZZOLAN TEST PROG, SERVES ALL DOD, DOE, EPA & VAR. OTHER FED. AGENCIES.

...CURRENT IMPORTANT PROGRAMS

PHY&NUM MODELING TO SOLVE RIVER, COASTAL, ECOLOGICAL, ENVRN & STRUCT PROBS. R&D OF CEMENT MATLS; MASS/STRUCT. CONC; COMP. STRUCT. ENG. CONST. METHODS. R&D OF NEW PAVEMENT&FOUND. DESIGNS; DES. OF PROTECTIVE AND HARDENED FACIL R&D OF WEAPONS & ENVIRON EFFECTS; BARRIERS & OBSTACLES; LOGISTICS SUPPORT. R&D OF VEH. MOB; FIXED FAC. CAMOU; MIL. HYDROLOGY; MINE LOC. & NEUTRALIZATION.

...FUNCTIONS/EQUIPMENT/FACILITIES

PERFORM GEN. INV. IN FLDS OF HYD, SOIL & ROCK MECH, CONCRETE, MIL VEH MOB, WPNS EFF, ECOLOGY, COASTAL ENG, MINE/COUNTERMINE, CAMOUFLAGE, MATLS & EQ TESTING, PROT & HARDEN STRUCT, STRUCT, PAVEMENT, FOUNDATION DES, EARTH-QUAKE ENG, AQUATIC PL. CONT., WES HAS TEST SITES, SPECIAL AND OTHER PLNT SUPP EARTHQUAKE INHOUSE & AT LEASED AREAS. TOTAL FACILITY INCLUDES: HYD FLUMES, WAVE GENERATORS, SHIP NAV. SIMULATOR, STATE-OF-THE-ART WATER QUALITY, SOILS, CONC. CHEM, CALIB, COMP. CONTROLLED ENV & LIMNOLOGY LABS, NUMERICAL & PHY. MODELING CAP. IN HYD, COASTAL, STRUCTURAL ENG, MOBILITY TEST FAC, 1 MILLION LB DYN LOAD MACH, WHEELED LOAD CARTS, SURFACE BLAST EFF. FAC, HIGH AND LOW FREQ VIBRATORS; ELECTRON BEAM MICROSCOPE, LARGE SCALE SCIENTIFIC COMP, TECH LIBRARY, PRINTING PLANT. IN ASSOCIATION WITH MSU, LSU, TAMU A GRADUATE LEVEL TRAINING INST. WAS ESTABLISHED INHOUSE.

INSTALLATION: FIELD ARTILLERY BOARD

FT. SILL, OK

PRES. COL WILLIAM J. FURTADO

TECH DIR. MR. BILLY HUDSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.568	3.276
TOTAL PROCUREMENT	0.005	0.000
TOTAL O&M	0.451	0.682
TOTAL OTHER	5.500	6.467
TOTAL ANNUAL LAB	9.524	10.425
TOTAL INHOUSE	9.524	10.425
TOTAL INHOUSE RDTE	3.568	3.276
ANNUAL OPERATING COST	0.325	0.325

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	112	0	34	78
CIVILIAN	60	0	6	54
TOTAL	172	0	40	132

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	13.790	38.080	16.939	68.809	0.000	3.522

...MISSION

PLAN CONDUCT AND REPORT ON EUTE IOTE AND OTHER USER-TYPE TESTS  
PARTICIPATE IN TECHNICAL TESTING AS DIRECTED  
PROVIDE ADVICE TO PROPONENT AGENCIES COMBAT AND MATERIEL DEVELOPERS  
CONDUCT OTHER TESTS AND EVALUATIONS AS DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

FDTE HIP II  
CEP AFATDS  
PIVT FIREFINDER II  
IOTE TACFIRE TAPE VERSION 8  
FDTE MULTIPLE FAMILY OF MUNITIONS C3I

...FUNCTIONS/EQUIPMENT/FACILITIES

TWO MET STATIONS  
TEST ITEMS ADDITIONAL SUPPORT IS OBTAINED FROM USAFACFS WHEN NEEDED

INSTALLATION: HARRY DIAMOND LABORATORIES

ADELPHI MD

DIR. MR. DONALD B. DINGER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	105.794	78.143
TOTAL PROCUREMENT	41.164	43.222
TOTAL O&M	2.456	2.580
TOTAL OTHER	17.115	17.970
TOTAL ANNUAL LAB	166.529	141.915
TOTAL INHOUSE	55.282	46.925
TOTAL INHOUSE RDTE	32.296	23.276
ANNUAL OPERATING COST	10.670	9.593

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	3	3	0
CIVILIAN	666	48	418	248
TOTAL	669	51	421	248

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2316	507.829	112.019	120.512	740.360	53.921	60.393

...MISSION

MISSION: RESPONSIBLE FOR TECHNOLOGY BASE PROGRAM, TECHNOLOGY DEMONSTRATIONS AND TECHNOLOGY LEADERSHIP IN ASSIGNED MISSION AREAS. IN ORDER TO INSURE TECHNOLOGY INSERTION, PERFORM ENGINEERING DEVELOPMENT, PRODUCTION SUPPORT AND TROOP SUPPORT ON A SELECTIVE BASIS.

...CURRENT IMPORTANT PROGRAMS

CURRENT SIGNIFICANT PROGRAMS: NUCLEAR SURVIVABILITY TECHNOLOGY  
HIGH POWER MICROWAVE TECHNOLOGY  
ELECTRONIC FUZING AND SELF-CONTAINED MUNITIONS  
INFORMATION AND SIGNAL PROCESSING  
ADVANCED RADAR TECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMNET AND FACILITIES:  
NUCLEAR FACILITIES: GAMMA RAY SIMULATOR (AURORA), HIGH INTENSITY FLASH X-RAY (HIFX), COBALT 60, ELECTROMAGNETIC PULSE SIMULATORS.  
ELECTRONIC DESIGN FACILITIES: THICK FILM HYBRID CIRCUIT FACILITY, MICROELECTRONIC DESIGN FACILITY.  
MICROWAVE ANECHOIC CHAMBERS  
FUZE TEST FACILITIES: ARTILLERY SIMULATORS, ENVIRONMENTAL TESTING.  
BLOSSOM POINT TEST AREA.

DIR. DR. JOHN D. WEISZ

## PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	21.688	27.779
TOTAL PROCUREMENT	0.084	0.255
TOTAL O&M	0.865	0.447
TOTAL OTHER	0.040	0.136
TOTAL ANNUAL LAB	22.677	28.617
 TOTAL INHOUSE	 14.219	 17.783
TOTAL INHOUSE RDTE	13.230	16.945
ANNUAL OPERATING COST	5.187	7.458

## PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	3	18	18
CIVILIAN	169	15	122	47
TOTAL	205	18	140	65

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
72	111.524	7.056	21.400	139.980	10.826	12.122

## ...MISSION

CONDUCT HFE RESEARCH, GENERATE DATA ON INDIVIDUAL SOLDIERS, SOLDIER CAPABILITIES/LIMITATIONS AND SOLDIER-SYSTEM INTERFACE/PERFORMANCE AND APPLY DATA TO ACQUISITION PROCESS VIA ON-SITE LOCATION AT AMC CMDS AND TRADOC CTRS AND SCHOOLS. DATA SUPPORTS ALL MISSION AREAS/COMMODITIES.

## ...CURRENT IMPORTANT PROGRAMS

HEL/ENHANCED M16A2 CONCEPT RIFLE-SOLDIER MACHINE INTERFACE DESIGN  
HUMAN FACTORS HOWITZER TEST BED CONCEPT EVALUATION/DEMONSTRATION  
MANPOWER AND PERSONNEL INTEGRATION (MANPRINT)/HFE APPLICATION  
INTEGRATED ARMY ROBOTICS THRUST PROGRAM STRATEGY DEVELOPMENT  
CONTROL/DISPLAY INTEGRATION/DATA ENTRY TECHNIQUES FOR TACTICAL USERS

## ...FUNCTIONS/EQUIPMENT/FACILITIES

ADVANCED HELICOPTER CREW RESEARCH SIMULATOR  
AIR BATTLE MANAGEMENT OPERATIONS CENTER (ABMOC)  
SMALL ARMS FIRING RANGE  
MOBILITY/PORTABILITY COURSE  
ARTILLERY CONTROL ENVIRONMENT (ACE) FACILITY  
HUMAN FACTORS HOWITZER TEST BED  
COMMAND POST VEHICLE TEST BED  
OCULOMETER FACILITY  
BIOTELEMETRY SYSTEM  
HELFAST LOGISTICS/AMMO HANDLING TEST SITE  
WOOD/METAL FABRICATION/TEST SUPPORT CAPABILITY  
COMPUTER FACILITIES/HUMAN FACTORS DATA BANK

INSTALLATION: INFANTRY BOARD

FT. BENNING, GA

CDR. COL HARVEY D. WATSON

TECH DIR. MR. PAUL W. LAVENDAR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.618	3.377
TOTAL PROCUREMENT	0.039	0.000
TOTAL O&M	0.032	0.003
TOTAL OTHER	3.479	3.458
TOTAL ANNUAL LAB	7.168	6.838
TOTAL INHOUSE	7.168	6.838
TOTAL INHOUSE RDTE	3.618	3.377
ANNUAL OPERATING COST	3.728	3.800

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	107	0	2	105
CIVILIAN	74	2	9	65
TOTAL	181	2	11	170

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	0.000	32.371	37.837	70.208	3.000	1.668

...MISSION

PLAN CONDUCT REPORT ON OPERATIONAL TESTS 1/2/3, FORCE DEVELOPMENT TESTS  
OTHER TESTS OF EQUIPMENT & ANCILLARY ITEMS TO BE USED BY INFANTRY UNITS  
FOR COMMAND, CONTROL, FIREPOWER, TARGET ACQUISITION, GROUND SURVEIL-  
LANCE, FIRE CONTROL GROUND MOBILITY & TRNG & CHEMICAL/BIOLOGICAL EQUIP

...CURRENT IMPORTANT PROGRAMS

MULTIPURPOSE BAYONET SYSTEM XM9  
BRADLEY FIGHTING VEHICLE SYSTEM MODIFICATIONS  
BRADLEY FIGHTING VEHICLE SYSTEM HIGH SURVIVABILITY  
THERMAL WEAPONS SIGHT  
BATTALION MORTAR SYSTEM 120-MM

...FUNCTIONS/EQUIPMENT/FACILITIES

AUTOMATED, COMPUTERIZED AUTOMATIC & SMALL ARMS WEAPONS RANGE.  
CLOTHING & EQUIPMENT TEST FACILITY.  
MANNED EVASIVE TARGET. NOVA 3L2 COMPUTER CAPABILITIES.

INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, D.C.

CDR. COL HAROLD E. PLANK

SCI DIR. DR. GINO C. BATTISTONE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	4.353	5.093
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.217	2.283
TOTAL ANNUAL LAB	6.570	7.376
 TOTAL INHOUSE	 4.480	 5.333
TOTAL INHOUSE RDTE	2.263	3.050
ANNUAL OPERATING COST	0.919	0.968

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	58	9	34	24
CIVILIAN	18	2	4	14
TOTAL	76	11	38	38

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	10.852	5.696	1.200	17.748	0.000	4.455

#### ...MISSION

USAIDR CONDUCTS R&D ON TREATMENT OF COMBAT FACIAL INJURIES, INFECTIONS, FIELD DENTAL EMERGENCIES, SYNTHETIC & ALLOGENIC MATERIALS FOR USE AS IMPLANTS TO REPLACE LOST HARD & SOFT TISSUE, FIELD DENTAL EQUIPMENT & MATERIALS, AND TECHNIQUES FOR RAPID DIAGNOSIS OF CHEMICAL CASUALTIES.

#### ...CURRENT IMPORTANT PROGRAMS

HAND-HELD ELECTRO-OPTIC DENTAL X-RAY  
MICROENCAPSULATED ANTIBIOTICS  
COMPUTER ASSISTED POSTMORTUM IDENTIFICATION SYSTEM  
POLYMER/MEDICAMENT AND DECALCIFIED BONE SYSTEMS FOR HUMAN IMPLANTATION  
ANTIBIOTIC CONTAINING WOUND DRESSINGS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

BLDG 40 WALTER REED ARMY MEDICAL CENTER, WASHINGTON, DC  
BLDG 91 WALTER REED ARMY MEDICAL CENTER, WASHINGTON, DC  
BLDGS 2801-2-4-5-10-11-31-32, FORT MEADE, MD  
MICROSCOPES-SEM-TEM  
FLOURESCENT MICROSCOPE WITH VIDEOPLAN SYSTEM  
GAS CHROMATOGRAPH-MASS SPECTROMETER WITH DATA SYSTEM  
FTIR INFRARED ANALYZER  
TNMR SPECTROMETER  
IMAGE INTENSIFIER QUATIMET  
MICRO TOME SYSTEM HARD TISSUE  
LIQUID AND GAS CHROMATOGRAPHS  
ATOMIC ABSORPTION SPECTROPHOTOMETERS

INSTALLATION: INSTITUTE OF SURGICAL RESEARCH

FT. SAM HOUSTON, TX

CDR. COL BASIL A. PRUITT, JR.

DEP. DR. ARTHUR D. MASON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.450	3.878
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.005	0.002
TOTAL OTHER	6.773	6.130
TOTAL ANNUAL LAB	10.228	10.010
TOTAL INHOUSE	10.228	9.477
TOTAL INHOUSE RDTE	3.450	3.345
ANNUAL OPERATING COST	1.487	1.447

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	155	17	56	99
CIVILIAN	78	6	25	53
TOTAL	233	23	81	152

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLIONS \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
1	26.424	1.800	22.400	50.624	6.531	6.111

...MISSION

INVESTIGATE PROBLEMS OF MECHANICAL AND THERMAL INJURIES WITH THEIR COMPLICATIONS; CARE FOR PATIENTS WITH SUCH INJURIES  
TEACH AND TRAIN OTHER PERSONNEL IN THE MANAGEMENT OF SUCH PATIENTS.  
CONDUCT INVESTIGATIVE STUDIES AT BOTH THE BASIC AND CLINICAL LEVELS.

...CURRENT IMPORTANT PROGRAMS

BURN, INFECTION, TREATMENT AND PREVENTION  
INEQUALITY OF VA/Q RATIOS FOLLOWING SMOKE INHALATION AND ITS EFFECTS  
DERIVATIVE SPECTROSCOPY CHEMILUMINIGENIC PROBING OF GRANULOCYTE REDOX  
PRELIMINARY STUDIES OF ZINC HOMEOSTATIC CONTROL AND IMMUNCCOMPETENCE  
ROLE OF THYROID HORMONES IN BURN PATHOPHYSIOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

OPERATE FORTY BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDES CLINICAL LABORATORY SUPPORT AND RESEARCH CAPABILITIES IN THE FIELDS OF PATHOLOGY (INCLUDING USE OF AN ELECTRON MICROSCOPE), MICROBIOLOGY, EXPERIMENTAL SURGERY AND BIOCHEMISTRY. MAINTAINS AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP, COMPUTER FACILITY AND MEDICAL LIBRARY.

INSTALLATION: INTELLIGENCE AND SECURITY BOARD

FT. HUACHUCA, AZ

PRES. COL JOSEPH D. MROZINSKI

TECH DIR. MR. PHILLIP E. WRALSTAD

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.550	3.227
TOTAL PROCUREMENT	2.837	1.607
TOTAL O&M	1.718	1.237
TOTAL OTHER	2.206	1.350
TOTAL ANNUAL LAB	10.311	7.421
TOTAL INHOUSE	4.827	3.904
TOTAL INHOUSE RDTE	3.444	3.031
ANNUAL OPERATING COST	0.924	1.053

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	81	0	54	27
CIVILIAN	35	0	14	21
TOTAL	116	0	68	48

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
10	4.000	6.627	21.667	32.294	0.616		9.710

...MISSION

DESIGN, CONDUCT AND REPORT RESULTS OF OPERATIONAL TESTS IEW MATERIAL, DOCTRINE, ORGANIZATIONS AND TRAINING SYSTEMS. CONDUCTED OTHER TESTS AS DIRECTED

...CURRENT IMPORTANT PROGRAMS

INTEL EW UNMANNED AERIAL VEHICLE 88-FO-ISBD-1348  
 AN/TSQ114B TRAILBLAZER 88-FO-ISBD-0728C  
 AN/ALQ-151 QUICKFIX II/BLACKHAWK 88-FO-ISBD-0834C  
 GUARD RAIL COMMON SENSORS 90-OT-ISBD1024  
 FAMILY OF ELECTRONIC DECEPTION DEVICES 88-FO-ISBD-1377

...FUNCTIONS/EQUIPMENT/FACILITIES

EW MONITORING FAC: TRANSPORTABLE 30 FT VAN: RECEIVE 10KHZ TO 40GHZ: DF 20 MHZ TO 40GHZ: TAPE RECORDERS, SPECTRUM ANALYZERS AND OSCILLISCOPES. ANALYSIS EQR. VULNERABILITY MOBILE TRANSMITTER "A" VAN: TRANSPORTABLE 40 FT VAN: RECEIVE 900KHZ TO 1GHZ: JAM 10KHZ TO 1GHZ WITH 1KW TRANSMITTERS: ANALYSIS EQP. VULNERABILITY MOBILE TRANSMITTER "B" VAN: TRANSPORTABLE 40 FT VAN: RECEIVE 1GHZ TO 40GHZ: JAM 1GHZ TO 40GHZ WITH 200W TRANSMITTERS: ANALYSIS EQP. NON-COMM EMITTER SIMULATOR: 8.5 TO 17.0 GHZ: 200W OUTPUT SIMULATING 20 THREAT RADARS: COMPUTER CNTL VIA DATA LINK: TRANSPORTABLE: REPROGRAMABLE ELEVEN COMM EMITTER SIMULATOR: 2 TO 1300MHZ: 20W OUTPUT SIMULATING 160 THREAT COMM TYPES: CONTROL THRU SYS MICROPROCESSOR, RECORDER OR DATA LINK: TRANSPORTABLE REPROGRAMABLE OPERATIONAL TEST CONTROL CENTER: BLDG WILL HOUSE REALTIME RANGE CONTROL SYS FAC DATA PROCESS



CDR. COL EDWIN S. BEATRICE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	18.128	21.069
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.350	0.350
TOTAL OTHER	6.542	6.650
TOTAL ANNUAL LAB	25.020	28.069
TOTAL INHOUSE	18.036	20.497
TOTAL INHOUSE RDTE	11.144	13.497
ANNUAL OPERATING COST	5.965	6.879

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	142	38	101	41
CIVILIAN	99	20	58	41
TOTAL	241	58	159	82

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
9	119.204	56.941	112.174	288.319	45.661	14.052

## ...MISSION

TO CONDUCT MEDICAL RESEARCH IN BIOEFFECTS OF AND EYE PROTECTION AGAINST LASERS; BLOOD PRESERVATION; BLOOD SUBSTITUTES; RESUSCITATION METHODS FOR USE IN FORWARD AREAS; DERMAL PROTECTION FROM CHEM AGENT AND VECTOR BORNE DISEASE; MAMMALIAN AND IN VITRO TOXICOLOGY; FORWARD AREA CASUALTY CARE.

## ...CURRENT IMPORTANT PROGRAMS

DETERMINATION OF SAFE THRESHOLDS OF COHERENT RADIATION  
RESUSCITATION SOLUTIONS FOR USE FORWARD OF DEFINITIVE MEDICAL CARE  
ACUTE AND CHRONIC MAMMALIAN AND IN VITRO TOXICOLOGY  
CUTANEOUS PROTECTION AGAINST HAZARDS IN A COMBAT ENVIRONMENT  
FORWARD CARE TRAUMATIC SHOCK AND HIGH VELOCITY MISSILE INJURIES

## ...FUNCTIONS/EQUIPMENT/FACILITIES

VARIOUS WAVE LENGTH LASERS, SIMULATED TERRAIN MODEL FOR EVALUATING OPERATOR PERFORMANCE FOLLOWING SIMULATED LASER EXPOSURE, CONVENTIONAL BLOOD STORAGE, SEPARATION AND ANALYSIS LABS TO INCLUDE MASS SPECTROMETRY, GAS AND HI PERFORMANCE LIQUID CHROMATOGRAPHY, SURGICAL SUITES WITH ON-LINE MULTI-CHANNEL PHYSIOLOGIC MONITORS, GERM-FREE AND OPEN ANIMAL FACILITIES HOUSING MANY SPECIES FROM NUDE MICE TO SUB-HUMAN PRIMATES, COMPUTERS FOR ADMIN AND TECH/SCIENTIFIC DATA ANALYSIS, GENERAL RESEARCH LABS FULLY EQUIPPED WITH SPECTROMETERS, GAMMA AND SCINTILLATION COUNTERS TRANSMISSION, SCANNING AND ELECTRON MICROSCOPES, COLD ROOM FOR FRACTIONATION, ETC.

DIR. DR. E. S. WRIGHT

CDR. COL D. R. KENNEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	48.235	47.111
TOTAL PROCUREMENT	0.000	0.111
TOTAL O&M	5.576	4.883
TOTAL OTHER	0.615	1.200
TOTAL ANNUAL LAB	54.426	53.305
TOTAL INHOUSE	38.466	37.903
TOTAL INHOUSE RDTE	33.891	33.520
ANNUAL OPERATING COST	9.571	10.460

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	8	7
CIVILIAN	588	69	263	325
TOTAL	603	69	271	332

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
37	352.000	88.261	48.375	488.636	40.073	25.280

## ...MISSION

MANAGE THE AMC STRUCTURAL MATERIALS AND MECHANICS PROGRAM AS LEAD LAB FOR MATERIALS, MECHANICS AND MANUFACTURING TESTING TECH. CONDUCT RESEARCH AT THE FOREFRONT OF TECHNOLOGY TO PROVIDE THE ADVANCED MATERIALS REQUIRED FOR PRESENT AND FUTURE ARMY WEAPONS SYSTEMS AT REASONABLE COSTS.

## ...CURRENT IMPORTANT PROGRAMS

METAL AND ORGANIC MATRIX COMPOSITES FOR LIGHTWEIGHT MATERIEL APPLICATION  
ADVANCED ARMOR AND ARMOR PENETRATOR MATERIALS INCLUDING LASER HARDENING  
STRUCTURAL INTEGRITY, NDT, AND LIFE PREDICTION/RELIABILITY MECHANICS  
CERAMICS FOR ELECTRO-OPTICAL, ENGINE, AND GUN TUBE APPLICATIONS  
MATERIALS PROCESSING AND CHARACTERIZATION: METALS ORGANICS AND CERAMICS

## ...FUNCTIONS/EQUIPMENT/FACILITIES

THE CENTER POSSESSES THE IN-HOUSE EXPERTISE AND FACILITIES TO PERFORM R&D PROJECTS RANGING FROM THE SYNTHESIS OF NEW AND IMPROVED MATERIALS AND DESIGNS TO THE PROTOTYPE MANUFACTURE OF COMPONENTS FOR ARMY WEAPONS SYSTEMS, METALS PROCESSING EQUIPMENT INCLUDES CASTING, FORGING, ROLLING, HEAT TREATING, JOINING, PLATING, ISOSTATIC PRESSING, VACUUM ARC MELTING, AND MACHINING. CERAMIC PROCESSING EQUIPMENT: SLIP CASTING, HOT PRESSING, SINTERING AND GRADIENT FURNACE CRYSTAL GROWTH. POLYMER/COMPOSIT PROCESSING EQUIPMENT: INJECTION MOLDING, LAMINATING, TAPE LAYUP, VACUUM FORMING, FILM FORMING AND ORIENTATION, FILAMENT WINDING, PULTRUSION, FOAM PROCESSING AND PILOT POLYMER PRODUCTION. QC AND NDT EQUIPMENT. ULTRASONICS, XRAY AND NEUTRON RADIOGRAPHY. SPECTROSCOPY, HOLOGRAPHY, CHEMICAL ANALYSIS, METALLOGRAPHY AND OPTICS.

INSTALLATION: MATERIEL SYSTEMS ANALYSIS ACTIVITY

APG, MD

DIR. MR. KEITH A MYERS

DEP DIR. COL JOHN N. MELOY

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	29.678	28.283
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	5.008	4.248
TOTAL OTHER	4.331	3.170
TOTAL ANNUAL LAB	39.017	35.701
 TOTAL INHOUSE	 23.733	 19.066
TOTAL INHOUSE RDTE	19.601	16.161
ANNUAL OPERATING COST	4.110	4.200

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	13	15
CIVILIAN	437	16	342	95
TOTAL	465	16	355	110

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
4	8.140	1.276	1.715	11.131		2.870	2.500

...MISSION

PREPARE AIR-TO-SURFACE, SURFACE-TO-SURFACE AND ANTI-AIR WPNS EFF MANUALS PROVIDES THE CENTRAL INDEPENDENT TECHNICAL CAPABILITY FOR AMC FOR THE CONDUCT OF MAJOR SYSTEMS ANALYSIS AND COST EFFECTIVENESS STUDIES, SERVES AS AMC LEAD ACTIVITY FOR SURVIVABILITY AND RELIABILITY, AVAILABILITY

...CURRENT IMPORTANT PROGRAMS

TEST DESIGN&EVAL OF APPROX 60 SYSTEMS INCLUDING PATRIOT ARM DECOY, M1A1 TANK, 120MM TANK GUN&AMMO, SINGARS, JTIDS CLASS II TERMINAL, RPV, STINGRAY, PDM, LFATDS, L119, LT HOW, XM40 MASK TRAINING DEVICES, 9MM POW FLIPPER, GEMSS, VOLCANO, AFATDS, MLRS, TGW, LRS, PLRS, STINGER POST.

...FUNCTIONS/EQUIPMENT/FACILITIES

AMSAA MISSION CAPABILITIES INCLUDE: PERFORMING INDEPENDENT TEST DESIGN AND OVERALL EVALUATION FOR DECISIONS ON MAJOR DESIGNATED NON-MAJOR AND SELECTED OTHER SYSTEMS; PROVIDING OVERVIEW OF LIFE CYCLE SURVEILLANCE PROGRAMS FOR MATERIEL SYSTEMS IN INVENTORY; PROVIDING WEAPONS SYSTEM EFFECTIVENESS ESTIMATES FOR COST AND OPERATING EFFECTIVENESS ANALYSIS; PROVIDING SYSTEMS ANALYSIS SUPPORT TO AMC MAJOR SUBORDINATE COMMANDS AND PROJECT/PRODUCT MANAGERS; MAINTAINING DIRECT CONTACT WITH ARMY MATERIEL USERS IN THE FIELD; SERVING AS THE AMC FIELD ACTIVITY FOR ADMINISTERING THE JOINT TECHNICAL COORDINATING GROUP FOR MUNITIONS EFFECTIVENESS (JTCG/ME), AND PERFORMING LOGISTICS AND READINESS RELATED ANALYSIS.

INSTALLATION: MEDICAL MATERIEL DEVELOPMENT ACTIVITY

FT. DETRICK, MD

CDR. COL HARRY G. DANGERFIELD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	53.517	59.653
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.136	0.000
TOTAL OTHER	1.368	1.420
TOTAL ANNUAL LAB	55.021	61.073
 TOTAL INHOUSE	 6.501	 5.807
TOTAL INHOUSE RDTE	4.997	4.387
ANNUAL OPERATING COST	1.413	1.329

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	10	21	2
CIVILIAN	33	5	13	20
TOTAL	56	15	34	22

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	0.000	12.864	0.000	12.864	0.532	0.240

...MISSION

EXERCISE FULL-LINE AUTHORITY OVER THE LIFE CYCLE INTEGRATED MATERIAL MANAGEMENT OF ALL ASSIGNED SYSTEMS AND/OR PRODUCTS IN ACHIEVING A BALANCED PROGRAM TO ACCOMPLISH THE MATERIEL DEVELOPER'S STATED OBJECTIVE

...CURRENT IMPORTANT PROGRAMS

IDENTIFICATION SYSTEM, BIOLOGIC AGENT, RAPID FIELD  
PYRIDOSTIGMINE PRETREATMENT SYSTEM  
OXYGEN, MEDICAL, FIELD GENERATOR/DISTRIBUTION  
RESUSCITATIVE FLUID PRODUCTION SYSTEM  
RADIOGRAPHIC/FLUOROGRAPHIC SYSTEM (HIGH CAPACITY)

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTALLATION: MEDICAL RESEARCH AND DEVELOPMENT COMMAND

FT. DETRICK, MD

CDR. MG PHILIP K. RUSSELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	8.298	8.190
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.353	0.695
TOTAL OTHER	6.326	3.300
TOTAL ANNUAL LAB	14.977	12.185
TOTAL INHOUSE	10.675	11.427
TOTAL INHOUSE RDTE	7.226	7.432
ANNUAL OPERATING COST	7.557	8.127

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	60	23	47	13
CIVILIAN	181	1	32	149
TOTAL	241	24	79	162

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	71.136	0.000	71.136	0.000	0.000

...MISSION

DEVELOPMENT OF MEDICAL DEFENSE AGAINST CHEMICAL WARFARE  
ADMINISTRATION AND COORDINATION OF THE ARMY MEDICAL RDTE, A PROGRAM.  
PROGRAM LIMITED TO UNIQUE MILITARY PROBLEMS WITHIN THE U. S. AND OCONUS.  
SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL DEPARTMENT

...CURRENT IMPORTANT PROGRAMS

CARE OF THE WOUNDED  
PREVENTION AND CONTROL OF INFECTIOUS DISEASES  
ENHANCEMENT OF MILITARY PERFORMANCE  
PROTECTION AGAINST MILITARY ENVIRONMENTAL HAZARDS  
DEVELOPMENT OF MEDICAL DEFENSE AGAINST BIOLOGICAL WARFARE

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTALLATION: MEDICAL RESEARCH INST OF CHEMICAL DEFENSE APG, MD

CDR. COL JOSEPH C. DENNISTON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	28.177	32.652
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.091	0.050
TOTAL OTHER	3.818	3.950
TOTAL ANNUAL LAB	32.086	36.652
TOTAL INHOUSE	19.284	20.800
TOTAL INHOUSE RDTE	15.375	16.800
ANNUAL OPERATING COST	6.120	6.530

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	85	26	46	39
CIVILIAN	158	22	74	84
TOTAL	243	48	120	123

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
31	36.246	22.945	99.029	158.220	9.384	17.742

...MISSION

FUNDAMENTL RES ON MECHANISMS OF ACTION (CW AGENTS, ANTIDOTES & PRETREAT)  
DEVELOPMENT OF PRETREATMENT, ANTIDOTE DRUGS & DECONTAMINANTS AGAINST CW  
DEVELOP & EVALUATE PREVENTION, RESUSCITATION, TREATMENT & MANAGEMENT  
METHODS FOR CHEMICAL CASUALTIES AND ASSIST IN THEIR IMPLEMENTATION

...CURRENT IMPORTANT PROGRAMS

ESTABLISH MED CHEM DEFENSE SCIENCE BASE/MECHANISM OF ACTION AGENTS/DRUGS  
DEVELOP SOLDIER CW AGENT ANTIDOTES, PRETREATMENT REGIMEN & DECON  
DEVELOP BIOMEDICAL MODELS TO EVALUATE DRUG AND DECON EFFICACY  
EVALUATE BEHAVIORAL/PERFORMANCE DECREMENTS FROM CW AGENTS/ANTIDOTES  
DEVELOP METHODS FOR MGT & TREATMENT OF MASS CW CASUALTIES

...FUNCTIONS/EQUIPMENT/FACILITIES

MODERN 7000 SQ FT ANIMAL HOLDING FACILITY & CHEMICAL SURETY AREA  
TECH LIBRARY HAS 6000 BOOKS, 1000 JOURNAL TITLES , MANY DATA BASES  
VIDEO PRODUCTION FACILITY & STATE-OF-THE-ART COMPUTER FACILITY  
MEDICAL MAINTENANCE FACILITY, LABORATORY SUPPLY FACILITY  
RADIOSOTOPE, CHEMICAL, DRUGS & BIOCHEMICAL ANALYSIS  
BEHAVIORAL TESTING LABORATORY & DRUG SCREENING LABORATORY  
LIQUID, GAS, COLUMN & AFFINITY CHROMATOGRAPHY. QUANT IMAGE ENHANCE/ANALY  
ELECTROPHORESIS, SPECTROSCOPY, FLUOROMETRY AND SPECTROPOLARIMETRY  
GC MASS SPECTROMETRY, ELECTRON SPIN RESONANCE AND PEPTIDE SYNTHESIS  
AMINO ACID ANALYSIS AND PEPTIDE SEQUENCING, MONOCLONAL ANTIBODIES  
PHYSIOLOGY, PHARMACOLOGY, AND NEUROPHARMACOLOGY LABORATORIES  
ELECTRON MICROSCOPY, SEM, TISSUE CULTURE, CELL CLONING, RECEPTOR ANALYS.

INSTALLATION: MEDICAL RSCH INST OF INFECTIOUS DIS.

FT. DETRICK, MD

CDR. COL DAVID L. HUXSOLL

DEP FOR SCI. DR. MICHAEL A. CHIRIGOS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	42.122	47.054
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.543	0.454
TOTAL OTHER	8.341	8.594
TOTAL ANNUAL LAB	51.006	56.102
 TOTAL INHOUSE	 30.493	 33.773
TOTAL INHOUSE RDTE	21.609	24.725
ANNUAL OPERATING COST	9.665	5.986

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	293	47	80	213
CIVILIAN	187	38	99	88
TOTAL	480	85	179	301

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
388	104.136	26.618	205.941	336.595	21.103	20.575

#### ...MISSION

TO DEVELOP STRATEGIES, PRODUCTS, INFORMATION, PROCEDURES AND TRAINING FOR MEDICAL DEFENSE AGAINST BIOLOGICAL WARFARE AGENTS AND NATURALLY OCCURRING INFECTIOUS AGENTS OF MILITARY IMPORTANCE THAT REQUIRE SPECIAL CONTAINMENT

#### ...CURRENT IMPORTANT PROGRAMS

CLONING OF SNAKE TOXIN GENES TO OBTAIN VACCINE OR ANTITOXIN  
SUCCESSFUL ANTIVIRAL DRUG CLINICAL TRIALS  
DEVELOPMENT OF VACCINES AGAINST POTENTIAL BW AGENTS  
RISK ASSESSMENT OF MILITARY IMPORTANT VIRUSES AND THEIR VECTORS  
DEVELOPMENT OF SYSTEMS FOR RAPID IDENTIFICATION AND DIAGNOSIS OF

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

MEDICAL RESEARCH CONDUCTED IN TWO BUILDINGS PROVIDING 307,000 SQ FT AND CONTAINING 23 MODRN LAB SUITES WITH EMPHASIS ON BIOSAFETY LEVEL 4 (BL-4) CONTAINMENT; BL-4 OPERATIONS CONDUCTED IN POSITIVE PRESSURE PERSONNEL SUITS AND/OR CLASS III MICROBIOLOGICAL SAFETY CABINETS. BL-4 LABS ARE UNIQUE RESOURCE IN WORLD FOR SAFE STUDY OF HIGH HAZARD DISEASE AGENTS WITH RESEARCH RESULTS PUBLISHED IN OPEN SCIENCE LITERATURE. SPECIAL 16-BED EXPERIMENTAL WARD FOR VACCINE AND OTHER STUDIES IN VOLUNTEERS. BL-4 CONTAINMENT WARD, BL-4 CLINICAL LAB AND BL-4 ISOLATION TRANSPORT SYSTEM PROVIDE STATE-OF-THE-ART MEDICAL TREATMENT AND DIAGNOSIS FOR MOST HAZARDOUS DISEASES KNOWN. OTHER UNIQUE FEATURES INCLUDE AEROSOL ASSESSMENT, CELL CULTURE, ELECTRON MICROSCOPES, MASS SPECTROMETRIC FACILITY, MUCOSAL LAB, DNA TECHNOLOGY, HYBRIDOMA LAB, COAGULATION LAB.

INSTALLATION: MISSILE RSCH, DEV AND ENGR CNTR

HUNTSVILLE, AL

CDR. MG THOMAS O. REESE

DIR. DR. WILLIAM C. MCCORKLE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	217.641	272.095
TOTAL PROCUREMENT	43.364	57.329
TOTAL O&M	27.786	21.049
TOTAL OTHER	5.603	6.159
TOTAL ANNUAL LAB	294.394	356.632
TOTAL INHOUSE	100.458	129.561
TOTAL INHOUSE RDTE	54.393	74.261
ANNUAL OPERATING COST	23.552	28.531

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	54	0	33	21
CIVILIAN	1319	71	809	510
TOTAL	1373	71	842	531

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	0.729	0.257	0.200	1.186	59.232	148.152

...MISSION

SUPPORT PROJECT MANAGED SYSTEMS; MANAGE & CONDUCT RSCH, EXPL & ADV DEVL FOR MISSILES, ROCKETS, DIRECTED ENERGY WEAPONS AND UNMANNED AERIAL VEHIC PROVIDE TECH SOLUTIONS TO ARMY'S CLOSE COMBAT, FIRE SPT, AIR DEF, AND AVIATION SYS NEEDS TO DEV TECHNOLOGY FOR FUTURE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

SETTLER AIR DEFENSE WEAPON  
FIBER OPTICS GUIDED MISSILE DEMO  
PRECISION DEEP ATTACK MISSILE CONCEPT DEMO  
KINETIC ENERGY MISSILE DEVELOPMENT  
MULTIROLE SURVIVABLE RADAR DEVELOPMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

CENTER IS EQUIPPED TO STUDY PROBLEMS IN PROP, AERO, G&C & STRUCTURES, MAJOR FAC IS MCMORROW LAB WHICH HOUSES MAJORITY OF CENTER, SOME UNIQUE FAC ARE: ADV SIM CNTR; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY 3 ENVIRON EFFECTS SIMULATORS; MSL COMPUTER SOFTWARE/HDWE CNTR; SIG EVAL EN CHAMBERS; ARMY MSL OPTICAL RANGE DESIGNED TO MEASURE LASER RADAR SIG. MAINTAINS AND OPERATES 7 MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC ENVIRON & FUNCTIONAL TEST; STATE-OF-THE-ART FAC & EQUIP SUCH AS LASER TRACKERS & ELECTRO-MAGNETIC RADAR SENSORS. PERFORMS ARMY LEAD CENTER FUNCTION IN GUID & CONTROL/TERMINAL HOMING TECH AND HIGH POWER/ENERGY TECH. FAC FOR MECH, ELECT & ELEC FAB & ASSY. ACTS AS AMC LEAD FOR SMART MUNITIONS. HYBRID MICROCIRCUITRY DESIGN AVAILABLE. SMOKE CHARACTERIZATION FACILITY IS ALSO AVAILABLE.



INSTALLATION: NATICK RESEARCH, DEVELOPMENT & ENGR CNTR NATICK, MA  
 CDR. COL A. D. RODGERS, III TECH DIR. MR. EDWARD F. LEVELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	65.924	56.296
TOTAL PROCUREMENT	3.275	3.047
TOTAL O&M	17.095	15.179
TOTAL OTHER	4.040	3.813
TOTAL ANNUAL LAB	90.334	78.335
TOTAL INHOUSE	60.361	50.535
TOTAL INHOUSE RDTE	41.554	36.060
ANNUAL OPERATING COST	9.348	12.776

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	101	2	30	71
CIVILIAN	977	70	379	598
TOTAL	1078	72	409	669

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
174	412.870	58.018	335.065	805.953	29.190	1.296

#### ...MISSION

ACCOMP R&D IN THE PHYS AND BIOL SCI AND ENGR TO MEET MIL NEEDS IN CLOTH AND PERS EQUIP; AIRDROP; FIELD SHELTERS AND EQUIPAGE; FIELD ORG EQUIP; FOOD/FOOD SYS; CONTAINERS AND PACKAGING. PERF ILS FUNC. ENG SPT TO DLA AND GSA PROC.

#### ...CURRENT IMPORTANT PROGRAMS

CHEMICAL AND BALLISTIC PROTECTION  
 LASER/HIGH ENERGY PROTECTION  
 MICROCLIMATE COOLING PROGRAM FOR GROUND AND AIR COMBAT VEHICLES  
 COMBAT FIELD FEEDING SYSTEM  
 CHEMICAL, BALLISTIC AND NUCLEAR HARDENED TACTICAL SHELTERS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

BACTERIOLOGY LAB EQUIP FOR INVES OF PATHOGENIC MICROORGANISMS; HIGH RESOLUTION MASS SPECTROMETER FOR ANALYSIS OF VOLATILE CPDS; FEBETRON MACHINE USED FOR FOOD OXIDATION; SCANNING TRANSMISSION ELECTRON MICROSCOPE; LASER LAB FOR EVAL OF HIGH ENERGY LASERS ON CLO AND RELATED MAT; DYEING AND FINISHING LAB FOR STUDIES OF TEXTILES; COMPUTER GENERATED SYS OF CLO PATTERNS TO OUTPUT COMPL TARIFF OF SIZES FROM ONE MASTER; CLIMATIC CHAMBERS W/TEMPS -57C TO +74C W/WIND AND RAIN; FLAME PROT LAB AND FACILITY INCL OUTDOOR FIRE PIT; AIRCRAFT ROLLER CONVEYER TEST FAC; DROP TEST FAC; 40 X 40 FT RAINCOURT; FOOD PROCESSING PLANT; FOOD SYS EQUIP LAB; EXPERIMENTAL KITCHEN; SENSORY EVALUATION LAB; HORIZONTAL IMPACT TESTING MACHINE; UNIVAC 1106, IBM 4341, PRIME 750 CAD/E, AND PRIME 2250 COMPUTERS WITH PERIPHERAL EQUIPMENT AND SOFTWARE.

INSTALLATION: RSCH INST FOR BEHAVIORIAL & SOCIAL SCIENCES ALEXANDRIA, VA

CDR. COL. WM. DARRYL HENDERSON

TECH DIR. DR. EDGAR H. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	67.747	62.783
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.953	4.694
TOTAL OTHER	1.363	1.719
TOTAL ANNUAL LAB	73.065	69.196
TOTAL INHOUSE	24.388	24.844
TOTAL INHOUSE RDTE	22.941	22.800
ANNUAL OPERATING COST	12.106	11.925

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	56	2	36	20
CIVILIAN	342	167	234	108
TOTAL	398	169	270	128

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
0	53.155	14.000	6.200	73.355	0.735	0.862	

...MISSION

TO MAXIMIZE ARMY EFFECTIVENESS THROUGH RESEARCH AND DEVELOPMENT IN THE ACQUISITION, TRAINING, DEVELOPMENT, UTILIZATION, AND RETENTION OF THE ARMY'S PERSONNEL RESOURCES.

...CURRENT IMPORTANT PROGRAMS

PERFORMANCE BASED SELECTION, CLASSIFICATION, AND ASSIGNMENT

MANPOWER AND PERSONNEL INTEGRATION (MANPRINT)

ARMY FAMILY FACTORS

BATTALION TRAINING PERFORMANCE FACTORS (NATIONAL TRAINING CENTER)

UNIT PERFORMANCE: COHESION AND VALUES

...FUNCTIONS/EQUIPMENT/FACILITIES

THREE RESEARCH LABORATORIES, MANPOWER/PERSONNEL, TRAINING AND SYSTEMS ARE DIVIDED INTO 9 FIELD UNITS AT FT LEAVENWORTH, FT KNOX, FT BENNING, FT RUCKER, FT HOOD, FT BLISS, ORLANDO, FL, FT SILL, AND PRESIDIO OF MONTEREY. NINE TECH AREAS AT HQ ARE SELECTION & CLASSIFICATION, PERSONNEL UTILIZATION, MANPOWER & PERSONNEL POLICY RESEARCH, LEADERSHIP & MANAGEMENT, EXECUTIVE DEVELOPMENT, MANNED SYSTEMS, TECHNOLOGIES FOR SKILL ACQUISITION & RETENTION, LOGISTICS TRAINING TECHNOLOGIES, AND DEVELOPMENT ENGINEERING. TEN SCIENTIFIC COORDINATION/LIASION OFFICES AT LONDON, OTEA, USAREUR, TRADOC, FT HUACHUCA, FT GORDON, AVSCOM, BOISE, FT LEWIS AND FT IRWIN. IN HOUSE EXPERIMENTAL FACILITIES INCLUDE LABORATORY AREAS-COMPUTERS THAT PERMIT REALTIME EXPERIMENTATION GAMING AND SIMULATION WITH EXTERNAL LINES TO PROVIDE FLEXIBILITY.

INSTALLATION: RSCH INST OF ENVIRONMENTAL MEDICINE

NATICK, MA

CDR. COL DAVID D. SCHNAKENBERG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	7.258	7.430
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.034	0.000
TOTAL OTHER	2.766	2.882
TOTAL ANNUAL LAB	10.058	10.312
TOTAL INHOUSE	9.124	9.688
TOTAL INHOUSE RDTE	6.324	6.806
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	72	17	44	28
CIVILIAN	81	27	59	22
TOTAL	153	44	103	50

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	46.621	6.163	24.790	77.574	4.084	10.092

#### ...MISSION

DESK TOP COMPUTERS TO HAND HELD CALCULATORS FOR PREDICTION OF SOLDIER PERFORMANCE AND ENDURANCE IN HOT CLIMATES OR WEARING MOPP CLOTHING. CONDUCTS RESEARCH TO DETERMINE THE EFFECTS OF TEMPERATURE, ALTITUDE, WORK, CHEMICAL DEFENSE, AND MILITARY NUTRITION ON THE SOLDIER'S LIFE

#### ...CURRENT IMPORTANT PROGRAMS

COMPLETED EVALUATION OF NEW COMBAT FIELD FEEDING SYSTEMS. CONDUCTED 45-DAY SIMULATED ASCENT TO MT EVEREST IN THE USARIEM HYBORIC CHAMBER. FIELD RESEARCH IN NEW METHOD OF ASSESSING BODY FATNESS OF MILITARY PERSONNEL. DEVELOPED A COMPUTER ALGORITHM TO COMPUTE WGBT FROM EXISTING USAF WEATHER DATA BASE. TRANSITIONED HEAT STRESS MODELS FROM

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

PROCESSES, PERFORMANCE, AND HEALTH. THE MAJOR EQUIPMENT AND FACILITY CAPABILITIES OF THE LABORATORY INCLUDE BUT ARE NOT LIMITED TO, TWO LARGE ALTITUDE CHAMBERS, 14 SMALL CLIMATIC CHAMBERS, AAALAC ACCREDITED ANIMAL CARE FACILITIES, ELECTRON MICROSCOPY, UNDERWATER RESEARCH POOL, COPPER MANIKINS AND DIVERSE PHARMACOLOGICAL AND PSYCHOLOGICAL MEASURING EQUIPMENT. THE INSTITUTE MAINTAINS A FIELD FACILITY ON THE SUMMIT OF PIKES PEAK, COLORADO.

INSTALLATION: TANK AUTOMOTIVE RD&E CENTER

WARREN, MI

ACTING DIR. DR. G. ORLICKI

ACTING TECH DIR. COL J. VAN ZANT

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	110.183	120.796
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	19.968	25.000
TOTAL OTHER	0.920	1.066
TOTAL ANNUAL LAB	131.071	146.862
TOTAL INHOUSE	38.638	44.867
TOTAL INHOUSE RDTE	22.959	25.323
ANNUAL OPERATING COST	6.140	7.878

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	0	18	9
CIVILIAN	783	14	375	408
TOTAL	810	14	393	417

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	246.562	123.756	125.274	495.592	255.173	134.463

...MISSION

EXPAND THE RD&E TECHNOLOGY BASE FOR THE DEVELOPMENT & SUPPORT OF THE GROUND MOBILITY FLEET OF TACTICAL & COMBAT VEHICLES. INTEGRATE WORLDWIDE TECHNOLOGY INTO COMBAT VEHICLES. PERFORM SYSTEMS ENGINEERING ACTIVITIES FOR LIFE CYCLE SUPPORT OF ALL TANK-AUTOMOTIVE MATERIAL.

...CURRENT IMPORTANT PROGRAMS

COMBAT VEHICLE TRACK & SUSPENSION PROGRAM.  
COMBAT VEHICLE SURVIVABILITY THRU THREAT WARNING & COUNTERMEASURES.  
VEHICLE ELECTRICAL/ELECTRONIC SYSTEMS INTEGRATION.  
FUTURE COMBAT VEHICLE SYSTEMS CONCEPT FORMULATION, SIMULATION & DEMOS.  
ADVANCED INTEGRATED PROPULSION SYSTEMS.

...FUNCTIONS/EQUIPMENT/FACILITIES

VEHICLE BRAKE DYNAMOMETER. ENGINE & TRANSMISSION TEST CELLS. VEHICLE COMPONENT/SUBSYSTEM FABRICATION, INTEGRATION & EVALUATION. VEHICLE SIMULATOR FOR DYNAMIC ANALYSIS & PREDICTION OF LAND VEHICLE PERFORMANCE. SIGNATURE MEASUREMENT CAPABILITY. VEHICLE THERMAL IMAGE PREDICTION MODEL SIX DEGREE OF FREEDOM SIMULATOR FOR DYNAMIC LAB TEST OF FULL-UP VEHICLES SCIENTIFIC & ENGINEERING COMPUTER NETWORK FOR COMPUTER AIDED DESIGN SERVICES. METAL ANALYSIS WITH MICROPROBE ELECTRON MICROSCOPE ANALYZER. AUTOMATED ARMOR DATA BASE PROVIDING VEHICLE DESIGNER EASY ACCESS TO BALLISTIC TEST & MATERIALS DATA. ARMOR FABRICATION & WELDING FACILITIES FOR DEVELOPMENT OF IMPROVED APPLICATION TECHNIQUES. LOW TEMPERATURE SHOCK & VIBRATION FACILITIES. IMAGE PROCESSING CAPABILITY. HOLOGRAPHIC CAPABILITY FOR LARGE STRUCTURES.

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, PANAMA

CDR. COL JOHN M. HARNISCH

TECH DIR. MR. BILLY R. DAVIS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.191	4.034
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.501	1.904
TOTAL ANNUAL LAB	5.692	5.938
 TOTAL INHOUSE	 5.499	 5.498
TOTAL INHOUSE RDTE	2.998	3.594
ANNUAL OPERATING COST	0.463	0.460

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	0	16	53
CIVILIAN	62	2	36	26
TOTAL	131	2	52	79

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2624	18.000	35.925	83.756	137.681	2.378	4.988

#### ...MISSION

PLAN, CONDUCT AND REPORT ON TROPIC ENVIRONMENTAL PHASES OF DEVELOPMENT TEST II AND OTHER DEVELOPMENTAL TYPE TEST. PROVIDE ADVICE AND GUIDANCE ON TESTS AND EVALUATION MATTERS TO MATERIEL DEVELOPERS, MATERIEL PRODUCERS, OTHER SERVICES AND PRIVATE INDUSTRY.

#### ...CURRENT IMPORTANT PROGRAMS

CHEMICAL AGENT MONITOR (CAM)  
PURSUIT DETERRENT MUNITION (PDM XM86)  
MULTIPLE DELIVERY MINE SYSTEM (VOLCANO) XM139  
MODIFIED NORWEGIAN NBC SANATOR  
UNATTENDED GROUND SENSORS (UGS)

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

TEST FACILITIES AND LABORATORIES WITH INSTRUMENTS AND EQUIPMENT FOR CONDUCTING TROPICAL TESTS OF DOD MATERIEL IN THE NATURAL ENVIRONMENT TO INCLUDE ELECTRONICS, HUMAN FACTORS, CHEMICAL, MICROBIOLOGICAL, MATERIEL, SOILS, AND DATA ANALYSIS LABORATORIES.  
OTHER TEST RESOURCES CONSIST OF FIRING RANGES, NATURAL TERRAIN MOBILITY COURSES, AMMO TEST STORAGE AND FUNCTIONING AREAS, JUNGLE, OPEN, AND COASTAL MATERIAL EXPOSURE SITES, JUNGLE RADIO RANGING SITES, POL TANK FARM, MANPACK PORTABILITY COURSE, AND TEST SITES REPRESENTING A VARIETY OF TROPIC MICROENVIRONMENTS INCLUDING BROADLEAF EVERGREEN TREES, SEMI-DECIDUOUS TREES, MARSHLAND, GRASSLAND, CORAL REEFS, FLAT AND HILLY TERRAIN.

INSTALLATION: VULNERABILITY ASSESSMENT LABORATORY

WSMR, NM

CDR. COL EDWARD J. BRADY

DEP DIR. MR. PHILLIP R. SMITH

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	49.306	39.028
TOTAL PROCUREMENT	1.073	1.471
TOTAL O&M	0.990	0.300
TOTAL OTHER	0.000	0.509
TOTAL ANNUAL LAB	51.369	41.308
TOTAL INHOUSE	14.998	13.828
TOTAL INHOUSE RDTE	13.783	12.922
ANNUAL OPERATING COST	5.186	6.050

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	66	0	1	65
CIVILIAN	201	3	118	83
TOTAL	267	3	119	148

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	137.000	28.000	39.000	204.000	6.386	64.350

...MISSION

THE MISSION OF VULNERABILITY ASSESSMENT LABORATORY (VAL) IS TO DETERMINE THE EW VULNERABILITY OF US COMMUNICATIONS/WEAPON SYSTEMS TO THREAT RADIO ELECTRONIC COMBAT AND TO RECOMMEND ELECTRONIC COUNTER-COUNTERMEASURES TO DEVELOPERS THAT WILL REDUCE THE EW VULNERABILITY OF THESE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

SMART MUNITIONS  
JOINT SURVEILLANCE TARGET ACQUISITION RADAR SYSTEM (JSTARS)  
OPTIC/ELECTRO-OPTIC (O/EO) DEVICES  
PATRIOT  
JTIDS-POSITION LOCATION REPORTING SYSTEM-HYBRID (JPH)

...FUNCTIONS/EQUIPMENT/FACILITIES

SUSCEPTIBILITY/VULNERABILITY ANALYSIS-ELECTRONIC WARFARE THREAT EMULATOR  
AUTOMATIC DATA PROCESSING AND MODELING SIMULATORS  
ELECTRO-OPTIC COUNTERMEASURES MISSILE FLIGHT SIMULATORS  
OPEN-LOOP TRACKING COMPLEX  
DYNAMIC ANALYSIS LABORATORY  
OPTICAL CONTRAST RANGE  
ELECTRO-OPTICAL VULNERABILITY ASSESSMENT FACILITY  
ELECTRONIC WARFARE SIGNATURE MEASUREMENT FACILITIES  
RADIO FREQUENCY JAMMER LABORATORY  
DYNAMIC RADAR CROSS SECTION MEASUREMENT FACILITY  
SPECIAL ELECTRO-MAGNETIC INTERFERENCE VULNERABILITY ASSESSMENT FACILITY  
ELECTRONIC COUNTER-COUNTERMEASURES TECHNIQUE DEVELOPMENT

INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, D.C.

CDR. COL FRANKLIN H. TOP, JR.

DEP DIR. COL CLIFFORD A. ROBERTS

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	104.118	88.321
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.756	4.455
TOTAL OTHER	16.767	17.128
TOTAL ANNUAL LAB	125.641	109.904
TOTAL INHOUSE	64.435	67.952
TOTAL INHOUSE RDTE	42.912	46.369
ANNUAL OPERATING COST	3.209	3.209

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	433	99	234	199
CIVILIAN	547	65	227	320
TOTAL	980	164	461	519

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
203	383.274	61.600	0.000	444.874	10.080	31.055

...MISSION

PERFORMS GENERAL MILITARY MEDICINE RESEARCH IN THE AREAS OF COMMUNICABLE DISEASE & IMMUNO SURGERY, DRUG DEVELOPMENT, NEUROPSY, GENERAL MEDICINE & SERVES AS COMMAND & CONTROL ELEMENT FOR THE SPECIAL FOREIGN ACTIVITIES, PLANS AND CONDUCTS AMEDD COURSES.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH ON MILITARY DISEASES  
MILITARY PSYCHIATRY  
MICROWAVE INJURY, PREVENTION & TREATMENT  
MEDICAL EFFECTS OF WEAPONS SYSTEM BLAST OVERPRESSURE  
MEDICAL ASPECTS OF CHEMICAL WARFARE DEFENSE

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT & FACILITY CAPABILITY OF THE LABORATORY INCLUDE CHEMICAL ANALYSIS EQUIPMENT, MICROBIOLOGICAL LABORATORIES, MICROWAVE EXPOSURE SYSTEM, BEHAVIORAL RESEARCH, INSTRUMENTATION AND ELECTRON MICROSCOPES. ADDITIONAL RESEARCH FACILITIES ARE LOCATED IN GERMANY, MALAYSIA, KENYA, BRAZIL, THAILAND, ISRAEL, AND FORT BRAGG.

INSTALLATION: WHITE SANDS MISSILE RANGE

WSMR, NM

CDR. MG JOE S. OWENS

TECH DIR. MR. JOHN A. LOCKARD

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	229.764	175.724
TOTAL PROCUREMENT	17.809	21.114
TOTAL O&M	8.009	12.814
TOTAL OTHER	26.368	27.423
TOTAL ANNUAL LAB	281.950	237.075
TOTAL INHOUSE	220.186	182.985
TOTAL INHOUSE RDTE	179.256	137.065
ANNUAL OPERATING COST	0.051	0.041

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	706	5	281	425
CIVILIAN	2671	66	1093	1578
TOTAL	3377	71	1374	2003

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1741360	621.292	674.356	4368.390	5664.038	239.179	229.942

...MISSION

TO PROVIDE AND OPERATE A NATIONAL TEST RANGE AND THE HIGH ENERGY LASER SYSTEMS TEST FACILITY, TO TEST AND EVALUATE ARMY MATERIEL AND TO OPERATE AND MAINTAIN THE INSTALLATION.

...CURRENT IMPORTANT PROGRAMS

ARMY-PERSHING, PATRIOT, CHAPARRAL, MLRS, FLAGE, ATACMS, HAWK, AND HEDI  
AIR FORCE-AMRAAM, AIM AND F-15 TACTICAL OPERATIONS AND TRAINING  
NAVY-ROLLING AIRFRAME MISSILE, STANDARD MISSILE AND SOUNDING ROCKETS  
NASA-SHUTTLE TRAINING/OPERATIONS AND TRACKING DATA RELAY SATELLITE SYS  
OTHER-TRI-SERVICE DIRECTED-ENERGY TESTS AND DNA, DOE AND OTHER TESTS

...FUNCTIONS/EQUIPMENT/FACILITIES

WSMR, AN ALL-OVERLAND TEST RANGE, PROVIDES TREMENDOUS LAND AND AIRSPACE FOR MISSILE SYSTEM/SUBSYSTEM TESTING. THE RANGE PROVIDES INTERNAL AND EXTERNAL MEASUREMENTS DATA UTILIZING TELEMETRY (SECURE) AND RADAR, LASER TRACKING, INTERFEROMETER, OPTICAL AND OTHER INSTRUMENTATION SYSTEMS. THESE SYSTEMS, THE LAUNCH COMPLEXES, CONTROL CENTERS AND DATA PROCESSING AND DISPLAY FACILITIES ARE JOINED BY EXTENSIVE TIMING AND COMMUNICATIONS SYSTEMS. OTHER CAPABILITIES INCLUDE: EXPERIMENTAL PAYLOAD AND MISSILE COMPONENT RECOVERY; AIR-AND GROUND-, MULTIPLE-TARGET CONTROL AND GEODETIC SURVEYING. OTHER TEST FACILITIES AND EQUIPMENT INCLUDE: GUIDANCE, ELECTRO-OPTICAL AND MICRO-WAVE SYSTEMS; DYNAMIC AND CLIMATIC ENVIRONMENTS, CHEMICAL, METALLURGICAL, MICROBIOLOGICAL, NUCLEAR AND ELECTROMAGNETIC EFFECTS AND HAZARDOUS WARHEADS AND EXPLOSIVES.



INSTALLATION: YUMA PROVING GROUND

YUMA, AZ

CDR. COL OLIVER C. STOKES

TECH DIR. MR. WILLIAM T. VOMOCIL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	52.771	53.400
TOTAL PROCUREMENT	10.377	9.626
TOTAL O&M	4.169	3.841
TOTAL OTHER	9.714	16.252
TOTAL ANNUAL LAB	77.031	83.119
TOTAL INHOUSE	40.292	40.500
TOTAL INHOUSE RDTE	27.335	26.351
ANNUAL OPERATING COST	22.147	20.234

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	323	0	38	285
CIVILIAN	651	2	192	459
TOTAL	974	2	230	744

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
837904	1.144	79.427	1511.678	1592.249	65.737	129.384

...MISSION

PLAN, CONDUCT SUPPORT DEVELOPMENT TEST OF AIR DELIVERY SYSTEMS, LONG RANGE TUBE ARTILLERY, AIRCRAFT ARMAMENT, DIRECT FIRE WEAPONS AND AUTOMOTIVE EQUIPMENT. PLAN AND CONDUCT DESERT FIELD TESTS AND ENVIRONMENTAL SIMULATION. DEVELOP TEST INSTRUMENTATION AND METHODS.

...CURRENT IMPORTANT PROGRAMS

C-NITE COBRA

M1 TANK

BASE BLEED PROJECTILE

TACTICAL ASSAULT PARACHUTE

TANK AMMO ENHANCEMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTRUMENTED OVERLAND 60KM ARTILLERY RANGE WITH SUPPORT FACILITIES.  
20 X 20 KM AIRCRAFT ARMAMENT RANGE AND AIR DELIVERY DROP ZONES SUPPORTED BY 6 LASER TRACKERS, POSITION LOCATING SYSTEM, TM, CINETHEODOLITES, VERSATILE TRACKING MOUNTS, AND VIDEO SCORING/EVENTS CONNECTED TO A REAL-TIME DATA PROCESSING SYSTEM WITH 3 DISPLAY AND CONTROL CENTERS.  
5 SEP AIRSPACE CONTROLLED AREAS PERMIT SAFE CONDUCT OF CONCURRENT TESTS.  
EIGHTEEN AUTOMOTIVE TEST COURSES FOR PERFORMANCE, MOBILITY & DURABILITY TESTS INCLUDING PAVED DYNAMOMETER COURSE WITH MOBILE DYNAMOMETERS AND SUPPORT SHOP PHYSICAL MEASUREMENT, TDT, X-RAY, PETROL AND CHEMICAL LABS STATIONARY, MOVING VISUAL TARGETS AND THERMAL TARGET PANELS.  
SCIENTIFIC COMPUTER CENTER WITH REAL-TIME AND BATCH DATA PROCESSING, HARD SURFACE AIRFIELD WITH 5160 AND 6000 FT RUNWAYS, MAINTENANCE FAC

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA, FL

CO. CAPT J. O. HOUGHTON

CHIEF SCI. DR. F. E. GUEDRY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	7.184	5.190
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.208	0.407
TOTAL OTHER	1.597	1.684
TOTAL ANNUAL LAB	8.989	7.281
TOTAL INHOUSE	8.989	7.281
TOTAL INHOUSE RDTE	7.184	5.190
ANNUAL OPERATING COST	1.642	1.782

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	40	12	18	22
CIVILIAN	55	14	32	23
TOTAL	95	26	50	45

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	114.538	3.500	8.164	126.202	3.042	7.783

...MISSION

CONDUCT RESEARCH, DEVELOPMENT, TEST, AND EVALUATION IN AVIATION MEDICINE AND ALLIED SCIENCES TO ENHANCE HEALTH, SAFETY, AND READINESS OF AVIATION PERSONNEL. CONDUCT RDT&E TO ASSESS AND IMPROVE HEALTH AND PHYSICAL TOLERANCES OF AVIATION PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

BIOMEDICAL EFFECTS OF CHEMICAL AGENTS ANTIDOTES  
 PERFORMANCE-BASED MEDICAL STANDARDS FOR AVIATION  
 HUMAN PERFORMANCE ASSESSMENT AND ENHANCEMENT.  
 PHYSIOLOGICAL AND BEHAVIORAL EFFECTS OF NON-IONIZING RADIATION  
 HUMAN FACTORS DESIGN CRITERIA DEVELOPMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

SLOW ROTATION ROOM. CORIOLIS ACCELERATION PLATFORM. HUMAN DISORIENTATION DEVICE. STILL-WERNER CHAIR. OFF VERTICAL ROTATING CHAIR. ANECHOIC AND REVERBERANT CHAMBERS. AUTOMATED PULMONARY FUNCTION. TREADMILL. VECTOR AND ECHOCARDIOGRAPH. THERMOGRAPHIC IMAGING SYSTEM. 30 BINOCULAR EYE TRACKER AND VISUAL STIMULATOR ELECTRON MICROSCOPE. VIVARIUM WITH OPERATING SUITE. EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS. COMPLEX TASKS HUMAN PERFORMANCE MEASUREMENT SYSTEMS.

INSTALLATION: AIR DEVELOPMENT CENTER

WARMINSTER, PA

CO. CAPT. E. J. STURM

TECH DIR. MR. R. S. BUFFUM

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	266.762	320.300
TOTAL PROCUREMENT	178.806	88.300
TOTAL O&M	64.224	46.100
TOTAL OTHER	14.202	9.561
TOTAL ANNUAL LAB	523.994	464.261
TOTAL INHOUSE	213.882	225.206
TOTAL INHOUSE RDTE	129.253	156.949
ANNUAL OPERATING COST	72.623	76.202

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	241	3	56	185
CIVILIAN	2568	62	1524	1044
TOTAL	2809	65	1580	1229

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
921	831.513	92.478	451.353	1375.344	38.396	91.010

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR NAVAL AIRCRAFT SYSTEMS  
LESS AIRCRAFT-LAUNCHED WEAPONS SYSTEMS

...CURRENT IMPORTANT PROGRAMS

CV-ASW MODULE (CARRIER ASW)  
VS/VP, F14/F18 PROGRAMS  
LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS (LAMPS)  
TACAMO/ECX STRATEGIC COMMUNICATION AIRCRAFT  
J-TIDS (JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM)

...FUNCTIONS/EQUIPMENT/FACILITIES

AIR WARFARE ANALYSIS, AIR ASW ANALYSIS, AIR COMBAT SYSTEMS ENGINEERING AND INTEGRATION. AIR VEHICLES (STRUCTURES, MATERIALS, FLIGHT DYNAMICS, PERFORMANCE, FLIGHT CONTROL), AIR VEHICLES-RELATED HUMAN FACTORS. AIRCRAFT, SURFACE SHIP, AND SUBMARINE NAVIGATION SYSTEMS. AIRCRAFT CREW EQUIPMENT AND LIFE SUPPORT. AEROSPACE MEDICINE AND AVIATION PHYSIOLOGY. AIR COMMAND AND CONTROL SYSTEMS. AIR TARGETS (SUB-SCALE). DEVELOPMENT AND INTEGRATION OF AIRBORNE SYSTEMS INCLUDING ELECTRONIC SURVEILLANCE AND COUNTER MEASURES, COMMUNICATION, NAVIGATION INFORMATION, ENVIRONMENTAL SENSING (ELECTROMAGNETIC/MAGNETIC, ACOUSTIC, ELECTRO-OPTIC AND PHOTOGRAPHIC). LAB FACILITIES: CENTRAL COMPUTER FACILITY, VIBRATION, THERMAL & PRESSURE FACILITIES. FLIGHT SIMULATION-CENTRIFUGE, SONOBUOY TEST FACILITY, INERTIAL NAVIGATION FACILITY.

INSTALLATION: AIR PROPULSION CENTER

TRENTON, NJ

CO. CAPT F. K. HELMSIN

DIR. RES. MGMT. MR. D. R. SNYDER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	67.939	57.786
TOTAL PROCUREMENT	3.010	5.935
TOTAL O&M	0.521	0.630
TOTAL OTHER	1.451	2.291
TOTAL ANNUAL LAB	72.921	66.642
TOTAL INHOUSE	46.350	49.340
TOTAL INHOUSE RDTE	41.855	40.759
ANNUAL OPERATING COST	13.696	24.246

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	8	0	8	0
CIVILIAN	679	1	203	476
TOTAL	687	1	211	476

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	488.390	27.962	92.816	609.168	52.190	11.135

...MISSION

PROVIDE NAVAIR & FLEET COMPLETE TECHNICAL & ENGINEERING SUPPORT FOR AIR-BREATHING PROPULSION SYSTEMS, ACCESSORIES, COMPONENTS AND FUELS & LUBES. MANAGE AND PERFORM APPLIED R&D ON NEW PROPULSION SYSTEMS; EVALUATE NEW SYSTEMS. BY T&E ASSURE MISSION ACCOMPLISHMENT AND SOLVE FLEET PROBLEMS

...CURRENT IMPORTANT PROGRAMS

CRUISE MISSILE ENGINE (F107/F112) WARRANTY/DEVELOPMENT TESTING  
F110 CORROSION AND ALTITUDE QUALIFICATION TESTING  
F404-GE-400 SECOND PRODUCTION SOURCE TESTING  
F404/RM12 ALTITUDE QUALIFICATION TEST  
T56-A-427 PRELIMINARY FLIGHT RATING ALTITUDE TEST

...FUNCTIONS/EQUIPMENT/FACILITIES

THREE LARGE ALTITUDE CELLS, TWO LARGE SEA LEVEL CELLS AND FOUR SMALL ALTITUDE CELLS PROVIDE ENVIRONMENTAL AND FLIGHT SIMULATION CAPABILITY OF SEA LEVEL TO 100000 FEET; MINUS 65 TO PLUS 350 DEGREES F; FLIGHT SPEEDS FROM ZERO TO MACH 3 TO TEST TURBOJET/FAN AND TURBOPROP/SHAFT ENGINES FIVE TEST ROOMS TO TEST STARTERS, ACCESSORIES AND AUXILIARY POWER UNITS TEN TEST ROOMS AND CHEMISTRY LAB USED FOR R&D ON FUELS, LUBES AND BEARINGS. SPECIAL TEST FACILITIES ARE ROTOR SPIN FACILITY, HELICOPTER TRANSMISSION TEST FACILITY, GYRO RIG AND ENGINE TURNTABLE. FACILITIES ARE USED FOR R&D ON ADVANCED FUELS AND LUBRICATING OILS, OIL-WETTED ENGINE COMPONENTS, AIR POLLUTION, LOW CYCLE FATIGUE, CONTAINMENT NOISE AND I/R PROGRAMS. NAPC QUALS OILS, MANAGES NAVY EXPLORATORY AND ADV DEVEL PRGMS, PROVIDES ADMN & TECH DIR TO SELECTED NAVAIR CONTRACTS.

INSTALLATION: AIR TEST CENTER

PATUXENT RIVER, MD

CO. RADM J. F. CALVERT

TECH DIR. MR. J. F. LYNCH

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	177.992	186.316
TOTAL PROCUREMENT	77.868	57.079
TOTAL O&M	36.958	62.797
TOTAL OTHER	50.745	82.261
TOTAL ANNUAL LAB	348.563	388.453
TOTAL INHOUSE	222.385	236.625
TOTAL INHOUSE RDTE	110.891	113.267
ANNUAL OPERATING COST	86.333	70.788

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1497	5	216	1281
CIVILIAN	2399	5	682	1717
TOTAL	3896	10	898	2998

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7124238	1263.297	453.278	4372.524	6089.099	204.291	117.427

...MISSION

NAVY'S PRINCIPAL AIRCRAFT WEAPONS SYSTEM TEST AND EVALUATION ACTIVITY THROUGH ACTIVE TEST AND EVALUATION PARTICIPATION IN ALL PHASES OF THE WEAPONS SYSTEM LIFE CYCLE PROCESS. THIS INCLUDES FULL SCALE DEVELOPMENT; PRODUCTION AND FLEET SUPPT; AND FLEET IN-SERVICE ENGINEERING SUPPT.

...CURRENT IMPORTANT PROGRAMS

EA-6B  
F/A-18  
S-3B  
SH-60F  
C-2A

...FUNCTIONS/EQUIPMENT/FACILITIES

LARGE, INSTRUMENTED, RESTRICTED AIRSPACE PLUS DIRECT ACCESS TO INSTRUMENTED OFFSHORE WARNING AREAS/REAL-TIME RANGE AND AIRCRAFT TELEMETRY DATA PROCESSING AND DATA DISPLAY/SIMULATION CAPABILITIES FOR AIRBORNE WEAPONS SYSTEMS AND SOFTWARE/ENVIRONMENTAL STIMULATION CAPABILITIES FOR UNDERWATER ACOUSTICS; ELECTRONIC WARFARE AND ELECTROMAGNETIC VULNERABILITY AND EFFECTS TESTING/AIRCRAFT GUN FIRING TUNNEL/ELECTRICAL SYSTEM TEST FACILITY/CONTROLLED ENVIRONMENT ENGINE, HYDRAULIC, FUEL, ENVIRONMENTAL, AND ELECTRICAL TEST CAPABILITY/SHIPBOARD CATAPULT AND ARRESTING GEAR/ANTENNA TEST RANGE/LAND, SEA, AND AIR TARGETS/SHIP GROUND STATION FOR LAMPS TESTING/ELECTROMAGNETICALLY SHIELDED HANGAR/PRECISION ELECTRO-OPTICAL TARGET/EXTENSIVE AIRCRAFT AND GROUND-BASED INSTRUMENTATION POOL AIDED BY DEVELOPMENT, FABRICATION AND INSTALLATION FACILITIES.

INSTALLATION: ATLANTIC FLEET WEAPONS TRAINING FAC ROOSEVELT ROADS, P.R.

CO. CAPT ROBERT S. MCFARLAND

TECH DIR. MR. J. R. BROWN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	0.350	0.255
TOTAL PROCUREMENT	7.400	0.652
TOTAL O&M	23.241	24.605
TOTAL OTHER	10.627	9.379
TOTAL ANNUAL LAB	41.618	34.891
 TOTAL INHOUSE	 6.474	 6.662
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	1.501	1.495

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	94	0	46	48
CIVILIAN	43	0	32	11
TOTAL	137	0	78	59

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
3523	0.000	14.957	232.440	247.397	19.962	137.439

...MISSION

TO OPERATE, MAINTAIN AND DEVELOP WEAPONS TRAINING FACILITIES AND SERVICES IN DIRECT SUPPORT OF THE TRAINING OF FLEET FORCES AND OTHER ACTIVITIES AND FOR THE DEVELOPMENT, TEST AND EVALUATION OF WEAPONS SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

CNO PROJ 623 SM-2 BLK II  
CNO PROJ 100 AEGIS PROGRAM  
CNO PROJ 251 TOMAHAWK  
CNO PROJ 107-2 FCS MK92 MOD2  
CNO PROJ 731 CGN-SM2 BLOCK I COMPARABILITY

...FUNCTIONS/EQUIPMENT/FACILITIES

NAVY'S LARGEST TRAINING FAC FOR ATLANTIC FORCES WITH 202,000 SQ.MI. COMBINED SEA AREA FOR AIR, SURFACE AND SUBSURFACE WARFARE OPERATIONS. CENTRAL COMMAND AND CONTROL SYSTEM WITH NTDS LINKING, REALISTIC EW ENVIRONMENT, SURVEILLANCE/TRACK RADARS, AIR/SURFACE TARGETS PRESENTATION, LARGE SCREEN DISPLAY SYSTEM FOR OPS MONITOR/CONTROL, EVENT RECONSTRUCTION, AND VARIOUS OTHER INSTRUMENTATION SYS. FLTAC FIELD STATION FOR MISSILE ANALYSIS AND EVALUATION. AIR TO GRND AND SURFACE TO SURFACE WEAPONS TARGET FACILITIES FOR CONVENTIONAL AIRCRAFT ORDNANCE DELIVERY, STRAFING AND NAVAL GUNFIRE WITH RADAR, TV BOMB SCORING SYSTEM AND OTHER SCORING/SPOTTING SYSTEMS. UNDERWATER RANGE FOR PRECISION SURFACE AND SUBSURFACE TRACKING, WSATS AND FORACS. NAVSTA PROVIDES FOR AIRCRAFT/SHIPS LOGISTICS SUPPORT, BOQ AND BEQ.

INSTALLATION: BIODYNAMICS LABORATORY

NEW ORLEANS, LA

CO. CAPT ROBERT J. BIRSNER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.909	3.159
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.837	1.422
TOTAL ANNUAL LAB	4.746	4.581
TOTAL INHOUSE	4.267	3.619
TOTAL INHOUSE RDTE	3.430	2.376
ANNUAL OPERATING COST	0.400	0.477

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	34	5	8	26
CIVILIAN	53	4	16	37
TOTAL	87	9	24	63

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	35.702	24.452	1.400	61.554	2.070	0.279

...MISSION

CONDUCT BIOMED RSCH ON EFFECTS OF MECH FORCES (MOTION,VIBRATION,IMPACT)  
ENCOUNTERED IN SHIPS AND AIRCRAFT BY NAVY PERSONNEL; ESTABLISH HUMAN  
TOLERANCE LIMITS FOR THESE FORCES; DEVELOP PREVENTIVE AND THERAPEUTIC  
METHODS TO PROTECT PERSONNEL FROM DELETERIOUS EFFECTS OF SUCH FORCES.

...CURRENT IMPORTANT PROGRAMS

LONG-TERM EFFECTS OF BIODYNAMIC STRESS EXPERIMENTS  
PHYSIOLOGICAL AND PERFORMANCE EFFECTS OF SHIP MOTION ON CREW MEMBERS  
DETERMINATION OF HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION  
EFFECTS OF IMPACT ACCELERATION ON HUMAN NEUROPHYSIOLOGY  
DEVELOPMENT OF AND VALIDATION OF HUMAN ANTHROPOMORPHIC MANIKINS

...FUNCTIONS/EQUIPMENT/FACILITIES

IMPACT FACILITY 1 MEGA N THRUST ACCELERATOR 213M ENVIRONMENTALLY EN-  
CLOSED TRACK. 17.8K N THRUST VERTICAL ACCELERATOR. XRAY CINEMATOGRAPHY  
ELECTRODYNAMIC MOTION EXCITORS. C210 SHAKER. SHIP MOTION GENERATOR. 22  
CHANNEL INERTIA DATA ACQUISITION SYSTEM AND HIGH SPEED CAMERA EQUIPPED  
FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTI-  
CAL ELECTROMAGNETIC ENVIRONMENTS.

INSTALLATION: BIOSCIENCES LABORATORY

NSC OAKLAND, CA

CO. CAPT W. P. CARNEY

SCI DIR. DR. D. KINGSBURY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	2.847	4.154
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.351	0.293
TOTAL ANNUAL LAB	3.198	4.447
TOTAL INHOUSE	3.198	4.447
TOTAL INHOUSE RDTE	2.847	4.154
ANNUAL OPERATING COST	0.512	0.632

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	9	3	9	0
CIVILIAN	4	0	0	4
TOTAL	13	3	9	4

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	77.625	8.731	34.646	121.002	1.000	69.624

...MISSION

THE MISSION OF THE BIOSCIENCE LABORATORY IS TO CONDUCT RESEARCH AND DEVELOPMENT IN THE BIOSCIENCES RELATED TO THE NEEDS OF THE NAVAL ESTABLISHMENT

...CURRENT IMPORTANT PROGRAMS

IMMUNE MECHANISMS OF INFECTIOUS DISEASES  
RAPID DETECTION OF MICROORGANISMS  
RECOMBINANT DNA TECHNOLOGY  
TOXIC EFFECTS OF ORGANOMETAL COMPOUNDS IN THE MARINE ENVIRONMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

EQUIPMENT INCLUDES CLASS 3 CONTAINMENT FACILITIES FOR HANDLING PATHOGENIC VIRUS AND BACTERIA, HYBRIDOMA FACILITY FOR MONOCLONAL ANTIBODY PRODUCTION, CHARACTERIZATION, AND EXPANSION IN TISSUE CULTURE AND LABORATORY ANIMALS, ZILOG COMPUTER SYSTEM, ELECTRON SPIN RESONANCE AND NUCLEAR MAGNETIC RESONANCE SPECTROMETERS, SPECTROFLUOROMETER, AND SCANNING ELECTRON MICROSCOPE, PROGRAMMED CELL FREEZING SYSTEM, 35-L AIRLIFT FERMENTER, DYNATECH ROBOTICS SAMPLING SYSTEM. NBL IS A CONTRACT BASIC RESEARCH LABORATORY WITH SCIENTIFIC AND TECHNICAL STAFF BEING MOSTLY UNIV. CALIFORNIA-BERKELEY EMPLOYEES.



INSTALLATION: CIVIL ENGINEERING LABORATORY

PORT HUENEME, CA

CO. CAPT JAMES A. CAUGHMAN

TECH DIR. MR. ROBERT N. STORER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	33.227	32.070
TOTAL PROCUREMENT	3.771	3.380
TOTAL O&M	9.875	7.464
TOTAL OTHER	3.542	1.966
TOTAL ANNUAL LAB	50.415	44.880
TOTAL INHOUSE	28.724	25.434
TOTAL INHOUSE RDTE	19.576	18.920
ANNUAL OPERATING COST	6.534	6.735

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	0	8	10
CIVILIAN	380	32	223	157
TOTAL	398	32	231	167

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
32	112.965	7.746	16.493	137.204	7.962	4.650

...MISSION

MISSION OF LABORATORY IS TO BE THE PRINCIPAL RDT AND E CENTER FOR NAVY SHORE FACILITIES, FIXED SURFACE AND SUBSURFACE OCEAN FACILITIES AND FOR THE NAVY AND MARINE CORPS CONSTRUCTION FORCES.

...CURRENT IMPORTANT PROGRAMS

NAVY SHORE FACILITIES SUPPORT. NAVY SEAFLOOR INSTALLATIONS, AMPHIBIOUS AND ADVANCED BASE TECHNOLOGY. ENVIRONMENTAL PROTECTION. ORGANIC MATERIALS. ENERGY TECHNOLOGY. DEEP OCEAN TECHNOLOGY. OFFSHORE BULK FUEL TRANSFER. INDEPENDENT EXPLORATORY DEVELOPMENT. INDEPENDENT RESEARCH. CONTAINER OFF-LOADING TRANSFER SYSTEM (COTS). MARINE CORPS. ARMY.

...FUNCTIONS/EQUIPMENT/FACILITIES

PRESSURE VESSEL FACILITY WITH 9, 18, 34, 72, INCH VESSELS SIMULATION PRESSURES TO OCEAN DEPTHS OF 20,000 FEET. DIVING LOCKER AND EQUIPMENT FOR 10 DIVERS. SEA FLOOR SOILS LAB. ENERGY TEST BED. CLASS G PHOTO LAB. PHYSICAL SECURITY LABS. CHEMISTRY LAB. INSTRUMENTATION LAB. WARPING TUG ELECTROMAGNETIC FACILITY. CORROSION AND METALURGICAL LABS. ENVIRONMENTAL RESEARCH LAB. PRIME 750 TERMINAL WITH HIGH SPEED READER AND LINE PRINTER DIGITAL MAG TAPE. PEN PLOTTER. CURRENT SESOR LAB. ENERGY MONITORING CAPABILITY. PROTOTYPE MACHINE, WELDING, CARPENTER, AND RIGGING SHOPS. SHALLOW OCEAN SIMULATION FACILITY. MATERIAL TESTING LAB. ELECTRICAL SYSTEMS LAB. CONCRETE MIXING LAB. AGGREGATE PROCESSING LAB. DATA PROCESSING CENTER.

# INSTALLATION: CLOTHING & TEXTILE RESEARCH FACILITY

NATICK, MA

CO. CDR GARY R. PETERSON

TECH DIR. MR. NORMAN AUDET

## PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	2.608	2.028
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.458	1.959
TOTAL OTHER	0.144	0.094
TOTAL ANNUAL LAB	4.210	4.081
TOTAL INHOUSE	3.711	4.043
TOTAL INHOUSE RDTE	2.109	1.990
ANNUAL OPERATING COST	0.283	0.321

## PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	56	1	40	16
TOTAL	57	1	41	16

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	EQUIP
1	12.660	10.200	3.600	26.460	1.054
					1.000

## ...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST & EVALUATION & PROVIDE ENGINEERING SUPPORT IN CLOTHING TEXTILES & RELATED FIELDS ASSOCIATED WITH NAVY DRESS & PROTECTIVE CLOTHING

## ...CURRENT IMPORTANT PROGRAMS

BATTLE DRESS AND CBR CLOTHING  
MATERIAL INVESTIGATIONS TO MEET NAVY CLOTHING REQUIREMENTS  
PROTECTIVE CLOTHNG & FOOTWEAR FOR HAZARDOUS ENVIRONMENTS  
LIFE SUPPORT SYSTEMS DEVELOPMENT FOR PROTECTIVE CLOTHING  
ENVIRONMENTAL PHYSIOLOGY RESEARCH AND EVALUATION

## ...FUNCTIONS/EQUIPMENT/FACILITIES

HYDRO-ENVIRONMENT TEMPERATURE LAB, AIR CHAMBER-MARINE TANK REPRODUCES AIR-SEA TEMP CONDITIONS FOR WATER IMMERSION PHYSIOLOGY & BUOYANCY TESTS.  
ENVIRONMENTAL TEST CHAMBER FOR EVALUATING PROTECTIVE CLOTHING UNDER WORK STRESS & EXTREME TEMPERATURES.  
INSTRUMENTED THERMAL MANIKIN FOR DETERMINING THERMAL INSULATION OF CLOTHING IN WET & DRY ENVIRONMENTS.  
THERMAL FLAMMABILITY APPARATUS FOR CONDUCTING FLAME RESISTANCE, HEAT RESISTANCE AND THERMAL PROTECTION MATERIAL TESTING.  
CHEMICAL & PHYSICAL TESTING EQUIPMENT FOR EVALUATING FABRICS, YARNS, FIBERS, LEATHER, PLASTICS, RUBBERS, DYES AND FINISHES.  
SEWING MACHINES, FUSING PRESS FOR DEVELOPING SAMPLE GARMETS. PATTERN DRAFTING EQUIPMENT.

INSTALLATION: COASTAL SYSTEMS CENTER

PANAMA CITY, FL

CO. CAPT M. W. GAVLAK

TECH DIR. MR. G. C. DILWORTH, JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	75.326	76.743
TOTAL PROCUREMENT	33.409	22.404
TOTAL O&M	20.554	15.653
TOTAL OTHER	4.642	4.299
TOTAL ANNUAL LAB	133.931	119.099
TOTAL INHOUSE	79.934	87.154
TOTAL INHOUSE RDTE	48.269	56.753
ANNUAL OPERATING COST	26.407	31.071

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	130	0	18	112
CIVILIAN	1131	47	658	473
TOTAL	1261	47	676	585

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
648	371.889	40.591	625.052	1037.532	49.346	32.345

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR MINE AND UNDERSEA COUNTER-MEASURES, SPECIAL WARFARE, AMPHIBIOUS WARFARE, DIVING AND OTHER NAVAL MISSIONS THAT TAKE PLACE PRIMARILY IN THE COASTAL REGIONS.

...CURRENT IMPORTANT PROGRAMS

MINE AND UNDERSEA COUNTERMEASURES  
TORPEDO AND SONAR COUNTERMEASURES. SUBMARINE LAUNCHERS (CM UNIQUE)  
SHIP/AIRBORNE MINE COUNTERMEASURES COMBAT SYSTEM INTEGRATION  
DIVING, SALVAGE, AND SPECIAL WARFARE  
AMPHIBIOUS WARFARE

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE- OCEAN SIMULATION FAC TO 2250' DEPTH. HYDROSPACE LAB.  
GAS ANALYSIS LAB, MAGNETIC TARGET DETECTION & CLASSIFICATION RANGE,  
CALIBRATION & STANDARDS FAC, MECHANICAL CALIBRATION LAB, ACOUSTIC TEST  
FAC, TRANSDUCER LAB, PRECISION ACOUSTIC TANK, LASER LAB, COUNTERMEASURE  
EVALUATOR IN REAL-TIME SIMULATION, BURROUGHS 6810 DIGITAL COMPUTER &  
ASSOC. DATA COMMUNICATIONS SYS, SONAR PROCESSING FAC, INTERACTIVE  
GRAPHICS SYS, SOFTWARE ENG ENVIR/TACTICAL EMBEDDED COMPUTERS, ADVANCED  
TECHNOLOGY COMPUTATIONAL FAC, VEHICLE TECH FAC, MATERIALS R&D FAC,  
ACTIVE SONAR MODEL, SHORE BASED OPTICAL TRACKING, GULF TEST RANGE,  
SIGNAL PHYSICS BLDG, PIER SPACE & BOATS TO INCLUDE RESEARCH VESSELS  
ATHENA 1&2, MSO 443 USS FIDELITY, HELIPORT COMPLEX W/2 RH53D, 1 MH53E,  
1 NUH1E, AND INDUSTRIAL SHOPS.

INSTALLATION: DAVID TAYLOR SHIP R&D CENTER

BETHESDA, MD

CO. CAPT G. R. GARRITSON

TECH DIR. MR. R. E. METREY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	218.385	291.543
TOTAL PROCUREMENT	19.806	28.576
TOTAL O&M	39.373	46.937
TOTAL OTHER	13.728	19.108
TOTAL ANNUAL LAB	291.292	386.164
TOTAL INHOUSE	188.999	219.269
TOTAL INHOUSE RDTE	145.577	165.738
ANNUAL OPERATING COST	52.234	62.838

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	77	2	23	54
CIVILIAN	2769	124	1501	1268
TOTAL	2846	126	1524	1322

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
325	1696.000	90.000	319.000	2105.000	75.900	101.700

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION (RDT&E) CENTER FOR NAVAL VEHICLES AND LOGISTICS AND TO PROVIDE RDT&E SUPPORT TO THE U.S. MARITIME ADMINISTRATION AND THE MARITIME INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

SSN-21 (PROPULSOR/BOW/STRUCTURES/MACHINERY/ACOUSTICS/HYDRODYNAMICS)  
SURFACE SHIP AND SUBMARINE SILENCING (ACOUSTIC/NON-ACOUSTIC/MACHINERY),  
SURFACE SHIP SURVIVABILITY (STRUCTURES/MACHINERY/MATERIALS)  
PROPULSION (HYDRODYNAMICS/MACHINERY/MATERIALS), AERODYNAMICS (JET-  
VANE YAW CONTROL/X-WING ROTOR SYSTEM/CIRCULATION CONTROL)

...FUNCTIONS/EQUIPMENT/FACILITIES

FUNCTIONS/EQUIPMENT/CAPABILITIES: DEEP WATER ACOUSTIC FACILITY, SHALLOW  
DEEP WATER/HIGH SPEED TOWING BASINS, WIND AND WATER TUNNELS, ANECHOIC  
FLOW FACILITY, STRUCTURAL EVALUATION LAB, UNDERWATER EXPLOSIONS BARGE/  
TEST POND, PHYSICAL METALLURGY LAB, WELDING/FABRICATION LABS, MACHINERY  
DEVELOPMENT LAB, ENVIRONMENTAL PROTECTION LAB, DYNAMIC CONTROL SIMULATOR  
/COMPUTER, MANEUVERING AND SEAKEEPING/RADIO-CONTROLLED MODEL FACILITY,  
PRESSURE TANKS/DEEP OCEAN FACILITIES, HIGH SPEED RESEARCH VESSELS, PAINT  
LAB, FUELS LAB, SHOCK AND VIBRATION FACILITY, CENTRAL COMPUTER FACILITY,  
ELECTRIC PROPULSION TEST CRAFT, TURBO-ELECTRIC PROPULSION LAB, ACOUSTIC  
MEASUREMENT BARGE/ACOUSTIC DATA ANALYSIS CENTER, CARR INLET ACOUSTIC  
RANGE FACILITY, AND SANTA CRUZ ACOUSTIC RANGE FACILITY. SUBMARINE  
INTERNAL FLUID DYNAMIC FACILITY, ROBOTICS, ACOUSTIC RESEARCH SHIP

INSTALLATION: DENTAL RESEARCH INSTITUTE

NTC GREAT LAKES, IL

CO. CAPT R. G. WALTER

SCI DIR. DR. I. L. SHKLIARR

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	1.112	1.272
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.287	1.103
TOTAL ANNUAL LAB	2.399	2.375
 TOTAL INHOUSE	 2.236	 2.205
TOTAL INHOUSE RDTE	0.949	1.102
ANNUAL OPERATING COST	0.408	0.451

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	8	11	18
CIVILIAN	15	4	6	9
TOTAL	44	12	17	27

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	21.264	6.001	9.318	36.583	0.005	0.062

...MISSION

TO CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN DENTAL AND ALLIED SCIENCES WITH PARTICULAR EMPHASIS ON PROBLEMS OF DENTAL AND ORAL HEALTH IN NAVY AND MARINE CORPS POPULATIONS AND ON PROBLEMS OF FLEET AND FIELD DENTISTRY.

...CURRENT IMPORTANT PROGRAMS

THE PATHOGENESIS OF ORAL AND DENTAL DISEASES  
EVALUATION OF NEW METHODS AND MATERIALS TO ARREST ORAL DISEASES  
COMPUTER ASSISTED DIAGNOSIS AND TREATMENT OF DENTAL EMERGENCIES  
AUTOMATED APPLICATIONS IN NAVY DENTAL EPIDEMIOLOGY  
RAPID IDENTIFICATION OF DESTRUCTIVE PERIODONTAL DISEASE

...FUNCTIONS/EQUIPMENT/FACILITIES

AMINO ACID ANALYZER/ATOMIC ASORPTION UNIT/LIQUID SCINTILATION COUNTER/  
MIN COMPUTER/GAS CHROMATOGRAPH UNIT/PHOTOMICROSCOPE/ELECTRON MICROSCOPE/  
CRYMICROTOME/DIAZO PROCESSOR/ANIMAL SURGERY ROOM/SPECTROPHOTOMETERS/  
THERMAL BALANCE/VIVARIUM/INCUBATORS/CENTRIFUGES/BIOLOGICAL SAFETY  
CABINET/FRACTIONATORS/SHAKERS/PHOTO LAB/OSCILLISCOPE/EQUIPMENT REPAIR/  
TISSUE CULTURE

INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA

CO. CDR M. G. SALINAS

TECH DIR. DR. J. HOVERMALE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	6.540	6.716
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.390	0.419
TOTAL OTHER	1.030	1.185
TOTAL ANNUAL LAB	7.960	8.320
 TOTAL INHOUSE	 3.613	 4.304
TOTAL INHOUSE RDTE	2.673	3.053
ANNUAL OPERATING COST	0.971	1.821

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	6	9
CIVILIAN	45	12	40	5
TOTAL	60	12	46	14

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	22.000	3.100	5.900	31.000	0.000	2.400

...MISSION

CONDUCT RESEARCH & DEVELOPMENT DIRECTED TOWARD PROVIDING OBJECTIVE LOCAL REGIONAL AND GLOBAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES  
 PROVIDE PLANNING, MODELING & EVALUATION SERVICES TO DETERMINE THE EFFECT OF ENVIRONMENTAL ELEMENTS ON NAVAL WEAPONS SYSTEMS

...CURRENT IMPORTANT PROGRAMS

DEVELOP SYSTEM FOR PROCESS/DISPLAY OF ENVIRONMENTAL SATELLITE DATA  
 DEVELOP COMPUTER MODELS WHICH ANALYZE/ASSIMILATE ATMOSPHERIC DATA  
 DEVELOP TECHNIQUES PREDICT/DIAGNOSE ATMOS EFFECTS ON WEAPONS SYSTEMS  
 DEVELOP OBJECTIVE LOCAL/REGIONAL ATMOS ANALYSIS/PREDICTION TECHNIQUES  
 DEVELOP SYNOPTIC/SUBSYNOPTIC AND MESOSCALE ATMOS PREDICTION MODELS

...FUNCTIONS/EQUIPMENT/FACILITIES

CAPABILITY OF RECEIVING, ENHANCING AND ANALYZING REMOTELY SENSED ATMOS DATA  
 CAPABILITY OF BUILDING, ANALYZING AND MODIFYING GLOBAL, REGIONAL AND LOCAL WEATHER MODELS  
 CAPABILITY TO DEVELOP ATMOS PREDICTION AIDS FOR USE BY NON-GRADUATE METEOROLOGICAL PERSONNEL  
 CONCURRENT 3260 COMPUTER ACCESS TO CYBER 205 AND 855/860 COMPUTERS

INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL TECH CNTR

INDIAN HEAD, MD

CO. CAPT R. L. MASTEN

TECH DIR. MR. L. A. DICKINSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	19.827	22.960
TOTAL PROCUREMENT	14.695	21.553
TOTAL O&M	3.100	4.863
TOTAL OTHER	0.300	4.270
TOTAL ANNUAL LAB	37.922	53.646
TOTAL INHOUSE	27.660	16.109
TOTAL INHOUSE RDTE	10.173	6.110
ANNUAL OPERATING COST	3.857	6.321

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	70	0	13	57
CIVILIAN	206	1	63	143
TOTAL	276	1	76	200

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP EQUIP
1172	71.578	22.176	90.643	184.397	5.987 5.201

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION CONCERNING BOTH THE DISPOSAL AND RENDERING SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS, GUIDED MISSILES, UNDERWATER WEAPONS, EXPLOSIVES, BIO AND CHEM MUNITIONS, BOTH U.S. AND FOREIGN, PLUS THE REQUIRED TOOLS AND EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF RENDER SAFE AND DISPOSAL TOOLS FOR CONVENTIONAL MUNITIONS  
DEVELOPMENT OF SPECIAL OPERATIONS SPECIAL TECHNOLOGY  
TERRORIST DEVICE COUNTERMEASURES  
IMPROVISED NUCLEAR DEVICE COUNTERMEASURES  
EXPLOSIVE RANGE CLEARANCE TECHNIQUES

...FUNCTIONS/EQUIPMENT/FACILITIES

DEVELOP EXPLOSIVE ORDNANCE DISPOSAL (EOD) PROCEDURE, PREPARE AND PUBLISH EOD PUBLICATIONS FOR JOINT-SERVICE USE. CONDUCT EXP. AND ADV. DEVELOPMENT LEADING TO SPECIALIZED TOOLS AND EQUIP. NEEDED TO LOCATE, IDENTIFY, RECOVER, RENDER-SAFE AND DISPOSE OF ALL TYPES OF EXPLOSIVE ORDNANCE. PREPARE AND MAINTAIN DOCUMENTATION FOR EOD TOOLS AND EQUIP. CONDUCT FIRST ARTICLE INSPECTION ON EOD TOOLS BEING PRODUCED FOR ALL SERVICES. CONDUCT INITIAL EVALUATION OF FOREIGN EXPLOSIVE ORDNANCE. CONDUCT EXP. ENGR DEVELOPMENT LEADING TO ACCESS AND DISABLEMENT COUNTERMEASURES AGAINST IMPROVISED NUCLEAR DEVICES. CAPABILITY OF TESTING EOD TOOLS TO A DEPTH OF 400 FT IN A DIVING CHAMBER. CAPABILITY OF ANALYZING HIGH SPEED EVENTS WITH FLASH X-RAYS AND PHOTOS.

INSTALLATION: HEALTH RESEARCH CENTER

SAN DIEGO, CA

CO. CAPT M. F. FORNES

CHIEF SCI. DR. E. K. E. GUNDERSON

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	4.184	4.666
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.029	1.075
TOTAL ANNUAL LAB	5.213	5.741
TOTAL INHOUSE	3.811	4.530
TOTAL INHOUSE RDTE	2.782	3.455
ANNUAL OPERATING COST	1.057	0.103

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	7	10	19
CIVILIAN	63	13	27	36
TOTAL	92	20	37	55

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	19.052	7.159	0.000	26.211	0.147	1.734

...MISSION

READINESS THROUGH RESEARCH, DEVELOPMENT, TEST, AND EVALUATION OF BIOMEDICAL AND PSYCHOLOGICAL ASPECTS OF NAVY AND MARINE CORP PERSONNEL HEALTH AND PERFORMANCE.

...CURRENT IMPORTANT PROGRAMS

EVAL OF HEALTH RISKS FOR NAVY OCCUPATIONS. NEUROMETRIC SELECTION OF SONAR OPERATORS. HUMAN PERF EFFECTIVENESS/PHYSIO ADAPTATION DURING SUSTAINED OPERATIONS. DEVEL/TESTING/COMPUTERIZED OPERATIONAL MEDICAL INFO SYSTEMS. PSYCHOPHARMACOLOGICAL TECHNIQUES TO ENHANCE PERFORMANCE. CHEM DEF MEASURES ON SUSTAINED PERFORMANCE.

...FUNCTIONS/EQUIPMENT/FACILITIES

ELECTROENCEPH MONITORING  
CARDIOVASCULAR STRESS LAB  
MUSCLE STRENGTH TESTING LAB  
COMPUTER STORAGE TOTAL USN/USMC HEALTH DATA  
MEDICAL INFORMATION SYSTEMS  
VAX/VMS



INSTALLATION: MEDICAL RESEARCH INSTITUTE

BETHESDA, MD

CO. CAPT R. K. SORENSEN

SCI DIR. D. L. A. KIESOW

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	20.784	22.850
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	9.644	10.127
TOTAL ANNUAL LAB	30.428	32.977
TOTAL INHOUSE	27.872	30.183
TOTAL INHOUSE RDTE	18.228	20.056
ANNUAL OPERATING COST	9.460	9.460

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	239	39	91	148
CIVILIAN	189	41	99	90
TOTAL	428	80	190	238

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	159.933	11.720	47.210	218.863	8.303	16.680

...MISSION

CONDUCT BASIC & APPLIED RESEARCH & DEVELOPMENT CONCERNED  
WITH THE HEALTH SAFETY & EFFICIENCY OF NAVY AND MARINE CORPS  
PERSONNEL

...CURRENT IMPORTANT PROGRAMS

COMBAT CARE TECHNOLOGY WOUND HEALING SHOCK TISSUE TRANSPLANTATION  
MICROBIOLOGY VACCINE DEV RAPID DIAGNOSIS EPIDEMIOLOGY,  
HYPERBARIC MEDICINE PHYSIOLOGY TREATMENT SAFETY,  
ENVIRONMENTAL STRESS THERMAL CHEMICAL TOXICOLOGY,  
BONE MARROW TRANSPLANTATION STEM CELLS GROWTH FACTORS,

...FUNCTIONS/EQUIPMENT/FACILITIES

HYPERBARIC RESEARCH FACILITY WITH MAN-RATED HYPERBARIC CHAMBERS  
HUMAN PHYSIOLOGICAL & HEAT STRESS EQUIPMENT & FACILITIES  
HUMAN TISSUE PRESERVATION & STORAGE EQUIPMENT & FACILITIES  
BIOHAZARDOUS MATERIALS HANDLING LAB EQUIPMENT & FACILITIES  
TOXICOLOGY EVALUATION EQUIP & FACILITIES INCLUDE HYPERBARIC CHAMBERS  
TRANSMISSION & SCANNING ELECTRON MICROSCOPES FLOURESCENT ANTIBODY CELL  
SORTER & COMPUTERS  
EXPERIMENTAL ANIMAL FACILITIES ANIMAL HOUSE & OPERATING ROOMS,  
LAB EQUIPMENT & FACILITIES FOR BASIC & APPLIED BIOCHEMICAL  
MICROBIOLOGICAL & PSYCHOLOGICAL & TRANSPLANTATION STUDIES

INSTALLATION: MEDICAL RESEARCH UNIT NO. 2

MANILA, PHILIPPINES

CO. CAPT L. W. LAUGHLIN

ACT SCI DIR. DR. C. G. HAYES

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.362	2.854
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.127	1.127
TOTAL ANNUAL LAB	4.489	3.981
TOTAL INHOUSE	4.489	3.981
TOTAL INHOUSE RDTE	3.362	2.854
ANNUAL OPERATING COST	0.971	0.998

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	25	9	24	1
CIVILIAN	48	4	44	4
TOTAL	73	13	68	5

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLIONS \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
1	15.439	6.654	2.400	24.493	0.000	0.456

...MISSION

TO CONDUCT RESEARCH ON, AND DEVELOP MEANS FOR DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC IN THE ASSIGNED GEOGRAPHICAL AREA. TO PERFORM OTHER SUCH TASKS AS DIRECTED BY COMMANDER, NAVMEDCOM, AND CO, NMRDC.

...CURRENT IMPORTANT PROGRAMS

CHARACTERIZE FIELD SITES FOR FUTURE MALARIA VACCINE TRIALS.  
EPIDEMIOLOGICAL STUDY ON HTLV-III INFECTION IN THE PHILIPPINES  
CLASSIFY THE SPECTRUM OF CLINICAL DIAGNOSIS ASSOCIATED WITH DENGUE & JE.  
IDENTIFY AGENTS THAT CAUSE DIARRHEA IN SOUTHEAST ASIA.  
RAPID DIAGNOSIS AND TREATMENT OF MALARIA

...FUNCTIONS/EQUIPMENT/FACILITIES

FULLY EQUIPPED AND FUNCTIONAL VIROLOGY, MICROBIOLOGY, PARASITOLOGY, ENTOMOLOGY, AND CLINICAL LABORATORIES IN BOTH MANILA, RP AND JAKARTA, INDONESIA. DETACHMENT HAS AN ESTABLISHED ANIMAL FACILITY. NAMRU-2 MANILA HAS BEEN GIVEN FUNDS TO ESTABLISH ANIMAL FACILITIES. NAMRU-2 MANILA HAS THE PREMIER INSECTARY IN THE PHILIPPINES. WANG VS ADP SYSTEM FOR BIOSTATICAL APPLICATIONS. DETACHMENT HAS ESTABLISH A STATE OF THE ART INTENSIVE CARE UNIT.

INSTALLATION: MEDICAL RESEARCH UNIT NO. 3

CAIRO, EGYPT

CO. CAPT JAMES F. WOODY

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	4.437	5.815
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.104	0.108
TOTAL OTHER	0.886	0.886
TOTAL ANNUAL LAB	5.427	6.809
 TOTAL INHOUSE	 5.427	 6.809
TOTAL INHOUSE RDTE	4.437	5.815
ANNUAL OPERATING COST	1.005	1.020

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	9	14	14
CIVILIAN	205	18	66	139
TOTAL	233	27	80	153

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	89.472	8.962	61.072	159.506	9.054	1.184

#### ...MISSION

TO CONDUCT RDT&E RELATING TO THE HEALTH SAFETY AND READINESS OF NAVAL PERSONNEL ASSIGNED TO S.W.ASIA AND AFRICA AND TO PERFORM SUCH OTHER FUNCTIONS AS MAY BE DIRECTED BY HIGHER AUTHORITY.

#### ...CURRENT IMPORTANT PROGRAMS

EPIDEM.AND PREV.OF MIL.RELEVANT INFECT.DISEASES IN S.W.ASIA AND AFRICA.  
THERAPY OF INFECT. DISEASE IN S.W.ASIA AND AFRICA  
RAPID & EARLY DIAG.OF INFECT.DISEASES OF MIL.IMPORT.IN S.W.ASIA AND AFRICA.

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

A STATE OF THE ART MEDICAL RESEARCH LABORATORY WITH ANIMAL FACILITIES AND A 40-BED WARD. CAPABILITIES IN ADVANCED TECHNIQUES,SEROLOGY,HYBRIDOMA TECH. AND HYBRIDIZATION OF DNA ALONG WITH PRODUCTION OF DNA PROBES, AMINO ACID ANALYSIS,FLUORESCENT MICROSCOPY AND COMPUTER LINKED ELISA READER, CYTOFLUOROGRAP,HPLC,GAS LIQUID CHROMATOGRAPHY, SPECTRO PHOTO METER,BETA-SCINILLATION COUNTER,GAMR-COUNTER,GAUMN CELL 40,CENTRIFUGES ULTRACENTRIFUGES AND CRYO PRESERVATION. P-3 CONTAINMENT CAPABILITY

INSTALLATION: NAVAL RESEARCH LABORATORY

WASHINGTON, D.C.

CO. CAPT W. C. MILLER

DIR OF RSCH. DR. T. COFFEY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	251.700	245.700
TOTAL PROCUREMENT	7.451	6.287
TOTAL O&M	18.989	7.810
TOTAL OTHER	75.975	65.603
TOTAL ANNUAL LAB	354.115	325.400
TOTAL INHOUSE	245.601	226.703
TOTAL INHOUSE RDTE	164.586	163.282
ANNUAL OPERATING COST	97.049	94.525

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	97	1	38	59
CIVILIAN	3333	706	1498	1835
TOTAL	3430	707	1536	1894

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1182	2357.807	193.096	402.615	2953.518	101.883	174.690

...MISSION

TO CONDUCT A BROADLY BASED MULTIDISCIPLINARY PROGRAM OF SCIENTIFIC RESEARCH AND ADVANCED TECHNOLOGICAL DEVELOPMENT DIRECTED TOWARD NEW AND IMPROVED MATERIALS, EQUIPMENT, TECHNIQUES, SYSTEMS, AND RELATED OPERATIONAL PROCEDURES FOR THE NAVY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED ECM AND DECOYS FOR NAVY EW SYSTEMS  
 ADVANCED ACOUSTIC AND NON-ACOUSTIC SUBMARINE DETECTION PROGRAMS  
 SATELLITE PROGRAMS  
 LOW OBSERVABLES TECHNOLOGY  
 DIRECTED ENERGY DEVICES

...FUNCTIONS/EQUIPMENT/FACILITIES

CORPORATE RESEARCH LABORATORY OF THE NAVY. PRIMARY AREAS ARE MATERIALS SCIENCE AND TECHNOLOGY, SPACE SCIENCE AND TECHNOLOGY, RADAR, ELECTRONIC WARFARE, LASER TECHNOLOGY, OPTICS, OPTICAL WARFARE, ELECTRONIC DEVICES, PLASMA AND RADIATION PHYSICS, INTELLIGENCE SUPPORT, UNDERSEA SURVEILLANCE, LOW OBSERVABLES TECHNOLOGY. MAJOR FACILITIES INCLUDE ACOUSTIC STANDARD AND CALIBRATION FACILITIES, HIGH LEVEL RADIATION LABORATORY, ENCLOSED 11,500 CUBIC FOOT FIRE TEST FACILITY, DIVERSE HIGH ENERGY LASERS, 200 KILOGAUSS HIGH FIELD MAGNET FACILITY, SPACE SIMULATION FACILITIES, MAJOR PLASMA PHYSICS FACILITIES, ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR, CLASS VI COMPUTER, AND FOUR ORION AIRCRAFT FOR RESEARCH SUPPORT, AND ONE SHIP FOR R&D ON FIRE AND PERSONNEL PROTECTION.

INSTALLATION: OCEAN R&D ACTIVITY

BAY ST LOUIS, MS

CO. CAPT A. C. ESAU

TECH DIR. DR. J. E. ANDREWS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	41.662	38.596
TOTAL PROCUREMENT	0.278	0.000
TOTAL O&M	1.765	4.474
TOTAL OTHER	1.429	1.154
TOTAL ANNUAL LAB	45.134	44.224
TOTAL INHOUSE	23.976	24.819
TOTAL INHOUSE RDTE	20.819	19.504
ANNUAL OPERATING COST	9.337	10.741

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	11	4
CIVILIAN	337	72	188	149
TOTAL	352	72	199	153

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	157.590	28.100	88.618	274.308	17.203	23.000

...MISSION

TO CARRY OUT A BROAD BASED RDT&E PROGRAM IN OCEAN SCIENCE & TECHNOLOGY WITH EMPHASIS ON UNDERSTANDING OCEAN PROCESSES THRU MEASUREMENT AND ANALYSIS, AND THE EFFECTS OF THIS OCEAN ENVIRONMENT ON NAVY SYSTEMS AND OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

OCEAN ACOUSTICS, OCEAN FORECASTING, REMOTE SENSING OCEANOGRAPHY, MC&G, BIOLOGICAL/CHEMICAL OCEANOGRAPHY, POLAR OCEANOGRAPHY, MC&G, SEAFLOOR GEOSCIENCES.

...FUNCTIONS/EQUIPMENT/FACILITIES

HAVE MASS SPECTROMETER, GAS CHROMATOGRAPH SYS, TOWED UNDERWATER PUMPING SYS, DTAGS, ACOUSTIC SEDIMENT CLASSIFIER, SEDIMENT CHARACT. PROBES, SIDE SCAN SONAR SYS, WAVE CURRENT SIMULATOR, SCANNING AND TRANSMISSION ELECTRON MICROSCOPES WITH IMAGE ANALYSIS SYSTEM & X-RAY SPECTROMETER, GEOTECH LAB, X-RAY FLUORESCENT FACILITY, PATTERN ANALYSIS LAB, AND MAGNETIC OBSERVATORY, OPTICS LAB, AIRBORNE BATHYMETRIC SYSTEMS, OCEAN BOTTOM SEISMOMETERS.

INSTALLATION: OCEAN SYSTEMS CENTER

SAN DIEGO, CA

CO. CAPT E. G. SCHWIEZER

TECH DIR. MR. R. M. HILLYER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	302.231	344.884
TOTAL PROCUREMENT	62.150	58.658
TOTAL O&M	83.278	103.183
TOTAL OTHER	37.243	33.390
TOTAL ANNUAL LAB	484.902	540.115
TOTAL INHOUSE	205.794	219.417
TOTAL INHOUSE RDTE	135.584	144.939
ANNUAL OPERATING COST	74.796	76.858

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	277	3	89	188
CIVILIAN	2967	192	1540	1427
TOTAL	3244	195	1629	1615

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2719	1354.570	202.800	200.460	1757.830	64.907	66.181

#### ...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVAL. CENTER FOR COMMAND CONTROL, COMMUNICATIONS, OCEAN SURV., SURFACE- AND AIR-LAUNCHED UNDERSEA WEAPONS SYSTEMS, OCEAN SCIENCES AND ENGINEERING, AND SUBMARINE ARCTIC WARFARE.

#### ...CURRENT IMPORTANT PROGRAMS

SURFACE/AEROSPACE/UNDERSEA SURVEILLANCE, INFORMATION WARFARE INCLUDING C3CM AND SIGNALS WARFARE, C3 SYSTEMS AND BATTLE FORCE INFORMATION MNGT, ADV AIR AND SURFACE LAUNCHED ASW WEAPON SYSTEMS, OCEAN SCIENCE AND ENGINEERING, SUB ARCTIC WARFARE, SPECIAL SENSORS AND ADV MARINE BIO SYS, TELEOP/REMOTE PRESENCE SYS, AND SUPPORTING TECHBASE.

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

ARCTIC RESEARCH FACILITY; C3 SITE, TACTICAL FLAG COMMAND CENTER (TFCC), ADVANCED COMMAND CONTROL ARCHITECTURE TEST BED (ACCAT), ADVANCED COMBAT DIRECTION SYSTEM (ACDS) DEVELOPMENT SITE, AND INTEGRATED BATTLE GROUP TACTICAL TRAINER (IBGTT); OCEAN SURVEILLANCE FACILITY; ; SURVEILLANCE TECHNOLOGY AND APPLIED RESEARCH FACILITY (STARF); INTEGRATED UNDERSEA SURVEILLANCE SYS (IUSS) FACILITY; MICROWAVE AND MILLIMETER WAVE ANTENNA PATTERN RANGE COMPLEX; STABLE SEMI-SUBMERGED PLATFORM; TRANSDUCER EVALUATION CENTER; MICRO-ELECTRONICS LAB COMPLEX; SIMULATION AND REAL-TIME COMPUTER FACILITIES FOR DEVELOPMENT OF OCEAN SURVEILLANCE AND ASW SYSTEMS; TORPEDO PROPULSION TEST CELLS AT MORRIS DAM; BIO-SCIENCE FACILITY ENGAGED IN RESEARCH, TRAINING, AND HANDLING OF MARINE MAMMALS; SAN CLEMENTE ISL SEA TEST RANGES FOR UNDRWTR MISSILES

INSTALLATION: OFFICE OF NAVAL RESEARCH

ARLINGTON, VA

CO. RADM J. B. MOONEY, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	1313.439	1606.513
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.246	2.297
TOTAL ANNUAL LAB	1,315.685	1,608.810
TOTAL INHOUSE	47.324	43.470
TOTAL INHOUSE RDTE	45.078	41.173
ANNUAL OPERATING COST	22.111	28.224

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	39	4	34	5
CIVILIAN	476	82	124	352
TOTAL	515	86	158	357

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
0	0.000	80.202	12.165	92.367	0.000	6.900

...MISSION

RESPONSIBLE FOR LEADERSHIP OF NAVY RESEARCH PROGRAM MANAGEMENT AND EXPLORATORY DEVELOPMENT PROGRAM THRU NAVY R&D LABS/CTRS, FINANCIAL MANAGEMENT OF RDT&EN APPROPRIATION FOR ASN(R&S), CONTRACT MANAGEMENT OF FEDERALLY FUNDED UNIVERSITY RESEARCH.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH AND EXPLORATORY DEVELOPMENT PROGRAMS  
NAVY-WIDE RDT&EN APPROPRIATION ADMINISTRATION  
FOCAL POINT FOR WORLD-WIDE RESEARCH INFORMATION  
CONTRACT MANAGEMENT PROGRAM AT EDUCATIONAL INSTITUTIONS

...FUNCTIONS/EQUIPMENT/FACILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES, MATHEMATICAL AND INFORMATION SCIENCES, BIOLOGICAL SCIENCES, PSYCHOLOGICAL SCIENCES, ARCTIC AND EARTH SCIENCES, MATERIAL SCIENCES, OCEAN SCIENCE AND TECHNOLOGY  
ADMINISTRATION OF THE ENTIRE EXPLORATORY DEVELOPMENT PROGRAM INCLUDING MANAGEMENT THROUGH NAVY LABS/CENTERS.  
ACTIVITIES INCLUDE NRL, NORDA, NEPRF.  
MAINTAINS RESEARCH RESERVE PROGRAM. COORDINATES NAVAL RESEARCH AND PROMOTES COOPERATIVE RESEARCH EFFORTS WITHIN NAVY, OTHER DOD, NSF, NASA, DARPA, SDIO, DEPT OF ENERGY AND OTHER GOVERNMENT RESEARCH GROUPS. SUPPORT AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY COMMITTEE

INSTALLATION: ORDNANCE MISSILE TEST STATION

WSMR, NM

CO. CAPT A. F. SCHROEDER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	9.705	13.148
TOTAL PROCUREMENT	2.133	2.770
TOTAL O&M	0.369	0.010
TOTAL OTHER	2.607	3.434
TOTAL ANNUAL LAB	14.814	19.362
 TOTAL INHOUSE	 4.264	 5.748
TOTAL INHOUSE RDTE	2.911	3.888
ANNUAL OPERATING COST	2.442	2.340

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	89	0	12	77
CIVILIAN	60	0	6	54
TOTAL	149	0	18	131

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
95	10.324	39.798	166.886	217.008	6.213	4.072

...MISSION

CONDUCT AND SUPPORT ASSIGNED NAVY GUIDED MISSILE, ROCKET, GUN AND DIRECTED ENERGY PROGRAMS, INCLUDING GROUND AND FLIGHT TESTING; TO PARTICIPATE IN THE OPERATION OF THE DOD MISSILE TEST RANGE AT WHITE SANDS; AND TO PERFORM ADDITIONAL TASKS AS DIRECTED BY COMNAVSEASYSOM.

...CURRENT IMPORTANT PROGRAMS

STANDARD MISSILE 1 AND 2/AEGIS FLIGHT TESTING  
CRUISE MISSILE FLIGHT TESTING  
RAM FLIGHT TESTING  
HIGH ENERGY LASER TESTING  
UPPER ATMOSPHERE RESEARCH ROCKET LAUNCHING

...FUNCTIONS/EQUIPMENT/FACILITIES

FLIGHT TEST TERRIER/TARTAR/STANDARD/SAM GUIDED MISSILES AND PROJECTILES  
LAUNCH VARIOUS SOUNDING ROCKETS FOR UPPER ATMOSPHERIC STUDY  
INTEGRATE THE MIRACL LASER WITH THE BEAM DIRECTOR, DO SYSTEM TESTING  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF NASA PROJECTS  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF AIR FORCE PROJECTS  
CONDUCT VARIOUS DEVELOPMENT TESTS FOR SSM AND SAM PROJECTS  
PROVIDE DRONE SUPPORT AND VANDAL MISSILE HIGH SPEED TARGETS  
ASSIST IN OPEVAL OF CRUISE MISSILE  
5-INCH GUIDED PROJECTILE LAUNCH CAPABILITY  
PROVIDE WARHEAD AND EOD ANALYSIS ARENA



INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA

CO. RADM R. C. GENTZ

TECH DIR. MR. W. R. HATTABAUGH

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	270.421	238.566
TOTAL PROCUREMENT	267.197	212.540
TOTAL O&M	187.463	130.883
TOTAL OTHER	83.551	81.869
TOTAL ANNUAL LAB	808.632	663.858
 TOTAL INHOUSE	 411.974	 334.930
TOTAL INHOUSE RDTE	175.400	152.491
ANNUAL OPERATING COST	94.967	93.787

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1043	12	392	651
CIVILIAN	4091	18	1132	2959
TOTAL	5134	30	1524	3610

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27093	1287.000	367.700	3262.600	4917.300	191.200	178.634

...MISSION

PERFORM DEVELOPMENT TEST AND EVALUATION DEVELOPMENT SUPPORT, AND FOLLOW-ON ENGINEERING, LOGISTIC, AND TRAINING SUPPORT FOR NAVAL WEAPONS WEAPONS SYSTEMS, AND RELATED DEVICES, AND PROVIDE MAJOR RANGE, TECHNICAL AND BASE SUPPORT FOR NAVY RDT&E, FLEET, AND OTHER DOD AND GOVT USERS.

...CURRENT IMPORTANT PROGRAMS

AIR AND SURFACE LAUNCHED CRUISE MISSILE & STRATEGIC SYSTEMS, DEVELOPMENT SUPT, T&E & ISE ON AIR LAUNCHED GUIDED WEAPONS AND CONVENTIONAL ORDNANCE. EW SYS READINESS & MISSION PERFORMANCE. EWSSA, SUPT EQUIP DEVELOPMENT. TARGETS DEVELOPMENT AND LIFE CYCLE TARGETS MANAGEMENT. RANGE SYSTEMS DEVELOPMENT. FLEET READINESS SPT. MOBILE SEA RANGE.

...FUNCTIONS/EQUIPMENT/FACILITIES

LABORATORIES FOR AIRBORNE WEAPONS SYSTEMS INTEGRATION, TEST, AND EVALUATION INCLUDING SOFTWARE SUPPORT AND ELECTRONIC WARFARE SYSTEMS. LABS INCLUDE HARDWARE-IN-THE-LOOP SIMULATION, ENVIRONMENTAL TEST/RELIABILITY GROWTH, ANECHOIC MEASUREMENTS, AND ALL UP ROUND TEST. A 32000 SQ MI SEA TEST RANGE PROVIDES FOR FLIGHT TEST OF AIRCRAFT AND MISSILE SYSTEMS RANGE INSTRUMENTATION INCLUDES C-BAND RADARS, LAND S-BAND TELEMETRY, DATA TRANSMISSION, DISPLAY, AND REDUCTION, AIR AND SEA TARGETS WITH VARIOUS AUGMENTATION, COMMAND CONTROL/FLIGHT TERMINATION, LAUNCH AND RECOVERY, AND COMMUNICATIONS. A 800 SQ MI UNDERWATER RANGE AT BARKING SANDS, HAWAII, PROVIDES FLEET TRAINING SUPPORT IN AIR, SURFACE, AND ASW WARFARE. PMTC AIRCRAFT PROVIDE EXTENSIVE DATA CONVERGENCE TO TRIDENT PACIFIC TEST AND TOMAHAWK INLAND FLIGHTS FROM PMTC TO THE UTAH TEST RANGE.

INSTALLATION: PERSONNEL RESEARCH & DEVELOPMENT CNTR

SAN DIEGO, CA

CO. CAPT B. E. BACON

TECH DIR. DR. J. S. MCMICHAEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	21.494	22.680
TOTAL PROCUREMENT	0.000	0.190
TOTAL O&M	7.517	7.599
TOTAL OTHER	1.811	3.396
TOTAL ANNUAL LAB	30.822	33.865
 TOTAL INHOUSE	 20.829	 19.635
TOTAL INHOUSE RDTE	15.418	12.804
ANNUAL OPERATING COST	5.222	5.482

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	26	0	12	14
CIVILIAN	320	95	225	95
TOTAL	346	95	237	109

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
3	79.332	18.417	0.000	97.749	7.300	11.791

...MISSION

PRINCIPAL NAVY RDT&E CENTER FOR MANPOWER, PERSONNEL, EDUCATION, TRAINING AND HUMAN FACTORS AND FOR PROVIDING TECHNICAL SUPPORT TO THE CHIEF OF NAVAL OPERATIONS IN THESE AREAS.

...CURRENT IMPORTANT PROGRAMS

MANPOWER MANAGEMENT  
EDUCATION AND TRAINING  
PERSONNEL ADMINISTRATION  
ORGANIZATIONAL MANAGEMENT  
HUMAN PERFORMANCE

...FUNCTIONS/EQUIPMENT/FACILITIES

IBM 4341 COMPUTER SYSTEM WITH COMMUNICATIONS CAPABILITY TO OTHER COMPUTERS, VAX 11/780 WITH APARNET ACCESS WHICH SUPPORTS THE NAVY LABORATORY COMPUTER NETWORK, PDP 11/45, BIOTECHNOLOGY DATA ACQUISITION SYSTEMS, VARIOUS CRT AND PRINTING DEVICES INTERFACING WITH THE NAVAL OCEAN SYSTEMS CENTER UNIVAC 1100/2 COMPUTER.

INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON, CT

CO. CAPT C. A. HARVEY

SCI DIR. DR. C. R. CAREY

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.117	4.444
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.136	0.006
TOTAL OTHER	1.564	1.652
TOTAL ANNUAL LAB	4.817	6.102
TOTAL INHOUSE	4.521	5.219
TOTAL INHOUSE RDTE	2.853	3.812
ANNUAL OPERATING COST	1.280	1.300

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	34	9	17	17
CIVILIAN	55	0	18	37
TOTAL	89	9	35	54

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	40.514	14.099	0.000	54.613	1.315	2.931

...MISSION

TO CONDUCT MEDICAL RESEARCH AND DEVELOPMENT AS IT RELATES TO SUBMARINE AND SHIPBOARD DIVING AND AMPHIBIOUS ENVIRONMENTS.

...CURRENT IMPORTANT PROGRAMS

COMPUTER-BASED MEDICAL DIAGNOSIS FOR USE ABOARD SUBMARINES.  
 MEDICAL PROBLEMS ASSOCIATED WITH PRESSURIZED SUBMARINE RESCUE.  
 REDUCTION OF ATTRITION RATES FOR SUBMARINERS BY BETTER SCREENING  
 IMPROVED PERFORMANCE ON AUDITORY SONARS AND VISUAL SONAR DISPLAYS.  
 PHYSIOLOGICAL AND PERFORMANCE EFFECTS OF ALTERED SUBMARINE ATMOSPHERE.

...FUNCTIONS/EQUIPMENT/FACILITIES

LABORATORY FACILITIES FOR USE OF UP-TO-DATE EQUIPMENT AND INSTRUMENTS TO DO BASIC AND APPLIED RESEARCH. FACILITIES INCLUDE TWO-MAN RATED 300 AND 150 PSIG HYPERBARIC CHAMBERS. COMPLETE EXERCISE PHYSIOLOGY LAB INSTRUMENTATION SHOP; COMPUTER APPLICATIONS CENTER; TECHNICAL LIBRARY; GRAPHIC ARTS AND PHOTOGRAPHY SHOP. ANIMAL SCIENCES FACILITY ANRCHOIC CHAMBERS PSYCHOACOUSTIC LAB. OPERATIONAL SONAR SIMULATION LABS CELL CULTURE LAB, MASS SPECTROMETERS, GAS CHROMATOGRAPHS

INSTALLATION: SURFACE WEAPONS CENTER

DAHLGREN, VA

CO. CAPT C. A. ANDERSON

TECH DIR. DR. L. L. HILL

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	348.588	330.705
TOTAL PROCUREMENT	173.265	142.572
TOTAL O&M	97.512	93.715
TOTAL OTHER	41.518	43.959
TOTAL ANNUAL LAB	660.883	610.951
TOTAL INHOUSE	321.662	286.667
TOTAL INHOUSE RDTE	178.870	150.236
ANNUAL OPERATING COST	138.742	136.761

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	111	0	30	81
CIVILIAN	5089	239	2429	2660
TOTAL	5200	239	2459	2741

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5103	1675.581	182.860	1138.642	2997.083	119.478	218.132

...MISSION

THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR SURFACE SHIP WEAPONS SYSTEMS, ORDNANCE, MINES AND STRATEGIC SYSTEMS SUPPORT.

...CURRENT IMPORTANT PROGRAMS

STRATEGIC SYSTEMS-TRIDENT, REENTRY SYSTEMS MATERIALS, TARGETING, COMBAT SYSTEMS-AEGIS, TOMAHAWK WEAPON SYSTEMS, SM-2, GUIDED PROJECTILE, UNDERWATER SYSTEMS, MINES, TORPEDO WARHEADS, ASW SYSTEMS ELECTRONIC SYSTEMS-EW SYSTEMS, EM EFFECTS, AEGIS RADAR, SEARCH & TRACK.

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE WIND TUNNELS UP TO MACH 18, 1.75 MILLION GALLON HYDROBALLISTIC TANK, MAGNETIC SILENCING FACILITY, FBM DISPAC PRODUCTION FACILITY. FACILITIES FOR ASSURANCE OF COMPUTER PROGRAMS FOR STRATEGIC AND TACTICAL MISSILES, INTELLIGENCE PROCESSING SYSTEMS, GUN AND MISSILE RANGE INCLUDING LAND-BASED DEVELOPMENT SITES FOR WEAPON CONTROL SYSTEMS. ELECTROMAGNETIC EFFECTS FACILITIES FOR NUCLEAR AND NON-NUCLEAR EFFECTS. FACILITIES FOR WARHEAD CHARACTERIZATION AND DAMAGE TO TARGETS. DEVELOPMENT AND TEST FACILITIES FOR LASER AND ELECTRO-OPTICS SUBSYSTEMS, DEEP WATER OFFSHORE FACILITIES FOR MINE SYS, MOBILE TACTICAL WARGAMES FAC, EXPLOSIVES DEV FACILITIES, EXTENSIVE SCIENTIFIC COMPUTER FACILITY. FUZE, EXPLOSIVE MATERIALS AND MARINE CORPS SUPPORT FACILITIES, CHEMISTRY, PLASTICS AND METALLURGY LABS.

INSTALLATION: UNDERSEA RANGES DEPARTMENT

NEWPORT, RI

CO. CAPT D. VOLGENAU

TECH DIR. MR. EARL MESSERE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	39.343	49.620
TOTAL PROCUREMENT	0.755	0.800
TOTAL O&M	11.095	11.950
TOTAL OTHER	9.573	4.500
TOTAL ANNUAL LAB	60.766	66.870
TOTAL INHOUSE	13.231	22.752
TOTAL INHOUSE RDTE	10.967	20.003
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	25	0	20	5
CIVILIAN	23	2	13	10
TOTAL	48	2	33	15

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
594	82.322	14.968	359.662	456.952	30.827	0.000

...MISSION

TO PROVIDE DEEP WATER DEV AND OPRTNL T&E FACLTYS FOR U/W ACOUSTIC MEASUREMENTS, TESTING, AND CALBRTN SONARS. PROVIDE ACCURATE U/W, SURFCE AND IN-AIR TRCKNG DATA ON SHIPS,SUBS,AIRCRAFT AND WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

MK48 WEAPON SYSTEMS TRAINING CERTIFICATION PROGRAM

SHIP SILENCING PROGRAM

FLEET TRAINING/SUBROC,RANGEX,SHAREM

TORPEX/RANGEX

R&D TESTS/CAPTOR/MP SONAR/TOWED ARRAYS/LAMPS/BQQ 5/DICASS

...FUNCTIONS/EQUIPMENT/FACILITIES

HIGHLY ADVNCD AND INSTRMNTD ASW WEAPONS,SONAR,AND FORACS TEST MEASURMNT RANGES IN SUPPORT OF NAVY ASW AND UNDERSEA R&D PROGRAMS,AND ASW FLEET ASSESSMENT AND OPERATIONAL READINESS.

INSTALLATION: UNDERWATER SYSTEMS CENTER

NEWPORT, RI

CO. CAPT D. VOLGENAU

TECH DIR. MR. EARL MESSERE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	206.996	301.404
TOTAL PROCUREMENT	204.812	249.538
TOTAL O&M	116.896	185.955
TOTAL OTHER	17.913	8.620
TOTAL ANNUAL LAB	546.617	745.517
TOTAL INHOUSE	238.354	256.081
TOTAL INHOUSE RDTE	127.816	147.948
ANNUAL OPERATING COST	94.203	102.722

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	0	76	8
CIVILIAN	3477	87	1919	1558
TOTAL	3561	87	1995	1566

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
372	1182.476	138.104	630.054	1950.634	63.468	96.258

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CTR FOR SUBMARINE WARFARE AND SUBMARINE WEAPON SYSTEMS

...CURRENT IMPORTANT PROGRAMS

ADVNC'D TECHNGY IN U/W ACOUSTCS, INFO PROCSNG, WEAPONRY.  
 DESGN, DEV & EVAL U/W COMBAT SUB SYSTMS INC'DNG SUBACS & SURF SHIP SONAR.  
 INTRODUCE TO FLT AND IN-SERV ENGINEERING OF MK48 & DEVEL OF MK48 ADFCAP.  
 DESIGN, DEVEL & EVAL OF LAUNCHERS, U/W TARGET SYSTEMS & MOBILE/FIXED U/W TEST RANGES.

...FUNCTIONS/EQUIPMENT/FACILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY U/W COMBAT SYSTEMS SUBSYSTEMS AND TECHNICS FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEGRTN/SUB ANTNA SYSTEMS). U/W WPN RANGE TECHNLGY/REDINESS OF IN-SVC SHIPBOARD U/W SYSTEMS/ASW SUP. TORPEDO TEST RANGES (FIXD/PORTBLE) SHLOW AND DP WTR ASW WPN FIRE CTRL R&D FACILITY. ASW WPN LAUNCHING DEVICE R&D FACILITY, QLTY ENG, EVAL&RELIABILITY LAB. BERMUDA RSCH FACLT, TORPEDO PROPULSN TEST FACLT, ELECTMGNTC FACLT, SYS CRTFCTN AND INTGRTN FACLT, ACOUSTC MSMNT & XDUCER R&E FACLT, TORPDO TEST RANGE. INSTMNT SHETER, ACOUSTC RANGE AUTEC.

INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA

CO. CAPT J. A. BURT

TECH DIR. G. R. SCHIEFER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	320.924	362.258
TOTAL PROCUREMENT	184.950	245.184
TOTAL O&M	68.206	47.134
TOTAL OTHER	50.758	52.360
TOTAL ANNUAL LAB	624.838	706.936
 TOTAL INHOUSE	 318.073	 387.554
TOTAL INHOUSE RDTE	182.908	199.696
ANNUAL OPERATING COST	92.458	87.276

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	564	0	34	530
CIVILIAN	5039	140	1811	3228
TOTAL	5603	140	1845	3758

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1127267	2143.439	193.880	2907.156	5244.475	258.755	133.990

#### ...MISSION

THE PRINCIPAL NAVY RDT&E CENTER FOR AIR WARFARE SYSTEMS (EXCEPT ANTI-SUBMARINE WARFARE SYSTEMS) AND MISSILE WEAPON SYSTEMS, AND THE NATIONAL RANGE/FACILITY FOR PARACHUTE TEST AND EVALUATION.

#### ...CURRENT IMPORTANT PROGRAMS

ANTI-AIR MSL: AIM-9M/R SIDEWINDER, AIM/RIM-7M/+ SPARROW, OUT AIR BAT MS  
 ANTI-SURFACE MSLS: AGM/RGM-84 HARPOON, BGM-109 TOMAHAWK, AGM-123 SKIPPER  
 ELECTRONIC W/F: AGM-88 HARM, ALR-67, LC SEEKER, SIMULATION FAC, TACTICS  
 TAC A/C SYS INTEGRATION A-7E, A-6E+, F/A-18, AH-1, A/C FIRE CONTROL SYS  
 AIR/SURFACE-LAUNCHED WEAPONS AND WEAPONS COMPONENTS. AIRCREW ESCAPE SYS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT IN-HOUSE RESEARCH AND ESTABLISH AND MAINTAIN PRIMARY IN-HOUSE DEVELOPMENT, TEST, EVALUATION, AND IN-SERVICE ENGINEERING SUPPORT FOR SPECIFIC NAVY, MARINE CORPS AND JOINT SERVICE PRODUCTS SUCH AS ANTI-AIR MISSILES, ANTI-SURFACE WEAPONS, DEFENSE PENETRATION SYSTEMS, INTEGRATED TACTICAL AIRCRAFT SYSTEMS. FACILITIES INCLUDE MICHELSON LAB, ELECTRONIC WARFARE THREAT ENVIRONMENT SIMULATION, SOLID STATE DEVICE LAB, ENCOUNTER SIMULATION LAB, PROPULSION RESEARCH LAB, MICROELECTRONICS FACILITY, EXPLOSIVES R&D FACILITIES, GROUND AND AIRCRAFT RANGES, EXTERIOR AND TERMINAL BALLISTICS RANGES, ARMITAGE AIR FIELD, PARACHUTE TEST TOWERS, SUPERSONIC TEST TRACKS, MICROWAVE ANECHOIC FACILITIES, RADIO-FREQUENCY AND INFRARED/ELECTRO-OPTICAL HARDWARE-IN-THE-LOOP SIMULATIONS, LASER/ELECTRO-OPTICS LABS, & AIRCRAFT INTEGRATION/SIMULATION FACILITIES.

INSTALLATION: WEAPONS EVALUATION FACILITY

ALBUQUERQUE, NM

CO. CAPT J. E. KILLIAN

TECH DIR. DR. S. R. RANDALL

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	3.951	4.069
TOTAL PROCUREMENT	1.861	1.917
TOTAL O&M	3.877	3.993
TOTAL OTHER	6.375	6.566
TOTAL ANNUAL LAB	16.064	16.545
 TOTAL INHOUSE	 14.485	 14.918
TOTAL INHOUSE RDTE	3.429	3.531
ANNUAL OPERATING COST	2.056	2.285

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	109	0	40	69
CIVILIAN	132	0	39	93
TOTAL	241	0	79	162

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	23.000	34.000	95.000	152.000	0.960	2.185

...MISSION

MISSION: CONDUCT THE NAVY NUCLEAR WEAPONS SYSTEM SAFETY PROGRAM. CONDUCT TEST AND EVALUATION PROJECTS ON NUCLEAR AND SELECTED NON-NUCLEAR WEAPONS. PERFORM NUCLEAR CERTIFICATION TRIALS INCLUDING NUCLEAR INSURV.

...CURRENT IMPORTANT PROGRAMS

PROGRAMS: ONGOING NUCLEAR SAFETY PROGRAM ON ALL NAVY NUCLEAR WEAPON SYSTEMS, DEVELOPMENT SUPPORT FOR SUCH PROGRAMS AS F/A-18A, ASW STANDOFF WEAPON, A NEW DEPTH STRIKE BOMB, AND THE TRIDENT D5, MAINTENANCE OF OVER 800 LOADING MANUALS AND CHECKLISTS.

...FUNCTIONS/EQUIPMENT/FACILITIES

FUNCTIONS: CONDUCT NAVY NUCLEAR WEAPON SYSTEM SAFETY PROGRAM. CONDUCT CERTIFICATION AND COMPATIBILITY TRIALS ON AIR-LAUNCHED NUCLEAR WEAPON SYSTEMS. SUPPORT THE DESIGN, DEVELOPMENT, TEST, AND EVALUATION OF NEW NUCLEAR WEAPON SYSTEMS. SUPPORT NAVY NUCLEAR SURVIVABILITY PROGRAMS. DEVELOP, VERIFY AND MAINTAIN CONVENTIONAL AND NUCLEAR WEAPON LOADING MANUALS AND CHECKLISTS FOR ALL NAVY AIRCRAFT.

CAPABILITIES: FLIGHT TEST UTILIZING 3 A-7 AIRCRAFT, EXTENSIVE AIRCRAFT INSTRUMENTATION, TELEMETRY AND DATA REDUCTION. IN-HOUSE COMPUTER FACILITIES AS WELL AS ACCESS EXTENSIVE KIRTLAND AFB COMPUTER RESOURCES. ACCESS TO WHITE SANDS MISSILE RANGE AND THE SANDIA AND LOS ALAMOS NATIONAL LABORATORIES. ACCESS TO HPD AND VPD EMP TEST FACILITIES.



INSTALLATION: AERO PROPULSION LABORATORY

WPAFB, OH

DIR. COL JAMES L. RADLOFF

CHIEF SCI. DR. EDWARD T. CURREN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	116.092	105.931
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.786	0.983
TOTAL ANNUAL LAB	116.878	106.914
TOTAL INHOUSE	15.756	16.162
TOTAL INHOUSE RDTE	14.970	15.179
ANNUAL OPERATING COST	4.327	4.427

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	55	7	50	5
CIVILIAN	313	21	206	107
TOTAL	368	28	256	112

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
41	281.813	18.850	349.510	650.173	83.200	45.073

#### ...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS IN AIR BREATHING PROPULSION, AEROSPACE POWER, FUELS AND LUBRICATION, AND AIRCRAFT FIRE PROTECTION TECHNOLOGY. CONDUCT CONTRACT AND IN-HOUSE PROGRAMS. PROVIDE OPERATIONAL AND SYSTEMS SUPPORT.

#### ...CURRENT IMPORTANT PROGRAMS

ADVANCED TURBINE ENGINE GAS GENERATOR(S) (ATEGG) TECHNOLOGY  
 INTEGRATED HIGH PERFORMANCE TURBINE ENGINE INITIATIVE  
 HIGH MACH NUMBER PROPULSION SYSTEM TECHNOLOGY  
 POWER TECHNOLOGY FOR MILITARY SPACECRAFT  
 PROPULSION TECHNOLOGY FOR AIR-LAUNCHED MISSILES

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

FUEL TANK & NACELLE SIMULATORS, FIRE RESEARCH LAB, FUEL ANALYSIS LAB, COMBUSTION FAC, LUBE TEST RIGS, BEARING TEST RIGS, FUEL HANDLING FAC, HIGH SPEED DRIVE STAND, COMPRESSOR RESEARCH TEST FACILITIES, LASER HOLOGRAPHY LAB, ROTOR TEST FAC, 1 SEA LEVEL TEST STAND CAPABLE OF 60,000 LBS THRUST, 1 TURBINE ENGINE ALTITUDE CELL, 3 PROPELLER WHIRL RIGS-1 CAPABLE OF 10,000 HP, DIRECT CONNECT RAMJET TEST FAC, RAMJET COMPONENTS LAB, AIRCRAFT ELECTRICAL POWER FAC WITH THREE 350 HP DRIVES, SUPERCONDUCTIVITY LAB, HIGH POWER LAB TO FIVE MEGAWATT, THERMAL ENERGY STORAGE LAB, HYDRAULICS LAB, PLASMA PHYSICS LAB, SOLAR CELL LAB, FUEL HYDROGENATION REACTOR, BATTERY LAB.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

WPAFB, OH

CDR. COL CHARLES P. HATSELL

PROGRAM DATA BY FISCAL YEAR (MILLION\$)		
PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	29.898	29.898
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.439	1.439
TOTAL OTHER	1.411	1.269
TOTAL ANNUAL LAB	32.748	32.606
 TOTAL INHOUSE	 10.770	 10.770
TOTAL INHOUSE RDTE	10.663	10.663
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	129	8	50	79
CIVILIAN	155	28	99	56
TOTAL	284	36	149	135

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
30	118.031	55.513	51.724	225.268	16.997	34.239

#### ...MISSION

ACCOMPLISH BEHAVIORIAL AND BIOMEDICAL RESEARCH AND DEVELOPMENT TO DEFINE HUMAN TOLERANCE AND DEGRADATION OF HUMAN PERFORMANCE UNDER THE CONDITION OF ENVIRONMENTAL STRESS ASSOCIATED WITH AEROSPACE OPERATIONS AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN THE ABOVE AREAS.

#### ...CURRENT IMPORTANT PROGRAMS

OPERATOR COMMAND CONTROL AND COMMUNICATIONS TECHNOLOGY. CREW SYSTEMS AUTOMATION TECHNOLOGY. ADVANCED ESCAPE TECHNOLOGY. HUMAN COUNTERMEASURES TECHNOLOGY. ENVIRONMENTAL HEALTH PROTECTION TECHNOLOGY. MAN-IN-SPACE ALTERNATIVES TECHNOLOGY. CHEMICAL DEFENSE TECHNOLOGY.

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

HUMAN DECELERATION SYSTEM TO SIMULATE THE COMPLEX ACCELERATION ENVIRONMENT ASSOCIATED WITH EJECTION AND CRASH LANDING. DYNAMIC ENVIRONMENT SIMULATOR A SIX DEGREE OF FREEDOM MAN-RATED CENTRIFUGE USED TO SIMULATE SUSTAINED ACCELERATIONS SUCH AS THOSE ENCOUNTERED IN AIR COMBAT MANEUVERING. THOMAS DOMES-EIGHT ALTITUDE EXPOSURE CHAMBERS TO SIMULATE EXOTIC ARTIFICIAL ATMOSPHERIC CONDITIONS. STRATEGIC AND TACTICAL COCKPIT EMULATION FACILITIES USED TO PERFORM REAL-TIME MAN-IN-THE-LOOP EXPERIMENTS. ANECHOIC AND REVERBERATION CHAMBERS TO ENABLE EXPERIMENTAL INVESTIGATIONS OF POTENTIALLY HAZARDOUS NOISE TO DETERMINE EFFECTS ON BODY FUNCTION AND PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY,

INSTALLATION: ARMAMENT DIVISION

ELGIN AFB, FL

CDR. MG RICHARD E. STEER

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	465.737	411.937
TOTAL PROCUREMENT	1406.968	1418.799
TOTAL O&M	16.760	14.803
TOTAL OTHER	272.652	219.398
TOTAL ANNUAL LAB	2,162.117	2,064.937
TOTAL INHOUSE	352.943	334.458
TOTAL INHOUSE RDTE	182.927	162.141
ANNUAL OPERATING COST	64.220	64.500

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	5112	6	1325	3787
CIVILIAN	2164	21	1081	1083
TOTAL	7276	27	2406	4870

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
456816	248.399 874.800 8917.098 10040.297	330.823 461.343

...MISSION

LEAD ORGANIZATION FOR DEVELOPMENT PLANNING, FOR INNOVATION THROUGH LONG RANGE PLANNING AND THE APPLICATION OF EMERGING TECHNOLOGY. CONDUCTS ANAL TO SYNTHESIZE NEW AIR-LAUNCHED ARMAMENT CONCEPTS & DETERMINE PREFERRED CONFIGURATIONS, SYSTEMS APPROACHES AND TO DIRECT TECHNOLOGY DEVELOPMENT.

...CURRENT IMPORTANT PROGRAMS

HYPERVELOCITY MISSILE  
MILLIMETER WAVE  
HAVE BLOCK  
GLADIATOR  
AUTONOMOUS GUIDED WEAPON

...FUNCTIONS/EQUIPMENT/FACILITIES

SCIENTIFIC/ENGINEERING PERSONNEL & LABORATORY FACILITIES CAPABLE OF EXPL, ADV & ENG DEVELOPMENT OF NON-NUCLEAR MUNITIONS & EQUIPMENT. ARMAMENT SYSTEMS TEST ENVIRONMENT COVERING 725 SQ MILES WITH LARGE ADJACENT WATER AREAS, FOR EXAMPLE: 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADARS & PHOTO-OPTICS; USED FOR MUNITION TESTING & ELECTROMAGNETIC TEST ENVIRONMENT; INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVALUATING WEAPONS SYSTEMS EFFECTIVENESS; A REALISTIC ENVIRONMENT FOR TESTING A WEAPON SYSTEM AGAINST AN ACTIVE DEFENSE SYSTEM; A CLIMATIC LABORATORY CAPABLE OF TESTING COMPLETE WEAPON SYSTEMS; A COMPUTER SCIENCE LAB; A PHYSICAL LAB; A PHOTO LAB; AN INSTRUMENT R&D FACILITY; AND A MISSILE SIMULATION & TEST LABORATORY.

INSTALLATION: ARMAMENT LABORATORY

EGLIN AFB, FL

CDR. COL WILLIAM E. O'BRIEN

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	119.410	119.326
TOTAL PROCUREMENT	0.000	0.168
TOTAL O&M	0.000	0.590
TOTAL OTHER	0.000	4.609
TOTAL ANNUAL LAB	119.410	124.693
TOTAL INHOUSE	32.655	42.934
TOTAL INHOUSE RDTE	32.655	42.287
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	138	1	97	41
CIVILIAN	379	16	247	132
TOTAL	517	17	344	173

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	94.464	72.504	82.285	249.253	13.253	0.000

...MISSION

AFATL IS SPECIFICALLY RESPONSIBLE FOR THE PLANNING, FORMULATION AND EXECUTION OF RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT OF NON-NUCLEAR ARMAMENT AND RELATED EQUIPMENT, AS WELL AS TECHNICAL SUPPORT FOR ARMAMENT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

STRATEGIC DEFENSE INITIATIVE/KINETIC ENERGY WEAPONS AND LETHALITY  
 INSENSITIVE MUNITIONS TECHNOLOGY  
 ADVANCED RADIO FREQUENCY (RF) TECHNOLOGY  
 ADVANCED AIRCRAFT GUN AND AMMUNITION TECHNOLOGY  
 HARD TARGET ORDNANCE TECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT INVENTORY CONSISTS OF A VARIETY OF ANALYZERS, SIMULATORS MIXER EQUIPMENT, AND MEASUREMENT MACHINES, SOME WITH RF, X-RAY AND LASER CHARACTERISTICS. AFATL FACILITIES INCLUDE 18 SEPARATE LABORATORIES AND FACILITIES FOR THE CONDUCT OF A WIDE RANGE OF SCIENTIFIC INVESTIGATIONS AND ANALYSES; A RAPID RESPONSE MODEL FABRICATION SHOP; AND A TECHNICAL LIBRARY WHICH HAS AN ON-LINE ACCESS TO SEVERAL DATA BANKS.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CNTR

TULLAHOMA, TN

CDR. COL STEPHEN P. CONRAN

CHIEF SCI. DR. JAMES A. MITCHELL

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	258.849	241.258
TOTAL PROCUREMENT	0.000	9.475
TOTAL O&M	0.014	0.635
TOTAL OTHER	6.878	39.259
TOTAL ANNUAL LAB	265.741	290.627
TOTAL INHOUSE	72.021	90.024
TOTAL INHOUSE RDTE	65.129	73.855
ANNUAL OPERATING COST	38.285	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	153	5	84	69
CIVILIAN	235	5	97	138
TOTAL	388	10	181	207

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
39081	1141.415	207.183	1715.051	3063.649	421.132	86.551

...MISSION

TESTING OF AIRCRAFT, MISSILE & SPACE SYSTEMS AND SUBSYSTEMS AT FLIGHT CONDITIONS TO BE EXPERIENCED DURING A MISSION. ADEC CONDUCTS A RSCH AND TECHNOLOGY PROGRAM TO DEVELOP ADVANCED TESTING TECHNIQUES AND INSTRUMENTATION, AND TO SUPPORT THE DEVELOPMENT OF NEW TEST FACILITIES.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER TESTING INCLUDES AERODYNAMIC AND ROCKET MOTOR FIRINGS  
STRATEGIC DEFENSE INITIATIVE TESTING  
F-110 ALTERNATE FIGHTER ENGINE DEVELOPMENT AND TESTING  
ADVANCED TACTICAL FIGHTER PROPULSION AND FLIGHT DYNAMICS TESTING  
INERTIAL UPPER STAGE ROCKET MOTOR FIRINGS

...FUNCTIONS/EQUIPMENT/FACILITIES

INCLUDED ARE WIND TUNNELS WITH SECTIONS TO 16FT AND SPEEDS FROM SUBSONIC TO MACH 20; TURBINE ENGINE TEST CELLS WHICH PROVIDE SIMULATION TO MACH 3  
ROCKET TEST CELLS, THE LARGEST RATED AT .5 MILLION LBS THRUST AT ALTITUDE; SPACE CHAMBERS TO 42FT DIAMETER AND 82FT HIGH; HYPERBALLISTIC RANGES; DUST AND SNOW EROSION FACILITY; BIRD IMPACT FACILITY; AND TWO CAPTIVE TRAJECTORY SYSTEMS; THESE FACILITIES HAVE SUPPORTED DEVELOPMENT AND QUALIFICATION OF MOST MAJOR AERONAUTICAL, MISSILE, AND SPACE SYSTEMS SINCE 1954. THIS TESTING COMPLIMENTS EXPENSIVE AND OFTEN HAZARDOUS FLIGHT TESTING, AND ASSURES THAT SYSTEM DEFICIENCIES ARE FOUND EARLY SAVING TIME AND RESOURCES IN THE OVERALL DEVELOPMENT, ACQUISITION AND DEPLOYMENT PROCESS.

INSTALLATION: AVIONICS LABORATORY

WPAFB, OH

DIR. COL BRUCE C. TOMPKINS

CHIEF SCI. DR. JESSE C. RYLES

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	171.126	255.434
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.261	2.826
TOTAL ANNUAL LAB	173.387	258.260
 TOTAL INHOUSE	 25.589	 28.057
TOTAL INHOUSE RDTE	23.328	25.231
ANNUAL OPERATING COST	4.418	4.431

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	147	1	143	4
CIVILIAN	540	32	381	159
TOTAL	687	33	524	163

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
220	229.369	9.483	405.264	644.116	64.750	133.894

#### ...MISSION

MAINTAINS AN AVIONICS TECHNOLOGY BASE THROUGH RESEARCH EXPLORATORY AND ADVANCED DEVELOPMENT AND ASSIGNED BASIC RESEARCH PROGRAMS. DEVELOPS AND DEMONSTRATES COST-EFFECTIVE AVIONICS CONCEPTS TO REDUCE ACQUISITION AND OPERATING COSTS AND IMPROVE OPERATIONAL CAPABILITIES.

#### ...CURRENT IMPORTANT PROGRAMS

VERY HIGH SPEED INTEGRATED CIRCUITS TECHNOLOGY  
COMMON SIGNAL PROCESSOR  
INTEGRATED ELECTRONIC WARFARE SYSTEM  
ULTRA RELIABLE RADAR  
AUTOMATIC TARGET CLASSIFICATION

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

TECHNICAL AREAS INCLUDE FIRE CONTROL, WEAPON DELIVERY, COMMUNICATIONS, ELECTRONIC WARFARE, NAVIGATION, SURVEILLANCE, RECONNAISSANCE, INFO PROCESSING AND CONTROL, SUBSYSTEMS, INTEGRATION AND SYSTEMS ARCHITECTURE SUPPORTING ELECTRONIC DEVICES. IN-HOUSE LABS INCLUDE SIMULATION AND ANALYSIS OF INTEGRATED DIGITAL SYSTEMS, DESIGN AND FABRICATION OF SPECIALIZED INTEGRATED/HYBRID CIRCUITS AND PRINTED WIRING BOARDS, PERFORMANCE EVALUATION OF E-O SYSTEMS AND CORRELATION WITH WEATHER OBSERVATION, SIMULATION OF REAL-WORLD SIGNAL/JAMMING ENVIRONMENT FOR EVALUATION OF ELECTRONIC WARFARE SYSTEMS, EVALUATION OF RECON SENSORS IN REALISTIC FLIGHT ENVIRONMENT. OTHER LABS ARE MAINTAINED FOR EVALUATION OF AIRBORNE AND SPACE SENSORS AND COMPONENTS FROM OPTICAL TO RADIO FREQUENCIES.

INSTALLATION: EASTERN SPACE AND MISSILE CNTR

PATRICK AFB, FL

CDR. COL LAWRENCE C. GOOCH

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	13.374	35.000
TOTAL O&M	350.025	335.387
TOTAL OTHER	81.043	68.368
TOTAL ANNUAL LAB	444.442	438.755
TOTAL INHOUSE	110.445	103.569
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	29.371	33.109

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1068	0	151	917
CIVILIAN	1118	1	36	1082
TOTAL	2186	1	187	1999

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
26178	220.172	1177.704	4789.850	6187.726	420.186	373.664

...MISSION

SUPPORT AIR, GROUND & SEA LAUNCHED SPACE & MISSILE SYSTEMS FROM CCAFS & KSC OPERATION OF INSTRUMENTED SHIP IN SUPPORT OF REQUIREMENTS. SUPPORT OF USAF SPACETRACK; SPECIAL PROJECTS; DOCUMENTED R&D TESTS & VARIOUS ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

NAVY: POSEIDON, TRIDENT, UK POLARIS

ARMY: PERSHING

MILITARY SPACE SUPPORT PROGRAM: TITAN

NASA PROGRAMS: ATLAS/CENTAUR, DELTA, SPACE SHUTTLE DOD SPACE TRANS SYS  
SUPPORT OF GROUND AND SEA-LAUNCHED SPACE AND MISSILE SYSTEMS FROM CCAFS

...FUNCTIONS/EQUIPMENT/FACILITIES

ESMC CAPABILITIES INCLUDE: ASSEMBLY, PRELAUNCH CHECKOUT, & LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, SPACE LAUNCH VEHICLES & PAYLOADS  
SERVICES INCLUDE: TRACKING, LONG DISTANCE COMMUNICATIONS, & DATA REDUCTION ANALYSIS. EQUIPMENT & FACILITIES INCLUDE: CCAFS LAUNCH SUPPORT MAINLAND, DOWN RANGE INSTRUMENTATION & COMMUNICATIONS, AN INSTRUMENTED SHIP, DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES & RANGE TIMING SYSTEMS.  
SUPPORT FUNCTIONS INCLUDE: CONTRACTOR OPERATION, PLANT ENGINEERING, LABS SHOPS AS WELL AS OTHER SPECIAL SERVICES.

CDR. COL KENNINGTON

CHIEF SCI. DR. THOMPSON

## PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	19.234	20.721
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.396	0.405
TOTAL OTHER	1.055	0.000
TOTAL ANNUAL LAB	20.685	21.126
TOTAL INHOUSE	4.251	4.505
TOTAL INHOUSE RDTE	0.909	1.036
ANNUAL OPERATING COST	0.293	0.295

## PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	67	6	24	43
CIVILIAN	36	8	28	8
TOTAL	103	14	52	51

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	65.620	37.750	49.550	152.920	7.100	2.670

## ...MISSION

ESL, HQ AFESC, IS THE LEAD AGENCY FOR RESEARCH, DEVELOPMENT, TEST AND EVALUATION IN THE AREAS OF CIVIL AND ENVIRONMENTAL ENGINEERING. IN ADDITION, THE LABORATORY HAS BEEN DESIGNATED AS THE FOCAL POINT LAB FOR ENVIRONMENTAL QUALITY TECHNOLOGY, AND LEAD LAB FOR FACILITIES ENERGY.

## ...CURRENT IMPORTANT PROGRAMS

FACILITIES SURVIVABILITY  
 WEAPONS SYSTEMS PLATFORM PERFORMANCE (PAVEMENTS)  
 FIRE PROTECTION AND RECOVERY  
 AIR FORCE FUEL CONTAMINANTS  
 HAZARDOUS WASTES CLEANUP AND CONTROL

## ...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES: ENVIRONMENTAL QUALITY LABORATORY- EXPLORATORY DEVELOPMENT OF NEW CONCEPTS TO ELIMINATE, OR SUBSTANTIALLY REDUCE ENVIRONMENTAL CONSEQUENCES OF FUTURE AIR FORCE WEAPON SYSTEMS; AIRFIELD SOILS AND SURFACES EVALUATION TRACK- TEST CHEMICAL EFFECTS ON RUNWAY SURFACES; BOMB CRATER TEST FACILITIES- EVALUATE DIFFERENT BOMB CRATER FILLING TECHNIQUES; STRUCTURES EXPLOSIVE TEST SITE- EVALUTE AND IMPROVE NATO BLDG CRITERIA; FIRE TEST FACILITY- IMPROVE FIRE DETECTION/SUPPRESSION FOR HARDENED A/C SHELTERS; AND ENGINEERING SERVICES LAB- CONDUCT CIVIL ENGINEERING RESEARCH. EQUIPMENT: CENTRIFUGE- FOR SUBSCALE TESTING; MASS SPECTROMETER FOR POLLUTANT ANALYSIS; AND LOAD CART- FOR TESTING A/C LANDING EFFECTS ON RUNWAY PAVEMENTS.



INSTALLATION: FLIGHT DYNAMICS LABORATORY

WPAFB, OH

DIR. COL THADDEUS H. SANDFORD

CHIEF SCI. DR. G. KEITH RICHEY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	238.783	163.989
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.007	0.110
TOTAL OTHER	2.874	3.590
TOTAL ANNUAL LAB	241.664	167.689
TOTAL INHOUSE	27.560	29.450
TOTAL INHOUSE RDTE	24.679	25.750
ANNUAL OPERATING COST	4.936	5.710

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	170	2	128	42
CIVILIAN	588	34	412	176
TOTAL	758	36	540	218

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
76	368.868	204.174	94.319	667.361	50.676	53.132

...MISSION

PLANS, FORMULATES AND EXECUTES TECHNOLOGY PROGRAMS FOR AEROSPACE FLIGHT VEHICLES IN STRUCTURES, AERODYNAMICS, FLIGHT CONTROL, AND VEHICLE EQUIPMENT/SUBSYSTEMS. PROGRAMS COVER BASIC RESEARCH AND EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT. LEAD AFVAL LAB FOR TECHNOLOGY INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

FORWARD SWEEP WING TECHNOLOGY DEMONSTRATOR  
ADVANCED FIGHTER TECHNOLOGY INTEGRATION  
ADVANCED COMPOSITE AND METALLIC STRUCTURES  
COMPUTATIONAL FLUID DYNAMICS  
BOOST GLIDE VEHICLE PROGRAM

...FUNCTIONS/EQUIPMENT/FACILITIES

THE FULL-SCALE STATIC, THERMAL AND FATIGUE TEST LABORATORY IS CAPABLE OF CONDUCTING STATIC AND FATIGUE TESTS ON SEVERAL AIRCRAFT STRUCTURES SIMULTANEOUSLY. THE LANDING GEAR TEST FACILITY HAS DYNAMOMETERS AND OTHER SPECIAL MACHINES FOR TESTING TIRES, BRAKES, AND LANDING GEAR STRUTS. THE FLIGHT CONTROL DEVELOPMENT LABORATORY IS CAPABLE OF EVALUATING ADVANCED CONTROL CONCEPTS IN A MISSION ENVIRONMENT USING SIMULATORS AND OTHER LABORATORIES FOR CREW SYSTEM DESIGN AND ACTUATION SYSTEM TESTS. THE TRISONIC GASDYNAMIC FACILITY IS CAPABLE OF OPERATING AT SUBSONIC, TRANSONIC, AND SUPERSONIC SPEEDS. THE VERTICAL WIND TUNNEL CAN PERFORM SPIN TESTS AND BE USED TO EVALUATE THE DYNAMIC BEHAVIOR OF FREE-FALL OBJECTS AND PARACHUTES.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA

CDR. MG W. T. TWINTING

TECH DIR. MR. C. E. ADOLPH

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	232.024	261.400
TOTAL PROCUREMENT	6.177	10.036
TOTAL O&M	30.778	37.499
TOTAL OTHER	136.330	145.131
TOTAL ANNUAL LAB	405.309	454.066
TOTAL INHOUSE	292.680	292.901
TOTAL INHOUSE RDTE	146.261	150.001
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3408	48	875	2533
CIVILIAN	1901	4	285	1616
TOTAL	5309	52	1160	4149

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
297438	187.106	281.979	7666.612	8135.697	343.454	182.639

...MISSION

TOTAL SYSTEMS DT&E OF MANNED AND UNMANNED AEROSPACE VEHICLES. T&E OF RESEARCH VEHICLES AND AERODYNAMIC DECELERATORS. OPERATE USAF TEST PILOT SCHOOL, EDWARDS FLIGHT TEST RANGE AND UTAH TEST AND TRAINING RANGE. SUPPORT IOT&E. SUPPORT USAF, DOD, GOV'T CONTRACTOR AND FOREIGN T&E.

...CURRENT IMPORTANT PROGRAMS

B1B DT&E/OT&E, ASAT

FIGHTER UPGRADE: F-16 MSIP, F-15, LANTIRN, A-7 STRIKEFIGHTER

B-52 STRATEGIC SYSTEMS UPGRADE

T-46, PRIMARY TRAINER EVALUATION

TECHNOLOGY: AFTI F-16, X-29, AFTI F-111

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT, FACILITIES AND PERSONNEL CAPABILITIES ARE AVAILABLE TO CONDUCT TOTAL WEAPON SYSTEMS DT&E/OT&E OF AERONAUTICAL SYSTEMS.

TECHNICAL FACILITIES/CAPABILITIES INCLUDE AERODYNAMIC ENGINEERING AND AVIONICS (IFAST) SIMULATORS; A REAL TIME MISSION CONTROL CENTER: MICROWAVE RANGE FROM HILL AFB TO VANDENBERG AFB; PRECISION IMPACT BOMB/GUNNERY/INFRARED/PHOTO RESOLUTION/RADAR FIDELITY AND CARGO/PERSONNEL AIRDROP RANGES; RADAR/CINE-T SPACE POSITIONING; DATA COLLECTION REDUCTION & ANALYSIS; REALTIME FLUTTER AND LOADS; PHOTO/TV LAB; & COMPLETE AIRCRAFT INSTRUMENTATION FACILITIES; AIRCRAFT/ENGINE/AVIONICS SHOPS; MUNITION STORAGE AND CHECKOUT, CRUISE MISSILE INTEGRATED MAINTENANCE FACILITY; SEVERAL MILES OF DRY LAKE RUNWAYS; AND THE R-2508 AND UTTR AIRSPACE.

INSTALLATION: FRANK J. SEILER RESEARCH LABORATORY

USAF COL SPNGS, CO

CDR. LTC J. H. PLETCHER

CHIEF SCI. LTC K. E. SIEGENTHALER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	1.989	1.888
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.352	1.422
TOTAL ANNUAL LAB	3.341	3.310
TOTAL INHOUSE	3.341	3.310
TOTAL INHOUSE RDTE	1.989	1.888
ANNUAL OPERATING COST	0.181	0.208

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	9	18	5
CIVILIAN	9	1	4	5
TOTAL	32	10	22	10

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
0	190.000	3.000	0.000	193.000	1.820	3.522

#### ...MISSION

CONDUCT BASIC RESEARCH IN LASERS, AEROMECHANICS, AND CHEMISTRY.  
ENCOURAGE AND SUPPORT USAF ACADEMY FACULTY & CADET RESEARCH BY DIRECT  
PARTICIPATION. SPONSOR INDEPENDENT FACULTY RESEARCH.

#### ...CURRENT IMPORTANT PROGRAMS

ELECTROCHEMISTRY OF MOLTEN SALTS (BATTERY RESEARCH)  
ENERGETIC MATERIALS  
THEORETICAL CALCULATIONS  
LASER (NONLINEAR OPTICS, SOLID INTERACTION, KINETICS)  
UNSTEADY AERODYNAMICS

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY & ELECTRODE REACTIONS,  
EXPLOSIVE & PROPELLANT SYNTH, DECOMP MECH & DETONATION PHENOMENA. MSMT,  
GENERATION, SPECTROSCOPY & MO CALC OF EXCITED STATE SPECIES. FITR, UV,  
FTNMR, NEPR, XRAY & MASS SPEC, CHROMATOGRAPHS, ELECTRON MICROSCOPE.  
SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP. FULL WET LAB. ADV ANALYSIS  
& EVAL TECHNIQUES FOR INERTIAL GUIDANCE SENSORS USING 2 AXIS TABLE,  
CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM. LASER  
LABORATORIES FOR NONLINEAR OPTICS, KINETICS, AND LASER/SOLID INTERAC-  
TION EXPERIMENTS. SUBSONIC WIND TUNNEL AND DATA COLLECTION EQUIPMENT  
INCLUDING MASSCOMP FOR UNSTEADY AERODYNAMICS RESEARCH. HOLOGRAPHIC, HOT  
WIRE, AND OTHER FLOW VISUALIZATION CAPABILITIES AND ASSOCIATED INSTRU-  
MENTATION FOR WIND TUNNEL EXPERIMENTS.

INSTALLATION: GEOPHYSICS LABORATORY

BEDFORD, MA

CDR. COL J. R. JOHNSON

CHIEF SCI. DR. ALVA T. STAIR JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	108.432	98.309
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	7.419	7.790
TOTAL ANNUAL LAB	115.851	106.099
TOTAL INHOUSE	36.666	38.794
TOTAL INHOUSE RDTE	32.503	34.423
ANNUAL OPERATING COST	8.579	9.008

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	125	2	65	60
CIVILIAN	474	89	264	210
TOTAL	599	91	329	270

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
336	395.732	14.821	25.883	436.436	12.171	38.460

#### ...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH EXPLORATORY AND ADVANCED DEVELOPMENT IN ENVIRONMENTAL AND PHYSICAL SCIENCES WITH MAJOR EMPHASIS ON GEOPHYSICS. ALSO CONDUCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

#### ...CURRENT IMPORTANT PROGRAMS

SPACE ENVIRONMENT  
WEATHER IMPACT ON AIR FORCE SYSTEMS  
IONOSPHERIC SPECIFICATION FOR C3I SYSTEMS  
OPTICAL, INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS  
GEODETIC AND EARTH MOTION EFFECTS ON MISSILE CEP.

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL AND ATMOSPHERIC SCIENCES, IONOSPHERIC, OPTICAL, SPACE AND SOLAR PHYSICS RELATING TO AIR FORCE NEEDS. EQUIPMENT AND FACILITIES INCLUDE IN-HOUSE LABORATORIES; SPACE SIMULATION CHAMBERS; ROCKET AND BALLOON LAUNCH FACILITIES; AND TWO KC-135 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC AND IONOSPHERIC STUDIES

INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX

CDR. COL DENNIS W. JARVI

CHIEF SCI. DR. EARL A. ALLUISI

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	58.123	57.090
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.018	2.354
TOTAL OTHER	5.726	6.191
TOTAL ANNUAL LAB	66.867	65.635
TOTAL INHOUSE	17.604	19.716
TOTAL INHOUSE RDTE	12.528	13.525
ANNUAL OPERATING COST	2.746	3.006

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	185	12	105	80
CIVILIAN	235	39	133	102
TOTAL	420	51	238	182

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	81.180	65.319	53.232	199.731	6.727	115.450

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY, AND ADVANCED DEVELOPMENT PROGRAMS IN TRAINING, LOGISTICS, AND MANPOWER AND FORCE MANAGEMENT.

...CURRENT IMPORTANT PROGRAMS

MANPOWER AND FORCE MEASUREMENT: SELECTION, CLASSIFICATION, RETENTION AND JOB PERFORMANCE MEASUREMENT. TRAINING: FLIGHT SIMULATION, VISUAL SIMULATION, REQUIREMENTS, COMPUTER BASED INSTRUCTION, MANAGEMENT OF OJT, AND TEAM TRAINING. LOGISTICS: COMBAT MAINTENANCE, AUTOMATED TECHNICAL INFORMATION AND REALIABILITY AND MAINTAINABILITY DESIGN.

...FUNCTIONS/EQUIPMENT/FACILITIES

RESEARCH IN SELECTION AND CLASSIFICATIONS TESTING (THE ARMED SERVICES VOCATIONAL APTITUDE BATTERY), OCCUPATIONAL ANALYSES, MANPOWER MANAGEMENT AND JOB PERFORMANCE MEASUREMENT. DEVELOPMENT AND TESTING OF FLIGHT TRAINING SIMULATORS, THEIR VISUAL DISPLAYS, AND SIMULATOR TRAINING EFFECTIVENESS. RESEARCH IN COMPUTER BASED INSTRUCTION (INSTRUCTIONAL SUPPORT SYSTEM). APPLICATION OF ARTIFICIAL INTELLIGENCE TO TRAINING AND JOB AIDING. DEVELOPMENT OF COMPUTER AIDS TO INCORPORATE RELIABILITY AND MAINTAINABILITY IN INITIAL WEAPONS SYSTEMS DESIGNS. INVESTIGATION INTO AUTOMATION THE DEVELOPMENT, TRANSFER, AND DISPLAY OF WEAPONS SYSTEMS TECHNICAL DATA. BASIC RESEARCH IN THE THEORIES OF MENTAL APTITUDES AND LEARNING ABILITY. QUICK REACTION STUDIES OF QUESTIONS POSED BY AIR FORCE MANPOWER AND PERSONNEL MANAGEMENT OFFICES.

INSTALLATION: MATERIALS LABORATORY

WPAFB, OH

DIR. DR. GARY L. DENMAN

CHIEF SCI. DR. HARRIS M. BURTE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	107.762	116.581
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.848	0.060
TOTAL ANNUAL LAB	108.610	116.641
TOTAL INHOUSE	12.853	12.737
TOTAL INHOUSE RDTE	12.005	12.677
ANNUAL OPERATING COST	1.353	2.031

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	51	4	45	6
CIVILIAN	286	49	225	61
TOTAL	337	53	270	67

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP
15	179.980	20.800	1760.750	1961.530	260.000
					EQUIP
					72.060

...MISSION

PLAN/EXECUTE RESEARCH AND DEVELOPMENT PROGRAMS FOR MATERIALS. PROVIDE TECHNICAL AND MANAGEMENT ASSISTANCE IN SYSTEM STUDIES, ANALYSES, DEVELOPMENT PLANNING, TEST, EVALUATION, MODIFICATION AND OPERATION OF AERO-SPACE SYSTEMS. MANAGE/DIRECT MANUFACTURING METHODS PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

STRUCTURAL MATERIALS FOR AEROSPACE SYSTEMS  
PROPULSION MATERIALS  
ELECTRONIC MATERIALS  
LASER HARDENED MATERIALS  
MANUFACTURING TECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR AERO-SPACE STRUCTURES THERMAL PROTECTION SYSTEMS, PROPULSION MATERIALS, FLUIDS LUBRICANTS, FLUID CONTAINMENT, COATINGS, FIBERS, ELECTROMAGNETIC WINDOWS, SENSORS, LASER WINDOWS AND OPTICAL DEVICES, ELECTRICAL COMPONENTS, NONDESTRUCTIVE EVALUATION, POLYMERS, MOLECULAR COMPOSITES, NON-METALLIC MATRIX COMPONENTS, ELASTOMERS, METALS, ALLOYS, METAL MATRIX COMPOSITES, METAL PROCESSING, CERAMICS, INTERMETALLICS, STATIC AND DYNAMIC BEHAVIOR ELECTRONIC/PHYSICAL/CHEMICAL ANALYSIS, FAILURE ANALYSIS, COMPUTER AIDED MANUFACTURING POWDER METALLURGY, AND OTHER MAJOR MATERIALS FUNCTIONS WHICH INCLUDE MANUFACTURING TECHNOLOGY, SYSTEMS APPLICATIONS AND SYSTEMS SUPPORT.

INSTALLATION: OFFICE OF SCIENTIFIC RESEARCH

WASHINGTON, DC

CDR. COL A. J. DRISCOLL

TECH DIR. DR. JOHN O. DIMMOCK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	182.192	177.153
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.013	0.102
TOTAL OTHER	2.462	2.694
TOTAL ANNUAL LAB	184.667	179.949
TOTAL INHOUSE	2.462	2.694
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	4.986	5.770

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	23	54	30
CIVILIAN	102	25	36	66
TOTAL	186	48	90	96

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	0.000	36.688	5.128	41.816	0.000	0.000

...MISSION

MANAGES THE AF RESEARCH PROGRAM, PREVENTS TECHNOLOGICAL SUPRISE,  
ASSISTS IN SOLVING TECHNOLOGICAL PROBLEMS, PROVIDES RESEARCH OPTIONS,  
ENHANCES THE CONTINUED SUPERIORITY OF THE AF OPERATIONAL CAPABILITY, AND  
ASSISTS IN THE TRANSITION OF RESEARCH TO DEVELOPMENT PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

HOT ATOM SURFACE CHEMISTRY  
THIN FILM SCIENCES  
NONMETALLIC STRUCTURAL MATERIALS  
PLASMA-BASED PROPULSION  
COMBUSTION ENHANCEMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

MANAGE THE AF RESEARCH PROGRAM AND SPONSOR EXTRAMURAL RESEARCH.

INSTALLATION: ROCKET PROPULSION LABORATORY

EDWARDS AFB, CA

CDR. COL JAMES R. NUNN

CHIEF SCI. DR. RICHARD WEISS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	99.487	101.374
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.026	0.000
TOTAL OTHER	5.832	6.418
TOTAL ANNUAL LAB	105.345	107.792
 TOTAL INHOUSE	 24.425	 25.648
TOTAL INHOUSE RDTE	18.593	19.230
ANNUAL OPERATING COST	1.003	1.015

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	163	0	83	80
CIVILIAN	265	20	127	138
TOTAL	428	20	210	218

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
68345	419.046	86.848	4.780	510.674	128.900	29.311

#### ...MISSION

CONDUCT THE AIR FORCE'S ROCKET PROPULSION AND INTERDISCIPLINARY SPACE TECHNOLOGY RESEARCH, EXPLORATORY, & ADV TECH DEVEL PROGRAMS FOR FUTURE ICBMS, AIR LAUNCHED MISSILES, SPACE VEHICLES, & SATELLITES. PROVIDES ROCKET PROPULSION TECHNOLOGICAL SUPPORT TO DOD AND NON-DOD AGENCIES.

#### ...CURRENT IMPORTANT PROGRAMS

PROVIDE SOLID PROPULSION OPTIONS FOR SMALL MOBILE BALLISTIC MISSILES. PROVIDE LOW SIGNATURE, HIGH PERF & LIGHTWEIGHT PROPULSION OPTIONS FOR TACTICAL MISSILES. PROVIDE LOW COST HIGH PERF PROPULSION OPTIONS FOR LAUNCH VEHICLES. PROVIDE HI PERF PROPULSION OPTIONS FOR SPACE SYS ORBIT TRANSFER. DEMO HIGHER PERF NON-CONVENTIONAL PROPULSION CONCEPTS.

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

LABS FOR SYNTHESIS, ANALYSIS, FORMULATION, & EVAL OF NEW PROPELLANTS. FACILITIES FOR MIXING, CASTING, CURING & TESTING SOLID ROCKET MOTORS AND MOTOR COMPONENTS. SOLID MOTOR EXPERIMENTAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE & HIGH TEMP COMPONENTS. LAB FOR EXPERIMENTATION OF SMALL ATTITUDE CONTROL & SATELLITE PROPULSION SYS & COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. ALTITUDE EXPERIMENTATION OF LIQUID, SOLAR, ELECTRIC, & SOLID ROCKETS UP TO 50,000 POUNDS THRUST. AMBIENT EXPERIMENTATION OF LIQUID OR SOLID ROCKETS UP TO 10,000,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, & DATA REDUCTION. SHOPS FOR FABRICATING EXPERIMENTAL HARDWARE AND SYSTEMS.



INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, NY

CDR. COL CHARLES E. FRANKLIN

CHIEF SCI. DR. FRED I. DIAMOND

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	367.289	361.930
TOTAL PROCUREMENT	35.922	24.150
TOTAL O&M	52.727	61.609
TOTAL OTHER	9.885	10.182
TOTAL ANNUAL LAB	465.823	457.871
TOTAL INHOUSE	73.296	74.396
TOTAL INHOUSE RDTE	59.462	61.030
ANNUAL OPERATING COST	4.990	5.193

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	214	3	167	47
CIVILIAN	1053	64	610	443
TOTAL	1267	67	777	490

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP EQUIP
1532	764.945	52.839	182.271	1000.055	29.595 56.680

...MISSION

CONDUCTS RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT, TEST AND SELECTED ENGINEERING DEVELOPMENT AND ACQUISITION SUPPORT PROGRAMS IN SUPPORT OF COMMAND, CONTROL AND COMMUNICATIONS AND INTELLIGENCE ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

SPACE BASED RADAR  
COMMAND, CONTROL AND COMMUNICATIONS DECISION AIDS  
SATELLITE COMMUNICATIONS  
ELECTRO-OPTICAL SURVEILLANCE AND DEVICES  
HIGH DENSITY DATA STORAGE AND HANDLING

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR AREAS OF TECHNOLOGY ARE ANTENNAS, SIGNAL PROCESSING, SOLID STATE COMPONENTS THERMIONICS, OPTO-ELECTRONICS, RADIATION HARDENING, SYSTEM AND COMPONENT RELIABILITY, SOFTWARE, ARTIFICIAL INTELLIGENCE-WITH EMPHASIS ON DECISION AIDS, AND RECONNAISSANCE AND INTELLIGENCE DATA HANDLING. MAJOR IN-HOUSE FACILITIES ARE RECONNAISSANCE EXPLOITATION FACILITY, HIGH POWER FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, RELIABILITY ANALYSIS CENTER, RADIATION EFFECTS FACILITY, EXPERIMENTAL PHOTOGAMMETRIC FACILITY, ECCM AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS FACILITY, EXPERIMENTAL DEVICE FABRICATION FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY FOR WEAPONS TESTING, SURVEILLANCE LABORATORY, MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY, AND COMMAND AND CONTROL TECHNOLOGY LABORATORY.

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX

CDR. COL JEFFERY G. DAVIS

TECH ADV. DR. J. W. WOLFE

PROGRAM DATA BY FISCAL YEAR (MILLION\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	22.652	21.822
TOTAL PROCUREMENT	12.337	12.061
TOTAL O&M	4.297	3.925
TOTAL OTHER	1.952	0.662
TOTAL ANNUAL LAB	41.238	38.470
TOTAL INHOUSE	50.762	47.505
TOTAL INHOUSE RDTE	13.259	12.798
ANNUAL OPERATING COST	4.935	4.824

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	355	40	116	239
CIVILIAN	254	39	97	157
TOTAL	609	79	213	396

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1310	422.784	30.279	177.459	630.522	53.153	33.338

...MISSION

CONDUCT EXPLORATORY RESEARCH AND DEVELOPMENT PROGRAMS IN AEROSPACE BIOTECHNOLOGY, INCLUDES LIFE SUPPORT, AEROSPACE MEDICINE, BIOMEDICAL PROGRAMS AND RADIOBIOLOGY. PROVIDE MEDICAL EVALUATION AND CONSULTATION FOR AIRCREWS TO ASSURE RETENTION OF FLYING STATUS.

...CURRENT IMPORTANT PROGRAMS

CHEMICAL WARFARE DEFENSE  
RADIATION AND DIRECTED ENERGY BIOEFFECTS  
CREW READINESS AND PROTECTIVE EQUIPMENT  
AEROMEDICAL ASPECTS OF AEROSPACE OPERATIONS  
SPACE BIOTECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

RESEARCH IN AEROSPACE MEDICAL PROBLEMS, LIFE SUPPORT, RADIOBIOLOGY, BIOMETRICS, BIOMED ENGINEERING, RDTE ON MEDICAL EQUIPMENT AND SYSTEMS, HUMAN CENTRIFUGE, COCKPIT INTEGRATION LAB, COMMAND-CONTROL-COMMUNICATIONS (C3) WORKSTATION PERFORMANCE TEST FACILITY, CHEMICAL DEFENSE TEST FACILITY, RESEARCH CHAMBERS, TELETHERAPY COBALT 60 RADIATION SOURCE, RADIO-FREQUENCY RADIATION RESEARCH FACILITY, REMOTE INTERACTIVE GRAPHIC TERMINAL SYSTEM, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSPACE MED SCIENCE LAB, LASER HAZARD FACILITIES AND LASER RANGE, AEROMEDICAL LIBRARY, AEROSPACE MED EVALUATION AND CONSULTATIVE SERVICES, NUCLEAR MEDICINE ACQUISITION SYSTEM, OPTICAL RESEARCH, AUDIOLOGY, VESTIBULAR STUDIES, NEUROSCIENCES LAB, PSYCHOBIOLOGY, RADIOISOTOPE, AEROMED STANDARDS, MODELING, BIOMED RESEARCH, MEDICAL REPOSITORIES, BIODYNAMICS RESEARCH.

INSTALLATION: WEAPONS LABORATORY

ALBUQUERQUE, NM

CDR. COL J. P. AMOR

CHIEF SCI. DR. A. H. GUENTHER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	334.565	282.200
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.010	0.010
TOTAL OTHER	24.417	25.150
TOTAL ANNUAL LAB	358.992	307.360
TOTAL INHOUSE	91.340	81.600
TOTAL INHOUSE RDTE	66.913	56.440
ANNUAL OPERATING COST	4.244	4.269

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	579	30	418	161
CIVILIAN	546	54	273	273
TOTAL	1125	84	691	434

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	551.000	110.000	180.000	841.000	28.340	94.600

...MISSION

RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT IN NUCLEAR WEAPONS EFFECTS, COMPONENTS, NUCLEAR WEAPONS SURVIVABILITY/VULNERABILITY, HIGH ENERGY LASER SYSTEMS, ADVANCED WEAPONS CONCEPTS AND TECHNOLOGY, AND NUCLEAR SAFETY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED RADIATION TECHNOLOGY  
ADVANCED WEAPON TECHNOLOGY  
NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING  
NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA  
STRATEGIC DEFENSE INITIATIVES

...FUNCTIONS/EQUIPMENT/FACILITIES

NUCLEAR WEAPONS EFFECT SIMULATION, SAFETY, COMPONENT ASSESSMENT AND ANALYSIS OF WEAPON SYSTEMS NUCLEAR HARDNESS ARE CONDUCTED IN ENGINEERING TEST LABORATORIES AND PHYSICS LABORATORIES. SIMULATION/TESTS ON MISSILES, AIRCRAFT, AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS. GAS GUNS, AND X-RAY DEVICES. CIVIL ENGINEERING PROGRAMS USE SHOCK TUBES AND HIGH EXPLOSIVES FOR SIMULATION OF NUCLEAR BLAST AND SHOCK. LASER SYSTEMS DEVELOPEMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH LARGE, HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METEOROLOGY LABORATORIES, 1 CRAY, 2 CDC-730 AND 1 IBM-434 COMPUTERS WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION SUPPORT ALL REQUIRING RDT/E PROGRAMS.

INSTALLATION: WESTERN SPACE AND MISSILE CNTR

VANDENBERG AFB, CA

CDR. COL ORLANDO C. SEVERO JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS\$)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	7.606	10.011
TOTAL O&M	81.518	81.628
TOTAL OTHER	11.605	11.251
TOTAL ANNUAL LAB	100.729	102.890
 TOTAL INHOUSE	 99.119	 101.257
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	541	4	188	353
CIVILIAN	522	0	121	401
TOTAL	1063	4	309	754

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP
421	1538.080	1224.352	844.146	3606.578	0.227
					EQUIP
					0.000

...MISSION

OPERATE THE WESTERN TEST RANGE TO SUPPORT FIELD TEST AND LAUNCH OPERATIONS FOR A VARIETY OF GOVERNMENT RANGE USERS.

...CURRENT IMPORTANT PROGRAMS

MINUTEMAN III OPERATION TESTING PROGRAM  
PEACEKEEPER MISSILE SYSTEM  
SPACE LAUNCH PROGRAMS USING TITAN, ATLAS AND SCOUT BOOSTERS  
RANGE SUPPORT TO BALLISTIC AND GUIDED MISSILES AND AERONAUTICAL PROGRAMS  
SABIR

...FUNCTIONS/EQUIPMENT/FACILITIES

WSMC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT.  
TEST LAUNCH INCLUDES: ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE SYSTEMS USING ATLAS, TITAN, AND MM BOOSTERS; PAYLOAD AND VEHICLE INTEGRATION/CHECKOUT AND LAUNCH CONTROL/SAFETY. WESTERN TEST RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTATION PLANNING AND DATA GATHERING ON BALLISTIC/SPACE/GUIDED MISSILE/AIRCRAFT AND OTHER TESTS AT UPRANGE AND DOWNRANGE LOCATIONS. LAUNCH AZIMUTHS VARY FROM 140 TO 313 DEGS. AERO TESTS ARE CONDUCTED IN AN INSTRUMENTED OFFSHORE OPERATING AREA. LAUNCH FACILITIES AND RANGE INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

INSTALLATION: 4950TH TEST WING

WPAFB, OH

CDR. COL G. A. BLAKE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	89.203	108.626
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.105	0.115
TOTAL OTHER	27.429	29.294
TOTAL ANNUAL LAB	116.737	138.035
TOTAL INHOUSE	101.775	118.469
TOTAL INHOUSE RDTE	75.161	92.160
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	888	3	237	651
CIVILIAN	958	0	206	752
TOTAL	1846	3	443	1403

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
4000	110.465	66.229	1026.533	1203.227	2190.000	43.963

#### ...MISSION

DOD MAJ TEST FAC. PERFORMS T&E ON MIL SYS, SUBSYS, AND COMP. OPR & MAIN  
ASGN TEST SUP ACFT AND ANCIL EQUIP. MANAGES A CENTRAL FAC FOR MAJ MOD OF  
AFSC ACFT. OPER SHOP FAC IN SUP OF CMD ACFT CLASS II MODS AND AFWAL R&D  
PROGMS. PROVIDES FLT TST ENGRG. TECH DATA ACQ. AND TECH PHOTO SVCS.

#### ...CURRENT IMPORTANT PROGRAMS

MARK XV IFF  
OPTICAL DIAGNOSTIC AIRCRAFT SUPPORT  
ECCM-ADVANCED RADAR TEST BED (ECCM/ARTB)  
CRUISE MISSILE MISSION CONTROL AIRCRAFT (CMMCA)  
SONOBUOY MISSILE IMPACT LOCATION SYSTEM (SMILS)

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

TEST SUPPORT AIRCRAFT (ARIA) PROVIDE GLOBAL SUPPORT  
ALL AFSC MAJOR CLASS II AIRCRAFT  
MISSILE LAUNCH/REENTRY TRACKING AND DATA RELAY  
1400 SQUARE MILE RESTRICTED TEST AREA IN OHIO  
FLIGHT TEST ENGINEERING (AERO-MECH, AVIONICS, ANALYSIS, INSTRUMENTATION)  
TEST DATA ACQUISITION/PROCESSING/ANALYSIS  
2 OPERATIONAL SQS (FLIGHT CREWS), 3 MAINTENANCE SQS, AND 1 DETACHMENT  
SPECIALIZED FABRICATION AND MODELING EQUIPMENT  
COMPUTER AIDED DESIGN/MANUFACTURING (CAD/CAM) CAPABILITY  
TECHNICAL PHOTOGRAPHIC INSTRUMENTATION AND PROCESSING  
LARGEST PMEL IN AF  
ASD LABORATORY MATERIAL CONTROL ACTIVITY

INSTALLATION: 6585TH TEST GROUP

HOLLOMAN AFB, NM

CDR. COL ROGER C. HEAD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION\$)	
	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	30.737	39.425
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	8.394	8.327
TOTAL OTHER	23.564	15.746
TOTAL ANNUAL LAB	62.695	63.498
TOTAL INHOUSE	29.923	38.119
TOTAL INHOUSE RDTE	19.399	26.533
ANNUAL OPERATING COST	0.276	0.600

PERSONNEL	PERSONNEL DATA (END OF FY 1986)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	245	0	96	149
CIVILIAN	294	2	109	185
TOTAL	539	2	205	334

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
7052	407.068	39.081	93.979	540.128	228.352	111.085

#### ...MISSION

DOD FOCAL POINT FOR FLIGHT, LAB & SLED T&E OF INERTIAL GUIDANCE SYSTEMS. HIGH SPEED TESTING FOR SEAT EJECTION, IMPACT, CORROSION AND GUIDANCE SYSTEMS. RADAR CROSS SECTION AND ANTENNA MEASUREMENT OF SPACE VEHICLES, RVS, A/C. A/C SUPPORT OF IN-HOUSE & TRANSIENTS.

#### ...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER GUIDANCE SYSTEM AND COMPONENTS TESTING  
AMRAAM RADAR FSD FLIGHT TESTS  
A/C NAVIGATION SYSTEM VERIFICATION TESTING, PROJECT 688G  
SMALL MISSILE GUIDANCE TESTING  
B-1B AVIONICS TESTING

#### ...FUNCTIONS/EQUIPMENT/FACILITIES

ONE 260-INCH/1-100 INCH PRECISION CENTRIFUGE  
PRECISION GROUND/AIRBORNE TEST FACILITY.  
PRECISION REFERENCE/DATA COLLECTION.  
ENVIRONMENTAL CHAMBERS  
INERTIAL NAV VANS  
50799 FT TEST TRACK  
50799 FT DUAL-RAIL, LAST 15200 FT ALSO NARROW GAGE (THIRD RAIL)  
5 BLOCKHOUSES  
9000 FT FAIRFIELD, 2000 FT BALLISTIC RAINFIELD  
30 MHZ TO 95 GHZ RADAR MEASUREMENT OF AMP, PHASE, DOPPLER, GLINT  
JET ENGINE MODULATION  
MODEL MAKING

INSTALLATION: ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE

BETHESDA, MD

CDR. COL JAMES J. CONKLIN, USAF

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1986 (ACTUAL)	1987 (ACT + EST)
TOTAL RDTE	14.867	14.600
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.585	3.650
TOTAL ANNUAL LAB	18.452	18.250
TOTAL INHOUSE	18.452	18.250
TOTAL INHOUSE RDTE	14.867	14.600
ANNUAL OPERATING COST	3.238	3.250

PERSONNEL DATA (END OF FY 1986)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	94	20	52	42
CIVILIAN	159	23	64	95
TOTAL	253	43	116	137

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	26.523	16.047	56.540	99.110	13.415	19.210

...MISSION

THE MISSION OF AFRI SHALL BE TO CONDUCT SCIENTIFIC RESEARCH IN THE FIELD OF RADIOBIOLOGY AND RELATED MATTERS ESSENTIAL TO THE OPERATIONAL AND MEDICAL SUPPORT OF THE DEPARTMENT OF DEFENSE AND THE MILITARY SERVICES.

...CURRENT IMPORTANT PROGRAMS

DEFINE PHYSIOLOGICAL/PATHOLOGICAL RESPONSE IN HUMANS TO RADIATION.  
ASSESS EFFECTS OF COMBINED INJURIES, MILITARY FORCES/NONCOMBATANTS.  
DATA FOR PREDICTION OF COMBAT INEFFECTIVENESS & CASUALTY PRODUCTION.  
TREATMENT METHODS FOR CASUALTIES FROM RADIATION/COMBINED INJURY.  
INSTRUCTION TO ARMED SERVICES ON TREATMENT OF NUCLEAR CASUALTIES

...FUNCTIONS/EQUIPMENT/FACILITIES

OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH, DISSEMINATING RESEARCH RESULTS, PROVIDE ANALYSIS AND CONSULTATION ON BIO EFFECTS OF RADIATION, PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY-STATE NUCLEAR REACTOR; 200,000 - CURIE COBALT - 60 REACTOR; ELECTRON LINER ACCELERATOR; X-RAY AND THERATRON EXPOSURE CAPABILITY. SUPPORT SERVICES INCLUDE: MEASUREMENT OF RADIATION FIELDS; PROVISION AND CARE OF LABORATORY ANIMALS; EQUIPMENT DESIGN AND FABRICATION ASSISTANCE; REAL-TIME DATA ACQUISITION SYSTEM; TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS; PERSONNEL AND ENVIRONMENTAL MONITORING; EDITORIAL ASSISTANCE IN REPORT PREPARATION; AND A LARGE TECHNICAL LIBRARY.

## APPENDIX I

### DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME

#### DEPARTMENT OF THE ARMY

Fire Control and Small Caliber Weapons Systems Laboratory Dover, NJ	Disestablished (Merged)
Large Caliber Weapons Systems Laboratory Dover, NJ	Disestablished (Merged)
Armament Research, Development and Engineering Center Dover, NJ	Established
Belvoir Research and Development Center Ft. Belvoir, VA	Disestablished (Name Change)
Belvoir Research, Development and Engineering Center Ft. Belvoir, VA	Established
Medical Bioengineering R&D Laboratory Ft. Detrick, MD	Disestablished (Name Change)
Biomedical R&D Laboratory Ft. Detrick, MD	Established
Chemical Research and Development Center Aberdeen Proving Ground, MD	Disestablished (Name Change)
Chemical Research, Development and Engineering Center Aberdeen Proving Ground, MD	Established
Communications-Electronics R&D Center Ft. Monmouth, NJ	Disestablished (Name Change)
Center for Communications/Automatic Data Processing Ft. Monmouth, NJ	Established
Electronic Warfare Laboratory Ft. Monmouth, NJ	Disestablished (Name Change)
Center for Electronic Warfare Ft. Monmouth, NJ	Established
Kwajalein Caliber Missile Range Marshall Islands Apo, San Francisco, CA	Contractor Operated Report Not Required



## APPENDIX I

### DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME

Missile Laboratory Huntsville, AL	Disestablished (Name Change)
Missile Research, Development and Engineering Center Huntsville, AL	Established
Night Vision and Electro-optics Laboratory Ft. Belvoir, VA	Disestablished (Name Change)
Center for Night Vision and Electro-Optics Ft. Belvoir, VA	Established
Signals Warfare Laboratory Vint Hill, VA	Disestablished (Name Change)
Center for Signals Warfare Vint Hill, VA	Established
Vulnerability Assessment Laboratory White Sands Missile Range, NM	Established

### DEPARTMENT OF THE NAVY

Explosive Ordnance Disposal Facility Indian Head, MD	Disestablished (Name Change)
Explosive Ordnance Disposal Technology Center Indian Head, MD	Established

### DEPARTMENT OF THE AIR FORCE

Engineering and Services Center/RD Tyndall AFB, FL	Disestablished (Name Change)
Engineering and Services Laboratory Tyndall AFB, FL	Established

### DEPARTMENT OF DEFENSE AGENCIES

NONE

Changes since publication of Department of Defense In-house RDTE  
Activities, 30 October 1985.

## APPENDIX II

### DEFINITIONS

1. In-House RDTE Activities - Those organizational entities performing work in any or all of the categories of research, development, test, and evaluation. The RDTE effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDTE activity.

2. Professionals - Full-time government scientific and engineering personnel actively engaged in RDTE activities. In the case of civilians this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

101 Social Science	668 Podiatrist
150 Geography	680 Dental Officer
180 Psychology	690 Industrial Hygiene
184 Sociology	695 Food and Drug Officer
190 General Anthropology	696 Consumer Safety
193 Archeology	701 Veterinary Medical Science
401 Ecology	801 General Engineering
403 Microbiology	803 Safety Engineering
405 Pharmacology	804 Fire Prevention Engineering
408 Ecology Engineering	806 Materials Engineering
410 Zoology	807 Landscape Architecture
413 Physiology	808 Architecture
414 Entomology	810 Civil Engineering
430 Botany	819 Sanitary Engineering
434 Plant Pathology	830 Mechanical Engineering
435 Plant Physiology	840 Nuclear Engineering
436 Plant Protection and Quarantine	850 Electrical Engineering
437 Horticulture	855 Electronic Engineering
440 Genetics	858 Biomedical Engineering
454 Range Conservation	861 Aeronautics Engineering
457 Soil Conservation	871 Naval Architecture
460 Forestry	880 Mining Engineering
470 Soil Science	881 Petroleum Engineer
471 Agronomy	890 Agriculture Engineering
480 General Fish & Wildlife	892 Ceramic Engineering
482 Fishery Biology	893 Chemical Engineering
486 Wildlife Biology	894 Welding Engineering
487 Animal Science	896 Industrial Engineering
493 Home Economics	1221 Patent Adviser
601 General Health	1222 Patent Attorney
602 Medical Officer	1223 Patent Classifying
660 Pharmacist	1224 Patent Examining
662 Optometrist Examining	1225 Patent Interference Examining
665 Speech Pathology and Audiology	

1226	Design Patent Examining	1382	Food Technology
1301	General Physical Science	1384	Textile Technology
1306	Health Physics	1386	Photographic Technology
1310	Physics	1510	Actuary
1313	Geophysics	1515	Operations Research
1315	Hydrology	1520	Mathematics
1320	Chemistry	1529	Mathematical Statistician
1321	Metallurgy	1530	Statistician
1330	Astronomy and Space Science	1540	Cryptography
1340	Meteorology	1550	Computer Science
1350	Geology		
1360	Oceanography		
1370	Cartography		
1372	Geodesy		
1380	Forest Products Technology		

Military professionals, both officer and enlisted, actively engaged in RDTE activities should be identified with the functions described in the above referenced civilian job series. Lawyers, accountants, chaplains, social workers, and educators should be excluded.

3. Technicians - Generally nonprofessionals working on an RDTE project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

102	Social Science Technician	688	Sanitarian
181	Psychological Technician	698	Environmental Health Technician
404	Biological Technician	699	Health Technician
421	Plant Protection Technician	704	Animal Health
455	Range Technician	802	Engineering Technician
458	Soil Conservation Technician	817	Surveying Technician
462	Forestry Technician	818	Engineering Drafting
603	Physician Assistant	856	Electronics Technician
621	Nurse Assistant	895	Industrial Engineering Technician
622	Medical Supply Aid	1202	Patent Technician
625	Autopsy Attendant	1311	Physical Science Technician
636	Rehabilitation Therapy Asst	1316	Hydraulic Technician
642	Nuclear Medicine Technician	1341	Meteorological Technician
644	Medical Technologist	1371	Cartographic Aid
645	Medical Technician	1374	Geodetic Technician
646	Pathology Technician	1521	Mathematics Technician
647	Medical Radiology Technician		
648	Therapeutic Radiological Technologist		
649	Medical Machine Technician		
650	Medical Technical Assistant		
661	Pharmacy Technician		
664	Restoration Technician		
667	Orthotist and Prosthetist		
669	Medical Record Librarian		
681	Dental Assistant		

682 Dental Hygienist  
683 Dental Laboratory  
Technician  
684 Public Health  
Dental Hygienist

1531 Statistical  
Clerical &  
Administrative  
1541 Cryptanalysis

Discretion will have to be exercised by each RDTE activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DOD 1312.1-E.

4. Real Property Cost - Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

5. Equipment Cost - Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

6. Space - The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DOD Instruction 4165.14.

7. In-House Obligations - Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions and M.P.A. Excluded from the in-house total are expenses for planning and administering programs by DOD personnel of contracts and grants for out-of-house work and M.C.A.

8. Out-Of-House Obligations - Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DOD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also

include travel and other supporting services.

9. Annual Operating Cost - This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

# APPENDIX III

## Selected Standard Abbreviations and Acronyms

AAM - air-to-air missile	GCA - ground-controlled approach
AAW - anti-air warfare	HF - high-frequency
ADPE - automatic data-processing equipment	IFF - identification, friend or foe
AEDC - Arnold Engineering Development Center	IR - infrared
AFSC - Air Force Systems Command	MPT - military potential test
AFWET - Air Force weapons effectiveness testing	NAF - Naval Air Facility
AMC - US Army Materiel Cmd	NASA - National Aeronautics and Space Administration
APG - Aberdeen Proving Ground	NASC - Naval Air Systems Command
ARPA - Advanced Research Projects Agency	NAVAIR - Naval Air Systems Command
ASW - antisubmarine warfare	NAVSEA - Naval Sea Systems Command
AUS - Army United States	NEMP - nuclear electromagnetic propagation
BIS - Board of Inspection and Survey	PI - product improvement
BW - biological warfare	POL - petroleum oil, lubricants
CBR - chemical, biological	QA - quality assurance
CE - Chief of Engineers, Army	QMDO - qualitative materiel development objective
CG - commanding general	RDTE - Research, development, test and evaluation
CNO - Chief of Naval Operations	RF - radio frequency
COMMEL - communications electronics	RV - reentry vehicle
DA - Department of the Army	SATS - short airfield tactical support
DOD - Department of Defense	SDR - small development requirement
DZ - drop zone	SI - ship installation
ECM - electronic counter-measures	SP - self propelled
ED - engineering development	ST - service test
EDT - engineering development & test	T&E - test and evaluation
EEG - electroencephalogram	UDT - underwater demolition team
EKG - electrocardiogram	ULMS - Undersea Long-Range Missile System
ELINT - electronic intelligence	USATECOM - US Army Test and Evaluation Command
EMP - electromagnetic propagation	UTTAS - utility tactical transport aircraft system
EMW - electromagnetic warfare	USW - undersea warfare
EODC - Explosive Ordnance Disposal Center	UV - ultraviolet
ET - engineering artillery	V/STOL - vertical/short takeoff and landing
FA - field artillery	
FBM - fleet ballistic missile	

## APPENDIX IV

### KEY WORD OR ACTIVITY

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Aviation R&T Activity ..... 11

#### AIR TO AIR MISSILES:

Ordnance Missile Test Station ..... 77

Pacific Missile Test Center ..... 78

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#### AIRCRAFT:

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Aviation Board ..... 8

Aviation Engineering Flight Activity ..... 10

Aviation R&T Activity ..... 11

Avionics R&D Activity ..... 12

Flight Dynamics Laboratory ..... 94

Flight Test Center ..... 95

#### AIRCRAFT ENGINES:

Aero Propulsion Laboratory ..... 86

Air Propulsion Center ..... 57

Arnold Engineering Development Center ..... 90

#### AMMUNITION:

Armament Division ..... 88

Armament RD&E Center ..... 4

Armor and Engineer Board ..... 5

Ballistic Research Laboratory ..... 13

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Explosive Ordnance Disposal Technology Center ..... 68

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### KEY WORD OR ACTIVITY

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Ordnance Missile Test Station .....	77
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#### ANTIMISSILE DEFENSE SYSTEMS:

Eastern Space and Missile Center .....	92
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### KEY WORD OR ACTIVITY

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Armor and Engineer Board .....	5
Ballistic Research Laboratory .....	13
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#### AUTOMOTIVE VEHICLES:

Combat Systems Test Activity .....	23
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#### AVIONICS:

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Avionics R&D Activity .....	12
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Army Research Office .....	6
Office of Naval Research .....	76
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#### BIOLOGICAL WARFARE:

Chemical RD&E Center .....	16
Dugway Proving Ground .....	26
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### KEY WORD OR ACTIVITY

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#### CAMOUFLAGE:

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#### CHEMICAL WARFARE:

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Dugway Proving Ground ..... 26

#### CLOTHING:

Air Development Center ..... 56

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Cold Regions R&E Laboratory ..... 21

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## APPENDIX IV

### KEY WORD OR ACTIVITY

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#### COMMUNICATIONS AND RADIO SYSTEMS:

Avionics R&D Activity .....	12
Center for Communications/Automatic Data Processing ...	17
Communications-Electronics Board .....	24
Naval Research Laboratory .....	73

#### CONSTRUCTION AND STRUCTUAL ENGINEERING:

Civil Engineering Laboratory .....	62
Construction Engineering Research Laboratory .....	25
Engineering Waterways Experiment Station .....	30

#### COST ANALYSIS:

Materiel Systems Analysis Activity .....	40
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#### CRYOGENICS:

Armament RD&E Center .....	4
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#### DATA PROCESSING:

Atmospheric Sciences Laboratory .....	7
Center for Communications/Automatic Data Processing ...	17
Construction Engineering Research Laboratory .....	25

#### DENTISTRY:

Dental Research Institute NTC .....	66
Institute of Dental Research .....	35
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#### EARTH SCIENCES:

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## APPENDIX IV

### KEY WORD OR ACTIVITY

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Cold Regions Test Center .....	22
Construction Engineering Research Laboratory .....	25
Dugway Proving Ground .....	26
Combat Systems Test Activity .....	23
Biomedical Research & Development Laboratory .....	15
Research Institute of Environmental Medicine .....	48
Tropic Test Center .....	50

#### EQUIPMENT: GENERAL

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#### FIRE CONTROL SYSTEMS:

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Armament RD&E Center .....	4
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## APPENDIX IV

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#### FUZES:

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Harry Diamond Laboratories .....	32

#### GUIDED MISSILES:

Armament Division .....	88
Ballistic Research Laboratory .....	13
Eastern Space and Missile Test Center .....	92
Field Artillery Board .....	31
Infantry Board .....	34
Missile RD&E Center .....	45
Ordnance Missile Test Station .....	77
Western Space and Missile Test Center .....	105
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#### HUMAN FACTORS ENGINEERING:

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Aerospace Medical Research Laboratory .....	55
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David W. Taylor Ship R&D Center .....	65
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### KEY WORD OR ACTIVITY

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#### INFECTIOUS DISEASES:

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Letterman Army Institute of Research .....	38
Biomedical R&D Laboratory .....	15

#### JET ENGINES:

Aero Propulsion Laboratory .....	86
Air Propulsion Center .....	57
Arnold Engineering Development Center .....	90

#### LANDING AIDS:

Avionics Laboratory .....	91
Avionics R&D Activity .....	12
Flight Test Center .....	95

#### LASERS:

Aero Propulsion Laboratory .....	86
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