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DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES



30 OCTOBER 1987

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Management Analysis Report . . .

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DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES REPORT

30 October 1987

Prepared for:

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FOREWORD

This report was prepared for the US Army Material 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 1987 are summarized in tables preceding the main text.

All current DOD RDTE Activities which meet the report requirement of having at least 25 percent 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 1987 appear in appendix I.

DOD instruction 7700.9, which has been the basis of this report since its inception, has been replaced by a tri-service regulation, AR 70-63 NAVCOMPTIST 7044.5E, AFR 80-26, DNA 7700.9A, entitled DOD In-House RDTE Annual Activities Report, 1 September 1981.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.

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SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

PROGRAM DATA FOR FY 1987

	(MILLIONS)
TOTAL ANNUAL PROGRAM	15488.090
TOTAL INHOUSE PROGRAM	4381.564
TOTAL RDTE PROGRAM	9990.105
TOTAL INHOUSE RDT&E	3753.748
TOTAL ANNUAL OPERATING COST	1307.972

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONAL
MILITARY	22384	730	7116
CIVILIAN	76103	4218	30601
TOTAL	98487	4948	37717

PHYSICAL FACILITIES (END OF FY 1987)

ACRES	5777692
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SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	33606.286
ADMINISTRATIVE	11652.539
OTHER	53181.425
TOTAL	98440.250

COST (MILLIONS)

REAL PROPERTY	115127.869
EQUIPMENT	32219.201
TOTAL	147347.070

TABLE 1. ARMY RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUN'ING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		INHOUSE RDT&E	TOTALS RDT&E	INHOUSE RDT&E	TOTAL MIL	TOTAL				PROF CIV
		INHOUSE	RD&E					CIV	MIL	PHD	PHD CIV	
AEROMEDICAL RESEARCH LABORATORY	9.602	6.105	6.875	6.032	69	67	69	67	9	12	22	19
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	0.000	0.000	0.000	328.299	88	3978	88	3978	0	103	56	2045
ARMY RESEAPCH OFFICE	116.646	0.000	116.492	0.000	2	129	2	129	0	45	1	0
ATMOSPHERIC SCIENCES LABORATORY	43.045	25.559	43.024	25.538	58	403	58	403	1	31	2	141
AVIATION DEVELOPMENT TEST ACTIVITY	23.580	20.754	12.188	12.188	138	95	138	95	0	1	20	26
AVIATION ENGINEERING FLIGHT AVTIVITY	10.200	8.342	8.040	7.195	63	108	63	108	0	0	24	44
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	103.889	38.879	100.560	37.305	16	354	16	354	1	26	8	227
AVIONICS R&D ACTIVITY	35.060	8.431	21.954	4.880	15	213	15	213	0	5	15	166
BALLISTIC RESEARCH LABORATORY	68.376	31.776	46.791	19.352	17	718	17	718	2	108	12	325
BELVOIR RD&E CENTER	183.519	54.634	140.233	39.504	59	1002	59	1002	0	27	6	414
BIOMEDICAL R & D LABORATORY	12.304	6.023	10.973	5.919	29	91	29	91	4	14	17	27
CENTER FOR CMD, CONTROL, & COMMUNICATIONS	69.556	37.005	64.020	19.866	15	440	15	440	0	14	7	250
CENTER FOR ELECTRONIC WARFARE	294.003	24.159	58.856	12.548	49	343	49	343	0	8	4	148
CENTER FOR NIGHT VISION & ELECTRO-OPTICS	115.446	31.001	98.175	25.492	39	469	39	469	1	35	6	258
CENTER FOR SIGNALS WARFARE	108.335	4.498	59.830	3.561	46	241	46	241	0	3	12	207
CENTER FOR SOFTWARE ENGINEERING	30.800	7.100	0.700	0.700	94	261	94	261	0	3	7	116
CHEMICAL RSCH, DEV AND ENGR CNTR	197.046	91.416	136.760	71.282	99	1160	99	1160	2	76	41	639
COLD REGIONS RESEARCH & ENGINEERING LAB	21.205	17.253	12.591	9.569	18	277	18	277	0	37	14	82
COLD REGIONS TEST CENTER	13.094	7.166	7.166	7.166	253	32	253	32	0	0	32	14
COMBAT SYSTEMS TEST ACTIVITY	93.086	115.397	67.780	55.647	255	1022	255	1022	0	7	32	338
CONSTRUCTION ENGINEERING RESEARCH LAB	46.744	27.460	34.415	20.648	3	212	3	212	0	44	3	144
DUGWAY PROVING GROUND	84.045	61.280	57.966	55.152	146	799	146	799	0	21	52	96
ELECTRONIC PROVING GROUND	49.152	37.156	18.967	11.949	600	229	600	229	0	1	54	93
ELECTRONIC TECHNOLOGY & DEVICES LAB	51.206	4.982	44.430	14.099	1	318	1	318	0	36	1	102
ENGINEER TOPOGRAPHIC LABORATORIES	67.957	18.215	63.127	15.617	15	324	15	324	0	21	15	184
ENGINEER WATERWAYS EXPERIMENT STA	108.281	90.316	58.358	40.864	10	1607	10	1607	1	123	9	559
HARRY DIAMOND LABORATORIES	182.374	72.769	129.501	54.964	3	679	3	679	2	50	1	379
HUMAN ENGINEERING LABORATORY	29.826	15.427	29.252	14.783	35	174	35	174	4	15	9	109
INSTITUTE OF DENTAL RESEARCH	6.570	2.263	4.353	2.263	58	18	58	18	9	2	25	2
INSTITUTE OF SURGICAL RESEARCH	10.228	4.616	3.450	3.450	155	78	155	78	17	6	39	19
LETTERMAN ARMY INSTITUTE OF RESEARCH	25.020	11.946	18.128	11.144	142	99	142	99	38	20	63	38
MATERIALS TECHNOLOGY LABORATORY	54.675	1.166	48.402	21.337	21	588	21	588	0	74	21	196
MATERIEL SYSTEMS ANALYSIS ACTIVITY	0.247	0.247	0.247	0.246	28	437	28	437	0	16	10	317

TABLE 1. ARMY RD&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		INHOUSE ROT&E	TOTAL MIL	TOTAL CIV	PHD		PROF			
		INHOUSE	RD&E				MIL	CIV	MIL	CIV		
MEDICAL MATERIEL DEVELOPMENT ACTIVITY	55.021	5.163	53.517	4.997	23	33	10	5	11	8		
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	11.769	7.557	8.298	7.226	60	181	23	1	24	31		
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	32.087	15.470	28.178	15.375	85	158	26	22	20	52		
MEDICAL RESEARCH INST OF INFECTIOUS DIS.	51.006	22.169	42.122	21.609	293	187	47	38	33	61		
MISSILE RESEARCH, DEV, AND ENGR CNTR	275.500	99.278	217.641	54.393	53	1305	1	71	19	745		
NATICK RESEARCH, DEVELOPMENT & ENGR CNTR	92.509	46.516	60.547	31.976	98	934	7	63	29	318		
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	72.025	22.962	64.162	22.540	30	313	2	167	24	71		
RSCH INST OF ENVIRONMENTAL MEDICINE	10.058	6.369	7.258	6.324	72	81	17	27	27	32		
TANK AUTOMOTIVE RD&E CENTER	136.372	38.986	109.925	24.741	29	786	0	14	20	499		
TRADOC TEST & EXPERIMENTATION CMD (TEXCOM)	70.982	42.535	32.003	32.003	658	549	0	0	183	225		
TROPIC TEST CENTER	5.692	2.998	3.191	2.998	69	62	0	2	16	34		
VULNERABILITY ASSESSMENT LABORATORY	40.373	13.828	39.028	12.922	66	200	0	4	3	118		
WALTER REED ARMY INSTITUTE OF RESEARCH	125.641	47.806	104.118	42.912	433	547	99	65	135	162		
WHITE SANDS MISSILE RANGE	175.274	99.882	152.885	79.039	700	2465	19	71	645	1067		
YUMA PROVING GROUND	84.836	32.529	58.067	28.469	299	559	0	3	37	191		
TOTALS	3504.262	1238.817	2504.552	1346.083	5607	25325	342	1537	1866	11338		

TABLE 2. ARMY RDT&E ACTIVITIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)						
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT	
AEROMEDICAL RESEARCH LABORATORY	53	87.668	10.120	33.260	7.603	16.356	
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	6487	267.806	1013.046	2747.397	138.893	190.000	
ARMY RESEARCH OFFICE	2	0.000	29.420	0.000	0.000	0.868	
ATMOSPHERIC SCIENCES LABORATORY	15	32.379	81.124	46.989	2.298	27.990	
AVIATION DEVELOPMENT TEST ACTIVITY	1196	0.000	49.151	130.692	2.014	45.881	
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 R&D ACTIVITY	2	52.450	13.665	19.100	0.000	26.685	
BALLISTIC RESEARCH LABORATORY	1938	378.000	123.000	151.000	20.398	72.690	
BELVOIR RO&E CENTER	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	
CENTER FOR CMD, CONTROL, & COMMUNICATIONS	0	62.000	70.000	40.000	0.000	22.272	
CENTER FOR ELECTRONIC WARFARE	106	113.278	36.107	8.189	6.775	9.500	
CENTER FOR NIGHT VISION & ELECTRO-OPTICS	0	30.000	44.473	37.000	12.244	47.041	
CENTER FOR SIGNALS WARFARE	0	10.595	46.605	7.440	4.830	11.410	
CENTER FOR SOFTWARE ENGINEERING	0	35.811	71.953	8.007	0.000	60.911	
CHEMICAL RSCH, DEV AND ENGR CNTR	3471	734.690	295.919	306.868	15.933	70.142	
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107.797	31.827	145.698	16.684	14.207	
COLD REGIONS TEST CENTER	147555	0.000	35.384	102.280	10.366	13.425	
COMBAT SYSTEMS TEST ACTIVITY	22865	720.999	4.351	248.742	22.176	58.880	
CONSTRUCTION ENGINEERING RESEARCH LAB	31	112.949	45.876	30.335	0.015	12.000	
DUGWAY PROVING GROUND	803364	159.561	198.388	1591.684	57.000	43.000	
ELECTRONIC PROVING GROUND	35683	2.316	28.042	284.477	11.000	2.500	
ELECTRONIC TECHNOLOGY & DEVICES LAB	0	92.040	47.000	2.000	34510.700	26000.000	
ENGINEER TOPOGRAPHIC LABORATORIES	0	90.722	7.000	13.300	14.200	14.073	
ENGINEER WATERWAYS EXPERIMENT STA	3073	1746.808	353.645	176.809	49.321	54.736	
HARRY DIAMOND LABORATORIES	2316	503.364	12.053	121.717	54.460	60.996	
HUMAN ENGINEERING LABORATORY	72	111.524	7.056	21.400	12.500	20.467	
INSTITUTE OF DENTAL 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	
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	119.204	56.941	112.174	45.661	14.052	
MATERIALS TECHNOLOGY LABORATORY	48	424.773	42.010	22.133	27.132	4.543	
MATERIEL SYSTEMS ANALYSIS ACTIVITY	4	8.140	1.276	1.715	2.870	2.500	

TABLE 2. ARMY ROT&E ACTIVITIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT	
MEDICAL MATERIEL 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 INST OF CHEMICAL DEFENSE	31	36.246	22.945	99.029	9.384	17.742	
MEDICAL RESEARCH INST OF INFECTIOUS DIS.	388	104.136	26.618	205.841	21.103	20.575	
MISSILE RESEARCH, DEV, AND ENGR CNTR	15000	0.868	0.322	0.210	240.000	302.000	
NATICK RESEARCH, DEVELOPMENT & ENGR CNTR	174	414.395	58.018	338.579	29.878	2.429	
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	0	53.155	14.000	6.200	0.752	0.870	
RSCH INST OF ENVIRONMENTAL MEDICINE	1	46.621	6.163	24.790	4.084	10.092	
TANK AUTOMOTIVE RD&E CENTER	11	246.562	123.756	125.274	235.197	144.591	
TRADOC TEST & EXPERIMENTATION CMD (TEXCOM)	22	19.200	40.000	0.000	6.000	3.000	
TROPIC TEST CENTER	2624	18.000	35.925	83.756	2.378	4.988	
VULNERABILITY ASSESSMENT LABORATORY	1316	85.030	38.516	77.654	5.884	68.000	
WALTER REED ARMY INSTITUTE OF RESEARCH	203	383.274	61.600	0.000	10.080	31.055	
WHITE SANDS MISSILE RANGE	1795861	1454.443	676.956	3048.239	246.366	129.280	
YUMA PROVING GROUND	837904	1.144	83.590	1516.559	74743.000	124.059	
TOTALS	3683060	9460.496	4408.664	12208.778	110636.912	27856.485	

TABLE 3. NAVY RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		TOTALS	INHOUSE	RDT&E	TOTAL	MIL	CIV	TOTAL	MIL	PHD	PHD	PROF
		INHOUSE	RDT&E											
AEROSPACE MEDICAL RESEARCH LABORATORY	6.848	5.611	4.749	4.749	4.749		38	55				10	13	5
AIR DEVELOPMENT CENTER	347.331	176.335	258.103	126.472	126.472		235	2723				3	64	45
AIR PROPULSION CENTER	39.585	34.291	37.330	30.185	30.185		7	730				0	1	7
AIR TEST CENTER	283.046	161.339	129.679	83.812	83.812		1633	2607				2	6	24
ATLANTIC FLEET WEAPONS TRAINING FAC	33.054	3.637	0.087	0.000	0.000		96	43				0	0	48
BIODYNAMICS LABORATORY	4.426	2.773	3.159	2.376	2.376		34	45				3	4	3
BIOSCIENCES LABORATORY	4.447	4.154	4.154	4.154	4.154		9	4				3	0	6
CIVIL ENGINEERING LABORATORY	47.214	30.631	31.989	19.286	19.286		18	425				0	32	6
CLOTHING & TEXTILE RESEARCH FACILITY	4.957	4.404	3.445	2.946	2.946		1	65				0	1	1
COASTAL SYSTEMS CENTER	123.887	66.868	67.715	39.036	39.036		133	1225				0	51	19
DAVID TAYLOR SHIP R&D CENTER	312.726	191.325	225.178	123.261	123.261		66	2771				2	124	24
DENTAL RESEARCH INSTITUTE	2.571	1.155	1.284	1.155	1.155		22	15				6	4	4
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	6.959	3.965	5.977	3.772	3.772		12	56				0	15	6
EXPLOSIVE ORDNANCE DISPOSAL TECH CNTR	52.568	16.109	22.960	6.110	6.110		71	229				0	1	13
HEALTH RESEARCH CENTER	5.836	3.286	4.519	3.286	3.286		29	63				11	14	5
MEDICAL RESEARCH INSTITUTE	28.470	17.608	19.574	17.480	17.480		260	192				51	47	95
MEDICAL RESEARCH UNIT, NO. 2	3.862	2.735	2.735	2.735	2.735		27	48				5	3	13
MEDICAL RESEARCH UNIT NO. 3	7.173	5.176	5.068	5.068	5.068		29	205				7	19	6
NAVAL RESEARCH LABORATORY	297.892	240.609	219.966	168.166	168.166		97	3576				2	729	32
OCEAN R&D ACTIVITY	47.295	32.995	43.780	26.766	26.766		14	378				0	74	11
OCEAN SYSTEMS CENTER	477.061	232.897	306.771	161.570	161.570		272	3125				1	186	68
OFFICE OF NAVAL RESEARCH & TECHNOLOGY	1595.789	46.877	1593.492	46.877	46.877		38	484				5	72	29
ORDNANCE MISSILE TEST STATION	5.254	4.623	2.576	1.949	1.949		93	63				0	0	17
PACIFIC MISSILE TEST CENTER	635.517	525.288	260.782	202.278	202.278		1031	4217				31	15	375
PERSONNEL RESEARCH & DEVELOPMENT CNTR	34.902	17.852	22.598	12.646	12.646		28	310				0	85	11
SUBMARINE MEDICAL RESEARCH LABORATORY	6.101	3.859	4.444	3.812	3.812		29	52				2	11	5
SURFACE WEAPONS CENTER	522.117	294.011	294.804	157.436	157.436		100	5038				0	234	27
UNDERSEA RANGES DEPARTMENT	62.807	11.228	46.319	9.574	9.574		28	11				0	0	24
UNDERWATER SYSTEMS CENTER	493.643	266.022	229.761	131.049	131.049		80	3667				3	108	63
WEAPONS CENTER	650.547	329.934	384.778	199.476	199.476		506	5427				0	148	32
WEAPONS EVALUATION FACILITY	14.250	10.190	3.884	3.415	3.415		109	132				0	0	40
TOTALS	6158.135	2298.353	4241.660	2946.980	2946.980		5145	37981				147	2061	1283
														15230

TABLE 5. AIR FORCE RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		TOTAL	INHOUSE	RDT&E	TOTAL	MIL	TOTAL			
		INHOUSE	RDT&E						CIV	MIL	PHD	PROF
AERO PROPULSION LABORATORY	149.911	23.825	147.903	23.825	57	325	7	23	38	202		
AEROSPACE MEDICAL RESEARCH LABORATORY	56.919	10.895	48.694	10.895	120	156	8	28	42	71		
ARMAMENT DIVISION	2004.884	180.516	411.937	162.141	2807	2211	7	17	1472	247		
ARMAMENT LABORATORY	122.699	40.841	118.701	38.643	120	379	3	18	84	233		
ARNOLD ENGINEERING DEVELOPMENT CNTR	250.144	62.379	237.899	61.600	152	242	3	4	77	73		
ASTRONAUTICS LABORATORY	116.431	21.720	110.171	21.720	157	281	1	22	68	117		
AVIONICS LABORATORY	321.767	32.360	313.657	32.360	147	554	3	30	132	379		
EASTERN SPACE AND MISSILE CNTR	568.719	80.865	0.000	0.000	1082	1108	0	1	115	37		
ENGINEERING AND SERVICES LABORATORY	28.027	2.484	22.706	1.139	68	38	6	7	60	31		
FLIGHT DYNAMICS LABORATORY	177.331	35.219	167.800	35.109	168	613	5	37	116	400		
FLIGHT TEST CENTER	317.434	90.048	267.507	76.213	3481	2109	49	10	568	539		
FRANK J. SELLER RESEARCH LABORATORY	3.595	2.143	2.243	2.143	23	9	13	2	6	3		
GEOPHYSICS LABORATORY	108.335	35.810	103.389	34.876	117	450	4	95	38	179		
HUMAN RESOURCES LABORATORY	67.710	12.262	57.953	12.241	191	214	10	39	104	83		
MATERIALS LABORATORY	159.212	17.974	156.356	17.974	52	299	2	52	46	185		
OFFICE OF SCIENTIFIC RESEARCH	184.437	0.000	180.303	0.000	77	108	18	29	41	12		
ROME AIR DEVELOPMENT CENTER	470.944	67.486	379.971	64.072	206	1056	3	62	148	555		
SCHOOL OF AEROSPACE MEDICINE	44.229	16.731	21.700	12.459	280	254	44	40	41	61		
WEAPONS LABORATORY	351.535	81.370	325.457	81.349	580	537	26	62	320	229		
WESTERN SPACE AND MISSILE CNTR	93.123	87.514	0.000	0.000	541	522	4	0	184	121		
4950TH TEST WING	143.973	72.927	113.036	72.812	853	864	1	0	137	151		
6585TH TEST GROUP	64.392	28.872	40.263	28.872	256	294	0	1	96	108		
TOTALS	5805.751	828.147	3227.646	3737.423	11535	12623	217	579	3933	4016		

TABLE 6. AIR FORCE ROT&E ACTIVITIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT	
AERO PROPULSION LABORATORY	41	283.893	20.770	349.510	83.357	44.493	
AEROSPACE MEDICAL RESEARCH LABORATORY	30	127.169	61.201	42.117	16.997	36.365	
ARMAMENT DIVISION	456815	355.390	796.015	8119.185	440.151	529.000	
ARMAMENT LABORATORY	0	123.981	82.385	19.683	0.000	20.164	
ARNOLD ENGINEERING DEVELOPMENT CNTR	39081	1103.536	190.817	964.753	792.206	135.537	
ASTRONAUTICS LABORATORY	68345	419.046	86.848	4.780	137.923	32.863	
AVIONICS LABORATORY	200	238.012	14.715	409.889	77.842	132.296	
EASTERN SPACE AND MISSILE CNTR	26138	212.871	1179.313	4864.445	384.295	435.723	
ENGINEERING AND SERVICES LABORATORY	0	65.620	37.750	49.550	7.100	2.670	
FLIGHT DYNAMICS LABORATORY	76	368.868	204.174	94.319	50.676	52.474	
FLIGHT TEST CENTER	297438	187.106	296.307	8020.234	419.209	246.086	
FRANK J. SEILER RESEARCH LABORATORY	0	19.000	3.000	0.000	1.820	2.507	
GEOPHYSICS LABORATORY	336	395.732	14.821	25.883	12.350	44.404	
HUMAN RESOURCES LABORATORY	5	84.596	79.833	44.428	7.749	122.100	
MATERIALS LABORATORY	15	172.455	4.194	182.734	276.174	71.170	
OFFICE OF SCIENTIFIC RESEARCH	0	0.000	36.688	5.128	0.000	0.070	
ROME AIR DEVELOPMENT CENTER	1532	775.837	53.447	170.771	31.202	84.954	
SCHOOL OF AEROSPACE MEDICINE	19575	422.784	30.279	177.459	53.153	28.372	
WEAPONS LABORATORY	90	551.000	110.000	180.000	28.340	96.000	
WESTERN SPACE AND MISSILE CNTR	421	1538.080	1224.352	844.146	0.277	0.000	
4950TH TEST WING	400	20.800	97.700	1068.000	24.900	348.992	
6585TH TEST GROUP	7052	407.068	39.081	93.979	228.352	121.169	
TOTALS	917590	7872.844	4663.690	25730.993	3074.073	2587.409	

TABLE 7. DEPARTMENT OF DEFENSE R&D ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		INHOUSE RDT&E	TOTAL MIL	TOTAL CIV	PHD		PROF MIL	PROF CIV		
		INHOUSE	RDT&E				MIL	CIV				
ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE	19.942	16.247	16.247	16.325	97	174	24	41	34	17		
TOTALS	19.942	16.247	16.247	3753.748	97	174	24	41	34	17		

SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

PROGRAM DATA FOR FY 1987

	(MILLIONS)
TOTAL ANNUAL PROGRAM	7224.110
TOTAL INHOUSE PROGRAM	2420.366
TOTAL RDTE PROGRAM	5335.972
TOTAL INHOUSE RDT&E	2317.291
TOTAL ANNUAL OPERATING COST	670.038

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONAL
MILITARY	5990	531	2348
CIVILIAN	44042	3463	19567
TOTAL	50032	3994	21915

PHYSICAL FACILITIES (END OF FY 1987)

ACRES	1256913
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SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	21587.713
ADMINISTRATIVE	4877.909
OTHER	11193.856
TOTAL	37659.478

COST (MILLIONS)

REAL PROPERTY	37028.091
EQUIPMENT	28947.019
TOTAL	65975.110

TABLE 1A. ARMY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		TOTALS	INHOUSE	RD&E	TOTAL	MIL	TOTAL				PROF	
		INHOUSE	RD&E						MIL	CIV	PHD	PHD	MIL	CIV
AEROMEDICAL RESEARCH LABORATORY	9.602	6.105	6.875	6.875	6.032		69	69	67		9	12	22	19
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	0.000	0.000	0.000	0.000	328.299		88	88	3978		0	103	56	2045
ATMOSPHERIC SCIENCES LABORATORY	43.045	25.559	43.024	43.024	25.538		58	58	403		1	31	2	141
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	103.889	38.879	100.560	100.560	37.305		16	16	354		1	26	8	227
AVIONICS R&D ACTIVITY	35.060	8.431	21.954	21.954	4.880		15	15	213		0	5	15	166
BALLISTIC RESEARCH LABORATORY	68.376	31.776	46.791	46.791	19.352		17	17	718		2	108	12	325
BELVOIR RD&E CENTER	183.519	54.634	140.233	140.233	39.504		59	59	1002		0	27	6	414
BIOMEDICAL R & D LABORATORY	12.304	6.023	10.973	10.973	5.919		29	29	91		4	14	17	27
CENTER FOR ELECTRONIC WARFARE	294.003	24.159	58.856	58.856	12.548		49	49	343		0	8	4	148
CENTER FOR NIGHT VISION & ELECTRO-OPTICS	115.446	31.001	98.175	98.175	25.492		39	39	469		1	35	6	258
CENTER FOR SIGNALS WARFARE	108.335	4.498	59.830	59.830	3.561		46	46	241		0	3	12	207
CHEMICAL RSCH, DEV AND ENGR CNTR	197.046	91.416	136.760	136.760	71.282		99	99	1160		2	76	41	639
COLD REGIONS RESEARCH & ENGINEERING LAB	21.205	17.253	12.591	12.591	9.569		18	18	277		0	37	14	82
CONSTRUCTION ENGINEERING RESEARCH LAB	46.744	27.460	34.415	34.415	20.648		3	3	212		0	44	3	144
ELECTRONIC TECHNOLOGY & DEVICES LAB	51.206	4.982	44.430	44.430	14.099		1	1	318		0	36	1	102
ENGINEER TOPOGRAPHIC LABORATORIES	67.957	18.215	63.127	63.127	15.617		15	15	324		0	21	15	184
ENGINEER WATERWAYS EXPERIMENT STA	108.281	90.316	58.358	58.358	40.864		10	10	1607		1	123	9	559
HARRY DIAMOND LABORATORIES	182.374	72.769	129.501	129.501	54.964		3	3	679		2	50	1	379
HUMAN ENGINEERING LABORATORY	29.826	15.427	29.252	29.252	14.783		35	35	174		4	15	9	109
INSTITUTE OF DENTAL RESEARCH	6.570	2.263	4.353	4.353	2.263		58	58	18		9	2	25	2
INSTITUTE OF SURGICAL RESEARCH	10.228	4.616	3.450	3.450	3.450		155	155	78		17	6	39	19
LETTERMAN ARMY INSTITUTE OF RESEARCH	25.020	11.946	18.128	18.128	11.144		142	142	99		38	20	63	38
MATERIALS TECHNOLOGY LABORATORY	54.675	1.166	48.402	48.402	21.337		21	21	588		0	74	21	196
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	32.087	15.470	28.178	28.178	15.375		85	85	158		26	22	20	52
MEDICAL RESEARCH INST OF INFECTIOUS DIS.	51.006	22.169	42.122	42.122	21.609		293	293	187		47	38	33	61
MISSILE RESEARCH, DEV, AND ENGR CNTR	275.500	99.278	217.641	217.641	54.393		53	53	1305		1	71	19	745
NATICK RESEARCH, DEVELOPMENT & ENGR CNTR	92.509	46.516	60.547	60.547	31.976		98	98	934		7	63	29	318
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	72.025	22.962	64.162	64.162	22.540		30	30	313		2	167	24	71
RSCH INST OF ENVIRONMENTAL MEDICINE	10.058	6.369	7.258	7.258	6.324		72	72	81		17	27	27	32
TANK AUTOMOTIVE RD&E CENTER	136.372	38.986	109.925	109.925	24.741		29	29	786		0	14	20	499
WALTER REED ARMY INSTITUTE OF RESEARCH	125.641	47.806	104.118	104.118	42.912		433	433	547		99	65	135	162
TOTALS	2569.909	777.705	1803.989	1803.989	1008.320		2138	2138	17724		290	1343	708	8370

TABLE 2A. ARMY R&D LABORATORIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT	
AEROMEDICAL RESEARCH LABORATORY	53	87.668	10.120	33.260	7.603	16.356	
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	6487	267.806	1013.046	2747.397	138.893	190.000	
ATMOSPHERIC SCIENCES LABORATORY	15	32.379	81.124	46.989	2.298	27.990	
AVIATION RESEARCH AND TECHNOLOGY ACTIVITY	127	88.848	58.673	16.370	2.348	16.761	
AVIONICS R&D ACTIVITY	2	52.450	13.665	19.100	0.000	26.685	
BALLISTIC RESEARCH LABORATORY	1938	378.000	123.000	151.000	20.398	72.690	
BELVOIR RD&E CENTER	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	
CENTER FOR ELECTRONIC WARFARE	106	113.278	36.107	8.189	6.775	9.500	
CENTER FOR NIGHT VISION & ELECTRO-OPTICS	0	30.000	44.473	37.000	12.244	47.041	
CENTER FOR SIGNALS WARFARE	0	10.595	46.605	7.440	4.830	11.410	
CHEMICAL RSCH, DEV AND ENGR CNTR	3471	734.690	295.919	306.868	15.933	70.142	
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107.797	31.827	145.698	16.684	14.207	
CONSTRUCTION ENGINEERING RESEARCH LAB	31	112.949	45.876	30.335	0.015	12.000	
ELECTRONIC TECHNOLOGY & DEVICES LAB	0	92.040	47.000	2.000	34510.700	26000.000	
ENGINEER TOPOGRAPHIC LABORATORIES	0	90.722	7.000	13.300	14.200	14.073	
ENGINEER WATERWAYS EXPERIMENT STA	3073	1746.808	353.645	176.809	49.321	54.736	
HARRY DIAMOND LABORATORIES	2316	503.364	12.053	121.717	54.460	60.996	
HUMAN ENGINEERING LABORATORY	72	111.524	7.056	21.400	12.500	20.467	
INSTITUTE OF DENTAL 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	
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	119.204	56.941	112.174	45.661	14.052	
MATERIALS TECHNOLOGY LABORATORY	48	424.773	42.010	22.133	27.132	4.543	
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	31	36.246	22.945	99.029	9.384	17.742	
MEDICAL RESEARCH INST OF INFECTIOUS DIS.	388	104.136	26.618	205.841	21.103	20.575	
MISSILE RESEARCH, DEV, AND ENGR CNTR	15000	0.868	0.322	0.210	240.000	302.000	
NATICK RESEARCH, DEVELOPMENT & ENGR CNTR	174	414.395	58.018	338.579	29.878	2.429	
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	0	53.155	14.000	6.200	0.752	0.870	
RSCH INST OF ENVIRONMENTAL MEDICINE	1	46.621	6.163	24.790	4.084	10.092	
TANK AUTOMOTIVE RD&E CENTER	11	246.562	123.756	125.274	235.197	144.591	
WALTER REED ARMY INSTITUTE OF RESEARCH	203	383.274	61.600	0.000	10.080	71.055	
TOTALS	34645	6884.652	2960.112	4950.173	35523.284	27267.215	

TABLE 3A. NAVY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		INHOUSE	TOTAL	INHOUSE		TOTAL	TOTAL		PHD		PROF	
		INHOUSE	RD&E			RD&E	ROT&E		MIL	CIV	MIL	CIV	MIL	CIV
AEROSPACE MEDICAL RESEARCH LABORATORY	6.848	5.611	4.749	4.749	38	4.749	4.749	55	10	13	5	17		
AIR PROPULSION CENTER	39.585	34.291	37.330	30.185	7	30.185	30.185	730	0	1	7	239		
BIODYNAMICS LABORATORY	4.426	2.773	3.159	2.376	34	2.376	2.376	45	3	4	3	14		
BIOSCIENCES LABORATORY	4.447	4.154	4.154	4.154	9	4.154	4.154	4	3	0	6	0		
CIVIL ENGINEERING LABORATORY	47.214	30.631	31.989	19.286	18	19.286	19.286	425	0	32	6	179		
CLOTHING & TEXTILE RESEARCH FACILITY	4.957	4.404	3.445	2.946	1	2.946	2.946	65	0	1	1	41		
DAVID TAYLOR SHIP R&D CENTER	312.726	191.325	225.178	123.261	66	123.261	123.261	2771	2	124	24	1307		
DENTAL RESEARCH INSTITUTE	2.571	1.155	1.284	1.155	22	1.155	1.155	15	6	4	4	1		
HEALTH RESEARCH CENTER	5.836	3.286	4.519	3.286	29	3.286	3.286	63	11	14	5	15		
MEDICAL RESEARCH INSTITUTE	28.470	17.608	19.574	17.480	260	17.480	17.480	192	51	47	95	71		
MEDICAL RESEARCH UNIT NO. 2	3.862	2.735	2.735	2.735	27	2.735	2.735	48	5	3	13	42		
MEDICAL RESEARCH UNIT NO. 3	7.173	5.176	5.068	5.068	29	5.068	5.068	205	7	19	6	57		
NAVAL RESEARCH LABORATORY	297.892	240.609	219.966	168.166	97	168.166	168.166	3576	2	729	32	835		
OCEAN R&D ACTIVITY	47.295	32.995	43.780	26.766	14	26.766	26.766	378	0	74	11	135		
OCEAN SYSTEMS CENTER	477.061	232.897	306.771	161.570	272	161.570	161.570	3125	1	186	68	1382		
PERSONNEL RESEARCH & DEVELOPMENT CNTR	34.902	17.852	22.598	12.646	28	12.646	12.646	310	0	85	11	140		
SUBMARINE MEDICAL RESEARCH LABORATORY	6.101	3.859	4.444	3.812	29	3.812	3.812	52	2	11	5	15		
UNDERWATER SYSTEMS CENTER	493.643	266.022	229.761	131.049	80	131.049	131.049	3667	3	108	63	2241		
WEAPONS CENTER	650.547	329.934	384.778	199.476	506	199.476	199.476	5427	0	148	32	1734		
TOTALS	2475.556	1248.408	1555.282	1928.486	1566	1928.486	1928.486	21153	106	1603	397	8469		

TABLE 4A. NAVY R&D LABORATORIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	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							
PENSACOLA, FL	1	114.538	3.500	8.164	3.042	7.128	
TRENTON, NJ	68	488.390	27.962	92.816	52.190	11.135	
NEW ORLEANS, LA	1	29.495	23.749	1.276	0.000	3.414	
NSC OAKLAND, CA	5	77.625	8.731	34.646	1.000	69.624	
PORT HUENEME, CA	32	112.965	7.746	16.493	13.506	8.508	
NATICK, MA	2	12.660	10.200	5.630	2.000	2.500	
BETHESDA, MD	325	1816.754	96.000	190.308	75.900	119.000	
NTC GREAT LAKES, IL	1	21.264	6.001	9.318	0.000	0.185	
SAN DIEGO, CA	1	19.052	7.159	0.000	0.147	1.842	
BETHESDA, MD	5	159.933	11.720	47.210	8.303	19.141	
MANILA, PHILIPPINES	1	10.751	12.248	0.000	0.000	0.848	
CAIRO, EGYPT	5	89.472	8.962	61.072	9.054	1.184	
WASHINGTON, DC	1181	2643.470	194.307	272.993	124.239	242.391	
BAY ST LOUIS, MS	0	103.050	23.230	78.526	17.203	29.000	
SAN DIEGO, CA	2769	1368.100	202.800	201.233	66.238	105.578	
SAN DIEGO, CA	3	79.312	18.417	0.080	7.850	13.747	
GROTON, CT	1	40.514	14.099	0.000	1.315	3.863	
NEWPORT, RI	345	1165.063	204.941	539.518	69.126	100.618	
CHINA LAKE, CA	1127267	2240.910	201.551	2908.456	269.011	149.940	
TOTALS	1132013	10593.318	108.323	4467.659	720.124	889.646	

TABLE 5A. AIR FORCE R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1987

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		TOTALS	INHOUSE	RD&E	INHOUSE	RD&E	TOTAL			
		INHOUSE	RD&E						MIL	CIV	PHD	PROF
AERO PROPULSION LABORATORY	149.911	23.825	147.903	23.825	23.825	57	325	7	23	38	202	
AEROSPACE MEDICAL RESEARCH LABORATORY	56.919	10.895	48.694	10.895	10.895	120	156	8	28	42	71	
ARMAMENT LABORATORY	122.699	40.841	118.701	38.643	38.643	120	379	3	18	84	233	
ASTRONAUTICS LABORATORY	116.431	21.720	110.171	21.720	21.720	157	281	1	22	68	117	
AVIONICS LABORATORY	321.767	32.360	313.657	32.360	32.360	147	554	3	30	132	379	
ENGINEERING AND SERVICES LABORATORY	28.027	2.484	22.706	1.139	1.139	68	38	6	7	60	31	
FLIGHT DYNAMICS LABORATORY	177.331	35.219	167.800	35.109	35.109	168	613	5	37	116	400	
FRANK J. SEILER RESEARCH LABORATORY	3.595	2.143	2.243	2.143	2.143	23	9	13	2	6	3	
GEOPHYSICS LABORATORY	108.335	35.810	103.389	34.876	34.876	117	450	4	95	38	179	
HUMAN RESOURCES LABORATORY	67.710	12.262	57.953	12.241	12.241	191	214	10	39	104	83	
MATERIALS LABORATORY	159.212	17.974	156.356	17.974	17.974	52	299	2	52	46	185	
ROME AIR DEVELOPMENT CENTER	470.944	67.486	379.971	64.072	64.072	206	1056	3	62	148	555	
SCHOOL OF AEROSPACE MEDICINE	44.229	16.731	21.700	12.459	12.459	280	254	44	40	41	61	
WEAPONS LABORATORY	351.535	81.370	325.457	81.349	81.349	580	537	26	62	320	229	
TOTALS	2178.645	394.253	1976.701	2317.291	2317.291	2286	5165	135	517	1243	2728	

TABLE 6A. AIR FORCE R&D LABORATORIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT	
AERO PROPULSION LABORATORY	41	283.893	20.770	349.510	83.357	44.493	
AEROSPACE MEDICAL RESEARCH LABORATORY	30	127.169	61.201	42.117	16.997	36.365	
ARMAMENT LABORATORY	0	123.981	82.385	19.683	0.000	20.164	
ASTRONAUTICS LABORATORY	68345	419.046	86.848	4.780	137.923	32.863	
AVIONICS LABORATORY	200	238.012	14.715	409.889	77.842	132.296	
ENGINEERING AND SERVICES LABORATORY	0	65.620	37.750	49.550	7.100	2.670	
FLIGHT DYNAMICS LABORATORY	76	368.868	204.174	94.319	50.676	52.474	
FRANK J. SEILER RESEARCH LABORATORY	0	19.000	3.000	0.000	1.820	2.507	
GEOPHYSICS LABORATORY	336	395.732	14.821	25.883	12.350	44.404	
HUMAN RESOURCES LABORATORY	5	84.596	79.833	44.428	7.749	122.100	
MATERIALS LABORATORY	15	172.455	4.194	182.734	276.174	71.170	
ROME AIR DEVELOPMENT CENTER	1532	775.837	53.447	170.771	31.202	84.954	
SCHOOL OF AEROSPACE MEDICINE	19575	422.784	30.279	177.459	53.153	28.372	
WEAPONS LABORATORY	90	551.000	110.000	180.000	28.340	96.000	
TOTALS	90245	4047.993	803.417	1751.123	784.683	770.832	

TABLE 7A. DEPARTMENT OF DEFENSE R&D LABORATORIES FACILITY DATA, FY 1987

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				OTHER	REAL PROPERTY	EQUIPMENT
	ACRES	LABORATORY	ADMIN				
ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE	10	61.750	31.057	BETHESDA, MD	24.901	0.000	19.326
TOTALS	10	61.750	31.057		24.901	0.000	19.326

INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT. RUCKER, AL

CDR: COL. DUDLEY R. PRICE

DEP COMMANDER: COL J.D. LAMOTHE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	6.105	7.388
TOTAL INHOUSE RDTE	6.032	7.388
ANNUAL OPERATING COST	3.296	3.311

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	9	22	47
CIVILIAN	67	12	19	48
TOTAL	136	21	41	95

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
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 CREWMEMPERS HEALTH AND PERFORMANCE. PROVIDES TO DEVELOPERS AND USERS OF ARMY SYSTEM, DATA BASES ACQUIRED THROUGH FIELD AND LAB RESEARCH; RSCH ON MEDICAL DEFENSE AGAINST CW AGENTS.

...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; CARDIOPULMO-NARY 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 FABRICATIOAN LAB; ELECTRO-OPTICAL TESTING LAB; MOBILE VISUAL STUDIES LAB; VISUAL NEUROPHYSIOLOGY LAB; SCIENTIFIC AND MEDICAL RESEARCH INFORMATION CENTER; ANALOGUE AND DIGITAL COMPUTER SYSTEM.

INSTALLATION: ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER PICATINNY, NJ

CDR: BG. J. RAFFIANI JR.

TECH DIRECTOR: H. KROSSER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	0.000	0.000
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDTE	328.299	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	88	0	56	32
CIVILIAN	3978	103	2045	1933
TOTAL	4066	103	2101	1965

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
6487	267.806	1013.046	2747.397	4028.249	138.893	190.000

...MISSION

PROVIDE THE US MILITARY AND ALLIES WITH ARMAMENT SYSTEMS OF MAXIMUM EFFECTIVENESS. CONDUCT RESEARCH, DEVELOPMENT, & SYSTEM FOR ASSIGNED MATERIAL. MAINTAIN A STRONG TECH BASE TO TRANSITION ESSENTIAL TECHNOLOGY TO THE DEVELOPMENT & PRODUCTION PROCESS IN SUPPORT OF TRI-SERVICE PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

INSENSITIVE MUNITIONS
SENSE AND DESTROY ARMOR (SADARM)
ADVANCED TANK CANNON SYSTEM (ATACS)
LIQUID PROPELLANTS (LP)
ADVANCE COMBAT RIFLE

...FUNCTIONS/EQUIPMENT/FACILITIES

TWENTY-FIVE MILLION ELECTRON-VOLT BETATRON
DYNAMIC GUN CONTROL FACILITY
ELECTRIC GUN CONTROL FACILITY
FULL SCALE CLIMATIC CONTROL TEST ROOM
HIGH ALTITUDE TEST CHAMBER FACILITY
INTELLIGENT SENSOR BASED ROBOTICS
ONE MILLION VOLT RESOTRON X-RAY SYSTEM
OPTICAL METROLOGY LABORATORY
POWDER GYMNASIATOR
SCIENTIFIC AND ENGINEERING MAINFRAME COMPUTER CENTER
VIDEO TELECONFERENCING CENTER

INSTALLATION: ARMY RESEARCH OFFICE

RSCH TRIANGLE PRK, NC

DIR: DR. ROBERT E. WEIGLE

SCIENCE ADVISOR: DR. GEORGE A. NEECE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	116.492	121.080
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.154	0.096
TOTAL ANNUAL LAB	116.646	121.176
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	3.755	4.172

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	1	1
CIVILIAN	129	45	0	129
TOTAL	131	45	1	130

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
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. ASSES 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 PROPOSAL AND RESEARCH PERFORMANCE

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WHITE SNDS MSL RNG, NM

CDR: COL. TODD D. STONG

TECH DIRECTOR

MR. J. E. MORRIS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	43.024	40.359
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.021	0.020
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	43.045	40.379
TOTAL INHOUSE	25.559	21.359
TOTAL INHOUSE RDTE	25.538	21.339
ANNUAL OPERATING COST	4.093	4.094

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	58	1	2	56
CIVILIAN	403	31	141	262
TOTAL	461	32	143	318

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	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 MATERIEL, 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. ASL PERFORMS ASSESSMENTS OF ATMOSPHERIC IMPACT UPON THE PROPGATION AND OPERATION OF DIRECTED ENERGY (LASER) WEAPONS.

INSTALLATION: AVIATION DEVELOPMENT TEST ACTIVITY

FT. RUCKER, AL

CDR: COL. LAWRENCE KARJALA

TECH DIRECTOR: JIM MCCRORY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	12.188	10.183
TOTAL PROCUREMENT	2.813	3.683
TOTAL O&M	5.704	4.746
TOTAL OTHER	5.688	5.755
TOTAL ANNUAL LAB	26.393	24.367
TOTAL INHOUSE	20.754	18.667
TOTAL INHOUSE RDTE	12.188	10.183
ANNUAL OPERATING COST	8.235	6.579

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	138	0	20	118
CIVILIAN	95	1	26	69
TOTAL	233	1	46	187

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1196	0.000	49.151	130.692	179.843	2.014	45.881

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

AH64A LOGISTICS EVAL
UH-60 HELLFIRE
PROGRESSIVE PHASE MAINT (PPM)
LEAD THE FLEET TESTING
FLIGHT SAFETY PARTS MONITORING

...FUNCTIONS/EQUIPMENT/FACILITIES

TWENTY-FIVE FIXED WINGS & ROTARY WING AIRCRAFT ARE ASSIGNED (7 UH-1, 1 T-42, 4 AH-1S, 1 U-21, 2 CH-47, 3 OH-58, 1 OV-1, 3 UH-60, 2 AH-64, 1 AH-1F) WHICH MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIP OR SUPPLIES APPLICABLE TO THAT A/C SERIES. A MODULAR ENGINE TEST SYS PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENG PERFORMANCE FOR ENGINES UP TO 5000 HP & WT UP TO 2000 LB. ON-SITE DATA PROCESSING & DISPLAY CAP EXISTS WITH REAL TIME PROCESSING, HP3000 ADACS DATA BASE, AN IBM 4361 COMPUTER SYS & A NETWORK OF PC'S. TECH PHOTOGRAPHIC CAP IS AVAIL TO INCL VIDEO AND 16MM INSTRUMENTATION CAMERAS. THE INSTRUMENTATION LAB CAN COLLECT ANALOG & DIGITAL MEASUREMENTS USING 14-TRACK INSTRUMENTATION RECORDERS & DIGITAL CASSETTE RECORDERS. HAS B&W COLOR VIDEO RECORDING CAP, STRIP-CHART RECORDERS, OSCILLOGRAPH, AIRINC 514 CRASH REC & OVER-WATER TESTING CAP.

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB, CA

CDR: COL. ALAN R. TODD

TECH DIRECTOR: MR. JAMES S. HAYDEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	8.040	9.008
TOTAL PROCUREMENT	0.621	0.655
TOTAL O&M	0.354	0.668
TOTAL OTHER	1.806	1.810
TOTAL ANNUAL LAB	10.821	12.141
TOTAL INHOUSE	8.342	10.049
TOTAL INHOUSE RDTE	7.195	8.599
ANNUAL OPERATING COST	1.550	1.590

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	63	0	24	39
CIVILIAN	108	0	44	64
TOTAL	171	0	68	103

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

...MISSION

PRODUCE ENGR FLT TEST DATA ON ACFT PERF HANDLING QUALITIES VIBRTION
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-34
5 JUH-1H.

ACFT MAINTENANCE CAPABILITY.

ACFT MODIFICATION CAPABILITY.

ACFT INSTRUMENTATION CAPABILITY.

CENTRAL ADP/POST-RDAPS COMPUTER FACILITY.

2 MOBILE REAL-TIME DATA ACQUISITION AND PROCESSING SYSTEM (RDAPS)

2 BRONICA, 4 CANON, 5 MINOLTA, 1 PENTAX, 2 POLAROID, 1 CPIGR, 2 SCOPIC,

2 ENLARGERS, 1 DRYER.

INSTALLATION: AVIATION RESEARCH AND TECHNOLOGY ACTIVITY MOFFETT FIELD, CA
 DIR: DR. RICHARD M. CARLSON DEP DIRECTOR: COL J. H. GODFREY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	38.879	46.742
TOTAL INHOUSE RDTE	37.305	44.342
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	8	8
CIVILIAN	354	26	227	127
TOTAL	370	27	235	135

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL	PROP	EQUIP
	LAB	ADMIN	OTHER				
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 MOFFETT 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, TENSIL 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. GAGGIN

DEP DIRECTOR: MR. A. CHARLES MAROTTA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	21.954	19.114
TOTAL PROCUREMENT	12.347	7.171
TOTAL O&M	1.791	2.055
TOTAL OTHER	0.773	0.461
TOTAL ANNUAL LAB	36.865	28.801
 TOTAL INHOUSE	 8.431	 10.747
TOTAL INHOUSE RDTE	4.880	7.411
ANNUAL OPERATING COST	3.892	3.655

PERSONNEL DATA (END OF FY 1987)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	15	0
CIVILIAN	213	5	166	47
TOTAL	228	5	181	47

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2	52.450	13.665	19.100	85.215	0.000	26.685

...MISSION

RESPONSIBLE FOR THAT PORTION OF AVSCOM'S MISSION WHICH PERTAINS TO AVIONICS FROM RESEARCH THRU FIRST-TIME PRODUCTION. THIS ENCOMPASSES: SYSTEMS ARCHITECTURE; AVIONICS HARDWARE (I.E. COMMUNICATION NAVIGATION, COCKPIT INSTRUMENTATION, AIRBORNE COMMAND & CONTROL); 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: DR. JOHN T. FRASIER

DEP DIRECTOR: LTC C. K. GAILEY, III

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	46.791	40.251
TOTAL PROCUREMENT	13.289	17.222
TOTAL O&M	1.796	1.022
TOTAL OTHER	8.672	9.895
TOTAL ANNUAL LAB	70.548	68.390
TOTAL INHOUSE	31.776	45.911
TOTAL INHOUSE RDTE	19.352	21.143
ANNUAL OPERATING COST	0.000	12.059

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	17	2	12	5
CIVILIAN	718	108	325	393
TOTAL	735	110	337	398

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1938	378.000	123.000	151.000	652.000	20.398	72.690

...MISSION

ARMY LEAD LAB FOR BALLISTIC TECHNOLOGY, VULN. VULN REDUCTION, CHARGED PARTICLE BEAM TECH AND LIQUID PROPULSION TECH (GUNS). MAINTAIN WEAPONS ORIENTED FUND. RSCH. PROG. RELATED TO ARMY NEEDS. CONDUCT EXPLORATORY DEV. EFFORTS TO SOLVE MILITARY PROBLEMS AND EVAL. SOLUTION FEASIBILITY.

...CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR WARHEADS AND KINETIC ENERGY PENETRATORS.
BALLISTIC PROTECTION TECHNOLOGY FOR US MATERIEL.
LIQUID PROPULSION TECHNOLOGY (GUNS).
VULNERABILITY ANALYSIS. VULNERABILITY REDUCTION US. THREAT MATERIEL.
MUNITION SURVIVABILITY ANALYSIS AND ENHANCEMENT.

...FUNCTIONS/EQUIPMENT/FACILITIES

LASER DIAGNOSTIC FACILITY FOR PROPELLANT. FLAME ANALYSIS; COMPUTED TOMOGRAPHY FOR BALLISTIC EVENTS; PROPELLANT FRACTURE MECHANICS ANALYSIS FACILITY; INSTRUMENTED INDOOR AERODYNAMIC FLIGHT RANGES FOR PROJECTILES UP TO 8"; THREE DEGREE-OF-FREEDOM FLIGHT SIMULATOR FOR SHELL UP TO 155-MM EXPLOSIVE MECHANICS TEST FACILITY, HIGH EXPLOSIVE CASTING AND PRESSING FACILITY; HIGH ALTITUDE BLAST SPHERE; THERMAL. BLAST SHOCK TUBE TO SIMULATE NUCLEAR EFFECTS; ADVANCED THERMINAL BALLISTIC TEST FACILITY FOR ARMOR AND ANTI-ARMOR RESEARCH; ANECHOIC CHAMBER FOR MM WAVE SENSOR AND SCALE MODEL SIGNATURE RESEARCH; ION BEAM ACCELERATOR; FIELD TEST FAC FOR WARHEAD, PENETRATOR, EXPLOSIVE AND ARMOR RSCH; HIGH SPEED AND SPARK PHOTOGRAPHY; X-RAY CINERADIOGRAPHY; COMPUTER AIDED DESIGN. ENG.; AND CENTRAL SITE AND MINI COMPUTERS WITH 900 REMOTE INTERACTIVE TERMINALS.

INSTALLATION: BELVOIR RD&E CENTER

FT. BELVOIR, VA

CDR: COL. PETER J. CAHILL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	140.233	126.047
TOTAL PROCUREMENT	10.292	40.300
TOTAL O&M	32.994	24.700
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	183.519	191.047
TOTAL INHOUSE	54.634	55.991
TOTAL INHOUSE RDTE	39.504	40.491
ANNUAL OPERATING COST	24.654	25.400

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	59	0	6	53
CIVILIAN	1002	27	414	588
TOTAL	1061	27	420	641

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
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 4 PROGRAM AREAS: MOBILITY/COUNTERMOBILITY, ENERGY, AND LOGISTICS, WHICH LINK WITH ARMY'S COMBAT SPT ENGRG & MINE WARFARE, COMBAT SVC SPT, & SPECIAL OPERATIONS 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 CLEARED LANE MARKING SYSTEM (CLAMS), DECEPTION SYSTEMS, MECHANIZED MINE FLAIL FOR LOW INTENSITY CONFLICT (LIC), AND THE VEHICLE MAGNETIC SIGNATURE (VEMASID) ENGINEERING DEVELOPMENT CONTRACT. FACILITIES INCLUDE A ROBOTICS LABORATORY 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 HANGAR, MOBILE STRESS ANALYSIS VAN, TRUCK STABILITY TILT TABLE, VEHICLE TEST TRACKS, SHOCK AND VIBRATION DYNAMICS SIMULATOR, ENVIRONMENTAL SIMULATOR, RAIL IMPACT TEST FACILITY, MATERIALS RESEARCH LABORATORY, STILL AND 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)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	10.973	11.092
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.093	0.000
TOTAL OTHER	1.238	1.264
TOTAL ANNUAL LAB	12.304	12.356
TOTAL INHOUSE	6.023	5.597
TOTAL INHOUSE RDTE	5.919	5.597
ANNUAL OPERATING COST	2.112	1.949

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	4	17	12
CIVILIAN	91	14	27	64
TOTAL	120	18	44	76

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, TEST, & 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: CENTER FOR CMD, CONTROL, & COMMUNICATIONS

FT. MONMOUTH, NJ

CDR: MG. BILLY M. THOMAS

DIRECTOR:

MR. E. FAMOLARI, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	64.028	43.915
TOTAL PROCUREMENT	16.079	12.210
TOTAL O&M	4.460	808.927
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	84.567	865.052
TOTAL INHOUSE	37.005	34.274
TOTAL INHOUSE RDTE	19.866	22.682
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	7	8
CIVILIAN	440	14	250	190
TOTAL	455	14	257	198

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	62.000	70.000	40.000	172.000	0.000	22.272

...MISSION

CTR FOR C3 SYSTEMS MISSION IS TO PERFORM RSCH DEVL AND ENGR ACTIVITIES TO ADVANCE AND APPLY STATE-OF-THE-ART IN C3 SYSTEMS AND CAPABILITIES, TO PROVIDE TECHNICAL SUPPORT TO PM'S AND OTHER CUSTOMERS, AND TO SUPPORT THE TROOP USERS IN THE FIELD.

...CURRENT IMPORTANT PROGRAMS

INTROD OF SURVIVBL ADAPTIVE DATACOM NETWORKS AND TACT C2 SYS TO FLD CMDS AUTO MAINT AND CONTROL OF ROBUST TAC DATACOM NETWKS AND LOCAL AREA NETWK NEW FIBER OPTIC CAPABILITY FOR REMOTING/DISPERSAL OF CENTRALIZED CP DIGITAL UHF-ECC RADIO WITH FREQ HOPPING ADAPTIVE ANT AND CODEC FUNCTIONS AI RSCH TO SUPPORT CORPS PLANNING/OPERATIONAL CONTROL CAPABILITIES

...FUNCTIONS/EQUIPMENT/FACILITIES

NET RADIO LAB-DEVOTED TO RDTE OF HF AND VHF RADIOS, MODEMS, AND ANCILRY-DEVICES. ACOUSTICS LAB- EQPD WITH ANECHOIC AND REVERBERANT CHAMBERS AND ASSOCIATED AUTOMATED AUDIO TEST AND MEASUREMENT EQPTS. ELECTROMAGNETIC (EMI) LAB-USED TO ASCERTAIN EMI CHARACTERISTICS OF TACTICAL MILITARY SYS DEVELOPMENT. ARTIFICIAL INTEL LABS- TO INVESTIGATE AND DEVELOP TECHNIQS OF AI TO IMPROVE C2. COMM SYSTEMS DESIGN CTR-PROVIDES ENGRG SUPPORT FOR DEVELOPING AND FIELDING COMM SYSTEMS. FIBER OPTICS LAB-DEVELOP, TEST, AND EVALUATE NEW FIBER OPTIC COMPONENTS AND SYSTEMS IN SOLVING ROC AND O&O REQUIREMENTS. C3 SYSTEMS SIMULATION FACILITY-COMPUTER FACIL TO PERFORM SIMULATION OF ARMY COMM SYSTEMS, BOTH CURRENT AND PROPOSED. RAPID CONFIGURATION LAB- PROVIDES RAPID PERFORMANCE CHECKOUT FOR PM'S OF ALTERNATIVE SYSTEMS AND SUB-CONFIGURATIONS.

INSTALLATION: CENTER FOR ELECTRONIC WARFARE

FT. MONMOUTH, NJ

CDR: MG. BILLY M. THOMAS

DIRECTOR:

MR. R. F. GIORDANO

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	58.856	29.243
TOTAL PROCUREMENT	139.974	127.617
TOTAL O&M	4.675	8.452
TOTAL OTHER	100.000	300.000
TOTAL ANNUAL LAB	303.505	465.312
TOTAL INHOUSE	24.159	24.666
TOTAL INHOUSE RDTE	12.548	10.964
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	49	0	4	45
CIVILIAN	343	8	148	195
TOTAL	392	8	152	240

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
106	113.278	36.107	8.189	157.574		6.775	9.500

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

RADAR COUNTERMEASURES TECHNOLOGY
ELECTRONIC SUPPORT MEASURES TECHNOLOGY
ELECTRO-OPTICAL/INFARED COUNTERMEASURES AND WARNING TECHNIQUES
STINGRAY SYSTEM FOR BRADLEY FIGHTING VEHICLE
CAMEO BLUEJAY SELF-PROTECTION SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

A VAX 11/730 COMPUTING SYSTEM IN SIGINT/ESM LAB IS USED TO GREATLY EXPAND THREAT DEPLOYMENT SIMULATION CAPABILITY AND AI COMPUTING FACILITY. A DYNAMIC GROUND TARGET SIMULATOR (DGTS) GENERATES SCENARIOS FOR DEVLPMT AND TESTING OF EW/RSTA SYSTEMS. A RSTA WEAPON LOCATION RADAR SYS ENGRG FACILITY FOR DEVLPMT AND APPLICATION OF TECH FOR DETECTION AND LOCATION OF HOSTILE MORTAR, TUBE ARTIL AND ROCKET WEAPONS ON THE BATTLEFIELD. THE REFLECTION-FREE ANECHOIC CHAMBER SIMULATES RF FREE-SPACE ENVIR, USED FOR REFLECTION MEASMTS OF HDWR AND RECORDS MW AND MM WAVE PATTERNS AND AXIAL RATIOS. EARLE-WAYSIDE TEST AREA T & E OF IR AND NVEO VULNERABILITY, ECM, AND RADIO AND RADAR DF. A TURNTABLE FOR 360 DEGREE MEASMT OF TARGET VEH AND ANT PATTERNS. A RADAR ACQ VAN FOR ACQ OF KU BAND RADAR DATA. A PORTABLE TOWER FOR HOISTING RADAR TO 150 FT FOR MSMT OF ANTENNA PATTERNS.

INSTALLATION: CENTER FOR NIGHT VISION & ELECTRO-OPTICS

FT. BELVOIR, VA

CDR: MG. BILLY M. THOMAS

DIRECTOR:

MR. P. D. TRAVESKY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	98.175	93.078
TOTAL PROCUREMENT	14.660	13.564
TOTAL O&M	4.875	3.773
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	117.710	110.415
TOTAL INHOUSE	31.001	30.206
TOTAL INHOUSE RDTE	25.492	25.469
ANNUAL OPERATING COST	10.110	10.945

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	39	1	6	33
CIVILIAN	469	35	258	211
TOTAL	508	36	264	244

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	30.000	44.473	37.000	111.473	12.244	47.041

...MISSION

PROVIDE TECHNOLOGY AND EQUIPMENT TO PERMIT TARGET ACQUISITION AT NIGHT AS EFFECTIVE AS IN DAY AND THROUGH SMOKE AND ADVERSE WEATHER WHILE AT THE SAME TIME REDUCING THE TASK LOADING OF THE OPERATOR.

...CURRENT IMPORTANT PROGRAMS

SECOND GENERATION HIGH PERFORMANCE IR SENSORS AND FOCAL PLANE ARRAYS
AIDED TARGET RECOGNITION
COUNTERMEASURES LASERS/COUNTER-COUNTERMEASURES DEVICES AND TECHNOLOGY
SENSOR PERFORMANCE MODELING/ANALYSIS AND FIELD EVALUATIONS
PROTOTYPE DEVELOPMENT OF NIGHT VISION AND ELECTRO-OPTIC DEMONSTRATORS

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT AND FACILITIES CAPABILITIES INCLUDE: ATR TERRAIN SIMULATION CHAMBER, HGCOTE GROWTH FACILITY, DETECTOR PROCESSING/EVALUATION FACILITY, LASER MATERIAL CHARACTERIZATION/EVALUATION FACILITY, OPTICAL COUNTER-COUNTERMEASURE TEST AND EVALUATION FACILITY, AIRBORNE SENSOR SYSTEM FOR EVALUATION AND TESTING (ASSET), IMAGE EVALUATION FACILITY, IN-HOUSE SMALL ARMS FIRING RANGE, FORT AP HILL 5000 METER LASER RANGE, AND MANAGEMENT INFORMATION SYSTEM/DIGITAL DATA BASE (MIS/DDB).

INSTALLATION: CENTER FOR SIGNALS WARFARE

WARRENTON, VA

CDR: MG. BILLY M. THOMAS

DIRECTOR:

MR. H. S. HOVEY, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	59.830	21.744
TOTAL PROCUREMENT	21.765	28.375
TOTAL O&M	26.740	5.932
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	108.335	56.051
TOTAL INHOUSE	4.498	5.853
TOTAL INHOUSE RDTE	3.561	4.117
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	46	0	12	34
CIVILIAN	241	3	207	34
TOTAL	287	3	219	68

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	10.595	46.605	7.440	64.640	4.830	11.410

...MISSION

MISSION-TO PROVIDE AN EFFECTIVE SIGNALS INTELLIGENCE/EW MATERIEL CAPABILITY TO US ARMY THROUGH: (1) TECH DEVEL AND PROTOTYPE DEMOS (2) DEVELOPMT PRODUCTION AND FIELDING OF EQPT AND SYSTEMS FOR STRATEGIC NEEDS (3) SUPPORT TO PM-SW, PEO-IEW AND OTHERS IN DEVEL AND PROD OF TACT IEW SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

EH-60A
TRAILBLAZER
VULPINE
AI FUSION RESEARCH
TACJAM

...FUNCTIONS/EQUIPMENT/FACILITIES

US ARMY CENTER FOR SIGNALS WARFARE IS LOCATED AT VINT HILL FARMS STATION WARRENTON, VA IN A FACILITY UNIQUELY SUITED TO ITS MISSION. THE CENTER CONSISTS OF A COMPUTERIZED SIG PRO FACILITY FOR RDE SOFTWARE DEVEL, VERIFICATION, AND VALIDATION, ANTENNA FIELD FOR DESIGN AND TEST OF EQUIP IN REAL-TIME ENVIR. AN OVERSEAS SITE WITH ANTENNA AND LAB SPACE IS AVAIL FOR TEST OF SIG INTERCEPT COLLECTION AND PROC EQPT. COLOCATED AT VHFS ARE PM PERSONNEL, IL SUPPORT SPECS, AND PROD/QA AND TEST TECHS TO PROVIDE FULL RANGE SUP OF RDA AND READINESS ACTIV FOR COMPLEX SYSTEMS. APPROX 15 MANYEARS(MY) ENGRG AND MGMT SUPPORT PROV TO PM-QUICKFIX FOR EH-60A SYS. 2 MY ENGRG DESIGN SUP TO PM PATRIOT FOR COMM ANT MASTS. 10 MY SUP TO PM TRAILBLAZER FOR PROD IMPROV AND MAINT TRAINER. 7 MY TO PM-JTF FOR PROD IMPROV TO TECH CONTROL ANAL CENTER. 30 MY TO NSA AND INSCOM FOR CRYPT EQP

INSTALLATION: CENTER FOR SOFTWARE ENGINEERING

FT. MONMOUTH, NJ

CDR: MG. BILLY M. THOMAS

DIRECTOR:

MR. JAMES SCHELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	0.700	0.900
TOTAL PROCUREMENT	15.500	6.200
TOTAL O&M	14.600	16.100
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	30.800	23.200
TOTAL INHOUSE	7.100	6.800
TOTAL INHOUSE RDTE	0.700	0.900
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	94	0	7	87
CIVILIAN	261	3	116	145
TOTAL	355	3	123	232

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	35.811	71.953	8.007	115.771	0.000	60.911

...MISSION

MISSION OF CENTER FOR SOFTWARE ENGINEERING (CSE) IS TO PROVIDE CENTRALIZED SOFTWARE LIFE CYCLE MGMT, ENGRG, AND SUPPORT OF MISSION CRITICAL DEFENSE SYSTEMS(MCDS) USED IN BATTLEFIELD FUNCTIONAL AREAS SUPPORTED BY CECOM, PROVIDE SOFTWARE TECH DEV, TRANSITION, AND INTEROPER OF BTLFD SYS.

...CURRENT IMPORTANT PROGRAMS

COMM AND IEW SYSTEMS SUPPORT TO PEO/PM SOFTWARE DEVELOPMENT
 MANEUVER CONTROL SYSTEMS SUPPORT TO PEO/PM SOFTWARE DEVELOPMENT
 FIRE SUPPORT SYSTEMS SUPPORT TO PEO/PM SOFTWARE DEVELOPMENT
 DEVELOPMENT OF THE ARMY INTEROPERABILITY TEST NETWORK
 RSRCH IMPROVING SOFTWARE PROD AND RELIAB AND PROGRAMG SUPPORT ENVIRONMTS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE CENTER FOR SOFTWARE ENGINEERING (CSE) SUPPORTS APPROX 150 MCDS FOR USE IN COMM, TACT INTEL AND EW, FIRE SUPPORT AND MANEUVER CONTROL FUNCTIONAL AREAS. THE CSE HAS FACILITIES LOCATED AT FT MONMOUTH, FT SILL, FT LEAVENWORTH AND FT HUACHUCA. INCLUDED IN THE MAJOR HOST EQUIPMENT IN THE CSE FACILITIES IS AN IBM 4341 COMPUTER, SEVERAL DEC VAX SERIES MINI COMPUTERS, 2 DG-MV8000 COMPUTERS AND RESIDENT TARGET MCDS EQUIPMENT. THESE COMPUTER RESOURCES ALLOW THE CENTER TO PROVIDE ANALYSIS, DESIGN, CODING, TEST, AND REPLICATION OF SOFTWARE.

INSTALLATION: CHEMICAL RSCH, DEV AND ENGR CNTR

APG, MD

CDR: BG.PETER D. HIDALGO

TECH DIRECTOR: MR J. J. VERVIER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	136.760	110.649
TOTAL PROCUREMENT	55.618	85.200
TOTAL O&M	13.221	8.700
TOTAL OTHER	2.400	2.500
TOTAL ANNUAL LAB	207.999	207.049
TOTAL INHOUSE	91.416	88.103
TOTAL INHOUSE RDTE	71.282	69.103
ANNUAL OPERATING COST	15.500	16.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	99	2	41	58
CIVILIAN	1160	76	639	521
TOTAL	1259	78	680	579

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3471	734.690	295.919	306.868	1337.477	15.933	70.142

...MISSION

A RSCH, DEV AND ENGR CTR PROFIDING 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 ITL PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS. INCLUDES CHEMICAL PILOT PLANTS, AEROSOL CHAMBER, SMOKE MUNITION FILLING FACILITY, PRODUCTION AND FACILITY DESIGN, CHAMBER FOR STUDIES OF RESPIRATORY PROTECTION DESIGN DRIVERS, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY, SPECIALIZED CHEMICAL AGENT LABS, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNEL, COMPLETE ANALYTICAL CHEMISTRY CAPABILITY (TRACE ANALYSIS), OBSCURANT TEST CHAMBERS FOR TRANSMISSION MEASUREMENTS (UV THRU MICROWAVE), LASER SPECTROSCOPY LABORATORY.

INSTALLATION: COLD REGIONS RESEARCH & ENGINEERING LAB

HANOVER, NH

CDR: COL. C.S. NICHOLS

TECH DIRECTOR: DR. L.E. LINK

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	12.591	14.398
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.668	1.336
TOTAL OTHER	6.946	6.914
TOTAL ANNUAL LAB	21.205	22.648
TOTAL INHOUSE	17.253	18.270
TOTAL INHOUSE RDTE	9.569	10.942
ANNUAL OPERATING COST	4.778	5.571

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	0	14	4
CIVILIAN	277	37	82	195
TOTAL	295	37	96	199

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
31	107.797 31.827 145.698 285.322	16.684 14.207

...MISSION

AS THE ARMY'S COMPREHENSIVE EXPERT ON COLD REGIONS PROBLEMS THE COLD REGIONS R&E LABORATORY INVESTIGATES BOTH THE NATURE AND EFFECTS OF COLD AND WINTER ON MILITARY ACTIVITIES WHERE WINTER & COLD REPRESENT A SEVERE PROBLEM. MANAGE ARMY COLD REGIONS INFORMATION CENTER.

...CURRENT IMPORTANT PROGRAMS

COMBAT OPERATIONS: EFFECTS OF WINTER ENVIRONMENT ON ARMY OPERATIONS
IMPACT OF WINTER ENVIRONMENT ON NEW WEAPON SYSTEMS AND OTHER MATERIEL
EFFECTS OF COLD ON CONSTRUCTION, OPERATION & MAINT.-MILITARY FACILITIES.
IMPROVE WINTER NAVIGATION
DEVELOP ENVIRONMENTAL REMOTE SENSING APPLICATIONS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS WHICH CAN BE OOPERATED TO -50F, AN ICE ENGINEERING LAB FOR LARGE SCALE ICE MODELING EXPERIMENTS, AN ELECTRON MICROSCOPE LAB, A SOILS PROC. LAB, A WASTEWATER TREATMENT RSCH FAC. A FROST EFFECTS LAB WHERE 6 TO 8 FREEZE/THAW CYCLES CAN BE CONDUCTED IN ONE YEAR, TRACE CHEMICALS ANALYSIS LABS INCLUDING A CLEAN ROOM COMPLES, 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 OVERA 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 ADVISOR: MR. W. J. HASLEM

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	7.166	7.768
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.928	8.237
TOTAL ANNUAL LAB	13.094	16.005
TOTAL INHOUSE	7.166	7.768
TOTAL INHOUSE RDTE	7.166	7.768
ANNUAL OPERATING COST	5.839	5.104

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	253	0	32	221
CIVILIAN	32	0	14	18
TOTAL	285	0	46	239

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
147555	0.000	35.384	102.280	137.664	10.366	13.425

...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 & GUIDANCE TO GOVT AGENCIES & PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

COLD REGION SPECIAL STUDY TEST OF SQUAD AUTO WEAPON (SAW)
DT2 OF AIR VOLCANO
SNOW AND ICE TERRAIN EQUIPMENT (SITE)
DT2 TACTICAL EXPLOSIVE SYSTEM (TEXS)
HEATER MODIFICATION FOR HMMWV

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITY CAN ACCOMMODATE A WIDE VARIETY & LARGE NUMBER TEST AT ANY ONE TIME. SEVERAL VEH TEST COURSES & EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSERVED RANGE, LARGE RESTRICTED AIR SPACE WITH UNRESTRICTED FIRING TO 10,000FT 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 & MAINT FOR MAJORITY OF EQUIP INCL LIMITED ENGR SUPPORT. ARMY AVN/USAF ACFT CAN BE ARRANGED. CALIBRATION AND METEOROLOGICAL SPT AVAIL. 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 DIRECTOR: MR. JAMES C. KELTON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	67.780	71.169
TOTAL PROCUREMENT	58.021	60.922
TOTAL O&M	5.896	6.191
TOTAL OTHER	8.146	8.552
TOTAL ANNUAL LAB	139.843	146.834
TOTAL INHOUSE	115.397	121.165
TOTAL INHOUSE RDTE	55.647	58.429
ANNUAL OPERATING COST	0.297	0.311

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	255	0	32	223
CIVILIAN	1022	7	338	684
TOTAL	1277	7	370	907

ACRES	SPACE AND PROPERTY 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	58.880	

...MISSION
PLAN, CONDUCT & RPT TESTS ON WPNS, WPNS SYS, TRACKED & WHEELED VEH, FIRE CONTROL & TGT ACQUISITION EQUIP, AMMO * MUNITIONS COMPONENTS, TRP SPT EQUIP & AR PLATE FOR ALL AMC INSTALL & ACTIVITIES. PROVIDE SVC SPT TO APG ELEMENTS & SPT COMMANDS.

...CURRENT IMPORTANT PROGRAMS
VULNERABILITY TESTING (BFVS)
ABRAMS TANK SYSTEM (M1A1)
BRADLEY FIGHTING VEHICLE SYSTEM (BFVS)
ABRAMS TANK SYSTEM (M1)
120MM MORTAR SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES
TEST AREA 75K ACRES. 22500M RANGE TO LAND IMPACT. 26000M RANGE TO WATER IMPACT. 41 MILES OF VEH COURSES INCL 27 TEST/OBSTACLE CRS & ENVIRONMENTAL/COND EQUIP. CHAMBERS FOR SUBJECTING EQUIP TO SALT SPRAY OR SOLAR RADN. ISOLATED VIBRATION TEST FAC FOR SHAKING EXPLO EQUIP SIMULTANEOUSLY W/TEMP COND FAC F/CONTROLLED TESTS OF ELEC CONTROL & GUID EQUIP. FREQ SOURCE FOR TESTING ALL TYPES OF MAT IN HIGH INTENSITY ELEC MAGNETIC RADN. FAC F/TEST OF AR PLATE. VEL & TGT EQUIP IS AVAIL F/OBSERVATION DURING RAPID FIRE OF RKT TRACK F/CONTROLLED TERMINAL BALLISTIC TEST. FAC AVAIL F/TEST OF SPECIAL ELEC & FIRE CONTROL EQUIP & RELATED SYS COMPONENTS. PULSE RADN FAC AVAIL FOR RADN TEST OF NUCLEAR EFFECTS. FIVE INSTRUMENTED RANGES FOR VULNERABILITY TESTING OF GROUND BASED SYSTEMS.

INSTALLATION: CONSTRUCTION ENGINEERING RESEARCH LAB

CHAMPAIGN, IL

CDR COL. NORMAN C. HINTZ

TECH DIRECTOR: DR. LOUIS R. SHAFFER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	34.415	37.856
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	10.835	11.918
TOTAL OTHER	1.494	1.643
TOTAL ANNUAL LAB	46.744	51.417
TOTAL INHOUSE	27.460	30.206
TOTAL INHOUSE RDTE	20.648	22.713
ANNUAL OPERATING COST	3.600	3.960

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	0	3	0
CIVILIAN	212	44	144	68
TOTAL	215	44	147	68

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	0.015	12.000

...MISSION

PLAN AND EXECUTE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGRG DESIGN, CONSTRUCTION (INCLUDING ENVIRONMENTAL QUALITY RQMTS), OPERATIONS AND MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY & THE NATION AT LEAST COST AND TO DISSEMINATE THOSE RESULTS.

...CURRENT IMPORTANT PROGRAMS

ENVIRONMENT QUALITY MGMT & SYSTEMS & TRAINING LANDS RESTORATION
ENERGY CONSERVATION AND SYSTEMS FOR MILITARY INSTALLATIONS
IMPROVED SYSTEMS FOR RPMA OF MILITARY FACILITIES
MATERIALS SYSTEMS FOR LARGE STRUCTURES IN SPACE
COMPUTER AIDED DESIGNS FOR PLANNING, DESIGN, AND MANAGEMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

CONTROLLED ENV CHAMABERS; ION PLATING UNIT; 1000000# CLOSED-LOOP MTL SYSTEM; SCANNING ELECTRON MICROSCOPE; SEMI-AUTO WELDING EQMT; BIAXIAL SHOCK TEST MACHINE; NDT FACILITY; VACUUM INDUCTION FURNACE; METALLOGRAPHIC SAMPLE PREP, X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYSTEM; DYNAMIC TENSION ANALYSIS SYSTEM; DIGITAL RECORDING ANALYSIS EQMT; AND HVAC TEST CAPABILITIES INCLUDING SYSTEMS BLDG METHODS AND TECHNIQUES; ENERGY SYSTEMS DESIGN; ENERGY CONSERVATION AND ALTERNATE FUELS; HARDENED FACILITIES ANALYSIS ENVIRONMENTAL QUALITY MGMT; POLLUTION CONTROL ABATEMENT; TRAINING AREA MAINTENANCE, MGMT AND RESTORATION; MOBILIZATION FACILITIES; EMP RESEARCH; PHYSICAL SECURITY; AND CORROSION CONTROL.

INSTALLATION: DUGWAY PROVING GROUND

DUGWAY, UT

CDR: COL. DAVID A. NYDAM

TECH DIRECTOR: DR. L. L. SALOMON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	57.966	57.100
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.670	3.264
TOTAL OTHER	24.409	20.594
TOTAL ANNUAL LAB	84.045	80.958
TOTAL INHOUSE	61.280	35.813
TOTAL INHOUSE RDTE	55.152	26.527
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	146	0	52	94
CIVILIAN	799	21	96	703
TOTAL	945	21	148	797

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
803364	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, INSTR GRIDS FOR CML CML-BIO & SMOKE/OBSCUR: ARTY RG FOR CONVL & CML METAL PARTS.

...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 MUNITION DEVELOPMENT/ACCEPTANCE AND PRODUCTION TESTING
CONDUCTS ENVIRONMENTAL STUDIES TO SUPPORT DPG AND ARMY PROGRAMS

...FUNCTIONS/EQUIPMENT/FACILITIES

BALLISTIC & DISSEM TEST: W/FIELD SMPL, SMPL MASS ANAL, MET (AUTO DATA ACQ & MESOMET NETWKSYS. 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 EQUIPPED 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 DIRECTOR: MR. G. H. BANISTER, JR.

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	18.967	23.183
TOTAL PROCUREMENT	4.232	5.172
TOTAL O&M	3.300	4.034
TOTAL OTHER	25.319	30.948
TOTAL ANNUAL LAB	51.818	63.337
TOTAL INHOUSE	32.156	39.303
TOTAL INHOUSE RDTE	11.949	14.605
ANNUAL OPERATING COST	15.781	9.828

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	600	0	54	546
CIVILIAN	229	1	93	136
TOTAL	829	1	147	682

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		2.500

...MISSION

PLAN, CONDUCT, EVALUATE AND REPORT ON DEVELOPMENT AND OTHER ENGINEERING. LAB-TYPE TEST 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
GUARDRAIL/COMMON SENSOR
PLRS/JTIDS HYBRID (PJH)
JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)
MOBILE SUBSCRIBER EQUIPMENT (MSE)

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT TEST 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.

INSTALLATION: ELECTRONIC TECHNOLOGY & DEVICES LAB

FT. MONMOUTH, NJ

DIR: DR. C.G. THORNTON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	44.430	44.998
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.794	1.607
TOTAL OTHER	4.982	24.219
TOTAL ANNUAL LAB	51.206	70.824
TOTAL INHOUSE	4.982	24.219
TOTAL INHOUSE RDTE	14.099	16.628
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	318	36	102	216
TOTAL	319	36	103	216

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	92.040	47.000	2.000	141.040	34510.700	26000.000

...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 ELECTRONIC 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, DIAGNOSTIC & COMPUTER CAPABILITIES & SPECIAL EQUIP FOR COMPONENT & SUBSYSTEM R&D

INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA

CDR/DIR:COL. ALAN A. LAUBSCHER

TECH DIRECTOR: MR. W. E. BOGE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	63.127	82.070
TOTAL PROCUREMENT	0.022	0.000
TOTAL O&M	4.223	4.881
TOTAL OTHER	0.607	0.599
TOTAL ANNUAL LAB	67.979	87.550
TOTAL INHOUSE	18.215	23.336
TOTAL INHOUSE RDTE	15.617	19.780
ANNUAL OPERATING COST	5.017	7.395

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	15	0
CIVILIAN	324	21	184	140
TOTAL	339	21	199	140

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	90.722	7.000	13.300	111.022	14.200	14.073

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SUPPORT TO ARMY SPACE PROGRAM
DIGITAL TOPOGRAPHIC SUPPORT SYSTEM
AIRLAND BATTLEFIELD ENVIRONMENT
TERRAIN ANALYSIS PRODUCTION
SUPPORT TO 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 1150/1170 AND DEC VAX MODELS 750/780/785. OTHER SPECIALIZED EQUIPMENT INCLUDE COMTALS, PD5 DIGITAL AUTOMATED MICRODENSITOMETER AND PRECISION MENSURATION EQUIPMENT.

INSTALLATION: ENGINEER WATERWAYS EXPERIMENT STA

VICKSBURG, MS

CDR: COL. D.G. LEE

TECH DIRECTOR: DR. R. W. WHALIN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	58.358	61.520
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.111	1.980
TOTAL OTHER	47.812	51.054
TOTAL ANNUAL LAB	108.281	114.554
TOTAL INHOUSE	90.316	95.783
TOTAL INHOUSE RDTE	40.864	43.249
ANNUAL OPERATING COST	14.333	17.300

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	10	1	9	1
CIVILIAN	1607	123	559	1048
TOTAL	1617	124	568	1049

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	49.321	54.736

...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, ENVIRON. & STRUCT PROBS R&D OF CEMENT MATLS; MASS/STRUCT. CONC; COMP. STRUCT. ENG. CONST. METHODS. R&D OF NEW PAVEMENT & FOUND. DESIGN; 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 CONTAINS BLDGS, TEST SITES, SPECIAL AND OTHER PLANT SUPP EQ INHOUSE & AT OTHER LEASED AREAS. TOTAL FAC. 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, ELECTROBEAM MICROSCOPE, LARGE SCALE SCIENTIFIC COMP, TECH LIBRARY, PRINTING PLANT. IN ASSOCIATION WITH MSU, LSU, TAMU A GRADUATE LEVEL TRAINING INST. WAS ESTABLISHED INHOUSE.

INSTALLATION: HARRY DIAMOND LABORATORIES

ADELPHI, MD

DIR: DONALD B. DINGER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	129.501	120.488
TOTAL PROCUREMENT	48.398	16.669
TOTAL O&M	3.590	3.481
TOTAL OTHER	7.959	3.519
TOTAL ANNUAL LAB	189.448	144.157
TOTAL INHOUSE	72.769	51.329
TOTAL INHOUSE RDTE	54.964	42.784
ANNUAL OPERATING COST	10.600	9.500

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	2	1	2
CIVILIAN	679	50	379	300
TOTAL	682	52	380	302

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2316	503.364	12.053	121.717	637.134	54.460	60.996

...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 EQUIPMENT 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.

INSTALLATION: HUMAN ENGINEERING LABORATORY

APG, MD

DIR: DR. JOHN D. WEISZ

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	29.252	27.000
TOTAL PROCUREMENT	0.270	0.150
TOTAL O&M	0.549	0.500
TOTAL OTHER	0.025	0.050
TOTAL ANNUAL LAB	30.096	27.700
TOTAL INHOUSE	15.427	16.525
TOTAL INHOUSE RDTE	14.783	15.400
ANNUAL OPERATING COST	5.310	5.823

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	35	4	9	26
CIVILIAN	174	15	109	65
TOTAL	209	19	118	91

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
72	111.524	7.056	21.400	139.980	12.500	20.467

...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING.
 PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROGRAMS SPONSORED BY AMC. SERVE AS AMC LEAD AGENCY FOR ROBOTICS IN AN ENVIRONMENT OTHER THAN MANUFACTURING.

...CURRENT IMPORTANT PROGRAMS

ROBOTICS/LOGISTICS RED/AI
 HFE SUPPORT TO ARMY VEHICLES/WEAPON SYSTEMS
 COMMAND-CONTROL-COMMUNICATIONS-COMPUTERS
 INDIVIDUAL WEAPONS/PROTECTIVE EQUIPMENT
 SOLDIER PERFORMANCE BASIC RESEARCH

...FUNCTIONS/EQUIPMENT/FACILITIES

COMMAND POST EXERCISE FACILITY
 ACE COMPUTER FACILITY
 FIRE CONTROL RESEARCH FACILITY
 DATA ACQUISITION & BIOTELEMETRY SYSTEM
 ACOUSTICAL AND ANECHOIC CHAMBER REVERBERANT ROOM
 HELFAST LOGISTICS TESTING FACILITIES
 MOBILITY/PORTABILITY COURSE
 SMALL ARMS TEST FIRING RANGE
 WOOD AND METAL WORKING SUPPORT FACILITY
 HUMAN FACTORS HOWITZER TEST BED
 OCULOMETER/EYE MOVEMENT FACILITY
 INDOORS SMALL ARMS RANGE

INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, DC

CDR: COL. HAROLD E. PLANK

SCIENTIFIC DIR: DR. G. C. BATTISTONE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	2.263	3.050
TOTAL INHOUSE RDTE	2.263	3.050
ANNUAL OPERATING COST	0.919	0.968

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	58	9	25	33
CIVILIAN	18	2	2	16
TOTAL	76	11	27	49

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

CHIEF, LAB DIV: DR. ARTHUR D. MASON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	4.616	3.697
TOTAL INHOUSE RDTE	3.450	3.345
ANNUAL OPERATING COST	1.487	1.447

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	155	17	39	116
CIVILIAN	78	6	19	59
TOTAL	233	23	58	175

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	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 IMMUNOCOMPETENCE
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 MIOCHEMISTRY. MAINTAINS AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP, COMPUTER FACILITY AND MEDICAL LIBRARY.

INSTALLATION: LETTERMAN ARMY INSTITUTE OF RESEARCH

PRESIDIO, SF, CA

CDR: COL. EDWIN S. BEATRICE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	11.946	14.297
TOTAL INHOUSE RDTE	11.144	13.497
ANNUAL OPERATING COST	5.965	6.879

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	142	38	63	79
CIVILIAN	99	20	38	61
TOTAL	241	58	101	140

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF 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 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 PROTECTIN 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 SPECTOMETRY, 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 FRACTION-ATION, ETC.

INSTALLATION: MATERIALS TECHNOLOGY LABORATORY

WATERTOWN, MA

CDR: MAJ. MELVIN E. ADAMS

TECH DIRECTOR: DR. E. S. WRIGHT

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	48.402	42.836
TOTAL PROCUREMENT	0.111	0.062
TOTAL O&M	4.996	4.198
TOTAL OTHER	1.166	1.292
TOTAL ANNUAL LAB	54.675	48.388
TOTAL INHOUSE	1.166	1.292
TOTAL INHOUSE RDTE	21.337	28.708
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	21	0	21	0
CIVILIAN	588	74	196	392
TOTAL	609	74	217	392

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
48	424.773	42.010	22.133	488.916	27.132	4.543

...MISSION

MANAGE & CONDUCT THE ARMY'S MATERIALS RESCH & DEVELOP PGM. SUPPORT AMC SUBORD CMDS THROUGH DEVELOPMENT OF NEW & IMPROVED MATERIALS/DESIGN, PROTOTYPES, LIMITED PROD & MANUFACTURE OF WEAPON SYS COMPONENTS & FAILURE ANALYSIS OF ARMY SYSTEMS. ARMY'S CENTER OF EXCEL FOR COMPOSITE MATLS. LEAD LAB FOR MATLS, STRUCTURAL INTEGRITY, SOLID MECH, MATL TESTING & ARMOR.

...CURRENT IMPORTANT PROGRAMS

COMPOSITE IFV HULL TECHNOLOGY DEMONSTRATION
OXYNITRIDE GLASS FIBERS
STEEL RESEARCH
SHS - SELF-PROPAGATING HIGH TEMPERATURE SYNTHESIS
SUPERCONDUCTIVITY

...FUNCTIONS/EQUIPMENT/FACILITIES

ION IMPLANTATION FACILITY
DU/Be METALS PROCESSING FACILITY
2 MeV X-RAY RADIOGRAPHY FACILITY
COMPOSITES PROCESSING FACILITY
BONDING/ADHESIVES PROCESSING LAB
MATERIALS CHARACTERIZATION FACILITY
DETONICS FACILITY
GAS GUN IMPACT TEST FACILITY
BALLISTICS RANGES
ROBOTICS/AUTOMATED CONTROL LAB. METAL PRIMARY PROCESSING FACILITY
MECHANICAL TESTING LAB. CERAMIC DEVELOPMENT & EVALUATION LAB.
SURFACE ENGINEERING LAB.

INSTALLATION: MATERIEL SYSTEMS ANALYSIS ACTIVITY

APG, MD

DIR: MR. KEITH A. MYERS

DEP DIRECTOR: COL R. E. HULL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	0.247	32.182
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	5.132
TOTAL OTHER	0.000	16.660
TOTAL ANNUAL LAB	0.247	53.974
TOTAL INHOUSE	0.247	35.620
TOTAL INHOUSE RDTE	0.246	16.178
ANNUAL OPERATING COST	0.247	3.584

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	10	18
CIVILIAN	437	16	317	120
TOTAL	465	16	327	138

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

DEVELOP FOR ARMY A BASIS OF INFORMATION AND UNDERSTANDING, PRIMARILY CONCERNING SYSTEM PERFORMANCE, EFFECTIVENESS, RELIABILITY, SUPPORT AND INTEGRATION IN TERMS OF CAPABILITIES AND LIMITATIONS LEADING TO DECISIONS WHICH PROVIDE THE ARMY WITH THE PROPER MATERIEL.

...CURRENT IMPORTANT PROGRAMS

ABRAMS TANKS SYSTEM - MIAI
SINGLE CHANNEL GROUND AND AIR RADIO SUBSYSTEM - SINGCARS
REMOTELY PILOTED VEHICLE - RPV
BRADLEY FIGHTING VEHICLE SYSTEM - BFVS
MANEUVER CONTROL SYSTEM - MCS

...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 ON LIFE CYCLE SURVEILLANCE PROGRAMS FOR MATERIEL SYSTEMS IN INVENTORY; PROVIDING WEAPON SYSTEM EFFECTIVENESS ESTIMATES FOR COST AND OPERATING EFFECTIVENESS ANALYSIS; PROVIDING SYSTEMS ANALYSIS SUPPORT TO AMC MAJOR SUBORDINATE COMMANDS, PROGRAM EXECUTIVE OFFICERS, DA STAFF AND PROJECT/PRODUCT MANAGERS; MAINTAINING DIRECT CONTACT WITH MATERIEL USERS IN THE FIELD; SERVING AS THE AMC FIELD ACTIVITY FOR ADMINISTERING THE JOINT TECHNICAL COORDINATING GROUP FOR MUNITIONS EFFECTIVENESS (JTCCG/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 (MILLIONS)	
	1987 (Actual)	1988 (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	5.163	4.387
TOTAL INHOUSE RDTE	4.997	4.387
ANNUAL OPERATING COST	1.413	1.329

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	10	11	12
CIVILIAN	33	5	8	25
TOTAL	56	15	19	37

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
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 (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	8.298	8.190
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.353	0.695
TOTAL OTHER	3.118	3.300
TOTAL ANNUAL LAB	11.769	12.185
TOTAL INHOUSE	7.557	8.127
TOTAL INHOUSE RDTE	7.226	7.432
ANNUAL OPERATING COST	7.557	8.127

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	60	23	24	36
CIVILIAN	181	1	31	150
TOTAL	241	24	55	186

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	0.000

...MISSION

DEVELOPMENT OF MEDICAL DEFENSE AGAINST BIOLOGICAL WARFARE
 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

...FUNCTIONS/EQUIPMENT/FACILITIES

SERVES AS ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL DEPARTMENTS

INSTALLATION: MEDICAL RESEARCH INST OF CHEMICAL DEFENSE APG, MD

CDR: COL. JOSEPH C. DENNISTON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	28.178	32.652
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.091	0.050
TOTAL OTHER	3.818	3.950
TOTAL ANNUAL LAB	32.087	36.652
TOTAL INHOUSE	15.470	16.850
TOTAL INHOUSE RDTE	15.375	16.800
ANNUAL OPERATING COST	6.120	6.630

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	85	26	20	65
CIVILIAN	158	22	52	106
TOTAL	243	48	72	171

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

...MISSION

FUNDAMENTAL 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 EFFICIENCY
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
RADIOSCOTOPES, 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 RESEARCH INST OF INFECTIOUS DIS.

FT. DETRICK, MD

CDR COL. DAVID L. HUXSOLL

DEP FOR SCIENCE:DR. M. A. CHIRIGOS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	22.169	25.199
TOTAL INHOUSE RDTE	21.609	24.725
ANNUAL OPERATING COST	9.665	5.986

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	293	47	33	260
CIVILIAN	187	38	61	126
TOTAL	480	85	94	386

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADM'N	OTHER	TOTAL	REAL PROP	EQUIP
388	104.136	26.618	205.841	336.595	21.103	20.575

...MISSION

DEVELOPMENT OF SYSTEMS FOR RAPID IDENTIFICATION AND DIAGNOSIS OF POTENTIAL BW AGENTS. 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 ANTITOXEN
SUCCESSFUL ANTIVIRAL DRUG CLINICAL TRIALS
DEVELOPMENT OF VACCINES AGAINST POTENTIAL BW AGENTS
RISK ASSESSMENT OF MILITARY IMPORTANT VIRUSES AND THEIR VECTORS

...FUNCTIONS/EQUIPMENT/FACILITIES

MEDICAL RESEARCH CONDUCTED IN TWO BUILDINGS PROVIDING 307,000SQFT AND CONTAINING 23 MODERN 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 RESEARCH, DEV, AND ENGR CNTR

HUNTSVILLE, AL

CDR: MG. THOMAS D. REESE

TECH DIRECTOR: DR. W. C. MCCORKLE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	217.641	289.662
TOTAL PROCUREMENT	43.364	54.500
TOTAL O&M	27.786	42.012
TOTAL OTHER	2.653	3.947
TOTAL ANNUAL LAB	291.444	390.121
TOTAL INHOUSE	99.278	105.270
TOTAL INHOUSE RDTE	54.393	68.056
ANNUAL OPERATING COST	23.552	29.495

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	53	1	19	34
CIVILIAN	1305	71	745	560
TOTAL	1358	72	764	594

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
15000	0.868 0.322 0.210 1.400	240.000 302.000

...MISSION

PROVIDE SUPPORT FOR PROJECT MANAGED SYSTEMS; MANAGE AND CONDUCT RESEARCH EXPLORATORY AND ADVANCED DEVELOPMENT FOR MISSILES, ROCKETS, DIRECTED ENERGY WEAPONS AND UNMANNED AERIAL VEHICLES; PROVIDE TECHNICAL SOLUTIONS TO ARMY'S CLOSE COMBAT, FIRE SUPPORT, AND AIR DEFENSE SYSTEM NEEDS AND DEVELOP TECHNOLOGY FOR FUTURE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

PRECISION DEEP ATTACK MISSILE SYSTEM (PDAMS)
TELEOPERATED MOBILE ANTIARMOR PLATFORM (TMAP)
MULTI-ROLE SURVIVABLE RADAR (MRSR) DEVELOPMENT
KINETIC ENERGY MISSILE DEVELOPMENT
OPTICAL PHASE CONJUGATION DYE LASER DEMONSTRATION

...FUNCTIONS/EQUIPMENT/FACILITIES

THE MISSILE RD&E CENTER IS EQUIPPED TO STUDY PROBLEMS IN PROPULSION, AERODYNAMICS, GUIDANCE & CONTROL, STRUCTURES, ADVANCED SENSORS, & MISSILE SYSTEM SIMULATION. THE MAJOR FACILITY IS MCMORROW LAB WHICH HOUSES THE MAJORITY OF THE CENTER. SOME UNIQUE FACILITIES ARE: ADVANCE SIMULATION CENTER; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY 3 ENVIRONMENTAL EFFECTS SIMULATORS; MISSILE COMPUTER SOFTWARE/HARDWARE CENTER; LIGHTING FACILITY; ARMY MISSILE OPTICAL RANGE, THE CENTER MAINTAINS & OPERATES 7 MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC, ENVIRONMENTAL, & FUNCTIONAL TESTING. THE CENTER ALSO UTILIZES STATE-OF-THE-ART FACIL & EQUIP SUCH AS LASER TRACKERS & ELECTRO-MAGNETIC RADAR SENSORS. THE CENTER PERFORMS AS ARMY LEAD CENTER IN GUIDANCE & CONTROL/TERMINAL HOMING TECHNOLOGY. ACT AS AMC LEAD FOR SMART MUNITIONS. SMOKE CHARACTERIZATION FACIL IS AVAIL.

INSTALLATION: NATICK RESEARCH, DEVELOPMENT & ENGR CNTR

NATICK, MA

CDR: COL. CLINTEN A. HODDER

TECH DIRECTOR: MR. EDWARD F. LEVELL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1986 (ACT+EST)
TOTAL RDTE	60.547	53.523
TOTAL PROCUREMENT	7.680	7.500
TOTAL O&M	20.713	13.504
TOTAL OTHER	3.569	3.673
TOTAL ANNUAL LAB	92.509	78.200
TOTAL INHOUSE	46.516	46.562
TOTAL INHOUSE RDTE	31.976	34.278
ANNUAL OPERATING COST	13.050	11.499

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	98	7	29	69
CIVILIAN	934	63	318	616
TOTAL	1032	70	347	685

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
174	414.395	58.018	338.579	810.992	29.878	2.429

...MISSION

ACCOMPLISH R&D IN PHYS AND BIOL SCI AND ENGR TO MEET MIL NEEDS IN CLO AND PERS EQUIP; AIRDROP; FIELD SHELTERS AND EQUIPAGE; FIELD ORG EQUIP; RATIONS/FOOD SYS; CONTAINERS AND PACKAGING. PERF ILS FUNC. ENG SPT TO IDLA AND GSA PROCUREMENT.

...CURRENT IMPORTANT PROGRAMS

INTEGRATED PROTECTION FOR IND SOLDIER FROM CHEM, BALSTC, LASER, ETC. THREAT LIGHTEN THE SOLDIER'S LOAD
NUCLEAR HARDENED SHELTERS AND CHEMICALLY PROTECTED TENTAGE SYSTEMS
ADVANCED AIRDROP SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

BACTERIOLOGY LAB EQUIP FOR INVES OF PATHOGENIC MICROORGANISMS; HIGH RESOLUTION MASS SPECTROMETER FOR ANAL OF VOLATILE CPDS; 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 FAC INCL OUTDOOR FIRE PIT; AIRCRAFT ROLLER CONVEYER TEST FAC; DROP TEST FAC; 40X40 FT RAINCOURT; FOOD PROC PLANT; FOOD SYS EQUIP LAB; EXPERIMENTAL KITCHEN; SENSORY EVAL LAB; HORIZONTAL IMPACT TEST MACHINE; IBM 4381 AND IBM 4341 FOR MAINFRAME DATA PROC, PRIME 9955II FOR COM-AIDED DESIGN AND ENGR, PRIME 2250 COMP W/PERIPHERAL EQUIP FOR SENS ANAL AND FOOD TEST, AND SPERRY 5000 INSTALL NETWK CONTRL.

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

CDR: COL. JON W. BLADES

TECH DIRECTOR: DR. EDGAR M. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	64.162	63.459
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	6.554	4.720
TOTAL OTHER	1.309	1.574
TOTAL ANNUAL LAB	72.025	69.753
TOTAL INHOUSE	22.962	23.690
TOTAL INHOUSE RDTE	22.540	23.343
ANNUAL OPERATING COST	8.924	11.617

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	30	2	24	6
CIVILIAN	313	167	71	242
TOTAL	343	169	95	248

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	0.752 0.870

...MISSION

TO MAXIMIZE COMBAT EFFECTIVENESS THROUGH RESEARCH IN THE ACQUISITION DEVELOPMENT, TRAINING, AND UTILIZATION OF SOLDIERS IN MILITARY SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

PROTOTYPE ENLISTED PERSONNEL ALLOCATION SYSTEM (EPAS)
DEVELOPED RECOGNITION-PRIME DECISION MAKING MODEL
UNDERSTANDING ROLE OF SYSTEMIC VS MEASUREMENT ERROR
MODEL OF THE ROLE OF FEEDBACK IN MOTOR LEARNING
ARMY COLLEGE FUND COST ANALYSIS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE PRINCIPLE ARMY AGENCY CONDUCTING SOLDIER-RELATED RESEARCH AND DEVELOPMENT. CONSISTS OF THREE RESEARCH LABORATORIES AND A BASIC RESEARCH OFFICE. THE LABORATORIES ARE COMPRISED OF TECHNICAL AREAS SELECTION AND CLASSIFICATION; SPECIAL SELECTION; PERSONNEL UTILIZATION; MANPOWER AND PERSONNEL POLICY; EXECUTIVE DEVELOPMENT; MANPRINT COORDINATION MANNED SYSTEM; TECHNOLOGIES FOR SKILL ACQUISITION AND RETENTION AUTOMATED INSTRUMENTAL SYSTEMS; LEADERSHIP AND MOTIVATION AND ALSO FIELD UNITS AND SCIENTIFIC COORDINATION OFFICES LOCATED AT PRESIDIO OF MONTEREY; FT BENNING; FT KNOX; FT RUCKER; FT BLISS; FT HOOD; FT LEAVENWORTH; ORLANDO; FT HUACHUCA; OTEA; AVSCOM; AND BOISE. IN-HOUSE EXPERIMENTAL FACILITIES LABORATORY AND COMPUTER TERMINAL AREA PERMITTING REALTIME EXPERIMENTATION, GAMING, AND SIMULATION.

INSTALLATION: RSCH INST OF ENVIRONMENTAL MEDICINE

NATICK, MA

CDR: COL. DAVID D. SCHNAKENBERG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	6.369	6.806
TOTAL INHOUSE RDTE	6.324	6.806
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	72	17	27	45
CIVILIAN	81	27	32	49
TOTAL	153	44	59	94

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

...MISSION

CONDUCTS RESEARCH TO DETERMINE THE EFFECTS OF TEMPERATURE, ALTITUDE, WORK, CHEMICAL DEFENSE, AND MILITARY NUTRITION ON THE SOLDIER'S LIFE PROCESSES, PERFORMANCE, AND HEALTH.

...CURRENT IMPORTANT PROGRAMS

EVALUATED COMBAT FIELD FEEDING SYSTEM. CONDUCTED 45DAY SIMULATED ASCENT TO MT EVEREST IN HYPOBARIC CHAMBER. RESCH IN BODY FATNESS ASSESSMENT. DEV COMPUTER ALGORITHM TO COMPUTE WGBT FM EXISTING WEATHER DATA BASE. USED HAND HELD CALCULATOR FOR PREDICTION OF SOLDIER PERFORMANCE & ENDURANCE IN HOT CLIMATES OR WEARING MOPP CLOTHING.

...FUNCTIONS/EQUIPMENT/FACILITIES

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

DEP DIR:DR. G. ORLICKI

ASSOC DIR:

COL J. VAN ZANT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	109.925	129.160
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	25.172	20.015
TOTAL OTHER	1.275	1.275
TOTAL ANNUAL LAB	136.372	150.450
 TOTAL INHOUSE	 38.986	 40.238
TOTAL INHOUSE RDTE	24.741	25.536
ANNUAL OPERATING COST	7.141	6.695

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	0	20	9
CIVILIAN	786	14	499	287
TOTAL	815	14	519	296

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	246.562	123.756	125.274	495.592	235.197	144.591

...MISSION

PLAN,MANAGE & CONDUCT RESEARCH EXPL/ADV DEVELOPMENT & SYSTEM INTEGRATION
FOR ASSIGNED MATERIAL.EXECUTE DEV PROGRAMS.PROVIDE ENGINEERING SUPPORT
FOR PROC.& FIELDIED SYSTEM.MGMT OF CONFIGURATION & TECH DATA FOR TANK-
AUTOMOTIVE EQUIP.& PROVIDE SCIENTIFIC SUPPORT TO OTHER ARMY ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

ARMORED FAMILY OF VEHICLES AFV
LIGHTWEIGHT 120MM GUN IN MI TURRET
ADVANCED INTEGRATED PROPULSION SYSTEM AIPS
ROBOTIC COMMAND CENTER
ROBOTIC MINE CLEARING VEHICLES

...FUNCTIONS/EQUIPMENT/FACILITIES

RIDE MOTION BASE SIMULATOR: TACOM HAS A RIDE MOTION BASE SIMULATOR
FACILITY WHICH IS A FOUR DEGREE OF FREEDOM CREW STATION "DRIVEN" BY A
COMPUTER TO SIMULATE THE RIDE OF A VEHICLE AND/OR THE RECOIL MOTION OF A
WEAPON. THIS FACILITY HAS BEEN USED IN THE PAST FOR RIDE SEVERITY
EVALUATION. TARGET ACQUISITION DISPLAYS AND CONTROLS STUDIES. USING
GUNNERS FROM FT KNOX AND OTHER SIMILAR ACTIVITIES.TACOM ALSO HAS TWO
LARGE MOTION BASE SIMULATOR BAYS WHERE WHEELED OR TRACKED VEHICLES CAN
BE MOUNTED ON HYDRAULIC ACTUATORS AND "SHAKEN" VIA COMPUTER GENERATED
SIGNALS SIMULATING CROSS COUNTRY TRAVEL. THIS FACILITY HAS BEEN USED FOR
MODEL VALIDATION AND FOR DETECTING ELEMENTS WHICH ARE PRONE TO FAIL

INSTALLATION: TRADOC TEST & EXPERIMENTATION CMD (TEXCOM) FT. HOOD, TX

CDR: MG. WILLIAM C. PAGE, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	32.003	0.000
TOTAL PROCUREMENT	7.460	0.000
TOTAL O&M	15.100	0.000
TOTAL OTHER	23.879	0.000
TOTAL ANNUAL LAB	78.442	0.000
TOTAL INHOUSE	42.535	0.000
TOTAL INHOUSE RDTE	32.003	0.000
ANNUAL OPERATING COST	25.020	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	658	0	183	475
CIVILIAN	549	0	225	324
TOTAL	1207	0	408	799

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
22	19.200	40.000	0.000	59.200	6.000		3.000

...MISSION
EXECUTE FORCE DEV AND FOLLOW-ON OPERATIONAL TESTS. CONDUCT FIELD
EXPERIMENTATION EARLY USER TESTS, INITIAL OPERATIONAL TESTS, AND CONCEPT
EVALUATIONS. CONDUCT FIELD VALIDATION OF NEW ORGANIZATIONS AND
OPERATIONAL CONCEPTS. DEVELOP AND PROCURE INSTRUMENTATION.

...CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR
ARTILLERY EFFECTS
LIGHT DIVISION CONCEPT
CLOSE AIR
URBAN WARFARE

...FUNCTIONS/EQUIPMENT/FACILITIES

POSITION LOCATION, HIGH AGILITY MODULAR INTEGRATED TGT, VIDEO, DATA
ACQUISITION & REDUCTION, THERMAL IMAGING, FIBER OPTICS & VIDEO MULTI-
PLEXER/DEMULTIPLEXER; EQ; RANGE TIMING, M-WAVE, ENVIRONMENTAL MEAS &
SURVEY.

NOTE: CONSOLIDATED REPORT SUBMITTED

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, PANAMA

CDR: COL. JOHN M. HARNISCH

TECH DIRECTOR: MR. B. R. DAVIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	3.191	0.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.501	0.000
TOTAL ANNUAL LAB	5.692	0.000
TOTAL INHOUSE	2.998	0.000
TOTAL INHOUSE RDTE	2.998	0.000
ANNUAL OPERATING COST	0.463	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	0	16	53
CIVILIAN	62	2	34	28
TOTAL	131	2	50	81

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE LAB	(THOUSANDS OF ADMIN	SQUARE FEET) 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 DEVELOPMENTS 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

WHITE SNDS MSL RNG, NM

CDR: COL. EDWARD J. BRADY

DEP DIRECTOR: MR. P. R. SMITH

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	39.028	33.929
TOTAL PROCUREMENT	1.471	1.184
TOTAL O&M	0.300	1.049
TOTAL OTHER	0.185	3.089
TOTAL ANNUAL LAB	40.984	39.251
TOTAL INHOUSE	13.828	32.034
TOTAL INHOUSE RDTE	12.922	27.033
ANNUAL OPERATING COST	6.050	5.787

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	66	0	3	63
CIVILIAN	200	4	118	82
TOTAL	266	4	121	145

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
1316	85.030	38.516	77.654	201.200	5.884		68.000

...MISSION

CONDUCT INDEPENDENT ELECTRONIC WARFARE VULNERABILITY ASSESSMENTS OF ARMY WEAPON AND COMMUNICATIONS-ELECTRONICS SYSTEMS. REDUCE ELECTRONIC WARFARE VULNERABILITIES THROUGH THE DEVELOPMENT OF ADVANCED COUNTER-COUNTERMEASURES TECHNIQUES AND RECOMMENDATIONS TO ARMY PROJECT MANAGERS.

...CURRENT IMPORTANT PROGRAMS

EVALUATED EFFECTS OF COUNTERMEASURES ON LINE-OF-SITE CANDIDATES.
DEMONSTRATED EFFECTS OF COMMON COUNTERMEASURES ON SMART MUNITIONS.
PROPOSED COUNTER-COUNTERMEASURES FOR MOBILE SUBSCRIBER EQUIPMENT.
DEVELOPED COUNTERMEASURE REQUIREMENTS FOR ADV ANTITANK WEAPON SYSTEM.
ASSESSED THE ELECTRONIC WARFARE VULNERABILITY OF COBRA C-NITE SYSTEM.

...FUNCTIONS/EQUIPMENT/FACILITIES

THE ELECTRO-OPTICAL COUNTERMEASURES SIMULATION FACILITY PERFORMS REAL-TIME HARDWARE-IN-THE-LOOP MISSILE FLIGHT SIMULATIONS FOR EVALUATING MISSILE PERFORMANCE IN A COUNTERMEASURES ENVIRONMENT. THE ARMY AIRBORNE ELECTRONIC WARFARE LABORATORY CONSISTS OF A USAF NKE-135A AIRCRAFT WITH ON-BOARD JAMMERS/CHAFF/FLARES USED TO CREATE A COUNTERMEASURES ENVIRONMENT FOR VULNERABILITY ASSESSMENT OF DOD SYSTEMS. THE SIGNATURE MEASUREMENTS AND DATA REDUCTION FACILITY CONDUCTS INFRARED SPECTRAL AND ULTRAVIOLET/INFRARED IMAGING MEASUREMENTS IN SUPPORT OF ELECTRONIC WARFARE PROGRAMS. THE SPECIAL ELECTROMAGNETIC INTERFERENCE FACILITY ASSESSES THE EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON MILITARY SYSTEMS. THE DYNAMIC ANALYSIS LABORATORY USES HARDWARE-IN-THE-LOOP TO ASSESS EFFECTS OF COUNTERMEASURES ON LASER GUIDED AND INFRARED SMART MUNITIONS.

INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, DC

CDR: COL. FRANKLIN H. TOP JR.

DEPUTY:

COL C. A. ROBERTS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (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	47.806	50.824
TOTAL INHOUSE RDTE	42.912	46.369
ANNUAL OPERATING COST	3.209	3.209

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	433	99	135	298
CIVILIAN	547	65	162	385
TOTAL	980	164	297	683

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 FT. BRAGG.

INSTALLATION: WHITE SANDS MISSILE RANGE

WHITE SNDS MSL RNG, NM

CDR: MG. THOMAS JP. JONES

TECH DIRECTOR: MR. J. A. LOCKERD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	152.885	121.983
TOTAL PROCUREMENT	19.785	22.627
TOTAL O&M	7.705	7.858
TOTAL OTHER	7.010	7.949
TOTAL ANNUAL LAB	187.385	160.417
TOTAL INHOUSE	99.882	95.874
TOTAL INHOUSE RDTE	79.039	73.190
ANNUAL OPERATING COST	0.485	0.048

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	700	19	645	55
CIVILIAN	2465	71	1067	1398
TOTAL	3165	90	1712	1453

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1795861	1454.443	676.956	3048.239	5179.638	246.366	129.280

...MISSION

TO PROVIDE AND OPERATE A NATIONAL TEST RANGE, THE HIGH ENERGY LASER SYS
TEST FACILITY (HELSTF) AND ARMY TEST FACILITIES; TO TEST AND EVALUATE
ARMY MATERIEL AND TO OPERATE AND MAINTAIN THE INSTALLATION.

...CURRENT IMPORTANT PROGRAMS

ARMY-PERSHING, PATRIOT, FAADS, MLRS, STINGER, HAWK, AND HEDI-KITE
AIR FORCE-AMRAAM, AIM AND F-15 TACTICAL OPERATIONS AND TRAINING
NAVY-RAM, SM, ASROC, 5" & 16" GUN, MIRACL & SLBD, AND RESEARCH ROCKETS
NASA-SHUTTLE TRAINING/OPERATIONS AND TRACKING DATA RELAY SATELLITE SYS
OTHER-SDIO, DNA, DOE, AND OTHER FOREIGN GOVT AND PRIVATE INDUSTRY 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 SECURE TELEMTRY 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 INCLUDE: MICROWAVE AND AUTOMATED SYS-
TEMS; DYNAMIC AND CLIMATIC ENVIRONMENTS, CHEMICAL, METALLURGICAL, MICRO-
BIOLOGICAL, NUCLEAR AND ELECTRO MAGNETIC EFFECTS; HARADOUS WARHEADS AND
EXPLOSIVES; BURRIS WELL OUTDOOR ELECTR-OPTICAL LABORATORY AND HELSTF.

INSTALLATION: YUMA PROVING GROUND

YUMA, AZ

CDR: COL. WILLIAM J. MILLER

TECH DIRECTOR: MR. W. T. VOMOCIL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	58.067	55.984
TOTAL PROCUREMENT	9.927	9.397
TOTAL O&M	5.028	2.731
TOTAL OTHER	14.323	21.062
TOTAL ANNUAL LAB	87.345	89.174
TOTAL INHOUSE	32.529	28.709
TOTAL INHOUSE RDTE	28.469	25.784
ANNUAL OPERATING COST	22.018	19.258

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	299	0	37	262
CIVILIAN	559	3	191	368
TOTAL	858	3	228	630

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
837904	1.144	83.590	1516.559	1601.293	74743.000	124.059

...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 TEST AND ENVIRONMENTAL SIMULATION. DEVELOP TEST INSTRUMENTATION AND METHODS.

...CURRENT IMPORTANT PROGRAMS

HOWITZER IMPROVEMENT PROGRAM
155MM NUCLEAR PROJECTILE
M\1/A\1 TANK
GPS PHASE III
60000/LB AIR DELIVERY SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTRUMENTED OVERLAND 60KM ARTILLERY RANGE WITH SUPPORT FACILITIES.
20 X 30 KM AIRCRAFT ARMAMENT RANGE AND AIR DELIVERY DROP ZONES SUPPORTED BY 6 LASER TRACKERS, POSITION LOCATING SYSTEM, TM, VIDEO CINETHEODOLITES VERSATILE TRACKING MOUNTS, AND VIDEO SCORING/EVENTS CONNECTED TO A REAL-TIME DATA PRODESSING 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 AND DURABILTY 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 5150 AND 6000 FT RUNWAYS, MAINTENANCE FAC.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA, FL

CO: CAPT. J.O. HOUGHTON

CHIEF SCIENTIST: DR. F.E. GUEDRY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	4.749	3.673
TOTAL PROCUREMENT	0.447	0.294
TOTAL O&M	0.415	0.524
TOTAL OTHER	1.684	1.747
TOTAL ANNUAL LAB	7.295	6.238
TOTAL INHOUSE	5.611	4.491
TOTAL INHOUSE RDTE	4.749	3.673
ANNUAL OPERATING COST	1.698	1.582

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	38	10	5	33
CIVILIAN	55	13	17	38
TOTAL	93	23	22	71

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	114.538	3.500	8.164	126.202	3.042	7.128

...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 AND PERFORMANCE EFFECTS OF CHEMICAL AGENTS ANTIDOTES.
PERFORMANCE-BASED MEDICAL STANDARDS FOR AVIATION.
PHYSICAL CONDITIONING TO ENHANCE G TOLERANCE.
PHYSIOLOGICAL AND BEHAVIORAL EFFECTS OF NON-IONIZING RADIATION.
BEHAVIORAL AND BIOMEDICAL EFFECTS OF SUSTAINED OPERATIONS.

...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. FIVE MOBILE FIELD LABS EQUIPPED TO COLLECT BIOMEDICAL AND COGNITIVE PERFORMANCE DATA. RADAR AND RADIO EMITTERS TO PRODUCE NON-IONIZING RADIATION FIELDS FOR HUMAN AND ANIMAL STUDIES.

INSTALLATION: AIR DEVELOPMENT CENTER

WARMINISTER, PA

CO: CAPT. C. J. WINTERS

TECH DIRECTOR: G. S. DILWORTH, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	258.103	282.535
TOTAL PROCUREMENT	71.154	72.069
TOTAL O&M	37.149	53.157
TOTAL OTHER	10.755	11.197
TOTAL ANNUAL LAB	377.161	418.958
TOTAL INHOUSE	176.335	227.488
TOTAL INHOUSE RDTE	126.472	163.451
ANNUAL OPERATING COST	62.051	64.908

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	235	3	45	190
CIVILIAN	2723	64	1539	1184
TOTAL	2958	67	1584	1374

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
921	860.191	97.494	454.434	1412.119	38.396	112.970

...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

DIRECTOR:

MR. D. R. SNYDER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	37.330	49.201
TOTAL PROCUREMENT	2.322	6.722
TOTAL O&M	0.466	1.173
TOTAL OTHER	1.762	4.486
TOTAL ANNUAL LAB	41.880	61.582
TOTAL INHOUSE	34.291	42.126
TOTAL INHOUSE RDTE	30.185	30.670
ANNUAL OPERATING COST	11.344	10.118

PERSONNEL	PERSONNEL DATA (END OF FY 1987)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	7	0	7		0
CIVILIAN	730	1	239		491
TOTAL	737	1	246		491

ACRES	SPACE AND PROPERTY (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
 F404-GE-400 SECOND PRODUCTION SOURCE TESTING
 404-GE-400D PRELIMINARY FLIGHT RATING TEST
 F404/RM12 ALTITUDE QUALIFICATION TEST
 F110-GE-400 PRODUCTION RELEASE TESTS

...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

CDR: RADM. J.F. CALVERT

TECH DIRECTOR: MR. WM. F. BAILEY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	129.679	146.506
TOTAL PROCUREMENT	50.829	57.457
TOTAL O&M	69.391	78.401
TOTAL OTHER	56.671	65.905
TOTAL ANNUAL LAB	306.570	348.269
TOTAL INHOUSE	161.339	179.645
TOTAL INHOUSE RDTE	83.812	94.687
ANNUAL OPERATING COST	61.380	78.470

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1633	2	243	1390
CIVILIAN	2607	6	925	1682
TOTAL	4240	8	1168	3072

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
6890	1365.008 479.604 4288.157 6132.769	218.251 128.035

...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

F-140
SH-60F
E-6A
P-3C UPDATE
TACTS

...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 HANGER/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. W.S. WOJTKOWSKI

TECH DIRECTOR: MR. J.R. BROWN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	0.087	0.125
TOTAL PROCUREMENT	0.150	6.500
TOTAL O&M	24.962	25.083
TOTAL OTHER	7.855	6.136
TOTAL ANNUAL LAB	33.054	37.844
TOTAL INHOUSE	3.637	4.131
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	0.850	0.921

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	96	0	48	48
CIVILIAN	43	0	31	12
TOTAL	139	0	79	60

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3523	0.000	14.957	233.861	248.818	21.855	139.404

...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 MOD 2
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. DOUGLAS W. CALL

CHIEF SCIENTIST:MR. MARC WEISS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	3.159	3.071
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.267	1.178
TOTAL ANNUAL LAB	4.426	4.249
TOTAL INHOUSE	2.773	2.974
TOTAL INHOUSE RDTE	2.376	2.516
ANNUAL OPERATING COST	0.477	0.704

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	34	3	3	31
CIVILIAN	45	4	14	31
TOTAL	79	7	17	62

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1	29.495 23.749 1.276 54.520	0.000 3.414

...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

EFFECTS OF IMPACT ACCELERATION ON HUMAN NEUROPHYSIOLOGY.
DETERMINATION OF HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION.
DEVELOPMENT OF SAFE-UNSAFE IMPACT ACCELERATION GUIDELINES.
LONG-TERM EFFECTS OF BIODYNAMIC STRESS EXPERIMENTS.
DEVELOPMENT OF AND VALIDATION OF HUMAN ANTHROPOMORPHIC MANIKINS.

...FUNCTIONS/EQUIPMENT/FACILITIES

HORIZONTAL ACCELERATOR, MTS ELECTROHYDRAULIC VIBRATION
SHAKER, SHIP MOTION SIMULATOR, MACHINE SHOP, CLINICAL LABORATORY
CLINICAL RADIOGRAPHIC FACILITY, NEUROPHYSIOLOGY
LABORATORY, NEUROPATHOLOGY LABORATORY, HUMAN PERFORMANCE
LABORATORY, VIVARIUM.

INSTALLATION: BIOSCIENCES LABORATORY

NSC OAKLAND, CA

CO: CAPT. W.P. CARNEY

SCIENCE DIR: DR. D. KINGSBURN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	4.154	0.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.293	0.000
TOTAL ANNUAL LAB	4.447	0.000
TOTAL INHOUSE	4.154	0.000
TOTAL INHOUSE RDTE	4.154	0.000
ANNUAL OPERATING COST	0.632	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	9	3	5	3
CIVILIAN	4	0	0	4
TOTAL	13	3	6	7

ACRES	SPACE AND PROPERTY (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 MICROSCOPES, PROGRAMMED CESS 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

OIC: CAPT. DONALD R. WELLS

TECH DIRECTOR: DR. D.L. BIRKIMER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	31.989	23.890
TOTAL PROCUREMENT	1.906	0.957
TOTAL O&M	10.864	8.039
TOTAL OTHER	3.427	1.616
TOTAL ANNUAL LAB	48.186	34.502
TOTAL INHOUSE	30.631	24.743
TOTAL INHOUSE RDTE	19.286	16.723
ANNUAL OPERATING COST	8.361	12.542

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	0	6	12
CIVILIAN	425	32	179	246
TOTAL	443	32	185	258

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	13.506 8.508

...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 CONSTRUCTIONS 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 METALLURGICAL LABS. ENVIRONMENTAL RESEARCH LAB. CDC 8090 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

OIC: CDR. GARY R. PETERSON

TECH DIRECTOR: NORMAN AUDET

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	3.445	1.732
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.458	2.181
TOTAL OTHER	0.054	0.059
TOTAL ANNUAL LAB	4.957	3.972
TOTAL INHOUSE	4.404	3.404
TOTAL INHOUSE RDTE	2.946	1.353
ANNUAL OPERATING COST	0.090	0.064

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	65	1	41	24
TOTAL	66	1	42	24

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
2	12.660	10.200	5.630	28.490		2.000	2.500

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

BATTLE DRESS AND CBR CLOTHING
MATERIAL INVESTIGATIONS TO MEET NAVY CLOTHING REQUIREMENTS
PROTECTIVE CLOTHING & 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 GARMENTS. PATTERN DRAFTING EQUIPMENT.

INSTALLATION: COASTAL SYSTEMS CENTER

PANAMA CITY, FL

CO: CAPT. M.W. GAVLAK

TECH DIRECTOR: DR. E.B. TUNSTALL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	67.715	90.380
TOTAL PROCUREMENT	22.721	16.323
TOTAL O&M	25.559	23.486
TOTAL OTHER	12.112	15.611
TOTAL ANNUAL LAB	128.107	145.800
TOTAL INHOUSE	66.868	87.602
TOTAL INHOUSE RDTE	39.036	46.966
ANNUAL OPERATING COST	22.659	22.659

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	133	0	19	114
CIVILIAN	1225	51	633	592
TOTAL	1358	51	652	706

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
648	358.636	42.503	553.861	955.000	50.800	36.253

...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, COUNTER-MEASURE EVALUATOR IN REAL-TIME SIMULATION, BURROUGHS 6810 DIGITAL COMPUTER & ASSOC. DATA COMMUNICATIONS SYS, SONAR PROCESSING FAC, INTER-ACTIVE 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 MH53F, 1 NUHIE, AND INDUSTRIAL SHOPS.

INSTALLATION: DAVID TAYLOR SHIP R&D CENTER

BETHESDA, MD

CDR: CAPT. C. GRAHAM

TECH DIRECTOR: MR. R.E. METREY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	225.178	233.252
TOTAL PROCUREMENT	45.542	46.246
TOTAL O&M	52.145	55.648
TOTAL OTHER	13.171	18.289
TOTAL ANNUAL LAB	336.036	353.435
TOTAL INHOUSE	191.325	183.535
TOTAL INHOUSE RDTE	123.261	117.143
ANNUAL OPERATING COST	64.852	62.904

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	66	2	24	42
CIVILIAN	2771	124	1307	1464
TOTAL	2837	126	1331	1506

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
325	1816.754	96.000	190.308	2103.062	75.900	119.000

...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 (PROPULSION/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
(TECHNOLOGY AND ADVANCED CONCEPTS)

...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. SHIP ELECTROMAG. SIGNATURE REDUCT. FAC, SUPERCONDUCTING MATLS FOR ELEC. DRIVE

INSTALLATION: DENTAL RESEARCH INSTITUTE

NTC GREAT LAKES, IL

CO: CAPT. G. WALTER

SCIENCE DIR: DR. L.G. SIMONSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	1.284	0.928
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.287	0.961
TOTAL ANNUAL LAB	2.571	1.889
TOTAL INHOUSE	1.155	0.928
TOTAL INHOUSE RDTE	1.155	0.928
ANNUAL OPERATING COST	0.426	0.403

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	22	6	4	18
CIVILIAN	15	4	1	14
TOTAL	37	10	5	32

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	0.000 0.185

...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 ADSORPTION UNIT/LIQUID SCINTILLATION COUNTER/
MICROCOMPUTER/GAS CHROMATOGRAPH UNIT/PHOTOMICROSCOPR/ELECTRON MICROSCOPE
CRYMICROTOME/ANIMAL SURGERY ROOM/SPECTROPHOTOMETERS/
THERMAL BALANCE/VIVARIUM/INCUBATORS/CENTRIFUGES/BIOLOGICAL SAFETY
CABINET/FRACTIONATORS/SHAKERS/PHOTO LAB/OSCILLISCOPE
TISSUE CULTURE.

INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA

CO: CDR. M.G. SALINAS

TECH DIRECTOR: DR. J. HOVERMALE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	5.977	5.762
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.397	0.481
TOTAL OTHER	0.585	0.600
TOTAL ANNUAL LAB	6.959	6.843
TOTAL INHOUSE	3.965	3.674
TOTAL INHOUSE RDTE	3.772	3.477
ANNUAL OPERATING COST	2.209	1.157

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	0	6	6
CIVILIAN	56	15	24	32
TOTAL	68	15	30	38

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	22.000	3.100	5.900	31.000	0.000		2.409

...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
ECLIPSE S250 COMPUTER ACCESS TO CYBER 203 AND 175 COMPUTERS

INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL TECH CNTR

INDIAN HEAD, MD

CO: CAPT. R.L. MASTEN

TECH DIRECTOR: MR. L.A. DICKINSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	22.960	56.618
TOTAL PROCUREMENT	21.553	6.683
TOTAL O&M	4.863	4.905
TOTAL OTHER	4.270	4.241
TOTAL ANNUAL LAB	53.646	72.447
TOTAL INHOUSE	16.109	21.895
TOTAL INHOUSE RDTE	6.110	8.885
ANNUAL OPERATING COST	6.321	7.530

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	71	0	13	58
CIVILIAN	229	1	62	167
TOTAL	300	1	75	225

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1172	85.397	16.897	77.984	180.278	5.987	4.550

...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. R.D. CHANEY

CHIEF SCIENTIST: DR. E.K.E. GUNDERSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	4.519	4.067
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.317	1.357
TOTAL ANNUAL LAB	5.836	5.424
TOTAL INHOUSE	3.286	3.203
TOTAL INHOUSE RDTE	3.286	3.203
ANNUAL OPERATING COST	0.144	0.208

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	11	5	24
CIVILIAN	63	14	15	48
TOTAL	92	25	20	72

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	19.052	7.159	0.000	26.211	0.147	1.842

...MISSION

TO SUPPORT FLEET OPERATIONAL READINESS THROUGH RESEARCH, DEVELOPMENT, TEST, AND EVALUATION OF BIOMEDICAL AND PSYCHOLOGICAL ASPECTS OF NAVY AND MARINE CORPS 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. KURT SORENSEN

SCIENCE DIR: DR. L.A. KIESOW

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	19.574	19.357
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.098	0.000
TOTAL OTHER	8.798	8.796
TOTAL ANNUAL LAB	28.470	28.153
TOTAL INHOUSE	17.608	17.354
TOTAL INHOUSE RDTE	17.480	17.354
ANNUAL OPERATING COST	8.927	8.927

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	260	51	95	165
CIVILIAN	192	47	71	121
TOTAL	452	98	166	286

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	159.933	11.720	47.210	218.863	8.303	19.141

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

...CURRENT IMPORTANT PROGRAMS
COMBAT CASUALTY TECHNOLOGY, WOUND HEALING, SEPTIC SHOCK, TISSUE TRANS-
PLANTATION. MICROBIOLOGY, VACCINE DEV RAPID DIAGNOSIS, EPIDEMIOLOGY,
HYPERBARIC MEDICINE (PHYSIOLOGY, TREATMENT SAFETY)
ENVIRONMENTAL STRESS (THERMAL, CHEMICAL, TOXIC)
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,
ANIMAL FACILITIES & 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	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	2.735	2.983
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.127	1.127
TOTAL ANNUAL LAB	3.862	4.110
TOTAL INHOUSE	2.735	2.983
TOTAL INHOUSE RDTE	2.735	2.983
ANNUAL OPERATING COST	0.971	0.998

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	5	13	14
CIVILIAN	48	3	42	6
TOTAL	75	8	55	20

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	10.751	12.248	0.000	22.999	0.000	0.848

...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 ESTABLISHED A STATE OF THE ART INTENSIVE CARE UNIT.

INSTALLATION: MEDICAL RESEARCH UNIT NO. 3

CAIRO, EGYPT

CO: CAPT. JAMES F. MOODY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	5.068	5.690
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.108	0.034
TOTAL OTHER	1.997	1.296
TOTAL ANNUAL LAB	7.173	7.020
TOTAL INHOUSE	5.176	5.724
TOTAL INHOUSE RDTE	5.068	5.690
ANNUAL OPERATING COST	1.020	0.950

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	7	6	23
CIVILIAN	205	19	57	148
TOTAL	234	26	63	171

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
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 HIGH 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,HYBRIDO-
MA TECH, AND HYDRIBIZATION OF DNA ALONG WITH PRODUCTION OF DNA PROBES,
AMINO ACID ANALYSIS,FLUORESCENT MICROSCOPY AND COMPUTER LINKED ELISA
READER, CYTOFLUOROGRAF,HPLC, GAS LIQUID CHROMATOGRAPHY, SPECTRO PHOTO
METER, BETA-SCINILLATION COUNTER, GAMR-COUNTER,GAUMN CELL 40, CENTRI.
ULTRACENTRIFUGES AND CRYP PRESERVATION. P-3 CONTAINMENT CAPABILITY.

INSTALLATION: NAVAL RESEARCH LABORATORY

WASHINGTON, DC

CO: CAPT. W.G. CLAUTICE

DIR OF RSCH: DR. T. COFFEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	219.966	258.564
TOTAL PROCUREMENT	8.582	7.175
TOTAL O&M	15.907	9.764
TOTAL OTHER	60.818	42.026
TOTAL ANNUAL LAB	305.273	317.529
TOTAL INHOUSE	240.609	245.157
TOTAL INHOUSE RDTE	168.166	197.526
ANNUAL OPERATING COST	104.288	99.878

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	97	2	32	65
CIVILIAN	3576	729	835	2741
TOTAL	3673	731	867	2806

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1181	2643.470	194.307	272.993	3110.770	124.239	242.391

...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, SPACE SIMULATION FACILITIES, MAJOR PLASMA PHYSICS FACILITIES, ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR, CLASS VI COMPUTER, 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 DIRECTOR: DR. J.E. ANDREWS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	43.780	46.919
TOTAL PROCUREMENT	3.889	4.404
TOTAL O&M	2.539	2.875
TOTAL OTHER	0.935	1.022
TOTAL ANNUAL LAB	51.143	55.220
TOTAL INHOUSE	32.995	35.740
TOTAL INHOUSE RDTE	26.766	28.686
ANNUAL OPERATING COST	10.367	11.593

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	0	11	3
CIVILIAN	378	74	135	243
TOTAL	392	74	146	246

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
0	103.050 23.230 78.526 204.806	17.203 29.000

...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 ACOUSTIC TECHNOLOGY: ACTIVE, PASSIVE, MULTISTATIC ACOUSTICS; AREA & VOLUME ENVIRONMENTAL ACOUSTICS: ARCTIC ACOUSTICS: NUMERICAL ACOUSTIC MODELING; VERY LOW & HIGH FREQUENCY ACOUSTICS: OCEAN FORECASTING, REMOTE SENSING OCEANOGRAPHY; PHYSICAL OCEANOGRAPHY, BIOLOGICAL/CHEMICAL OCEANOGRAPHY, POLAR OCEANOGRAPHY.

...FUNCTIONS/EQUIPMENT/FACILITIES

SECURE & UNCLASSIFIED ACOUSTIC DATA PROCESSING; ARRAY DESIGN TEST FABRICATION; MICROPROCESSOR DESIGN & DEVELOP.; ACOUSTIC DATA BASES; OCEAN ACOUSTICS MOBILE UNDRWTR TEST BED; ENVIRON. ACOUSTICS LAB. HAVE MASS SPECTROMETER, GAS CHROMATOGRAPH SYS, TOWED UNDRWTR PUMPING SYS, DTAGS, ACOUSTIC SEDIMENT CLASSIFIER, SEDIMENT CHARACT. PROBES, SIDE SCAN SONAR SYS., WAVE CURRENT SIMULATOR, SCANNING & TRANSMISSION ELECTRON MICROSCOPES WITH IMAGE ANALYSIS SYSTEM & X-RAY SPECTROMETER, OCEAN BOTTOM SEISMOMETERS, GEOTECH LAB, X-RAY FLUORESCENT FACILITY, PATTERN ANALYSIS LAB (TEMPEST CERT.), MAGNETIC OBSERVATORY, OPTICS LAB, HYDROGRAPHIC AIRBORNE LASER SYS, & AEM SYS.

INSTALLATION: OCEAN SYSTEMS CENTER

SAN DIEGO, CA

CDR: CAPT. E.G. SCHWIEZER

TECH DIRECTOR: MR. R.M. HILLYER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	306.771	290.850
TOTAL PROCUREMENT	76.039	70.300
TOTAL O&M	80.074	84.300
TOTAL OTHER	36.419	35.338
TOTAL ANNUAL LAB	499.303	480.788
TOTAL INHOUSE	232.897	213.515
TOTAL INHOUSE RDTE	161.570	144.515
ANNUAL OPERATING COST	56.549	58.219

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	272	1	68	204
CIVILIAN	3125	186	1382	1743
TOTAL	3397	187	1450	1947

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
2769	1368.100	202.800	201.233	1772.133	66.238		105.578

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SURFACE/AEROSPACE/UNDERSEA SURVEILLANCE, COMMUNICATIONS SYSTEMS, INFO. WARFARE INCLUDING C3CM AND SIGNALS WARFARE, C3 SYSTEMS AND BATTLE FORCE INFO. MNGT., ADV AIR AND SURFACE LAUNCHED ASW WEAPON SYSTEMS, OCEAN SCIENCE AND ENGINEERING, SUBMARINE ARCTIC WARFARE, SPECIAL SENSORS AND ADV MARINE BIO SYS, TELOP/REMOTE PRESENCE SYS, AND SUPP. 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 BATTLE GROUP TACTICAL TRAI (BGTT)/RESEARCH, EVALUATION, SIMULATION, AND ANALYSIS FACILITY (RESA), OCEAN SURVEILLANCE FAC., SURVEILLANCE TECH. AND APPLIED RSCH. RAC (STARF): INTEGRATED UNDERSEA SURV. SYS. (IUSS)FAC., MICROWAVE AND MM WAVE ANTENNA PATTERN RANGE COMPLEX, STABLE SEMI SUBMERGED PLATFORM; TRANSDUCER EVAL. CTR; MICRO-ELECTRONICS LAB COMPLEX; SIMULATION AND REAL TIME COMPUTER FACS. FOR DEVEL. OF OCEAN SURV. AND ASW SYS. TORPEDO PROPULSION TEST CELLS AT MORRIS DAM; BIO-SCIENCE FAC. ENGAGED IN RSCH., TRAINING AND HANDLING OF MARINE MAMMALS; SAN CLEMENTE ISLAND SEA TEST RANGES FOR UNDERWATER WEAPONS.

INSTALLATION: OFFICE OF NAVAL RESEARCH & TECHNOLOGY

ARLINGTON, VA

CO: RADM. J.R. WILSON, JR.

TECH DIRECTOR: DR. F.E. SAALFELD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	1593.492	2608.489
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.297	2.377
TOTAL ANNUAL LAB	1595.789	2610.866
TOTAL INHOUSE	46.877	47.369
TOTAL INHOUSE RDTE	46.877	47.369
ANNUAL OPERATING COST	21.120	17.221

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	38	5	29	9
CIVILIAN	484	72	30	454
TOTAL	522	77	59	463

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	86.418	12.165	98.583	0.000	8.200

...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 (RE&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, MT'L SCIENCES, ENGINEERING SCI, OCEAN SCIENCE AND TECH. ADMIN. OF THE ENTIRE EXPLORATORY DEVEL. PROGRAM INCLUDING MANAGEMENT THROUGH NAVY LABS/CENTER.
ACTIVITIES INCLUDE NRL, NORDA, NEPRF, NBL IS DISESTABLISHED AS OF 9/30/8
MAINTAINS RESEARCH RESERVE PROGRAM, COORDINATES NAVAL RESEARCH AND PROMOTES COOPERATIVE RESEARCH EFFORTS WITHIN NAVY, OTHER DOD, NSF, NASA, DEPT OF ENERGY AND OTHER GOVERNMENT RESEARCH GROUPS AND WITH INDUSTRY AND NON-PROFIT GROUPS AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY COMMITTEE.

INSTALLATION: ORDNANCE MISSILE TEST STATION

WHITE SNDS MSL RNG, NM

CO: CAPT. A. F. SCHROEDER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	2.576	2.406
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.004	0.017
TOTAL OTHER	2.674	3.018
TOTAL ANNUAL LAB	5.254	5.441
TOTAL INHOUSE	4.623	4.245
TOTAL INHOUSE RDTE	1.949	1.227
ANNUAL OPERATING COST	2.340	2.557

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	93	0	17	76
CIVILIAN	63	0	9	54
TOTAL	156	0	26	130

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
97	10.057	30.108	191.551	231.716	6.775	6.849

...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
OPERATE THE MIRACL HIGH ENERGY LASER WITH SLBD BEAM DIRECTOR,
CONDUCT VARIOUS DEVELOPMENT TESTS FOR SSM AND SAM PROJECTS
PROVIDE DRONE SUPPORT AND VANDAL MISSILE HIGH SPEED TARGETS
ROLLING AIRFRAME MISSILE LBTS
5-INCH GUIDED PROJECTILE FIRING CAPABILITY
PROVIDE WARHEAD AND EOD ANALYSIS ARENA
SMK 41 VLS LAUNCH SUPPORTING SM, VLA, TOMAHAWK

INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA

CDR: RADM. R.C. GENTZ

TECH DIRECTOR: MR. W.R. HATTABAUGH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	260.782	245.680
TOTAL PROCUREMENT	252.986	298.859
TOTAL O&M	176.881	169.514
TOTAL OTHER	89.259	72.459
TOTAL ANNUAL LAB	779.908	786.512
TOTAL INHOUSE	525.288	483.970
TOTAL INHOUSE RDTE	202.278	181.430
ANNUAL OPERATING COST	105.483	101.927

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1031	31	375	656
CIVILIAN	4217	15	1211	3006
TOTAL	5248	46	1586	3662

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27093	1265.861	370.248	3380.058	5016.167	196.899	185.890

...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 SPT, T&E & ISE ON AIR LAUNCHED GUIDED WEAPONS AND CONVENTIONAL ORDNANCE. EW SYS READINESS & MISSION PERFORMANCE. EWSSA SPT 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. AN 800 SQ MI UNDERWATER RANGE AT BARKING SANDS, HAWAII, PROVIDES FLEET TRAINING SUPPORT IN AIR, SURFACE, AND ASW WARFARE. PMTC AIRCRAFT PROVIDE EXTENSIVE DATA COVERAGE 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 DIRECTOR: DR. J.S. MCMICHAEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	22.598	23.321
TOTAL PROCUREMENT	0.332	0.625
TOTAL O&M	9.776	6.050
TOTAL OTHER	2.447	2.684
TOTAL ANNUAL LAB	35.153	32.680
TOTAL INHOUSE	17.852	18.200
TOTAL INHOUSE RDTE	12.646	13.100
ANNUAL OPERATING COST	4.545	4.289

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	11	17
CIVILIAN	310	85	140	170
TOTAL	338	85	151	187

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
3	79.312	18.417	0.000	97.729	7.850	13.747	

...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. IBM 4341 COMPUTER SYSTEM WITH COMMUNICATIONS CAPABILITY TO OTHER COMPUTERS, VAX11/780 WITH ARPANET.

...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, VAX11/780 WITH ARPANET ACCESS WHICH SUPPORTS THE NAVY LABORATORY COMPUTER NETWORK, MASCOMP, 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

SCIENCE DIR: DR. S. LURIA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	4.444	2.860
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.006	0.006
TOTAL OTHER	1.651	1.347
TOTAL ANNUAL LAB	6.101	4.213
TOTAL INHOUSE	3.859	2.603
TOTAL INHOUSE RDTE	3.812	2.603
ANNUAL OPERATING COST	1.300	1.123

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	2	5	24
CIVILIAN	52	11	15	37
TOTAL	81	13	20	61

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	3.863

...MISSION

TO CONDUCT MEDICAL RESEARCH AND DEVELOPMENT AS IT RELATES TO SUBMARINE 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 SHIP, COMPUTER APPLICATIONS CENTER, TECHNICAL LIBRARY, GRAPHIC ARTS AND PHOTOGRAPHY SHOP. ANIMAL SCIENCES FACILITY, ANECHOIC CHAMBERS, PSYCHOACOUSTIC LAB., OPERATIONAL SONAR SIMULATION LABS, CELL CULTURE LAB, MASS SPECTROMETERS. GAS CHROMATOGRAPHS.

INSTALLATION: SURFACE WEAPONS CENTER

DAHLGREN, VA

CDR: CAPT. C.A. ANDERSON

TECH DIRECTOR: DR. L. L. HILL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	294.804	308.942
TOTAL PROCUREMENT	169.123	188.692
TOTAL O&M	87.232	103.774
TOTAL OTHER	30.227	26.863
TOTAL ANNUAL LAB	581.386	628.271
TOTAL INHOUSE	294.011	252.754
TOTAL INHOUSE RDTE	157.436	133.344
ANNUAL OPERATING COST	97.912	103.423

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	100	0	27	73
CIVILIAN	5038	234	2248	2790
TOTAL	5138	234	2275	2863

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4084	1604.590	302.707	1165.964	3073.261	122.660	258.566

...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-GUNS, SM-2, GUIDED PROJECTILES 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. M.P. FIORI

TECH DIRECTOR: MR. EARL MESSERE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	46.319	45.687
TOTAL PROCUREMENT	0.763	0.550
TOTAL O&M	13.363	15.165
TOTAL OTHER	2.391	2.076
TOTAL ANNUAL LAB	62.836	63.478
TOTAL INHOUSE	11.228	12.741
TOTAL INHOUSE RDTE	9.574	10.046
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	24	4
CIVILIAN	11	0	10	1
TOTAL	39	0	34	5

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
594	84.888	18.826	311.060	414.774	34.167	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, SURFACE AND IN-AIR TRCKING DATA ON SHIPS,SUBS,AIRCRAFT AND WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS
R&D TESTS/MK48ADCAP/LAMPS/CULZASW HELO/WAA/SSTD/SSN21/SEALANCE/
SQS53C/ASW FCS/MK116/TOWED ARRAY/FMS.
CERTIFICATION/TORP MK48 TRAINING CERT PROG/CSSQT/WSAT/CART/AIREM/
SPCL ACOUSTIC TRAILS.
FLEET TRAINING/MK48 PROFICIENCY/AIR TORPEX/PCO/OTHT/ASW REFTRA.

...FUNCTIONS/EQUIPMENT/FACILITIES
HIGHLY ADVNCD AND INSTRMNTD ASW WEAPONS, SONAR, AND FORACS TEST MEASURE-
MENT 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. M.P. FIORI

TECH DIRECTOR: MR. EARL MESSERE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	229.761	209.422
TOTAL PROCUREMENT	179.726	145.739
TOTAL O&M	132.185	193.192
TOTAL OTHER	7.192	11.838
TOTAL ANNUAL LAB	548.864	560.191
TOTAL INHOUSE	266.022	283.300
TOTAL INHOUSE RDTE	131.049	133.986
ANNUAL OPERATING COST	74.170	81.650

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	80	3	63	17
CIVILIAN	3667	108	2241	1426
TOTAL	3747	111	2304	1443

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
345	1165.063	204.941	539.518	1909.522	69.126	100.618

...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 ACOUTCS, INFO PROCSNG, WEAPONRY.
DESIGN, DEV & EVAL U/W COMBAT SUB SYSTMS INC'DNG SUBACS & SURF SHIP SONAR.
RDT&E FOR OVERALL U/W COMBAT (TRIDENT, 688, ETC.).
INTRODUCE TO FLT AND IN-SERV ENGINEERING OF MK48 & DEV OF MK48 ADCAP.
DESIGN, DEV&EVAL OF LAUNCHERS, U/W TARGET SYS & MOBILE/FIXD U/W TEST RANGES

...FUNCTIONS/EQUIPMENT/FACILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY U/W COMBAT SYSTEMS SUBSYSTEMS AND TECHNGYS 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, ELECTNGNTC FACLT, SYS CRTFCTN AND INTGRTN FACLT, ACOUSTC MSMNT & XDUCER R&E FACLT, TORPDO TEST RANGE. INSTMNT SHELTER, ACOUSTC RANGE AUTEC.

INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA

CDR: CAPT. J.A. BURT

TECH DIRECTOR: G.R. SCHIEFER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	384.778	379.278
TOTAL PROCUREMENT	277.137	222.124
TOTAL O&M	43.170	62.172
TOTAL OTHER	37.004	37.847
TOTAL ANNUAL LAB	742.089	701.421
TOTAL INHOUSE	329.934	314.288
TOTAL INHOUSE RDTE	199.476	195.166
ANNUAL OPERATING COST	93.585	99.380

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	506	0	32	474
CIVILIAN	5427	148	1738	3689
TOTAL	5933	148	1770	4163

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1127267	2240.910 201.551 2908.456 5350.917	269.011 149.940

...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

ANTIAIR MISSILES: SIDEWINDER, OUTER-AIR-BTL MSL, SPARROW, RAM, PHOENIX
ANTISURFACE WEAPONS: HARM, SIDEARM, HARPOON, TOMAHAWK, SKIPPER, BIGEYE
ELECTRONIC WARFARE: ALR-67, HARM LCS, ERASE, FOLPEN, ECHO RANGE, TACTICS
TACTICAL A/C SYS: A-6, A-7, AV-8, F/A-18, AH-1, TARGETING, ESCAPE SYS
TECHNOLOGY BASE: E-O/LASER, PROPULSION/WARHEAD, GUIDANCE/FUZING, MAT'LS

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT RESEARCH, ESTABLISH AND MAINTAIN PRIMARY RDT&E SUPPORT FOR NAVY, MARINE CORPS, AND JOINT-SERVICE PRODUCTS SUCH AS ANTIAIR MSLS, ANTISURFACE WPNS, DEFENSE-PENETRATION SYSTEMS, AND INTEGRATED TACTICAL A/C SYSTEMS. FACILITIES INCLUDE MICHELSON LAB, MICROELECTRONICS FACILITY, EXPLOSIVES: R&D FACILITY, GROUND & AIR RANGES, MILITARY TARGETS RANGE, ARMITAGE FIELD, PARACHUTE TEST FACILITIES, SUPERSONIC TEST TRACKS, MICROWAVE ANECHOIC FACILITIES, RF & IR/E-O HARDWARE-IN-THE-LOOP SIMULATIONS, LASER/OPTICS/E-O LABS, WPNS AND TACTICS ANALYSIS CENTER, A/C-WPNS SURVIV. LAB, A/C- INTEGRATION/SIMULATION FACILITIES, STRATEGIC SYSTEMS T&E FACILITY, AND RADAR CROSS-SECTION FACILITY.

INSTALLATION: WEAPONS EVALUATION FACILITY

ALBUQUERQUE, NM

CO: CAPT. LEROY FARR

TECH DIRECTOR S. R. RANDALL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	3.884	4.001
TOTAL PROCUREMENT	2.027	2.088
TOTAL O&M	3.724	3.836
TOTAL OTHER	6.397	6.587
TOTAL ANNUAL LAB	16.032	16.512
TOTAL INHOUSE	10.190	10.496
TOTAL INHOUSE RDTE	3.415	3.517
ANNUAL OPERATING COST	3.020	3.110

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	109	0	40	69
CIVILIAN	132	0	39	93
TOTAL	241	0	79	162

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL	PROP	EQUIP
	LAB	ADMIN	OTHER				
7	23.000	34.000	99.000	156.000		0.970	2.535

...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 ON 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, TELEMTRY 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 DIR: DR. E. T. CURRAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	147.903	163.080
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.008	2.100
TOTAL ANNUAL LAB	149.911	165.180
TOTAL INHOUSE	23.825	24.200
TOTAL INHOUSE RDTE	23.825	24.200
ANNUAL OPERATING COST	4.491	4.436

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	57	7	38	19
CIVILIAN	325	23	202	123
TOTAL	382	30	240	142

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
41	283.893	20.770	349.510	654.173	83.357	44.493

...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 TECHNOLOGY
POWER TECHNOLOGY FOR MILITARY SPACECRAFT
PROPULSION TECHNOLOGY FOR AIR-LAUNCHED MISSILES

...FUNCTIONS/EQUIPMENT/FACILITIES

PROPELLER TEST FACILITY, HELICOPTER ROTOR TEST FACILITY, BATTERY LAB, PHOTOVOLTAIC LAB, THERMAL LAB, FLUID POWER LAB/HIGH SPEED DRIVE STAND, SUPERCONDUCTIVITY RESEARCH LAB, HIGH POWER LAB, AIRCRAFT ELECTRICAL POWER LAB, PLASMA PHYSICS LAB, OPTICAL DIAGNOSTICS LAB, RAMJET ENGINE TEST FACILITY, RAMJET COMBUSTION RESEARCH FACILITY, RAMJET COMBUSTOR FLOW VISUALIZATION FACILITY, FUELS AND LUBRICATION LAB, FUELS RESEARCH FACILITY, LUBRICATION RESEARCH FACILITY, FIRE PROTECTION RESEARCH FACILITY, AIRCRAFT ENGINE NACELLE SIMULATOR, AIRCRAFT FUEL TANK ENVIRONMENT SIMULATOR, FLAME TUBE AND FUEL TANK ELECTROSTATIC SIMULATOR, SEA LEVEL ENGINE TEST STAND, FUEL TANK FARM, COMPRESSOR RESEARCH FACILITY (CRF), CRF STRUCTURES LAB, CRF COMPONENT TEST LAB, INNOVATIVE STRUCTURES RESEARCH LAB, TURBINE RESEARCH LAB.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

WPAFB, OH

CDR: COL. CHARLES P. HATSELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	48.694	38.612
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.385	1.431
TOTAL OTHER	5.840	0.000
TOTAL ANNUAL LAB	56.919	40.043
TOTAL INHOUSE	10.895	10.186
TOTAL INHOUSE RDTE	10.895	10.186
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	120	8	42	78
CIVILIAN	156	28	71	85
TOTAL	276	36	113	163

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
30	127.169	61.201	42.117	230.487	16.997	36.365

...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 ENVIRON 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 SIMULATION 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 PERFORM -ANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

INSTALLATION: ARMAMENT DIVISION

EGLIN AFB, FL

CDR: MG. R. E. STEERE

TECH DIRECTOR: MR. H. L. DIMMIG

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	411.937	491.952
TOTAL PROCUREMENT	1418.799	1237.694
TOTAL O&M	14.803	14.802
TOTAL OTHER	161.274	161.274
TOTAL ANNUAL LAB	2006.813	1905.723
TOTAL INHOUSE	180.516	205.250
TOTAL INHOUSE RDTE	162.141	188.524
ANNUAL OPERATING COST	64.500	64.500

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2807	7	1472	1335
CIVILIAN	2211	17	247	1964
TOTAL	5018	24	1719	3299

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
456815	355.390 796.015 8119.185 9270.590	440.151 529.000

...MISSION

AD LEAD ORG FOR DEV PLANNING. FOSTERS INNOVATION THROUGH LONG RANGE PLANNING AND THE APPLICATION OF EMERGING TECHNOLOGY. CONDUCTS ANALYSIS TO SYNTHESIZE NEW AIR-LAUNCHED ARMAMENT CONCEPTS AND DETERMINE PREFERRED CONFIGURATIONS AND SYSTEMS APPROACHES AND TO DIRECT TECHNOLOGY DEV.

...CURRENT IMPORTANT PROGRAMS

HYPERVELOCITY MISSILE
MILLIMETER WAVE
HAVE BLOCK
SMALL BUSINESS INNOVATIVE RESEARCH
INERTIAL GUIDANCE TECHNOLOGY DEMONSTRATION

...FUNCTIONS/EQUIPMENT/FACILITIES

SCIENTIFIC/ENGINEERING PERSONNEL & LABRATORY FACILITIES CAPABLE OF EXPL, ADV & ENGR 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

CHIEF SCIENTIST: DR. S. C. LAMBERT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	118.701	132.775
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.998	3.500
TOTAL ANNUAL LAB	122.699	136.275
TOTAL INHOUSE	40.841	45.709
TOTAL INHOUSE RDTE	38.643	42.209
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	120	3	84	36
CIVILIAN	379	18	233	146
TOTAL	499	21	317	182

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
0	123.981	82.385	19.683	226.049	0.000	20.164

...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

AUTONOMOUS SYNTHETIC APERTURE RADAR GUIDANCE TECHNOLOGY
INSENSITIVE MUNITIONS TECHNOLOGY
STRATEGIC DEFENSE INITIATIVE/KINETIC ENERGY WEAPONS AND LETHALITY
TACTICAL RADAR SEEKER
ADVANCED WEAPON DISPENSER TECHNOLOGY (HAVE SLICK)

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT INVENTORY CONSISTS OF A VARIETY OF ANALYZERS, SIMULATOR 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 A ON-LINE ACCESS TO SEVERAL DATA BANKS.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CNTR

ARNOLD AFB, TN

CDR: COL. STEPHEN P. CONDON

CHIEF SCIENTIST: DR. J. G. MITCHELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	237.899	242.768
TOTAL PROCUREMENT	1.045	3.735
TOTAL O&M	3.305	3.404
TOTAL OTHER	7.895	12.153
TOTAL ANNUAL LAB	250.144	262.060
TOTAL INHOUSE	62.379	87.022
TOTAL INHOUSE RDTE	61.600	80.362
ANNUAL OPERATING COST	54.295	57.357

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	152	3	77	75
CIVILIAN	242	4	73	169
TOTAL	394	7	150	244

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
39081	1103.536	190.817	964.753	2259.106	792.206	135.537

...MISSION

PRIMARY MISSION IS TO TEST AIRCRAFT, MISSILE, AND SPACE SYSTEMS AND SUBSYSTEMS AT THE FLIGHT CONDITIONS THEY WILL EXPERIENCE DURING A MISSION. AEDC CONDUCTS A RESEARCH AND TECHNOLOGY PROGRAM TO DEVELOP ADVANCED TESTING TECHNIQUES AND INSTRUMENTATION, AND TO SUPPORT THE DEVELOPMENT OF NEW TEST FACILITIES.

...CURRENT IMPORTANT PROGRAMS

1. PEACEKEEPER TESTING INCLUDES AERODYNAMIC AND ROCKET MOTOR FIRINGS.
2. STRATEGIC DEFENSE INITIATIVE TESTING.
3. SMALL ICBM MOTOR DEVELOPMENT AND AERODYNAMIC TESTING.
4. ADVANCED TACTICAL FIGHTER PROPULSION AND FLIGHT DYNAMICS TESTING.
5. 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 SYSTEM SINCE 1954. THIS TESTING COMPLEMENTS 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: ASTRONAUTICS LABORATORY

EDWARDS AFB, CA

CDR: COL. JAMES R. NUNN

CHIEF SCIENTIST: DR. RICHARD WEISS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	110.171	113.408
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	6.260	6.448
TOTAL ANNUAL LAB	116.431	119.856
TOTAL INHOUSE	21.720	23.576
TOTAL INHOUSE RDTE	21.720	23.576
ANNUAL OPERATING COST	1.015	1.086

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	157	1	68	89
CIVILIAN	281	22	117	164
TOTAL	438	23	185	253

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
68345	419.046	86.848	4.780	510.674	137.923	32.863	

...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 ADVANCED BALLISTIC MISSILE SYSTEMS. 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 & 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 IN 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 SYSTEMS. CARBON-CARBON & FILAMENT WINDING LAB. HIGH ENERGY DENSITY MATTER LAB. SPACE STRUCTURE DYNAMICS LAB.

INSTALLATION: AVIONICS LABORATORY

WPAFB, OH

DIR: COL. BRUCE C. THOMPkins

CHIEF SCI DIR: DR. JESSE R. RYLES

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	313.657	331.127
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	8.110	8.400
TOTAL ANNUAL LAB	321.767	339.527
TOTAL INHOUSE	32.360	32.931
TOTAL INHOUSE RDTE	32.360	32.931
ANNUAL OPERATING COST	4.720	4.923

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	147	3	132	15
CIVILIAN	554	30	379	175
TOTAL	701	33	511	190

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
200	238.012 14.715 409.889 662.616	77.842 132.296

...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 L. GOOCH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	75.754	47.333
TOTAL O&M	336.436	309.257
TOTAL OTHER	156.529	161.206
TOTAL ANNUAL LAB	568.719	517.796
TOTAL INHOUSE	80.865	69.872
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	28.914	30.042

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1082	0	115	967
CIVILIAN	1108	1	37	1071
TOTAL	2190	1	152	2038

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
26138	212.871	1179.313	4864.445	6256.629	384.295	435.723

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

NAVY: POSEIDON, TRIDENT, UK POLARIS

ARMY: PERSHING

MILITARY SPACE PROGRAM: TITAN

NASA PROGRAMS: ATLAS/CENTAUR, DELTA, SPACE SHUTTLE, DOD STS

...FUNCTIONS/EQUIPMENT/FACILITIES

CAPABILITIES INCLUDE: ASSEMBLY, PRELAUNCH CHECKOUT, AND LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, SPACE LAUNCH VEHICLES, AND PAYLOADS. SERVICES INCLUDE TRACKING, LONG-DISTANCE COMMUNICATIONS, AND DATA REDUCTION ANALYSIS. EQUIPMENT AND FACILITIES INCLUDE: CCAFS LAUNCH SUPPORT, MAINLAND AND DOWN-RANGE INSTRUMENTATION AND COMMUNICATIONS, INSTRUMENTED SHIP, DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES, AND RANGE TIMING SYSTEMS. ESMC OPERATES AND MAINTAINS CCAFS, MAINLAND SITES, AND DOWNRANGE STATIONS. SUPPORT FUNCTIONS INCLUDE: CONTRACTOR SERVICES.

INSTALLATION: ENGINEERING AND SERVICES LABORATORY

TYNDALL AFB, FL

CDR: COL. KENNINGTON

LAB DIRECTOR: LTC HOKANSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	22.706	21.150
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.379	1.352
TOTAL OTHER	3.942	3.200
TOTAL ANNUAL LAB	28.027	25.702
TOTAL INHOUSE	2.484	3.457
TOTAL INHOUSE RDTE	1.139	2.127
ANNUAL OPERATING COST	0.782	0.740

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	68	6	60	8
CIVILIAN	38	7	31	7
TOTAL	106	13	91	15

ACRES	SPACE AND PROPERTY (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 AFESCM IS THE LEAD LABORATORY FOR RDT&E IN CIVIL AND ENVIRONMENTAL ENGINEERING. THE LABORATORY IS THE FOCAL POINT FOR ENVIRONMENTAL QUALITY, LEAD LAB FOR FACILITIES' ENERGY, AND PROGRAM MANAGER FOR AIRBASE OPERABILITY SCIENCE AND TECHNOLOGY BASE.

...CURRENT IMPORTANT PROGRAMS

AIRCRAFT OPERATING SURFACES PERFORMANCE/ATTACK RECOVERY
FACILITIES/UTILITIES ATTACK SURVIVABILITY AND RECOVERY
FIRE PROTECTION- CRASH/RECOVERY
AIR FORCE FUELS AND CHEMICAL CONTAMINANTS CONTROL
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 WEAPONS SYSTEMS; AIRFIELD SOILS AND SURFACE EVALUATION TRACK- TESTS CHEMICAL EFFECTS ON RUNWAY SURFACES; BOMB CRATER TEST FACILITIES- EVALUATE DIFFERENT BOMB CRATER FILLING TECHNIQUES; STRUCTURES EXPLOSIVE TEST SITE- EVALUATE 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 DIR: DR. G. KEITH RICHEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	167.800	188.920
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.110	0.000
TOTAL OTHER	9.421	9.700
TOTAL ANNUAL LAB	177.331	198.620
TOTAL INHOUSE	35.219	36.923
TOTAL INHOUSE RDTE	35.109	36.923
ANNUAL OPERATING COST	5.688	5.258

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	168	5	116	52
CIVILIAN	613	37	400	213
TOTAL	781	42	516	265

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
76	368.868	204.174	94.319	667.361	50.676	52.474

...MISSION

PLANS, FORMULATES AND EXECUTES TECHNOLOGY PROGRAMS FOR AEROSPACE FLIGHT VEHICLES IN STRUCTURES, AERODYNAMICS, FLIGHT CONTROL, AND VEHICLE SUB-SYSTEMS/EQUIPMENT. PROGRAMS COVER BASIC RESEARCH AND EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT, AS WELL AS TECHNOLOGY INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

ADVANCED FIGHTER TECHNOLOGY INTEGRATION (F-16 AND F-111)
FORWARD SWEEP WING TECHNOLOGY DEMONSTRATOR
HYPERSONIC GLIDE VEHICLE
ADVANCED COMPOSITE AND METALLIC STRUCTURES
COMPUTATIONAL FLUID DYNAMICS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE SUBSONIC AERODYNAMIC RESEARCH LABORATORY IS AN OPEN-CIRCUIT WIND TUNNEL WITH A MAXIMUM TEST SECTION VELOCITY OF M=0.6. THE FULL-SCALE STATIC, THERMAL, AND FATIGUE TEST LAB CAN CONDUCT SINGLE OR COMBINED TESTS ON SEVERAL AIRCRAFT SIMULTANEOUSLY. THE LANDING GEAR TEST FACILITY HAS DYNAMOMETERS AND OTHER SPECIAL MACHINES FOR TESTING TIRES, BRAKES, AND LANDING GEAR STRUTS. THE FLIGHT CONTROL DEVELOPMENT LAB CAN EVALUATE ADVANCED CONTROL CONCEPTS IN A MISSION ENVIRONMENT USING SIMULATION SIMULATORS AND OTHER LABS FOR CREW SYSTEM DESIGN AND ACTUATION SYS TESTS. THE TRISONIC GAS DYNAMIC FACILITY CAN OPERATE AT SUBSONIC, TRANSONIC, AND SUPERSONIC SPEEDS. THE VERTICAL WIND TUNNEL CAN PERFORM SPIN TESTS AND ALSO EVALUATE THE DYNAMIC BEHAVIOR OF FREE-FALL OBJECTS AND PARACHUTES.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA

CDR: MG. W. T. TWINTING

TECH DIRECTOR: MR. R. R. HILDEBRAND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	267.507	274.900
TOTAL PROCUREMENT	10.859	11.276
TOTAL O&M	29.709	36.963
TOTAL OTHER	9.359	4.932
TOTAL ANNUAL LAB	317.434	328.071
TOTAL INHOUSE	90.048	92.405
TOTAL INHOUSE RDTE	76.213	70.022
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3481	49	568	2913
CIVILIAN	2109	10	539	1570
TOTAL	5590	59	1107	4483

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
297438	187.106	296.307	8020.234	8503.647	419.209	246.086

...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, GOVT, CONTRACTOR, AND FOREIGN TD&E.

...CURRENT IMPORTANT PROGRAMS

BIB DT&E/OT&E, ASAT
FIGHTER UPGRADE: F-16 MSIP/LANTIRN, F-15, F15E, YA-7F
B-52 STRATEGIC SYSTEMS UPGRADE
COMBAT TALON II
TECHNOLOGY: AFTI F-16, X29, AFTI F-111

...FUNCTIONS/EQUIPMENT/FACILITIES

AERODYNAMIC ENGINEERING AND AVIONICS (IFAST) SIMULATORS
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; MUNITIONS STORAGE AND CHECKOUT,
CRUISE MISSILE INTEGRATED MAINTENANCE FACILITY; SEVERAL MILES OF DRY LAKE RUNWAYS; AND THE R-2500 AND UTTR AIRSPACE.

INSTALLATION: FRANK J. SEILER RESEARCH LABORATORY

USAFA, COL SPNGS, CO

CDR: LTC. W. G. THORPE

CHIEF SCIENTIST: LTC K. E. SIEGENTHALER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	2.243	1.530
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.352	1.352
TOTAL ANNUAL LAB	3.595	2.882
TOTAL INHOUSE	2.143	1.430
TOTAL INHOUSE RDTE	2.143	1.430
ANNUAL OPERATING COST	0.391	0.226

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	13	6	17
CIVILIAN	9	2	3	6
TOTAL	32	15	9	23

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
0	19.000 3.000 0.000 22.000	1.820 2.507

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

ELECTROCHEMISTRY OF MOLTEN SALTS (BATTERY RESEARCH).
ENERGETIC MATERIALS, SYNTHESIS AND DECOMPOSITION MECHANISMS.
THEORETICAL CHEMICAL CALCULATIONS.
LASER (NONLINEAR OPTICS, KINETICS).
UNSTEADY AERODYNAMICS.

...FUNCTIONS/EQUIPMENT/FACILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY AND ELECTRODE REACTIONS,
EXPLOSIVE & PROPELLANT SYNTH, DECOMP MECH & DETONATION PHENOMENA. MSMT,
GENERATION, SPECTROSCOPY & MO CALCULATIONS OF MOLECULAR SPECIES. FTIR,
UV, FTMNR, EPR, MASS SPEC, CHROMATOGRAPHS, ELECTRON MICROSCOPE,
SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP. FULL WET LAB. LASER
LABORATORIES FOR NONLINEAR OPTICS AND KINETICS EXPERIMENTS. SUBSONIC
WIND TUNNEL AND DATA COLLECTION EQUIP, INCLUDING MASSCOMP FOR UNSTEADY
AERODYNAMICS RESEARCH. PRESSURE, NOT WIRE AND FLOW VISUALIZATION
CAPABILITIES AND ASSOCIATED INSTRUMENTATION FOR WIND TUNNEL EXPERIMENTS.

INSTALLATION: GEOPHYSICS LABORATORY

BEDFORD, MA

CDR: COL. J. R. KIDD

CHIEF SCIENTIST: VACANT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	103.389	106.059
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	4.946	5.106
TOTAL ANNUAL LAB	108.335	111.165
TOTAL INHOUSE	35.810	36.421
TOTAL INHOUSE RDTE	34.876	35.487
ANNUAL OPERATING COST	8.013	8.334

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	117	4	38	79
CIVILIAN	450	95	179	271
TOTAL	567	99	217	350

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
336	395.732	14.821	25.883	436.436	12.350	44.404

...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 EFFECTS ON AIR FORCE SYSTEMS
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 STRATEGIC 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, INCLUDING ATMOSPHERIC TRANSMISSION MODELS AND TACTICAL DECISION AIDS FOR ELECTRO OPTICAL SYSTEMS. 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. HAROLD G. JENSEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	57.953	61.936
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.674	0.624
TOTAL OTHER	7.083	8.151
TOTAL ANNUAL LAB	67.710	70.711
TOTAL INHOUSE	12.262	13.296
TOTAL INHOUSE RDTE	12.241	13.269
ANNUAL OPERATING COST	2.516	2.542

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	191	10	104	87
CIVILIAN	214	39	83	131
TOTAL	405	49	187	218

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL	PROP	EQUIP
	LAB	ADMIN	OTHER				
5	84.596	79.833	44.428	208.857	7.749		122.100

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

MANPOWER AND FORCE MANAGEMENT: 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 RELIABILITY AND MAINTAINABILITY DESIGN.

...FUNCTIONS/EQUIPMENT/FACILITIES

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

INSTALLATION: MATERIALS LABORATORY

WPAFB, OH

DIR: DR. GARY L. DENMAN

CH SCI DIR

DR. H. M. BURTE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)		
PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	156.356	195.128
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.856	2.950
TOTAL ANNUAL LAB	159.212	198.078
 TOTAL INHOUSE	 17.974	 20.657
TOTAL INHOUSE RDTE	17.974	20.657
ANNUAL OPERATING COST	1.662	2.194

PERSONNEL DATA (END OF FY 1987)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	52	2	46	6
CIVILIAN	299	22	185	114
TOTAL	351	54	231	120

SPACE AND PROPERTY					COST (MILLIONS \$)	
ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
15	172.455	4.194	182.734	359.393	276.174	71.170

...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. ALAN J. DRISCOLL

TECH DIRECTOR: DR. JOHN O. DIMMOCK

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	180.303	198.499
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.102	0.102
TOTAL OTHER	4.032	4.153
TOTAL ANNUAL LAB	184.437	202.754
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	2.542	2.651

PERSONNEL DATA (END OF FY 1987)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	77	18	41	36
CIVILIAN	108	29	12	96
TOTAL	185	47	53	132

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	0.000	36.688	5.128	41.816	0.000		0.070

...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. MANAGES THE AF RESEARCH PROGRAM AND SPONSORS EXTRAMURAL RESEARCH.

...CURRENT IMPORTANT PROGRAMS

HYPERSONIC FLIGHT
NEURAL COMPUTING AND PROCESSING
HIGH ENERGY DENSITY PROPELLANT
BIOTECHNOLOGY FOR AEROSPACE MATERIALS
NONLINEAR OPTICS

...FUNCTIONS/EQUIPMENT/FACILITIES

MANAGE THE AF RESEARCH PROGRAM AND SPONSOR EXTRAMURAL RESEARCH

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, NY

CDR: COL. CHARLES E. FRANKLIN

CHIEF SCIENTIST: DR. F. I. DIAMOND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	379.971	433.228
TOTAL PROCUREMENT	28.952	20.126
TOTAL O&M	54.037	59.205
TOTAL OTHER	10.300	10.600
TOTAL ANNUAL LAB	473.260	523.159
TOTAL INHOUSE	67.486	76.443
TOTAL INHOUSE RDTE	64.072	73.649
ANNUAL OPERATING COST	0.611	0.632

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	206	3	148	58
CIVILIAN	1056	62	555	501
TOTAL	1262	65	703	559

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1532	775.837	53.447	170.771	1000.055	31.202	84.954

...MISSION

RADC PLANS AND EXECUTES RESEARCH, DEVELOPMENT, TEST AND SELECTED ACQUISITION PROGRAMS IN SUPPORT OF COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE (C3I) ACTIVITIES. TECHNICAL AND ENGINEERING SUPPORT WITHIN AREAS OF TECHNICAL COMPETENCE IS PROVIDED TO ESD PROGRAM OFFICES (POS).

...CURRENT IMPORTANT PROGRAMS

PHOTONICS
SPACE BASED RADAR
COMMAND, CONTROL, COMMUNICATIONS DECISION AIDS
SATELLITE COMMUNICATIONS
ELECTRO-OPTICAL SURVEILLANCE AND DEVICES

...FUNCTIONS/EQUIPMENT/FACILITIES

HQ RADC, GRIFFISS AFB; OPERATING LOCATIONS -- HANSCOM AFB 2 DIRECTORATES
AVA, NY; ONTARIO, NY; VERONA, NY; NEWPORT, NY; STOCKBRIDGE, NY;
YOUNGSTOWN, NY; FORESTPORT, NY; QUAKER HILL, NY; VIENNA, NY;
IPSWICH, MA; PROSPECT HILL, MA
IN-HOUSE FACILITIES: RECONNAISSANCE EXPLOITATION FACILITY, HIGH POWER
FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, PHOTONICS CENTER
RELIABILITY ANALYSIS CENTER, EXPERIMENTAL PHOTOGRAMMETRIC FACILITY, ECCM
AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS
FACILITY, COMMAND AND CONTROL TECHNOLOGY LABORATORY, RADIATION EFFECTS
FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY FOR WEAPONS TESTING
SURVEILLANCE LABORATORY, MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY
RADIATION EFFECTS FACILITY, EXPERIMENTAL DEVICE FABRICATION FACILITY.

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX

CDR: COL. JEFFREY G. DAVIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	21.700	21.073
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.272	3.474
TOTAL OTHER	18.257	20.817
TOTAL ANNUAL LAB	44.229	45.364
TOTAL INHOUSE	16.731	15.683
TOTAL INHOUSE RDTE	12.459	12.209
ANNUAL OPERATING COST	4.222	3.609

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	280	44	41	239
CIVILIAN	254	40	61	193
TOTAL	534	84	102	432

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19575	422.784	30.279	177.459	630.522	53.153	28.372

...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 MED PROBLEMS, LIFE SUPPORT, ENVIRONMENTAL STRESS, RADIOBIOLOGY, LASER, BIOMETRICS, BIOMED ENGINEERING, RDTE ON MED EQUIPMENT AND SYSTEMS, HUMAN CENTRIFUGE, COCKPIT INTEGRATION LAB, COMMAND-CONTROL-COMMUNICATIONS (C3) WORKSTATION PERFORMANCE TEST FACILITY, CHEMICAL DEFENSE TEST FACILITY, TESTING CELLS, RESEARCH CHAMBERS, TELETHERAPY COBALT 60 RADIATION SOURCE, RADIOFREQUENCY RADIATION RESEARCH FACILITY, REMOTE INTER-ACTIVE GRAPHIC TERMINAL SYSTEM, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSPACE MED SCIENCE LAB, LASER HAZARD FACILITIES AND RANGE, AEROMED LIBRARY, AEROSPACE MED EVAL AND CONSULTATIVE SVCS, NUCLEAR MEDICINE ACQUISITION SYSTEM, OPTICAL RESEARCH, AUDIOLOGY, VESTIBULAR STUDIES, NEUROSCIENCES LAB PSYCHOBIOLOGY, RADIOISOTOPE, AEROMED RSCH, MED REPOSITORIES, RADIATION SCIENCES RESEARCH, BIODYNAMICS RESEARCH, DEVEL ENGINEERING.

INSTALLATION: WEAPONS LABORATORY

KIRTLAND AFB, NM

CDR: COL. J. P. AMOR

CHIEF SCIENTIST: DR. A. H. GUENTHER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	325.457	441.824
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.021	0.050
TOTAL OTHER	26.057	27.360
TOTAL ANNUAL LAB	351.535	469.234
TOTAL INHOUSE	81.370	110.468
TOTAL INHOUSE RDTE	81.349	110.418
ANNUAL OPERATING COST	4.854	4.629

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	580	26	320	260
CIVILIAN	537	62	229	308
TOTAL	1117	88	549	568

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
90	551.000	110.000	180.000	841.000	28.340	96.000

...MISSION

RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT IN NUCLEAR WEAPONS EFFECTS, NUCLEAR WEAPONS SURVIVABILITY/VULNERABILITY NUCLEAR SAFETY, AND DIRECTED ENERGY WEAPON TECHNOLOGY.

...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 WEAPON EFFECTS SIMULATION, SAFETY, 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 DEVELOPMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METEOROL-OGY LABORATORIES, THE AIR FORCE SUPER-COMPUTER CENTERS 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	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (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	87.514	90.006
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	541	4	184	357
CIVILIAN	522	0	121	401
TOTAL	1063	4	305	758

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
421	1538.080	1224.352	844.146	3606.578	0.277		0.000

...MISSION

OPERATE THE WESTERN TEST RANGE TO SUPPORT FIELD TEST AND LAUNCH OPERATIONS FACILITIES FOR A VARIETY OF GOVERNMENT RANGE USERS. SUPPORTS OTHER DOD TEST RANGES DURING SPACE, MISSILE, AND AIRCRAFT OPS.

...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

SMALL ICBM SYSTEM TEST INCLUDING TRIDENT II

...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, MINUTEMAN AND COMMERCIAL BOOSTERS.

PAYLOADS 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. F. C. GIDEON, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	113.036	113.568
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.115	0.130
TOTAL OTHER	30.822	42.750
TOTAL ANNUAL LAB	143.973	156.448
TOTAL INHOUSE	72.927	77.330
TOTAL INHOUSE RDTE	72.812	77.200
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	853	1	137	716
CIVILIAN	864	0	151	713
TOTAL	1717	1	288	1429

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
400	20.800	97.700	1068.000	1186.500	24.900	348.992

...MISSION

DOD MAJOR 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 TEST ENGRG. AND TECH DATA ACQ. SVCS.

...CURRENT IMPORTANT PROGRAMS

MARK XV IFF
MILSTAR FSED TERMINAL
ECCM-ADVANCED RADAR TESTBED
SONOBUOY MISSILE IMPACT LOCATION SYSTEM (SMILS)
ARGUS SUPPORT

...FUNCTIONS/EQUIPMENT/FACILITIES

TEST SUPPORT AIRCRAFT (ARIA) PROVIDE GLOBAL SUPPORT ALL AFSC MAJOR CLASS II AIRCRAFT. MISSILE LAUNCH/REENTRY TRACKING AND DATA RELAY. 1700 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. COMPUTATIONAL FLUID DYNAMICS ANALYSIS CAPABILITY. 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 (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	40.263	45.515
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	8.383	8.500
TOTAL OTHER	15.746	11.586
TOTAL ANNUAL LAB	64.392	65.601
TOTAL INHOUSE	28.872	33.135
TOTAL INHOUSE RDTE	28.872	33.135
ANNUAL OPERATING COST	0.293	0.190

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	256	0	96	160
CIVILIAN	294	1	108	186
TOTAL	550	1	204	346

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7052	407.068	39.081	93.979	540.128	228.352	121.169

...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

ADVANCED TACTICAL FIGHTER
AMRAAM RADAR FSD FLIGHT TESTS
A/C NAVIGATION SYSTEM VERIFICATION TESTING, PROJECT 688G
JOINT STARS
PEACEKEEPER GUIDANCE SYSTEM AND COMPONENTS TESTING

...FUNCTIONS/EQUIPMENT/FACILITIES

ONE 260-INCH, ONE 120-INCH, ONE 100-INCH PRECISION CENTRIFUGE
PRECISION AIRBORNE/GROUND TEST FACILITY
PRECISION REFERENCE/DATA COLLECTION (ELECTRONIC/PHOTOGRAPHIC)
ENVIRONMENTAL CHAMBERS (TEMPERATURE/ALTITUDE)
INERTIAL NAV VANS
SCIENTIFIC ADPE
50799 FT DUAL-RAIL TEST TRACK
5 BLOCKHOUSES
9000 FT RAINFIELD, 2000 FT BALLISTIC RAINFIELD
150MHZ TO 95GHZ RCS MEASUREMENT, ANTENNA PATTERN MEASUREMENT
R&D MACHINE/FABRICATION SHOP
MODEL MAKING

INSTALLATION: ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE

BETHESDA, MD

CDR: COL. GEORGE W. IRVING, III.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1987 (Actual)	1988 (ACT+EST)
TOTAL RDTE	16.247	16.884
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.695	3.805
TOTAL ANNUAL LAB	19.942	20.689
TOTAL INHOUSE	16.247	16.884
TOTAL INHOUSE RDTE	16.325	16.934
ANNUAL OPERATING COST	3.335	3.435

PERSONNEL	PERSONNEL DATA (END OF FY 1987)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	97	24	34	63
CIVILIAN	174	41	17	157
TOTAL	271	65	51	220

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
10	61.750	31.057	24.901	117.708	0.000	19.326

...MISSION

THE MISSION OF AFRRRI SHALL BE TO CONDUCT 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 AND CASUALTY PRODUCTION.
TREATMENT METHODS FOR CASUALTIES FROM RADIATION/COMBINED INJURY.
INSTRUCTION TO ARMED SERVICES ON TREATMENT OF NUCLEAR CASUALTIES.

...FUNCTIONS/EQUIPMENT/FACILITIES

FUNCTIONS: OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH AND DISSEMINATING RESULTS: CONDUCT ADVANCED TRAINING: PROVIDE ANALYSIS, CONSULTATION ON BIOEFFECTS OF RADIATION AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY STATE NUCLEAR REACTOR, 300,000-CURIE COBALT-60 IRRADIATOR, ELECTRON LINEAR 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

Air Defense Artillery Board Ft. Bliss, Tx	Consolidated
Airborne & Special Operations Test Board Ft. Bragg, NC	Consolidated
Armor & Engineering Board Ft. Knox, KY	Consolidated
Armament Research, Development & Engineering Center, Dover, NJ	Established
Armament Munitions and Chemical Command Dover, NJ	Disestablished
Astronautics Laboratory Edwards AFB, CA	Established
Aviation Board Ft. Rucker, AL	Consolidated
Belvoir Research, Devel & Engineering Center Ft. Belvoir, VA	Changed Name
Center for Command, Control, & Communications Ft. Monmouth, NJ	Established
Cntr for Comm/Automatic Data Processing Ft. Monmouth, NJ	Disestablished
Communications & Electronics Board Ft. Gordon, GA	Consolidated
Field Artillery Board Ft. Sill, OK	Consolidated
Infantry Board Ft. Benning, GA	Consolidated
Intelligence & Security Board Ft. Huachuca, AZ	Consolidated
TRADOC Test & Experimentation CMD (TEXCOM) Ft. Hood, TX (SEE NOTE ON PAGE 104)	Established

APPENDIX I

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME

DEPARTMENT OF THE NAVY

NONE

DEPARTMENT OF THE AIR FORCE

**Rocket Propulsion Laboratory
Edwards AFB, CA**

Disestablished

DEPARTMENT OF DEFENSE AGENCIES

NONE

**Changes since publication of Department of Defense In-House RDTE
Activities, 30 October 1986 through FY 1987.**

**NOTE - TRADOC Test and Experimentation Board (TEXCOM) located at
Ft. Hood, TX has submitted a consolidated report for its local
boards.**

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 Engineering
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
 1301 General Physical Science
 1306 Health Physics
 1310 Physics
 1313 Geophysics
 1315 Hydrology
 1320 Chemistry
 1321 Metallurgy
 1330 Astronomy and Space Science
 1340 Meteorology
 1350 Geology
 1360 Oceanography
 1370 Cartography
 1380 Forest Products Technology

1382 Food Technology
 1384 Textile Technology
 1386 Photographic
 Technology
 1510 Actuary
 1515 Operations Research
 1520 Mathematics
 1529 Mathematical
 Statistician
 1530 Statistician
 1540 Cryptography
 1550 Computer Science
 1372 Geodesy

Military professional, 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	
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

1521 Mathematics
Technician
1531 Statistical, Clerical &
Administrative
1541 Cryptoanalysis

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 Instructions 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	- AntiAir 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 Material Cmd	NASA	- National Aeronautics and Space Administration
APG	- Aberdeen Proving Gnd	NASC	- Naval Air Systems Command
ARPA	- Advance Research Pro- jects Agency	NAVAIR	- Naval Air Systems Command
ASW	- AntiSubmarine Warfare	NAVSEA	- Naval Sea Systems Command
AUS	- Army United States	NEMP	- Nuclear Electro- Magnetic Propagation
BIS	- Board of Inspection and Survey	PI	- Product Improvement
BW	- Biological Warfare	POL	- Petroleum Oil, Lubricants
CBR	- Chemical, Biological Radiological	QA	- Quality Assurance
CE	- Chief of Engineers Army	QMDO	- Qualitative Material 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
EKG	- Electrocardiogram	ULMS	- Undersea Long-Range System
ELINT	- Electronic Warfare	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
		V/STOL	- Vertical/Short Takeoff Landing

ET - Engineering Artillery
FA - Field Artillery
FBM - Fleet Ballistic Missile

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