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DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES

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DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES

30 October 1985

Prepared for:

US ARMY MATERIEL COMMAND
5001 Eisenhower Avenue
Alexandria, Virginia 22333

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FOREWORD

THIS REPORT WAS PREPARED FOR THE US ARMY MATERIEL COMMAND AT THE DIRECTION OF THE DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND ACQUISITION. THIS EDITION IS THE EIGHTEENTH OF A SERIES 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 1985 ARE SUMMARIZED IN TABLES PRECEDING THE MAIN TEXT AND CHARTS AND TABLES ARE PROVIDED FOR EACH SERVICE SHOWING ORGANIZATIONAL RELATIONSHIPS AND COMMAND CHAIN.

ALL CURRENT DOD RDTE ACTIVITIES WHICH MEET THE REPORT REQUIREMENT OF HAVING AT LEAST 25 PER CENT OF THEIR BUDGET IN RDTE FUNDS ARE LISTED IN THE CONTENTS ALPHABETICALLY WITHIN EACH DEPARTMENT. SOME FACILITIES WHICH DO NOT MEET THE REQUIREMENT PREVIOUSLY NOTED ARE ALSO LISTED BY SPECIAL REQUEST. ORGANIZATIONAL CHANGES DURING FY 1985 APPEAR IN APPENDIX I.

DOD INSTRUCTION 7700.9, WHICH HAS BEEN THE BASIS FOR THIS REPORT SINCE ITS INCEPTION, HAS BEEN REPLACED BY A TRI-SERVICE REGULATION, AR 70-63 NAVCOMPTIST 7044.5E, AFR 80-26, DNA 7700.9A, ENTITLED DOD IN-HOUSE RDTE ANNUAL ACTIVITIES REPORT, 1 SEPTEMBER 1981. APPENDIX II CONTAINS MANY OF THE DEFINITIONS USED IN THIS REPORT AND ARE 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 AND, IN ALMOST ALL CASES, REVIEWED WITH THE SUBMITTING AGENCY TO INSURE CORRECTNESS AND CLARITY.

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.

NO MAJOR CHANGES HAVE BEEN MADE IN THIS YEAR'S REPORT VIS-A-VIS LAST YEAR'S.

IT IS DESIRED THAT THIS PUBLICATION BE GIVEN WIDESPREAD DISTRIBUTION IN THE DOD LABORATORIES AS AN INTERNAL MANAGEMENT DOCUMENT AT THE DIRECTOR AND COMMANDING OFFICER LEVEL AS WELL AS AT THE BENCH LEVEL IN ORDER TO ALLOW PERSONNEL AN OPPORTUNITY TO FAMILIARIZE THEMSELVES WITH THE FUNCTIONAL CAPABILITIES OF OTHER DOD LABORATORIES. IT IS HOPED THAT BY THIS MEANS LABORATORY SCIENTISTS AND ENGINEERS WILL BE ENCOURAGED TO COMMUNICATE WITH EACH OTHER ON COMMON PROBLEMS OF INTEREST TO THEIR SERVICE LABORATORIES AS WELL AS TO COMMUNICATE WITH LABORATORIES OF THE OTHER SERVICES.

ADDITIONAL COPIES OF THIS DOCUMENT MAY BE OBTAINED BY WRITING THE DEFENSE TECHNICAL INFORMATION CENTER, BUILDING 5, CAMERON STATION, ALEXANDRIA, VIRGINIA 22314.

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SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

PROGRAM DATA FOR FY 1985

	(MILLIONS)
TOTAL ANNUAL PROGRAM	15821.187
TOTAL INHOUSE PROGRAM	5927.891
TOTAL RDT&E PROGRAM	9780.347
TOTAL INHOUSE RDT&E	2644.558
TOTAL ANNUAL OPERATING COST	1624.866

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	26552	799	7429
CIVILIAN	73413	4065	38597
TOTAL	99965	4864	41026

PHYSICAL FACILITIES (END OF FY 1985)

ACRES	6259285
-------	---------

SPACE (THOUSANDS OF SQ FT)

LABORATORY	31821.166
ADMINISTRATIVE	10864.166
OTHER	51251.811
TOTAL	93937.143

COST (MILLIONS)

REAL PROPERTY	5274.714
EQUIPMENT	5438.259
TOTAL	10712.973

TABLE 1. ARMY ROTEE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)		PERSONNEL DATA										
	TOTAL	INHOUSE	TOTAL	INHOUSE	TOTAL	TOTAL	PHD	PHD	PHD	PHD	PROF	PROF	
	INHOUSE	RD&E	RD&E	RD&E	MIL	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
AEROMEDICAL RESEARCH LABORATORY	11.072	6.349	7.516	7.516	72	70	13	9	44	26			
AIR DEFENSE ARTILLERY BOARD	10.596	6.449	3.943	3.943	97	95	1	0	20	14			
AIRBORNE & SPEC. OP. TEST BOARD	6.204	3.328	2.990	2.990	52	56	0	0	9	6			
ARMOR AND ENGINEER BOARD,	10.263	10.738	10.738	10.738	178	126	0	2	69	32			
ARMY RESEARCH OFFICE	104.407	0.153	0.153	0.153	2	133	0	42	0	52			
ATMOSPHERIC SCIENCES LABORATORY	40.114	23.472	30.578	22.558	50	403	1	32	3	127			
AVIATION BOARD	6.792	4.200	4.200	4.200	44	46	0	3	21	23			
AVIATION DEVELOPMENT TEST ACTIVITY	23.754	10.359	10.359	10.359	194	93	0	0	32	30			
AVIATION ENGINEERING FLY ACTIVITY	10.051	7.591	7.045	7.045	64	100	0	0	45	30			
AVIATION RESEARCH & TECH ACTIVITY	153.600	42.100	148.057	38.188	24	365	1	26	19	258			
AVIONICS R&D ACTIVITY	35.578	23.964	6.931	6.931	17	259	0	4	13	141			
BALLISTIC RESEARCH LABORATORY	161.640	135.319	63.391	63.391	14	743	1	111	10	473			
BELVOIR RESEARCH & DEV CENTER	221.414	139.491	45.940	45.940	59	1040	2	24	59	418			
CHEMICAL RESEARCH AND DEVELOPMENT CENTER	183.689	141.807	53.982	53.982	99	980	5	81	41	705			
COLD REGIONS RESEARCH & ENGINEERING LAB	25.121	17.728	13.170	8.034	15	278	0	30	6	121			
COLD REGIONS TEST CENTER	12.643	7.056	7.056	7.056	256	24	0	0	32	14			
COMBAT SYSTEMS TEST ACTIVITY	112.630	101.160	70.708	64.479	220	995	0	7	21	392			
COMMUNICATIONS - ELECTRONICS BOARD	5.394	2.181	2.181	2.181	53	43	0	0	48	11			
COMMUNICATIONS-ELECTRONICS R&D CENTER	92.961	27.354	75.635	22.684	13	664	0	9	6	543			
CONSTRUCTION ENGINEERING RESEARCH LAB	40.926	19.850	36.276	17.350	4	259	0	34	4	184			
DUGWAY PROVING GROUND	62.583	59.239	52.498	49.154	175	826	3	21	154	104			
ELECTRONIC PROVING GROUND	69.566	46.847	48.752	29.251	603	211	0	0	54	82			
ELECTRONIC WARFARE LABORATORY	350.283	120.627	16.005	16.005	28	349	0	7	14	89			
ELECTRONICS TECHNOLOGY AND DEVICES LAB	87.812	22.995	79.865	17.430	1	290	0	36	0	185			
ENGINEER TOPOGRAPHIC LABORATORIES	35.854	12.138	32.702	9.879	11	297	0	18	14	186			
ENGINEER WATERWAYS EXPERIMENT STA.	114.290	91.545	49.773	40.638	17	1642	2	114	17	675			
FIELD ARTILLERY BOARD	10.701	4.387	4.387	4.387	112	52	0	0	31	5			
FIRE CONTROL & SMALL CAL. WPNS SYS. LAB	109.691	62.538	61.058	24.650	15	848	0	29	9	483			
HARRY DIAMOND LABORATORIES	165.459	99.263	92.122	74.846	3	1016	1	49	5	497			
HUMAN ENGINEERING LABORATORY	16.465	14.674	17.078	14.090	35	176	1	16	16	126			
INFANTRY BOARD	7.191	7.191	3.687	3.687	107	77	0	3	2	6			
INSTITUTE OF DENTAL RESEARCH	6.326	6.245	6.425	4.475	60	20	9	2	38	4			
INSTITUTE OF SURGICAL RSCH	8.869	3.360	3.360	3.360	156	72	18	8	52	34			
INTELLIGENCE AND SECURITY BOARD	6.256	1.501	3.447	1.379	84	33	0	2	70	29			
KWAJALEIN MISSILE RANGE/MARSHALL ISLANDS	172.021	9.100	170.131	6.410	44	105	0	1	15	60			
LARGE CALIBER WEAPONS SYSTEMS LAB	283.223	137.129	206.023	60.179	27	1728	0	80	20	1089			
LETTERMAN ARMY INSTITUTE OF RESEARCH	21.312	16.269	16.422	11.379	155	99	27	16	74	48			
MATERIALS TECHNOLOGY LABORATORY	59.391	37.676	52.652	33.183	14	617	2	66	11	241			
MATERIEL SYSTEMS ANALYSIS ACTIVITY	30.929	21.706	25.516	17.569	30	428	0	18	14	318			
MEDICAL BIOENGINEERING R&D LAB	16.583	6.499	13.906	6.360	30	92	100	20	410	350			
MEDICAL MATERIAL DEVELOPMENT ACTIVITY	45.940	1.756	45.754	1.756	26	39	10	4	15	7			
MEDICAL M & D COMMAND	13.064	10.749	9.495	7.180	60	178	23	0	44	11			
MEDICAL RSCH INST OF CHEMICAL DEFENSE	42.604	19.646	38.082	16.182	85	155	31	26	39	56			
MEDICAL RSCH INST OF INFECTIOUS DIS.	38.994	28.995	30.448	20.449	295	192	50	37	85	94			
MISSILE LABORATORY	241.548	113.513	192.310	71.127	41	883	0	54	31	590			
NATICK RESEARCH DEVELOPMENT AND ENGR CTR	136.285	54.611	61.273	41.554	102	1004	3	77	30	549			
NIGHT VISION AND ELECTRO-OPTICS LAB	172.546	39.622	111.941	34.677	33	476	1	35	13	262			
RESEARCH INST FOR BEH & SOCIAL SCI	78.852	78.241	22.069	22.069	56	342	2	167	36	234			
RSCH INST OF ENVIRONMENTAL MEDICINE	11.612	8.337	10.116	6.541	73	84	19	25	50	58			

SIGNALS WARFARE LAB.	306.881	11.550	60.823	5.642	65	205	0	4	13	175
TANK AUTOMOTIVE ROAD CENTER	122.270	40.373	101.096	23.517	29	775	0	17	22	363
TROPIC TEST CENTER	5.325	5.229	3.682	3.585	70	61	0	2	12	11
WALTER REED ARMY INSTITUTE OF RESEARCH	103.234	59.158	84.639	40.567	451	554	98	68	301	232
WHITE SANDS MISSILE RANGE	284.740	215.803	213.402	167.021	878	2664	5	71	279	1085
YUMA PROVING GROUND	65.281	39.185	44.478	26.415	424	733	0	3	36	164
TOTALS	4587.832	1950.957	3127.110	1318.281	5930	24092	429	1510	2530	12108

TABLE 2. ARMY ROTBE FACILITIES DATA, FY 1965

INSTALLATION	SPACE (THOUSANDS OF SQUARE FEET)		SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)		COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AEROMEDICAL RESEARCH LABORATORY	53	69,572	16,000	10,669	7,506	13,519
AIR DEFENSE ARTILLERY BOARD	0	11,220	37,090	35,357	1,370	15,185
AIRBORNE & SPEC. OP. TEST BOARD	27	3,976	40,795	44,183	0,103	8,953
ARMOR AND ENGINEER BOARD,	2	36,062	50,454	86,069	1,455	19,850
ARMY RESEARCH OFFICE	2	0,000	29,420	0,000	0,000	0,790
ATMOSPHERIC SCIENCES LABORATORY	15	51,541	26,663	67,658	20,213	23,194
AVIATION BOARD	0	0,000	10,826	20,470	0,000	1,900
AVIATION DEVELOPMENT TEST ACTIVITY	1196	0,000	53,629	127,687	2,055	36,665
AVIATION ENGINEERING FLT ACTIVITY	19	9,200	1,600	124,600	4,042	15,432
AVIATION RESEARCH & TECH ACTIVITY	127	68,848	58,673	16,370	2,272	19,439
AVONICS R&D ACTIVITY	2	52,450	13,665	19,100	0,000	11,344
BALLISTIC RESEARCH LABORATORY	1920	375,522	116,705	53,044	9,085	55,000
BELVOIR RESEARCH & DEV CENTER	1052	359,261	186,816	260,584	19,598	39,194
CHEMICAL RESEARCH AND DEVELOPMENT CENTER	3471	420,073	348,763	567,290	25,080	52,317
COLD REGIONS RESEARCH & ENGINEERING LAB	31	108,797	30,027	145,148	15,995	11,652
COLD REGIONS TEST CENTER	647155	0,000	39,184	167,282	10,336	10,102
COMBAT SYSTEMS TEST ACTIVITY	22865	720,999	4,351	248,742	22,176	44,865
COMMUNICATIONS - ELECTRONICS BOARD	7	0,000	19,625	1,823	0,253	1,735
COMMUNICATIONS-ELECTRONICS R&D CENTER	0	39,206	98,975	6,485	0,000	23,700
CONSTRUCTION-ENGINEERING RESEARCH LAB	31	45,876	41,549	30,335	10,000	10,000
DUGWAY PROVING GROUND	688123	159,561	198,388	1591,684	57,000	43,000
ELECTRONIC PROVING GROUND	106	112,278	35,107	312,519	11,000	21,700
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	58,763	35,837	6,189	6,775	10,346
ELECTRONICS TECHNOLOGY AND DEVICES LAB	33	90,722	7,000	13,300	6,000	14,612
ENGINEER TOPOGRAPHIC LABORATORIES	3073	1743,080	353,645	176,809	42,300	51,700
ENGINEER WATERWAYS EXPERIMENT STA.	0	13,790	38,080	16,939	0,000	3,541
FIELD ARTILLERY BOARD	7	177,420	103,980	4,667	10,122	29,958
FIRE CONTROL & SMALL CAL. WPNS SYS. LAB	2316	507,829	112,019	121,492	53,921	57,071
HARRY DIAMOND LABORATORIES	72	111,524	7,056	32,885	10,826	6,507
HUMAN ENGINEERING LABORATORY	1	0,000	32,203	2,000	3,000	1,632
INFANTRY BOARD	0	9,852	5,696	1,200	2,610	3,626
INSTITUTE OF DENTAL RESEARCH	0	26,424	1,800	22,400	5,432	5,091
INSTITUTE OF SURGICAL RSCH	10	4,000	6,627	21,667	0,616	9,806
INTELLIGENCE AND SECURITY BOARD	1361	0,000	209,608	2423,848	237,550	245,980
KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS	17	407,992	235,400	65,000	17,732	27,420
LARGE CALIBER WEAPONS SYSTEMS LAB	9	119,204	56,941	112,174	43,779	11,955
LETTERMAN ARMY INSTITUTE OF RESEARCH	37	352,000	88,261	48,375	14,879	24,470
MATERIALS TECHNOLOGY LABORATORY	4	8,140	100,276	1,715	2,070	1,366
MATERIEL SYSTEMS ANALYSIS ACTIVITY	5	23,691	42,773	13,389	3,836	4,644
MEDICAL BIOENGINEERING R&D LAB	0	0,000	12,864	0,000	0,532	0,120
MEDICAL MATERIAL DEVELOPMENT ACTIVITY	0	0,000	51,896	0,000	0,650	3,450
MEDICAL R & D COMMAND	31	36,246	22,945	99,029	9,384	16,703
MEDICAL RSCH INST OF CHEMICAL DEFENSE	215	104,136	20,618	197,909	20,117	14,734
MEDICAL RSCH INST OF INFECTIOUS DIS.	11000	728,800	257,200	200,000	138,516	128,252
MISSILE LABORATORY	78	502,631	51,018	334,905	23,991	29,854
NATICK RESEARCH DEVELOPMENT AND ENGR CTR	0	60,000	44,473	37,000	12,244	35,499
NIGHT VISION AND ELECTRO-OPTICS LAB	0	53,155	14,000	6,200	0,735	8,862
RESEARCH INST FOR GEN & SOCIAL SCI	4	65,177	14,037	28,647	4,084	8,360
RSCH INST OF ENVIRONMENTAL MEDICINE						

TABLE 3. NAVY RET&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1965

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA										
	TOTAL INHOUSE	TOTAL RDY&E	INHOUSE RDY&E	TOTAL MIL	TOTAL CIV	TOTAL MIL	PHD MIL	PHD CIV	PROF MIL	PROF CIV	TOTAL MIL	PHD MIL	PHD CIV	PROF MIL	PROF CIV
AEROSPACE MEDICAL RESEARCH LABORATORY	6.544	5.136	5.136	37	56	37	9	13	17	34	37	9	13	17	34
AIR DEVELOPMENT CENTER	465.862	258.062	112.427	267	2374	267	3	62	75	1540	267	3	62	75	1540
AIR PROPULSION CENTER	55.356	50.721	30.676	6	711	6	0	2	7	221	6	0	2	7	221
AIR TEST CENTER	333.312	150.404	103.952	240	937	1609	0	5	0	672	1609	0	5	0	672
ATLANTIC FLFET WEAPONS TRAINING FACILITY	36.731	0.610	0.200	0	200	93	0	0	0	29	93	0	0	0	29
BIODYNAMICS LABORATORY	4.687	3.874	3.192	34	53	34	5	3	19	19	34	5	3	19	19
BIOSCIENCES LABORATORY	4.447	4.154	4.154	9	4	9	3	0	13	0	9	3	0	13	0
CIVIL ENGINEERING LABORATORY	53.040	42.080	21.800	17	391	17	0	32	7	223	17	0	32	7	223
CLOTHING & TEXTILE RESEARCH FACILITY	4.566	3.049	2.671	1	57	1	0	1	1	43	1	0	1	1	43
COASTAL SYSTEMS CENTER	97.105	65.007	40.951	132	1076	132	0	41	13	531	132	0	41	13	531
DAVID M. TAYLOR SHIP R&D CENTER	337.506	238.632	137.144	75	2888	75	2	125	27	1385	75	2	125	27	1385
DENTAL RESEARCH INSTITUTE	1.726	0.942	0.802	15	15	15	10	4	13	15	15	10	4	13	15
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	6.500	6.845	2.904	15	39	15	0	12	6	44	15	0	12	6	44
EXPLOSIVE ORDNANCE DISPOSAL TECH CEN	37.922	19.827	10.173	70	206	70	0	1	13	63	70	0	1	13	63
HEALTH RESEARCH CENTER	4.405	3.516	2.404	30	61	30	6	11	22	23	30	6	11	22	23
MEDICAL RESEARCH INSTITUTE	29.256	20.239	16.109	255	188	255	54	39	103	114	255	54	39	103	114
MEDICAL RESEARCH UNIT NO. 2	3.683	2.694	2.694	25	48	25	9	4	24	44	25	9	4	24	44
MEDICAL RESEARCH UNIT NO. 3	5.545	4.466	4.466	28	205	28	12	18	14	66	28	12	18	14	66
OCEAN RESH & DEV ACT	42.877	39.809	27.785	17	319	17	0	70	13	205	17	0	70	13	205
OCEAN SYSTEMS CENTER	512.900	303.984	147.576	281	2948	281	1	196	55	1541	281	1	196	55	1541
OFFICE OF NAVAL RESEARCH	774.674	631.863	28.672	41	471	41	6	77	40	114	41	6	77	40	114
ORDNANCE MISSILE TEST STATION	14.814	9.705	2.911	89	60	89	0	0	12	6	89	0	0	12	6
PACIFIC MISSILE TEST CENTER	747.935	407.527	191.828	1077	4133	1077	12	18	405	1115	1077	12	18	405	1115
PERSONNEL RESEARCH & DEVELOPMENT CTR	37.791	19.863	13.116	27	329	27	1	103	14	236	27	1	103	14	236
RESEARCH LABORATORY	393.698	340.732	174.726	91	3279	91	2	701	34	1584	91	2	701	34	1584
SUBMARINE MEDICAL RESEARCH LABORATORY	3.478	2.279	2.279	34	55	34	6	14	12	28	34	6	14	12	28
SURFACE WEAPONS CENTER	542.195	309.901	123.474	166	5345	166	0	243	36	2438	166	0	243	36	2438
UNDERSEA RANGES DEPARTMENT	66.603	44.477	9.931	25	25	25	0	2	16	13	25	0	2	16	13
UNDERWATER SYSTEMS CENTER (NUMC)	481.855	206.068	111.064	84	3461	84	0	66	73	1938	84	0	66	73	1938
WEAPONS CENTER	667.047	347.955	165.794	567	5237	567	0	94	42	1806	567	0	94	42	1806
WEAPONS EVALUATION FACILITY	13.526	3.762	3.181	135	124	135	0	0	23	44	135	0	0	23	44
TOTALS	5799.606	2489.090	1505.942	5307	36721	5307	143	1977	1180	16137	5307	143	1977	1180	16137

TABLE 4. NAVY RDT&E FACILITIES DATA, FY 1985

INSTA'LATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL	EQUIPMENT
		SPACE (THOUSANDS OF SQUARE FEET)				
AEROSPACE MEDICAL RESEARCH LABORATORY						
AIR DEVELOPMENT CENTER	1	107,780	6,632	2,554	2,818	5,486
AIR PROPULSION CENTER	640	669,000	84,000	654,000	38,396	72,848
AIR TEST CENTER	68	488,390	27,962	92,816	52,190	11,135
ATLANTIC FLEET WEAPONS TRAINING FACILITY	7123	1261,133	433,407	248,753	179,600	76,222
BIODYNAMICS LABORATORY	3530	0,000	14,957	225,152	19,268	135,179
BIOSCIENCES LABORATORY	1	35,792	24,452	0,000	2,070	0,279
CIVIL ENGINEERING LABORATORY	5	77,625	8,731	34,646	1,000	6,962
CLOTHING & TEXTILE RESEARCH FACILITY	32	112,965	7,746	16,493	8,727	5,670
COASTAL SYSTEMS CENTER	1	12,660	10,200	3,600	1,054	0,878
DAVID W. TAYLOR SHIP RESEARCH CENTER	448	358,558	37,914	401,454	49,323	27,571
DENTAL RESEARCH INSTITUTE	423	1815,000	99,000	332,000	75,819	95,118
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	1	21,264	6,001	9,318	0,000	0,102
EXPLOSIVE ORDNANCE DISPOSAL RESEARCH FACILITY	0	2,106	15,578	5,588	0,000	2,307
HEALTH RESEARCH CENTER	1172	71,578	22,176	90,643	5,987	5,201
MEDICAL RESEARCH INSTITUTE	1	19,052	7,159	0,000	0,147	1,734
MEDICAL RESEARCH UNIT NO. 2	4	159,933	11,720	47,210	8,303	16,680
MEDICAL RESEARCH UNIT NO. 3	1	15,439	6,654	2,400	0,000	0,371
OCEAN SYSTEMS CENTER	5	89,472	8,962	61,072	9,054	1,184
OFFICE OF NAVAL RESEARCH	5	92,647	35,342	76,817	17,203	16,927
ORDNANCE MISSILE TEST STATION	2719	1290,967	198,370	192,920	56,987	62,956
PACIFIC MISSILE TEST CENTER	0	0,080	89,022	12,085	0,000	6,400
PERSONNEL RESEARCH & DEVELOPMENT CTR	95	10,324	39,798	166,886	6,213	4,072
RESEARCH LABORATORY	27088	1287,000	347,500	3665,400	187,108	195,174
SUBMARINE MEDICAL RESEARCH LABORATORY	3	65,792	18,417	0,000	6,700	10,590
SURFACE WEAPONS CENTER	1072	2352,236	192,677	466,809	101,754	152,875
UNDERSEA RANGES DEPARTMENT	1	40,514	14,099	0,000	1,315	2,485
UNDERWATER SYSTEMS CENTER (NUSSC)	5083	1657,760	169,154	1111,309	108,606	195,236
WEAPONS CENTER	594	82,322	13,218	335,132	30,151	8,690
WEAPONS EVALUATION FACILITY	379	1118,991	221,281	532,819	65,356	63,282
	1127267	2143,439	193,080	2907,156	259,674	120,212
	7	23,000	34,000	95,000	9,600	2,258
TOTALS	1178069	15682,731	2399,214	11790,032	1280,709	1296,854

TABLE 5. AIR FORCE RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA											
	TOTAL	TOTAL	INHOUSE	RT&E	TOTAL	RT&E	MIL	CIV	TOTAL	MIL	CIV	PHD	PHD	PROF	PROF	
AERO PROPULSION LABORATORY	137.651	25.805	135.316	23.470	56	329	4	21	54	207						
AEROSPACE MEDICAL RESEARCH LAB	47.696	10.666	62.485	10.391	131	164	10	31	63	99						
ARMAMENT DIVISION	1721.852	278.337	559.809	177.872	5146	2152	5	24	756	1093						
ARMAMENT LABORATORY	76.966	31.522	77.606	30.162	147	307	1	16	185	225						
ARNOLD ENGINEERING DEVELOPMENT CENTER	281.876	97.638	274.605	98.367	171	252	2	4	67	67						
AVIONICS LABORATORY	420.381	46.402	412.970	32.991	148	578	3	32	131	367						
EASTERN SPACE AND MISSILE CENTER	518.972	255.549	0.000	0.000	2392	1133	1	1	217	113						
ENGINEERING & SERVICES CTR / RD	41.326	4.883	37.694	1.508	71	36	7	3	33	22						
FLIGHT DYNAMICS LABORATORY	210.216	22.441	202.786	35.011	171	628	1	30	139	415						
FLIGHT TEST CENTER	374.747	268.129	197.229	133.133	3414	1942	45	4	617	282						
FRANK J. SEILER RESEARCH LABORATORY	2.537	2.537	1.834	1.834	23	9	9	1	18	5						
GEOPHYSICS LABORATORY	115.851	36.666	108.432	32.503	125	474	2	89	65	284						
HUMAN RESOURCES LABORATORY	66.867	17.604	58.123	12.528	185	235	12	39	105	133						
MATERIALS LABORATORY	157.306	25.537	154.806	23.037	51	296	4	54	46	236						
OFFICE OF SCIENTIFIC RESEARCH	147.548	3.324	144.184	0.000	85	103	27	24	39	27						
ROCKET PROPULSION LABORATORY	68.850	21.847	63.047	16.044	171	245	2	17	71	100						
ROME AIR DEVELOPMENT CENTER	396.658	49.672	302.100	40.784	218	1099	3	65	152	685						
SCHOOL OF AEROSPACE MEDICINE	27.260	15.078	26.570	14.388	360	269	40	41	69	108						
WEAPONS LABORATORY	273.285	107.306	255.352	89.373	607	522	22	55	360	262						
WESTERN SPACE AND MISSILE CENTER	166.272	11.972	4.507	0.000	337	420	4	3	238	326						
9950TH TEST WING	113.611	97.745	83.991	71.425	888	977	4	0	147	135						
6585TH TEST GROUP	46.998	26.364	31.866	19.024	326	276	0	2	98	100						
TOTALS	5416.729	1470.824	3175.312	606.645	15223	12445	208	856	3670	5291						

TABLE 6. AIR FORCE RDT&E FACILITIES DATA, FY 1965

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL	EQUIPMENT
	SPACE (THOUSANDS OF SQUARE FEET)					
AERO PROPULSION LABORATORY	42	280,744	66,200	104,396	63,150	42,061
AEROSPACE MEDICAL RESEARCH LAB	30	119,000	1,000	100,000	14,971	29,321
ARMAMENT DIVISION	456816	347,161	960,206	6760,309	322,067	380,215
ARMAMENT LABORATORY	0	51,345	0,000	147,200	13,253	0,000
ARNOLD ENGINEERING DEVELOPMENT CENTER	39081	1173,656	302,764	709,364	416,056	66,551
AVIONICS LABORATORY	220	129,369	9,483	405,264	53,959	128,761
EASTERN SPACE AND MISSILE CENTER	26178	220,172	1177,704	4789,850	420,186	240,159
ENGINEERING & SERVICES CTR / RD	3	12,000	14,000	0,000	1,960	2,921
FLIGHT DYNAMICS LABORATORY	76	271,586	5,400	294,233	50,676	67,314
FLIGHT TEST CENTER	297796	167,106	264,473	7663,606	316,502	148,075
FRANK J. SEILER RESEARCH LABORATORY	0	190,000	3,000	0,000	1,820	3,239
GEOPHYSICS LABORATORY	336	395,732	14,921	25,683	12,171	38,464
HUMAN RESOURCES LABORATORY	15	61,180	65,319	53,232	6,727	115,450
MATERIALS LABORATORY	0	0,000	36,688	5,128	23,340	69,401
OFFICE OF SCIENTIFIC RESEARCH	68345	419,046	86,848	4,780	126,300	28,300
ROCKET PROPULSION LABORATORY	4517	764,945	52,839	182,271	29,595	56,243
ROME AIR DEVELOPMENT CENTER	1309	409,974	30,279	161,600	53,153	25,246
SCHOOL OF AEROSPACE MEDICINE	702	705,130	130,000	132,000	34,527	82,200
WEAPONS LABORATORY	58600	914,972	568,183	607,327	300,000	400,000
WESTERN SPACE AND MISSILE CENTER	400	110,465	66,229	1026,533	21,900	320,000
4950TH TEST WING	7052	407,068	39,081	93,979	226,352	104,652
6585TH TEST GROUP						
TOTALS	958523	7479,623	4020,566	25341,480	2533,523	2348,772

TABLE 7. DEPARTMENT OF DEFENSE R&D ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1965

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA								
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	MIL	CIV	MIL	CIV	MIL	CIV	PROF	
	INHOUSE	RDY&E	RDY&E	RDY&E	INHOUSE	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE	17.020	13.640	13.640	13.640	17.020	92	155	19	22	49	61		
TOTALS	17.020	13.640	13.640	13.640	17.020	92	155	19	22	49	61		

SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

PROGRAM DATA FOR FY 1985

	(MILLIONS)
TOTAL ANNUAL LABORATORY PROGRAM	9858.971
TOTAL INHOUSE PROGRAM	8509.467
TOTAL RDT&E PROGRAM	6452.048
TOTAL INHOUSE RDT&E	2406.988
TOTAL ANNUAL OPERATING COST	1097.852

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	6959	674	8742
CIVILIAN	51150	8721	26708
TOTAL	58109	4895	30450

PHYSICAL FACILITIES (END OF FY 1985)

ACRES	1285526
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SPACE (THOUSANDS OF SQ FT)

LABORATORY	24268.466
ADMINISTRATIVE	4725.946
OTHER	11756.501
TOTAL	40750.918

COST (MILLIONS)

REAL PROPERTY	2126.988
EQUIPMENT	2482.706
TOTAL	4609.644

TABLE 1A. ARMY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA											
	TOTAL	INHOUSE	TOTAL RDT&E	INHOUSE RDT&E	TOTAL MIL	TOTAL CIV	PROF MIL	PROF CIV	MIL	CIV	PROF MIL	PROF CIV	MIL	CIV		
AEROMEDICAL RESEARCH LABORATORY	11,072	8,349	7,510	7,510	72	70	13	9	44	28						
ATMOSPHERIC SCIENCES LABORATORY	40,114	23,472	36,576	22,558	58	403	1	32	3	127						
AVIATION RESEARCH & TECH ACTIVITY	153,600	42,100	146,857	38,188	24	365	1	26	19	258						
AVIONICS R&D ACTIVITY	35,576	12,650	23,964	6,931	17	259	0	4	13	141						
BALLISTIC RESEARCH LABORATORY	161,640	84,441	135,319	63,391	14	743	1	111	10	473						
DELVOIR RESEARCH & DEV CENTER	221,414	62,651	139,491	45,940	59	1040	2	24	59	418						
CHEMICAL RESEARCH AND DEVELOPMENT CENTER	183,689	74,464	141,807	53,982	99	980	5	81	41	705						
COLD REGIONS RESEARCH & ENGINEERING LAB	25,121	17,728	13,170	8,034	15	278	0	30	6	121						
COMMUNICATIONS-ELECTRONICS R&D CENTER	92,961	27,354	75,635	22,684	13	664	0	9	8	543						
CONSTRUCTION ENGINEERING RESEARCH LAB	40,926	19,850	36,276	17,350	4	259	0	34	4	184						
ELECTRONIC WARFARE LABORATORY	350,203	34,755	120,627	18,005	28	349	0	7	14	89						
ELECTRONICS TECHNOLOGY AND DEVICES LAB	87,812	22,995	79,865	17,430	1	290	0	36	0	185						
ENGINEER TOPOGRAPHIC LABORATORIES	35,054	12,138	32,702	9,679	11	297	0	18	14	186						
ENGINEER WATERWAYS EXPERIMENT STA.	114,290	91,545	49,773	40,638	17	1642	2	114	17	675						
FIRE CONTROL & SMALL CAL. WPNS SYS. LAB	109,691	62,538	61,058	26,650	15	848	0	29	9	483						
HARRY DIAMOND LABORATORIES	165,459	99,283	92,122	74,846	3	1016	1	49	5	497						
HUMAN ENGINEERING LABORATORY	18,465	14,674	17,878	14,090	35	176	1	16	16	126						
INSTITUTE OF DENTAL RESEARCH	6,328	6,245	6,425	4,475	60	20	9	2	38	4						
INSTITUTE OF SURGICAL RSCH	8,869	8,869	3,360	3,360	156	72	18	8	52	34						
LARGE CALIBER WEAPONS SYSTEMS LAB	283,223	137,129	206,023	60,179	27	1726	0	80	20	1089						
LETTERMAN ARMY INSTITUTE OF RESEARCH	21,312	16,269	16,422	11,379	155	99	27	16	74	48						
MATERIALS TECHNOLOGY LABORATORY	59,391	37,676	52,652	33,183	14	617	2	66	11	241						
MEDICAL BIENGINEERING R&D LAB	16,583	8,499	13,906	6,380	30	92	100	20	410	350						
MEDICAL R & D COMMAND	13,064	10,749	9,495	7,180	60	175	23	0	44	11						
MEDICAL RSCH INST OF CHEMICAL DEFENSE	42,604	19,846	38,882	16,182	85	155	31	26	39	56						
MEDICAL RSCH INST OF INFECTIOUS DIS.	38,994	28,995	30,448	20,449	295	192	50	37	85	94						
MISSILE LABORATORY	241,548	113,513	192,310	71,127	41	883	0	54	31	590						
MATICK RESEARCH DEVELOPMENT AND ENGR CTR	136,285	54,611	61,273	41,554	102	1004	3	77	30	549						
NIGHT VISION AND ELECTRO-OPTICS LAB	172,546	39,622	111,941	34,677	33	476	1	35	13	262						
RSCH INST FOR BEH & SOCIAL SCI	78,852	24,420	70,241	22,069	56	342	2	167	36	234						
RSCH INST OF ENVIRONMENTAL MEDICINE	11,812	6,337	10,116	6,641	73	84	19	25	50	58						
SIGNALS WARFARE LAB.	386,881	11,550	60,823	5,642	65	205	0	4	13	175						
TANK AUTOMOTIVE RD&E CENTER	122,270	48,373	101,096	23,517	29	775	0	17	22	363						
MALTER REED ARMY INSTITUTE OF RESEARCH	103,234	59,158	84,639	40,567	451	554	98	68	301	232						
TOTALS	3513,765	1338,720	2285,523	894,675	2217	17152	410	1331	1551	9629						

TABLE 2A. ARMY RED FACILITIES DATA, FY 1965

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
		(THOUSANDS OF SQUARE FEET)				
AEROMEDICAL RESEARCH LABORATORY	53	89,572	16,000	10,669	7,566	13,519
ATMOSPHERIC SCIENCES LABORATORY	15	51,541	26,663	67,658	20,213	23,194
AVIATION RESEARCH & TECH ACTIVITY	127	68,648	58,673	16,370	2,272	19,439
AVIONICS RED ACTIVITY	2	52,450	13,665	19,100	0,000	11,344
BALLISTIC RESEARCH LABORATORY	1920	375,522	116,705	53,044	9,065	55,000
BELVOIR RESEARCH & DEV CENTER	1052	359,261	186,816	260,584	19,598	39,194
CHEMICAL RESEARCH AND DEVELOPMENT CENTER	3471	420,073	348,763	567,290	25,060	52,317
COLD REGIONS RESEARCH & ENGINEERING LAB	31	108,797	30,027	145,148	15,995	11,652
COMMUNICATIONS-ELECTRONICS R&D CENTER	0	39,506	96,975	6,485	0,000	23,700
CONSTRUCTION ENGINEERING RESEARCH LAB	31	45,876	41,549	30,335	10,000	10,000
ELECTRONIC TECHNOLOGY AND DEVICES LAB	106	112,278	35,107	8,189	6,775	10,345
ENGINEER TOPOGRAPHIC LABORATORIES	0	58,763	35,837	0,000	0,000	19,030
ENGINEER WATERWAYS EXPERIMENT STA.	33	90,722	7,000	13,300	6,900	14,512
FIRE CONTROL & SMALL CAL. WPNS SYS. LAB	3073	1743,090	353,645	176,809	42,307	51,700
HUMAN ENGINEERING LABORATORY	2316	507,829	112,019	4,667	10,125	29,958
INSTITUTE OF DENTAL RESEARCH	72	111,524	7,056	21,400	53,921	57,071
INSTITUTE OF SURGICAL RSCH	0	9,852	5,696	1,200	10,826	8,507
LARGE CALIBER WEAPONS SYSTEMS LAB	1	26,424	1,800	22,400	2,610	3,626
LETTERMAN ARMY INSTITUTE OF RESEARCH	17	407,992	235,400	65,000	5,432	5,091
MATERIALS TECHNOLOGY LABORATORY	9	119,204	56,941	112,174	17,732	29,420
MEDICAL BIOENGINEERING R&D LAB	37	352,000	88,261	48,375	43,779	11,955
MEDICAL R & D COMMAND	5	23,691	42,773	13,389	14,879	24,470
MEDICAL RSCH INST OF CHEMICAL DEFENSE	0	0,000	51,896	0,000	3,636	4,644
MEDICAL RSCH INST OF INFECTIOUS DIS.	51	36,246	22,945	99,029	0,650	3,450
MISSILE LABORATORY	215	104,136	20,618	197,909	9,384	16,703
NATICK RESEARCH DEVELOPMENT AND ENGR CTR	11000	726,800	257,200	200,000	20,117	14,734
HIGHLY VISION AND ELECTRO-OPTICS LAB	78	502,631	51,018	334,905	138,516	128,252
RESEARCH INST FOR GEN & SOCIAL SCI	0	60,000	44,473	37,000	23,991	29,854
RSCH INST OF ENVIRONMENTAL MEDICINE	4	63,155	14,000	6,207	12,244	36,499
SIGNALS WARFARE LAB	4	65,177	14,037	28,647	0,735	0,862
TANK AUTOMOTIVE RESE CENTER	10	9,710	35,475	7,448	4,084	8,360
WALTER REED ARMY INSTITUTE OF RESEARCH	11	246,562	123,756	125,274	235,197	125,666
TOTALS	203	383,274	61,600	0,000	10,060	28,053
	23930	7581,916	2722,369	2841,482	767,162	934,112

TABLE 3A. NAVY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA														
	TOTAL	TOTAL	INHOUSE	RD&E	TOTAL	RD&E	TOTAL	MIL	CIV	PHD	MIL	CIV	PHD	MIL	CIV	PROF	MIL	CIV	PROF
	INHOUSE	RD&E	RD&E	RD&E	INHOUSE	RD&E	INHOUSE	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E	RD&E
AEROSPACE MEDICAL RESEARCH LABORATORY	6.544	5.136	6.544	5.136	6.544	5.136	6.544	9	13	0	0	13	0	13	17	34			
AIR DEVELOPMENT CENTER	465.662	250.062	181.639	112.427	465.662	250.062	181.639	267	2574	3	62	75	1540						
BIODYNAMICS LABORATORY	4.687	3.874	4.005	3.192	4.687	3.874	4.005	34	53	5	3	19	19						
BIOSCIENCES LABORATORY	4.447	4.154	4.447	4.154	4.447	4.154	4	9	4	3	0	13	0						
CIVIL ENGINEERING LABORATORY	53.040	42.080	27.131	21.800	53.040	42.080	17	391	0	32	1	7	223						
CLOTHING & TEXTILE RESEARCH FACILITY	4.566	3.049	4.162	2.671	4.566	3.049	1	57	0	1	1	43							
COASTAL SYSTEMS CENTER	97.105	65.007	61.347	40.951	97.105	65.007	132	1076	0	41	13	531							
DAVID W. TAYLOR SHIP R&D CENTER	337.506	238.632	180.480	137.144	337.506	238.632	75	2888	2	125	27	1385							
DENTAL RESEARCH INSTITUTE	1.726	0.942	1.586	0.802	1.726	0.942	29	15	10	4	13	15							
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0.500	3.079	3.079	2.904	0.500	3.079	15	39	0	12	6	44							
HEALTH RESEARCH CENTER	4.405	3.516	3.293	2.404	4.405	3.516	30	61	6	11	22	23							
MEDICAL RESEARCH INSTITUTE	29.256	20.239	27.126	18.109	29.256	20.239	255	188	54	39	103	114							
MEDICAL RESEARCH UNIT NO. 2	3.683	2.694	3.683	2.694	3.683	2.694	25	48	9	4	24	44							
MEDICAL RESEARCH UNIT NO. 3	5.565	4.466	5.565	4.466	5.565	4.466	28	205	12	18	14	66							
OCEAN RESM & DEV ACT	42.677	39.809	30.767	27.785	42.677	39.809	17	319	0	70	13	205							
OCEAN SYSTEMS CENTER	512.900	303.984	235.799	147.576	512.900	303.984	261	2948	1	196	55	1541							
PERSONNEL RESEARCH & DEVELOPMENT CTR	37.791	19.863	21.551	13.116	37.791	19.863	27	329	1	103	14	236							
RESEARCH LABORATORY	399.698	340.732	212.729	174.726	399.698	340.732	91	3279	2	701	34	1584							
SUBMARINE MEDICAL RESEARCH LABORATORY	3.478	2.279	3.298	2.279	3.478	2.279	34	55	6	14	12	28							
SURFACE WEAPONS CENTER	542.195	309.901	207.699	123.474	542.195	309.901	106	5345	0	243	36	2438							
UNDERSEA RANGES DEPARTMENT	68.603	44.477	11.759	9.931	68.603	44.477	25	25	0	2	18	13							
UNDERWATER SYSTEMS CENTER (NUASC)	481.855	206.068	199.010	111.064	481.855	206.068	84	3461	0	86	73	1938							
WEAPONS CENTER	667.047	347.955	284.262	165.794	667.047	347.955	567	5237	0	94	42	1805							
TOTALS	5783.336	2273.764	1721.961	1134.599	5783.336	2273.764	2186	28653	125	1874	651	13870							

TABLE 4A. NAVY R&D FACILITIES DATA, FY 1985

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
	SPACE (THOUSANDS OF SQUARE FEET)					
AEROSPACE MEDICAL RESEARCH LABORATORY	1	107.760	6.632	2.554	2.818	5.486
AIR DEVELOPMENT CENTER	640	869.000	84.000	654.000	38.396	72.848
BIODYNAMICS LABORATORY	1	35.702	24.452	0.000	0.279	0.279
BIOSCIENCES LABORATORY	5	77.625	8.731	34.646	1.000	6.962
CIVIL ENGINEERING LABORATORY	32	112.965	7.746	16.493	8.727	5.670
CLOTHING & TEXTILE RESEARCH FACILITY	1	12.660	10.200	3.600	1.054	0.678
COASTAL SYSTEMS CENTER	648	358.558	37.914	401.454	49.323	27.571
DAVID M. TAYLOR SHIP RAD CENTER	323	1815.000	99.000	332.000	75.019	95.118
DENTAL RESEARCH INSTITUTE	1	21.264	6.001	9.318	0.000	0.102
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0	2.106	15.578	5.588	0.000	2.307
HEALTH RESEARCH CENTER	1	19.052	7.159	0.000	0.147	1.734
MEDICAL RESEARCH INSTITUTE	4	159.933	11.720	47.210	8.303	16.680
MEDICAL RESEARCH UNIT NO. 2	1	15.439	6.654	2.400	0.000	0.371
MEDICAL RESEARCH UNIT NO. 3	5	69.472	8.962	61.072	9.054	1.184
OCEAN RESM & DEV ACT	5	92.647	35.342	76.817	17.203	16.927
OCEAN SYSTEMS CENTER	2719	1290.967	198.370	192.920	56.087	62.956
PERSONNEL RESEARCH & DEVELOPMENT CTR	3	65.792	18.417	0.000	6.700	10.890
RESEARCH LABORATORY	1072	2352.238	192.677	466.809	101.754	152.075
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000	1.315	2.485
SURFACE WEAPONS CENTER	5083	1657.760	169.159	1111.309	108.600	195.236
UNDERSEA RANGES DEPARTMENT	594	82.322	13.218	335.132	30.151	0.000
UNDERMATER SYSTEMS CENTER (MUSC)	379	1116.991	221.261	532.819	63.356	63.262
WEAPONS CENTER	1127267	2143.439	193.080	2907.156	239.674	120.212
TOTALS	1138986	12541.826	1390.392	7193.297	620.751	861.253

TABLE SA. AIR FORCE R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA										
	TOTAL	TOTAL INHOUSE	TOTAL RDTRC	TOTAL RDTRC	TOTAL INHOUSE	TOTAL RDTRC									
AERO PROPULSION LABORATORY	137.651	25.805	135.316	23.470	56	328	4	21	54	207					
AEROSPACE MEDICAL RESEARCH LAB	47.696	10.666	42.485	10.391	131	164	10	31	63	99					
ARMAMENT LABORATORY	78.966	31.522	77.606	30.162	147	307	1	16	185	225					
AVIONICS LABORATORY	420.381	40.402	412.970	32.991	148	578	3	32	131	387					
ENGINEERING & SERVICES CTR / RD	41.326	4.883	37.694	1.508	71	36	7	3	33	22					
FLIGHT DYNAMICS LABORATORY	210.216	42.441	202.786	35.011	171	628	1	30	139	415					
FRANK J. SEILER RESEARCH LABORATORY	2.537	2.537	1.834	1.834	23	9	9	1	18	5					
GEOPHYSICS LABORATORY	115.851	36.666	108.432	32.503	125	474	2	89	65	264					
HUMAN RESOURCES LABORATORY	66.867	17.604	56.123	12.528	185	235	12	39	105	133					
MATERIALS LABORATORY	157.306	25.537	154.806	23.037	51	296	4	54	46	236					
ROCKET PROPULSION LABORATORY	68.850	21.847	63.047	16.044	171	245	2	17	71	100					
ROME AIR DEVELOPMENT CENTER	396.658	49.472	392.100	40.784	218	1099	3	65	152	685					
SCHOOL OF AEROSPACE MEDICINE	27.260	15.078	26.570	14.388	360	269	40	41	69	108					
WEAPONS LABORATORY	273.285	107.306	255.352	89.373	607	522	22	55	360	262					
TOTALS	2044.850	431.766	1879.121	364.024	2464	5190	120	494	1491	3148					

TABLE 6A. AIR FORCE R&D FACILITIES DATA, FY 1985

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)						COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	42	200.744	66.208	104.396	63.158	42.081	63.158	42.081
AEROSPACE MEDICAL RESEARCH LAB	30	119.000	1.000	100.000	14.971	29.521	14.971	29.521
ARMAMENT LABORATORY	0	51.345	0.000	147.200	13.253	0.000	13.253	0.000
AVIONICS LABORATORY	220	229.369	9.483	405.264	53.959	128.741	53.959	128.741
ENGINEERING & SERVICES CTR / RD	3	12.000	14.000	0.000	1.960	2.921	1.960	2.921
FLIGHT DYNAMICS LABORATORY	76	271.586	5.400	294.233	50.676	47.314	50.676	47.314
FRANK J. SEILER RESEARCH LABORATORY	0	190.000	3.000	0.000	1.820	3.239	1.820	3.239
GEOPHYSICS LABORATORY	336	395.732	14.821	25.883	12.171	38.464	12.171	38.464
HUMAN RESOURCES LABORATORY	5	61.180	65.319	53.232	6.727	115.450	6.727	115.450
MATERIALS LABORATORY	15	108.750	117.941	54.123	23.340	69.401	23.340	69.401
ROCKET PROPULSION LABORATORY	68345	419.046	86.848	4.780	126.300	28.300	126.300	28.300
ROME AIR DEVELOPMENT CENTER	1517	764.945	52.839	182.271	29.595	56.243	29.595	56.243
SCHOOL OF AEROSPACE MEDICINE	1309	409.974	30.279	161.800	53.153	25.246	53.153	25.246
WEAPONS LABORATORY	702	705.130	130.000	132.000	34.527	82.200	34.527	82.200
	72600	4116.601	597.138	1665.162	505.610	669.121	505.610	669.121

TOTALS

TABLE 7A. DEPARTMENT OF DEFENSE R&D FACILITIES DATA, FY 1985

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
ARMED FORCES RADIOBIOLOGY RSCH INSTITUTE	BETHESDA, MD	10	26.523	16.047	56.540	18.220
TOTALS		10	26.523	16.047	56.540	18.220

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

COMMAND CHAIN

INTERMEDIATE

COMMAND

RES INST FOR BEHAVIORAL & SOCIAL SCIENCES
 RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE
 SIGNALS WARFARE LABORATORY
 TANK AUTOMOTIVE COMMAND RD&E CENTER
 WALTER REED ARMY INSTITUTE OF RESEARCH

--
 MEDICAL R&D COMMAND
 ELECTRONICS R&D CMD
 TANK AUTOMOTIVE COMMAND
 MEDICAL R&D COMMAND

DEPUTY CHIEF OF STAFF FOR
 PERSONNEL
 THE SURGEON GENERAL
 MATERIEL COMMAND
 MATERIEL COMMAND
 THE SURGEON GENERAL

TABLE 9 - NAVY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

<u>COMMAND CHAIN</u>	
<u>INTERMEDIATE</u>	<u>COMMAND</u>
AEROSPACE MEDICAL RESEARCH LABORATORY	NAVAL MEDICAL COMMAND
AIR DEVELOPMENT CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
BIODYNAMICS LABORATORY	NAVAL MEDICAL COMMAND
BIOSCIENCES LABORATORY	CHIEF OF NAVAL RESEARCH
CIVIL ENGINEERING LABORATORY	NAVAL FAC ENG COMMAND
CLOTHING AND TEXTILE RESEARCH FACILITY	NAVAL SUPPLY SYS COMMAND
COASTAL SYSTEMS CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
DAVID W. TAYLOR SHIP R&D CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
DENTAL RESEARCH INSTITUTE	NAVAL MEDICAL COMMAND
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	CHIEF OF NAVAL RESEARCH
HEALTH RESEARCH CENTER	NAVAL MEDICAL COMMAND
MEDICAL RESEARCH INSTITUTE	NAVAL MEDICAL COMMAND
MEDICAL RESEARCH UNIT NO. 2	NAVAL MEDICAL COMMAND
MEDICAL RESEARCH UNIT NO. 3	NAVAL MEDICAL COMMAND
OCEAN R&D ACTIVITY	CHIEF OF NAVAL RESEARCH
OCEAN SYSTEMS CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
PERSONNEL RESEARCH & DEVELOPMENT CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
RESEARCH LABORATORY	CHIEF OF NAVAL RESEARCH
SUBMARINE MEDICAL RESEARCH LABORATORY	NAVAL MEDICAL COMMAND
SURFACE WEAPONS CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
UNDERSEAS RANGES DEPARTMENT	CHIEF OF NAVAL RESEARCH (NOTE)
UNDERWATER SYSTEMS CENTER	CHIEF OF NAVAL RESEARCH (NOTE)
WEAPONS CENTER	CHIEF OF NAVAL RESEARCH (NOTE)

NOTE: Command chain shown as of 30 Sep 1985; for FY 1986, Command is Space and Naval Warfare Systems Command

TABLE 10 AIR FORCE RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

COMMAND CHAIN

INTERMEDIATE

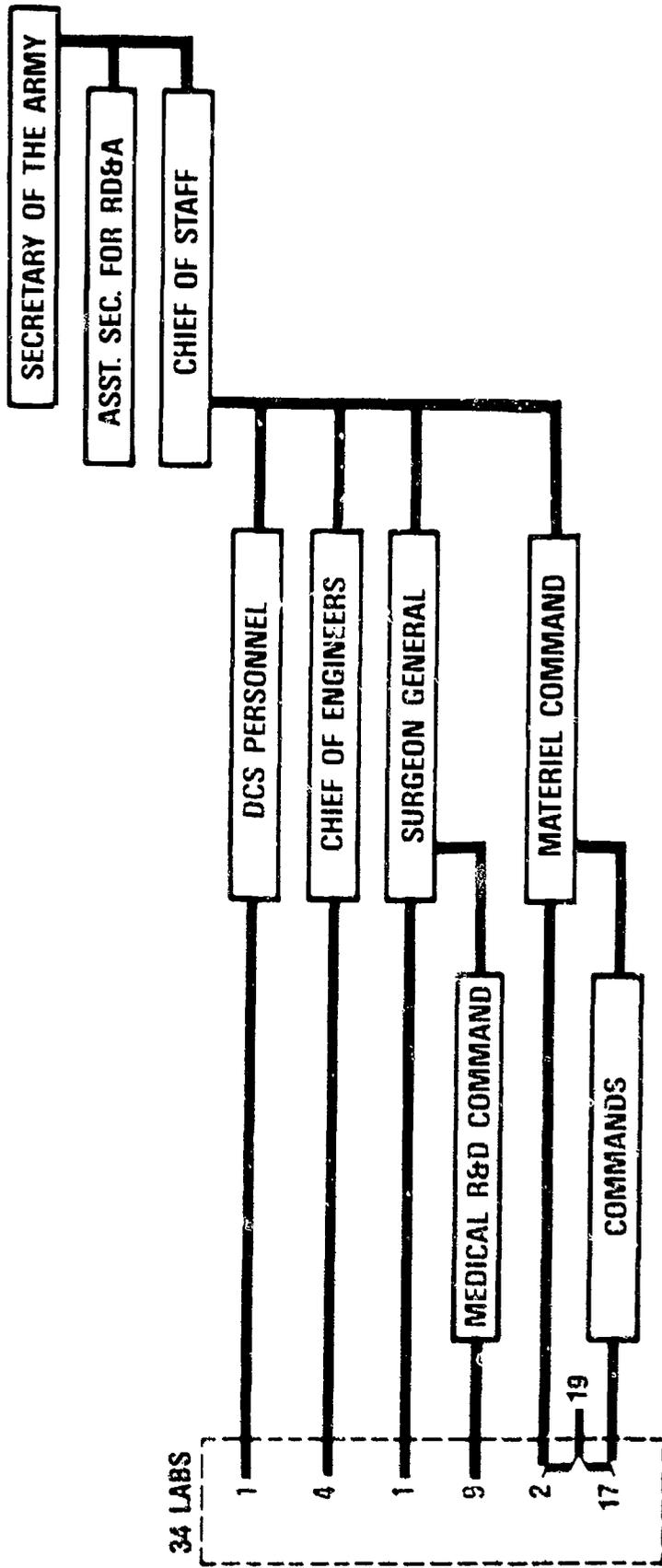
COMMAND

AEROPROPULSION LABORATORY
 AEROSPACE MEDICAL RESEARCH LABORATORY
 ARMAMENT LABORATORY
 AVIONICS LABORATORY
 ENGINEERING SERVICES LABORATORY
 FLIGHT DYNAMICS LABORATORY
 FRANK J. SEILER RESEARCH LABORATORY
 GEOPHYSICS LABORATORY
 HUMAN RESOURCES LABORATORY
 MATERIALS LABORATORY
 ROCKET PROPULSION LABORATORY
 ROME AIR DEVELOPMENT CENTER
 SCHOOL OF AEROSPACE MEDICINE
 WEAPONS LABORATORY

WRIGHT AERONAUTICAL LABS
 AEROSPACE MEDICAL DIVISION
 ARMAMENT DIVISION
 WRIGHT AERONAUTICAL LABS
 ENGINEERING SVCS CTR/AFSC
 WRIGHT AERONAUTICAL LABS
 OFFICE OF SCIENTIFIC RES
 SPACE TECHNOLOGY CENTER
 AEROSPACE MEDICAL DIVISION
 WRIGHT AERONAUTICAL LABS
 SPACE TECHNOLOGY CENTER
 ELECTRONIC SYSTEMS DIVISION
 AEROSPACE MEDICAL DIVISION
 SPACE TECHNOLOGY CENTER

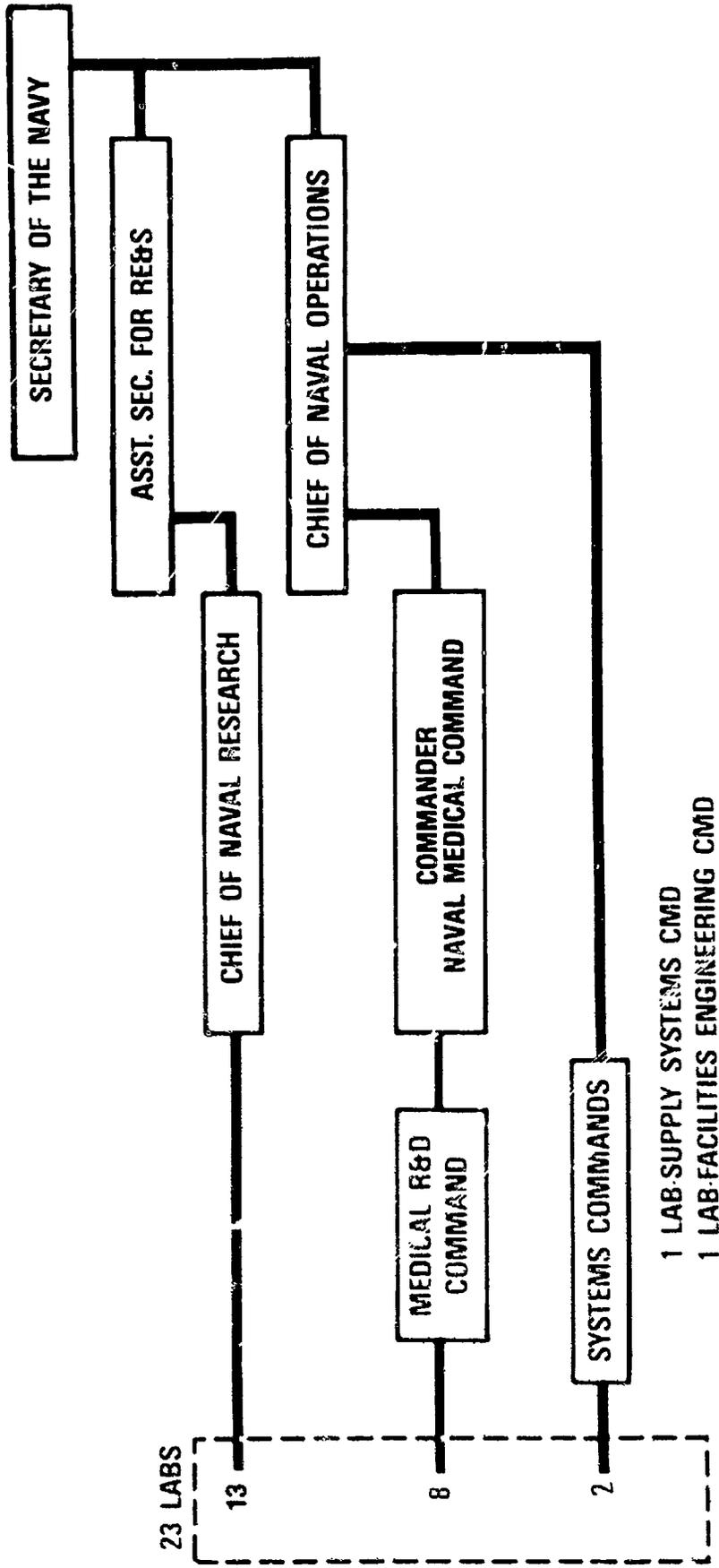
AF SYSTEMS COMMAND
 AF SYSTEMS COMMAND
 AF SYSTEMS COMMAND
 AF SYSTEMS COMMAND
 HQ US AIR FORCE
 AF SYSTEMS COMMAND
 AF SYSTEMS COMMAND

ARMY LABORATORIES COMMAND CHAIN



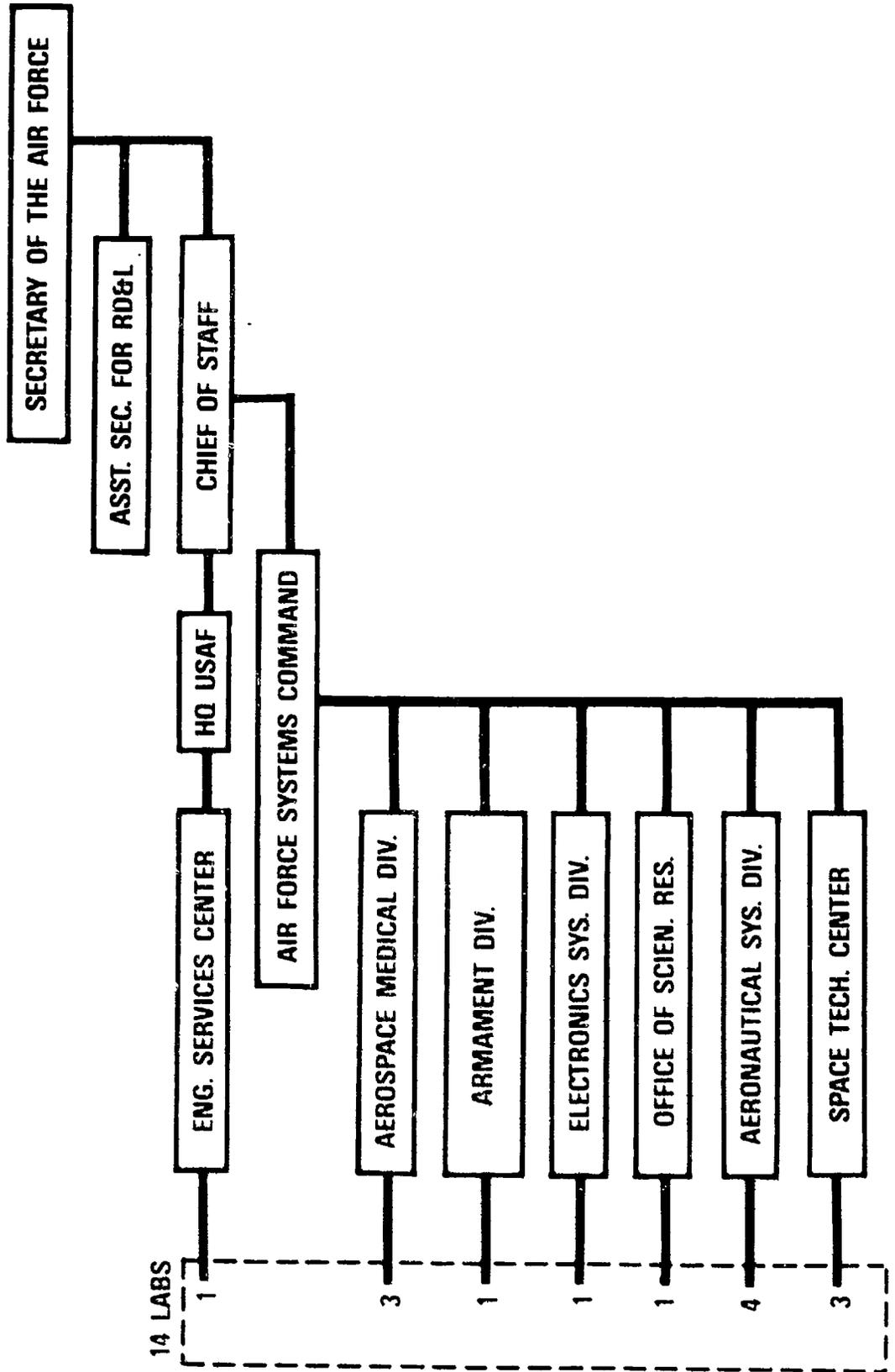
- 4 LABS - ARMAMENT MUN. & CH. CMD 1 - MISSILE CMD
- 2 - AVIATION SYSTEMS CMD 1 - TANK-AUTOMOTIVE CMD
- 6 - ELECTRONICS R&D CMD 1 - COMMUNICATIONS - ELECTRONICS CMD
- 2 - TROOP SUPPORT COMMAND

NAVY LABORATORIES COMMAND CHAIN



XXX : :

AIR FORCE LABORATORIES COMMAND CHAIN



CDR. COL DUDLEY R. PRICE

DEP CDR. LTC J.D. LAMOTHE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.849	7.119
TOTAL PROCUREMENT	0.006	0.000
TOTAL O&M	0.000	0.020
TOTAL OTHER	2.717	3.050
TOTAL ANNUAL LAB	11.072	10.189
TOTAL INHOUSE	10.241	9.594
TOTAL INHOUSE RDT&E	7.518	6.524
ANNUAL OPERATING COST	3.811	3.519

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	72	18	44	28
CIVILIAN	70	9	28	42
TOTAL	142	22	72	70

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
58	89.572	18.000	10.669	118.241	7.506	13.519

...MISSION

CONDUCTS MEDICAL RSCH INTO MILITARY AVIATION, VEHICLES, & WEAPONS SYS ENVIRONMENT & THEIR EFF ON CREWMEMBERS' HEALTH, & PERF. PROVIDES TO DEV-ELOPERS & USERS OF ARMY SYS, DATA BASES ACQD THROUGH FIELD & LAB RSCH. CONDUCTS RSCH ON MED DEF AGAINST CHEMICAL AGENTS.

...CURRENT IMPORTANT PROGRAMS

PHYSIOLOGICAL & PSYCHOLOGICAL EFFECTS OF COMBAT CREWS IN NBC ENVIRONMENT
 INDIVIDUAL & CREW STRESS/WORKLOAD/PERFORMANCE
 AUDITORY EFFECTS OF BLAST OVERPRESSURE
 BIOMEDICAL HAZARDS OF COMBAT AIRCRAFT & VEHICLES
 VISUAL ACOUSTICAL BIOEFFECTS OF COMBAT MATERIAL & OPERATIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

PRES. COL JOE M. BOX

TECH ADV. MR. ALEJANDRA ESTORGA

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	5.488	7.157
TOTAL PROCUREMENT	0.924	0.924
TOTAL O&M	0.642	3.550
TOTAL OTHER	8.592	3.592
TOTAL ANNUAL LAB	10.596	15.228
TOTAL INHOUSE	8.449	10.818
TOTAL INHOUSE RDT&E	8.948	5.227
ANNUAL OPERATING COST	0.727	0.727

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	97	1	20	77
CIVILIAN	95	0	14	81
TOTAL	192	1	34	158

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	11.220	37.090	85.857	88.667	1.870	15.185

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

A2C2 FDTE
 TRIPOD MOUNTED STINGER
 HAWK EVALUATUIN
 HAWK PIP PHASE III
 HIGH MOBILITY INTEGRATED STINGER

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT: MULTIPLE TGT TRACKING SYS PROVIDES DATA FROM AIR AND GROUND TGTS, TWO LASER TRACKING SYS PROVIDE DATA FROM COOPERATIVE TGTS; INTR RADAR SYS THAT PROVIDES HIGH ACCURACY; ONE NIKE-HERC FIRE CON SYS USED WITH RADAR DATA RECORDER; A RANGE TIMING SYS TO PROVIDE A TIME BASE FOR ALL INSTR SYS; TWO DATA ACQ SYS ACCEPT 59 DIFFERENT SIGNALS, CCTV SYS FOR RANGE SAFETY; TECH PHOTO LAB FOR REQUIRED DATA; RICS PROVIDES ^{NEAR} REAL TIME DATA OUTPUTS. FACILITIES AT FT BLISS: BLDG 1656 HOUSES RICS; RANGE TIMING SYS; DATA REDUCTION SYS; ELECTRONICS CAL AND FABRICATION LAB; MACHINE AND CARPENTER SHOPS; MICROWAVE TERMINAL THAT PROVIDES DATA AND COMMO LINK TO RANGES; BLDG 1658 - PHOTOGRAPHIC LAB; MCGREGOR AND ORO GRANDE RANGES FOR FIRING FORWARD AREA WEAPONS AT AIR OR GROUND TGTS.

PRES. COL. WILLIAM T. PALMER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	8.828	3.219
TOTAL PROCUREMENT	0.411	0.118
TOTAL O&M	1.878	1.847
TOTAL OTHER	3.092	2.883
TOTAL ANNUAL LAB	8.204	7.067
TOTAL INHOUSE	7.866	6.760
TOTAL INHOUSE RDT&E	2.990	2.912
ANNUAL OPERATING COST	2.591	2.741

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	52	0	9	48
CIVILIAN	56	0	8	48
TOTAL	108	0	17	91

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
27	3.978	40.796	44.188	88.956	0.103	8.953

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE: MAIN OFC BLDG, ABN HANGAR, INSTRUMENTATION/DESIGN SECTION, AVN HANGAR, COMBINED SHOP & ADP FACILITY. MAJOR EQUIPMENT INCLUDES: 5 LIGHTWEIGHT OPTICAL TRACKING SYSTEMS, 25-TON CRANE, 2 20-TON MOBILE CRANES, 6-TON WRECKER, 2 40,000 LB ACFT LOADER, 3 T-84C ACFT, 1 UH-1H HELICOPTER, VARIOUS TYPES OF STANDARD PARACHUTES, 9 GASOLINE GENERATORS, DIGITAL THEODOLITES, ELECTRONIC DIAGNOSTIC EQUIPMENT, VOLTMETERS, AMMETERS, SPECTRUM ANALYZERS, SOUND & VIBRATION ANALYZERS, TIME MARK GENERATORS, OSCILLOSCOPES, MULTIMETERS, RANDOM NOISE GENERATORS, POWER SUPPLIES, Q METERS, ATTENUATORS, GRAPHIC LEVEL RECORDERS, 16MM CAMERAS, FILM ANALYZERS, PORTABLE VIDEO EQUIPMENT, VAN METER, ANALOG TAPE RECORDER, FREQUENCY COUNTERS, SOUND LEVEL CALIBRATORS, METER CALIBRATORS, MEGOHMMETER.

INSTALLATION: ARMOR AND ENGINEER BOARD,

FT KNOX, KY

PRES. COL GARRETT E. DUCAN

SCI ADV. MR. WARREN W. WELLS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	10.788	11.958
TOTAL PROCUREMENT	2.550	1.865
TOTAL O&M	0.968	0.765
TOTAL OTHER	4.007	8.834
TOTAL ANNUAL LAB	18.263	18.422
TOTAL INHOUSE	18.263	18.422
TOTAL INHOUSE RDT&E	10.788	11.958
ANNUAL OPERATING COST	0.809	0.895

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	178	0	69	109
CIVILIAN	126	2	32	94
TOTAL	304	2	101	203

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	38.062	50.454	88.069	176.585	1.455	19.850

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

XM40 PROTECTIVE MASK AND S10 BRITISH RESPIRATOR
BATTLEFIELD MANAGEMENT SYSTEM
FACILITY INTRUSION DETECTION DEVICE
M1 TRACK WIDTH MINE PLOW
MULTIPLE MINE DELIVERY SYSTEM (VOLCANO)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

VIDEO AUTOMATIC TARGET TRACKING SYS; POSITION LOCATION SYS; WIRE GUIDED EVASIVE TARGET SYS; TANK VIDEO SYS; GUN CAMERA; RANGE TIMING EQ; TELEMETRY EQ; 16MM MOTION PICTURE CAMERA WITH DATADOORS; GUN ELEVATION LIMITING DEVICE; SLR CAMERA; AUTOMATIC FILM ANALYZER & DIGITIZER SYS; DATA ANALYSIS & RECORDING SUBSYS; INSTRUMENTATION VAN MOUNTED SIX CHANNEL VIDEO RECORDING SYS (VIDEO I); METEOROLOGICAL INSTRUMENTATION; MICROCOMPUTER DEV LAB; ACCUBAR ACCOUSTICAL AUTOMATIC TARGET SCORING SYS; DIGITAL VIDEO PROCESSOR; BT-41 TANK COMBAT SIMULATOR; OPTICAL LIGHTBEAM SPLITTER. ADP CAPABILITIES INCLUDE IN-HOUSE REDUCTION & ANALYSIS OF INSTR GENERATED DATA, TELECOMMUNICATIONS INTERFACE TO CD & T&E NETWORK & CLASSIFIED PROCESSING. OTHER CAPABILITIES: 40-TON OVERHEAD CRANE; MACHINE SHOP AND MAINT EQ SETS; CBT VEH, TACTICAL WHEELED VEH & ENGR CONSTRUCTION EQ.

DIR. DR. ROBERT E. WEIGLE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	104.254	115.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.158	0.158
TOTAL ANNUAL LAB	104.407	115.158
TOTAL INHOUSE	0.158	0.158
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	2.220	2.500

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	2	0	0	2
CIVILIAN	188	42	52	81
TOTAL	185	42	52	83

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	0.000	29.420	0.000	29.420	0.000	0.790

...MISSION

DEVELOP AMC RESEARCH PROGRAMS FOR MATH, AND PHYSICAL, ENGINEERING, ATMOSPHERIC, TERRESTRIAL, AND BIOLOGICAL SCIENCES. ASSESS, EVALUATE AND PRIORITIZE THE AMC 6.1 RESEARCH PROGRAM AND EVALUATE 6.2 EXPLORATORY DEVELOPMENT. ASSESS IMPACT OF INDEPENDENT RESEARCH AND DEVELOPMENT.

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN ARTIFICIAL INTELLIGENCE.
 CHEMICAL AND BIOLOGICAL DEFENSE.
 ROTARY WING AIRCRAFT RESEARCH.
 NOVEL NONDESTRUCTIVE EVALUATION.
 RESEARCH IN IMAGE PROCESSING.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES MATHEMATICS, MATERIALS, ELECTRONICS, MECHANICS AND AERONAUTICS. ADMINISTRATION OF THE RESEARCH PORTION OF ARMY RESEARCH AND STANDARDIZATION OFFICE, LONDON, COORDINATES ARMY RESEARCH EFFORTS WITHIN THE ARMY AND WITH OTHER GOVERNMENT AGENCIES SUCH AS NAVY, NASA, DOD, NSF AND OTHERS.

CDR/DIR. COL TODD D. STONG

DEP DIR. MR. JAMES E. MORRIS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	88.578	88.800
TOTAL PROCUREMENT	0.153	0.000
TOTAL O&M	0.898	0.200
TOTAL OTHER	0.485	0.201
TOTAL ANNUAL LAB	40.114	39.201
TOTAL INHOUSE	28.472	28.101
TOTAL INHOUSE RDT&E	22.558	22.700
ANNUAL OPERATING COST	5.481	5.470

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	58	1	8	5E
CIVILIAN	408	82	127	276
TOTAL	461	83	130	331

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	51.541	26.668	67.658	145.862	20.218	28.194

...MISSION

AMC LEAD LABORATORY FOR ATMOSPHERIC AND METEOROLOGICAL TECHNOLOGY. PROVIDE R&D PROGRAMS ON ATMOSPHERIC SENSORS AND BATTLEFIELD OBSCURATION EFFECTS. ASSIGNED MATERIEL DEVELOPMENT FOR METEOROLOGICAL SYSTEMS. PROVIDE METEOROLOGICAL SUPPORT TO AMC RANGES BOTH CONUS AND OCONUS.

...CURRENT IMPORTANT PROGRAMS

ATMOSPHERIC DATA AND TECHNOLOGY FOR ARMY RDTE.
 REMOTE SENSING OF CHEMICAL AND BIOLOGICAL TOXINS
 AN/TMQ-80 AUTOMATED METEOROLOGICAL STATION
 METEOROLOGICAL SUPPORT TO RDTE ACTIVITIES CONUS AND OCONUS.
 BATTLEFIELD ATMOSPHERIC EFFECTS ON ARMY SYSTEMS AND OPERATIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

METEOROLOGICAL RESEARCH FACILITY AND CAPABILITY.
 METEOROLOGICAL RDTE SUPPORT FACILITIES - CONUS AND OCONUS.
 HIGH ENERGY LASER (HEL) METEOROLOGICAL SYSTEM AT NATIONAL HEL FACILITY.
 INTEGRATED METEOROLOGICAL SYSTEM.
 AN/TMQ-80 AUTOMATED METEOROLOGICAL SYSTEM
 RPV/UAV METEOROLOGICAL SENSORS
 REMOTE WIND SENSING 8-KILOMETER LASER DOPPLER VELOCIMETER SYSTEM.
 MULTISPECTRAL IMAGE DATA ACQUISITION SYSTEM.
 TRANSPORTABLE ATMOSPHERIC CHARACTERIZATION SYSTEM.
 SIMULTANEOUS MULTISPECTRAL ABSOLUTE RADIOMETER/TRANSMISSOMETER.
 LOW VISIBILITY INFRARED TRANSMISSOMETER SYSTEM.
 UPPER ATMOSPHERIC RESEARCH AND SOUNDING FACILITY AND CAPABILITY.

INSTALLATION: AVIATION BOARD

FORT RUCKER, AL

PRES. COL STANLEY E. GRETT

TECH ADV. MR. GEORGE E. SLAGLEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	4.200	4.240
TOTAL PROCUREMENT	0.098	0.000
TOTAL O&M	0.116	8.040
TOTAL OTHER	2.888	2.681
TOTAL ANNUAL LAB	6.792	9.911
TOTAL INHOUSE	6.792	9.911
TOTAL INHOUSE RDT&E	4.200	4.240
ANNUAL OPERATING COST	2.475	2.600

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	44	0	21	23
CIVILIAN	46	8	28	23
TOTAL	90	8	44	46

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	18.826	20.470	89.296	0.000	1.900

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

AN/APR-89A(KE-1) RADAR WARNING RECEIVER
FO214C USAH/ASE FDTE
OTN1019A NOE COMM II
OTN1085 AH-64 MASK
OTN1084 SHELTER MAINTENANCE TRANSPORTABLE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NO MAJOR EQUIPMENT OR FACILITY.

CDR. COL LAWRENCE KARJALA

TECH DIR. MR. JIM MCCRORY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	10.859	10.114
TOTAL PROCUREMENT	8.782	2.526
TOTAL O&M	4.282	5.888
TOTAL OTHER	5.831	6.080
TOTAL ANNUAL LAB	28.754	24.508
TOTAL INHOUSE	28.754	24.508
TOTAL INHOUSE RDT&E	10.859	10.114
ANNUAL OPERATING COST	8.007	7.809

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	194	0	32	162
CIVILIAN	98	0	30	68
TOTAL	287	0	62	225

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1196	0.000	53.829	127.687	181.516	2.057	36.665

...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
 AIR TO AIR STINGER
 OH-58D LOG EVAL (AHIP)
 PROGRESSIVE PREV MAINT (PPM)
 CH-47D LOG EVAL

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THIRTY-TWO FIXED AND ROTARY WING AIRCRAFT ARE ASSIGNED (10 UH-1, 1 T-42, 6 AH-1S, 1 U-21, 2 CH-47, 8 OH-58, 1 OV-1, 2 UH-60, 1 AH-64) WHICH MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIPMENT OR SUPPLIES APPLICABLE TO THAT A/C SERIES. A MODULAR ENGINE TEST SYSTEM (METS) PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENGINE PERFORMANCE FOR ENGINES UP TO 5000 HP AND WT UP TO 2000 LB. ON SITE DATA PROCESSING & DISPLAY CAPABILITY EXISTS WITH PDP-11 & IBM 4861 COMPUTER SYS. ADMIN & TECHNICAL PHOTOGRAPHIC CAPABILITY IS AVAIL TO INCLUDE VIDEO AND 16MM INSTRUMENTATION CAMERAS. THE INSTRUMENTATION LAB CAN COLLECT ANALOG AND DIGITAL MEASUREMENTS USING 14-TRACK INSTRUMENTATION RECORDERS AND DIGITAL CASSETTE RECORDERS. HAS B&W COLOR VIDEO RECORDING CAP, STRIP-CHART RECORDERS, OSCILLOGRAPH, AIRINC 514 CRASH REC AND OVER-WATER TESTING CAP.

CDR. COL ALAN R. TODD

TECH DIR. JAMES S. HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	7.591	8.885
TOTAL PROCUREMENT	0.368	0.699
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.097	2.288
TOTAL ANNUAL LAB	10.051	11.817
TOTAL INHOUSE	9.505	10.767
TOTAL INHOUSE RDT&E	7.045	7.785
ANNUAL OPERATING COST	1.425	2.896

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	64	0	45	19
CIVILIAN	100	0	80	70
TOTAL	164	0	75	89

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19	9.200	1.600	124.800	185.600	4.042	15.482

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

PRELIMINARY AIRWORTHINESS EVALUATION BK-117
 AH-1S(MC)UH-1H RUS SPRING EVALUATION
 AH-64 ICING EVALUATION
 PRELIMINARY AIRWORTHINESS EVALUATION UH-1H/T-55L-708 ENGINE
 AIRWORTHINESS AND BLIGHT CHARACTERISTICS BELL 214ST

...FUNCTIONS/EQUIPMENT/CAPABILITIES

JT-288 2T28B 20V-1C JU21A JAH-1S AH-1S 2JCR-47C JOR-58C JUR-60A
 JOR-1H
 ACFT MAINTENANCE CAPABILITY
 ACFT MODIFICATION CAPABILITY
 ACFT INSTRUMENTATION CAPABILITY
 AIRBORNE DATA ACQUISITION-SYSTEMS
 VAX 11/780 COMPUTER SYSTEM
 REMOTE GROUND STATIONS WITH COMPUTER AND TELEMETRY CAPABILITY
 MILIKEN, SMINOLTA, 2 BRONICA, PRINT DRYER, 2 ENLARGERS, 20 PCS VIDEO EQUIPMENT, TEXT EDITORS, 2 MAG TYPEWRITERS, AUTO COMPOSING SYSTEM

DIR. DR. RICHARD M. CARLSON

DEP DIR. COL WALTER URBACH, JR.

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	148.857	104.608
TOTAL PROCUREMENT	0.888	0.450
TOTAL O&M	2.456	1.080
TOTAL OTHER	1.449	1.455
TOTAL ANNUAL LAB	153.600	107.588
TOTAL INHOUSE	42.100	86.491
TOTAL INHOUSE RDT&E	88.188	88.916
ANNUAL OPERATING COST	7.406	7.659

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	24	1	19	3
CIVILIAN	865	26	258	107
TOTAL	889	27	277	112

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
127	88.848	58.678	16.370	168.891	2.272	19.489

...MISSION

MANAGE AND EXECUTE RESEARCH AND DEVELOPMENT OF ARMY AIRMOBILE SYSTEMS. PROVIDE TECHNICAL SUPPORT TO PROJECT/PRODUCT MANAGEMENT AND SYSTEM 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/CAPABILITIES

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, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETER GROUND STATION, NON-DESTRUCT TESTING FACILITY, AND FLIGHT SAFETY LAB.

CDR. COL DAVID GRIESHOP

DEP DIR. MR DAVID GAGGIN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	28.984	20.198
TOTAL PROCUREMENT	5.908	8.477
TOTAL O&M	4.828	4.108
TOTAL OTHER	1.383	0.902
TOTAL ANNUAL LAB	85.578	28.680
TOTAL INHOUSE	12.650	11.981
TOTAL INHOUSE RDT&E	6.981	7.162
ANNUAL OPERATING COST	4.757	5.448

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	17	0	13	4
CIVILIAN	259	4	141	118
TOTAL	276	4	154	122

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	52.450	13.665	19.100	85.215	0.000	11.844

...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., COMM NAV, IMAGE&SIGNAL PROCESSING AIRBORNE CMD & CONT.); & SYS ENGINEERING/INTEGRATION

...CURRENT IMPORTANT PROGRAMS

DIGITAL AVIONICS INTEGRATION
 INTEGRATED COMMUNICATIONS, NAVIGATION, IDENTIFICATION, AVIONICS
 AUTOMATED BATTLE CAPTAIN DEMONSTRATION
 NIGHT NAVIGATION AND PILOTAGE SYSTEM
 HIGH RELIABILITY INERTIAL REFERENCE UNIT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT INCLUDES DIGITAL HOT BENCH, AUTOMATED DATA COLLECTION AND REDUCTION EQUIPMENT, AND AUDIO/DIGITAL ANALYZERS.
 FACILITIES INCLUDE ACOUSTIC/AUDIO ANALYSIS FACILITY, TACTICAL AVIONICS SYSTEM SIMULATOR (TASS), SYSTEM TEST BED FOR AVIONICS RESEARCH (STAR), AUDIO ACOUSTIC FACILITY, ADJACENT HELIPORT, POST DEPLOYMENT SOFTWARE SUPPORT CENTER.

CDR. COL. JAMES V. WASSON

DIR. DR. JOHN T. FRASIER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	185.819	119.199
TOTAL PROCUREMENT	11.425	18.289
TOTAL O&M	1.585	2.299
TOTAL OTHER	18.811	14.515
TOTAL ANNUAL LAB	161.640	149.802
TOTAL INHOUSE	84.441	68.728
TOTAL INHOUSE RDT&E	68.891	50.745
ANNUAL OPERATING COST	12.000	18.469

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	14	1	10	4
CIVILIAN	748	111	478	270
TOTAL	757	112	488	274

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1920	375.522	116.705	58.044	545.271	9.085	55.000

...MISSION

SYSTEM FEASIBILITY. RESEARCH FOCUSES ON ADVANCED PROPELLANT TECHNOLOGY (GUNS), ANTI-ARMOR WARHEADS (GUNS/MISSILES), ANTI-ARMOR KINETIC ENERGY PENETRATORS, VULNERABILITY-LETHALITY ASSESSMENT U.S. AND THREAT MATERIEL AND SYSTEMS AND CONCEPT ENGINEERING AND ANALYSIS. FACILITIES

...CURRENT IMPORTANT PROGRAMS

ARMYLEAD LABORATORY FOR BALLISTIC TECHNOLOGY, VULNERABILITY/VULNERABILITY REDUCTION, LIQUID PROPELLANT TECHNOLOGY (GUNS) AND CHARGED PARTICLE BEAM TECHNOLOGY. MAINTAIN WEAPON ORIENTED FUNDAMENTAL RESEARCH PROGRAM RESPONSIVE TO ARMY NEEDS. CONDUCTS EXPLORATORY DEVELOPMENT RESEARCH. SOLVE MILITARY PROBLEMS AND TO EVALUATE SOLUTION/

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INCLUDE: LASER DIAGNOSTIC FACILITY FOR PROPELLANT FLAME ANALYSIS; 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 155MM; EXPLOSIVE MECHANICS TEST FACILITY; HIGH EXPLOSIVE CASTING AND PRESSING FACILITY; HIGH ALTITUDE SIMULATION BLAST CHAMBER; SHOCK TUBES TO SIMULATE BLAST AND THERMAL NUCLEAR EFFECTS; ADVANCED TERMINAL 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 FACILITY FOR WARHEADS, PENETRATORS, EXPLOSIVE AND ARMOR RESEARCH; HIGH SPEED AND SPARK PHOTOGRAPHY; X-RAY CINERADIOGRAPHY; COMPUTER-AIDED-DESIGN/ENGINEERING; COMPUTERS WITH 1600 REMOTE INTERACTIVE TERMINALS.

CDR. COL EDWARD M. LEE

TECH DIR. MR. T. W. LOVELACE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	189.491	168.000
TOTAL PROCUREMENT	51.218	89.200
TOTAL O&M	80.705	22.800
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	221.414	229.500
TOTAL INHOUSE	62.651	65.157
TOTAL INHOUSE RDT&E	45.940	47.778
ANNUAL OPERATING COST	22.897	28.818

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	59	2	59	0
CIVILIAN	1040	24	418	622
TOTAL	1099	26	477	622

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1052	359.261	186.816	260.584	806.661	19.598	89.194

...MISSION

PROVIDE THE ARMY WITH NEW AND IMPROVED COMBAT SUPPORT AND COMBAT SERVICE SUPPORT THROUGH RESEARCH, DEVELOPMENT, ENGINEERING, INITIAL ACQUISITION AND SUBSEQUENT ACQUISITION SUPPORT IN COMBAT ENGINEERING AND LOGISTICS SUPPORT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

COUNTERMINE/COUNTEROBSTACLE EQUIPMENT
 FUELS AND LUBRICANTS DEVELOPMENT
 TACTICAL DECEPTION DEVICES
 WATER SUPPLY EQUIPMENT
 PETROLEUM DISTRIBUTION SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ACCOMPLISH RESEARCH DEVELOPMENT AND ACQUISITION FOR THE FOLLOWING FIELDS OF ENDEAVOR: BRIDGING, COUNTERMINE, COMBAT ENG, ELECTRICAL PWR, FUELS AND LUBES HEATER & AIR CONDRS, COUNTERMINESURVEILLANCE & TACTICAL DECEPTION, PHYSICAL SECURITY, TUNNEL DETECTION, TOPO EQUIP, SENSOR TECHNOLOGY, WATER SUPPLY, FUELS HANDLING, SUPPLY DISTRIBUTION, MARINE CRAFT SUPPORT EQUIP. FACILITIES INCLUDE SENSOR TEST AREA, RADIO FREQUENCY ANECHOIC CHAMBER, FIRE SUPPRESSION CHAMBER, BRIDGE TEST HANGER, MOBILE STRESS ANALYSIS VAN, TRUCK STABILITY TILT TABLE, VEHICLE TEST TRACKS, SHOCK & VIBRATION DYNAMICS SIMULATOR, ENVIRONMENTAL SIMULATOR, RAIL IMPACT TEST FACILITY, MATERIALS RESEARCH LABORATORY, STILL & MOTION PICTURE SUPPORT, MODEL FABRICATION SHOP

CDR. BG JAMES R. KLUGH DEP DIR. MR. B. RICHARDSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	141.807	140.017
TOTAL PROCUREMENT	29.200	78.400
TOTAL O&M	10.482	8.574
TOTAL OTHER	2.200	2.800
TOTAL ANNUAL LAB	183.689	224.291
TOTAL INHOUSE	74.464	76.874
TOTAL INHOUSE RDT&E	53.982	58.000
ANNUAL OPERATING COST	14.022	15.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	99	5	41	58
CIVILIAN	980	81	705	275
TOTAL	1079	86	746	333

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
8471	420.078	348.768	567.290	1336.126	25.080	52.317

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC RESEARCH; SMOKE/OBSCURANT SYSTEMS; CHEMISTRY AND EFFECTS OF THREAT AGENTS; ANALYSIS AND INTEGRATION OF CML DEF SYSTEMS; RECONNAISSANCE, DETECTION, AND IDENTIFICATION; INDIVIDUAL/COLLECTIVE PROTECTION; DECONTAMINATION AND CONTAMINATION AVOIDANCE; CB DATA BASE & SYSTEMS SCIENCE; CHEMICAL DETERRENT SYSTEMS.

MAJOR EQUIPMENT IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS. INCLUDES CML PILOT PLANTS, AEROSOL CHAMBER, MUNITION FILLING FACILITY, PRODUCTION AND FACILITY DESIGN, CHAMBER FOR STUDIES ON SPEECH TRANSMISSION, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY, SPECIALIZED CHEMICAL AGENT LAB, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, COMPUTERMAN, INDOOR BALLISTIC RANGE, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNEL.

CDR/DIR. COL M. F. ROTH

TECH DIR. DR. EUGENE MARVIN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	18.170	14.015
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.662	0.928
TOTAL OTHER	10.289	18.578
TOTAL ANNUAL LAB	25.121	28.516
TOTAL INHOUSE	17.728	20.842
TOTAL INHOUSE RDT&E	8.084	8.549
ANNUAL OPERATING COST	4.467	4.989

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	15	0	6	9
CIVILIAN	278	80	121	157
TOTAL	293	80	127	166

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
31	108.797	80.027	145.148	283.972	15.995	11.652

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAIN LABORATORY AT USACR&EL CONTAINS 24 COLD LABS WHICH CAN BE OPERATED TO -68 F, SPECIAL TESTING APPARATUS FOR RESEARCH IN FROZEN MATERIAL, AN ICE ENGINEERING FAC. FOR LARGE SCALE ICE MODELING EXPERIMENTS. A CHEMISTRY LAB, AN ELECTRON MICROSCOPE LAB, A SOILS PROC. LAB, A PAVEMENT TEST FAC. FOR TESTING UNDER FREEZING/THAWING CONDITIONS, A WASTEWATER TREATMENT RESEARCH FAC., A COMPUTER INSTALLATION, A MASS SPECTROMETER, A GAS CHROMATOGRAPH, A SMALL LASER FAC. THE CRREL-ALASKA OFFICE AT FAIRBANKS CONDUCTS RESEARCH AND PROVIDES LOGISTICS SUPPORT FOR OTHER RESEARCH. CRREL'S MIL. & CIV. PERSONNEL HAVE EXPERTISE OVER A WIDE RANGE OF SCIENTIFIC & ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH. A NEW FACILITY THE FROST EFFECTS RES. FAC. WAS DEDICATED IN APRIL 1985. SIX TO EIGHT FREEZE/THAW CYCLES ARE NOW PERMITTED EACH YEAR IN THIS TEST FAC.

CDR. COL JESSE H. DENTON

TECH ADV. MR. WILLIAM J. HASLEM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	7.056	7.887
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.587	5.755
TOTAL ANNUAL LAB	12.648	18.642
TOTAL INHOUSE	12.648	18.642
TOTAL INHOUSE RDT&E	7.056	7.887
ANNUAL OPERATING COST	6.818	6.919

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	256	0	32	224
CIVILIAN	24	0	14	10
TOTAL	280	0	46	284

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
647155	0.000	84.184	167.282	201.466	10.886	10.102

...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 INTERGRATED TESTING CYCLE POLICIES. PROVIDE ADVISE AND GUIDANCE TO GOVT AGENCIES AND PRIVATE IND.

...CURRENT IMPORTANT PROGRAMS

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE AMBULANCE
 ARCTIC FUEL DISPENSING EQUIPMENT (AFDE)
 INTEGRATED INDIVIDUAL FIGHTING SYSTEM PROGRAM (IIFSP)
 MODULAR FIELD KITCHEN (MFK)
 IR SMOKE SCREENING GRENADE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITY CAN ACCOMODATE A WIDE VARIETY AND LARGE NUM TESTS AT ANY ONE TIME. SEVERAL VEH TEST COURSES AND EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSERVED RANGE, LARGE RESTRICTED AIRSPACE WITH UNRESTRICTED FIRING TO 10,000 FT ORDINATE. COORD WITH FAA CAN EFFECT UNRESTRICTED ORDINATE. 1ST, 2ND, OR 3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. PHONE/NON-TAC RADIO AT ALL RANGES AND TEST SITES. AUTODIN, FACSIMILE, TELETYPE, PHOTO LAB AND MAINT FOR MAJORITY OF EQUIP INCL ACFT, LIMITED ENGR SUPPORT. ARMY AVN AND 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.

CDR. COL RONALD V. HITE

TECH DIR. MR. DONALD RESCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	70.708	74.248
TOTAL PROCUREMENT	25.874	27.168
TOTAL O&M	5.851	5.619
TOTAL OTHER	10.697	11.281
TOTAL ANNUAL LAB	112.630	118.261
TOTAL INHOUSE	101.160	106.217
TOTAL INHOUSE RDT&E	64.479	67.708
ANNUAL OPERATING COST	89.660	46.870

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	220	0	21	199
CIVILIAN	995	7	392	603
TOTAL	1215	7	418	802

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
22865	720.999	4.851	248.742	974.092	22.176	44.865

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

PRODUCT IMPROVED VULCAN AIR DEFENSE SYSTEM (PIVADS)
 VULNERABILITY STUDY OF BMP
 BRADLEY FIGHTING VEHICLE SYSTEM
 ABRAMS TANK (M1)
 HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

PRES. COL HUMPHREY L. PETERSON, JR. ENGR ADV. MR. RONNIE E. BRACKETT

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	2.181	2.462
TOTAL PROCUREMENT	0.088	0.165
TOTAL G&M	0.465	0.968
TOTAL OTHER	2.665	2.178
TOTAL ANNUAL LAB	5.894	5.768
TOTAL INHOUSE	5.894	5.768
TOTAL INHOUSE RDT&E	2.181	2.462
ANNUAL OPERATING COST	1.158	1.472

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	58	0	48	5
CIVILIAN	48	0	11	32
TOTAL	96	0	59	37

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	0.000	19.625	1.828	21.448	0.258	1.785

...MISSION

PLANS, CONDUCTS AND REPORTS ON OPERATIONAL TESTS OT I, II, AND, III OF C-E SYSTEMS AND FORCE DEVELOPMENT TESTING AND EXPERIMENTATION AS PUBLISHED IN THE DA FIVE YEAR TEST PROGRAM, CONDUCTS CONCEPT EVALUATION PLANS AND OTHER USER-RELATED/CUSTOMER TEST DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

TACTICAL ARMY CSS COMPUTER SYSTEM, IACCS, 85-OT-1214
 AN/TSC-98A TACSAICOM, 86-OTN-1258
 SPECIAL FORCES BURST COMM SYS AN/TSC-99, 86-OTN-845A
 BATTLEFIELD ELECTRONICS CEOI SYSTEM, 86-OTN-1841
 ARMY DARPA DISTRIBUTED COMMUNICATIONS PROCESSING EXPERIMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. MG ROBERT D. MORGAN

TECH DIR. MR. EUGENE FAMOLARI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	75.685	88.517
TOTAL PROCUREMENT	18.595	11.557
TOTAL O&M	8.781	4.540
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	92.961	104.614
TOTAL INHOUSE	27.854	40.531
TOTAL INHOUSE RDT&E	22.684	35.991
ANNUAL OPERATING COST	8.900	3.200

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	18	0	8	5
CIVILIAN	664	9	548	121
TOTAL	677	9	551	126

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	39.506	98.975	6.485	144.966	0.000	23.700

...MISSION

PERFORM RESEARCH AND DEVELOPMENT OF THE COMMUNICATIONS AND AUTOMATION SCIENCES. PROVIDE COMPREHENSIVE TECHNOLOGY SUPPORT FOR COMMAND, CONTROL AND COMMUNICATIONS (C3) SYSTEMS AND CAPABILITIES. PROVIDE ENGINEERING EXPERTISE TO THE PM'S FOR DEVELOPMENT OF C3 SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

ARMY/DARPA DISTRIBUTED COMMUNICATIONS/PROCESSING EXPERIMENT (ADDCOMPE)
 MOBILE SUBSCRIBER EQUIPMENT (MSE)
 TACTICAL FIBER OPTIC CABLE ASSEMBLIES (TFOCA)
 HF DATA MODEMS
 SPECIAL OPERATIONS FORCES SUPPORT/PRODUCTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MICROPROCESSOR DESIGN CENTER
 COMMUNICATIONS SYSTEM DESIGN CENTER
 SOFTWARE DEVELOPMENT SUPPORT SYSTEM
 TACTICAL DATA BASE MANAGEMENT SYSTEM TDBMS-TB
 EXPERIMENTAL DISTRIBUTED PROCESSING FACILITY
 PRODUCT LINE DEVELOPMENT (PLD)/NON-DEVELOPMENTAL ITEMS(NDI)
 ACOUSTIC RESEARCH LABORATORY
 HFCHANNEL SIMULATOR
 TELEPROCESSING DESIGN CENTER
 ARTIFICIAL INTELLIGENCE LABORATORY

CDR. COL. PAUL J THEUER

TECH DIR. L. R. SHAFFER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	86.276	86.100
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.800	5.500
TOTAL OTHER	0.850	0.400
TOTAL ANNUAL LAB	40.926	42.000
TOTAL INHOUSE	19.850	20.800
TOTAL INHOUSE RDT&E	17.850	17.600
ANNUAL OPERATING COST	2.510	3.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	4	0	4	0
CIVILIAN	259	84	184	75
TOTAL	263	84	188	75

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
81	45.876	41.549	80.885	117.760	10.000	10.000

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

DEVELOP ENERGY CONSERVATION TECHNIQUES/PROCEDURES FOR MIL INSTALLATIONS
 DEVELOP COMPUTER AIDED SYSTEMS FOR PLANNING AND DESIGN
 DEVELOP IMPROVED SYSTEMS FOR RPMA OF MIL FACILITIES
 DEVELOP SYSTEMS FOR ENVIRONMENTAL QUALITY MGMT
 ADAPT ALTERNATE FUELS TECHNOLOGY FOR MIL FACILITIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONTROLLED ENV CHAMBERS; ION PLATING UNIT; 1000000-PD CLOSED-LOOP MTRL TEST SYT; SCANNING ELECTRON MICROSCOPE; SEMI-AUTO WELDING EQMT; BI-AXIAL SHOCK TEST MACHINE; NDT FAC; VACUUM INDUCTION FURNACES; METALLOGRAPHIC SAMPLE PREP; METALLOGRAPH X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYT; DYNAMIC TENSION ANALYSIS SYT; DIGITAL RECORDING ANAL EQMT; AND HVAC TEST FACILITY CAPABILITIES INCLUDING SYSTEMS BLDG METHODS AND TECHNIQUES; COMPUTER-BASED DESIGN & CONST MGMT TECHNIQUES; ENERGY SYSTS DESIGN; ENERGY CONSERVATION & ALTERNATE FUELS; HARDENED FACILITIES ANALYSIS; ENV QUALITY MGMT; POLLUTION CONTROL ABATEMENT; MIL HOUSING SYTS; TRAINING-AREA MAINTENANCE & MGMT; MOBILIZATION FACILITIES; QUALITY OF LIFE & ARCHITECTURAL RES; & ELECTROMAGNETIC PULSE INTERFACE RES.

CDR. COL JAMES D. TIPTON

SCI. DIR. DR. LOTHAR L. SALOMON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	52.498	57.966
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.588	1.670
TOTAL OTHER	8.497	24.409
TOTAL ANNUAL LAB	62.583	84.045
TOTAL INHOUSE	59.239	65.580
TOTAL INHOUSE RDT&E	49.154	55.152
ANNUAL OPERATING COST	15.120	15.340

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	176	8	154	21
CIVILIAN	826	21	104	722
TOTAL	1001	24	258	748

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
808128	159.561	198.888	1591.684	1949.638	57.000	48.000

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CML CML-BIO & SMOKE/OBSCUR: ARTY RG FOR CONVL & CML METAL PARTS, BALLISTIC & DISSEM TESTS: W/FIELD SMPL. SMPL MASS ANAL, MET(AUTO DATA ACQ & MESOMET NETWK)SYS. ISPI(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; CM, LIFE SCI TECHN, ECOL SURVL OF DPG; CAPBL FOR PLANNING ANAL,EVAL OF TESTS,OPNS RSCH, LABS EQUIPD FOR WIDE RNG OF CML,MICROBIO, TOXICAL,IMMUNOL,ECOL,POLL CNTR STUDIES, CAP FOR PROD BIO SIMUL AG; TECHN & MASS ASSAY OF FLUORESCENT AIR TRACERS; EXT COMM & RG SAFETY SYS. OUTSTANDING ARE LARGE LAND AREA, RESTRICTED AIR SPACE, LONG & FLAT ARTY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY, DIVERSE TECH & SCIENTIFIC SKILLS

CDR COL WILLIAM R. HARNAGEL

TECH DIR MR. GRADY H. BANISTER, JR.

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	48.752	51.189
TOTAL PROCUREMENT	8.586	8.765
TOTAL O&M	2.184	2.241
TOTAL OTHER	15.094	15.849
TOTAL ANNUAL LAB	69.566	73.044
TOTAL INHOUSE	46.847	49.189
TOTAL INHOUSE RDT&E	29.251	30.718
ANNUAL OPERATING COST	12.892	13.587

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH		TOTAL PHDS	TOTAL PROF	NON-PROF
	MILITARY	603		0	54
CIVILIAN	211		0	82	129
TOTAL	814		0	186	678

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
85688	0.150	28.042	812.519	840.711	11.000	21.700

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

TRAILBLAZER, AN/TSQ-114B
 REMOTELY PILOTED VEHICLE (RPV)
 FACILITY INTRUSION DETECTION SYSTEM (FIDS)
 SINGLE CHANNEL GROUND AIR AIRBORNE RADIO SYSTEMS (SINGARS)
 JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT TESTS OF HDWR/SOFTWARE, DOCTRINAL CONCEPTS/SCENARIOS TEST. CAPABILITY INCL TEST OF COMM, IMAG, IMAGERY INTERPRETATION MET, RADIAC, RDR, LASER INTEL. EW, CMD/CTRL, PWR SOURCES, RPV, GND&SCTY SENSORS SYS/EQUIP INCL EMC, EMI, EMV, ECM, ECCM, TEMPEST AND INTRA/INTEROPERABILITY AAL AS PEQ. 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 (8 FPS-16/CAPRI), TEMPEST, CSI 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.

CDR. MG ROBERT D. MORGAN

DIR. MR. ROBERT F. GIORDANO

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	120.627	126.658
TOTAL PROCUREMENT	209.892	220.387
TOTAL O&M	19.764	20.752
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	850.288	867.797
TOTAL INHOUSE	34.755	36.498
TOTAL INHOUSE RDT&E	18.005	18.905
ANNUAL OPERATING COST	6.260	6.390

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	28	0	14	14
CIVILIAN	849	7	89	260
TOTAL	877	7	103	274

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
106	112.278	85.107	8.189	155.574	6.775	10.846

...MISSION

PERFORM RESEARCH AND DEVELOPMENT OF NONCOMMUNICATIONS AND SELECTED COMMUNICATIONS EW COUNTERMEASURES AND INTELLIGENCE EQUIPMENT ALONG WITH SURVEILLANCE, WEAPON LOCATION, DETECTION AND IDENTIFICATION EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

COMINT SYSTEMS-GUARDRAIL V, IMPROVED GUARDRAIL V
 INTEGRATED SICINT SYSTEMS-GUARDRAIL COMMON SENSOR
 ELINT SYSTEMS-QUICKLOOK II, ADVANCED QUICKLOOK, TEAMPACK
 GROUND EMP AND OPTICAL NUCLEAR DETONATION SYSTEM (GEONDS)
 METEOROLOGICAL DATA SYSTEM (MDS) AN/IMQ-31

...FUNCTIONS/EQUIPMENT/CAPABILITIES

VAX 11/730 FOR THREAT DEPLOYMENT SIMULATION AND AN AI COMPUTING FACILITY
 ANECHOIC CHAMBER FOR RADAR REFLECTION AND ANTENNA PATTERN MEASUREMENTS
 NUCLEAR RADIATION FACILITY WITH NR SOURCES, GENERATORS, AND X-RAY MACHINE
 USED FOR ENERGY DEPENDANCE TESTS
 ANTENNA TEST RANGE FOR TESTING RADAR ANTENNAS AND RADAR CROSS-SECTION
 MEASUREMENTS FROM 100 TO 1000 FT. DISTANCE USING A MOBILE TOWER TELESCOP-
 ING FROM 80 TO 150 FT.
 A 50 FT. DIAM. TARGET TURNTABLE FOR CONDUCTING RADAR AND OPTICAL TARGET
 SIGNATURE STUDIES. WAYSIDE LASER RANGE, 3.2KM, USED FOR RF AND EO
 EXPERIMENTS AT TACTICAL RANGES. A RADAR DATA ACQUISITION VAN FOR
 ACQUISITION OF HIGH QUALITY KU BAND RADAR SIGNATURE DATA. AN ELECTRO-
 OPTICS LAB. A LASER LAB TO SUPPORT THE EO LAB AND WAYSIDE LASER RANGE.

DIR. DR. C. G. THORNTON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	79.865	106.851
TOTAL PROCUREMENT	6.747	4.881
TOTAL O&M	1.200	1.270
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	87.812	112.002
TOTAL INHOUSE	22.995	29.674
TOTAL INHOUSE RDT&E	17.480	25.829
ANNUAL OPERATING COST	1.896	2.284

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	1	0	0	1
CIVILIAN	290	86	185	105
TOTAL	291	86	185	106

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	58.768	85.887	0.000	94.600	0.000	19.000

...MISSION

DEVEL AND TRANSITION CRITICAL ELECT. TECH DEVICES INTO PRESENT & FUTURE GENERATION ARMY SYSTEMS. CRITICAL TECH INCLUDE: MILLIMETER WAVES, MICROWAVES, MICROELECTRONICS, ANALOG SIG PROC, FREQ CNTRL, DISPLAYS, TACT PWR SOURCES AND MGMT OF THE TRI-SERVICE VHSIC PROGRAM.

...CURRENT IMPORTANT PROGRAMS

ULTRA-HIGH STABILITY QUARTZ CRYSTAL RESONATORS.
 INTEGRATED CIRCUIT TRANSMITTERS, RECEIVERS AND TRANSCEIVERS.
 THERMOELECTRIC GENERATOR MATERIALS AND HARDWARE DEVELOPMENT.
 FULLY FUNCTIONAL POCKET RADIAC DEVELOPMENT AND DEMONSTRATION.
 FLAT PANEL DISPLAY TECHNOLOGY AND EVALUATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FULLY OPERATIONAL BATTERY TEST FACILITY OPERATED IN CONJUNCTION WITH CECOM. THE NEW ARMY PULSE POWER FACILITY FOR R&D AND EVALUATION IS SCHEDULED FOR COMPLETION IN FY86. MOLECULAR BEAM EPITAXY SYSTEM IS NOW UPGRADED TO INCLUDE A VARIAN 860 PREPARATION CHAMBER. A NEW HIGH VOLTAGE TEST MONITOR SYSTEM IS IN PLACE. A NEW TEST SYSTEM FOR AUTOMATIC MEASUREMENT OF FREQUENCY VS TEMPERATURE ON SURFACE ACOUSTIC WAVE DEVICES IS NOW OPERATIONAL.

CDR/DIR. MR. ALAN A. LAUBSCHER TECH DIR. MR. WALTER E. BOGE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	82.702	59.101
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.698	2.102
TOTAL OTHER	0.454	0.581
TOTAL ANNUAL LAB	85.854	62.784
TOTAL INHOUSE	12.188	15.260
TOTAL INHOUSE RDT&E	9.879	12.754
ANNUAL OPERATING COST	8.785	4.271

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	11	0	14	8
CIVILIAN	297	18	186	111
TOTAL	308	18	200	114

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
88	90.722	7.000	18.800	111.022	6.000	14.612

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SUPPORT TO THE ARMY SPACE PROGRAM
 DIGITAL TOPOGRAPHIC SUPPORT SYSTEM
 MODULAR AZIMUTH AND POSITIONING SYSTEM
 SUPPORT TO THE DEFENSE MAPPING AGENCY
 SUPPORT TO THE DAFA STRATEGIC COMPUTING PROGRAM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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 170/780, PDP 1160 AND PDP 1170 AND DEC VAX MODELS 750/780/785. OTHER SPECIALIZED EQUIPMENT INCLUDE COMPA'S, PDS DIGITAL AUTOMATED MICRODENSITOMETER AND PRECISION MEASUREMENT EQUIPMENT.

DIR. COL A F GRUM

TECH DIR. DR. R. W. WHALIN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	49.778	58.500
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.200	2.500
TOTAL OTHER	62.817	59.000
TOTAL ANNUAL LAB	114.290	120.000
TOTAL INHOUSE	91.545	96.455
TOTAL INHOUSE RDT&E	40.638	46.525
ANNUAL OPERATING COST	8.426	9.605

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	17	2	17	0
CIVILIAN	1642	114	675	967
TOTAL	1659	116	692	967

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
8078	1748.080	358.645	176.809	2278.534	42.800	51.700

...MISSION

MIL. & CIV FUNDED RSCH, DEV&INVES IN HYD, ECOLOGY, COASTAL ENGR., PAVEMENTS, SOIL, EXPLO WPN EFF, EXPLO EXCAVATION, VEH MOBILITY, COUNTERMOBILITY; ENV. ASPECTS OF MIL. OPERATIONS. OPERATE TECH LIBRARY, GOVT CEMENT POZZOLAN TEST PROG. SERVES TOTAL ARMY, AF, NAVY, DNA, DOE, EPA & OTHER FED. AGENCIES.

...CURRENT IMPORTANT PROGRAMS

HYD&MATH MODELING TO SOLVE RIVER, TIDAL, WINDWAVE, ECOLOGICAL&STRUC PROBS. RSCH ON VEH MOBILITY, REMOTE SENSING, ENV. IMPACT & EARTHQUAKE DES. CRIT. NUC&HE RSCH TO DEV CRIT FOR DES PROTECT STRUC, BARRIERS & EXCAVATIONS. RSCH&DEV NEW & IMPROVED ENG DES. CRITERIA FOR ROADS, STORAGE& AIRFIELDS. RSCH&DEV OF CEMENT MATLS AND RSCH OF MASS AND STRUCTURAL CONCRETE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PERFORM GEN INVEST IN FLDS OF HYD, SOIL & ROCK MECH, CONCRETE, MIL. VEH. MOBILITY, WPN EFF, ECOLOGY, COASTAL ENGR; MINE/COUNTERMINE, CAMOUFLAGE, PROTECTIVE STRUC., MATLS & EQUIP TESTING, STRUC & PAVEMENT DESIGN, EARTHQUAKE ENGR., AQUATIC PLANT CONT. WES CONTAINS BLDGS, TEST SITES, SPECIAL & OTHER PLANT SUPPORT EQUIP, TEST SITES & FAC FOR SPECIAL TESTS ARE MAINT. AT OTHER AREAS ON LEASE BASIS. FAC INCLUDE HYD FLUMES, WAVE GENERATORS, STATE-OF-THE-ART SOILS, CONC, CHEM, CALIB, COMP. CONTROLLED ENV. & LIMNOLOGY LABS, X-RAY DIFFRACTION & SPECTROSCOPY EQUIP, BLAST LOAD FAC., NUMERICAL & PHYSICAL MODELING CAPABILITIES IN HYD & STRUC ENGR. MOBILITY RSCH FAC., IM LB DYNAMIC LOADER, SINGLE & MULTIPLE WHEEL LOAD CARTS, SURFACE BLAST EFF. FAC., HIGH AND LOW FREQ VIBRATORS; ELECTROBEAM MICROSCOPE LARGE SCALE COMPUTER FAC., TECH LIBRARY; PRINTING PLANT.

PRES. COL C. S. NOBLES

TECH DIR. MR. BILLY HUDSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	4.887	8.866
TOTAL PROCUREMENT	1.066	0.005
TOTAL O&M	0.232	0.871
TOTAL OTHER	5.016	4.811
TOTAL ANNUAL LAB	10.701	9.053
TOTAL INHOUSE	10.701	9.053
TOTAL INHOUSE RDT&E	4.887	8.866
ANNUAL OPERATING COST	0.825	0.825

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	112	0	31	81
CIVILIAN	52	0	5	47
TOTAL	164	0	36	128

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
0	13.790	38.080	16.939	68.809	0.000	3.541

...MISSION

PLAN CONDUCT AND REPORT ON OT I OT II AND OTHER USER-TYPE TESTS
 PARTICIPATE IN DT I AND DT II AS DIRECTED
 PROVIDE ADVICE TO PROPONENT AGENCIES AND DEVELOPERS
 CONDUCT OTHER TESTS AND EVALUATIONS AS DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

OPERATIONAL TEST II TACFIRE VERSION VII
 FOE BCS-ITS
 FDTE HIP I
 FOE FIST DMD
 FDTE LIGHTWEIGHT TACFIRE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. COL BERNARD MANDERVILLE

TECH DIR. MR. S. JACOBSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	61.058	91.800
TOTAL PROCUREMENT	88.889	57.000
TOTAL O&M	10.244	5.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	109.691	158.800
TOTAL INHOUSE	62.538	90.080
TOTAL INHOUSE RDT&E	24.650	37.480
ANNUAL OPERATING COST	17.000	18.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON- PROF
	STRENGTH	PHDS	PROF	
MILITARY	15	0	9	6
CIVILIAN	848	29	488	865
TOTAL	863	29	492	871

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	177.420	108.980	4.667	286.067	10.125	29.958

...MISSION

MAINTAIN TEST BED FACILITIES TO EVALUATE WEAPON SYSTEMS FOR THE INDIVIDUAL SOLDIER, AUTOMATIC CANNON, TANK MAIN AND SECONDARY ARMAMENTS. ACCOMPLISH EXPLORATORY RESEARCH, ADVANCED AND ENGINEERING DEVELOPMENT. LIFE CYCLE TECH RESPONSIBILITY FOR FIRE CONTROL AND ALL WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

JOINT SERVICES SMALL ARMS PROGRAM
 ARMAMENT TECHNOLOGY FOR CLOSE COMBAT WEAPONRY
 INDIVIDUAL SOLDIER WEAPONS
 106MM RECOILLESS RIFLE UPGRADE
 RESEARCH IN CLOSE COMBAT WEAPONRY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AIR DEFENSE GUN PLATFORMS AND GUN SYSTEMS FOR ATTACK AND UTILITY HELICOPTERS. CENTER HAS CAPABILITY FOR DESIGN AND FABRICATION OF CANNON MOUNTS, FEED SYSTEMS, TURRETS AND MUNITIONS. THE JOINT SERVICES SMALL ARMS PROGRAM HAS RESPONSIBILITY FOR ALL SMALL ARMS CONVENTIONAL AND SPECIAL WEAPON SYSTEMS FOR ALL USERS.

ACT DIR. DR. LOUIS M. TOZZI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	92.122	91.201
TOTAL PROCUREMENT	52.212	51.690
TOTAL O&M	7.498	7.428
TOTAL OTHER	13.627	13.491
TOTAL ANNUAL LAB	165.459	163.805
TOTAL INHOUSE	99.263	98.271
TOTAL INHOUSE RDT&E	74.846	74.098
ANNUAL OPERATING COST	16.253	15.483

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	8	1	5	2
CIVILIAN	1016	49	497	519
TOTAL	1019	50	502	521

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
2816	507.829	112.019	121.492	741.840	53.921	57.071

...MISSION

MISSION: RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT , AND TECHNICAL LEADERSHIP IN ELECTRONIC FUZING AND SMART MUNITION SENSORS, NUCLEAR SURVIVABILITY, RADAR, SIGNAL AND INFORMATION PROCESSING, HIGH POWER MICROWAVES, ANTI-RADIATION COUNTERMEASURES, AND TROOP SUPPORT.

...CURRENT IMPORTANT PROGRAMS

CURRENT SIGNIFICANT PROGRAMS: NUCLEAR SURVIVABILITY TECHNOLOGY
 VERY INTELLIGENT SURVEILLANCE AND TARGET ACQUISITION DEMONSTRATION
 HIGH POWER MICROWAVE HARDENING TECHNOLOGY
 ELEVATED TARGET ACQUISITION SYSTEM RADAR
 M818E1 FUZE FOR PATRIOT MISSILE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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.

DIR. DR. JOHN D. WEISZ

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	17.878	20.849
TOTAL PROCUREMENT	0.091	0.050
TOTAL O&M	0.121	0.120
TOTAL OTHER	0.875	0.200
TOTAL ANNUAL LAB	18.465	20.719
TOTAL INHOUSE	14.674	15.777
TOTAL INHOUSE RDT&E	14.090	15.407
ANNUAL OPERATING COST	4.916	5.520

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	85	1	16	19
CIVILIAN	176	16	126	50
TOTAL	211	17	142	69

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
72	111.524	7.056	21.400	139.980	10.826	8.507

...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROGRAMS SPONSORED BY AMC. NINETEEN DETACHMENTS AND/OR FIELD REPRESENTATIVES HAVE BEEN ESTABLISHED AT AMC CMDS, AND TRADOC CTRS/SCHOOLS

...CURRENT IMPORTANT PROGRAMS

COMMAND POST VEHICLE CONCEPT
 SOLDIER/MACHINE INTERFACE TEST BED HOWITZER CONCEPT
 CONCEPT HOOD/MASK PROTECTIVE, CHEMICAL-BIOLOGICAL
 ROBOTICS RESEARCH AND DEVELOPMENT
 MANPOWER AND PERSONNEL INTEGRATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

COMMAND POST EXERCISE FACILITY
 ACE COMPUTER FACILITY
 FIRE CONTROL RESEARCH FACILITY
 DATA ACQUISITION AND BIOTELEMETRY SYSTEM
 GAT 2M HELICOPTER SIMULATOR
 ACOUSTICAL AND ANECHOIC CHAMBER REVERBERANT ROOM
 HELFAST LOGISTICS TESTING FACILITIES
 EYE MOVEMENT MEASURING DEVICE
 SMALL ARMS TEST FIRING RANGE
 WOOD AND METAL WORKING TEST SUPPORT CAPABILITY
 HUMAN FACTORS DATA BANK
 COMMAND CONTROL SIMULATOR SYSTEM

INSTALLATION: INFANTRY BOARD

FORT BENNING, GA

CDR. COL JOHN N. MELOY

TECH DIR. MR. PAUL W. LAVENDAR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.687	8.962
TOTAL PROCUREMENT	0.107	0.068
TOTAL O&M	0.258	0.284
TOTAL OTHER	8.144	8.582
TOTAL ANNUAL LAB	7.191	7.846
TOTAL INHOUSE	7.191	7.846
TOTAL INHOUSE RDT&E	8.687	8.962
ANNUAL OPERATING COST	2.825	8.728

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	107	0	2	105
CIVILIAN	77	8	8	69
TOTAL	184	8	10	174

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	0.000	82.208	82.885	65.088	3.000	1.682

... MISSION

PLAN CONDUCT REPORT ON OPERATIONAL TESTS 1/2/8, FORCE DEVELOPMENT TESTS
OTHER TESTS OF EQUIPMENT & ANCILLARY ITEMS TO BE USED BY INFANTRY UNITS
FOR COMMAND, CONTROL, FIREPOWER, TARGET ACQUISITION, GROUND SURVEIL-
LANCE, FIRE CONTROL GROUND MOBILITY & TRNG & CHEMICAL/BIOLOGICAL EQUIP

... CURRENT IMPORTANT PROGRAMS

ENHANCED M16A2 RIFLE OT II
BATTALION MORTAR SYSTEM (BMS) 120 MM
THERMAL WEAPONS SYSTEM (TWS)
XM 4 CARBINE OT II
NIGHT VISION GOGGLES, AN/PVS-7 (NVG)

... FUNCTIONS/EQUIPMENT/CAPABILITIES

AUTOMATED, COMPUTERIZED AUTOMATIC & SMALL ARMS WEAPONS RANGE
CLOTHING & EQUIPMENT TEST FACILITY
MANNED EVASIVE TARGET
NOVA 812 COMPUTER CAPABILITIES

CDR. COL HAROLD E. PLANK SCI DIR. DR. GINO C. BATTISTONE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	6.425	4.481
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.908	2.778
TOTAL ANNUAL LAB	8.828	7.204
TOTAL INHOUSE	6.245	5.878
TOTAL INHOUSE RDT&E	4.475	2.605
ANNUAL OPERATING COST	1.088	1.242

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-PROF
	STRENGTH	PHDS	PROF	
MILITARY	60	9	38	22
CIVILIAN	20	2	4	16
TOTAL	80	11	42	38

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	9.852	5.696	1.200	16.748	2.610	3.626

...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, & TECHNIQUES FOR RAPID DIAGNOSIS OF CHEMICAL CASUALTIES.

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BLDG 40, WRAMC, WASHINGTON, D.C.
 BLDG 91, WRAMC, WASHINGTON, D.C.
 BLDGS 2801-2-4-5-10-31-32, FORT MEADE, MD
 BLDG 1808, PRESIDIO OF SAN FRANCISCO, CA
 MICROSCOPES-SEM-TEM
 FLUORESCENT MICROSCOPE WITH VIDEOPLAN SYSTEM
 GAS CHROMATOGRAPH-MASS SPECTROMETER WITH DATA SYSTEM
 FTIR INFRARED ANALYZER
 NMR SPECTROMETER
 IMAGE INTENSIFIER QUATIMET
 MICROTOME SYSTEM HARD TISSUE
 LIQUID AND GAS CHROMATOGRAPHS AND ATOMIC ABSORPTION SPECTROPHOTOMETERS

CDR. COL BASIL A. PRUITT, JR.

SCI DIR. DR. AUTHUR D. MASON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	3.860	3.475
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.509	6.767
TOTAL ANNUAL LAB	8.869	10.242
TOTAL INHOUSE	8.869	10.242
TOTAL INHOUSE RDT&E	3.860	3.475
ANNUAL OPERATING COST	1.255	1.381

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	156	18	52	104
CIVILIAN	72	8	34	38
TOTAL	228	26	86	142

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
	1	26.424	1.800	22.400	50.624	5.482

...MISSION

INVESTIGATE PROBLEMS OF MECHANICAL AND THERMAL INJURIES WITH THEIR COMPLETE 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 THE EFFECTS OF STUDIES OF LYMPHOID SUBPOPULATIONS IN A BURNED ANIMAL MODEL
 PRELIMINARY STUDIES OF ZINC HOMEOSTATIC CONTROL AND IMMUNOCOMPETENCE IN CARDIOVASCULAR AND ENDOCRINE SEQUELLAE OF BURN RESUSCITATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

PRES. LTC. GARY A. GRUENHAGEN

TECH. DIR. MR. PHILLIP E. WRALSTAD

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.447	8.487
TOTAL PROCUREMENT	1.879	1.688
TOTAL O&M	0.805	1.569
TOTAL OTHER	1.125	1.091
TOTAL ANNUAL LAB	6.256	7.785
TOTAL INHOUSE	1.501	2.003
TOTAL INHOUSE RDT&E	1.879	1.875
ANNUAL OPERATING COST	0.839	0.995

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	84	0	70	14
CIVILIAN	88	2	29	4
TOTAL	117	2	99	18

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	4.000	6.627	21.667	32.294	0.616	9.806

...MISSION

PLAN, CONDUCT AND REPORT ON OT I, II, III AND OTHER USER TYPE TESTS OF TACTICAL INTEL + SECURITY MATERIAL. PARTICIPATE IN DT I, II + III TESTS AS DIRECTED. CONDUCT VULNERABILITY + OTHER CUSTOMER TESTS AS DIRECTED.

...CURRENT IMPORTANT PROGRAMS

AN/ALQ-186 PULSE RADAR JAMMER 86OTN1075
 REMBASS SIMULATOR 86OZN1160
 BATTLEFIELD DECEPTION 86CEP315
 SEMA/ASE PHASE III (FDTE) 87FOO0214B
 ADVANCED COMMANDEKS TACTICAL TERMINAL 87OT1260

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EW MONITORING FAC: TRANSPORTABLE 80 FT VAN: RECEIVE 10KHZ TO 40GHZ: DF 20 MEZ TO 40GHZ: TAPE RECORDERS, SPECTRUM ANALYZERS AND OSCILLOSCOPES.
 ANALYSIS EQP. VULNERABILITY MOBILE TRANSMITTER "A" VAN: TRANSPORTABLE 40 FT VAN: RECEIVE 900KHZ TO 1GHZ: JAM 10KHZ TO 1GHZ WITH 1000W TRANSMITTERS: ANALYSIS EQP. VULNERABILITY MOBILE TRANSMITTER "B" VAN: TRANSPORTABLE 40 FT VAN: RECEIVE 1GHZ TO 40GHZ: JAM 1GHZ TO 40GHZ WITH 200W TRANSMITTERS: ANALYSIS EQP. NON-COMM EMITTER SIMULATOR: 8.6 TO 17.0GHZ: 200W OUTPUT SIMULATING 20 THREAT RADARS: COMPUTER CONTROL VIA DATA LINK: TRANSPORTABLE: REPROGRAMABLE. COMM EMITTER SIMULATOR: 2 TO 500MEZ: 20W OUTPUT SIMULATING 50 THREAT COMM TYPES: CONTROL THRU SYS MICROPROCESSOR, RECORDER OR DATA LINK: TRANSPORTABLE: REPROGRAMABLE. OPERATIONAL TEST CONTROL CENTER: BLDG WILL HOUSE REALTIME RANGE CONTROL SYS FAC AND DATA PROCESSING.

DIR. COL J. A. ALLRED

DEP DIR. MR. H. R. BRASWELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	170.181	182.970
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.690	17.845
TOTAL ANNUAL LAB	172.821	200.815
TOTAL INHOUSE	9.100	8.174
TOTAL INHOUSE RDT&E	6.410	5.429
ANNUAL OPERATING COST	0.759	0.600

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	44	0	15	29
CIVILIAN	105	1	60	45
TOTAL	149	1	75	74

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1861	0.000	209.608	2428.848	2638.456	287.550	245.980

...MISSION

PLAN, MANAGE, DIRECT, CONTROL & COORDINATE OVERALL ACTIVITIES OF THE KWAJALEIN MISSILE RANGE FOR TECH & LOG SUPPORT OF ON-SITE STRATEGIC DEFENSE PROGRAMS. TECH INSTRUMENTATION SUPPORT OF STRATEGIC OFFENSIVE WEAPON SYSTEMS DEV & OPNS TEST. SPACE DATA COLLECTION & SURVEILLANCE.

...CURRENT IMPORTANT PROGRAMS

USAF DELTA 180 PROGRAM DEV & RANGE OPERATIONS SUPPORT
 USAF SAC MINUTEMAN III OPERATIONAL TESTING
 USN STRATEGIC SYSTEMS PROGRAM OFFICE OPERATIONAL TESTING
 USAF BMO PEACEKEEPER R&D TESTING
 SPACE DETECTION & TRACKING SYS & SPACE OBJECT IDENTIFICATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ALCOR TRADEX ALTAIR & MILLIMETER WAVE RADARS, MULTISTATIC MEASUREMENT SYS, KREMS TO CONUS HIGH SPEED DATA LINK, 2AN/MPS 36, AN/FPQ19, AN/TPX42 2 SPLASH DETECTION RADARS, 3 RADOTS, 6 SUPER RADOTS, 8 BALLISTIC CAMERA 6 SPECTRAL CAMERAS PHOTO LAB, S-BAND TELEMETRY RECEIVING SYS INCL 8 AUTO TRACK ANTENNAS, 1 RELAY SYS, RECIEVE & RECORD SYS, DATA SEPARATION AND DISPLAY SYS, METEOROLOGICAL SYS, LAUNCH ORDNANCE FAC, TIMING/COUNTDOWN SYS FREQUENCY CON,ROL & ANALYSIS SYS, INSTRUMENTATION CONTROL CENTER AIR TRAFFIC CONTROL SYS INCLUDING TACAN LOW FREQUENCY HOMING BEACON & AC COMMUNICATION, CLOSED CIRCUIT TV SYS, DATA REDUCTION FACILITY & INSTRUMENTATION SYS ACCURACY ANALYSIS CAPABILITY GROUND PORTION OF FLIGHT TERMINATION & CONTROL SYS, DIVING & RECOVERY CAPABILITIES & RANGE SAFETY SYSTEM.

INSTALLATION: LARGE CALIBER WEAPONS SYSTEMS LAB

DOVER, N. J.

CDR. COL A. T. CRUMPTON

TECH DIR. DR. T. DAVIDSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	206.028	208.086
TOTAL PROCUREMENT	69.800	59.827
TOTAL O&M	7.900	7.995
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	288.228	275.408
TOTAL INHOUSE	187.129	127.848
TOTAL INHOUSE RDT&E	60.179	60.781
ANNUAL OPERATING COST	28.043	29.445

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	0	20	7
CIVILIAN	1728	80	1089	639
TOTAL	1755	80	1109	646

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
17	407.992	235.400	85.000	728.392	17.732	29.420

...MISSION

MAINTAIN STRONG BASIC & EXPLORATORY TECH BASE, CONCEPT FORMULATION, RDTE, & SPT TO PRODUCTION FOR MUNITIONS & WPNS SYS LARGER THAN 40MM, E. G., TOWED & SP ARTY SYS, TK MAIN ARM, MORTARS, RECOILLESS RIFLES, MSL/ RKT WIDS, FUZES, MINES, DEMOS, NONNUCL SAFE-ARM-FUZING F/ARMY NUC MUNS.

...CURRENT IMPORTANT PROGRAMS

ENERGETIC MATERIALS, HI-ENERGY, HI-D EXPLS, ENHANCED ANTIARMOR WIDS
ELECTROMAGNETIC PROPULSION, LIWT LAUNCH COMPTS
LIWT ARTY, LIWT TOWED ARTY WPNS, MISSILE-CANNON AIR DEFENSE
INTEGRATED SMART ARTY SYNTHESIS-ISAS, LEAP AHEAD PGM, ROBOTICS
HI-G/HI-D SMART MUNITIONS, CONV GEOM SMART PROJECTILES & TK HI-G MUNS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CAPABILITIES & FACILITIES IN LCWSL: ENERGETIC MATERIALS IGNITION, RHEOLOGY, & COMBUSTION AEROBALLISTICS MUNITION DEV & TEST, GAS DYNAMICS, A CLOSED BOMB DIFFERENTIAL THERMAL ANALYSIS, PROPELLANT SURVEILLANCE, EVALUATION, & TEST, HYPERVELOCITY PROPULSION, PYROTECHNIC EVALUATION & TEST, X-RAY, LASER, HOLOGRAPHIC, & ULTRASONIC NDT, SHAPE CHARGE TEST, HIGH SPEED DETONATION, EXPLOSIVE HAZARD ANALYSIS & PERFORMANCE TEST, GUN BARREL FATIGUE TEST, BREECH MECHANISM & BREECH BLOCK TEST, SPECIALIZED TEST & ANALYTICAL EQUIPMENT, SUBSONIC, TRANSONIC, & SUPERSONIC WINDTUNNELS, ELECTROMAGNETIC LAUNCHER CAPABLE OF DELIVERING 3 TO 5 GIGAWATTS, REAL POWER, MACHINE & MODEL SHOPS. THESE RESOURCES ARE CONTAINED IN A COMPLEX OF ENG & LAB BLDGS. LCWSL HAS 20 ADM, 72 LAB, & 2 STORAGE BLDGS.

CDR. COL EDWIN S. BEATRICE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	16.422	17.957
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.317	0.120
TOTAL OTHER	4.578	6.062
TOTAL ANNUAL LAB	21.812	24.139
TOTAL INHOUSE	10.269	17.004
TOTAL INHOUSE RDT&E	11.879	10.822
ANNUAL OPERATING COST	6.551	7.658

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	155	27	74	81
CIVILIAN	99	16	48	51
TOTAL	254	43	122	132

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
9	119.204	56.941	112.174	288.319	48.779	11.955

...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 & VECTOR BORN DISEASE; MAMMALIAN & 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 & CHRONIC MAMMALIAN & IN VITRO TOXICOLOGY
 CUTANEOUS PROTECTION AGAINST HAZARDS IN A COMBAT ENVIRONMENT
 FORWARD CARE TRAUMATIC SHOCK & HIGH VELOCITY MISSILE INJURIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

DIR. DR. E. S. WRIGHT

CDR. COL J. E. KEMPSTER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	52.652	48.235
TOTAL PROCUREMENT	0.015	0.000
TOTAL O&M	6.650	5.576
TOTAL OTHER	0.074	0.060
TOTAL ANNUAL LAB	59.891	58.871
TOTAL INHOUSE	37.676	38.466
TOTAL INHOUSE RDT&E	33.188	33.891
ANNUAL OPERATING COST	9.571	9.649

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	14	2	11	3
CIVILIAN	617	66	241	376
TOTAL	631	68	252	379

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
37	352.000	88.261	48.875	488.686	14.879	24.470

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

DIR. MR. KEITH A. MYERS

DEP DIR. COL JAMES J. WALDECK

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	25.516	26.587
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.727	4.888
TOTAL OTHER	0.686	0.718
TOTAL ANNUAL LAB	80.929	82.088
TOTAL INHOUSE	21.706	23.019
TOTAL INHOUSE RDT&E	17.569	18.272
ANNUAL OPERATING COST	8.740	8.820

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	80	0	14	16
CIVILIAN	428	18	318	110
TOTAL	468	18	332	126

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	8.140	100.276	1.715	110.181	2.070	1.366

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

TEST DESIGN, EVAL OF APPROX 60 SYSTEMS INCLUDING 120MM GUN AMMO, TCAC, MK19 40MM GRENADE MG, HIRSS, ESSS, AND CVCU FACE MASK. EXAMINE PERFORMANCE AND SURVIVABILITY OF FAMILY OF LIGHT HELICOPTERS. DEVELOP METHODOLOGIES, EVALUATE EFFECTIVENESS OF ADVANCED IFF SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. COL CARL E. PEDERSEN, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	18.906	11.190
TOTAL PROCUREMENT	0.251	0.051
TOTAL O&M	0.012	0.000
TOTAL OTHER	2.414	8.180
TOTAL ANNUAL LAB	16.583	14.871
TOTAL INHOUSE	8.499	7.838
TOTAL INHOUSE RDT&E	6.880	5.891
ANNUAL OPERATING COST	2.051	1.950

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	80	100	410	380
CIVILIAN	92	20	350	258
TOTAL	122	120	760	638

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	28.691	42.773	18.889	79.853	3.836	4.644

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SIGNIFICANT RESEARCH PROJECTS INCLUDE PESTICIDE DISPERSAL UNIT, MULTICAPABILITY; FLYWHEEL POWERED MOBILE X-RAY GENERATOR; VITAL SIGNS MONITOR; DEVELOPMENT OF INTERIM DRINKING WATER STANDARDS FOR FIVE MUNITIONS COMPOUNDS; & ESTABLISHMENT OF A PROGRAM TO REVISE COMBAT DRINKING WATER STANDARDS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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.

CDR. COL HARRY G. DANGERFIELD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	45.754	56.596
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.186	0.000
TOTAL OTHER	0.000	1.884
TOTAL ANNUAL LAB	45.940	58.480
TOTAL INHOUSE	1.756	7.190
TOTAL INHOUSE RDT&E	1.756	5.856
ANNUAL OPERATING COST	0.898	1.659

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	26	10	15	11
CIVILIAN	89	4	7	82
TOTAL	65	14	22	48

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	0.000	12.864	0.000	12.864	0.582	0.120

...MISSION

EXERCISE FULL LINE AUTHORITY OVER CYCLE INTEGRATED MATERIAL MGT OF ALL ASSIGNED SYSTEMS AND/OR PRODUCTS IN ACHIEVING A BALANCED PROGRAM TO ACCOMPLISH THE MATERIAL DEVELOPER'S STATED OBJECTIVES.

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESPONSIBLE FOR MANAGEMENT OF MEDICAL MATERIAL PROGRAM FOR SUPPORT OF ARMY HEALTH SERVICES.

CDR. MG GARRISON P. RAPMUND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	9.495	10.848
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.840	0.881
TOTAL OTHER	8.229	4.177
TOTAL ANNUAL LAB	13.064	15.851
TOTAL INHOUSE	10.749	11.277
TOTAL INHOUSE RDT&E	7.180	6.769
ANNUAL OPERATING COST	7.180	6.769

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	60	28	44	16
CIVILIAN	175	0	11	164
TOTAL	235	28	55	180

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	51.896	0.000	51.896	0.650	8.450

...MISSION

ADMINISTRATION AND COORDINATION OF THE ARMY MEDICAL RDTE PROGRAM LIMITED TO UNIQUE MILITARY PROBLEMS WITHIN THE U.S. AND OCONUS.

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL DEPARTMENT.

CDR. COL JOSEPH C. DENNISTON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	38.882	31.121
TOTAL PROCUREMENT	0.008	0.000
TOTAL O&M	0.091	0.033
TOTAL OTHER	8.628	4.080
TOTAL ANNUAL LAB	42.604	35.234
TOTAL INHOUSE	19.846	20.174
TOTAL INHOUSE RDT&E	16.182	16.061
ANNUAL OPERATING COST	8.800	4.300

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	85	31	39	46
CIVILIAN	155	26	56	99
TOTAL	240	57	95	145

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
81	36.246	22.945	99.029	158.220	9.384	16.703

...MISSION

FUNDAMENTAL RES ON MECHANISMS OF ACTION (CW AGENTS-ANTIDOTES & PRETREAT)
 DEVELOPMENT OF PRETREATMENT & ANTIDOTE DRUGS (AGAINST CW AGENTS)
 DEVELOP & EVALUATE PREVENTION, RESUSCITATION, TREATMENT & MANAGEMENT
 METHODS FOR CHEMICAL CASUALTIES & 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
 DEVELOP BIOMEDICAL MODELS TO EVALUATE DRUG EFFICACY
 EVALUATE BEHAVIORAL/PERFORMANCE DECREMENTS FROM CW AGENTS/ANTIDOTES
 DEVELOP METHODS FOR MGT & TREATMENT OF MASS CW CASUALTIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MODERN 7000 SQ FT ANIMAL HOLDING FACILITY & CHEMICAL SURETY AREA
 TECH LIBRARY HAS 6000 BOOKS, 1000 JOURNAL TITLES, MANY DATA BASES
 COMPLETE VIDEO PRODUCTION FACILITY & COMPUTER FACILITY (WITH NETWORK)
 MEDICAL MAINTENANCE FACILITY, LABORATORY SUPPLY FACILITY
 RADIOISOTOPE CHEMICAL DRUGS & BIOCHEMICAL ANALYSIS
 BEHAVIORAL TESTING LABORATORY
 LIQUID, GAS, COLUMN & AFFINITY CHROMATOGRAPHY, ANAL ULTRACENTRIFUGE
 ELECTROPHORESIS, SPECTROSCOPY, FLUOROMETRY & SPECTROPOLARIMETRY
 EC MASS SPECTROMETRY & ELECTRON SPIN RESONANCE
 AMINO ACID ANALYSIS & PEPTIDE SEQUENCING, MONOCLONAL ANTIBODIES
 PHYSIOLOGY, PHARMACOLOGY & NEUROPHARMACOLOGY LABORATORIES
 ELECTRON MICROSCOPY, SEM, TISSUE CULTURE, CELL CLONING, RECEPTOR ANALYSIS

CDR. COL DAVID L. HUXSOLL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	80.448	41.856
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.486	0.216
TOTAL OTHER	8.110	10.448
TOTAL ANNUAL LAB	38.994	52.015
TOTAL INHOUSE	28.995	30.698
TOTAL INHOUSE RDT&E	20.449	20.084
ANNUAL OPERATING COST	10.085	10.940

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	295	50	85	210
CIVILIAN	192	87	94	98
TOTAL	487	87	179	808

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
	215	104.186	20.618	197.909	822.663	20.117

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SYSTEMS FOR RAPID IDENTIFICATION & DIAGNOSIS OF POTENTIAL BW AGENTS.
 ANTIVIRAL DRUG SCREENING PROGRAM FOR BW & MILITARILY UNIQUE VIRUSES.
 DEVELOPMENT OF VACCINES AGAINST POTENTIAL BW AGENTS.
 MEDICAL DEFENSIVE STUDIES TO PROTECT AGAINST TRICOTHECENE TOXINS.
 RISK ASSESSMENT-EVALUATION OF VIRUS AGENTS AND THEIR VECTORS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MEDICAL RESEARCH CONDUCTED IN TWO BUILDINGS PROVIDING 300,000 SQ. FEET & CONTAINING 28 MODERN LAB SUITES WITH EMPHASIS ON P4 BIOHAZARD SAFETY CONTAINMENT. P4 OPERATIONS CONDUCTED IN PLASTIC SUITS & MICROBIOLOGICAL CABINET SYSTEMS. THESE LABS CONSTITUTE A UNIQUE RESOURCE IN FREE WORLD FOR SAFE STUDY OF HIGH HAZARD DISEASE AGENTS. SPECIAL 16-BED EXPERIMENTAL WARD PERMITS VACCINE & OTHER STUDIES IN VOLUNTEERS. P4 CONTAINMENT WARD PLUS P4 CLINICAL LAB & P4 TRANSPORT SYSTEM PROVIDE STATE OF ART MEDICAL TREATMENT & DIAGNOSIS FOR MOST HAZARDOUS DISEASES KNOWN. OTHER UNIQUE FEATURES INCLUDE AEROSOL ASSESSMENT, CELL CULTURE ELECTRON MICROSCOPES MASS SPECTROMETRIC FACILITY MUCOSAL LABORATORY DNA TECHNOLOGY HYBRIDOMA LAB COAGULATION LAB EQUIPMENT TO PREPARED EXPERIMENTAL VACCINES & TOXOIDS.

CDR. MG PETER G. BURBULES

DIR. DR. WILLIAM C. MCCORKIE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	192.810	198.284
TOTAL PROCUREMENT	81.808	24.828
TOTAL O&M	14.854	7.446
TOTAL OTHER	2.576	2.688
TOTAL ANNUAL LAB	241.548	227.746
TOTAL INHOUSE	118.518	105.605
TOTAL INHOUSE RDT&E	71.127	76.495
ANNUAL OPERATING COST	17.929	18.118

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	41	0	31	10
CIVILIAN	888	54	590	298
TOTAL	924	54	621	808

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11000	728.800	257.200	200.000	1186.000	188.516	128.252

...MISSION

SUPPORT PROJECT MNGED SYSTEMS; MNGE & CONDUCT RSCH, EXPL & ADV DEV FOR MISSILES, ROCKETS, AND HIGH ENERGY LASERS
 PROVIDE TECH SOLUTIONS TO ARMY'S CLOSE COMBAT, FIRE SPT, AIR DEF, AND AVIATION SYS NEEDS TO DEV TECH FOR FUTURE SYS.

...CURRENT IMPORTANT PROGRAMS

SETTER AIR DEFENSE WEAPON
 FIBER OPTICS GUIDED MISSILE DEMO.
 SPARROW-HAWK DEMONSTRATION
 VBSIC AUTOMATIC TARGET TRACKER
 SPATIAL LIGHT MODULATOR

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CENTER IS EQUIPPED TO STUDY PROBLEMS IN PROP, AERO, G&C, & STRUCTURES. MAJOR FAC IS MCMORROW LAB WHICH HOUSES MAJORITY OF CENTER. SOME UNIQUE FAC ARE: ADV SIM CNTR; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY 8 ENVIRON EFFECTS SIMULATORS; MSL COMPUTER SOFTWARE/HWDE CNTR; SIG EVAL EN CHAMBERS; ARMY MSL OPTICAL RANGE DESIGNED TO MEASURE LASER RADAR SIG MAINTAINS AND OPERATES 7 MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC, ENVIRON & FUNCTIONAL TEST; STATE-OF-THE-ART FAC & EQUIP SUCH AS LASER TRACKERS & ELECTRO-MAGNETIC RADAR SENSORS. PERFORMS ARMY LEAD LAB FUNCTION IN GUID & CONTROL/ TERMINAL HOMING TECH AND HIGH POWER/ENERGY LASER TECH. FAC FOR MECH, ELECT&ELEC FAB&ASSY AND HYBRID MICROCIRCUITRY DESIGN ARE AVAILABLE. SMOKE CHARACTERIZATION FAC IS ALSO AVAILABLE.

CDR. COL A. D. RODGERS

TECH DIR. MR. EDWARD F. LEVELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	61.278	68.165
TOTAL PROCUREMENT	55.154	1.665
TOTAL O&M	17.176	16.228
TOTAL OTHER	2.682	2.984
TOTAL ANNUAL LAB	186.285	83.992
TOTAL INHOUSE	54.611	56.876
TOTAL INHOUSE RDT&E	41.554	42.801
ANNUAL OPERATING COST	9.229	9.218

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	102	8	80	72
CIVILIAN	1004	77	549	455
TOTAL	1106	80	579	527

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
78	502.681	51.018	834.905	888.554	28.991	29.854

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BACTERIOLOGY LAB EQUIP FOR INVES OF PATHOGENIC MICROORGANISMS; HIGH RESOLUTION MASS SPECTROMETER FOR ANALYSIS OF VOLATILE COMPOUNDS; FEBETRO MACHINE USED FOR FOOD OXIDATION; SCANNING TRANSMISSION ELECTRON MICROSCOPE; LASER LAB FOR EVAL OF HIGH ENERGY LASERS ON CLO AND RELATED MAT; DYEING AND FINISHING LAB FOR STUDIES OF TEXTILES; COMPUTER GENERATED SYS OF CLO PATTERNS TO OUTPUT COMPL TARIFF OF SIZES FROM ONE MASTER; CLIMATIC CHAMBERS W/TEMPS -57C TO 74C W/WIND AND RAIN; FLAME PROT LAB AND FACILITY INCL OUTDOOR FIRE PIT; AIRCRAFT ROLLER CONVEYER TEST FAC; DROP TEST FAC; 40 X 40 FT RAINCOURT; FOOD PROCESSING PLANT; FOOD SYS EQUIP LAB; EXPERIMENTAL KITCHEN; SENSORY EVALUATION LAB; HORIZONTAL IMPACT TESTING MACHINE; UNIVAC 1106, IBM 4841, PRIME 750 CAD/E, AND PRIME 2250 COMPUTERS WITH PERIPHERAL EQUIPMENT AND SOFTWARE.

CDR. MG ROBERT D. MORGAN

DIR. MR. PAUL TRAVESKY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	111.941	114.900
TOTAL PROCUREMENT	58.090	19.500
TOTAL O&M	2.515	2.720
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	172.546	187.120
TOTAL INHOUSE	89.622	83.648
TOTAL INHOUSE RDT&E	84.677	28.498
ANNUAL OPERATING COST	10.007	10.810

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	88	1	18	20
CIVILIAN	476	85	262	214
TOTAL	509	86	275	284

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	80.000	44.478	87.000	161.478	12.244	38.499

...MISSION

NV&EOC IS RESPONSIBLE FOR PROVIDING THE ARMY WITH TECHNOLOGY AND EQUIPMENT TO PERMIT OPERATION WITH DAYLIGHT EFFICIENCY. THE PROGRAM IS STRUCTURED AROUND A STRONG TECHNOLOGY BASE IN THE AREAS OF IR SENSORS, ELECTROPTICS, LASERS, VISIONICS AND SIGNAL PROCESSING.

...CURRENT IMPORTANT PROGRAMS

RESEARCH AND DEVELOPMENT OF IR SENSORS
 AUTOMATION OF FLIR AND MULTI-SENSORS
 RESEARCH AND DEVELOPMENT OF VIS/VIR TUNABLE LASERS
 RESEARCH AND DEVELOPMENT OF COUNTER-COUNTERMEASURES
 VISIONICS ANALYSIS AND EVALUATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NIGHT VISION SYSTEM LAB. SURFACE RESEARCH FACILITY.
 IR DETECTOR FABRICATION AND ANALYSIS FACILITY.
 FOCAL PLANE ARRAY TEST FACILITY. IR OPTICAL TEST FACILITY.
 IMAGE INTENSIFIER TUBE TESTING FACILITY.
 SEMICONDUCTOR MATERIALS RESEARCH FACILITY.
 ELECTRONICS TEST FACILITY. INTERACTIVE IMAGE PROCESSING FACILITY.
 LASER RANGES. 8-D MULTI-SPECTRAL SEARCH SIMULATOR.
 SCIENTIFIC COMPUTER CENTER. FIRING TEST RANGE.
 EO/IR IMAGE EVALUATION FACILITY.
 LASER MATERIAL EVALUATION FACILITY.

CDR. COL WM HENDERSON

TECH DIR. DR. EDGAR M. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	70.241	66.688
TOTAL PROCUREMENT	0.260	0.000
TOTAL O&M	6.557	7.594
TOTAL OTHER	1.794	1.816
TOTAL ANNUAL LAB	78.852	76.098
TOTAL INHOUSE	24.420	25.588
TOTAL INHOUSE RDT&E	22.069	23.625
ANNUAL OPERATING COST	12.058	18.171

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	56	2	86	20
CIVILIAN	342	167	284	108
TOTAL	398	169	270	128

SPACE AND PROPERTY

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

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

PERFORMANCE BASED SELECTION AND CLASSIFICATION MEASURES
 MANPOWER AND PERSONNEL INTEGRATION (MANPRINT)
 LOW COST FLIGHT SIMULATION
 BATTALION TRAINING PERFORMANCE FACTORS
 SENIOR (GO/SES) LEADERSHIP

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE PRINCIPAL 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: PERSONNEL UTILIZATION; SELECTION & CLASSIFICATION; MANPOWER AND PERSONNEL POLICY; LEADERSHIP & MANAGEMENT; EXECUTIVE DEVELOPMENT; BATTLE-FIELD INFO SYSTEMS; MANNED SYSTEMS; INSTRUCTIONAL TECHNOLOGY SYSTEMS; TRAINING & SIMULATION; AND DEVELOPMENT ENGINEERING AND ALSO OF 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 LEWIS; FT HUACHUCA; OTEA; AVSCOM; AND BOISE. INHOUSE EXPERIMENTAL FACILITIES INCLUDE LABORATORY AND COMPUTER TERMINAL AREAS PERMITTING REALTIME EXPERIMENTATION, GAMING AND SIMULATION.

CDR. COL BRENDAN E. JOYCE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	10.116	7.812
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.005	0.005
TOTAL C'THER	1.691	2.786
TOTAL ANNUAL LAB	11.812	10.058
TOTAL INHOUSE	8.837	9.129
TOTAL INHOUSE RDT&E	6.641	6.888
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	78	19	50	28
CIVILIAN	84	25	58	26
TOTAL	157	44	108	49

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	65.177	14.037	28.647	107.861	4.084	3.860

...MISSION

CONDUCTS RES TO DETERMINE THE EFF OF TEMP, ALTITUDE, WORK, CHEM DEF, & MILITARY NUTRITION ON THE SOLDIER'S LIFE PROCESSES, PERF, & HEALTH. DEFINES INTERACTION OF ENV STRESS, THE BODY'S DEFENSES, & THE TECHNIQUES EQUIP & PROCEDURES BEST CALCULATED TO PROTECT THE SOLDIER.

...CURRENT IMPORTANT PROGRAMS

INVESTIGATE PHYSIOLOGICAL, PHARMACOLOGICAL, ACCLIMATIZATION, & TRAINING STRATEGIES TO PREVENT INJURY & ENHANCE PERF & ENDURANCE IN HOT, COLD & HIGH TERRESTRIAL ALT ENV. DEVELOP & TEST PHYSIOLOGICAL & PSYCHOLOGICAL TECHNIQUES TO ENHANCE COMBAT CREW EFFECTIVENESS IN SUSTAINED OPNS IN A CHEMICAL ENV. EVAL BIOMED IMPACT OF MIL CLOTHING, SLEEPING SYS & FOOTWR.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAJOR EQUIPMENT & FACILITY CAPABILITIES OF THE LAB INCLUDE, BUT ARE NOT LIMITED TO, TWO LARGE ALTITUDE CHAMBERS, 14 SMALL CLIMATIC CHAMBERS, AAALAC ACCREDITED ANIMAL CARE FACILITIES, ELECTRON MICROSCOPY, UNDER-WATER RESEARCH POOL, COPPER MANIKINS & DIVERSE PHARMACOLOGICAL & PSYCHOLOGICAL MEASURING EQUIPMENT. THE INSTITUTE MAINTAINS A FIELD FACILITY ON THE SUMMIT OF PIKES PEAK, CO.

INSTALLATION: SIGNALS WARFARE LAB.

VINT HILL, VA.

CDR. MG ROBERT D. MORGAN

DIR. MR. HERBERT S. HOVEY JR.

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	60.828	72.870
TOTAL PROCUREMENT	228.158	149.748
TOTAL O&M	22.905	28.758
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	306.881	246.876
TOTAL INHOUSE	11.550	18.209
TOTAL INHOUSE RDT&E	5.642	6.656
ANNUAL OPERATING COST	5.660	6.200

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	65	0	18	52
CIVILIAN	205	4	175	80
TOTAL	270	4	188	82

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	9.710	35.475	7.440	52.625	4.200	9.920

...MISSION

PERFORM RESEARCH AND DEVELOPMENT OF ARMY SIGNALS INTELLIGENCE (SIGINT), ELECTRONIC WARFARE AND OTHER INTELLIGENCE MATERIEL TO DETERMINE ENEMY INTENTIONS AND POTENTIAL; LOCATE AND IDENTIFY ENEMY CONTROL CENTERS; AND DISRUPT ENEMY OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

SIGINT/EW PROCESSING PROGRAM
EXPENDABLE JAMMER PROGRAM
NDI HIGH FREQUENCY SUBSYSTEM FOR AN/TRQ-92
PRODUCT IMPROVEMENT PROGRAM FOR AN/TSQ-114 (TRAILBLAZER)
IMPROVE STRATEGIC INTERCEPT PROGRAM-TRACECHAIN-TOKEN PAYMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE FACILITY AT VINT HILL FARMS IS UNIQUELY SUITED TO ITS COMMUNICATIONS INTERCEPT, PROCESSING, COLLECTION, DIRECTION FINDING AND JAMMING MATERIEL MISSION. FACILITIES AVAILABLE INCLUDE AN ANTENNA FIELD FOR SIGNALS COLLECTION, A COMPUTERIZED SIGNAL ANALYSIS PROCESSING SYSTEM FOR SIGNALS SIMULATION AND ANALYSIS, AND AN IN-HOUSE FACILITY FOR SYSTEM SOFTWARE VERIFICATION AND VALIDATION. THE CENTER IS STAFFED WITH ELECTRONIC ENGINEERS, TECHNICAL SIGNAL ANALYSTS, OPERATION RESEARCH ANALYSTS INTEGRATED LOGISTICS SUPPORT PERSONNEL, PRODUCT AND QUALITY ASSURANCE TECHNICIANS AND PRODUCTION ENGINEERS TO PROVIDE FOR USEFUL MILITARY EQUIPMENT AND SYSTEMS.

CDR. COL A. BURKE

TECH DIR. MR. A. FARKAS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	101.096	117.488
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	19.899	20.246
TOTAL OTHER	1.275	1.275
TOTAL ANNUAL LAB	122.270	188.959
TOTAL INHOUSE	40.878	39.991
TOTAL INHOUSE RDT&E	28.517	24.618
ANNUAL OPERATING COST	5.874	5.878

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	PROF	
MILITARY	29	0	22	7
CIVILIAN	775	17	363	412
TOTAL	804	17	385	419

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	246.562	123.756	125.174	495.592	235.197	125.666

...MISSION

RESPONSIBLE FOR ACCOMPLISHING DESIGN, DEVELOPMENT, ACQUISITION & INITIAL DEPLOYMENT OF ASSIGNED TANK-AUTO VEHICLES/EQUIPMENT/SYSTEMS. CONDUCT & MANAGE RESEARCH, CONCEPT DESIGN STUDIES & COMPONENT DEVELOPMENTS, PERFORM PROCUREMENT, QUALITY ASSURANCE & RAM-D THRU DEVELOPEMENT.

...CURRENT IMPORTANT PROGRAMS

COMBAT VEHICLE TRACK & SUSPENSION PROGRAM.
 COMBAT VEHICLE SURVIVABILITY THRU THREAT WARNING & DATA MGMT.
 VEHICLE ELECTRICAL/ELECTRONIC SYSTEMS INTEGRATION.
 FUTURE CLOSE COMBAT VEHICLE SYSTEMS. DESIGN, SIMULATION & TEST BED DEMOS.
 ADVANCED INTEGRATED PROPULSION SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

VEHICLE BRAKE DYNAMOMETER. ENGINE & TRANSMISSION TEST CELLS.
 VEHICLE COMPONENT/SUBSYSTEM INTEGRATION & EVALUATION. VEHICLE MOTION SIMULATOR. ANALYTICAL PREDICTION OF LAND VEHICLE PERFORMANCE. VEHICLE SIGNATURE MEASUREMENT CAPABILITY. SIX DEGREE OF FREEDOM SIMULATOR
 SCIENTIFIC & ENGINEERING COMPUTER NETWORK (SENET) FOR COMPUTER AIDED DESIGN (CADE) SERVICES. METAL ANALYSIS WITH MICROPROBE ELECTRON MICROSCOPE ANALYZER & TECHNIQUES. DEVELOPMENT OF IMPROVED ARMOR WELDING, FABRICATION & APPLICATION TECHNIQUES. LOW TEMPERATURE SHOCK & VIBRATION TEST FACILITIES, IMAGE PROCESSING CAPABILITY. HOLOGRAPHIC CAPABILITY FOR LARGE STRUCTURES.

CDR. COL EDWARD GRIER, JR.

TECH DIR. MAJ. WILLIAM SZYMANSKI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.682	8.818
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.648	1.701
TOTAL ANNUAL LAB	5.825	5.519
TOTAL INHOUSE	5.229	5.428
TOTAL INHOUSE RDT&E	8.586	8.722
ANNUAL OPERATING COST	0.476	0.476

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	70	0	12	58
CIVILIAN	61	2	11	50
TOTAL	181	2	23	108

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2624	18.000	85.925	88.756	187.681	2.878	4.918

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

M1E1 TANK SYSTEM
 M-8 CAVALRY FIGHTING VEHICLE (BRADLEY)
 MODULAR FIELD KITCHEN
 CHEMICAL AGENT MONITOR
 MODULAR PACK MINE SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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, MATERIALS, SOILS, AUDIO-VISUAL, AND DATA ANALYSIS LABORATORIES.
 OTHER TEST RESOURCES CONSIST OF FIRING RANGES, NATURAL TERRAIN MOBILITY COURSES, AMMO TEST STORAGE AND FUNCTIONING AREAS, JUNGLE, GRASS, AND COASTAL MATERIEL EXPOSURE SITES, JUNGLE RADIO RANGING SITES, POL TANK FARM, MANPACK PORTABILITY COURSE, CALIBRATED SEISMIC DETECTION AND CHEMICAL TEST GUIDES AND 2588 ACRES OF BROADLEAF EVERGREEN TREES, SEMIDECIDUOUS TREES, MARSHLAND, GRASSLAND, CORAL REEFS, FLAT AND HILLY TERRAIN AND ALL TYPES OF VEGETATION.

CDR. COL FRANKLIN H. TOP, JR.

DEP DIR. CLIFFORD A. ROBERTS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	84.639	79.082
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.009	1.718
TOTAL OTHER	16.586	19.168
TOTAL ANNUAL LAB	103.234	99.968
TOTAL INHOUSE	59.158	61.329
TOTAL INHOUSE RDT&E	40.567	40.492
ANNUAL OPERATING COST	3.555	3.555

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	451	98	301	150
CIVILIAN	554	68	232	322
TOTAL	1005	166	533	472

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
203	383.274	61.600	0.000	444.874	10.080	28.053

...MISSION

PERFORMS GENERAL MILITARY MEDICINE RESEARCH IN THE AREAS OF COMM DIS AND IMMUNO SURGERY, DRUG DEV, NEUROPSY, GEN MED AND PREV MED. SERVES AS COMMAND AND CONTROL ELEMENT FOR THE SPEC FOREIGN ACTIVITIES, PLANS AND CONDUCTS AMEDD COURSES

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH ON MILITARY DISEASES
 MILITARY PSYCHIATRY
 MICROWAVE INJURY, PREVENTION AND TREATMENT
 MED EFFECTS OF WEAPONS SYS BLAST OVERPRESSURE
 MED ASPECTS OF CHEM WARFARE DEF

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIP AND CAPABILITY OF THE LAB INCLUDES CHEM ANALY EQUIP, MICROBIOLOGICAL LABS, MICROWAVE EXPOSURE SYS, BEHAVIORAL RES INSTRUMENTATION AND ELECTRON MICROSCOPES. ADDITIONAL RESEARCH FACILITIES ARE LOCATED IN GERMANY, MALAYSIA, KENYA, BRAZIL.

CDR. MG NILES J. FULWYLER

CH SCI/TECH DIR DR. RICHARD H. DUNCAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	218.402	220.281
TOTAL PROCUREMENT	17.809	18.165
TOTAL O&M	26.274	19.706
TOTAL OTHER	27.255	28.834
TOTAL ANNUAL LAB	284.740	286.486
TOTAL INHOUSE	215.803	219.855
TOTAL INHOUSE RDT&E	167.021	172.866
ANNUAL OPERATING COST	39.600	46.370

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	878	5	279	599
CIVILIAN	2664	71	1085	1579
TOTAL	3542	76	1364	2178

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1741360	62.129	674.356	4368.390	5104.875	239.179	229.942

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. COL OLIVER C. STOKES

TECH DIR. MR. WAHNER E. BROOKS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	44.478	48.221
TOTAL PROCUREMENT	11.221	13.293
TOTAL O&M	1.894	2.363
TOTAL OTHER	7.688	6.618
TOTAL ANNUAL LAB	65.281	70.495
TOTAL INHOUSE	39.185	40.702
TOTAL INHOUSE RDT&E	26.415	26.334
ANNUAL OPERATING COST	21.506	21.353

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	424	0	36	388
CIVILIAN	733	3	164	569
TOTAL	1157	3	200	957

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
828314	1.144	79.427	1510.461	1591.032	64.790	122.824

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

GLOBAL POSITION SYSTEM
 ADVANCED ATTACK HELICOPTER
 INFANTRY FIGHTING VEHICLE
 60K AIR DELIVERY SYSTEM
 XM 900 105MM CARTRIDGE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INSTRUMENTED OVERLAND 60KM ARTILLERY RANGE WITH SUPPORT FACILITIES.
 20 X 30KM AIRCRAFT ARMAMENT RANGE AND AIR DELIVERY DROP ZONES SUPPORTED BY 6 LASER TRACKERS, POSITION LOCATING SYSTEM, TM, CINETHEODOLITES, VERSATILE TRACKING MOUNTS, AND VIDEO SCORING/EVENTS CONNECTED TO A REAL-TIME DATA PROCESSING SYSTEM WITH 3 DISPLAY AND CONTROL CENTERS.
 5 SEP AIRSPACE CONTROLLED AREAS PERMIT SAFE CONDUCT OF CONCURRENT TESTS.
 EIGHTEEN AUTOMOTIVE TEST COURSES FOR PERFORMANCE, MOBILITY AND DURABILITY TESTS INCLUDING PAVED DYNAMOMETER COURSE WITH MOBILE DYNAMOMETERS AND SUPPORT SHOP PHYSICAL MEASUREMENT, TDT, X-RAY, PETROLEUM AND CHEM 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 FACILITY

CO. CAPT J. O. HOUGHTON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	5.136	5.996
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.030	0.018
TOTAL OTHER	1.378	1.877
TOTAL ANNUAL LAB	6.544	7.891
TOTAL INHOUSE	6.544	7.891
TOTAL INHOUSE RDT&E	5.136	5.996
ANNUAL OPERATING COST	1.408	1.763

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	37	9	17	20
CIVILIAN	56	13	34	22
TOTAL	93	22	51	42

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	107.780	6.632	2.554	116.966	2.818	5.486

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN AVIATION MEDICINE AND ALLIED SCIENCES TO ENHANCE HEALTH SAFETY AND READINESS OF AVIATION PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT. E. J. STURM

TECH DIR. MR. R. S. BUFFUM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	258.062	300.189
TOTAL PROCUREMENT	136.895	159.871
TOTAL O&M	60.037	63.535
TOTAL OTHER	11.368	7.463
TOTAL ANNUAL LAB	465.862	580.508
TOTAL INHOUSE	181.839	198.073
TOTAL INHOUSE RDT&E	112.427	127.863
ANNUAL OPERATING COST	67.781	77.384

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED		TOTAL		NON-PROF
	STRENGTH		PHDS	PROF	
MILITARY	267		3	75	192
CIVILIAN	2574		62	1540	1034
TOTAL	2841		65	1615	1226

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
840	869.000	84.000	654.000	1607.000	38.396	72.848

...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/CAPABILITIES

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.

CO. CAPT H. G. CHALKEY

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

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	50.721	67.939
TOTAL PROCUREMENT	2.037	3.010
TOTAL O&M	0.186	0.521
TOTAL OTHER	2.412	1.451
TOTAL ANNUAL LAB	55.356	72.921
TOTAL INHOUSE	34.758	46.350
TOTAL INHOUSE RDT&E	30.676	41.855
ANNUAL OPERATING COST	11.042	18.696

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	8	0	7	1
CIVILIAN	711	2	221	490
TOTAL	719	2	228	491

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	488.390	27.962	92.816	609.168	52.190	11.185

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

CRUISE MISSILE ENGINE (F107/F112) WARRANTY/DEVELOPMENT TESTING
 F110 AUGMENTOR AERODYNAMIC DEVELOPMENT TEST
 F109 GYROSCOPIC MOMENT TEST
 PW1120 ALTITUDE DEVELOPMENT TEST
 T56-A-427 PRELIMINARY FLIGHT RATING ALTITUDE TEST

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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.

CO. RADM J. K. READY

TECH DIR. MR. J. F. LYNCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	150.404	165.420
TOTAL PROCUREMENT	69.810	73.873
TOTAL O&M	49.219	55.971
TOTAL OTHER	63.879	60.876
TOTAL ANNUAL LAB	333.312	355.640
TOTAL INHOUSE	240.937	260.305
TOTAL INHOUSE RDT&E	103.952	114.330
ANNUAL OPERATING COST	88.041	94.632

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	1608	0	0	1608
CIVILIAN	2321	5	672	1649
TOTAL	3929	5	672	3257

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7123	1261.133	433.407	248.753	1943.293	179.600	76.222

...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

E2C
F/A-18
AV-8B
CH-53E
TOMAHAWK

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT ROBERT S. MCFARLAND

TECH DIR. MR. J. R. BROWN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	0.200	0.000
TOTAL PROCUREMENT	8.300	0.500
TOTAL O&M	24.003	24.855
TOTAL OTHER	6.228	12.913
TOTAL ANNUAL LAB	38.731	38.268
TOTAL INHOUSE	8.610	8.045
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	3.100	2.092

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	93	0	29	64
CIVILIAN	42	0	32	10
TOTAL	135	0	61	74

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3530	0.000	14.957	225.152	240.109	19.268	135.179

...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

GPS/SMILS TESTS
 CNO PROJ 628 SM-2 BLK II
 CNO PROJ 100 AEGIS PROGRAM
 TOMAHAWK

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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 NETS 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.

CO. CAPT ROBERT J. BIERSNER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	3.874	3.909
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.813	0.837
TOTAL ANNUAL LAB	4.687	4.746
TOTAL INHOUSE	4.005	4.267
TOTAL INHOUSE RDT&E	3.192	3.430
ANNUAL OPERATING COST	0.520	0.400

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	34	5	19	15
CIVILIAN	53	3	19	34
TOTAL	87	8	38	49

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	35.702	24.452	0.000	60.154	2.070	0.279

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IMPACT FACILITY 1 MEGA N THRUST ACCELERATOR, 213M ENVIRONMENTALLY ENCLOSED TRACK, 17.3K N THRUST VERTICAL ACCELERATOR, XRAY CINEMATOGRAPHY ELECTRODYNAMIC MOTION EXCITORS, C210 SHAKER, SHIP MOTION GENERATOR, 22 CHANNEL INERTIA DATA ACQUISITION SYSTEM AND HIGH SPEED CAMERA EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS.

CO. CAPT W. P. CARNEY

SCI DIR. DR. KINGSBURY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	4.154	4.352
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.293	0.202
TOTAL ANNUAL LAB	4.447	4.554
TOTAL INHOUSE	4.447	4.554
TOTAL INHOUSE RDT&E	4.154	4.352
ANNUAL OPERATING COST	0.632	0.671

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-PROF
	STRENGTH	PHDS	PROF	
MILITARY	9	3	13	4
CIVILIAN	4	0	0	4
TOTAL	13	3	13	8

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	77.625	8.731	34.646	121.002	1.000	6.962

...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
 VECTOR COMPETENCE OF MOSQUITOES
 TOXIC EFFECTS OF ORGANOMETAL COMPOUNDS IN THE MARINE ENVIRONMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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 CELL FREEZING SYSTEM, 35-L AIRLIFT FERMENTER, DYNATECH ROBOTICS SAMPLING SYSTEM. NBL IS A CONTRACT BASIC RESEARCH LABORATORY WITH SCIENTIFIC AND TECHNICAL STAFF BEING MOSTLY UNIV. CALIFORNIA-BERKELEY EMPLOYEES.

CO. CAPT JAMES A. CAUGHMAN

TECH DIR. DR. DONALD L. BIRKIMER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	42.080	35.970
TOTAL PROCUREMENT	1.380	3.311
TOTAL O&M	4.671	7.038
TOTAL OTHER	4.909	6.571
TOTAL ANNUAL LAB	53.040	52.890
TOTAL INHOUSE	27.131	27.298
TOTAL INHOUSE RDT&E	21.800	18.942
ANNUAL OPERATING COST	6.150	6.270

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	17	0	7	10
CIVILIAN	391	32	223	168
TOTAL	408	32	230	178

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
32	112.965	7.746	16.493	137.204	8.727	5.670

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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. SEAFLOOR SOILS LAB. ENERGY TEST BED. CLASS G PHOTO LAB. PHYSICAL SECURITY LABS. CHEMISTRY LAB. INSTRUMENTATION LAB. WARPING TUG ELECTROMAGNETIC FACILITY. CORROSION AND METALLURGICAL LAB. 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.

CO. CDR GARY R. PETERSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	3.049	2.608
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.463	1.458
TOTAL OTHER	0.054	0.144
TOTAL ANNUAL LAB	4.566	4.210
TOTAL INHOUSE	4.162	3.711
TOTAL INHOUSE RDT&E	2.671	2.109
ANNUAL OPERATING COST	0.253	0.283

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	57	1	43	14
TOTAL	58	1	44	14

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	12.660	10.200	3.600	26.460	1.054	0.878

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST & EVALUATION & PROVIDE ENGINEERING SUPPORT IN CLOTHING TEXTILES & RELATED FIELDS ASSOCIATED WITH SERVICE 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/CAPABILITIES

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 CONDUCTING RDT&E ON FABRICS, YARNS, FIBERS, LEATHER, PLASTICS, RUBBER, DYES, & FINISHES.
 SEWING MACHINES & PATTERN DRAFTING FOR DEVELOPING GARMENTS.

CO. CAPT. C. C. KING TECH DIR. MR. G. C. DILWORTH, JR.

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	65.007	83.166
TOTAL PROCUREMENT	12.806	21.310
TOTAL O&M	11.927	10.891
TOTAL OTHER	7.865	4.860
TOTAL ANNUAL LAB	97.105	119.727
TOTAL INHOUSE	61.347	75.565
TOTAL INHOUSE RDT&E	40.951	52.209
ANNUAL OPERATING COST	25.183	29.410

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	132	0	18	119
CIVILIAN	1076	41	531	545
TOTAL	1208	41	544	664

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
648	358.558	37.914	401.454	797.926	49.323	27.571

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE- OCEAN SIMULATION FAC TO 2250' DEPTH. HYDROSPACE LAB. SWIMMER/DIVER R&D FAC. GAS ANALYSIS LAB. SONAR RAIL FAC. MAGNETIC TARGET DETECTION & CLASSIFICATION RANGE. OPTICAL POSITIONING SYS. CALIBRATION AND STANDARDS FAC. MECHANICAL CALIBRATION LAB. ACOUSTIC TEST FAC. TRANSDUCER LAB. PRECISION ACOUSTIC TANK. ACOUSTIC ANAL FAC. SYS DEV AND TEST FAC. LASER LAB. ELECTRONIC TRACKING RANGE, PORTABLE TRACKING & POST RUN ANALYSIS SYS. COUNTERMEASURES EVALUATOR IN REAL-TIME SIMULATION. BURROUGHS 6810 DIGITAL COMPUTER AND ASSOCIATED DATA COMMUNICATIONS SYS. ENVIRONMENTAL MONITORING FAC. SONAR PROCESSING FAC. INTERACTIVE GRAPHICS SYS. PIER SPACE & BOATS TO INCLUDE RESEARCH VESSELS ATHENA I & II. MSO-443 USS FIDELITY. INDUSTRIAL SHOPS. HELIPORT COMPLEX WITH 2 RH53D & 2 UH1E, AND SOFTWARE ENG ENVIR/TACTICAL EMB AND COMPUTERS.

CO. CAPT G. R. GARRITSON

TECH DIR. DR. A. POWELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	288.682	205.753
TOTAL PROCUREMENT	87.843	34.420
TOTAL O&M	47.814	51.064
TOTAL OTHER	13.217	18.243
TOTAL ANNUAL LAB	837.506	309.480
TOTAL INHOUSE	180.480	159.789
TOTAL INHOUSE RDT&E	187.144	119.407
ANNUAL OPERATING COST	53.092	47.750

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	FHDS	PROF	PROF
MILITARY	75	2	27	48
CIVILIAN	2888	125	1385	1503
TOTAL	2963	127	1412	1551

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
323	1815.000	99.000	832.000	2246.000	75.019	95.118

...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

SURFACE SHIP AND SUBMARINE SILENCING (ACOUSTIC/NON-ACOUSTIC/MACHINERY), SURFACE SHIP SURVIVABILITY & TOPSIDE STRUCTURES AND MACHINERY, PROPULSOR DEVELOPMENT (HYDRODYNAMICS/STRUCTURES/ACOUSTICS), SUBMARINE PRESSURE HULL AND NON-PRESSURE HULL (STRUCTURES/MATERIALS), AERODYNAMICS (JET-VANE YAW CONTROL/X-WING ROTOR SYSTEM/CIRCULATION CONTROL)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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.

CO. CAPT G. E. CLARK

SCI DIR. DR. I. L. SHKLAIR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	0.942	1.087
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.784	0.887
TOTAL ANNUAL LAB	1.726	1.974
TOTAL INHOUSE	1.586	1.811
TOTAL INHOUSE RDT&E	0.802	0.924
ANNUAL OPERATING COST	0.410	0.480

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	29	10	13	16
CIVILIAN	15	4	15	0
TOTAL	44	14	28	16

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	21.264	6.001	9.318	36.583	0.000	0.102

...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/CAPABILITIES

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

INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA

CO. CDR M. G. SALINAS

TECH DIR. DR J. HOVERMALE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	6.845	6.716
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.408	0.538
TOTAL OTHER	1.247	0.664
TOTAL ANNUAL LAB	8.500	7.918
TOTAL INHOUSE	8.879	3.732
TOTAL INHOUSE RDT&E	2.904	2.922
ANNUAL OPERATING COST	0.971	1.269

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	15	0	6	9
CIVILIAN	39	12	44	5
TOTAL	54	12	50	14

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	2.106	15.578	5.588	23.272	0.000	2.307

...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/CAPABILITIES

CAPABILITY OF RECEIVING, ENHANCING AND ANALYZING REMOTEL 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

CO. CAPT R. L. MASTEN

TECH DIR. MR. L. A. DICKINSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	19.827	22.960
TOTAL PROCUREMENT	14.695	21.553
TOTAL O&M	3.100	4.863
TOTAL OTHER	0.300	4.270
TOTAL ANNUAL LAB	37.922	53.646
TOTAL INHOUSE	27.660	16.109
TOTAL INHOUSE RDT&E	10.173	6.110
ANNUAL OPERATING COST	3.857	6.321

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	PERSONNEL DATA (END OF FY 1985)		TOTAL PROF	NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS		
MILITARY	70	0	13	57
CIVILIAN	206	1	63	143
TOTAL	276	1	76	200

SPACE AND PROPERTY

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

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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.

CO. CAPT M. F. FORNES

CH SCI. DR. L. C. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	3.516	4.369
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.889	1.025
TOTAL ANNUAL LAB	4.405	5.394
TOTAL INHOUSE	3.293	4.015
TOTAL INHOUSE RDT&E	2.404	2.990
ANNUAL OPERATING COST	0.980	1.101

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	30	6	22	8
CIVILIAN	61	11	28	38
TOTAL	91	17	45	46

SPACE AND PROPERTY

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

...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 STANDARDS FOR OBESITY & PHYSICAL FITNESS OF NAVY PERS. DEVEL, TEST, COMPUTERIZED OP MED INFO SYSTEMS. CHEM DEF MEASURES ON SUSTAINED PERFORMANCE. PSYCHOPHARMACOLOGICAL TECHNIQUES TO ENHANCE PERF.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT R. L. SPHAR

SCI DIR. DR. L. A. KIESOW

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	20.289	20.784
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.001	0.000
TOTAL OTHER	9.016	9.650
TOTAL ANNUAL LAB	29.256	30.434
TOTAL INHOUSE	27.126	27.878
TOTAL INHOUSE RDT&E	18.109	18.228
ANNUAL OPERATING COST	9.587	9.460

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-
		PHDS	PROF	PROF
MILITARY	255	54	103	152
CIVILIAN	188	39	114	74
TOTAL	443	93	217	226

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	159.933	11.720	47.210	218.833	8.303	16.680

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT L. W. LAUGHLIN ACT. SCI. DIR. DR. C. G. HAYES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	2.694	3.127
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.989	0.989
TOTAL ANNUAL LAB	3.683	4.116
TOTAL INHOUSE	3.683	4.116
TOTAL INHOUSE RDT&E	2.694	3.127
ANNUAL OPERATING COST	0.805	0.932

PERSONNEL DATA (END OF FY 1985)

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

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	15.439	6.654	2.400	24.493	0.000	0.371

...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

CONDUCT RESEARCH ON TROPICAL COMMUNICABLE DISEASES, INCLUDING MALARIA AMEBIASIS, PARASITIC DISEASES, ARTHROPOD VECTOR DISEASES AND DIARRHEA. EMPHASIS IS ON DIAGNOSIS, PREVENTION AND TREATMENT OF ENCEPH, TROPICAL INFECTIOUS DISEASES AND THEIR GEOGRAPHIC EPIDEMIOLOGY. TEST AND EVALUATE METHODS OF IMPROVED RAPID DIAGNOSES OF INFECTIOUS DISEASES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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 THE PREMIER INSECTARY IN THE PHILIPPINES. WANG VS ADP SYSTEM FOR BIOSTATISTICAL APPLICATIONS. DETACHMENT IS ESTABLISHING A STATE OF THE ART INTENSIVE CARE UNIT FOR USE IN THEIR STUDIES.

CO. CAPT JAMES F. MOODY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	4.466	4.480
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.218	0.185
TOTAL OTHER	0.886	0.886
TOTAL ANNUAL LAB	5.565	5.551
TOTAL INHOUSE	5.565	5.551
TOTAL INHOUSE RDT&E	4.466	4.480
ANNUAL OPERATING COST	0.980	1.005

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	12	14	14
CIVILIAN	205	18	66	139
TOTAL	233	30	80	153

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

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

A STATE OF THE ART MEDICAL RESEARCH LABORATORY WITH ANIMAL FACILITIES AND A 40-BED WARD. CAPABILITIES IN ADVANCED TECHNIQUES, SEROLOGY, HYBRIDOMA TECH. AND HYBRIDIZATION OF DNA ALONG WITH PRODUCTION OF DNA PROBES, AMINO ACID ANALYSIS, FLUORESCENT MICROSCOPY AND COMPUTER LINKED ELISA READER, CYTOFLUOROGRAF, HIGH PRESSURE LIQUID CHROMATOGRAPHY, GAS LIQUID CHROMATOGRAPHY, SPECTRO PHOTOMETER, BETA-SCINTILLATION COUNTER, GAMMA-COUNTER, GAMMA CELL 40. CENTRIFUGES, ULTRACENTRIFUGES AND CRYO-PRESERVATION. HAZARDOUS MATERIAL LABORATORY, WITH A CONTAINMENT CAPABILITY UP TO P-3 LEVEL.

CO. CAPT R. P. GNORATI

TECH DIR. DR. J. E. ANDREWS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	39.809	47.108
TOTAL PROCUREMENT	0.100	0.147
TOTAL O&M	1.448	2.124
TOTAL OTHER	1.520	2.001
TOTAL ANNUAL LAB	42.877	51.375
TOTAL INHOUSE	30.767	36.853
TOTAL INHOUSE RDT&E	27.785	32.683
ANNUAL OPERATING COST	9.319	10.181

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	17	0	13	4
CIVILIAN	319	70	205	114
TOTAL	336	70	218	118

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	92.647	35.342	76.817	204.806	17.203	16.927

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

OCEAN ACOUSTICS, OCEAN FORECASTING, REMOTE SENSING OCENAOGRAPHY, AND ARCTIC PROGRAM.
 REMOTE SENSING OCEANOGRAPHY & OCENAN MODELING TO SUPPORT OCEAN FORECASTING. ACOUSTIC BOUNDARY INTERACTION TO SUPPORT SURV & WPN SYS DEV/PERF. PATTERN ANALYSIS & SENSOR DEVELOPMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HAVE MASS SPECTROMETER, GAS CHROMATOGRAPH SYS, TOWED UNDERWATER PUMPING SYS, DTAGS, ACOUSTIC SEDIMENT CLASSIFIER, SEDIMENT CHARACT. PROBES, SIDE SCAN SONAR SYS, SECURE/UNCLAS ACOUSTIC DATA PRO, APRAY DESIGN/TEST/FAB, MICROPROCESSOR DESIGN/DEV, ACOUSTIC DATA BASES, OCEAN ACOUSTICS MOBILE UNDERWATER TEST BED, ENV ACOUSTIC LAB, WAVE CURRENT SIMLLATOR, SCANNING AND TRANSMISSION ELECTRON MICROSCOPES, OCEAN BOTTOM SEISMOMETERS, GEOTECH LAB, X-RAY FLUORESCENT FACILITY, PATTERN ANALYSIS LAB, AND MAGNETIC OBSERVATORY.

CO. CAPT F. M. PESTORIUS

TECH DIR. MR R. M. HILLYER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	303.984	340.800
TOTAL PROCUREMENT	71.195	75.800
TOTAL O&M	99.310	101.900
TOTAL OTHER	38.411	37.340
TOTAL ANNUAL LAB	512.900	555.840
TOTAL INHOUSE	285.799	250.895
TOTAL INHOUSE RDT&E	147.576	162.195
ANNUAL OPERATING COST	71.104	77.090

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	281	1	55	226
CIVILIAN	2948	196	1541	1407
TOTAL	3229	197	1596	1633

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2719	1290.967	198.370	192.920	1682.257	56.087	62.956

...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

OCEAN SURVEILLANCE SYS WITH SOSUS UPDATE AND MULTI-SENSOR INTEGRATION, COMMAND CONTROL AND COMMUNICATIONS SYS ARCHITECTURE AND ENGINEERING, ADVANCED SURFACE AND AIR LAUNCHED UNDERSEA WEAPONS AND SURFACE ASW SYS, TECHNOLOGY DEVELOPMENTS SUCH AS ADV MARINE BIO SYS, ARCTIC SUB OPS, OCEAN ENGINEERING, ELECTRONIC WARFARE AND ARTIFICIAL INTELLIGENCE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ARCTIC RESEARCH FACILITY; C3 SITE, INCL TACTICAL FLAG COMMAND CENTER (TFCC), ADVANCED COMMAND CONTROL ARCHITECTURE TEST BED (ACCAT), ADVANCED COMBAT DIRECTION SYSTEM (ACDS) DEVELOPMENT SITE, AND INTEGRATED BATTLE GROUP TACTICAL TRAINER (IBGTT); OCEAN SURVEILLANCE FACILITY; ACOUSTIC RESEARCH CENTER (ARC) WITH SATELLITE DATA LINKS; INTEGRATED UNDERSEA SURVEILLANCE SYS (IUSS) FACILITY; MICROWAVE AND MILLIMETER WAVE ANTENNA PATTERN RANGE COMPLEX; OCEANOGRAPHIC RESEARCH TOWER; STABLE SEMI-SUBMERGED PLATFORM; USS DOLPHIN, EXPERIMENTAL SUB; TRANSDUCER EVALUATION CENTER; MICRO-ELECTRONICS LAB COMPLEX; SIMULATION AND REAL-TIME COMPUTER FACILITIES FOR DEVELOPMENT OF OCEAN SURVEILLANCE AND ASW SYSTEMS; SHIP MOTION SIMULATOR; BIO-SCIENCE FACILITY ENGAGED IN RESEARCH, TRAINING, AND HANDLING OF MARINE MAMMALS.

CC. RADM J.B. MOONEY, JR. TECH DIR. DR. M.K. MOSS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	631.868	720.685
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	138.517	140.548
TOTAL OTHER	4.294	4.466
TOTAL ANNUAL LAB	774.674	865.699
TOTAL INHOUSE	30.832	36.725
TOTAL INHOUSE RDT&E	28.672	34.479
ANNUAL OPERATING COST	21.350	25.991

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	41	6	40	1
CIVILIAN	471	77	114	357
TOTAL	512	83	154	358

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.080	89.022	12.085	101.187	0.000	6.400

...MISSION

RESPONSIBLE FOR LEADERSHIP OF NAVY RESEARCH PROGRAM MANAGEMENT AND DIRECTION OF JIC CONDUCTED RDT&E AND OF THE NAVY-WIDE PATENT PROGRAM, DEVELOPMENT OF NAVY-WIDE RDT&E FOR ASN(RES), WORLD-WIDE RESEARCH INFO AND CONTRACT MGMT OF FEDERALLY FUNDED UNIVERSITY RESEARCH

...CURRENT IMPORTANT PROGRAMS

CONTRACT RESEARCH AND TECHNOLOGY PROGRAMS
 NAVY PATENT PROGRAM
 NAVY-WIDE RDT&E APPROPRIATION ADMINISTRATION
 FOCAL POINT FOR WORLD-WIDE RESEARCH INFORMATION
 CONTRACT MANAGEMENT PROGRAM AT EDUCATIONAL INSTITUTIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES, MATHEMATICAL AND INFORMATION SCIENCES, BIOLOGICAL SCIENCES, PSYCHOLOGICAL SCIENCES, ARCTIC AND EARTH SCIENCES, MATERIAL SCIENCES, OCEAN SCIENCE AND TECHNOLOGY
 ADMINISTRATION OF TECHNOLOGY PROGRAMS IN NAVAL VEHICLE AND WEAPONS TECHNOLOGY, SENSOR AND CONTROL TECHNOLOGY, ANALYSIS AND SUPPORT. FIELD ACTIVITIES INCLUDE NRL, NORDA, NEL, NEPRF, RDT&E NAVY LABS, NPRDC.
 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. SUPPORT AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY COMMITTEE

INSTALLATION: ORDNANCE MISSILE TEST STATION

WHITE SANDS, NM

CO. CAPT A. F. SCHROEDER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	9.705	13.148
TOTAL PROCUREMENT	2.188	2.770
TOTAL O&M	0.869	0.010
TOTAL OTHER	2.607	3.484
TOTAL ANNUAL LAB	14.814	19.362
TOTAL INHOUSE	4.264	5.748
TOTAL INHOUSE RDT&E	2.911	3.888
ANNUAL OPERATING COST	2.442	2.340

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON- PROF
		PHDS	TOTAL PROF	
MILITARY	89	0	12	77
CIVILIAN	60	0	6	54
TOTAL	149	0	18	131

SPACE AND PROPERTY

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

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA

CO. RADM J. R. WILSON JR.

TECH DIR. MR. W. R. HATTABAUGH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	274.089	284.850
TOTAL PROCUREMENT	220.535	217.238
TOTAL O&M	150.157	122.863
TOTAL OTHER	103.204	105.132
TOTAL ANNUAL LAB	747.935	729.578
TOTAL INHOUSE	407.527	405.586
TOTAL INHOUSE RDT&E	191.828	199.044
ANNUAL OPERATING COST	76.547	80.539

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	1077	12	405	672
CIVILIAN	4138	18	1115	3018
TOTAL	5210	30	1520	3690

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27088	1287.000	347.500	3665.400	5299.900	187.100	195.124

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

INSTALLATION: PERSONNEL RESEARCH & DEVELOPMENT CTR

SAN DIEGO, CA

CO. CAPT H. S. ELDRIDGE

TECH DIR. DR. J. W. TWEEDDALE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	19.868	24.031
TOTAL PROCUREMENT	1.300	0.495
TOTAL O&M	13.405	8.279
TOTAL OTHER	8.228	2.442
TOTAL ANNUAL LAB	37.791	35.247
TOTAL INHOUSE	21.551	21.097
TOTAL INHOUSE RDT&E	18.116	14.339
ANNUAL OPERATING COST	5.849	6.435

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED		TOTAL		NON-PROF
	STRENGTH		PHDS	PROF	
MILITARY	27		1	14	13
CIVILIAN	329		103	236	93
TOTAL	356		104	250	106

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
8	65.792	18.417	0.000	84.209	6.700	10.890

...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/CAPABILITIES

ACCESS WHICH SUPPORTS THE NAVY LABORATORY COMPUTER NETWORK, PDP 11/45 BIOTECHNOLOGY DATA ACQUISITION SYSTEMS, VARIOUS CRT AND PRINTING DEVICES INTERFACING WITH THE NAVAL OCEAN SYSTEMS CENTER UNIVAC 1100/2 COMPUTER.

CO. CAPT J. P. O'DONOVAN DIR OF RSCH DR. T. COFFEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	840.782	297.724
TOTAL PROCUREMENT	9.863	8.595
TOTAL O&M	14.991	18.064
TOTAL OTHER	84.112	29.966
TOTAL ANNUAL LAB	899.698	849.849
TOTAL INHOUSE	212.729	189.828
TOTAL INHOUSE RDT&E	174.726	156.204
ANNUAL OPERATING COST	84.807	85.217

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-
		PHDS	PROF	PROF
MILITARY	91	2	34	57
CIVILIAN	3279	701	1584	1695
TOTAL	3370	703	1618	1752

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1072	2352.238	192.677	466.809	3011.724	101.754	152.075

...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/CAPABILITIES

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, BIOMOLECULAR ENGINEERING FACILITY, HIGH LEVEL RADIATION LABORATORY, ENCLOSED 11,500 CUBIC FOOT FIRE TEST FACILITY, DIVERSE HIGH ENERGY LASERS, 200 KILOGAUSS HIGH FIELD MAGNET FACILITY, SPACE SIMULATION FACILITIES, MAJOR PLASMA PHYSICS FACILITIES, ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR, CLASS VI COMPUTER, AND FOUR ORION AIRCRAFT FOR RESEARCH SUPPORT.

INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON, CT

CO. CAPT C. A. HARVEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	2.279	3.068
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.057	0.062
TOTAL OTHER	1.142	1.131
TOTAL ANNUAL LAB	8.478	4.261
TOTAL INHOUSE	8.298	4.092
TOTAL INHOUSE RDT&E	2.279	3.068
ANNUAL OPERATING COST	0.999	1.003

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	34	8	12	22
CIVILIAN	55	14	28	27
TOTAL	89	22	40	49

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	40.514	14.099	0.000	54.613	1.815	2.485

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

COMPUTER ASSISTED DIAGNOSIS PROGRAMS FOR CORPSMEN ABOARD NUCLEAR SUBS
 AUDITORY AND VISUAL T AND E OF SUBMARINES AND DIVERS PHYSIOLOGICAL PSY-
 CHOLOGICAL RESEARCH IN COLD WEATHER. HUMAN FACTORS VISION AUDITORY RSCH
 HEALTH AND LONGEVITY OF NUCLEAR SUBMARINE CREWS.
 NUCLEAR SUBMARINE ATMOSPHERE EVALUATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC AND APPLIED RESEARCH COMPETENCE IN CARDIOPULMONARY, THERMAL, AND
 HYPERBARIC PHYSIOLOGY, BIOCHEMISTRY, AUDITORY, VISION, HUMAN FACTORS ENG,
 HYPERBARIC AND MECHANICAL SERVICES, ELECTRICAL INSTRUMENTATION AND
 REPAIRS, COMPUTER APPLICATIONS, ANIMAL SCIENCES, TECHNICAL LIBRARY,
 HYPERBARIC CHAMBER, HUMAN 150 PSI,
 ANIMAL 300 PSI AND 1000 PSI SURGICAL SUITE COMPUTER APPLICATIONS
 FACILITY, CLOSED CIRCUITRY SYSTEM, GAS CHROMATOGRAPHS, EEG, DOPPLER
 SYSTEM, SONAR, STACK SIMULATION TEST SYSTEM, FLUIDIC CONTROL CONSOLE,
 RESPIRATORY MASS SPECTROMETER.

INSTALLATION: SURFACE WEAPONS CENTER

DAHLGREN, VIRGINIA

CO. CAPT J. R. WILLIAMS

TECH DIR. DR. L. L. HILL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	309.901	341.667
TOTAL PROCUREMENT	142.186	169.509
TOTAL O&M	57.449	76.286
TOTAL OTHER	32.709	56.440
TOTAL ANNUAL LAB	542.195	648.902
TOTAL INHOUSE	207.699	230.084
TOTAL INHOUSE RDT&E	123.474	131.062
ANNUAL OPERATING COST	142.857	121.884

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	106	0	36	70
CIVILIAN	5345	243	2488	2907
TOTAL	5451	243	2474	2977

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5083	1657.760	169.159	1111.809	2938.228	108.600	195.236

...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, POSEIDON, MK300, MISSILE MATERIELS, TARGETING, COMBAT SYSTEMS-AEGIS, DDG-51, CV/CVN, CG-47, DDG-993, DD-963, WEAPON SYSTEMS-TOMAHAWK, SM-2, GUIDED PROJECTILE, HI POWER RADIATION. UNDERWATER SYSTEMS-CAPTOR, QUICKSTRIKE, MINES, MK-60 TORPEDO, WARHEADS. ELECTRONIC SYSTEMS-SLQ-32, SLQ-17, AN/SPY-1, NUCLEAR WEAPONS EFFECTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

INSTALLATION: UNDERSEA RANGES DEPARTMENT

NEWPORT, RI

CO. CAPT D. VOLGENAU

TECH DIR. MR. EARL MESSERE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	44.477	87.879
TOTAL PROCUREMENT	0.961	0.875
TOTAL O&M	14.816	14.800
TOTAL OTHER	8.349	8.032
TOTAL ANNUAL LAB	68.603	60.586
TOTAL INHOUSE	11.759	17.927
TOTAL INHOUSE RDT&E	9.931	16.226
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	25	0	18	7
CIVILIAN	25	2	13	12
TOTAL	50	2	31	19

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
594	82.322	18.218	385.132	480.672	30.151	0.000

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

MK48 WEAPON SYSTEMS TRAINING CERTIFICATION PROGRAM
SHIP SILENCING PROGRAM
FLEET TRAINING/SUBROC, RANGEX, SHAREM
TORPEX/RANGEX
R&D TESTS/CAPTOR/MP SONAR/TOWED ARRAYS/LAMPS/BQQ 5/DICASS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT D. VOLGENAU

TECH DIR. MR. EARL MESSERE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	206.068	246.458
TOTAL PROCUREMENT	114.852	116.447
TOTAL O&M	180.959	142.520
TOTAL OTHER	80.457	19.669
TOTAL ANNUAL LAB	481.855	525.094
TOTAL INHOUSE	199.010	239.520
TOTAL INHOUSE RDT&E	111.064	136.535
ANNUAL OPERATING COST	75.214	88.026

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	84	0	73	11
CIVILIAN	3461	86	1938	1523
TOTAL	3545	86	2011	1534

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
879	1118.991	221.281	532.819	1873.091	63.856	63.282

...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.
 DESGN, DEV & EVAL U/W COMBAT SUB SYSTEMS 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.
 DESGN, DEV&EVAL OF LAUNCHERS, U/W TARGET SYS & MOBILE/FIXD U, W TEST RANGES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY U/W COMBAT SYSTEMS SUBSYSTEMS AND TECHNLOGYS FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEGRN/SUB ANNA SYSTEMS). U/W WPN RANGE TECHNLOGY/REDINESS OF IN-SVC SHIPBOARD U/W SYSTEMS/ASW SUP. TORPEDO TEST RANGES (FIXD/PORTBLE) SHLOW AND DP WTR ASW WPN FIRE CTRL R&D FACILITY. ASW WPN LAUNCHING DEVICE R&D FACILITY, QLTY ENG, EVAL&RELIABILITY LAB. BERMUDA RSCH FACLT, TORPEDO PROPULSN TEST FACLT, ELECTMGNTC FACLT, SYS CRTFCTN AND INTGRN FACLT, ACOUSTC M'SMNT & XDUCER R&E FACLT, TORPDO TEST RANGE.

CO. CAPT K. A. DICKERSON

TECH DIR. DR. B. W. HAYS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	347.955	322.006
TOTAL PROCUREMENT	204.996	215.869
TOTAL O&M	54.727	50.047
TOTAL OTHER	59.869	66.286
TOTAL ANNUAL LAB	667.047	653.708
TOTAL INHOUSE	284.262	354.280
TOTAL INHOUSE RDT&E	165.794	192.033
ANNUAL OPERATING COST	87.515	98.885

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	567	0	42	525
CIVILIAN	5237	94	1806	3431
TOTAL	5804	94	1848	3956

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1127267	2143.439	193.080	2907.156	5243.675	239.674	120.212

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CO. CAPT. J. E. KILLIAN TECH DIR. DR. S. R. RANDALL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	3.762	3.923
TOTAL PROCUREMENT	1.400	1.900
TOTAL O&M	2.671	2.947
TOTAL OTHER	5.698	6.697
TOTAL ANNUAL LAB	18.526	15.476
TOTAL INHOUSE	12.541	18.924
TOTAL INHOUSE RDT&E	3.181	3.160
ANNUAL OPERATING COST	1.658	1.401

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	PROF	
MILITARY	185	0	28	112
CIVILIAN	124	0	44	80
TOTAL	259	0	67	192

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	23.000	34.000	95.000	152.000	9.600	2.258

...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/CAPABILITIES

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

CAPABILITIES: FLIGHT TEST UTILIZING 8 A-7 AIRCRAFT, EXTENSIVE AIRCRAFT INSTRUMENTATION, TELEMETRY AND DATA REDUCTION. IN-HOUSE COMPUTER FACILITIES AS WELL AS ACCESS EXTENSIVE KIRTLAND AFB COMPUTER RESOURCES. ACCESS TO WHITE SANDS MISSILE RANGE AND THE SANJIA AND LOS ALAMOS NATIONAL LABORATORIES. ACCESS TO HPD AND VPD EMP TEST FACILITIES.

DIR. COL JAMES D. JOHNSON

CH SCI DR. EDWARD T. CURRAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	185.816	154.407
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.385	2.395
TOTAL ANNUAL LAB	187.651	156.802
TOTAL INHOUSE	25.805	27.805
TOTAL INHOUSE RDT&E	28.470	25.410
ANNUAL OPERATING COST	5.256	5.650

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	56	4	54	2
CIVILIAN	328	21	207	121
TOTAL	384	25	261	123

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
42	280.744	66.208	104.396	451.348	83.158	42.081

...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
 HIGH PERFORMANCE TURBINE ENGINE INITIATIVE
 HIGH MACH NUMBER PROPULSION SYSTEM TECHNOLOGY
 POWER TECHNOLOGY FOR MILITARY SPACECRAFT
 HIGH DENSITY AVIATION FUELS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. COL. GEORGE C. MOHR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	42.485	28.534
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.262	1.300
TOTAL OTHER	3.949	1.282
TOTAL ANNUAL LAB	47.696	31.116
TOTAL INHOUSE	10.666	10.206
TOTAL INHOUSE RDT&E	10.891	10.019
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	181	10	63	68
CIVILIAN	164	31	99	65
TOTAL	295	41	162	133

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
30	119.000	1.000	100.000	220.000	14.971	29.521

...MISSION

ACCOMPLISH BEHAVIORAL 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 SYSTEMS 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/CAPABILITIES

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 PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

CDR. MAJOR GENERAL G. E. FORNELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	559.809	537.789
TOTAL PROCUREMENT	1,016.704	1,032.280
TOTAL O&M	16.072	12.638
TOTAL OTHER	129.270	165.512
TOTAL ANNUAL LAB	1,721.855	1,748.194
TOTAL INHOUSE	278.337	310.670
TOTAL INHOUSE RDT&E	127.872	147.121
ANNUAL OPERATING COST	42.041	42.209

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	5146	5	756	4390
CIVILIAN	2152	24	1093	1059
TOTAL	7298	29	1849	5449

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
456816	347.881	968.286	8780.809	10095.976	322.887	380.215

...MISSION

RESPONSIBLE FOR AIR-LAUNCH TAC & AIR DEF MISSILES; NONNUCLEAR MUNITIONS GUIDED WEAP, THREAT SIM, AIRBASE DEF, & RELATED EQUIP. RESPONSIBLE FOR BASIC TECH, DEVEL, TEST, INIT ACQ & DEPLOY. TEST MISSION INCLUDING LEAD CTR IN MUN, ELECTRONIC COMBAT, INTRUSION, INTERDICTION, & CLIMATIC SIM.

...CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR/ANTI-MATERIAL MUNITIONS
 PRECISION GUIDANCE MUNITIONS
 ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE RANGE SYSTEMS
 HARD TARGET AND RUNWAY CRATERING SUBMUNITIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SCIENTIFIC/ENGINEERING PERSONNEL & LABORATORY FACILITIES CAPABLE OF EXPLOR, ADV, & ENGINEERING DEVELOPMENT OF NONNUCLEAR MUNITIONS & EQUIP. ARMAMENT SYSTEMS TEST ENVIRONMENT COVERING 725 SQUARE MILES WITH LARGE ADJACENT WATER AREA; HAS 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADARS & PHOTO-OPTICS; IS USED FOR MUNITION TESTING & ELECTROMAGNETIC TEST ENVIRONMENT; AN INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVALUATING WEAPON SYSTEM EFFECTIVENESS; PROVIDES 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 SCIENCE LAB, A PHOTO LAB, AN INSTRUMENTATION/R/D FACILITY, & A MISSILE SIMULATION & TEST LABORATORY.

CDR. COL. STEPHEN P. CONDON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	77.606	139.446
TOTAL PROCUREMENT	0.830	0.905
TOTAL O&M	0.505	0.246
TOTAL OTHER	0.025	0.066
TOTAL ANNUAL LAB	78.966	140.663
TOTAL INHOUSE	31.522	48.600
TOTAL INHOUSE RDT&E	30.162	47.383
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	147	1	185	38
CIVILIAN	307	16	225	82
TOTAL	454	17	410	120

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
0	51.345	0.000	147.200	198.545	13.258	0.000

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

STRATEGIC DEFENSE INITIATIVE/KINETIC ENERGY WEAPONS AND LETHALITY
 INSENSITIVE MUNITIONS TECHNOLOGY
 AUTONOMOUS GUIDED BOMB TECHNOLOGY
 ADVANCED AIRCRAFT GUN & AMMUNITION TECHNOLOGY
 HARD TARGET ORDNANCE TECHNOLOGY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

CDR. COL. PHILLIP J. CONKAN CH SCI DR. JAMES G. MITCHELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	274.605	258.849
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.080	0.014
TOTAL OTHER	7.241	6.873
TOTAL ANNUAL LAB	281.876	265.786
TOTAL INHOUSE	97.638	72.016
TOTAL INHOUSE RDT&E	90.867	65.129
ANNUAL OPERATING COST	83.832	88.285

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL	TOTAL	NON-PROF
		PHDS	PROF	
MILITARY	171	2	67	104
CIVILIAN	252	4	67	185
TOTAL	423	6	134	289

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
39081	1173.658	302.784	709.864	2185.806	418.086	86.551

...MISSION

PRIMARY MISSION IS TO PROVIDE ENVIRONMENTAL TEST SUPPORT TO SYSTEMS DEVELOPMENT AND RESEARCH, DEVELOPMENT PROGRAMS OF DOD AND TO KEEP EXISTING FACILITIES MODERN TO PROVIDE ADVANCED FACILITIES AS REQUIRED, AND TO CONTINUALLY DEVELOP ADVANCED TEST TECHNIQUES AND INSTRUMENTATION.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER TESTING INCLUDES AERODYNAMIC AND ROCKET MOTOR FIRINGS
 ANTI SATELLITE TEST SUPPORT INCLUDES SENSOR TESTING
 F100 COMPONENT IMPROVEMENT PROG AND ENGINE MODEL DERIVATIVE PROG TEST
 B-1B AND F101 ENGINE AND AERODYNAMIC TEST
 INERTIAL UPPER STAGE ROCKET MOTOR FIRINGS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AEDC IS COMPRISED OF ABOUT 35 TEST UNITS. INCLUDED ARE WIND TUNNELS WITH TEST SECTIONS TO 16 FT SQ AND SPEED 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 SIMULATION CHAMBERS TO 42 FT DIA AND 82 FT HIGH; HYPERBALLISTIC RANGES; DUST & SNOW EROSION FACILITY; BIRD IMPACT FACILITY; TWO CAPTIVE TRAJECTORY SYSTEMS. THESE FACILITIES HAVE SUPPORTED DEVELOPMENT AND QUALIFICATION OF MOST MAJOR AERONAUTICAL, MISSILE, AND SPACE SYSTEM DEVELOPMENT 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: AVIONICS LABORATORY

WPAFB, OHIO

DIR COL JAMES D. LANG

CH SCI DR JESSE C. RYLES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	412.970	477.791
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	7.411	7.596
TOTAL ANNUAL LAB	420.381	485.387
TOTAL INHOUSE	40.402	40.081
TOTAL INHOUSE RDT&E	32.991	32.485
ANNUAL OPERATING COST	6.886	7.120

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	148	3	181	17
CIVILIAN	578	32	387	191
TOTAL	726	35	518	208

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
220	229.369	9.488	405.264	644.116	58.959	128.741

...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/CAPABILITIES

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.

CDR COL NATHAN J. LINDSAY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	0.000	0.000
TOTAL PROCUREMENT	18.008	12.051
TOTAL O&M	346.297	337.793
TOTAL OTHER	159.672	160.244
TOTAL ANNUAL LAR	518.972	510.088
TOTAL INHOUSE	255.549	266.170
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	31.815	28.675

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	2892	1	217	2175
CIVILIAN	1188	1	118	1020
TOTAL	3525	2	330	3195

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
26178	220.172	1177.704	4789.850	6187.726	420.186	240.158

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

NAVY PROGRAMS-POSEIDON, TRIDENT, UK POLARIS
 MILITARY SPACE SUPPORT PROGRAMS-TITAN
 MILITARY MISSION SUPPORT PROGRAMS-SRAM AND PERSHING
 NASA PROGRAMS-ATLAS/CENTAUR AND SPACE SHUTTLE
 DOD SPACE TRANSPORTATION SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ESMC 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 AND ANALYSIS. EQUIPMENT AND FACILITIES INCLUDE: CCAFS LAUNCH SUPPORT MAINLAND AND DOWNRANGE INSTRUMENTATION AND COMMUNICATION, INSTRUMENTED SHIP DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES, MISSILE IMPACT LOCATION SYSTEMS, METEOROLOGICAL SERVICES AND RANGE TIMING SYSTEMS. ESMC OPERATES AND MAINTAINS CCAFS, MAINLAND SITES AND DOWNRANGE STATIONS. SUPPORT FUNCTIONS INCLUDE: CONTRACTOR OPERATION, PLANT ENGINEERING, LABS, SHOPS, AND OTHER SPECIAL SERVICES.

DIR. COL ROBERT BOYER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	87.694	26.986
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.268	0.805
TOTAL OTHER	8.864	8.864
TOTAL ANNUAL LAB	41.826	30.605
TOTAL INHOUSE	4.883	4.454
TOTAL INHOUSE RDT&E	1.508	1.078
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	71	7	38	38
CIVILIAN	36	3	22	14
TOTAL	107	10	55	52

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3	12.000	14.000	0.000	26.000	1.960	2.921

...MISSION

AIR FORCE LEAD AGENCY FOR RESEARCH, DEVELOPMENT, TEST AND EVALUATION IN THE AREAS OF CIVIL ENGINEERING AND ENVIRONMENTAL QUALITY. AF FOCAL POINT FOR ENVIRONMENTAL QUALITY AND LEAD LABORATORY FOR FACILITIES ENERGY.

...CURRENT IMPORTANT PROGRAMS

RAPID RUNWAY REPAIR AND NEW AIRCRAFT OPERATIONAL SURFACES
 ENVIRONMENTAL QUALITY AND ASSESSMENT RESEARCH AND DEVELOPMENT
 SURVIVABILITY/VULNERABILITY OF FACILITIES
 FACILITIES ENERGY AND ALTERNATE ENERGY SOURCES
 FIRE PROTECTION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESEARCH AND TEST FACILITIES CONSIST OF AN ENVIRONMENTAL LABORATORY AND A CIVIL ENGINEERING TEST AND EVALUATION FACILITY. THE ENVIRONMENTAL LABORATORY HOUSES INSTRUMENTATION AND SCIENTIFIC APPARATUS TO PROVIDE A PRIMARY CAPABILITY IN CHEMICAL ANALYSIS AND MEASUREMENT OF POLLUTANTS AND TOXINS. THE CIVIL ENGINEERING TEST AND EVALUATION FACILITIES INCLUDE AN ENCLOSED SIMULATED BOMB CRATER FACILITY, EXPLOSIVE CRATER FACILITY, AND A FIRE TEST FACILITY. A NEW LAB COMPLEX IS DUE TO BE COMPLETED IN 1987. THIS NEW FACILITY WILL HOUSE RESEARCH LABORATORY EFFORTS IN THE FOLLOWING AREAS: ASPHALT, CONCRETE, STRUCTURES, SOILS, INSTRUMENTATION, CORROSION, PILOT PLANT, WATER QUALITY, COMBUSTION, CHEMICAL ANALYSIS, AND WET CHEMISTRY.

DIR COL THADDEUS H. SANDFORD

CH SCI DR G. KEITH RICHEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	202.786	184.780
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	7.480	7.616
TOTAL ANNUAL LAB	210.216	192.896
TOTAL INHOUSE	42.441	44.073
TOTAL INHOUSE RDT&E	35.011	36.457
ANNUAL OPERATING COST	7.988	8.120

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	171	1	189	82
CIVILIAN	628	30	415	218
TOTAL	799	31	554	245

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
76	271.586	5.400	294.233	571.219	50.676	47.314

...MISSION

PLANS AND EXECUTES RESEARCH, EXPLORATORY AND ADV DEV PROGRAMS FOR AERO-SPACE FLT VEHICLE STRUCTURES, AERODYNAMICS, FLT CONTROL, DYNAMICS AND VEHICLE EQUIPMENT. LEAD AFSC LAB FOR EXPERIMENTAL FLT VEHICLES. FOCAL POINT FOR NON-NUCLEAR SURVIVABILITY PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED FIGHTER TECHNOLOGY INTEGRATION
 FORWARD SWEEP WING TECHNOLOGY DEMONSTRATOR
 COMPUTATIONAL FLUID DYNAMICS
 SHORT TAKE-OFF/LANDING AND MANEUVER TECHNOLOGY
 ADVANCED COMPOSITE AND METALLIC STRUCTURES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

A GROUND-BASED PILOT-IN-THE-LOOP SIMULATION WAS COMPLETED FOR A TERRAIN FOLLOWING/TERRAIN AVOIDANCE SYSTEM DESIGN. A CRITICAL FLAP TAB FLUTTER WIND TUNNEL TEST, PROOF LOAD AND GROUND VIBRATION TESTS ON WING AND FUSELAGE, AND IN-FLIGHT SIMULATIONS WERE SUCCESSFULLY COMPLETED FOR THE X-29 AIRCRAFT. A SUPERPLASTIC FORMED/DIFFUSION-BONDED NOZZLE FAIRING STRUCTURE WAS DEMONSTRATED AND TRANSITIONED TO THE F-15. THE AIRCRAFT GROUND INDUCED LOADS EXCITATION TEST FACILITY WAS DEVELOPED AND USED TO PROVIDE SIMULATIONS OF AIRCRAFT OPERATING FROM ROUGH/DAMAGED/REPAIRED RUNWAYS. PATCHES MADE OF AN ADVANCED COMPOSITE MATERIAL WERE DEMONSTRATED TO BE AN EFFECTIVE MEANS OF REPAIRING CRACKED METAL STRUCTURES. ADVANCED ROUGH FIELD LANDING GEAR DESIGNS WERE EVALUATED IN THE LANDING GEAR DEVELOPMENT FACILITY.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA.

CDR MAJ. GEN. W. T. TWINTING

TECH DIR MR. C. E. ADOLPH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	197.229	288.500
TOTAL PROCUREMENT	2.709	6.141
TOTAL O&M	29.572	29.770
TOTAL OTHER	145.237	141.908
TOTAL ANNUAL LAB	374.747	416.819
TOTAL INHOUSE	268.129	280.068
TOTAL INHOUSE RDT&E	183.188	187.671
ANNUAL OPERATING COST	52.800	44.100

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	3414	45	617	2797
CIVILIAN	1942	4	282	1660
TOTAL	5356	49	899	4457

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
297796	187.106	264.478	7663.808	8115.387	316.502	148.075

...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 FLI TEST RANGE AND UTAH TEST AND TRAINING RANGE. SUPPORT OT&E. SPT USAF DOD, GOVT, CONTRACTOR AND FOREIGN T&E.

...CURRENT IMPORTANT PROGRAMS

B-1B DT&E/OT&E

FIGHTER UPGRADE: F-16 MSIP, F-15, LANTIRN, F-15E

B-52 STRATEGIC SYSTEMS UPGRADE

T-46

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQP, FACILITIES AND PERSONNEL CAPABILITIES ARE AVAILABLE TO CONDUCT TOTAL WEAPON SYSTEMS DT&E/OT&E OF AERONAUTICAL SYSTEMS. TECH FACILITIES/CAPABILITIES INCLUDE AERODYNAMIC ENGINEERING AND AVIONICS (IFAST) SIMULATORS; A REAL TIME MISSION CONTROL CENTER; MICROWAVE RANGE FROM HILL AFB TO VANDENBERG AFB; PRECISION IMPACT BOMB/GUNNERY/INFRARED/PHOTO RESOLUTION/RADAR FIDELITY AND CARGO/PERSONNEL AIRDROP RANGES; RADAR/CINE-T SPACE POSITIONING; DATA COLLECTION, REDUCTION & ANALYSIS; REAL-TIME FLUTTER AND LOADS; PHOTO/TV LAB; & COMPLETE AIRCRAFT INSTRUMENTATION FACILITIES; AIRCRAFT/ENGINE/AVIONICS SHOPS; MUNITIONS STORAGE AND CHECKOUT, CRUISE MISSILE INTEGRATED MAINTENANCE FACILITY; 19 MAJOR HANGAR/ENGINEERING SUPPORT FACILITIES; 15,000 FT RUNWAY; SEVERAL MILES OF DRY LAKE RUNWAYS; AND THE R-2508 AND UTR AIRSPACE.

CDR LTCOL J. H. PLETCHER

CH SCI LTCOL K. E. DIEGENHALER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	1.884	1.686
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.708	0.685
TOTAL ANNUAL LAB	2.587	2.371
TOTAL INHOUSE	2.587	2.371
TOTAL INHOUSE RDT&E	1.884	1.686
ANNUAL OPERATING COST	0.186	0.142

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	PROF	
MILITARY	23	9	18	5
CIVILIAN	9	1	5	4
TOTAL	32	10	23	9

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	190.000	3.000	0.000	193.000	1.820	3.239

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

ELECTROCHEMISTRY OF MOLTEN SALTS (BATTERY RESEARCH)
 ENERGETIC MATERIALS
 THEORETICAL CALCULATIONS
 LASER RESEARCH (GYROS, DAMAGE, KINETICS)
 UNSTEADY AERODYNAMICS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY & ELECTRODE REACTIONS, EXPLOSIVE & PROPELLANT SYNTH, DECOMP MECH & DETONATION PHENOMENA. MSMT, GENERATION, SPECTROSCOPY & MO CALC OF EXCITED STATE SPECIES. FTIR, UN, FTNMR, NEPR, XRA / & MASS SPEC, CHROMATOGRAPHS, ELECTRON MICROSCOPE. SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP. FULL WET LAB. ADV ANALYSIS & EVAL TECHNIQUES FOR INERTIAL GUIDANCE SENSORS USING 2-AXIS TABLE, AUTO AZIMUTH ALIGN EQUIP & ELECT CONTROL EQUIP FOR 50 SERIES INERTIAL DEVICES IN CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM. VAX 11780, MINICIMP AND SOFTWARE TO AUTOMATE GYRO RESEARCH. LASER LABORATORIES FOR DAMAGE AND KINETICS EXPERIMENTS. AERO RESEARCH IN SUBSONIC AND TRISONIC WIND TUNNELS. HOLOGRAPHIC, HOT WIRE, & OTHER FLOW VISUALIZATION CAPABILITIES AND ASSOCIATED INSTRUMENTATION.

CDR COL JR JOHNSON

CH SCI DR. ALVA T. STAIR JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	108.482	98.809
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	7.419	7.790
TOTAL ANNUAL LAB	115.851	106.099
TOTAL INHOUSE	86.666	88.794
TOTAL INHOUSE RDT&E	82.508	84.428
ANNUAL OPERATING COST	8.579	9.008

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	TOTAL PROF	
MILITARY	125	2	65	60
CIVILIAN	474	89	264	210
TOTAL	599	91	329	270

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
886	895.782	14.821	25.883	486.486	12.171	38.464

...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH, EPLORATORY 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 ENVIROMENT
 WEATHER IMPACT ON AIR FORCE SYSTEMS
 IONOSPHERIC SPECIFICATION FOR C3I SYSTEMS
 OPTICAL; INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS
 GEODETIC AND EARTH MOTION EFFECTS ON MISSILE CEP.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

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

INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX

CDR. COL DENNIS W. JARVI

CH SCI. DR. EARL A. ALLUISI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	58.128	57.090
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.018	2.354
TOTAL OTHER	5.726	6.191
TOTAL ANNUAL LAB	66.867	65.635
TOTAL INHOUSE	17.604	19.716
TOTAL INHOUSE RDT&E	12.528	18.525
ANNUAL OPERATING COST	2.746	3.006

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	185	12	105	80
CIVILIAN	285	39	183	102
TOTAL	420	51	238	182

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	81.180	65.819	53.282	199.731	6.727	115.450

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

MANPOWER AND FORCE 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/CAPABILITIES

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

DIR DR GARY L. DENMAN

CH SCI DR HARRIS M. BURTE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	154.806	196.529
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.500	2.568
TOTAL ANNUAL LAB	157.306	199.092
TOTAL INHOUSE	25.537	28.482
TOTAL INHOUSE RDT&E	23.037	25.919
ANNUAL OPERATING COST	8.186	8.620

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH		TOTAL		NON-PROF
			PHDS	PROF	
MILITARY	51		4	46	5
CIVILIAN	296		54	236	60
TOTAL	347		58	282	65

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	188.750	117.941	54.123	360.814	23.840	69.401

...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/CAPABILITIES

MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR AERO-SPACE STRUCTURES, THERMAL PROTECTION SYSTEMS, PROPULSION MATERIALS, FLUIDS, LUBRICANTS, FLUID CONTAMINANTS, COATINGS, FIBERS, ELECTROMAGNETIC WINDOWS, SENSORS, LASER WINDOWS AND OPTICAL DEVICES, ELECTRICAL COMPONENTS, NON-DESTRUCTIVE 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 GERALD P. D'ARCY

TECH DIR DR. JOHN O. DIMMOCK

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	144.184	166.220
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.040	0.028
TOTAL OTHER	8.324	8.424
TOTAL ANNUAL LAB	147.548	169.672
TOTAL INHOUSE	8.324	8.424
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	4.708	5.100

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	85	27	39	46
CIVILIAN	108	24	27	76
TOTAL	188	51	66	122

SPACE AND PROPERTY

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

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

LASER PHYSICS
CONTROL OF DISTRIBUTED SYSTEMS
AUDITORY PATTERN RECOGNITION
MONOLITHIC MILLIMETER WAVE INTEGRATED CIRCUITS
MANEUVERABILITY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANAGE THE AF RESEARCH PROGRAM AND SPONSOR EXTRAMURAL RESEARCH.

CDR. COL JERRY DAVIS

DIR. MR. DON HART

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	68.047	62.920
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.803	6.035
TOTAL ANNUAL LAB	68.850	68.955
TOTAL INHOUSE	21.847	22.455
TOTAL INHOUSE RDT&E	16.044	16.420
ANNUAL OPERATING COST	0.994	1.005

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	171	2	71	100
CIVILIAN	245	17	106	145
TOTAL	416	19	171	245

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68345	419.046	86.848	4.780	510.674	126.300	28.300

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

PROVIDE SOLID PROPULSION OPTIONS FOR SMALL MOBILE BALLISTIC MISSILES. PROVIDE HIGH PERF & LIGHTWEIGHT COMPONENT OPTIONS FOR TACTICAL MISSILES. PROVIDE LOW AIR LAUNCHED MISSILE PROPULSION SIGNATURE. PROVIDE HIGH PERF PROPULSION OPTIONS FOR SPACE SYS ORBIT TRANSFER. DEMONSTRATE HIGHER PERF NON-CONVENTIONAL PROPULSION CONCEPTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES FOR SYNTHESIS, ANALYSIS, FORMULATION, & EVAL OF NEW PROPEL-LANTS. FACILITIES FOR MIXING, CASTING, CURING & TESTING SOLID ROCKET MOTORS. SOLID MOTOR EXPERIMENTAL COMPLEX FOR INVESTIGATION OF COMBUSTION , AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE & HIGH TEMP COMPO-NENTS. LAB FOR EXPERIMENTATION OF SMALL ATTITUDE CONTROL & SATELLITE PROPULSION SYS & COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. ALTITUDE EXPERIMENTATION OF LIQUID, SOLAR, ELECTRIC, & SOLID ROCKETS UP TO 60,000 POUNDS THRUST. AMBIENT EXPERIMENTATION OF LIQUID OR SOLID ROCKETS UP TO 10,000,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, & DATA REDUCTION. SHOPS FOR FABRICATING EXPERIMENTAL HARDWARE AND SYSTEMS.

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, NY

CDR. COL. CARL G O'BERRY

CH SCI. DR. FRED I. DIAMOND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	302.100	415.800
TOTAL PROCUREMENT	27.100	20.500
TOTAL O&M	58.700	65.600
TOTAL OTHER	8.758	9.000
TOTAL ANNUAL LAB	396.658	510.900
TOTAL INHOUSE	49.472	65.133
TOTAL INHOUSE RDT&E	40.784	56.133
ANNUAL OPERATING COST	136.400	142.300

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	218	3	152	66
CIVILIAN	1099	65	685	414
TOTAL	1317	68	837	480

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1517	764.945	52.839	182.271	1000.055	29.595	56.243

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

ADVANCED TACTICAL RADAR
SPACE BASED RADAR
COMMAND, CONTROL AND COMMUNICATIONS DECISION AIDS
SATELLITE COMMUNICATIONS
FIBER OPTICS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR AREAS OF TECHNOLOGY ARE ANTENNAS, SIGNAL PROCESSING, SOLID STATE COMPONENTS, THERMIONICS, OPTO-ELECTRONICS, RADIATION HARDENING, SYSTEM AND COMPONENT RELIABILITY, SOFTWARE, ARTIFICIAL INTELLIGENCE-WITH EMPHASIS ON DECISION AIDS, AND RECONNAISSANCE AND INTELLIGENCE DATA HANDLING. MAJOR IN-HOUSE FACILITIES ARE RECONNAISSANCE EXPLOITATION FACILITY, HIGH POWER FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, R AND D COMPUTER FACILITY FEATURING TWO HONEYWELL 6180 COMPUTERS WITH MULTICS, RELIABILITY ANALYSIS CENTER, RADIATION EFFECTS FACILITY, EXPERIMENTAL PHOTOGAMMETRIC FACILITY, ECCM AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS FACILITY, EXPERIMENTAL DEVICE FABRICATION FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY FOR WEAPONS TESTING, SURVEILLANCE LABORATORY, AND MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY.

CDR. COL JEFFREY G DAVIS

VICE CDR. COL JAMES H RADDIN, JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	26.570	27.497
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.690	0.717
TOTAL ANNUAL LAB	27.260	28.214
TOTAL INHOUSE	15.078	16.776
TOTAL INHOUSE RDT&E	14.388	16.059
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	360	40	69	291
CIVILIAN	269	41	108	161
TOTAL	629	81	177	452

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1309	409.974	30.279	161.800	602.053	53.153	25.246

...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/CAPABILITIES

RESEARCH IN AEROSPACE MEDICAL PROBLEMS, LIFE SUPPORT, ENVIRONMENTAL STRESS, RADIOBIOLOGY, LASER, BIOMETRICS, BIOMED ENGINEERING, RTE ON MEDICAL EQUIPMENT AND SYSTEMS, WHOLE BODY COUNTER, HUMAN CENTRIFUGE, COCKPIT INTEGRATION LAB, CHEMICAL DEFENSE TEST FACILITY, TESTING CELLS, RESEARCH CHAMBERS, TELETHERAPY COBALT 60 RADIATION SOURCE, RADIOFREQUENCY RADIATION SYSTEM, REMOTE INTERACTIVE GRAPHIC TERMINAL SYSTEM, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSPACE MED SCIENCE LAB, LASER HAZARD FACILITIES AND LASER RANGE, AEROMEDICAL LIBRARY, AEROSPACE MED EVALUATION AND CONSULTATIVE SERVICES, NUCLEAR MEDICINE ACQUISITION SYSTEM, OPTICAL RESEARCH, AUDIOLOGY, VESTIBULAR STUDIES, NEUROSCIENCES LAB, PSYCHOBIOLOGY, RADIOISOTOPE, AEROMED STANDARDS, MODELING, BIOMED RESEARCH, MEDICAL REPOSITORIES, RADIATION SCIENCES RESEARCH, BIODYNAMICS RESEARCH, DEVEL

CDR. COL J M WALTON

CH SCI. DR A H GUENTHER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	255.852	252.949
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	17.938	23.847
TOTAL ANNUAL LAB	273.285	276.296
TOTAL INHOUSE	107.806	111.879
TOTAL INHOUSE RDT&E	89.878	88.532
ANNUAL OPERATING COST	4.059	4.828

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON-PROF
		PHDS	PROF	
MILITARY	607	22	360	247
CIVILIAN	522	55	262	260
TOTAL	1129	77	622	507

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
702	705.180	180.000	132.000	967.180	84.527	82.200

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUCLEAR WEAPONS EFFECTS SIMULATION, SAFETY, COMPONENT ASSESSMENT AND ANALYSIS OF WEAPONS 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 LARGE, HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METEOROLOGY LABORATORIES, 1 CRAY, 2 CDC-780 AND 1 IBM-434 COMPUTERS WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION SUPPORT ALL REQUIRING RDT&E PROGRAMS.

CDR. COL LAWRENCE L. GOOCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	4.507	2.445
TOTAL PROCUREMENT	12.466	9.990
TOTAL O&M	137.476	116.391
TOTAL OTHER	11.823	12.145
TOTAL ANNUAL LAB	166.272	140.971
TOTAL INHOUSE	11.972	12.290
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	337	4	288	99
CIVILIAN	420	8	326	94
TOTAL	757	7	564	193

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
58600	914.972	568.183	607.327	2090.482	800.000	400.000

...MISSION

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

...CURRENT IMPORTANT PROGRAMS

SPACE TRANSPORTATION SYSTEM
 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

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WSMC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT. TEST LAUNCH INCLUDES: ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE SYSTEMS USING ATLAS, TITAN, AND MM BOOSTERS; PAYLOAD AND VEHICLE INTEGRATION/CHECKOUT AND LAUNCH CONTROL/SAFETY. WESTERN TEST RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTATION PLANNING AND DATA GATHERING ON BALLISTIC/SPACE/GUIDED MISSILE/AIRCRAFT AND OTHER TESTS AT UPRANGE AND DOWNRANGE LOCATIONS. LAUNCH AZIMUTHS VARY FROM 140 TO 318 DEG. AERO TESTS ARE CONDUCTED IN AN INSTRUMENTED OFFSHORE OPERATING AREA. LAUNCH FACILITIES AND RANGE INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

CDR. COL.G.A.BLAKE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1985 (ACTUAL)	1986 (ACT + EST)
TOTAL RDT&E	88.991	90.450
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.808	0.000
TOTAL OTHER	28.817	27.514
TOTAL ANNUAL LAB	118.611	117.964
TOTAL INHOUSE	97.745	105.453
TOTAL INHOUSE RDT&E	71.425	78.839
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1985)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	888	4	147	741
CIVILIAN	977	0	185	842
TOTAL	1865	4	282	1588

ACRES	SPACE AND PROPERTY				COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL			
400	110.465	66.229	1026.538	1203.227	21.900	320.000	

...MISSION

DOD MAJ TEST FAC. PERFORMS T&E ON MIL SYS, SUBSYS, AND COMP. OPER & 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 PROGRMS. PROVIDES FLT TST ENGRG. TECH DATA ACQ. AND TECH PHOTO SVCS.

...CURRENT IMPORTANT PROGRAMS

JOINT SURVEILLANCE AND TARGET ATTACK RADAR SYSTEM (J-STARS)
 CRUISE MISSILE MISSION CONTROL AIRCRAFT (CMMCA)
 AIRBORNE SEEKER EVALUATION TEST SYSTEM (ASSETS)
 SONOBUOY MISSILE IMPACT LOCATION SYSTEM (SMILS)
 MARK XV IFF

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST SUPPORT AIRCRAFT (ARIA EC-135) PROVIDE GLOBAL SUPPORT
 ALL AFSC MAJOR CLASS II AIRCRAFT MODIFICATION
 MISSILE LAUNCH/REENTRYTRACKING AND DATA RELAY
 1400 SQUARE MILE RESTRICTED TEST AREA IN OHIO
 FLIGHT TEST ENGINEERING (AERO-MECH, AVIONICS, ANALYSIS, INSTRUMENTATION)
 TEST DATA ACQUISITION/PROCESSING/ANALYSIS
 2 OPERATIONAL SQS (FLIGHT CREWS) 8 8 MAINTENANCE SQS, AND 2 DETACHMENTS
 SPECIALIZED FABRICATION AND MODELING EQUIPMENT
 COMPUTER AIDED DESIGN/MANUFACTURING (CAD/CAM) CAPABILITY
 TECHNICAL PHOTOGRAPHIC INSTRUMENTATION & PROCESSING
 LARGEST PMEL IN AF
 ASD LABORATORY MATERIAL CONTROL ACTIVITY

CDR. COL MICHAEL E. SEXTON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	31.866	88.078
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	8.592	9.000
TOTAL OTHER	6.540	20.286
TOTAL ANNUAL LAB	46.998	67.809
TOTAL INHOUSE	26.864	28.526
TOTAL INHOUSE RDT&E	19.824	21.790
ANNUAL OPERATING COST	0.411	0.759

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-PROF
	STRENGTH	PHDS	PROF	
MILITARY	326	0	98	228
CIVILIAN	276	2	100	176
TOTAL	602	2	198	404

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7052	407.068	39.081	98.979	540.128	228.852	104.652

...MISSION

DOD FOCALPOINT 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 & TRANSIENT REQMTS.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER GUIDANCE SYSTEM AND COMPONENTS TESTING
 AMRAAM RADAR FSD FLIGHT TESTS
 A/C NAVIGATION SYSTEM VERIFICATION TESTING PROJECT 688G
 SMALL MISSILE GUIDANCE TESTING
 B1-B AVIONICS TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ONE 260-INCH/2-100 INCH PRECISION CENTRIFUGE.
 PRECISION GROUND/AIRBORNE TEST FACILITY.
 PRECISION REFERENCE/DATA COLLECTION ENVIRONMENTAL CHAMBERS.
 INERTIAL NAV VANS.
 50799 FT TEST TRACK.
 35588 FT 2 RAIL / 15200 FT 8 RAIL.
 6 BLOCK HOUSES.
 9000 FT RAINFIELD, 2000 FT BALLISTIC RAINFIELD.
 80 MHZ TO 95 GHZ RADAR MEASUREMENT OF AMP, PHASE, DOPPLER, GLINT.
 JET ENGINE MODULATION
 MODEL MAKING

CDR. COL JAMES J. CONKLIN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1985	1986
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	18.640	15.017
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.380	3.585
TOTAL ANNUAL LAB	17.020	18.602
TOTAL INHOUSE	17.020	18.602
TOTAL INHOUSE RDT&E	18.640	15.017
ANNUAL OPERATING COST	3.054	3.238

PERSONNEL DATA (END OF FY 1985)

PERSONNEL	AUTHORIZED	TOTAL	TOTAL	NON-
	STRENGTH	PHDS	PROF	PROF
MILITARY	92	19	49	43
CIVILIAN	155	22	61	94
TOTAL	247	41	110	137

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	26.528	16.047	56.540	99.110	18.415	18.220

...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/CAPABILITIES

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, 200,000-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

Aviation Research and Technology Activity Moffett Field, CA	Established
Aviation Research and Technology Laboratories Moffett Field, CA	Disestablished (Name Change)
Combat Surveillance and Target Acquisition Laboratory	Disestablished
Materials and Mechanics Research Center Watertown, MA	Disestablished (Name Change)
Materials Technology Laboratory Watertown, MA	Established
Natick R&D Center Natick, MA	Disestablished (Name Change)
Natick RD&E Center Natick, MA	Established
Tank-Automotive Command R&D Center Warren, MI	Disestablished (Name Change)
Tank-Automotive Command RD&E Center Warren, MI	Established

DEPARTMENT OF THE NAVY

NONE

DEPARTMENT OF THE AIR FORCE

NONE

* Changes since publication of Department of Defense In-house RDTE Activities,
30 October 1984.

APPENDIX II

DEFINITIONS

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

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

Military professionals, both officer and enlisted, actively engaged in RDTE activities could 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	681	Dental Assistant
181	Psychological Technician	682	Dental Hygienist
404	Biological Technician	683	Dental Laboratory Technician
421	Plant Protection Technician	684	Public Health Dental Hygienist
455	Range Technician	685	Public Health Program Specialist
458	Soil Conservation Technician	688	Sanitarian
462	Forestry Technician	698	Environmental Health Technician
603	Physician Assistant	699	Health Technician
621	Nurse Assistant	704	Animal Health Technician
622	Medical Supply Aid	802	Engineering Technician
625	Autopsy Attendant	817	Surveying Technician
636	Rehabilitation Therapy Asst	818	Engineering Drafting
642	Nuclear Medicine Technician	856	Electronics Technician
644	Medical Technologist	895	Industrial Engineering Technician
645	Medical Technician	1202	Patent Technician
646	Pathology Technician	1311	Physical Science Technician
647	Medical Radiology Technician	1316	Hydrologic Technician
648	Therapeutic Radiological Technologist	1341	Meteorological Technician
649	Medical Machine Technician	1371	Cartographic Aid
650	Medical Technical Assistant	1374	Geodetic Technician
661	Pharmacy Technician	1521	Mathematics Technician
664	Restoration Technician	1531	Statistical Clerical & Administrative
667	Orthotist and Prosthetist	1541	Cryptanalysis
669	Medical Record Librarian		

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

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

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

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

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

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

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

APPENDIX III

Selected Standard Abbreviations and Acronyms

AAM -- air-to-air missile
AAW -- antiair warfare
ADPE -- automatic data-processing equipment
AEDC -- Arnold Engineering Development Center
AFSC -- Air Force Systems Command
AFWET -- Air Force weapons effectiveness testing
AMC -- US Army Materiel Cmd
APG -- Aberdeen Proving Ground
ARPA -- Advanced Research Projects Agency
ASW -- antisubmarine warfare
AUS -- Army United States

BIS -- Board of Inspection and Survey
BW -- biological warfare

CBR -- chemical, biological
CE -- Chief of Engineers, Army

CG -- commanding general
CNO -- Chief of Naval Operations
COMMEL -- communications electronics
DA -- Department of the Army
DOD -- Department of Defense

DZ -- drop zone

ECM -- electronic countermeasures
ED -- engineering development
EDT -- engineering development & test
EEG -- electroencephalogram
EKG -- electrocardiogram
ELINT -- electronic intelligence
EMP -- electromagnetic propagation
EW -- electromagnetic warfare
EODC -- Explosive Ordnance Disposal Center
ET -- engineering artillery
FA -- field artillery
FBM -- fleet ballistic missile

GCA -- ground-controlled approach
HF -- high-frequency
IFF -- identification, friend or foe
IR -- infrared
MPT -- military potential test
NAF -- Naval Air Facility
NASA -- National Aeronautics and Space Administration

NASC -- Naval Air Systems Command
NAVAIR -- Naval Air Systems Command
NAVSEA -- Naval Sea Systems Command
NEMP -- nuclear electromagnetic propagation
PI -- product improvement
POL -- petroleum oil, lubricants

QA -- quality assurance

QMDO -- qualitative materiel development objective
RDTE -- Research, development, test and evaluation

RF -- radio frequency
RV -- reentry vehicle
SATS -- short airfield tactical support
SDR -- small development requirement
SI -- ship installation
SP -- self-propelled
ST -- service test
T&E -- test and evaluation

UDT -- underwater demolition team
ULMS -- Undersea Long-Range Missile System
USATECOM -- US Army Test and Evaluation Command
UTTAS -- utility tactical transport aircraft system
USW -- undersea warfare
UV -- ultraviolet
V/STOL -- vertical/short takeoff and landing

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