

Table C.1: Counterproliferation Support Program Projects

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> <ul style="list-style-type: none"> • Joint DoD/FBI Proliferation Prevention Program 	<ul style="list-style-type: none"> • Adapt DoD technology and training expertise to enhance capabilities of foreign law enforcement agencies in stemming proliferation at its source 	<ul style="list-style-type: none"> • Prepared training materials for courses to be given to law enforcement agencies in Uzbekistan and Kazakhstan 	<ul style="list-style-type: none"> • Conduct the first counterproliferation training course in June 1997 • Conduct training assessments and prepare courses for additional FSU states • Continue to train foreign law enforcement agencies in Eastern Europe and the Baltics 	13, 14	OSIA	-*	605160D
<ul style="list-style-type: none"> • Integrated Proliferation Prevention and Open Source Monitoring 	<ul style="list-style-type: none"> • Data collection, research, and analysis in support of proliferation prevention 	<ul style="list-style-type: none"> • Research and analysis contract awarded 	<ul style="list-style-type: none"> • Continue research and analysis • Establish international norms for proliferation prevention 	13, 8	ATSD (NCB)	1.275	603160D
<ul style="list-style-type: none"> • Nuclear Matters Projects 	<ul style="list-style-type: none"> • Assessments of reliability, safety, surety, and sustainability of the nuclear stockpile 	<ul style="list-style-type: none"> • Continue DoD oversight of DOE stockpile stewardship; advisory support to Secretary of Defense • Prepared annual Nuclear Weapons Deployment Request to President 	<ul style="list-style-type: none"> • Continue management and oversight support activities 	5, 2, 3	ATSD (NCB)	1.914	605160D
<u>Strategic/Tactical Intelligence</u> <ul style="list-style-type: none"> • High Frequency Active Auroral Research Project (HAARP) 	<ul style="list-style-type: none"> • Single source transmission of long wavelength electromagnetic waves for underground structure detection 	<ul style="list-style-type: none"> • Completed installation and began testing of prototype transmitter • Completed initial field tests imaging known underground structure 	<ul style="list-style-type: none"> • Collect field data and conduct “blind” imaging test 4QFY97 • Activate full-power operational facility and demonstrate global imaging capability FY00 	3, 8	Air Force	0**	603160D
<u>Battlefield Surveillance</u> <ul style="list-style-type: none"> • Tactical FLIR Sensor Project 	<ul style="list-style-type: none"> • Improved BDA of NBC/M and underground facilities • UAV sensor integration assessment 	<ul style="list-style-type: none"> • Developed design options, initiated proof-of-principle demonstrations of system modifications, and collected imagery to improve and support weapon delivery testing 	<ul style="list-style-type: none"> • Design, develop, and flight test modified LANTIRN pods 3QFY97-1QFY98 • Participate in CP1 ACTD demonstrations FY98 	2, 3, 8	DSWA Air Force	3.500	603160D
<ul style="list-style-type: none"> • Tactical UGS System (TUGS) Project 	<ul style="list-style-type: none"> • Continuous surveillance, target characterization, and BDA of NBC/M and underground facilities 	<ul style="list-style-type: none"> • Continued data collection from representative facilities during weapon detonations to evaluate performance and demonstrate utility • Constructed and field tested a brassboard TUGS system 	<ul style="list-style-type: none"> • Phase II configuration brassboard TUGS acceptance testing 3QFY97-1QFY98 • Operational TUGS available 1QFY98 • Participate in CP2 ACTD • Residual equipment available to CINCs 2QFY98 	2, 3, 8	DSWA DOE	4.200	603160D

* Work continues on this program using funds authorized and appropriated in prior years. Although no funds were specifically identified for the program in the President’s FY 1998 budget request, DoD may seek to reprogram funds as needed to continue work on the program.

** Currently, no FY 1998 funds are budgeted for this Congressional Special Interest Program.

Table C.1: Counterproliferation Support Program Projects (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<ul style="list-style-type: none"> Tactical Multi-Sensor Data Fusion 	<ul style="list-style-type: none"> RDT&E to support NBC/M and underground target characterization and BDA 	<ul style="list-style-type: none"> Conducted user demonstrations and training 	<ul style="list-style-type: none"> Validation with WBS and FLIR data and full-up validation tests 1QFY98 	2, 3, 8, 11	DSWA DARPA	0.750	603160D
Counterforce <ul style="list-style-type: none"> Collateral Effects Phenomenology Assessment 	<ul style="list-style-type: none"> Source term characterization and transport prediction, phenomenology experiments, and assessment tool development 	<ul style="list-style-type: none"> Fielded HASCAL ver 1.0 Accurate prediction of atmospheric transport of hazard plumes during CP1 ACTD demos 	<ul style="list-style-type: none"> Integrate HPAC ver 3.0 into IMEA FY98 CP1 ACTD demonstration support FY98 Integrate HPAC ver 4.0 into IMEA FY99 	2, 3, 11	DSWA	8.000	603160D
<ul style="list-style-type: none"> Advanced Weapon Systems (AUP, HTSF, WBS, and ITAG) 	<ul style="list-style-type: none"> Development of enhanced penetrating munition for hard and underground target defeat offering expanded compatibility with delivery platforms and an all-weather capability 	<ul style="list-style-type: none"> Demonstrated controlled weapon penetration depth using HTSF Integration of GBU-24/HTSF with F-15E and F/A-18 Scale testing of WBS line payout ITAG software simulation and initial hardware fabrication 	<ul style="list-style-type: none"> Complete WBS flight testing 1QFY98 CP1 ACTD demonstration tests FY98 Deliver AUP/HTSF to Services 2QFY98 	2, 3	DSWA Air Force DOE	12.600	603160D
<ul style="list-style-type: none"> NBC/M Target Planning and Response/Vulnerability Assessment 	<ul style="list-style-type: none"> Experimental and analytical analyses of target response/vulnerability and automated target planning for NBC/M facilities 	<ul style="list-style-type: none"> Developed and validated models for conventional weapons effects against hard and buried targets Fielded IMEA ver 2.0 to EUCOM and continued modeling support for contingency operations 	<ul style="list-style-type: none"> Release IMEA ver 3.0 1QFY98 CP1 ACTD demonstration support FY98 Release IMEA ver 4.0 1QFY99 	11, 2, 3, 5	DSWA	5.475	603160D
<ul style="list-style-type: none"> Counterproliferation ACTDs 	<ul style="list-style-type: none"> Integrated operational testing to support early deployment of new counterforce capabilities against NBC/M and underground targets 	<ul style="list-style-type: none"> Completed integrated sensor, weapons, and planning tool demonstrations of the CP1 ACTD Conducted static detonation and live weapon drops on simulated BW storage facility 	<ul style="list-style-type: none"> Complete CP2 ACTD planning FY97 Complete CP1 ACTD demonstrations FY98 Deliver CP1 residual capabilities to CINC EUCOM FY98-99 Conduct CP2 demonstrations FY98-02 	2, 3, 11, 8	DSWA EUCOM	10.579	603160D
Passive Defense <ul style="list-style-type: none"> JBREWS ACTD 	<ul style="list-style-type: none"> Accelerate fielding of war-fighting capabilities for remote detection, identification, characterization, and early warning of BW agent attacks 	<ul style="list-style-type: none"> CINC EUCOM and CINC CENTCOM sponsors identified USD(A&T) approval and management plan under development Technical architecture and concept studies under way 	<ul style="list-style-type: none"> Systems definition and analysis 4QFY97 Preliminary Design Review 2QFY98 Critical Design Review 1QFY99 Conduct field demonstrations FY00 EMD transition FY00 	1, 9, 8	JPO-BD	17.770	603884BP
<ul style="list-style-type: none"> Eye Safe LR-BSDS for BW Detection 	<ul style="list-style-type: none"> Accelerated deployment of airborne eye safe IR lidars for standoff battlefield BW aerosol detection and track 	<ul style="list-style-type: none"> System design completed Program restructured to accommodate reduced funding Full laser power demonstrated 	<ul style="list-style-type: none"> Milestone II for two prototypes 4QFY97 IOC and Milestone III for 4 systems 4QFY99 First Unit Equipped FY99 Transition to procurement FY00 	1, 9	JPO-BD Army	13.744	603884BP

Table C.1: Counterproliferation Support Program Projects (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
• JWARN Demonstration and Integration	• Demonstrate technology to integrate and communicate NBC hazard information	• Demonstrated automated reporting • Initiated development of backtrack system to determine hazard source location	• Demonstrate in Air Base/Port Bio Detection ACTD FY97 • Participate in field trials FY98	1, 9	JPO-BD	1.000	603384BP
• BW Detection Advanced Technology Development	• Demonstration and rapid fielding of selected man-portable and UAV-integrated BW detectors for remote detection and characterization of BW agents	• 3 FOWG units delivered to CBIRF; demonstrated improved detector • Successful bench test of Mass Spectrometer • Conducted biological background sampling at Osan, Korea	• Mass Spectrometer prototype field testing 4QFY98 • Detector testing as part of JBREWS ACTD FY99 • Establish BW detection test bed 1QFY98	1, 9	JPO-BD DARPA NRL	6.845	603384BP
<u>Counter Paramil./ Terrorist Threats</u> • First Responder Support	• Accelerated development of capabilities and technologies to enhance interagency response to CW/BW threats	• Integrated CW/BW sensors and software upgrades into CBSS • Tested prototype BW Detection Kit • Completed Escape Hood market survey and assessment • User implementation of CW/BW EOD suit	• Complete user field trials of BW Detection Kit 2QFY98 • Deliver 6 Chem./Bio. Sentry Systems (CBSS) 1QFY98	6, 5	SOCOM	1.200	603160D
• Specialized SOF Technologies and Prototype Devices	• Develop technologies adapted for SOF use to enhance capabilities to detect, access, disable, render safe, and recover NBC devices and improve NBC target defeat, mobility, and access capabilities	• Testing and evaluation of fielded SFAI prototype • Delivery of FOWG BW detectors to CBIRF • Completed fieldable prototype drill extractor for CW/BW sample retrieval	• Deliver 4 extraction tool training prototypes 1QFY98; P3I in FY99 • Deliver 4 prototype FOWG BW detectors 4QFY97; P3I in FY98-00 • SFAI CDR 3QFY97; deliver prototypes 4QFY98; P3I FY99-00 • Deliver WMD Containers: Ph.I 2QFY98; Ph. II 1QFY99; Ph. III 4QFY99	5	SOCOM	10.029	603160D
• Joint EOD Readiness Sustainment	• Operational plans and exercises and readiness sustainment training against NBC devices	• Conducted readiness sustainment programs for EOD units • Delivered equipment suites to EOD units	• Continue readiness sustainment training • Continue forward deployment of equipment and capabilities • Conduct shortfall assessments	5	SOCOM Navy	0.656	603160D
<u>CP Architecture Studies and Management/ Oversight</u>	• Analysis, architecture, and technical studies; integrated planning; and management and oversight support for ATSD(NCB)	• Preparation of CPRC annual reports to Congress • Supported 1996 Counterproliferation Study • Manage Counterproliferation Support Program	• Continue program management and oversight support activities, technical analyses, program planning, and integrated architecture studies • Continue preparation of annual reports to Congress	1, 2, 3, 5, 6, 9, 11, 13	ATSD (NCB) DSWA	5.133	605160D
• Total:						104.670	

Table C.2: Chemical and Biological Defense Program

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency*	FY 98 Budget [\$M]	PE No.
Passive Defense • Chemical/Biological Defense (Non-Medical)	• Basic research in chemistry, life sciences, and physics in support of CW/BW defense	• Conducted a coordinated and consolidated mass spectrometric study of biomarkers having potential utility in a future mass spectrometry based biodetectors	• Basic Research	1, 9	Army	2.301	601384BP
• Medical Chemical Defense Basic Research	• Basic research on medical countermeasures to chemical agents	• Expanded pathophysiological database on sulfur mustard; used microdialysis models to fully characterize time course of neurochemical changes in nerve agent seizures; used “quadromas” fusion products to produce binding site modification on catalytic antibodies to detoxify nerve agents	• Basic Research	9	Army	8.133	601384BP
• Medical Biological Defense: Basic Research	• Basic research on the development of drugs and vaccines for BW defense	• Determined mode of action of aerosolized ricin and staphylococcus enterotoxin B; examined molecular biology, genetics, and pathophysiological mechanisms of anthrax and brucellosis; determined mechanisms of immunity to plague and additional bacterial threats	• Basic Research	9, 10	Army	14.756	601384BP
• Chemical/Biological Defense: Applied Research	• Numerous activities including CW/BW detection and warning, individual and collective protection, decontamination, and modeling support	• Conducted modeling and simulation of Fixed Base Operations and investigated the compatibility of Joint Service CW/BW defense technologies with Air Force operations	• Transition first candidate material to JSLIST P3I FY98 • Upgrade wargames and simulations to enable evaluation of virtual prototypes of CW/ BW defense equipment FY98	9, 1	Army	35.133	602384BP
• Medical Biological Defense: Applied Research	• Exploratory development of drugs and vaccines for BW defense	• Determined optimal expression systems for multivalent vaccine candidates for the staphylococcal enterotoxins • Evaluated pharmacological and immunological prophylaxes for candidate therapeutic selections for botulinum toxins	• Continue applied research on products to protect against or treat plague, brucellae, SEB, VEE/EEE/WEE, ricin toxin, and viral agents FY98	9, 10	Army	11.474	602384BP
• Medical Chemical Defense: Applied Research	• Exploratory development of treatments for CW agent casualties	• Determined efficacy of calcium chelators to protect against sulfur mustard and intracellular calcium effects • Determined new assays to quantify DNA damage	• Continue applied research on skin decontamination, nerve agent countermeasures, and diagnostic technologies	9	Army	13.416	602384BP
• Medical Biological Defense: Advanced Technology Development	• Advanced technology development in support of BW vaccine and drug development and vaccine production	• Conducted pre-clinical testing of improved anthrax vaccine for Milestone I transition • Evaluated pharmacological prophylaxis and developed vaccine candidate expression system and a Good Manufacturing Practice level product for botulinum toxins • Investigated safety and efficacy of vaccine candidates for brucella and plague in animal models	• Transition plague vaccine to Dem/Val FY98 • Complete vaccine MS IIIs for: Q-fever and smallpox ('99), ricin ('00), VEE/botulinum ('01), combined VEE/WEE/EEE/plague ('03), and brucellosis ('04)	10, 9	Army JPO-BD	13.860	603384BP

* All Chemical and Biological Defense Program projects are funded through DoD-wide accounts and are generally Joint Service programs. The lead Service or Agency executing the project is listed.

Table C.2: Chemical and Biological Defense Program (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
• Medical Chemical Defense: Life Support	• Advanced technology development investigating new medical countermeasures for CW agents	• Screened 40 candidate antivesicant compounds in cell viability assays and 30 candidate compounds in the nicotinamide adenine dinucleotide depletion assay • Finalized animal models to support advanced screening requirements for candidate antivesicant compounds	• Perform toxicity and reactivity studies for vesicant pre-treatments FY98 • Complete MS 0 for reactive topical skin protectant FY99	9	Army	9.673	603384BP
• Chemical/Biological Defense Systems Advanced Technology Development	• Technology demos in CW/BW agent detection/identification, decontamination, and individual/collective protection	• Demonstrated technologies in wide area detection using chemical imaging sensors, low level atmospheric monitoring using mini CBMS, and small lightweight detectors using ion mobility spectrometry and surface acoustic waveguides	• Complete remotely deployed integrated BW early warning network FY98 • Demonstrate fixed site lidar CW defense system FY98	9, 1	Army	9.845	603384BP
• Contamination Avoidance: Dem/Val	• Dem/Val of CW and BW detection technology	• CBMS: conducted chemical profiling for NBCRS, Technical Feasibility Testing, and Production Proveout Testing; completed technical/logistics documentation • JSLSCAD: prepared documentation and conducted MS II IPR; conducted simulant and live agent testing; obtained hardware and software redesigns; conducted interface trials with candidate transport systems	• Integrate JSLSCAD into NBCRS FY97	9, 1	Army	0.145	603884BP
• Collective Protection: Dem/Val	• Dem/Val of CW/BW collective protection technology	• AICPS: completed Engineering Design Review and Test (EDT) on filter; initiated prototype design and fabrication for Pre-Production Qualification Test/Initial Operational Test and Evaluation (PPQT/IOTE)	• Complete system integration and production performance specifications FY98	9	Army	3.582	603884BP
• Decontamination: Dem/Val	• Modular Decontamination System and advanced sorbent technology Dem/Val	• MDS: completed XM21 prototype testing; modified NDI and validated XM22 hardware through EDT	• Complete MDS PPQT and IOTE FY98 • Integrate sorbent into M295 decontamination kit FY98	9	Army	7.045	603884BP
• Medical Chemical Defense: Dem/Val	• Advanced development and validation of pre-treatments and antidotes for CW agents and casualty decontamination	• Demonstrated human safety and technical performance of topical skin protectant and multichambered autoinjector; conducted animal toxicology studies for cyanide pretreatment	• Complete safety study for cyanide pretreatments FY98 • Complete toxicity and efficacy evaluation of advanced anticonvulsant FY99	9	Army	0.894	603884BP
• Medical Biological Defense: Dem/Val	• Advanced development and validation of vaccines and drugs	• Began clinical and nonclinical studies to collect data supporting a change to FDA license for anthrax vaccine to reduce the number of shots for immunization	• Initiate production, safety, and efficacy testing of selected sero-types of botulinum toxin vaccines	10	Army	10.051	603884BP
• Biological Defense: Dem/Val	• Program definition and risk reduction for point and remote BW detection systems	• LR-BSDS P3I engineering development tests under way • SR-BSDS CDR completed • Modeling of JBREWS deployment concepts and architectures	• SR-BSDS prototype 4QFY97 • Complete JBREWS architecture study 4QFY97 • LR-BSDS P3I MSIII 4QFY99	1, 9	JPO-BD	1.914	603884BP
• Collective	• NBC collective protection	• New program for shipboard collective protection	• Integrate high pressure fan	9	Army	1.169	604384BP

Protection: EMD	shelter development		and filter upgrades FY98				
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Table C.2: Chemical and Biological Defense Program (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
• Contamination Avoidance: EMD	• EMD of NBC detection and warning systems (MICAD, SCAMP, IPDS, SALAD, JWARN, JCAD, ACADA, CBMS, and JSLSCAD)	• MICAD: test system fabrication/inspection, system integration, and built prototype hardware • SCAMP: initiated fabrication of engineering development models and started Technical Evaluation • IPDS: supported fleet introduction and component development and testing • SALAD: continued Tech. Eval. and shipboard Operational Evaluation	• MICAD: type classification and prepare documentation for production contract FY98 • SALAD: prepare documentation for production contract FY98 • CBMS: fabricate engineering prototypes FY98	9, 1	Army	48.652	604384BP
• Individual Protection: EMD	• EMD for JSLIST, the EOD Ensemble, and the Naval Aircrew CW/BW NDI Respirator	• JSLIST: continued and completed Integrated Developmental and Operational Testing of prototype ensembles • ACPM: resolved design issues, completed technical design package, built IOT&E hardware, completed logistics support, and conducted Milestone III IPR	• Revise JSLIST specs. for technology insertion; verify production items FY99 • Support aircraft mods for AERP integration FY99	9	Joint Service	6.023	604384BP
• Medical Chemical Defense: EMD	• EMD of medical materials necessary to field medical defense capabilities	• Evaluated extended stability of medical aerosolized antidote, convulsant antidote, and pyridostigmine pretreatment for nerve agents	• Complete autoinjector FY98 • Type certification of collective protection shelter FY98	9	Army	5.265	604384BP
• Medical Biological Defense: EMD	• Vaccine EMD	• Data collection to support changing FDA license for anthrax vaccine that would reduce the number of shots for protective immunization	• Compile data for anthrax vaccine FDA license amendment • Prepare product license application for botulinum pentavalent vaccine FY97	10, 9	Army	16.500	604384BP
• Nonmedical BW Defense: EMD	• Detection of BW threats to provide early warning, including development of the Air Base/Port Bio Detection ACTD	• BIDS: fabricated candidate P3I detection components • JBPDS: EMD proposals received and evaluated; contract award expected 3QFY97 • IBAD: completed rapid prototype fabrication and installed additional units aboard ships • LR-BSDS: completed design, conducted Critical Design Review and prepared Technical Design Package • SR-BSDS: completed design and conducted PDR • JBREWS: initiated program documents • ACTD: completed two major field trials of sensor/early warning network at Dugway Proving Ground	• JBPDS: complete Block I suite design; initiate system integration; begin antibody development for 6 agents FY98 • ACTD: Initiate logistics support and fielding for CENTCOM and U.S. Forces Korea air base/port sites FY98	1, 9	JPO-BD Army Navy	42.926	604384BP
• Joint Chemical/Biological Contact Point and Test	• Repository of CW/BW information for multiple users	• Initiated 6 assessments, 3 field trials, and 2 laboratory tests evaluating CW defense equipment to provide inputs to Services for doctrine, policy, and training procedures development	• Management Support	9	ATSD (NCB) Army	1.689	605384BP
• Management Support	• Oversight and integration of CBD Program	• Continued to perform program oversight, assessment, and policy development	• Management Support	9, 1, 10	Services	4.073	605384BP

• Dugway Proving Ground	• Operation of test facilities	• Maintaining test facility readiness	• Management Support • Continue operations	9, 1	Army	9.280	605384BP
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Table C.2: Consolidated Chemical and Biological Defense Program (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Procurement • M40 Mask	• Procurement of M40 protective mask	• Continued procurement	• Production and Deployment	9	Army	6.075	0300D, BA3 M99601
• PATS	• Protection Assessment Test System procurement	• Continued procurement	• Production and Deployment	9	Army	5.546	0300D, BA3 M95801
• ICAM	• Improved Chemical Agent Monitor	• Continued procurement	• Production and Deployment • FUE by 2QFY98	9	Army	9.777	0300D, BA3 S02201
• FOX NBCRS	• FOX NBC Recon. System	• Continued procurement	• Production and Deployment • FUE by 1QFY99	9, 1	Army	26.788	0300D, BA3 MA0601
• Pocket Radiac	• Compact radiation measuring device	• Continued procurement	• Production and Deployment • FUE by 2QFY98	9	Army	3.345	0300D, BA3 B96801
• Chem/Bio Protective Shelters	• CBPS collective protection shelter	• Continued procurement	• Production and Deployment	9	Army	17.292	0300D, BA3 R12301
• Shipboard Detector Modifications	• Procurement of IPDS and SALAD	• Continued procurement	• Production and Deployment	9, 1	Navy	5.864	0300D, BA3 N00041
• BIDS P3I	• Improvements to NDI BIDS	• Developmental and Operational Testing under way at Dugway Proving Ground	• Milestone IV decision 4Q97 • FUE by 4QFY99	1, 9	Army JPO-BD	41.341	0300D, BA3 M93001
• M45 Air Crew Protective Mask	• Procurement of the M45 mask	• Continued procurement	• Production and Deployment • FUE by 3QFY98	9	Army	5.882	0300D, BA3 M99501
• Chem/Bio Respiratory System - Aircrew	• Provide USN/USMC aircrews with CW/BW respiratory protection	• Continued procurement	• Production and Deployment	9	Navy USMC	7.744	0300D, BA3 N00020
• AERP Aircraft Modifications	• Second generation CW/BW oxygen mask	• Continued procurement	• Production and Deployment	9	Air Force	1.439	0300D, BA3 JN0011
• ACADA, XM22 CW Detectors	• Procurement of ACADA	• Continued procurement	• Production and Deployment • FUE by 4QFY97	9	Army	15.673	0300D, BA3 M98801
• Protective Clothing	• Procurement of JSLIST, EOD Ensemble, and Fire Fighters' Ensemble	• Continued procurement	• Production and Deployment	9	Services	35.089	0300D, BA3 MA0400
• Individual Protective Gear	• Initial outfitting of protective equipment for naval construction	• New procurement	• Production and Deployment	9	Navy	2.092	0300D, BA3
• Medical BW Defense: Vaccine Procurement	• Procurement of vaccines and medical products	• Completing anthrax vaccine stockpile • Initial studies to reduce anthrax vaccine production schedule	• JVAP prime systems contract award expected in FY97 • Approval of anthrax immunization plan	10, 9	JPO-BD Army	24.091	0300D, BA3 JX0005
Counter Paramil./ Terrorist Threats • Anti-Terrorism Support	• Vulnerability assessments of DoD installations to	• New program for FY 1998	• Continue vulnerability assessments of installations and	5	Services	3.688	605384BP

	CW/BW threats		training to counter CW/BW				
						• Total:	489.525

Table C.3: Key U.S. Army Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Active Defense							
<ul style="list-style-type: none"> • PATRIOT PAC-3 Procurement 	<ul style="list-style-type: none"> • Procurement of 52 PAC-3 missiles, 11 PAC-3 launch stations, and 6 radar station modification kits 	<ul style="list-style-type: none"> • Phase III radar station successfully tested during live fire exercises 	<ul style="list-style-type: none"> • PAC-3 LRIP DAB 1QFY98 	4, 7	Army	349.100	C49200 C50700 CA0267
<ul style="list-style-type: none"> • PATRIOT PAC-3 RDT&E 	<ul style="list-style-type: none"> • RDT&E for the Remote Launch Communications Enhancement Unit, threat simulations, and P3I testing 	<ul style="list-style-type: none"> • Completed RDT&E for the Remote Launch Communications Enhancement Unit 	<ul style="list-style-type: none"> • Continue P3I system development and testing 	4, 7	Army	12.388	203801A
<ul style="list-style-type: none"> • Missile Defense Systems Integration: Dem/Val 	<ul style="list-style-type: none"> • Integrate, demonstrate, and validate critical systems to accomplish the TMD mission, including BMC4I systems • Support joint U.S./Israeli Nautilus/THEL ACTD 	<ul style="list-style-type: none"> • Conducted systems analyses, studies, and experiments to integrate and validate TMD missions and functions • Systems upgrade and development of MDBIC synthetic combat environments and DIS interfaces • Development of the Synthetic Battlefield Environment • Nautilus/THEL ACTD development 	<ul style="list-style-type: none"> • Develop virtual prototypes of potential battlefield systems to facilitate training and TMD integration • Complete THEL demonstrator integration and testing 	4, 7	Army	24.138	603308A
<ul style="list-style-type: none"> • TMD BMC4I Procurement 	<ul style="list-style-type: none"> • Provides JTIDS terminals for platform interoperability in support of TMD 	<ul style="list-style-type: none"> • Ensured single configuration for all terminals 	<ul style="list-style-type: none"> • Provide TMD interoperability for multiple platforms 	4, 7	Army	20.100	208864C
Passive Defense							
<ul style="list-style-type: none"> • All Army Passive Defense Programs have been incorporated into the CBD Program (see Table C.2) 							
						• Total:	405.726

Table C.4: Key U.S. Navy Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> • SEI System Support Program	• Procurement and fleet integration of SEI system upgrades to aid in tracking NBC/M-related shipments	• Program transitions from Counterproliferation Support Program • Continued implementation into fleet by upgrading existing processors	• Fleet integration scheduled for FY 1999	13	Navy	1.626	204575N
<u>Counterforce</u> • Counterforce Hardened Target Munitions	• Develop advanced conventional earth penetrating warheads • Supports HDBTDC program	• Completed initial trade studies, including advanced control systems and DoD/DOE laboratory and industry concepts for advanced ordnance	• Optimize internal packaging, weaponize enhanced effects packages, and environmental qualification FY98	3, 2	Navy	4.987	604327N
<u>Active Defense</u> • USMC Hawk Procurement	• Procurement of the Marine Corps Hawk air defense system	• Completed 5 successful intercepts of ballistic missile targets • Declared IOC 1QFY97	• Continue procurement of system upgrades	4, 7	Navy	3.475	procurement
• Navy Area TBMD Program	• Procurement of the Navy Area TBMD System	• Achieved first intercept with modified SM-2 Block IV interceptor • Approved for EMD by the DAB	• Field UOES prototype FY99 • FUE FY01	4, 7	Navy	15.400	procurement
<u>Passive Defense</u> • Navy Radiac Program	• RDT&E and procurement of radiation detection and monitoring equipment for Navy and Marine Corps applications	• Production of Multifunction Radiac • Underwater Radiac EMD • Initiated LRIP for laser dosimeter • EOD dosimeter in production	• Achieve IOC for Multifunction Radiac, Underwater Radiac, EOD dosimeter, and laser dosimeter	9	Navy	3.030	603542N
<u>Counter Paramil./ Terrorist Threats</u> • Joint Service EOD Systems Program	• Specialized EOD equipment to locate, access, and render safe explosive devices, including NBC devices, for all Services	• Initial development of “main charge disrupter” and lightweight charge disrupter to neutralize explosive devices • Continued development of an improved ordnance locator system	• Initiate production for the Advanced Radiographic System FY98 • EMD for charge disrupters • Continue RONS projects	5	Navy ASD (SO/LIC)	4.720	603654N
• Joint Service EOD Procedures Program	• Tests and validates prototype EOD systems and develops specialized procedures for EOD units • Funds DTRG technical support unit	• Maintained DTRG readiness • Developed countermeasure procedures for improvised nuclear devices • Continued development of EOD procedures for foreign and U.S. ordnance	• Continue render safe procedures development for U.S. and foreign ordnance and improvised nuclear devices • Continue DTRG support	5, 6	Navy ASD (SO/LIC)	6.613	604654N
• Marine Corps CBIRF	• USMC unit dedicated to managing the consequences of incidents involving CW/BW release	• Unit stood up in April 1996 • Supported Olympic Games in Atlanta • Assembled group of consulting experts to support deployments	• Finalize Ops. Requirements Document FY97 • Participate in 911-BIO ACTD 3QFY97	6	USMC	20.200	O&M
• Total:						60.051	

Table C.5: Key U.S. Air Force Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> • Nuclear Detonation Detection System	• Integrates and supports nuclear detonation detection sensors on GPS satellites; develops and procures ground system for nuclear detonation reporting	• Integrated new sensors on GPS Block IIR satellites • Developed and tested ground segment processing and display system hardware and software	• Complete software to process Block IIR sensor data • Complete sensor deliveries for next generation GPS Block IIF satellite integration	15	Air Force	14.145 9.155	305913F procurement
<u>Strategic/Tactical Intelligence</u> • HAARP Project Support	• Exploratory hardware development and operational support	• Program supplemented by Counterproliferation Support Program	• See Table C.1	3, 8	Air Force	0*	602601F
• Remote Optical Sensing Program	• Aircraft based long range lidar for remote sensing of NBC weapons production signatures	• Demonstrated 20 km detection range	• Flight testing to validate 20 km detection range	8, 1	Air Force DIA	0.800	602601F
<u>Counterforce</u> • Hard and/or Deeply Buried Target Defeat Capability: Hard Target Munitions Dem/Val	• Joint Service evaluation and development of hard and/or deeply buried target defeat capabilities (see also Tables C.4 and C.8)	• Collected weapons system concepts from industry and DoD/DOE labs • Baseline concepts analyzed and assessment of alternatives framework and study plan developed • ACTD working group formed	• Milestone I approval 3QFY98 • Transition to EMD 4QFY01 • Production and initial fielding 4QFY04	3, 2 11, 8, 5	Services DSWA DIA OSD	4.981	603311F 604327F (Joint Service PE pending)
• Agent Defeat Weapon Program	• Develop capabilities and munitions concepts to defeat or neutralize BW/CW agents and their delivery systems	• Collected concepts from industry and DoD/DOE labs; baseline concepts analyzed • Assessment of alternatives framework/study plan developed • ACTD working group formed	• Milestone I approval 4QFY99 • Transition to EMD 4QFY03 • Production and initial fielding 4QFY06	2, 4, 12, 11	Air Force DOE	0.500	604222F
<u>Active Defense</u> • Airborne Laser (ABL) Program	• Integration of laser, optical, tracking, and related BMC4I systems into ABL aircraft for demonstration of ballistic missile boost phase intercept	• Completed active tracking, laser power, and chemical efficiency tests • Demonstrated beam control functionality and multi-beam illuminator concept • Measured 747 aircraft in-flight vibration and completed turret wind tunnel tests • Milestone 1 achieved and Dem/Val contract awarded	• Initial test prototype FY98 • Conduct intercept demo FY02 • Complete Program Definition and Risk Reduction and transition to EMD FY03 • Complete EMD FY05 • 3 aircraft IOC FY06 • Full operational capability (7 aircraft) FY08	4, 7	Air Force	157.136	603319F

* Currently, no FY 1998 funds are budgeted for this Congressional Special Interest Program.

Table C.5: Key U.S. Air Force Programs Strongly Related to Counterproliferation (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<ul style="list-style-type: none"> Theater Missile Defense (R&D) Program 	<ul style="list-style-type: none"> R&D integration to improve BMC4I and counterforce operations to defeat theater missile capabilities and their supporting infrastructure elements 	<ul style="list-style-type: none"> Demonstration of Link-16 range extension and integration of TMD message set on AWACS Development of IPB methodology and automated application tools; completion of country studies Completion of the Defensive Planning Module and the Time Critical Targeting Aid Completion of expert missile tracker prototype 	<ul style="list-style-type: none"> Integrate Link-16 TMD message set on JSTARS and Air Force C3 aircraft Demonstrate improved JSTARS ATR and Moving Target Indication capability Demonstrate TMD Smart Sensor/ATR with LANTIRN pod upgrade 	4, 12, 8, 7	Air Force	29.182	208060F
<ul style="list-style-type: none"> Space Sensor and Satellite Communication Technology 	<ul style="list-style-type: none"> Surveillance sensor and threat warning technology RDT&E in support of TMD and NMD 	<ul style="list-style-type: none"> Characterization of first large format IR array and demonstration of a two color focal plane array Fabrication of an IR camera testbed for testing large staring arrays 	<ul style="list-style-type: none"> Deliver 2 color mercury-cadmium-tellurium array Develop large format multispectral quantum well detector Investigate hyperspectral potential 	4, 7	Air Force	1.498	603401F
• Total:						217.397	

Table C.6: Key BMDO Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Active Defense • PATRIOT PAC-3	• Continue missile EMD, remote launch, communications development, and testing	• Continued system procurement and fabrication • Conducted flight tests and achieved successful target intercept • Procurement transitioned to Army	• Begin formal flight testing of PAC-3 missile • Configuration 2 IOC FY97 • Begin LRIP FY98 • FUE 4QFY99	4, 7	BMDO	206.057	604865C
• Navy Area TBMD System	• Modify Navy Standard Missile and AEGIS combat system (ACS) to enable endoatmospheric theater ballistic missile engagement	• Conducted Milestone II DAB review • Conducted EMD flight tests and successful target kill • Procurement transitioned to Navy	• Complete CDR FY98 • DT/OT FY99-02 • Ship-deployed UOES FY99 • FUE FY01	4, 7	BMDO	267.822	604867C
• THAAD System	• Conduct flight testing and Dem/Val program development and transition to EMD for this land-based theater-wide TMD system	• Completed 7 flight tests with radar operating as primary sensor • Organized first battery; all UOES equipment available, except missiles • Data gathered to support modeling and simulation validation	• Complete flight testing for Dem/Val and EMD FY98 • Full UOES FY00 • LRIP FY02 • Production and FUE FY05	4	BMDO	294.647 261.480	603861C 604861C
• Navy Theater-Wide TBMD System	• Development of ship-based, theater-wide defense system based on leveraging the Navy Area TBMD program and further modifying the AEGIS, Standard Missile, and Vertical Launch System	• Completed system flight demonstrations, including LEAP flight tests • Continued advanced AEGIS operational capability demonstrations • Planning under way to establish as Navy procurement program	• Conduct pre-EMD flight test • 3 rd stage hover tests FY97-98 • Initial intercept FY00 • Begin ATD flight tests FY01	4	BMDO	194.898	603868C
• MEADS	• Supports international teaming and project definition and validation of a short range TMD and advanced air defense system	• Completed MoU with Germany and Italy for project definition/validation • Established National Project Office and NATO MEADS Management Agency • Commenced project definition/validation phase with 2 international industry teams	• Conduct system requirements and design reviews FY97-98 • Downselect winning design FY99; design and development FY99-03 • Production by FY05	4, 7	BMDO	47.956	603869C
• Joint TMD Dem/Val	• Integration of TMD family of systems, including Joint data collection, validation, and analysis for TMD technologies, components, systems, and programs • Joint BMC4I integration, network testing, and development	• Designed, developed, and maintained tools for measuring performance of core systems, advanced sensors, risk reduction, readiness, threat, countermeasures, and advanced BMC4I initiatives/architecture • Integrated upgraded capabilities into Air Force, Army, and Navy systems	• Continue data collection, evaluation, and integration support for core systems	4, 7	BMDO	542.619	603872C

Table C.6: Key BMDO Programs Strongly Related to Counterproliferation (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
• National Missile Defense (NMD)	• System development, test and deployment planning for NMD	<ul style="list-style-type: none"> Continued implementation of deployment readiness program shortening IOC to 3 years from deployment start Designated as MDAP Established NMD Joint Program Office and RFP for lead system integrator released to industry Integrated Deployment Plan drafted 	<ul style="list-style-type: none"> System downselects FY98 Integrated systems test FY99 Deployment review FY00 (MS II if no deployment) Prepare acquisition justification for deployment FY00 	4	BMDO	504.091	603871C
• Boost Phase Intercept	• Development of boost phase defense concepts for TMD, including the Israeli Boost Intercept System (IBIS) and development of Joint Service UAV-based concepts	<ul style="list-style-type: none"> Cooperative participation with Israeli industry on IBIS risk mitigation UAV-based concept development under way through tri-Service IPTs 	<ul style="list-style-type: none"> UAV-based boost phase intercept requirements definition FY97 IBIS risk mitigation final report FY99 	4	BMDO	12.885	603870C
• Support Technology, Exploratory and Advanced Development	<ul style="list-style-type: none"> Innovative Science and Technology, Small Business Innovative Research, and Technology Transfer Programs Technology applications and Historically Black Colleges and Universities/Minority Institutions Program 	<ul style="list-style-type: none"> Advanced technology development to support TMD and NMD Main thrusts include advanced sensor, interceptor, and directed energy technologies and missile defense phenomenology data collection and analysis Demonstrated space-based characterization of midcourse engagement signatures via MSX experiment Conducted high power laser test 	<ul style="list-style-type: none"> Continue investment in key technologies Award Phases I and II SBIRs Continue program as mandated by law 	4, 7	BMDO	101.932 147.557	602173C 603173C
• Totals:						2,581.944	

Table C.7: Key DARPA Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Counterforce/Battlefield Surveillance</u> <ul style="list-style-type: none"> • Surveillance Sensor and Exploitation Systems Program 	<ul style="list-style-type: none"> • Develop sensors to defeat camouflage, concealment, and deception practices, including foliage penetrating radars • Provide near real-time, semi-automated exploitation of wide area imagery to track critical mobile targets 	<ul style="list-style-type: none"> • Developed FOPEN radar concept and verified system requirements for airborne demonstrator • Demonstrated ultra-wideband antenna design and automatic target recognition, detection, and cueing • Transitioned target recognition algorithms into the SAIP ACTD • Initiated development of next-generation ATRs 	<ul style="list-style-type: none"> • SAIP ACTD demos 1QFY98 • Develop FOPEN airborne demonstrator radar and demonstrate multi-spectral image exploitation using SAIP architecture FY98 • FOPEN radar CDR 3QFY98 • Demonstrate automatic target cueing, vehicle classification, and false alarm mitigation techniques • Demonstrate next generation ATR 	12, 8, 2, 3	DARPA	81.600	603762E
<ul style="list-style-type: none"> • Information Integration Systems Program 	<ul style="list-style-type: none"> • Development of an integrated, all-source, geographically referenced battlefield knowledge base and information distribution system for enhanced, real-time situation assessment and intelligence dissemination 	<ul style="list-style-type: none"> • Completed integration of a single intelligence source correlator • Demonstrated functionality of the global broadcast service and information servers for rapid dissemination of imagery products 	<ul style="list-style-type: none"> • Demonstrate multi-intelligence correlators for signals, text, and imagery • Demonstrate warfighter's associate for direct broadcast of and flexible access to large data and product servers • Demonstrate enhanced automated information management capabilities • Implement flexible information fusion architecture for joint interoperability across operations and systems 	12, 8, 2, 3	DARPA	96.424	603760E
<u>Active Defense</u> <ul style="list-style-type: none"> • Air Defense Initiative 	<ul style="list-style-type: none"> • Development of technologies for low cost defenses against cruise missiles, theater ballistic missiles, and UAVs and for air-directed defense architectures 	<ul style="list-style-type: none"> • Demonstrated Mountain Top surveillance radar and a fire control radar • Mountain Top radar transitioned to the Navy for further development • Tested space-time adaptive processing algorithms • Initiated low cost cruise missile defense studies 	<ul style="list-style-type: none"> • Transition space-time adaptive algorithms to USN/USAF • Demonstrate air-directed surface-to-air missile architecture • Design components for low cost cruise missile defense 	7, 4	DARPA	18.100	603762E

Table C.7: Key DARPA Programs Strongly Related to Counterproliferation (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Passive Defense <ul style="list-style-type: none"> • BW Defense Program 	<ul style="list-style-type: none"> • Basic research to develop and demonstrate technologies that will minimize impact of BW agents on future military operations 	<ul style="list-style-type: none"> • Deposition of BW simulant antibodies on a chip using photolithography • Developed medical protocol software tool for BW defense training and tested anthrax version • Demonstrated million-fold reduction of virus in bloodstream using modified red blood cells 	<ul style="list-style-type: none"> • Develop advanced miniaturized point detectors for BW agents • Extend combat informatics program to BW defense • Develop BW medical countermeasures emphasizing multi-agent approaches 	1, 9	DARPA	61.600	602383E
• Totals:						257.724	

Table C.8: Key DSWA Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> • Nuclear Arms Control/CTBT Verification Technology Program	• RDT&E of technologies to support CTBT implementation, compliance, and verification • Provide enhanced nuclear safeguards	• Consolidated management of R&D programs under DSWA • Continued development of global continuous threshold monitoring network and data fusion knowledge base	• All U.S. IMS monitoring stations operational FY99 • Deliver IDC to CTBT international organization FY99 • Entry-into-force expected; IMS and IDC operational FY00	15	DSWA	56.299 1.701	603711H O&M
• Chemical Biological Arms Control Technology Program	• RDT&E support for implementation, verification, monitoring, and inspection technologies to support U.S. roles in global CW/BW arms control initiatives while protecting U.S. and DoD equities	• Developed provisional modular laboratory for on-site analysis • Developed CWC inspector training courses • Fielded the Chemical Agent Management Information Network • Developed improved CW sample extraction and preparation techniques • Developed “masking” software for use with analytical instruments to protect non-CWC data • Completed BW sampling analysis protocols and foreign BW program assessment	• Develop ruggedized, self-supporting on-site laboratory • Adapt emerging analytical and sensor technologies for treaty verification • Enhance “masking” software for analytical instruments • Develop handheld detector for CWC inspectors • Develop data management system to assist with BWC compliance and complete BW history and reference handbooks	15	DSWA	9.589	603711H
• START Verification Technology Program	• RDT&E of technologies to enable verification of START I, START II, and follow-on nuclear weapons treaties	• START Central Data System IOC • Developed fieldable prototype Arms Control Verification Gravity Gradiometer	• Incorporate START II data reporting requirements into START Central Data System • Implement Treaty Limited Item study results	15	DSWA	8.072	603711H
<u>Counterforce</u> • Hard Target Defeat Program	• End-to-end evaluation and development of improved tactics and technologies for hard target characterization and defeat	• Completed initial tunnel portal attack assessments • Completed tunnel MEA ver 1.0	• Release MEA for tunnels ver 2.0 FY99 • Conduct tunnel attack field tests FY99-03 • Deliver initial deliberate planning tool FY00	3, 2, 11	DSWA	13.202	602715H

Table C.8: Key DSWA Programs Strongly Related to Counterproliferation (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<ul style="list-style-type: none"> Weapons Systems Lethality Program 	<ul style="list-style-type: none"> Evaluation of conventional weapon lethality and effects and collateral effects assessment Maintain core competency in nuclear weapons effects 	<ul style="list-style-type: none"> Developed/validated models for combined weapons effects in support of the CP1 ACTD Provided hazard assessment support to contingency operations 	<ul style="list-style-type: none"> Update weapons lethality and collateral effects tools based on CP2 ACTD results FY99 Integrate predictive tools into warfighter systems FY00 Assess urban nuclear terrorism and covert ship delivery threats FY01 	2,3,5, 11	DSWA	18.807	602715H
Passive Defense <ul style="list-style-type: none"> Test and Simulation Technology 	<ul style="list-style-type: none"> Simulators and simulator technology required to validate weapons systems operability in nuclear environments 	<ul style="list-style-type: none"> Supported multiple Service test program requirements Demonstrated technology and completed building and data acquisition system for the DECADE radiation simulator Completed closeout of Aurora simulator facility 	<ul style="list-style-type: none"> Continue to support system radiation test requirements Complete DECADE qualification tests and hardware construction FY98 Continue upgrades of radiation simulators 	9	DSWA	20.650	602715H
<ul style="list-style-type: none"> Weapon System Operability Program 	<ul style="list-style-type: none"> Force survivability assessments against nuclear weapons effects based on test results 	<ul style="list-style-type: none"> Completed Strategic Futures IV, TMD, and TW/AA assessments Initiated operability assessment for STRATCOM in force direction, weapon systems, and C4ISR Completed non-ideal airblast assessment for the Army Nuclear and Chemical Agency Completed high integration density hardened memory Demonstrated hardened optical imaging electronics 	<ul style="list-style-type: none"> Complete operability assessments for TMD C3I systems FY97 Complete force employment operability/connectivity assessment for STRATCOM FY98 Complete initial NMD system architecture assessment FY98 Complete non-ideal airblast tests on armored vehicles FY99 Continue to develop hardened electronics 	9, 11, 4, 7	DSWA	7.380	602715H
Counter Paramil/Terrorist Threats <ul style="list-style-type: none"> Force Protection Initiative 	<ul style="list-style-type: none"> Conduct force protection assessments, field assessment teams to identify and evaluate shortfalls, and develop an R&D support plan 	<ul style="list-style-type: none"> Formed organization and developed CONOPS and assessment methodology Conducted 3 assessments Conducted symposium with industry to seek inputs to fulfill CINC and Service requirements 	<ul style="list-style-type: none"> Complete 50 assessments in 1997 and 100 assessments by the end of 1998 Define a prioritized technology R&D plan to address key force protection shortfalls 	5	DSWA	4.500	602715H

• Totals:	140.200
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Table C.9: Key OSD Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> • DoD/U.S. Customs Proliferation Prevention Program	• Training and technical assistance to improve and expand efforts to prevent proliferation and acquisition of NBC/M and related materials in the FSU, Eastern Europe, and the Baltics	• Initiation of activities to assess needs and develop training programs • Completed initial interagency coordination activities	• Conduct initial training program in late FY97 • Prioritize future training for other countries	14, 13	ATSD (NCB) OSIA	3.000*	O&M
• Critical Technology Support Program	• Preparation of the <i>Militarily Critical Technologies List</i> (MCTL) to support export control activities • Identify and assesses technologies which could assist in countering the proliferation of NBC/M	• Published MCTL Part I, Weapons Systems Technologies • Provided technical support to DoD and interagency processes in Wassenaar Arrangement and other NBC/M constraint arrangements	• Monitor and update MCTL to include both technologies that could be used by proliferants (Part II) and developing technologies that could assist in countering NBC/M proliferation (Part III)	14	DUSD (ICP)	2.690	605110D
<u>Counter Paramil./ Terrorist Threats</u> • Domestic Preparedness Initiative	• Improve NBC emergency response preparedness and coordination with state and local agencies through First Responder training, interagency exercises, and technical assistance	• New initiative	• Continue First Responder training and intergovernmental exercises to improve interagency response • Continue “WMD Hotline”	5, 6	ASD (SO/LIC)	49.500	pending
• Counterterror Technical Support Program	• Develop technical capabilities and prototype systems and concepts to detect, render safe, and defend against paramilitary and terrorist NBC threats	• Development of specialized access tools, explosives, nuclear materials detectors, enzyme decontaminants, and systems to suppress explosively dispersed CW/BW agents	• Complete development of a field-portable x-ray system for large volume explosives detection and a low cost disposable protective CW/BW mask	5, 6	ASD (SO/LIC)	29.087	603122D
• Consequence Management 911-BIO ACTD	• ACTD to enhance and integrate military capabilities to respond to terrorist/paramilitary use of BW	• “Fast-Track” ACTD approval • Management plan in process	• Conduct ACTD demonstrations 3QFY97 and 1QFY98	6, 5	ATSD (NCB)	-**	
• Joint Physical Security Equipment	• Consolidates DoD activities for facility and nuclear and other high value weapons protection equipment	• Performance tested and installed commercially available security systems at military bases and aboard ships	• Continue installation and upgrades of security systems at military facilities • Continue RDT&E activities	5	PDUSD (A&T/S&TS)	17.789	603228D

* Estimate based on congressional requirements to spend not more than \$9.0 million over 3 years.

** ACTD demonstrations will be completed in the first quarter of FY 1998 using FY 1997 dollars. FY 1998 funding, including funding for technology leave-behinds, has not been determined.

Table C.9: Key OSD Programs Strongly Related to Counterproliferation (continued)

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
• SO/LIC Analytical Support	• Research/analysis of technical, acquisition, and policy issues relating to special operations, counterterrorism, and unconventional warfare	• Supported DoD World-Wide Anti-terrorism Conference and the International Terrorism Response Awareness Program	• Continue support for ASD(SO/LIC) activities and programs	5, 6	ASD (SO/LIC)	1.611	603122D
• Explosive Ordnance Disposal/ Low-Intensity Conflict Program	• Rapid prototyping effort to provide technology and equipment for the detection and neutralization of explosive devices	• Developed a light-sensitive ordnance locator and remote measuring device • Continued development of an autonomous search vehicle	• Complete development of imaging ordnance locator FY98 • Continue development of visualization methods and remote field disassembly of improvised explosive devices	5	ASD (SO/LIC)	4.165	603122D
• Joint Robotics Program	• Consolidates Service/DoD RDT&E efforts to demonstrate mature robotics technologies for EOD and other activities	• Began EMD of Remote Ordnance Neutralization System (RONS) • Completed ATD for Unmanned Ground Vehicle (UGV) technology • Completed MoU with EOD unit to improve user-developer interface	• RONS IOC FY99 • Continue demonstration of UGVs for multiple missions	5	PDUSD (A&T/S&TS)	16.399	603709D
• Totals:						124.241	

Table C.10: Key CTR Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> <ul style="list-style-type: none"> • Destruction and Dismantlement 	<ul style="list-style-type: none"> • Assistance to FSU in the destruction and dismantlement of nuclear weapons, strategic delivery systems, and chemical munitions. 	<ul style="list-style-type: none"> • All nuclear warheads removed from Belarus, Ukraine, and Kazakhstan • 81 ICBMs dismantled • 64 SLBM launchers eliminated • 20 heavy bombers dismantled • Sealed 59 of 194 nuclear weapons test tunnels and bore holes at Russia's Delegen Mountain complex • Delivered 3 mobile chemical analytical labs in support of CW destruction 	<ul style="list-style-type: none"> • Complete Central Chemical Analytical Lab FY98 • Seal 194 nuclear test tunnels and bore holes FY99 • Dismantle 37 heavy bombers FY00 • Eliminate 497 ICBMs FY02 • Eliminate 548 SLBM launchers FY02 	15	ATSD (NCB)	210.000	FSU Threat Reduction
<ul style="list-style-type: none"> • Chain of Custody Programs 	<ul style="list-style-type: none"> • Design and manufacture of fissile material containers, support for a Russian fissile material storage facility, and improvement of weapons security in the FSU 	<ul style="list-style-type: none"> • Completed foundation for Mayak Fissile Material Storage Facility and delivered 10,000 fissile material containers • Initiated design and testing of Russian Reactor Core Conversion project • Delivered 117 rail car conversion kits to enhance physical security of nuclear weapons/warheads in transit 	<ul style="list-style-type: none"> • Complete Mayak Fissile Material Storage Facility FY00 • Deliver 24,000 fissile material containers FY98 • Complete conversion of weapons grade plutonium producing reactor FY99 	15	ATSD (NCB)	141.700	FSU Threat Reduction
<ul style="list-style-type: none"> • Demilitarization 	<ul style="list-style-type: none"> • Support for conversion of defense related industry and demilitarization of the nuclear weapons industry through elimination of physical infrastructure 	<ul style="list-style-type: none"> • Established 17 joint venture partnerships between U.S. companies and FSU defense enterprises formerly associated with NBC/M production • Over 15,000 former Soviet weapons scientists and engineers now employed on peaceful civilian projects • Defense Enterprise Fund established in 1994 	<ul style="list-style-type: none"> • Defense Enterprise Fund becomes self-sufficient and continues to support conversion of defense enterprises 	15	ATSD (NCB)	0	FSU Threat Reduction
<ul style="list-style-type: none"> • Other Program Support 	<ul style="list-style-type: none"> • Conduct training and exchange projects in the FSU to increase expertise in demilitarization • Administrative and logistical support to other CTR areas 	<ul style="list-style-type: none"> • Funded 117 exchanges between U.S. and FSU defense establishments • Conducted 28 audits and examinations of CTR program 	<ul style="list-style-type: none"> • Approximately 200 defense and military contacts planned for 1997 • 18 audits and examinations to be conducted in 1997 	15	ATSD (NCB)	30.500	FSU Threat Reduction
• Totals:						382.200	

Table C.11: Key OSIA Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
<u>Proliferation Prevention</u> • INF Treaty	• Inspections and inspection support under the terms of the Intermediate Range Nuclear Forces treaty	• Treaty year 9 inspections ongoing	• Continuation of treaty-related inspections	15	OSIA	14.311	O&M
• START I Treaty	• Inspections and inspection support under the terms of START I	• Baseline and treaty year 2 inspections completed successfully	• Continuation of treaty year 3 inspections	15	OSIA	21.001	O&M
• START II Treaty	• Planning and preparations for verification of START II	• Senate gave advice and consent to ratify treaty in January 1996	• Awaiting ratification of the treaty by the Russian Duma	15	OSIA	9.276	O&M
• Nuclear Testing Treaties	• Monitoring and monitoring support of Threshold Test Ban Treaty and Peaceful Nuclear Explosions Treaty	• Maintained a low state of readiness to deploy and monitor a Russian nuclear test	• OSIA/DOE standdown of TTBT monitoring equipment	15	OSIA	0.289	O&M
• Chemical Weapons Agreements	• Inspections and inspection support under the terms of CWC and Bilateral Destruction Agreement for verification and destruction of CW	• Conducted numerous mock inspections and challenge inspection training exercises throughout CONUS	• CWC entry-into-force April 29, 1997 • Bilateral Destruction Agreement: entry-into-force 2QFY99	15	OSIA	34.771	O&M procurement
• Biological Weapons Agreements	• Inspection support under the terms of the BWC and BW Trilateral Agreement	• Conducted staff assistance visits and mock inspections in the U.S	• Support to BWC backstopping and BW agreement preparations	15	OSIA	0.306	O&M
• Comprehensive Test Ban Treaty (CTBT)	• Proposed escort, security, and training functions for DoD/U.S. personnel and facilities	• Provided technical advisory support to the CTBT Interagency Backstopping Group and on-site inspection support to the Verification Monitoring Task Force	• Entry-into-force expected April 1998	15	OSIA	1.014	O&M
• Safeguards, Transparency, and Irreversibility (STI) Program	• Mutual Reciprocal Inspections (MRI) and escort support associated with anticipated STI agreements	• Escorted Russian team to Rocky Flats, LLNL, and ORNL for a technical exchange and to review MRI measurements	• Escorted Russian team visit • Support DoD/DOE in plutonium reactor shut-down talks with Russia	15	OSIA	2.428	O&M
• Other Programs: UNSCOM Operations in Iraq	• As executive agent for DoD, provides personnel, services, and equipment in support of UNSCOM	• Provided support in enforcing UN Security Council Resolution 687 directing the destruction of Iraq's NBC/M infrastructure	• Continued support to UNSCOM inspection and monitoring of Iraq's compliance with UN resolutions.	15	OSIA	5.343	O&M
• Totals:						88.739	

Table C.12: Key DTSA Activities Strongly Related to Counterproliferation

Activity	Description	Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Proliferation Prevention • DTSA Activities	• Develops and implements DoD policies regarding military and dual-use exports and coordinates DoD's review of export licenses	<ul style="list-style-type: none"> • Enhancement of new multinational export control framework, the "Wassenaar Arrangement" • Reviewed over 18,000 export license applications for military and dual-use technologies • Conducted export control cooperation programs with other nations 	<ul style="list-style-type: none"> • Continue to monitor and update export control regulations • Continue export license reviews • Continue international cooperation activities 	14	DTSA	10.542	O&M
• Totals:						10.542	

Table C.13: Key Joint Staff Programs Strongly Related to Counterproliferation

Program/Project Title	Project Description	Project Accomplishments	Key Milestones	DoD ACE	Agency	FY 98 Budget [\$M]	PE No.
Active Defense • JTAMDO Support	<ul style="list-style-type: none"> • Planning, coordination, and oversight of Joint integrated theater air and missile defense requirements generation, Joint operational concepts, and architecture development • Modeling and simulation and studies and analysis support 	• New Start in FY 1998	<ul style="list-style-type: none"> • Maintain requirements section of Master Plan for fielding integrated theater air and missile defenses • Coordinate and support Services, CINCs, and DoD Agencies in interoperability assessments and initiatives 	4, 7	Joint Staff	23.100	605126J
• Totals:						23.100	