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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603160D8Z Counterproliferation Advanced Technology Development						
<i>COST (In Thousands)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	74196	0	0	0	0	0	0	0	0	74196
P535 SOF Counterproliferation Support	16189	0	0	0	0	0	0	0	0	16189
P539 Counterforce	58007	0	0	0	0	0	0	0	0	58007
<u>Mission Description and Budget Item Justification:</u>										
<p>In August 1994, DoD established the Counterproliferation Support Program specifically to address the DoD shortfalls in counterproliferation operational capabilities documented in the May 1994 Report to Congress titled <i>Report on Nonproliferation and Counterproliferation Activities and Programs</i>. Counterproliferation Support Program funds are used to leverage DoD acquisition programs to meet the counterproliferation priorities of the Commanders-in-Chief (CINCs) of the Combatant Commands and accelerate the deployment of enhanced capabilities to the field. Specifically, the goal of the Counterproliferation Support Program is to improve specific military counterproliferation capabilities by (1) building on ongoing programs in the Services, DoD agencies, Department of Energy and US Intelligence; (2) focusing on the most critical counterproliferation shortfalls to address major gaps in deployed capabilities (as reflected in the CINCs' priorities and the Counterproliferation Review Committee's (CPRC) prioritized list of counterproliferation Areas for Capability Enhancements); (3) leveraging existing program funding to more rapidly field capabilities by accelerating the deliverables of DoD programs; (4) identifying and enhancing the development of high payoff technologies to accelerate capabilities to the warfighter; (5) identifying and promoting key non-materiel initiatives that complement technological advances; and (6) transitioning Counterproliferation Support Program projects to the Services as soon as practicable.</p> <p>The FY 1998 Defense Reform Initiative (DRI) directed the establishment of the Defense Threat Reduction Agency (DTRA) effective 1 October 1998. The DTRA will be formed through the consolidation of three existing agencies: the Defense Special Weapons Agency (DSWA), the On-Site Inspection Agency (OSIA), and the Defense Technology Security Administration (DTSA). In addition, several functions from the Office of the Secretary of Defense (OSD) and Washington Headquarters Services (WHS) currently involved in the management of associated programs will transfer to DTRA as well. The DTRA will also carry out programs to counter proliferation and reduce threats posed by weapons of mass destruction and provide nuclear weapon stockpile and related support.</p> <p>As part of this budget submission, Counterproliferation Support Program funding and manpower resources programmed for FY 1999 and out are transferred to the DTRA. A five-percent military and civilian personnel savings associated with the DTRA consolidation has already been applied and is reflected in the funding and personnel transfers to DTRA.</p>										
Exhibit R-2 (PE 0603160D8Z)										

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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603160D8Z Counterproliferation Advanced Technology Development					PROJECT P535	
<i>COST (In Thousands)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
P535 SOF Counterproliferation Support	16189	0	0	0	0	0	0	0	0	16189
<p><u>A. Mission Description and Budget Item Justification</u></p> <p><u>Project P535 - SOF Counterproliferation Support:</u> In 1995, the Secretary of Defense (SECDEF) assigned the core task of countering the proliferation of weapons of mass destruction (WMD) to Special Operations Forces (SOF). The SOF Projects will develop and demonstrate SOF unique devices that enable SOF and special mission units to detect, disable and neutralize WMD and their associated facilities under the direction of a geographic combatant commander-in-chief (CINC) in support of Concept Plan (CONPLAN) 0400. These projects are to be employed by SOF units with direct application to the nation's effort to counter the spread of WMD (CP-WMD). These include efforts to defeat hard and deeply buried targets (HDBT), explosive ordinance disposal (EOD) and maritime efforts to prevent the spread of WMD technology or systems using the sea-lanes. HDBT is focused on breaching tools, improved communications, life support equipment, detection and defeat sensors, underground navigation systems, and target defeat. The EOD focus is on detection, characterization, extraction, and emergency destruction of nuclear, biological and chemical (NBC) agents and devices. Efforts to seek to improve these capabilities by providing greater standoff and utilizing non-intrusive technologies. Maritime counterproliferation (CP) operations concentrate on defeating and neutralizing WMD or WMD material being transported or concealed on maritime platforms. Also included are efforts to enhance our existing capability in support of the domestic response to the WMD threat on U.S. soil. The CP-WMD effort also includes support requirements that apply to all three efforts.</p> <p>Under Project 535, First Responder Projects quickly leverage DoD biological and chemical response, detection and mitigation technologies to crisis and consequence management response teams such as the US Army Technical Escort Unit (USA TEU), the Navy Defense Technical Response Group (DTRG), the Federal Emergency Management Agency (FEMA), the US Secret Service (USSS) and the Department of Public Health and Safety (PHS). These projects are executed in conjunction with the Joint Chiefs of Staff CONPLAN 0300, the Office of the Assistant Secretary of Defense (Special Operations and Low Intensity Conflicts) and the Technical Support Working Group of the National Security Council's Interagency Working Group on Counterterrorism to ensure full interagency coordination of requirements.</p> <p><u>Acquisition Strategy:</u></p> <p><u>FY 1998 Accomplishments:</u></p> <ul style="list-style-type: none"> • 1828 FIRST RESPONDER PROJECTS • Chemical/ Biological Sentry System (CBSS)--Finalized field testing; delivered prototype unit to user (600) • Biological Detection Kit--Field tested system; delivered prototype units to user (329) • Chemical Agent Recognition Training Aid—Developed a training aid that reproduces the visual and auditory signatures associated with chemical agent alarm functioning, thereby increasing individual and user confidence in detector operability (150)) 										
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<ul style="list-style-type: none"> • Detection/ Electronic Diagnostics—Initiated development of modified x-ray system to minimize risk of explosive device functioning during x-ray operations (400) • Access -- Conducted development of Sloth Technology equipment designed to operate/move at speeds below sensing threshold of volumetric sensors (275) • Neutralize -- Assessed capability of explosively driven magneto-hydrodynamic generators as a means of defeating very fast firing circuits on explosive devices (50) • SBIR/STTR (24) • 14361 SOF PROJECTS • Efforts in support of SOF. Specific details are classified (14232) • SBIR/STTR (129) <p>Total 16189</p> <p>FY 1999 Planned Program: Total 0 Funds and activities transferred to PE 0603160BR. P535</p> <p>FY 2000 Planned Program: Total 0 Funds and activities transferred to PE 0603160BR. P535</p> <p>FY 2001 Planned Program: Total 0 Funds and activities transferred to PE 0603160BR. P535</p> <p>B. <u>Project Change Summary</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td style="text-align: center;">11885</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">Continuing</td> </tr> <tr> <td>Appropriated Value</td> <td style="text-align: center;">11885</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: center;">4304</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Current Budget Submit/President's Budget</td> <td style="text-align: center;">16189</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">Continuing</td> </tr> </tbody> </table> <p>C. <u>Other Program Funding Summary</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;"><u>To</u></th> <th style="text-align: center;"><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>Not Applicable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><u>Compl</u></td> <td style="text-align: center;"><u>Cost</u></td> </tr> </tbody> </table> <p>Project P535 Exhibit R-2 (PE 0603160D8Z)</p>				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY2001</u>	<u>Total Cost</u>	Previous President's Budget	11885	0	0	0	Continuing	Appropriated Value	11885	N/A	N/A	N/A	N/A	Adjustments to Appropriated Value	4304	N/A	N/A	N/A	N/A	Current Budget Submit/President's Budget	16189	0	0	0	Continuing		<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To</u>	<u>Total</u>	Not Applicable									<u>Compl</u>	<u>Cost</u>
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603160D8Z Counterproliferation Advanced Technology Development					PROJECT P539	
<i>COST (In Thousands)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
P539 Counterforce	58007	0	0	0	0	0	0	0	0	58007
<p>A. <u>Mission Description and Budget Item Justification</u></p> <p>Project P539 - Counterforce: The purpose of this project is to develop technologies, demonstrate prototype systems in an operationally realistic environment and provide the warfighter with enhanced capabilities in response to current threat projections for potential adversaries who have the capability to develop and/or employ nuclear, biological and chemical (NBC) weapons in future regional conflicts involving the U.S. or its allies. The U.S. requires the capability to identify and characterize NBC research, production, storage and operational support facilities and be prepared to attack and neutralize them while mitigating collateral effects resulting from expulsion and release of NBC agents. The potential target set includes fixed, aboveground and underground hardened and unhardened facilities. The project started in FY95 and was structured to exploit ongoing technology programs wherever possible. Early project emphasis was applied to efforts to predict and measure target response and dispersion of agents associated with attacks against NBC facilities using existing conventional weapons. Current emphasis is to mitigate collateral effects through advanced weapon development and greatly enhanced deliberate target planning leading to optimized weapon employment. The near-term focus is the demonstration of target planning tools, weapons and sensors supporting direct attacks on an expanded set of NBC targets. In the longer-term, the project emphasis will change to standoff penetrating weapons, collateral effects assessment and the supporting planning tools. Prototype or modified systems integrating these technologies will then be evaluated in an Advanced Concept Technology Demonstration (ACTD), and a residual operational capability provided to the warfighters.</p> <p>A second counterforce CP ACTD is approved by DUSD(AT) and is awaiting signature of the management plan. The original CP ACTD has been retitled CP1 ACTD for the first CP ACTD. The second CP ACTD is called the Second Counterproliferation Counterforce Advanced Concept Technology Demonstration (CP2 ACTD). FY98 is the transition year with CP1 ACTD concluding and CP2 ACTD starting.</p> <p>This project builds on previous Defense Special Weapons Agency (DSWA) projects to develop and mature sensor systems to provide additional capabilities for pre-, trans- and post-attack target characterization, and damage and collateral effects assessments. The project further develops and accelerates capabilities in collateral effects prediction, target/weapon interaction prediction, and funds the integration of these capabilities into Service/CINC target planning systems. The project also builds on Service programs in advanced weapon guidance, penetration and fuze enhancements. Service weapon development expertise will be used to integrate complementary, demonstrated technologies into prototype weapons that can improve prompt response, enhance lethality and control collateral effects. The project milestones are broken into four major product areas or subprojects, sensors, collateral effects, target planning and weapons, plus the operational demonstrations.</p> <p>1. <u>Sensors.</u> This effort will provide improved warfighting residual capabilities for facility characterization, battle damage assessment (BDA) and collateral effects assessment against the spectrum of NBC facilities. Research and development is currently in progress at DSWA to characterize signatures from shallow underground facilities for exploitation by tactical unattended ground sensors (TUGS). Objectives of the current program include development of techniques for source identification,</p>										
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<p>localization, and performing change detection in trans-attack signatures for weapon effectiveness analysis. Current intelligence community (IC) and Department of Energy (DOE) programs involve research and development to assess sensor performance and approaches for optimum sensor application for surface target detection and underground facility detection and characterization. Other project activities include enhancing the performance of existing forward looking infrared (FLIR) sensors and a weapon based sensor to provide high confidence BDA. This sub-project will leverage existing programs to (1) define concept of operations and sensor system (ground, air, and weapon based) architectures for BDA, collateral effects assessment and facility characterization; (2) develop and demonstrate sensor technologies and prototype sensor systems for BDA and facility characterization; (3) produce a data fusion and processing module for BDA and facility characterization to meet user requirements on existing platforms; (4) produce an integrated BDA module to support airborne sensors; (5) develop and demonstrate a man-emplaced TUGS system that includes multi-sensor arrays; (6) integrate stand-off and point chemical sensors onto an unmanned air vehicle (UAV) and an expendable mini-UAV, respectively, and demonstrate the ability to confirm, identify, and assess the release of chemical agents in support of attacks on NBC facilities. CP2 ACTD sensors and data fusion will address confirming the presence of chemical agents post attack and assist in predicting transport patterns by updating pre-strike predictions of the potentially hazardous plume with real-time data. The CP2 ACTD sensor program will leverage on-going chemical sensor efforts within the chemical and biological defense community to minimize program risk in developing chemical sensors for counterforce missions. This program will also monitor the progress of remote biological agent detectors for potential incorporation into the collateral effects assessment system.</p> <p>2. Collateral Effects. The Collateral Effects program provides predictive tools for NBC expulsion and dispersion resulting from attacks on WMD facilities as well as acts of terrorism and hostile use of WMD for a variety of applications supporting NBC target attack planning. Requirements include high resolution weather models, weather measurement systems, and population databases. A key element in developing these collateral effects codes is chemical/biological expulsion tests and modeling. Modeling of chemical/biological expulsion sources will be based on theoretical model and empirical data. Codes will be validated from existing data, other predictive models and special collateral effects experiments. The collateral effects tools will provide pre-attack prediction and post-attack assessment. The Hazard Prediction and Assessment Capability (HPAC) is a major product that predicts the release and transport of NBC materials and the subsequent collateral effects. The high resolution weather prediction capability, another area of emphasis in the subproject, will provide timely wind, cloud, and precipitation data necessary for NBC collateral effects predictions. Weather data currently does not have the resolution or quality necessary. This weather data will also be available to other users in the theater such as Joint Warning Network (JWARN). These tools will also be integrated into the target attack planning tools to assess the consequences of attacks on WMD facilities.</p> <p>3. Target Planning. This effort will provide a new deliberate planning combat assessment capability and a major upgrade for existing theater level planning capabilities for defeating or denying NBC facilities and capabilities. This effort builds upon the Integrated Mission Effects Assessment (IMEA) planning tool developed for CP1. IMEA provides a forward deployable target planning capability for NBC targets. IMEA is an integration of the Munitions Effects Assessment (MEA) tool providing targeting solutions using conventional weapons for a variety of structures and equipment and the HPAC developed under the Collateral Effects subproject. The current effort will produce the Integrated Target Planning Tool Set (ITPTS) that will provide a spectrum of planning capabilities from deliberate to crisis. ITPTS includes IMEA II and high resolution weather prediction. IMEA II will import target data and import attack assessment data from prior planned strikes. ITPTS will also predict weapons performance and associated NBC collateral effects, develop targeting solutions that minimize collateral effects, and provide the results through the appropriate interfaces for a variety of targets including functionally and structurally complex facilities. The major differences between IMEA and IMEA II is a greatly enhanced interface to the</p>		
Project P539		Exhibit R-2 (PE 0603160D8Z)

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<p>Intelligence community and upgrades to handle additional target types including complex facilities, to handle additional weapons and platforms, to provide more operator friendly displays, to import attack assessment data, and to efficiently interface with Service planning systems. The ITPTS interfaces include but are not limited to Global Command and Control System, the Service targeting and strike execution control systems, strategic and tactical intelligence and sensor systems, the weather community, and the NBC warning system. A key interface for CP applications is with the Tactical Multi-Sensor Fusion (TMSF), providing critical pre- and post-strike target characterization information. The “plug and play” architecture is required to accommodate differing CONOPS, theaters, and performers in several geographic locations. The deliberate planning capability requires significant input from the intelligence community including data regarding NBC facilities, processes, and surrounding populations. This effort will support the intelligence community in developing the necessary interfaces to provide for the efficient transfer of intelligence data. ITPTS will include IMEA II, IMEA II Prime, an advanced wind and weather prediction capability, and a “plug and play” architecture. This effort will execute a full verification and validation program for all delivered capabilities including extensive field testing at all functional levels.</p> <p>4. Weapons. Conventional explosive-filled weapons are often relatively ineffective in destroying large underground reinforced concrete facilities. Even if the weapon detonates inside the facility, substantial interior walls and/or floors often confine the blast and fragmentation thus causing significant overpressure and venting through the penetration hole. Likewise conventional explosive-filled weapons often result in complete and uncontrolled destruction of soft buried and aboveground facilities. When these facilities protect NBC, the random use of conventional weapons greatly increases the risk of agent dispersal that may result in extensive civilian or force casualties. This sub-project will develop, integrate and demonstrate advanced conventional weapons technologies to improve mission effectiveness against NBC facilities while mitigating collateral effects. For CP1 ACTD, these technologies include improvements in adverse-weather/precision guidance, enhanced penetrating capabilities, and advanced fuzing options. Technologies that have been successfully demonstrated will be weaponized into prototype systems. Advanced fuzes will enable weapons employment options to maximize lethality and/or control collateral effects. The focus for CP2 ACTD is to provide the warfighter with a demonstrated option to attack NBC facilities in a standoff mode. CP2 ACTD will improve on existing stand-off weapon platforms to provide enhanced penetration, advanced fuzing, and enhanced payloads that can reduce collateral effects by neutralizing agents before they are released or reducing the amount released. Standoff weapons to be enhanced include the conventional Tomahawk Land Attack Missile (TLAM-C) and the Conventional Air Launched Cruise Missile (CALCM). Enhanced payloads will explore alternate warhead options to conventional blast/fragmentation with the objectives of mitigating collateral effects associated with dispersal of NBC materials while also minimizing the number of weapons required to functionally defeat WMD facilities.</p> <p>5. Operational Demonstrations. The Counterproliferation ACTD will improve the operational capability for holding NBC targets at risk with minimum collateral effects. The objective is to integrate available or near-term technologies for sensors, weapons, collateral effects prediction and target planning tools, evaluate the technologies in an operational context, and transition improved capabilities rapidly to warfighters. Specifically, this project will enhance and accelerate existing programs to provide integrated target planning to include collateral effects prediction codes and sensors for facility characterization and BDA, and advanced weapons development programs to meet NBC target defeat requirements. This project will also support demonstration operations to include system operational concept, demonstration planning, scenario development, execution of the ACTD and post-demonstration analysis. Planning and execution of the ACTDs uses a time phased approach to screen candidate technologies for maturity, develop prototype systems and demonstrate enhancements in military capability against a warfighter prioritized subset of all potential NBC target types. This approach results in a cycle of prototype development and testing followed by periods of operational demonstration.</p>		
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<p>Two operational demonstration series were defined for the CP1 ACTD. The first demonstration, named Dipole Orbit (DO), was successfully completed in February 1997. This first demonstration used new target planning tools to determine the "best" employment of current weapons with a smart fuze against simulated biological agents housed in soft above-ground bermed structures. The second and final demonstration series, named Dipole Jewel (DJ), is scheduled for completion in July 1998. This demonstration will assess improved capabilities in weapons, sensors, and enhanced planning tools against a simulated, hardened chemical weapons production facility in a shallow-buried, cut-and-cover structure. After the start of CP1 ACTD, the sponsoring command identified a need to understand their ability to conduct counterforce operations against soft above-ground simulated chemical production facilities using the TLAM-C. The Dipole Tiger (DT) demonstration series was added as a quick response to the users' request. DT started in April 1997 and will end in FY98.</p> <p>Four operational demonstration series are planned during CP2 ACTD over the period of FY1999-2002 to provide the sponsor and participating commands with the opportunity to assess the utility of the selected technologies. The objective of the first demonstration series in CP2 ACTD, called Dipole Xeric (DX), is to employ current technology products in weapons and improved target planning tools, using new weapon delivery tactics, and operationally demonstrate their enhanced penetration capabilities against a simulated chemical agent production and storage facility considerably harder than the structure used during CP1 ACTD Dipole Jewel series. The objective of the second demonstration series, called Dipole Yukon (DY), is to exploit near-term technology by demonstrating the baseline capabilities of the Joint Air-to-Surface Stand-off Missile (JASSM) to conduct chemical/biological (C/B) counterforce missions through operationally realistic attacks against a simulated biological weapons storage facility. The objective of the third demonstration, called Dipole Zodiac (DZ), is to assess the suitability of the CALCM with a penetrating warhead and a Predator UAV-based standoff sensor providing collateral effects assessment. The objective of the fourth demonstration series, called Divine Canberra (DC), is to evaluate the end-to-end set of products of the CP2 ACTD including the target planning tool, in its final operational context, a TLAM stand-off attack penetrating weapon capability, and remote combat assessment using a small expendable mini - UAV with a chemical point sensor on-board (and deployed from the Predator UAV demonstrated in DZ) against a relatively hard chemical production and storage facility. DC also includes demonstration of a weaponized enhanced payload.</p> <p>The High Frequency Active Auroral Research Program (HAARP) is to develop an ionospheric research facility to study and exploit emerging ionospheric technology for DoD surveillance and communications applications. The specific application of this project is imaging of underground counterproliferation related facilities.</p> <p><u>Acquisition Strategy:</u> FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • 11440 SENSORS • Delivered TMSF for validation, support ACTD fielding and provide operational user manuals. (600) • Provided test support and fielding for TFPM. (1400) • Delivered TUGS demonstration units, supply communications and interfaces, support validation tests and supply operational user manuals. (2700) • Baselined performance of existing remote or standoff chemical agent detectors for the counterforce role and down-select to an appropriate candidate. (200) 		
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<ul style="list-style-type: none"> • Initiated testing of existing chemical point sensors for counterforce role. (1400) • Initiated design modifications of a mini-UAV chemical point sensor. (900) • Initiated design modifications of the Predator UAV platform for remote sensing and delivery of a mini-UAV. (540) • Initiated Predator UAV sensor system integration and subsystem test and evaluation. (1000) • Upgraded HAARP transmitter. Evaluate "Blind" test data. Validation analysis of ground global tomography (2700) • 6900 COLLATERAL EFFECTS <ul style="list-style-type: none"> • Developed high resolution weather prediction capability and weather data server. (2500) • Collected weather data for tools validation. (1800) • Developed a chemical precursor source term model. (800) • Enhanced population effects model. (600) • Initiated development of HPAC 4.0 software. (1200) • 10600 TARGET PLANNING <ul style="list-style-type: none"> • Delivered IMEA 3.1 to reflect lessons learned from the CP I ACTD. (500) • Generated component level weapon-target validation data. (800) • Initiated design and development of IMEA 4.0 for Dipole Xeric. (1800) • Defined interface standards and initiate software development for the Integrated Target Planning Tool Set (ITPTS). (1200) • CP Analysis and Planning System (CAPS) - advanced planning initiative (6300) • 18004 WEAPONS <ul style="list-style-type: none"> • Completed ITAG flight test and fabrication of ACTD demonstration units. (2880) • Completed Ground Setting Unit (GSU) design and certification for HTSF. (2650) • Procured AUPs and conduct flight tests for DX demonstration readiness. (1092) • Designed and ground tested a CALCM unitary penetrator. (2500) • Conducted TLAM penetrator systems integration. (982) • Initiated TLAM penetrator warhead design, fabrication, and test. (3850) • Initiated smart fuze design to meet Navy certification requirements. (1800) • Conducted initial down-selection and lab tests of payloads to mitigate collateral effects. (950) • Began scale tests of selected high temperature incendiaries (HTI) and chemical neutralization agents against simulated chemical and biological agents. (550) 		
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<ul style="list-style-type: none"> • Conducted modeling and simulation to support concept screening and down-select. (600) • Developed enhanced weapon lethality models to support predictions of agent response. (150) • 10205 OPERATIONAL DEMONSTRATIONS • Executed the CP ACTD Phase II (Dipole Jewel). (5098) • Completed Dipole Jewel post demonstration analysis. (1100) • Initiate target construction for Dipole Xeric demonstration. (807) • Conducted Dipole Xeric demonstration planning. (1200) • CP Capabilities Working Group - advanced planning initiative (2000) • 858 SBIR/STTR Total 58007 										
FY 1999 Planned Program:										
Total 0 Funds and activities transferred to PE 0603160BR. P539										
FY 2000 Planned Program:										
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B. Project Change Summary										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>					
Previous President's Budget	46376	0	0	0	Continuing					
Appropriated Value	56376	N/A	N/A	N/A	N/A					
Adjustments to Appropriated Value	1631	N/A	N/A	N/A	N/A					
Current Budget Submit/President's Budget	58007	0	0	0	Continuing					
C. Other Program Funding Summary										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To	Total
Not applicable									Compl	Cost
Project P539										
Exhibit R-2 (PE 0603160D8Z)										