

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
--	------------------------------

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0207320F Sensor Fuzed Weapon (SFW)	PROJECT 1016
---	---	-------------------------------

COST (\$ In Thousands)	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
1016 Sensor Fuzed Weapon	15,804	7,504	11,785	0	0	0	0	0	0	64,601
Quantity of RDT&E Articles	4	0	0	0	0	0	0	0	0	8

(U) A. Mission Description

This project continues development of the Sensor Fuzed Weapon (SFW) Pre-Planned Product Improvement (P3I). The P3I improvements to the baseline SFW will enhance weapon performance against primary targets (land combat vehicles), targets with countermeasures, and potentially allow for use against alternative targets. The improvements will also enhance the performance of SFW when fitted with the Wind Corrected Munitions Dispenser (WCMD) kit and the anti-armor version of the Joint Standoff Weapon (JSOW). All P3I improvements are at the BLU-108 submunition level. SFW is an ACAT II program.

(U) FY 1998 (\$ in Thousands):

- (U) \$9,954 Continued the P3I development, qualification, integration of the dual mode sensor and multi-mission warhead. Conduct munition tests.
- (U) \$4,694 Conduct dual mode sensor and multimission warhead tests
- (U) \$1,156 Continued program management support, including travel, program office supplies and equipment, training and technical engineering support
- (U) \$15,804 Total

(U) FY 1999 (\$ in Thousands):

- (U) \$7,030 Continue the P3I development program with contractor test and evaluation
- (U) \$347 Continue program management support, includes travel, program office supplies and equipment, training and technical engineering support
- (U) \$127 Identified as a source for SBIR
- (U) \$7,504 Total

(U) FY 2000 (\$ in Thousands):

- (U) \$9,865 Complete the P3I development program; correct technical problems; complete contractor development testing; and support govt. qualification testing
- (U) \$846 Continue program management support, includes travel, program office supplies and equipment, training and technical engineering support
- (U) \$1,074 Conduct and complete subsystem level testing and Cluster Bomb Unit (CBU) flight testing
- (U) \$11,785 Total

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
--	------------------------------

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0207320F Sensor Fuzed Weapon (SFW)	PROJECT 1016
---	---	-------------------------------

(U) B. Budget Activity Justification:

This program is in budget activity 7 - Operational System Development, because this activity funds improvements to the SFW, which is currently in production.

(U) C. Program Change Summary (\$ in Thousands)

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 1999 PB)	16,437	3,551	0	0	48,169
(U) Appropriated Value	19,804	7,551			
(U) Adjustments to Appropriated Value					
a. Congressional/General Reductions	-705	-47			
b. SBIR	-2,875				
c. Omnibus or Other Above Threshold Reprogram	-420				
d. Below Threshold Reprogramming					
(U) Adjustments to Budget Years Since FY 1999 PB			11,785		
(U) Current Budget Submit/FY 2000 PB	15,804	7,504	11,785	0	64,601

(U) Significant Program Changes:

The SFW P3I development slipped 17 months in FY98 due to technical problems with: the new dual mode sensor (infrared & laser); software; and noise from single mounting board configuration. There were reliability concerns with the micro-lens design due to requirements to maintain very precise tolerances over a 20 year life cycle. The software development process was far more resource consuming than anticipated. Finally, the prototype electronics printed wire assembly exhibited excessive noise/cross-talk. All problems have been corrected and prototype testing has revealed redesign efforts were successful. Congress added \$4,000 in the FY99 appn for laser sensor redesign and the Air Force added \$11,785 in FY00 to correct the remaining technical problems and complete the program. The weapon level testing and the P3I development will now be completed various in FY00 with first year of P3I production in FY01. FY99: \$127 identified as a source for SBIR.

(U) D. Other Program Funding Summary (\$ in Thousands)

	<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 Compl</u>	<u>Total Cost</u>
(U) Procurement of Ammunition, AF P-1 Line Item SFW	148,621	125,083	61,334	101,508	87,538	87,372	86,415	84,400	202,000	1,630,125

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0207320F Sensor Fuzed Weapon (SFW)

	<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 <u>Compl</u>	Total <u>Cost</u>
(U) SEEK EAGLE Procurement of Ammunition, AF P-1 Line Item SFW	0	0	0	0	0	0	0	0	0	10,888

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)												DATE February 1999																																																																																																																																																																																														
BUDGET ACTIVITY 7 - Operational System Development						PE NUMBER AND TITLE 0207320F Sensor Fuzed Weapon (SFW)						PROJECT 1016																																																																																																																																																																																														
<p>(U) E. Acquisition Strategy: The SFW Pre-Planned Product Improvements (P3I) program is a 58 month R&D effort to enhance the BLU-108 submunition and projectile. This is a sole source Cost-Plus Award Fee (CPAF) contract for P3I to the current SFW submunition design. The SFW P3I submunition (improved BLU-108) will be used in the JSOW weapon system.</p>																																																																																																																																																																																																										
<p>(U) F. Schedule Profile</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="4"><u>FY 1998</u></th> <th colspan="4"><u>FY 1999</u></th> <th colspan="4"><u>FY 2000</u></th> <th colspan="4"><u>FY 2001</u></th> </tr> <tr> <th></th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>(U) Design and Development of P3I</td> <td>*</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td>X</td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) End Trade Studies</td> <td></td><td></td><td></td><td>*</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Preliminary Design Review (PDR)</td> <td>*</td><td></td><td></td><td></td> <td></td><td></td><td></td><td>X</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Detailed Design/Development Tests</td> <td>*</td><td>*</td><td>*</td><td>*</td> <td>*</td><td>X</td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Development Test Meeting</td> <td></td><td></td><td></td><td></td> <td></td><td>X</td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Critical Design Review (CDR)</td> <td></td><td></td><td></td><td></td> <td></td><td>X</td><td></td><td></td> <td></td><td>X</td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Hardware Build/Qualification Tests</td> <td></td><td></td><td></td><td></td> <td></td><td>X</td><td>X</td><td>X</td> <td>X</td><td>X</td><td>X</td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) Subsystem Level Testing</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td>X</td><td>X</td><td>X</td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>(U) System Level Testing</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td>X</td><td>X</td> <td>X</td><td></td><td></td><td></td> </tr> </tbody> </table> <p>* = Completed Events X = Planned Events</p>																	<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	(U) Design and Development of P3I	*										X						(U) End Trade Studies				*													(U) Preliminary Design Review (PDR)	*							X									(U) Detailed Design/Development Tests	*	*	*	*	*	X											(U) Development Test Meeting						X											(U) Critical Design Review (CDR)						X				X							(U) Hardware Build/Qualification Tests						X	X	X	X	X	X						(U) Subsystem Level Testing										X	X	X					(U) System Level Testing											X	X	X			
	<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>																																																																																																																																																																																													
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																										
(U) Design and Development of P3I	*										X																																																																																																																																																																																															
(U) End Trade Studies				*																																																																																																																																																																																																						
(U) Preliminary Design Review (PDR)	*							X																																																																																																																																																																																																		
(U) Detailed Design/Development Tests	*	*	*	*	*	X																																																																																																																																																																																																				
(U) Development Test Meeting						X																																																																																																																																																																																																				
(U) Critical Design Review (CDR)						X				X																																																																																																																																																																																																
(U) Hardware Build/Qualification Tests						X	X	X	X	X	X																																																																																																																																																																																															
(U) Subsystem Level Testing										X	X	X																																																																																																																																																																																														
(U) System Level Testing											X	X	X																																																																																																																																																																																													
Project 1016				Page 3 of 5 Pages				Exhibit R-2 (PE 0207320F)																																																																																																																																																																																																		

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999				
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0207320F Sensor Fuzed Weapon (SFW)				PROJECT 1016			
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>											
				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>				
(U) Major Contracts				9,954	7,030	9,865	0				
(U) Support Contracts				721	307	796	0				
(U) Program Office Support				435	40	50	0				
(U) Test and Evaluation				4,694	0	1,074	0				
(U) Identified as a source for SBIR				0	127	0	0				
(U) Total				15,804	7,504	11,785	0				
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
Performing Organizations:											
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
Identified as a source for SBIR 127			N/A	N/A	0	0	127	0	0	0	0
<u>Product Development Organizations</u>											
Textron System Defense	SS/CPAF	Jan 99	52,251	52,251	25,402	9,954	7,030	9,865	0	0	52,251
<u>Support and Management Organizations</u>											
ASC/YH	N/A	various	N/A	N/A	1,468	435	40	50	0	0	1,993
Miscellaneous	various	various	N/A	N/A	440	721	307	796	0	0	2,264
<u>Test and Evaluation Organizations</u>											
46 OG/OGML	REO	Mar 00	N/A	N/A	2,009	4,694	0	1,074	0	0	7,777
Project 1016				Page 4 of 5 Pages				Exhibit R-3 (PE 0207320F)			

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0207320F Sensor Fuzed Weapon (SFW)				PROJECT 1016		
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands) (Contd.)										
Government Furnished Property:										
<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1998</u>	<u>Budget FY 1998</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Property</u>										
GFE (explosive) Army, Aberdeen	MIPR	May 97	Oct 97	72	0	0	0	0	0	72
GFE (RHA Plates) Army, Aberdeen	MIPR	Jun 96	Jul 96	117	0	0	0	0	0	117
<u>Support and Management Property</u>										
None										
<u>Test and Evaluation Property</u>										
None										
Identified as source for SBIR				0	0	127	0	0	0	127
Subtotal Product Development				25,591	9,954	7,030	9,865	0	0	52,440
Subtotal Support and Management				1,908	1,156	347	846	0	0	4,257
Subtotal Test and Evaluation				2,009	4,694	0	1,074	0	0	7,777
Total Project				29,508	15,804	7,504	11,785	0	0	64,601

THIS PAGE INTENTIONALLY LEFT BLANK