PE NUMBER: 0604441F PE TITLE: Space Based Infrared Systems (SBIRS) High EMD

Exhib	oit R-2, RDT	&E Budge	t Item Just	ification			DATE	February	2004
BUDGET ACTIVITY 05 System Development and Demonstrati	ion (SDD)			E NUMBER AND 604441F Spa		rared System	ns (SBIRS) Hi	igh EMD	
Cost (\$ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to	Total
· · · · · ·	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	February High EMD Cost to Complete 984.700 984.700 984.700 forces or its allie ballistic missile focurate, and time detection and trace onal Requirement on an integrated complete the second second second second second second traces of the second s	
Total Program Element (PE) Cost	775.346	610.230	508.448	373.353	310.628	381.646	342.713		6,986.751
3616 SBIRS High Element EMD	775.346	610.230	508.448	373.353	310.628	381.646	342.713	984.700	6,986.751
will incorporate new technologies to enhar and tactical ballistic missile launches. SBI Unified Combatant Commanders, Joint Ta performance in order to meet requirements Document. SBIRS will consist of satellite ground station serving all SBIRS space ele (U) This program is assigned to Budget Ad	nce detection, a IRS supports Ba isk Force (JTF) is in US Space C is in Geosynchro ements, Defense	nd improve rep attlespace Char Commanders, t Command's Cap onous Earth Or e Support Progr	orting of interc acterization an the intelligence stone Requirer bit (GEO), pay cam (DSP) sate	continental ball d Technical Int e community, a nents Documer loads hosted of llites, and prog	istic missile lau celligence missi nd other users. nt and Air Forc n satellites in H ram and other	inches, submar ions by providin SBIRS provid e Space Comm lighly Elliptical related support	ine launched ba ng reliable, acc les increased de nand's Operation l Orbit (HEO), activities.	allistic missile l urate, and time etection and trace nal Requirement an integrated co	aunches, ly data to cking nts entralized
program. (U) <u>B. Program Change Summary (\$ in Mill</u>	lions)					<u>FY 2003</u>	FY2	2004	<u>FY 2005</u>
(U) Previous President's Budget						775.395			508.919
(U) Current PBR/President's Budget						775.346	610	.230	508.448
(U) Total Adjustments						-0.049			
(U) Congressional Program Reductions							-6	.999	
Congressional Rescissions Congressional Increases									
Reprogrammings									
SBIR/STTR Transfer						-0.049			
(U) <u>Significant Program Changes:</u>									
		R-1 Sh	opping List - Iten	n No. 75-1 of 75-6	6			Exhibit R-2 (I	PE 0604441F)

	Ex	hibit R-2a, F	RDT&E Pro	ject Justifi	ication			DATE	February	2004		
	ET ACTIVITY stem Development and Demonstra	ation (SDD)		0	E NUMBER AND 604441F Spa Systems (SBI	ce Based Inf		PROJECT NUM 3616 SBIRS	BER AND TITLE High Element	EMD		
	Cost (\$ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2007	FY 2007	FY 2008	FY 2009	Cost to	Total
		Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete			
3616		775.346	610.230	508.448	373.353	310.628	381.646			6,986.751		
	Quantity of RDT&E Articles	0	0	0	0	0	0	0				
	A. Mission Description and Budget Ite (U) The Space-Based Infrared System's (will incorporate new technologies to enh and tactical ballistic missile launches. SI Unified Combatant Commanders, Joint T performance in order to meet requirement Document. SBIRS will consist of satelli ground station serving all SBIRS space e (U) This program is assigned to Budget A program.	(SBIRS) primary ance detection, a BIRS supports Ba Fask Force (JTF) ats in US Space C tes in Geosynchro elements, Defense	nd improve rep attlespace Char Commanders, Command's Cap onous Earth Or e Support Progr	porting of inter- racterization and the intelligence ostone Requires bit (GEO), pay ram (DSP) sate	continental ball d Technical Int e community, a ments Documen yloads hosted of ellites, and prog	istic missile lat celligence miss nd other users. nt and Air Forc n satellites in F ram and other	unches, subma ions by provid SBIRS provi es Space Comm lighly Elliptic related suppor	rine launched b ling reliable, acc des increased d mand's Operatic al Orbit (HEO), t activities.	allistic missile l curate, and time etection and trac onal Requirement an integrated co	aunches, ly data to cking nts entralized		
(U) (U) (C) (U) (U) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	B. Accomplishments/Planned Program Continue EMD contracts for Space and G levelopment, GEO 1&2 integration, asse and test, Ground System development, Sy support, Host SPO support, Combined Ta studies, and related support activities).	round segment de mbly and test, HI ystem Engineerin	EO developme g and Program	ent/production, Management,	HEO 2 integra Increment 1 Pr	tion, assembly. e-operations	73	<u>7 2003</u> 36.070	<u>FY 2004</u>	<u>FY 2005</u>		
	Continue System Program Office Support]	13.772	7.508	8.849		
	Continue technical analysis and independent		nd validation o	f contractor by	FFRDC.		-	25.504	27.482	26.494		
) a I	Continue EMD contracts for Space and G GEO 1&2 integration, assembly and test, and test, Ground System development, Sy intelligence activities, CTF support activity activities).	HEO developments HEO developments HEO developments	nt/production/c g and Program	on-orbit suppor Management,	t, HEO 2 integr Host SPO supp	ation, assembl	3		575.240	473.105		
	Fotal Cost						71	75.346	610.230	508.448		
Proje	ect 3616		R-1 Sh	opping List - Iter	n No. 75-2 of 75-6	6			Exhibit R-2a (F	PE 0604441F)		

	UNCLASSIFIED	
Exhibit R-2a, RDT&E Pro	DATE February 2004	
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604441F Space Based Infrared Systems (SBIRS) High EMD	PROJECT NUMBER AND TITLE 3616 SBIRS High Element EMD
U) <u>C. Other Program Funding Summary (\$ in Millions)</u>		
U) <u>D. Acquisition Strategy</u> The pre-SDD SBIRS contracts were competed in full and open competing pre-SDD phase. A single contract was awarded to Lockheed Martin in		Aerojet and Hughes/TRW in 1995 for the

E	Exhibit R-3, RD	T&E Project Cost	t Analysis	6					DATE		rv 200	14
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)			PE NUMBER AND TITLE						February 2004 PROJECT NUMBER AND TITLE 3616 SBIRS High Element EMD			
(U) <u>Cost Categories</u>	Contract Method	Performing Activity &	Total	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	Cost to	Total	Target
(Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>& Type</u>	<u>Location</u>	Prior to FY 2003 Cost	<u>2003</u> <u>Cost</u>	2003 Award Date	Cost	2004 Award Date	Cost	2005 Award Date	-	<u>Cost</u>	Value of Contract
(U) Product Development												
LMMS & Hughes (Pre-SDD)	C/CPFF		159.600							0.000	159.600	
LMMS (SDD)		Lockheed Martin, Sunnyvale, CA	2,352.564	736.070	Oct-02	575.240	Oct-03	473.105	Oct-04	2,168.386	6,305.3 65	6,305.38 6
SBIRS Pre-SDD Contract Adjustment			4.780							0.000	4.780	
Technology	Various		11.600							0.000	11.600	
Phenomenology	Various		17.350								17.350	
Sandia Natl Lab (Cobra Brass) Not Applicable	Various		10.000								10.000 0.000	
Subtotal Product Development			2,555.894	736.070		575.240		473.105		2,168.386	6,508.6 95	6,305.38 6
Remarks:												
(U) <u>Support</u> Aerospace Corp		Aerospace Corp, El Segundo CA	98.417	25.504	Oct-02	27.482	Oct-03	26.494	Oct-04	151.726	329.623	329.623
Prgm Mgmt Supt	Various	Various	45.376	13.772	Oct-02	7.508	Oct-03	8.849	Oct-04	72.928	148.433	153.542
Subtotal Support Remarks:			143.793			34.990		35.343				483.165
 (U) <u>Test & Evaluation</u> Not Applicable Subtotal Test & Evaluation Remarks: 			0.000	0.000		0.000		0.000		0.000	0.000 0.000	
(U) <u>Management</u>											0.000	
Subtotal Management Remarks:			0.000	0.000		0.000		0.000		0.000		
(U) Total Cost			2,699.687	775.346		610.230		508.448		2,393.040	6,986.7 51	6,788.55 1
Project 3616		R-1 Shopping List	- Item No. 75-4	4 of 75-6						Exhibit R	R-3 (PE 0	604441F)

ACTIVITY	: R-4, RDT&I	- Schedule	Profile	D TITLE	PR		ebruary 200 AND TITLE
em Development and Demonstration (SD	0604441F Spa	ace Based Infr IRS) High EMD	ared 36	16 SBIRS Higl			
	FY03	FY04	FY05	FY06	FY07	FY08	FY09
System Effectivities) TS-1 Available (DSP 23	HEO Msg Cert	Contraction of the second	0 M3P ITWAA Cert	
Space Segment		HEO-1	HEO-2 Delivery				
HEO Deliveries			ARTVAC GEO-1 T		GEO-1 Launch	G EO-2 Laurich	
GEO Deliveries		222 222 222	E01-2	GEO-2 TA	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Opera	tions
Ground Segment							
Mission Control Station			l i i i i	ations			
Mission Control Station Backup			evelopment				
Ground Software Block Builds	HEOT	HIO	GIST	OT GIO		FC	
DSP capable M3Ps	Developn				Opera	ations	
GEO capable M3Ps		to SEIT		De	velopment		
HEOT: HEO Early Orbit Test HIO: H	3E0 Full Capabil E0 Interim Open Systems Eng, Int	ations IC	IO: GEO Interim)T&E: Initial open VAC: Thermal va	ation	M3P: Muh	0 Inter Segment ti-mission Mobile ater Event Syste	Processor
Concept activities Production / fielding			n / developme tions / sustair			<mark>_</mark> Integratio ⟩ Key even	

Exhibit R-4a, RDT&E Schedule	DA	DATE February 2004			
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604441F Space Based Infrared Systems (SBIRS) High EMD	PROJECT NUMBER AND TI 3616 SBIRS High Elen			
(U) <u>Schedule Profile</u>	<u>FY 2003</u>	FY	<u>2004</u>	<u>FY 2005</u>	
(U) Effectivity 1 - Interim Mission Control Station - Backup (IMCS-B) Certification	1Q				
(U) Integrated Training System available	4Q				
(U) HEO sensor #1 delivery			4Q		
(U) DSP capable M3P to Systems engineering, integration & test team (SEIT)			2Q		
(U) HEO interim operations			2-3Q		
(U) HEO Sensor #2 Delivery				1Q	
(U) Effectivity 3 HEO message certification				4Q	
(U) Effectivity 4 - DM3P Theater Event System (TES) Certification				4Q	