

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY		PE NUMBER AND TITLE								
4 - Advanced Component Development and Prototypes		0603747A - Soldier Support and Survivability								
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	33232	4330	4787	4912	5315	5405	4359	4462	Continuing	Continuing
610 FOOD ADV DEVELOPMENT	3233	2740	3795	3914	4315	4405	4359	4462	Continuing	Continuing
669 CLOTHING AND EQUIPMENT		8								7954
C08 RAPID EQUIPPING FORCE	29999	1582	992	998	1000	1000				43071

A. Mission Description and Budget Item Justification: This program element supports component development and prototyping for organizational equipment, improved individual clothing and equipment that enhance Soldier battlefield effectiveness, survivability, and sustainment. This program element also supports the component development and prototyping of joint service food and combat feeding equipment designed to reduce logistics burden. In FY06, Projects 669 and C09 transition to a new Program Element, 0603827A, Soldier Systems - Advanced Development.

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4 - Advanced Component Development and Prototypes	0603747A - Soldier Support and Survivability			
<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	3344	2778	3833	3929
Current BES/President's Budget (FY 2008/2009)	33232	4330	4787	4912
Total Adjustments	29888	1552	954	983
Congressional Program Reductions	-15	-17		
Congressional Rescissions	-34			
Congressional Increases		1600		
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years	29937	-31	954	983

Change Summary Explanation:

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603747A - Soldier Support and Survivability						PROJECT 610	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
610 FOOD ADV DEVELOPMENT	3233	2740	3795	3914	4315	4405	4359	4462	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides for the advanced component development and prototyping of joint service food and combat feeding equipment designed to reduce the logistics burden and Operation and Support (O&S) costs of subsistence support to service personnel. Project supports development of rations and rapidly deployable field food service equipment. Project conducts demonstration and validation of improved subsistence and subsistence support items used to enhance soldier effectiveness and quality of life in all four Services, as part of an integrated Department of Defense (DoD) Food Research, Development, Test, Evaluation and Engineering Program. The Program is reviewed and validated twice annually by the DoD Combat Feeding Research and Engineering Board (CFREB) as part of the Joint Service Food Program. This project develops critical enablers that support the Joint Future Force Capabilities and the Joint expeditionary mindset by maintaining readiness through fielding and integrating new equipment. This equipment enhances the field soldier's well-being and provides the soldier with usable equipment, in addition to reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY06: Based on warfighter recommendations; obtained COTS, NDI, and completed development of Unitized Group Ration (UGR) Heat and Serve (H&S) and A components (for UGR 2008 date of pack (DOP)) to improve the acceptability of the family of UGR. Down selected components via in-house technical panels and completed development of prototype UGR H&S and A menus. Completed draft procurement documents. Secured test site and transitioned to 6.5 for field testing in 1Q07. Completed accelerated development of the Unitized Group Ration-Express (UGR-E), a self-contained non powered hot group meal for remote units (i.e. warfighters). Successfully completed UGR-E producibility test and operational testing (OT). Completed procurement documents, initiated transition to DSCP. Completed development of Enhanced Box (E-Box) to augment UGR-E based on warfighter feedback from OIF/OEF and initiated transition to DSCP. FY07: Complete transition of all UGR-E procurement documents to DSCP. Complete UGR (H&S, A) component menu development to improve family of UGRs for FY09 date of pack. Based on warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Complete draft procurement documents. Secure test site and transition to 6.5 for field testing. Complete development of dehydrated BIB (Boil-in-Bag) menu components for UGR H&S to enhance variety/acceptability incorporate into and transition to 6.5 for field testing. Complete development of Bakery Kit to augment UGR H&S with high quality, easy to prepare baked goods. Complete draft procurement documents and transition to 6.5 for field testing.	1098	1250		
FY08-09: Improve family of UGRs (H&S, A, B and E) to increase overall warfighter acceptability, and consumption for FY10-11 DOPs). Based on warfighter recommendations incorporate COTS, NDI, and developmental components into prototype menus. Select field test site, complete draft procurement documents and transition to 6.5 for field testing. Integrate state of the art packaging, chemical heating and combat ration processing technologies for improved operational and functional performance.			1119	1164
FY06: Completed development of the First Strike Ration (FSR) design for first on the ground first to fight. FSR reduces weight and cube by 50% ICW Meal, ready to Eat and provides eat o the move capability. Successfully completed producibility and assembly tests with industry. Completed procurement documents and operational testing. Developed/finalized FSR procurement management plan with DA G-4, USMC and DLA. Obtained OTSG approval for FSR as a restricted ration. FY07: Complete transition of all FSR procurement	715	321	317	163

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documents to DSCP. Based on Marine Corps request select new components to expand FSR menu availability to improve overall acceptability and consumption. Evaluate new components for product improvement of Long Range Patrol (LRP) and Meal, Cold Weather (MCW). Develop prototype menus for FSR (2)/LRP/MCW. Select test site and complete draft procurement documents.FY 08: Complete initial development/integration of the Supplemental Improvement Pack (SIP) to augment Assault/Special Purpose Rations. SIP will contain components to increase caloric availability and improve warfighter cognitive/physical performance. Complete FSR/MS/LRP component down select (COTS, NDI, developmental items and S&T transitions) and prototype menu development to improve quality, acceptability, eat on the move capability and consumption rate. Secure test site, complete draft procurement documents and transition to 6.5 for field testing. FY 09: Optimize developmental S&T components from NOFSR ATO projects. Design expanded FSR menus with developmental and non-developmental performance enhancing components. Evaluate developmental, non-developmental, and COTS components for modification and expansion of FSR menus based on Warfighter feedback. Complete prototype development and prepare for field testing of SIP. Secure test site, prepare draft procurement documents and transition to 6.5 for field testing.				
FY 06: Based on warfighter recommendations, obtained COTS, NDI and completed development of MRE components (for 2009 DOP) to improve acceptability, expand variety and improve consumption. Down selected components via in house technical panels, and completed development of prototype menus; completed draft procurement documents, secured test site and transitioned to 6.5 for field testing in FY07. Completed in house evaluation of improved cheese spread formulations which resists degradation effects of heat and transitioned to 6.5 for field testing. Completed operational testing of two alternative non-flammable gas producing flameless ration heaters and completed data analysis for Joint Service Operational Ration Forum decision 2Q07. FY 07: Validate new directional tear primary packaging film for MRE components to facilitate increased consumption by warfighters. Based on warfighter preferences incorporate COTS, NDI and developmental components (COTS, NDI, developmental), down select (for 2010 DOP), into prototype menu development. Complete draft procurement documents, secure test site and transition to 6.5 or 4Q07 field testing. FY 08: Complete validation of MRE directional tear primary packaging material, complete modification of draft procurement document and transition to 6.5 for 4Q08 field testing. Develop nanocomposite MRE packaging material (menu bag, primary ration component) to eliminate foil laminate, reduce weight and volume of packaging waste on the battlefield while maintaining barrier properties. Transition to 6.5 for field testing. Based on warfighter preferences incorporate COTS, NDI and developmental components (for 2011 DOP) into prototype MRE menus. Select field test site (4Q08) and complete draft procurements documents and transition to 6.5 for field testing. Integrate packaging/food processing S&T transitions to improve operational and functional performance.	388	928	834	
FY 09: Complete initial demonstration of multi-functional secondary packaging. Fabricate and evaluate prototype shipping containers. Begin producibility studies of optimized fiberboard. Evaluate components for improving the nutrition and variety of MARC and Kosher for Passover menus. Based on Warfighter preferences incorporate COTS, NDI and developmental components (for 2012 DOP) into prototype MRE menus. Select field test site (4Q09) and complete draft procurements documents and transition to 6.5 for field testing.				442
FY06: Developed, optimized and ruggedized Surface scanning Biosensor design with USDA. Completed case hardening for the rapid screening and detection of chemical agents and microbial contaminants/pathogens from whole foods. Awarded BAA contract to BioMachines to develop bioconjugated fluorescent dyes for increase signal generation. Completed field tests, prepared Technical Data Package and transitioned to Veterinary Command to support system procurement. Biosensor system will provide rapid detection, enhanced military field diagnostics capability, improved food safety, savings in labor, and reductions in ration discard losses.	363			
FY08: Conduct Producibility testing of MRE non-retort pouches fabricated from polymer nanocomposites. Complete package performance testing of non-retort nanocomposite pouches to include rough handling, permeability and storage stability. Incorporate novel state-of-the-art packaging materials into future combat ration packaging systems that offer low cost, enhanced performance capability, durability, reliability and barrier properties for product shelf life and survivability while achieving strategic military requirements.			235	

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Optimize multi-layer nanocomposite structures/films and novel polymer matrices to provide improvement in key properties of morphological, mechanical, barrier, and thermal stability critical to combat rations and increased packaging performance capability. Quantify cost advantage over current from package down-gauging and elimination of specific materials. Complete performance based requirements document and transition to DSCP.				
FY08: Review and validate ice usage/consumption and scrub requirements for Battlefield Ice Supply System (BISS) with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI Bulk Ice Making and bagging Systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). FY09: Award contract to design and fabricate prototype(s) and conduct contractor testing to validate stated performance requirements. Execute independent test and evaluation program plan. Prepare milestone documentation. Transition to 6.5			132	256
FY06: Completed provisions storage configuration study for the Littoral Class Ship U.S.S. Freedom (LCS-1). Made recommendations for chill/freeze provision storage optimization to meet the ships operational goals and objectives. Utilized a total systems approach in completing a modeling and simulation analysis of the galley, scullery, and storage space parameters for DD(X)/DDG-1000. Efforts support the Navy Standard Core Menu, production/work flow, manpower usage, equipment requirements and maintenance reductions. The new design was adopted by PEO Ships as a food service space consolidation effort to accommodate planned optimized crew sizes of the future. FY07: Recommend foodservice space consolidation and galley designs to support the Navy_s initiative of reduced crew size for future platforms, such as DD (X)/DDG-1000, LCS, and CG (X) and the CVN-78. Prototype models utilizing modular concepts based on service feeding requirements, equipment configurations, manpower usage, production flow, and maintenance requirements to ensure future galley designs meet future Navy transformation to the future. Optimize system design configuration for specific Naval system platform and transition to 6.5.	358	164		
FY06: Explored and applied cost effective technologies to extend the shelf life of highly perishable Fresh Fruits and Vegetables (FF&V) for military feeding systems. Conducted additional prototype testing in-house of polymer membranes to control atmosphere of FF&V commodity and down selected system to be used aboard Navy submarine fleet. Awarded 2nd Phase contract to Apio Inc. to develop membrane technology for the top 12 FF&V identified by Naval Supply Systems Command (NAVSUP). Conducted multiple field tests and user evaluations for to refine system. Demonstrated 400% shelf-life extension of single and case sized banana configurations and conducted extensive afloat field testing and user evaluations of selected items, broccoli, iceberg lettuce and bananas aboard the USS Reagan with positive results. Transitioned via performance specification to Navy for implementation.	111			
FY06: Provided technical support for the development, modernization and implementation of the Air Force Basic Expeditionary Airfield Resources (BEAR) field kitchen concept which consolidates existing Air Force Harvest Falcon, Harvest Eagle, 9-1 and 9-2 tent field kitchens. Kitchens reorganized and consolidated into the BEAR-(i) (Initial), which provides all food service requirements to support 550 airmen, and BEAR-(f) (Follow-on) platforms, which incrementally support food service requirements for 550 to 1100 personnel. Program provides cost savings and enhanced system capability through application/ integration of new, efficient, state-of-the-art electric food service equipment and food preparation technology to support Air Force requirements. Reviewed current assets, identified issues, use concepts, and selected equipment from the Navy_s Afloat 21 Program and commercial sources. Conducted extensive in-house testing and initial user testing of equipment at Air Force test sites and provided technical recommendations to Air Force on technical performance and integration. Evaluated equipment and provided commercial item descriptions for selected replacement systems based on Service operational requirements. Transitioned to 6.5 (AirForce, DLA, Natick).	200			
FY08: Complete upgrade to replace obsolete COMMZ kitchen and bakery with commercial food equipment to increase reliability,			157	

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maintainability, and significantly enhance operational performance capability/ efficiency. Establish design system layout meeting established user requirements and install new COTS equipment. Simplify overall logistics footprint and reduce life cycle costs and training requirements by incorporating modular systems concept. Conduct test and evaluation; perform initial field testing to verify upgraded capabilities and transition to 6.5. Prepare performance specification and transition to the Navy.		
FY08: Integrate new technologies/automation concepts and food service equipment for galley serving lines. Designs must maintain high standards of food service and reduce labor/preparation time of food items for future Navy CVN-21 Platforms. Provide recommends to NAVSEA and NAVSUP for appropriate serving line automated systems to support galley feeding and self-service requirements, and transition to 6.5.		159
FY08: Integrate technology advances for Smart Navy Galley in food service equipment automation by implementing Supervisory Control and Data Acquisition (SCADA) networking capabilities utilizing industry accepted North American Association of Food Equipment Manufacturers (NAFEM) protocols. Quantify functionality of Smart Process Control System as an enabler to minimize shipboard labor to prepare food products, perform management functions, improve meal scheduling/ production process, and minimize food service equipment maintenance requirements through an automatic internal diagnostics/ prognostics system. Food service equipment prototypes will be developed and operational testing will be conducted to validate the concept for shipboard transition into Smart Galley.		332
FY08: Complete advanced development of an efficient Self-Powered Tray Ration Heater that produces its own electricity from the heat of combustion. A self-powered capability will improve overall operational flexibility and superior RAM characteristics as compared to battery/generator driven systems with added benefit of reduced weight, lower fuel consumption, and quiet operation while offering the same legacy performance characteristics including capacity, heat time, operational environment, size, weight, and cube. System will utilize standard commercial DC powered burner. Modify system prototype as required and verify capabilities of system to prepare Unitized Group Rations. Test and evaluate; and complete operational testing of system and refine as appropriate. Prepare joint service performance specification for transition to services for procurement.		377
FY09: Review and validate DDG, CG, CVN, DDX, CGX, Littoral Class Ships (LCS) and Submarine refrigeration and ice consumption requirements with Navy. Perform market research and develop a Request for Proposal/Statement of Work (SOW). The SOW will provide detail requirements for the contractor to design and develop a prototype dual temperature modular system with ice making capabilities.		158
FY09: Conduct IPT meeting with NAVSEA and SUBLANT to determine galley requirements for Virginia Class submarines. Conduct market research with food service equipment manufacturers to identify hatchable/modular equipment suitable for submarines environment. Procure/evaluate any Commercial off the Shelf (COTS) equipment with potential for use on submarines.		236
FY09: Receive technology transition from S&T and SBIR based studies. Develop a Performance Specification to incorporate the technology to the preplanned product improvement for alternative power sources for the Multi Temperature Refrigeration Container System. Prepare contract for prototype.		206
FY09: Test and evaluate state of the art low solar absorbing coatings, super insulations, lightweight composite structural insulated panels, and alternative refrigeration cycle technologies that will lead to significant improvements in the fielded Advanced Design Refrigerator (ADR300). This program will reduce internal airlift footprint requirements by increasing the operational volume using the same air transportation footprint for the current design. Update the performance specification with the Air Force Basic Expeditionary Airfield Resources (BEAR) customers, and prepare the scope of work for an R&D contract. Evaluate state of the art insulation technology, which will provide significant improvements in refrigeration efficiency, thermal insulation performance, and reduction in overall logistics cube. Perform market research, and develop a statement of work (SOW) for a 2-year R&D contract award. The SOW will identify detail		301

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requirements for the contractor to: complete design of the system, develop a system prototype, and verify capabilities of system.					
FY09: Scrub Mobile Refrigeration Trailer System (MRTS) requirements with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI trailer mounted refrigeration systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). Transition to 6.5					263
FY08: Review and validate ice usage/consumption and scrub requirements for Battlefield Ice Supply System (BISS) with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI Bulk Ice Making and bagging Systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). FY09: Award contract to design and fabricate prototype(s) and conduct contractor testing to validate stated performance requirements. Execute independent test and evaluation program plan. Prepare milestone documentation.				133	256
FY09: Receive technology transition from S&T and SBIR based studies. Develop a Performance Specification to incorporate the technology to the preplanned product improvement for alternative power sources for the Multi Temperature Refrigeration Container System. Prepare contract for prototype.					206
FY09: Scrub Mobile Refrigeration Trailer System (MRTS) requirements with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI trailer mounted refrigeration systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s).					263
SBIR/STTR reductions				77	
Total	3233	2740	3795		3914

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0604713.548, Military Subsistence System	3224	3006	2501	2515	2154	2199	2174	2220	Continuing	Continuing
OPA 3, M65801, Refrigerated Containers	3872	5513	4220	13024	14463	14617	7192	5890	Continuing	Continuing

Comment:

C. Acquisition Strategy Project development will transition to System Development & Demonstration and production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
4 - Advanced Component Development and Prototypes			0603747A - Soldier Support and Survivability									610		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	In-House	RDECOM, Natick, MA	23355	1234	1-4Q	986	1-4Q	1442	1-4Q	1487	1-4Q	Cont.	Cont.	Cont.
Joint Service Food/Combat Feeding Equipment	Contracts	Various	11622	1248	1-4Q	973	1-4Q	1462	1-4Q	1507	1-4Q	Cont.	Cont.	Cont.
Subtotal:			34977	2482		1959		2904		2994		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	MIPR	DTC, Maryland & AEC, Virginia	5111	452	1-4Q	413	1-4Q	531	1-4Q	548	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5111	452		413		531		548		Cont.	Cont.	Cont.
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Combat Feeding Program Management	In-House	RDECOM, Natick, MA	1896	299	1-4Q	291	1-4Q	360	1-4Q	372	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR Tax						77	1-4Q						77	

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY	PE NUMBER AND TITLE							PROJECT			
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Subtotal:	1896	299		368		360		372	Cont.	Cont.	Cont.
Project Total Cost:	41984	3233		2740		3795		3914	Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

February 2007

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	<p>Test and evaluate FSR and MCW/LRP, Test and evaluate UGR Enhancements</p> <p>(1) Test Modular Food Service System aboard Navy ship, (2) Study technology to reduce food service labor on Navy ship</p> <p>DT on MTRCS</p> <p>(3) Complete producibility demonstration and field test UGR-Express (E)</p> <p>Complete pre-production testing of UGR-E</p> <p>Test prototype design of Modular Food Service system for DDX</p> <p>Conduct testing of commercial and approved Navy equipment to use in AF BEAR</p> <p>Transition mature items to SDD or procurement. See exhibit R4a for details, Conduct studies on technologies to reduce food service labor on Navy Ships, Develop Modular Food Service equipment and transition to the Navy., Prepare TDP and transition Surface Scanning Biosensor to VETCOM.</p> <p>(4) Transition performance contract requirement for Tamper Evident Packaging to DSCP</p> <p>Transition First Strike Ration components to SDD.</p>																															

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
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Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(5) Complete UGR-E producibility demonstrations, field tests and transition to DSCP								▲5																								
(6) Completed DT on the Multi Temp Refrigerated Container System (MTRCS).			▲6																													
(7) Test commercial storage/MAP gas system aboard submarines/ships												▲7																				
Conduct surveys on commercial storage/MAP gas systems and provide recommendation, Transition advanced development of individual and group ration components to SDD																																
(8) Transition Boil-in-bag Egg package to DSCP for Procurement			▲8																													
(9) Transition Institutional-Sized Pouch (UGR- H&S) package to DSCP for procurement	▲9																															
Compare Advanced Component Development of WEC systems for joint service kitchen																																
Update ADR300 perf-spec for AF BEAR program office, prepare scope for contract																																
(10) Award R&D contract to design and fabricate prototypes for the ADR P3I																																
Validate shipboard refrigeration and ice consumption requirements with Navy																																

FOOD ADV DEVELOPMENT

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT																																										
4 - Advanced Component Development and Prototypes	0603747A - Soldier Support and Survivability	610																																										
Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13															
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4												
(11) Award R&D contract to design and fabricate NavRP prototypes.																																												
Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier, Quantify manning reductions for the scullery process based on testing results, Integrate control systems for diagnostics/prognostics of the automated scullery, Identify, evaluate, and consolidate service requirements for TriCon Kitchen																																												
(12) Award a contract to design and develop a prototype modular TriCon kitchen																																												
Review Marine Corp Field Feeding Doctrine identify capability of current systems, Assess and analyze deficiencies in current system, recommend system improvements, Test prototype Battlefield Ice Supply, Test prototype Solar Powered Refrigeration System, Test Vapor Compression Improvement prototype, Test prototype Mobile Kitchen Trailer Future, Test improved Tray Ration Heater																																												

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603747A - Soldier Support and Survivability						610	
<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
Test and evaluate FSR and MCW/LRP	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Test and evaluate UGR Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Test Modular Food Service System aboard Navy ship		1Q							
Study technology to reduce food service labor on Navy ship	3Q								
DT on MTRCS	3Q - 4Q								
Complete producibility demonstration and field test UGR-Express (E)	4Q								
Complete pre-production testing of UGR-E	1Q								
Test prototype design of Modular Food Service system for DDX	2Q - 3Q								
Conduct testing of commercial and approved Navy equipment to use in AF BEAR	1Q - 4Q								
Transition mature items to SDD or procurement. See exhibit R4a for details	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Conduct studies on technologies to reduce food service labor on Navy Ships		2Q - 4Q							
Develop Modular Food Service equipment and transition to the Navy.	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q				
Prepare TDP and transition Surface Scanning Biosensor to VETCOM.		1Q - 3Q							
Transition performance contract requirement for Tamper Evident Packaging to DSCP		4Q							
Transition First Strike Ration components to SDD.	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Complete UGR-E producibility demonstrations, field tests and transition to DSCP		1Q							

Completed DT on the Multi Temp Refrigerated Container System (MTRCS).	3Q							
Test commercial storage/MAP gas system aboard submarines/ships		4Q						
Conduct surveys on commercial storage/MAP gas systems and provide recommendation	1Q - 4Q							
Transition advanced development of individual and group ration components to SDD	1Q - 4Q							
Transition Boil-in-bag Egg package to DSCP for Procurement	3Q							
Transition Institutional-Sized Pouch (UGR-H&S) package to DSCP for procurement	1Q							
Compare Advanced Component Development of WEC systems for joint service kitchen			4Q	1Q - 4Q				
Update ADR300 perf-spec for AF BEAR program office, prepare scope for contract				1Q - 4Q				
Award R&D contract to design and fabricate prototypes for the ADR P3I					2Q			
Validate shipboard refrigeration and ice consumption requirements with Navy				1Q - 2Q				
Award R&D contract to design and fabricate NavRP prototypes.					3Q			
Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier						2Q - 4Q		
Quantify manning reductions for the scullery process based on testing results							4Q	
Integrate control systems for diagnostics/prognostics of the automated scullery								2Q - 4Q
Identify, evaluate, and consolidate service requirements for TriCon Kitchen			2Q - 3Q					
Award a contract to design and develop a prototype modular TriCon kitchen				2Q				
Review Marine Corp Field Feeding Doctrine identify capability of current systems							2Q - 4Q	
Assess and analyze deficiencies in current								1Q - 3Q

system, recommend system improvements								
Test prototype Battlefield Ice Supply				3Q - 4Q				
Test prototype Solar Powered Refrigeration System					3Q - 4Q			
Test Vapor Compression Improvement prototype						3Q - 4Q		
Test prototype Mobile Kitchen Trailer Future						3Q - 4Q		
Test improved Tray Ration Heater						3Q - 4Q		