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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	18.058	33.178	18.556	57.900	76.456	4.166	4.240	4.315	4.380	Continuing	Continuing
610: FOOD ADV DEVELOPMENT	3.767	4.186	4.234	0.000	4.234	4.166	4.240	4.315	4.380	Continuing	Continuing
C08: RAPID EQUIPPING FORCE	14.291	28.992	14.322	57.900	72.222	0.000	0.000	0.000	0.000	Continuing	Continuing
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.											
B. Program Change Summary (\$ in Millions)											
			FY 2009	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	
Previous President's Budget			25.631	31.752		32.722		0.000		32.722	
Current President's Budget			18.058	33.178		18.556		57.900		76.456	
Total Adjustments			-7.573	1.426		-14.166		57.900		43.734	
• Congressional General Reductions				0.000							
• Congressional Directed Reductions				0.000							
• Congressional Rescissions			0.000	0.000							
• Congressional Adds				1.600							
• Congressional Directed Transfers				0.000							
• Reprogrammings			-6.855	0.000							
• SBIR/STTR Transfer			-0.718	-0.174							
• Adjustments to Budget Years			0.000	0.000		-14.166		0.000		-14.166	
• FY11 OCO Request			0.000	0.000		0.000		57.900		57.900	
Change Summary Explanation											
Change Summary Explanation: FY 2011: Funds realigned to higher priority Army programs.											

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>				PROJECT 610: <i>FOOD ADV DEVELOPMENT</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
610: <i>FOOD ADV DEVELOPMENT</i>	3.767	4.186	4.234	0.000	4.234	4.166	4.240	4.315	4.380	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>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. This PE/Project supports Field Feeding Programs for all the services.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.000	0.070	0.000	0.000	0.000
FY10: Review and validate Ice usage/consumption requirements for Battlefield Ice Supply System (BISS) with Combined Arms Support Command (CASCOM) and the Joint Service Community. Perform market research to evaluate existing Commercial Off the Shelf / Non-Developmental (COTS/NDI) bulk Ice Making and bagging Systems. Develop a Draft 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 BISS prototype(s)											
FY 2009 Accomplishments: FY 2009											

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #2 FY09: Transitioning Solar Refrigeration Technology from S&T to system development phase. Preparing solicitation for prototype and award contract. Initiate fabrication of prototype and transition to 6.5 for testing and evaluation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.331	0.000	0.000	0.000	0.000
Program #3	0.000	0.200	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: Transitioning Solar Refrigeration Technology from S&T to system development phase. Preparing solicitation for prototype and award contract. Initiate fabrication of prototype and transition to 6.5 for testing and evaluation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #4 FY11: Transition Waste to Energy Converter (WEC) technology to advanced component development phase after successful demonstration of exit criteria outlined in the Technology Transition Agreement. Review and validate requirements outlined in the Capability Production Document (CPD) with CASCOT and Joint Service Community. Establish design and evaluation criteria to meet desired capability. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	0.000	0.290	0.000	0.290

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #5 FY10: Transition Man-portable appliance technology to advanced component development phase to integrate into the Battlefield Kitchen (BK) after successful demonstration of exit criteria outlined in the Capability Development Document (CDD) with CASCOM and Joint Service Community. Establish design and evaluation criteria to meet deesired capability. Initiate fabrication of prototype and initiate Developmental Testing (DT). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO				0.000	0.390	0.000	0.000	0.000
Program #6 FY 11: Prepare solicitation for prototype and award contract. Initiate fabrication of prototype and initiate Developmental Testing (DT).				0.000	0.000	0.423	0.000	0.423

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #7 FY11: Transition Sanitation Solution Generator from 6.3 and implement approved system into fielding kitchens.	0.000	0.000	0.189	0.000	0.189
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #8	0.941	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09: Based on warfighter recommendations, identified and obtained Commercial-Off-The-Shelf/Non-developmental Item (COTS/NDI) and completed development of Meal, Ready-to-Eat (MRE) components and packaging innovations (for 2012 Date of Pack (DOP)) to improve acceptability, expand variety and improve consumption. Integrated packaging/food processing science and technology (S&T) transitions to improve operational and functional performance. Completed procurements documents and transitioned to 6.5 for field testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO					
Program #9 FY10: Continue to identify suitable COTS/NDI candidate items and conduct in-house product development of food components for fielded individual operational rations (MRE 2013/2014 DOP) to enhance acceptability, increase consumption and improve nutritional intake. Conduct pilot scale in-house production to support engineering design, technology insertion, and producibility. Work with vendors and assemblers as needed to ensure feasibility and technology transition. Develop, integrate, and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness, functionality and improve logistics. processing and packaging to introduce targeted component items into individual ration platforms for enhanced acceptability, nutrition and performance.	0.000	0.941	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #10 FY11: Continue to identify suitable COTS/NDI candidate items and conduct in-house product development of food components for fielded individual operational rations (MRE 2013/2014 DOP) to enhance acceptability, increase consumption and improve nutritional intake. Conduct pilot scale in-house production to support engineering design, technology insertion, and producibility. Work with vendors and assemblers as needed to ensure feasibility and technology transition. Develop, integrate, and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness, functionality and improve logistics. processing and packaging to introduce targeted component items into individual ration platforms for enhanced acceptability, nutrition and performance. FY 2009 Accomplishments: FY 2009		0.000	0.000	0.649	0.000	0.649
FY 2010 Plans: FY 2010						

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #11 FY09: Increased availability and consumption of dietary fiber in combat rations in accordance with Surgeon General nutritional standards for operational rations based on Military Dietary Reference Intakes (MDRI) established through military nutrition research. Identified intake mechanisms and/or carriers to promote healthy diets, increase broad, beneficial health effects, and ensure warfighters health and fitness for optimal mission performance. Identified fiber types and formats, categorize and select suitable candidates, conducted menu adaptation or product reformulation, and developed prototype candidates. Transitioned to Fielded Individual ration improvement Program (FIRIP) and Assault and General Purpose Improvement Program (ASPIP) to complete validation and field testing prior to transition to procurement. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.101	0.000	0.000	0.000	0.000
Program #12	0.331	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09: Analyzed field test results of new components for Meal Cold Weather (MCW)/Long Range Patrol (LRP). Recommended components and menu profiles to Services. Optimized development of S&T components from Nutritionally Optimized First Strike Ration (FSR) project. Designed expanded FSR menus with developmental and non-developmental performance enhancing components. Evaluated range of developmental, non-developmental, and COTS components for modification and expansion of FSR menus based on warfighter feedback, R&D progress, and product development. Completed prototype development and assembly, transitioned to 6.5 for field test. Completed procurement documents for new items and new assembly documentation for FSR and MCW/LRP. Conducted production testing of new components. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO					
Program #13 FY10: Continue identification and selection of new candidate items. Conduct in-house product development as needed; assemble test menus, select test site, and transition to 6.5 for field test. Complete procurement documents for new items and new assembly documentation for FSR and MCW/LRP. Conduct production testing of new components.	0.000	0.310	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #14 FY11: Continue identification and selection of new candidate items. Conduct in-house product development as needed; assemble test menus, select test site, and transition to 6.5 for field test. Complete procurement documents for new items and new assembly documentation for FSR and MCW/LRP. Conduct production testing of new components. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	0.000	0.229	0.000	0.229

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #15 FY11: This effort will evaluate innovative packaging materials including high barrier, non-foil packaging structure for acidic condiments in order to increase condiment variety and warfighter acceptability for maximum consumption and nutritional intake. Packaging materials will be down-selected then integrated with new formulations of high demand acidic condiments. The effort involves reformulating and optimizing pH of acidic condiments for acceptability, then integrating those new formulations with the down-selected packaging material for evaluation of package integrity, product quality, and shelf life. Producibility testing will then be initiated for commercial scale-up of the reformulated high acid condiments in the new packaging materials. Technical data and prototypes will transition to individual & group ration improvement projects for field testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.121	0.000	0.121
Program #16 FY11: Transition from technology base advanced development effort highly acceptable, multi-component breakfast and bakery items to fielded combat rations. Supports frequently requested items that will increase		0.000	0.000	0.135	0.000	0.135

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
consumption, caloric intake, and morale. Military nutritional and shelf life requirements necessitate application of novel processing, packaging, and stabilization and preservation technologies to bridge the gap between user needs and product availability. Identified specific analytical requirements, ingredient, and packaging specifications such as water activity, pH, moisture, and additives to increase sensory acceptability and extend shelf life (humectants, emulsifiers, water binding agents, and anti-staling agents) are needed. Items include self-heating egg, breakfast burritos, breakfast pizzas, turnovers, sausage, instant breakfast cereals, pita breads, English muffins, etc. Will demonstrate and validate product parameters in commercial scale production, identify critical process controls, determine analytical testing or new test procedures, initiate long term storage studies and sensory evaluation, conduct nutrient analysis and incorporate in menu planning to meet OTSG guidelines, and develop technical data to support transition to production. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO					
Program #17 FY09: Conducted field evaluation/test of prototypes. Identified and selected new commercial and in-house developmental and product improvements as well as science and technology insertions supporting scenario specific supplemental packs to optimize warfighter performance, high altitude, cold weather, and high intensity/ long duration. Established baseline for essential nutrients to maintain the proper energy levels, nutritional	0.245	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
balance, body weight, mental and physical alertness within intended scenarios. Coordinated with USARIEM and OTSG to assess and determine optimal amounts of nutraceuticals, functional foods, and phytonutrients to maximize benefit and performance levels. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO					
Program #18 FY10: Complete product evaluations and product refinement as needed. Prepare final technical data for commercial production and transition to Defense Supply Center Philadelphia ration system procurement of final modular supplements. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010	0.000	0.098	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #19 FY09: Improved family of UGRs (H&S (2012), A (2011), B and E (2012)) to increase overall Warfighter acceptability, and consumption. Based on Warfighter recommendations incorporated COTS, NDI, and developmental components into prototype menus, transitioned to 6.5 for field testing. Completed draft procurement documents. Integrated state of the art packaging and combat ration processing technologies for improved operational and functional performance. Transitioned from 6.3 and conducted advanced development of HOT PAC, a low-cost, disposable self-heating package for dispensing hot water in the field. Optimized performance of package via material, fitment, and self-heating technology changes. Completed performance-based procurement documents and transitioned to Procurement. Updated and improved the Medical Nutrition Supplement (MNS) for the family of UGRs to support the military requirement of meeting the unique nutritional needs of all hospitalized patients in a combat environment. Developed and tested MNS prototypes consisting of essential food items (broth, gelatin, high protein / high calorie liquid supplements) and supplies for patient diets, and unitized into a supplemental module. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		1.105	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #20 FY10: Revise performance-based documents and transition to Procurement. Improve family of UGRs (H&S (2013/2014), A (2012/2013), B and E (2013/2014)) to increase overall Warfighter acceptability, and consumption. Based on Warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Select field test site and transition to 6.5 for field testing. Complete draft procurement documents. Integrate state of the art packaging and combat ration processing technologies for improved operational and functional performance. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.000	1.090	0.000	0.000	0.000
Program #21 FY11: Improve family of UGRs (H&S (2013/2014), A (2012/2013), B and E (2013/2014)) to increase overall Warfighter acceptability, and consumption. Based on Warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Select field test site and transition to 6.5 for field testing.	0.000	0.000	0.730	0.000	0.730

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Complete draft procurement documents. Integrate state of the art packaging and combat ration processing technologies for improved operational and functional performance. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #22 FY11: Conduct study of effects of extended consumption of military rations on warfighters FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.070	0.000	0.070

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #23 FY09: Transitioned from 6.3 and optimized treated fiberboard based on characterization studies to reduce cost, weight, and improve environmental properties. Fabricated prototype shipping containers using coated alternative fiberboard materials. Evaluated prototype shipping containers for wet strength, compression and rough handling. Initiated producibility study, transportation study and secure test site for FY10 user evaluation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.271	0.000	0.000	0.000	0.000
Program #24 FY10: Complete evaluation of prototype shipping containers. Complete producibility and transportation studies of optimized shipping containers. Conduct user evaluation of shipping containers. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010	0.000	0.110	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: FOOD ADV DEVELOPMENT			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #25 FY09: Reviewed and validated shipboard refrigeration and ice consumption requirements with Navy. Conducted tradeoff and Front Analysis for comparing conventional bulk refrigerator/freezers with dual temperature capabilities. Conducted design analysis for incorporating ice-making capabilities into the dual temperature footprint to derive requirements for ice making capabilities. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.050	0.000	0.000	0.000	0.000
Program #26 FY10: Develop modular, hatchable, reconfigurable, dual temperature refrigerated and frozen space to support endurance requirements for legacy and future ships.	0.000	0.090	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: FOOD ADV DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #27 FY09: Identified and prioritized food service areas for upgrade on the Virginia Class Submarines, and legacy submarines platforms. Conducted market investigation and developed recommendations to address issues with the galley and scullery.				0.227	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: FOOD ADV DEVELOPMENT		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #28 FY10: Procure equipment, develop test plans, and conduct land-based testing to support Navy goals. Standardize and optimize the food service equipment, reducing manpower requirements, and supporting NAVSUP's Standard Core Menu for submarines. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.310	0.000	0.000	0.000
Program #29 FY11: Transition Automated Shipboard Scullery project from the Navy Small Business Innovative Research (SBIR) Program to a Phase III effort. Combat Feeding Directorate (CFD) will partner with PEO Carriers on a cost sharing initiative to support a Phase III SBIR effort. During the Phase III effort, the Automated Shipboard Dishwashing System (ASDS) configuration will be demonstrated aboard a U.S. Navy ship. Prior to the demonstrating the system onboard a ship, a Ship Configuration Change Document (SCD) will be initiated and approved. This will allow the ASDS to be installed onboard a Navy vessel for evaluation. FY 2009 Accomplishments: FY 2009		0.000	0.000	0.470	0.000	0.470

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: FOOD ADV DEVELOPMENT		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #30 FY09: Collaborated with Naval Support Command (NAVSUP) to identify product segments for Navy Standard Core Menu (NSCM). Worked with commercial suppliers to research advanced foods and conducted sensory evaluation panels and nutrition research. Identified existing Trans Fats in the NSCM for modification of menu items. Prepared yearly product recommendations and supported NAVSUP field testing for new menu item introductions. Transitioned finding to NSCM. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.165	0.000	0.000	0.000	0.000
Program #31		0.000	0.209	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)							
			FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: Coordinate with NAVSUP to identify and collect information to determine menu goals and constraints; investigate emerging food preparation techniques to reduce labor for shipboard feeding; and provide annual reports and product recommendations. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO							
Program #32 FY11: Provide NAVSUP with continuous product identification, evaluations and menu development to support NSCM upgrades and revision changes. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base			0.000	0.000	0.136	0.000	0.136

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #33 FY10: Complete transition (from a Technology Transition Initiative) of a fully functional alternate chemical heating technology for the UGR-E. Verify performance as drop-in component of the UGR-E. Revise performance-based procurement documents, field test under the FGRIP and transition procurement documents to DSCP. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.000	0.250	0.000	0.000	0.000
Program #34 FY11: Expanded Self-Heating Capabilities for Remote Feeding. FY 2009 Accomplishments: FY 2009	0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: FOOD ADV DEVELOPMENT		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #35		0.000	0.000	0.084	0.000	0.084
FY11: Initiate program to provide ration components in fully integrated, multi-functional, active packaging materials beyond traditional polymer laminate films and oxygen scavenger sachets to improve storage stability & acceptability, reduce product waste, and increase consumption/nutrition. Performance oriented "smart" packaging materials protect food products from microorganisms, oxygen, moisture, and UV light, play an active role in preserving food throughout product shelf-life and improve product acceptability. Based on utility/functionality and technology readiness, primary technical focus will be on embedded oxygen scavenging, anti-oxidant, and olfactory/aromatic based innovative film structures that can be applied to combat ration components. Conduct market research and transition novel functional films from tech base effort. Produce limited scale production quantity of ration compatible films and/or pouches for further laboratory examination.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: FOOD ADV DEVELOPMENT			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #36 FY11: Transition and implement quantitative kinetics models utilizing analytical markers (fat oxidation colorimetry, etc) to 6.4 Assault/Special Purpose Ration Improvement Program (ASPIP) and Fielded Individual Ration Improvement Program (FIRIP). Integrate optimized quality kinetics models into current sensory evaluation system and adjust and optimize storage protocols and conditions using analytical testing/temperature kinetics and defined and recommended guidelines for conducting accelerated storage studies equivalent to Military storage requirements. Streamline and enhance evaluation process for identified new ration components (entres, sides, snacks, bakery items) that fall within the guidelines specified by the quality kinetics model, accelerate rapid fielding of specific ration components, decrease/minimize engineering support cases for quality related issues, and enhance development efficiency. Modify and transition technical data to Defense Supply Center Philadelphia. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.000	0.000	0.056	0.000	0.056
Program #37	0.000	0.000	0.030	0.000	0.030

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY11: Improved Food Risk Assessment/Management, provide DoD Veterinary Services Agency and services a predictive modeling database and applicable training materials to provide science-based information to perform food safety risk assessment/management duties FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #38 FY11: Develop a Joint Service Refrigerated Container System (JSRCS) to support group ration distribution and storage for multiple services FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	0.000	0.130	0.000	0.130

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #39 FY11: Evaluate and demonstrate state of the art insulation technology, like Aerogel Insulation to significantly improve refrigeration efficiency in the field and shipboard FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.150	0.000	0.150
Program #40 FY11: Develop a fully integrated refrigeration system for the Assault kitchen to allow the AK to support UGR-A ration feeding, and menu supplements FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	0.000	0.160	0.000	0.160

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #41 FY11: Air Force Basic Expeditionary Airfield Resources (BEAR) - Kitchen System Enhancements, provide AF with enhanced, state of the art all electric food service equipment; and continue to refine modular field feeding system FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.000	0.000	0.182	0.000	0.182
Program #42 Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR) FY 2009 Accomplishments: FY 2009	0.000	0.118	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
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<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						3.767	4.186	4.234	0.000	4.234	
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>RDTE, 0604713.548,</i> <i>Military Subsistence System</i>	2.422	2.092	2.118	0.000	2.118	2.082	2.115	2.153	2.185	Continuing	Continuing
• Ord. #2: <i>OPA 3, M65801,</i> <i>Refrigerated Containers</i>	36.867	26.404	16.488	0.000	16.488	5.478	4.323	4.397	4.466	Continuing	Continuing
<u>D. Acquisition Strategy</u> Project development will transition to System Development & Demonstration and production.											
<u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010																																																																	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>				PROJECT 610: <i>FOOD ADV DEVELOPMENT</i>																																																																				
Product Development (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> <tr> <td>Joint Service Food/Combat Feeding Equipment</td> <td align="center">C</td> <td>RDECOM Natick, MA</td> <td align="right">26.784</td> <td align="right">1.637</td> <td></td> <td align="right">1.660</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">1.660</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0</td> </tr> <tr> <td>Joint Service Food/Combat Feeding Equipment - 2</td> <td align="center">C</td> <td>Various Location could not be determined.</td> <td align="right">15.066</td> <td align="right">1.606</td> <td></td> <td align="right">1.625</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">1.625</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">41.850</td> <td align="right">3.243</td> <td></td> <td align="right">3.285</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">3.285</td> <td></td> <td></td> <td align="right">0.000</td> </tr> </table>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Joint Service Food/Combat Feeding Equipment	C	RDECOM Natick, MA	26.784	1.637		1.660		0.000		1.660	Continuing	Continuing	0	Joint Service Food/Combat Feeding Equipment - 2	C	Various Location could not be determined.	15.066	1.606		1.625		0.000		1.625	Continuing	Continuing	0	Subtotal			41.850	3.243		3.285		0.000		3.285			0.000
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																															
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Joint Service Food/Combat Feeding Equipment	C	RDECOM Natick, MA	26.784	1.637		1.660		0.000		1.660	Continuing	Continuing	0																																																															
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Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																															
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>				PROJECT 610: <i>FOOD ADV DEVELOPMENT</i>																																																																				
Management Services (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Combat Feeding Program Management</td> <td align="center">C</td> <td>RDECOM Natick, MA</td> <td align="right">2.862</td> <td align="right">0.286</td> <td></td> <td align="right">0.404</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.404</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0</td> </tr> <tr> <td>Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)</td> <td align="center">C</td> <td>Nothing entered for Activity and Location. Location could not be determined.</td> <td align="right">0.000</td> <td align="right">0.118</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td><td align="right">2.862</td><td align="right">0.404</td><td></td><td align="right">0.404</td><td></td><td align="right">0.000</td><td></td><td align="right">0.404</td><td></td><td></td><td align="right">0.000</td> </tr> </tbody> </table>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Combat Feeding Program Management	C	RDECOM Natick, MA	2.862	0.286		0.404		0.000		0.404	Continuing	Continuing	0	Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.118		0.000		0.000		0.000	Continuing	Continuing	0	Subtotal			2.862	0.404		0.404		0.000		0.404			0.000
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																															
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Remarks																																																																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																							DATE: February 2010								
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)												R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability												PROJECT 610: FOOD ADV DEVELOPMENT							
	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015						
	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			
Award R&D contract to design and fabricate prototypes for the ADR P3I									#																						
Provide NAVSUP w/CPI, evaluations and menu development to support NSCM upgrades				#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#				
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													#	#	#																
Award a contract to design and develop a prototype modular TriCon kitchen	#																														
Review Marine Corp Field Feeding Doctrine identify capability of current systems													#	#	#																
Award prototype contract for Battlefield Ice Supply							#																								
Fabricate prototype Solar Powered Refrigerations System						#	#	#																							
Test Vapor Compression Improvement prototype									#	#																					
Test prototype Battlefield Kitchen									#	#																					
Conduct Milestone C on Battlefield Kitchen																					#										
Transition HOT PAC procurement documents to DSCP				#	#	#																									
Transition MNS procurement documents to DSCP						#																									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																		DATE: February 2010																	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)										R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability										PROJECT 610: FOOD ADV DEVELOPMENT															

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																								DATE: February 2010			
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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>	PROJECT 610: <i>FOOD ADV DEVELOPMENT</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Award R&D contract to design and fabricate prototypes for the ADR P3I	1	2011	1	2011
Provide NAVSUP w/CPI, evaluations and menu development to support NSCM upgrades	4	2009	3	2015
Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier	1	2011	3	2011
Quantify manning reductions for the scullery process based on testing results	3	2011	3	2011
Integrate control systems for diagnostics/prognostics of the automated scullery	1	2012	3	2012
Award a contract to design and develop a prototype modular TriCon kitchen	1	2009	1	2009
Review Marine Corp Field Feeding Doctrine identify capability of current systems	1	2012	3	2012
Award prototype contract for Battlefield Ice Supply	3	2010	3	2010
Fabricate prototype Solar Powered Refrigerations System	3	2010	1	2011
Test Vapor Compression Improvement prototype	2	2011	3	2011
Test prototype Battlefield Kitchen	2	2011	3	2011
Conduct Milestone C on Battlefield Kitchen	4	2014	4	2014
Transition HOT PAC procurement documents to DSCP	4	2009	2	2010
Transition MNS procurement documents to DSCP	3	2010	3	2010
Transition Solar Power Refrigeration Technology to System Development phase	2	2010	2	2010
Test and evaluate Arctic Supplement for the UGR	4	2009	3	2010
Transition Arctic Supplement procurement docs to DSCP	4	2010	2	2011
Test and evaluate Culinary Kit for the UGR	4	2009	3	2010

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: FOOD ADV DEVELOPMENT		
	Start		End	
Event	Quarter	Year	Quarter	Year
Transition Culinary Kit procurement docs to DSCP	4	2010	2	2011
Test and evaluate Non-Retort ISPs for the UGR	4	2009	3	2010
Transition Non-Retort ISP procurement docs to DSCP	4	2010	2	2011
Test and evaluate Thermoformed Corrugated Trays for UGR	4	2010	3	2011
Transition Thermoformed Corrugated Trays procurement docs to DSCP	4	2010	2	2011
Test and evaluate Common Box for UGR	4	2010	3	2011
Transition Common Box procurement docs to DSCP	4	2011	2	2012
Test and evaluate UGR-E Alternate Chemical Heater	4	2009	3	2010
Transition UGR-E Alternate Heater procurement docs to DSCP	3	2010	3	2010
Conduct DT on JP8 Fired Commerical Appliances	1	2014	3	2014
USMC Field Kitchen Modernization Effort	4	2013	3	2015
Joint Service Refrigeration Systems Enhancement Effort	4	2012	3	2015
Conduct DT on Assault Kitchen Refrigeration System	1	2012	3	2012
Conduct Milestone B on Waste to Energy Converter	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>				PROJECT C08: <i>RAPID EQUIPPING FORCE</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C08: <i>RAPID EQUIPPING FORCE</i>	14.291	28.992	14.322	57.900	72.222	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<p>Note</p> <p>Note that: (a) Equipment mix and configuration may change based on changes in operational environment and circumstances. (b) REF- Resource Management Capabilities Needs equipment and funding execution details will be provided in the Secretary of Army report to the Congressional Defense Committee in March and October of each year(per HAC Report #108-553, DoD APPNs Bill 2005, June 18, 2004, page 134.)</p> <p>A. Mission Description and Budget Item Justification</p> <p>The US Army Rapid Equipping Force (REF) was established to provide urgently needed state-of-the-art technology to soldiers in the field to meet immediate warfighter needs under operational conditions in the current theaters. The REF Forward Teams in Iraq and Afghanistan work with Combatant Commanders and the soldiers to identify warfighter needs while REF Rear formulates solutions and rapidly delivers/fields new equipment to the deployed units. REF solutions are rapid responses to evolving, adaptable and changing threats, in any operational environment. REF Rear evaluates, utilizes or adapts currently available military or civilian items (COTS/GOTS) which typically have not been type classified for Army-wide use but are available and adaptable to the current Operational Combatant Commander's needs. For the REF, necessary materiel solutions can only be determined as "real time" threat modes are identified. Countermeasures to these evolving threats must be developed/purchased/modified, often within weeks, for the first cycle of spiral type responses. Specifically the REF is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near term developmental items that can be researched, developed and acquired quickly - ideally within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF process rapidly provides capabilities to meet immediate warfighter needs and supports efforts to mitigate asymmetric and traditional threats. A key element of this process is the provision for execution flexibility. The REF process provides the mechanism to respond rapidly to an adaptive enemy who changes in days and months, not years. The REF focuses on finding effective capabilities to counter emerging and future threats. The REF works directly with operational commanders to find solutions to identified equipping requirements. These solutions may result in procurement of new or existing military/commercial materiel equipment, or accelerated development of a Future Force materiel solution for insertion into the current force now. The REF adaptive practices are at the forefront of Army modernization and serve as a catalyst and change agent for Army transformation. The REF accomplishes its mission by working in partnership with industry, academia, Army senior leaders, the Army Training and Doctrine Command (TRADOC), the Army acquisition community, and the Army Test and Evaluation Command (ATEC) to meet immediate warfighter needs. The REF ensures safety testing of all equipment prior to release to the soldier. All equipment must pass Safety Confirmation and have a Capabilities and Limitations Report completed prior to being issued to operational units/soldiers. The Asymmetric Warfare Group provides operational advisory assistance to Army and Joint Force Commanders to enhance the combat effectiveness of the operating force and enable the defeat of asymmetric threats.</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT C08: RAPID EQUIPPING FORCE		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09 Base: The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF ensures safety testing of all equipment prior to release to the soldier. REF focuses on the development and testing of systems and mechanisms designed to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help protect the warfighter. The REF continues to maintain our support to commanders to ensure that we provide a solution in the areas of Protecting the Force and Intelligence, Surveillance and Reconnaissance (ISR). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		11.646	0.000	0.000	0.000	0.000
Program #2		2.645	0.000	0.000	9.900	9.900

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT C08: RAPID EQUIPPING FORCE			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09 Overseas Contingency Operation (OCO) - The AWG will focus efforts to investigate, evaluate, and assist in the development and improvement of existing jamming devices, Electro Magnetic Pulse emitting devices, and crew, vehicle, electronics disrupting devices. Specifically focus on enhancements to existing jamming devices as well as future developments. Provide RDTE with flexibility for working with industry, DoD assets, as well as technical institutes for the R&D of new emerging technologies. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO					
Program #3 FY10 Base: The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF ensures safety testing of all equipment prior to release to the soldier. REF focuses on the development and testing of systems and mechanisms designed to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help	0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT C08: RAPID EQUIPPING FORCE		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
protect the warfighter. The REF continues to maintain our support to commanders to ensure that we provide a solution in the areas of Protecting the Force and Intelligence, Surveillance and Reconnaissance (ISR). New Accomplishment FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #4 FY11 Base: The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF ensures safety testing of all equipment prior to release to the soldier. REF focuses on the development and testing of systems and mechanisms designed to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help protect the warfighter. The REF continues to maintain our support to commanders to ensure that we provide		0.000	0.000	14.322	0.000	14.322

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT C08: RAPID EQUIPPING FORCE				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
a solution in the areas of Protecting the Force and Intelligence, Surveillance and Reconnaissance (ISR). New Accomplishment FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #5 FY11 Overseas Contingency Operation (OCO) - Supports the rapid asymmetric threat counter measure resolution development. The FY11 Overseas Contingency Operations (OCO) Supplement requested funding will provide the Asymmetric Warfare Group funding to accomplish its mission and allows the Asymmetric Warfare Group funding to execute an operational and advisory assistance mission to Army and Joint Force Commanders in order to enhance the effectiveness of the warfighter. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	26.625	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #6 FY11 Overseas Contingency Operations: Ballistic Threat Identification/Hostile Fire Detection System (HFDS) FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	0.000	0.000	0.000	48.000	48.000
Program #7 Congressional Add - Squad Mission Support (SMSS) FY 2009 Accomplishments: FY 2009	0.000	1.600	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #8	0.000	0.767	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR) (Rapid Equipping Force)					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	14.291	28.992	14.322	57.900	72.222

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: Other Procurement, Army	496.023	13.350	42.229	58.590	100.819	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #2: Operations and Maintenance, Army	101.900	11.431	20.728	85.500	106.228	20.987	21.347	21.516	21.697	Continuing	Continuing
D. Acquisition Strategy											
The REF provides urgently needed, state-of-the-art technology to soldiers in the field to meet immediate requirements. REF Rear evaluates, utilizes or adapts currently available military or civilian items (COTS/GOTS) which typically have not been type classified for Army-wide use but are available and adaptable to the current Operational Combatant Commander's needs.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability					PROJECT C08: RAPID EQUIPPING FORCE			
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Base: Various Projects - Protect The Force in Counter Insurgency	C	Various Locations TBD Location could not be determined.	0.000	10.884		5.442		0.000		5.442	Continuing	Continuing	0
Base: Various Projects - Enhance Intelligence Surveillance Recon	C	Various Locations TBD Location could not be determined.	0.000	5.858		3.151		0.000		3.151	Continuing	Continuing	0
Base: Various Projects - Logistics/Medical in Counterinsurgency Opns	C	Various Locations TBD Location could not be determined.	0.000	1.066		0.573		0.000		0.573	Continuing	Continuing	0
Base: Various Projects - Timeliness of Analysis and Information Dissemination	C	Various Locations TBD Location could not be determined.	0.000	4.526		2.435		0.000		2.435	Continuing	Continuing	0
OCO: Asymmetric Warfare Group	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		9.900		9.900	Continuing	Continuing	0
FY11 Overseas Contingency Operations: Ballistic Threat Identification/Hostile Fire Detection System	C	Various Location could not be determined.	0.000	0.000		0.000		48.000		48.000	Continuing	Continuing	0
Congressional Add - Squad Mission Support (SMSS)	C		0.000	1.600		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603747A: <i>Soldier Support and Survivability</i>				PROJECT C08: <i>RAPID EQUIPPING FORCE</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Nothing entered for Activity and Location. Location could not be determined.											
Subtotal			0.000	23.934		11.601		57.900		69.501			0.000
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A TEC - Protect Force in Counterinsurgency Operations	C	Various locations Location could not be determined.	0.000	5.058		2.721		0.000		2.721	Continuing	Continuing	0
Subtotal			0.000	5.058		2.721		0.000		2.721			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army									DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability				PROJECT C08: RAPID EQUIPPING FORCE				
		Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		0.000	28.992		14.322		57.900		72.222			0.000
Remarks												

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