

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment
---	---

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	2.983	1.763	2.054	-	2.054	2.225	2.070	2.114	2.172	Continuing	Continuing
548: Mil Subsistence Sys	-	2.983	1.430	0.759	-	0.759	0.358	0.472	1.148	1.178	Continuing	Continuing
EL2: Army Field Feeding Equipment	-	0.000	0.333	1.295	-	1.295	1.867	1.598	0.966	0.994	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project supports the development and demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency and survivability, and to reduce food service logistics requirements for all four services. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment, enhance safety in food service, and decrease fuel and water requirements. This project develops critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through fielding and integrating new equipment; by enhancing the field soldier's well-being; and providing soldier usable equipment. They also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for all the services.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	3.034	1.763	2.466	-	2.466
Current President's Budget	2.983	1.763	2.054	-	2.054
Total Adjustments	-0.051	0.000	-0.412	-	-0.412
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.051	-	-0.412	-	-0.412

Change Summary Explanation

The FY17 funding request was reduced by \$.412 million to account for the availability of prior year execution balances.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
--	--	--

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
548: <i>Mil Subsistence Sys</i>	-	2.983	1.430	0.759	-	0.759	0.358	0.472	1.148	1.178	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the development and demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance Soldier efficiency and survivability, and to reduce food service logistics requirements for all four services. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment, enhance safety in food service, and decrease fuel and water requirements. This project develops critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through fielding and integrating new equipment; by enhancing the field Soldier's well-being; and providing Soldier usable equipment. They also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for all the services.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017
<p>Title: Containerized Kitchen Modernization (CK)</p> <p>Description: New Containerized Kitchen (CK) layout with modular, closed combustion, thermostatically controlled appliances that reduce heat stress inside the kitchen.</p> <p>FY 2015 Accomplishments: Upgraded the Containerized Kitchen with improved layout, appliances, ventilation and power generation for improved energy efficiency and operator environment. Used completed initial design to integrate the Advanced Medium Mobile Power Source (AMMPS) into the CK. Performed testing to validate generator interface, interoperability and performance with the CK. Developed technical data to support required Engineering Change Proposal to current system.</p>	0.312	-	-
<p>Title: Fielded Individual Ration Improvement Project (FIRIP)</p> <p>Description: Continuous product improvement project for the Meal Ready to Eat (MRE).</p> <p>FY 2015 Accomplishments: Based on field test results, presented recommendations to Joint Services (2Q15) for continued product improvement of ration components/packaging/technologies for MRE (2017 date of pack). Finalized MRE procurement documents and initiated transition to Defense Logistics Agency - Troop Support (DLA-Troop Support). Obtained Surgeon General approval of revised MRE menus. Executed production testing with industry to ensure consistent ration quality, understand Performance Contract Requirements</p>	0.379	0.274	0.130

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>(PCR), and resolve vendor/supplier issues. Obtained and assembled selected new items for field test. Conducted field evaluation of new candidate ration components for MRE (2018 date of pack) to improve quality, acceptability, nutrition and expand variety.</p> <p>FY 2016 Plans: Finalize MRE procurement documents and standards for verification for MRE (2018 date of pack) and initiate transition to DLA-Troop Support based on Budget Activity 4 (BA4) Joint Service approvals. Obtain Surgeon General approval of revised MRE menus. Execute production testing with industry to ensure consistent ration quality, understand PCR requirements, resolve vendor/supplier issues, and conduct confirmatory sensory, chemical, physical and shelf life testing.</p> <p>FY 2017 Plans: Will integrate prototype components/technologies into MRE menu system to improve quality, acceptability, nutrition and expand variety. Will plan and complete field testing of new ration menus for MRE (2020 date of pack) in an operationally relevant environment.</p>				
<p>Title: Assault/Special Purpose Ration Improvement Project (ASPIP)</p> <p>Description: Continuous product improvement of special purpose rations by the insertion of new technologies in nutrition, processing and packaging.</p> <p>FY 2015 Accomplishments: Continued on-going shelf life studies of candidate Meal, Cold Weather/Long-Range Patrol (MCW/LRP) and Modular Operational Ration Enhancement (MORE) components and updated procurement documents for transition to DLA - Troop Support.</p> <p>FY 2017 Plans: Will integrate prototype components/technologies (e.g., commercial brick pack packaging, Multi- Purpose Individual Heating Technology (MIT)) into First Strike Ration (FSR), MCW/LRP and/or MORE menu systems to improve quality, acceptability, nutrition and expand variety. Will plan and complete field testing of new ration menus in an operationally relevant environment. Will continue to populate Combat Rations Database with nutritional/menu data.</p>		0.175	-	0.056
<p>Title: Fielded Group Ration Improvement Project (FGRIP)</p> <p>Description: Continuous product improvement project to update/improve group ration components, menus, and packaging by integrating state-of-the-art military/commercial packaging and technology base transitions. The family of Unitized Group Rations (UGRs) includes the Unitized Group Ration - Heat & Serve (UGR-H&S), Unitized Group Ration - Express (UGR-E), Unitized Group Ration - A (UGR-A), and Unitized Group Ration - M (UGR-M).</p> <p>FY 2015 Accomplishments:</p>		0.356	0.323	0.122

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>Completed field testing of UGR-H&S and UGR-E (2016/17 date of pack) and UGR-A (FY17 menus) to improve quality, nutritional intake and expand variety. Finalized procurement documents for transition to DLA-Troop Support.</p> <p>FY 2016 Plans: Finalize UGR (A, H&S, E) procurement documents and standards for verification and initiate transition to DLA-TS based on BA4 Joint Service approvals. Obtain Surgeon General approval of revised UGR menus. Support DLA-Troop Support Limited First Article production testing of new H&S and E items with industry to ensure consistent ration quality, understand PCR requirements, resolve vendor/supplier issues, and conduct confirmatory sensory, chemical, physical and shelf life testing.</p> <p>FY 2017 Plans: Will integrate prototype components/technologies into UGR-H&S, UGR-E, UGR-M and UGR-A menu systems to improve quality, acceptability, nutrition and expand variety. Will complete field testing of new ration menus in an operationally relevant environment.</p>				
<p>Title: Group Ration Airdrop Survivability Project (GRASP)</p> <p>Description: Quantify baseline airdrop performance characteristics for current group combat ration (UGR-H&S/M/E) configurations/designs; identify survival rates (based on caloric loss and packaging damage/loss) under defined operational conditions; provide knowledge base and supporting data to generate executable load configuration changes; identify capability gaps that might warrant product/package/assembly configuration redesign and reengineering.</p> <p>FY 2015 Accomplishments: Conducted extensive airdrop testing to determine UGR components, packaging and assembly configurations with the highest survival rates. Performed cost/benefit analysis of current vs. proposed reconfigurations. Transitioned updated technical data to DLA - Troop Support and Airdrop partners.</p> <p>FY 2017 Plans: Will conduct review/analysis of airdrop test data on additional UGR configurations/versions. Will re-test/assess data and recommend packing/rigging changes. Will transition updated technical data/rigging changes to DLA - Troop Support and Airdrop partners.</p>		0.072	-	0.039
<p>Title: Navy Shipboard Galleys</p> <p>Description: Provide continuous Research and Development (R&D) for Navy Shipboard Galleys for state-of-the-art Galley designs and equipment technologies; support Naval Supply Systems Command (NAVSUP) foodservice equipment standardization plan; integrate automated technology such as, prognostics, diagnostics, and reliability tracking.</p> <p>FY 2015 Accomplishments:</p>		0.310	0.397	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>Conducted in-house test and evaluation of equipment prioritized by Navy. Instrumented equipment for reliability evaluations and support for ship board evaluations. Transitioned reports to NAVSUP. Procured, tested and evaluated a hydroponic system to grow fresh produce aboard ballistic submarines for increased quality of life and nutrition for submarine Sailors.</p> <p>FY 2016 Plans: Preliminary Design Review/Critical Design Review (PDR/CDR) reviews. Instrument equipment for Condition-Based Maintenance. Conduct test & evaluation of modified COTS equipment in accordance with Naval Sea Systems Command (NAVSEA) test criteria. Complete at-sea user evaluations and technical data package for transition to Navy.</p>				
<p>Title: Armed Forces Recipe Service (AFRS)</p> <p>Description: Demonstrate and validate standardized recipes to be utilized by the Services in food service and operational settings. Develop and deliver specifications to the Armed Forces Recipe Committee for approval. Specifications will populate the Armed Forces Management Information System (AFMIS), a system utilized by all DoD Components.</p> <p>FY 2015 Accomplishments: Completed transition to new recipe development/nutritional analysis software. Conducted nutritional analysis of deliverables. The output of this project facilitated implementation of nutritional initiatives such as Go for Green and Healthy Base Initiative.</p>		0.600	-	-
<p>Title: Block Upgrades and Operational Improvements for Expeditionary Field Feeding Equipment</p> <p>Description: Eliminate the sole sourcing of tray ration heater component parts. Reduce overall water consumption through the use of non-immersive cooking technologies and more efficient ware-washing equipment. Increase Kitchen flexibility through appliance upgrades. To reduce the overall fuel consumption of Expeditionary Field Feeding Equipment through enhanced combustion technologies.</p> <p>FY 2015 Accomplishments: Conducted root cause failure analysis on Modernized Tray Ration Heater (MTRHS) prototype. Conducted operational test and evaluation on field feeding equipment. Completed approved Engineering Changes to upgrade the capability of the Expeditionary Field Kitchen.</p> <p>FY 2017 Plans: Will develop reports, Engineering Change Proposals (ECPs) and logistical data to facilitate integration of cooking appliances into United States Marine Corp (USMC) Expeditionary Field Kitchen (EFK), Enhanced Tray Ration Heating System (ETRHS), and/or Tray Ration Heater (TRH). Will transition prototype equipment and technical data to USMC.</p>		0.320	-	0.079
<p>Title: Support to Air Force Field Feeding Modernization Efforts</p>		0.240	0.386	0.158

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>Description: Provide continuous R&D efforts for all Expeditionary Air Force squadrons. Modernize and standardize field foodservice equipment to reduce labor, maintenance, pack-out volume and cost. Increase reliability, efficiency and sustainability. Develop comprehensive specifications and technical data packages for recommended Food Service Equipment (FSE) items; test and evaluate newer commercial FSE items for expeditionary use and smaller transportation footprint; develop total overall life cycle cost of each system; test Energy Star certified FSE items that use less power; and investigate/develop appliances that use less water, increase competition on standardized designs</p> <p>FY 2015 Accomplishments: Provided continuous research and development efforts for all Expeditionary Air Force squadrons. Increased reliability, efficiency and sustainability. Provided operational test and evaluation support to the Basic Expeditionary Airfield Resources (BEAR) community to develop or edit equipment purchase descriptions, participate in source selection evaluations, provide technical documents to support the contract award process and participate in the design reviews.</p> <p>FY 2016 Plans: Complete preliminary design review (PDR). Initiate BEAR Kitchen Final Design Review. Conduct user Test & Evaluation of proposed equipment. Draft technical test reports and provide to Air Force for review.</p> <p>FY 2017 Plans: Will conduct Energy Management System (EMS) Critical Design Reviews and in-house test and evaluation. Will complete the development of the Joint Service Expandable Refrigerated Container System (JSERCS). Will integrate JSERCS into the BEAR kitchen system to conduct operational testing.</p>				
<p>Title: Joint Inter-service Field Feeding Burner</p> <p>Description: Develop, demonstrate and validate a Joint-Service, government owned Jet Propellant 8 (JP-8) burner for field kitchen appliances. Government will control configuration, procurement, and support decisions. Establishment of a COTS parts list using widely supportable supply chain in field operations.</p> <p>FY 2015 Accomplishments: Built beta units; prepared Tech Data Package; tested units in a high fidelity, realistic operating environment and conducted Integrated Logistic Support (ILS) validation.</p>		0.169	-	-
<p>Title: Navy Food Storage Analysis Tool (NFSAT)</p> <p>Description: Software analysis tool for Navy Foodservice that will automatically calculate all storage space factors and requirements for naval vessels based off the specific Navy Standard Core Menu (NSCM), crew size, Naval Ship's Technical Manual 096, Weights and Stability, Naval Vessel Requirements Food Service Facility Design Manual, Build Specifications 671,</p>		0.050	0.050	0.175

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
672, and Type Commander established endurance levels. Develop automated subsistence inventory management, tracking and storeroom locations for all storage areas with mobile scanning technology capability.			
<i>FY 2015 Accomplishments:</i> Expanded NFSAT capabilities to include Landing Platform Docking (LPD) amphibious warfare ship class and the Littoral Combat Ship (LCS) class.			
<i>FY 2016 Plans:</i> Complete Alpha version of Navy subsistence inventory management software and conduct test and evaluation of Alpha version of the software			
<i>FY 2017 Plans:</i> Will complete development of updated software, which will provide automated subsistence inventory management, tracking, and storeroom locations for all storage areas with mobile scanning technology capabilities. Will conduct operational testing and will transition Technical Data Package, Commercial Item Descriptions, and equipment to the Navy.			
Accomplishments/Planned Programs Subtotals	2.983	1.430	0.759

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• RDT&E 643747.610: <i>Food Adv Dev 643747.610</i>	3.348	0.021	5.299	-	5.299	6.579	4.830	4.508	4.631	Continuing	Continuing
• RDT&E 643747.EL1: <i>Army Field Feeding Programs 643747.EL1</i>	-	0.280	1.948	-	1.948	0.452	-	0.509	-	Continuing	Continuing
• RDT&E 654713.EL2: <i>Army Field Feeding Equipment 654713.EL2</i>	-	0.333	1.295	-	1.295	1.867	1.598	0.966	0.994	Continuing	Continuing
• OPA M65806: <i>Assault Kitchen, Field Feeding M65806</i>	4.889	3.632	7.750	-	7.750	4.608	4.129	4.565	6.145	Continuing	Continuing

Remarks

D. Acquisition Strategy

Complete Engineering and Manufacturing Development (EMD) and Demonstration of food items and equipment for transition into competitive procurement contract. Complete advanced research efforts to support Engineer Change Proposals for previously developed equipment.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>

E. Performance Metrics

N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604713A / Combat Feeding, Clothing, and Equipment				548 / Mil Subsistence Sys							
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CFP Management	C/FP	RDECOM : Natick, MA	2.430	0.164	Jul 2015	0.233	Jul 2016	0.204	Jul 2017	-		0.204	0	3.031	Continuing
SBIR+STTR	TBD	Various : Various	0.064	-		-		-		-		-	0	0.064	0
Subtotal			2.494	0.164		0.233		0.204		-		0.204	0.000	3.095	-
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various combat feeding equipment, multi fuel and water equipment	C/FP	RDECOM : Natick, MA	6.185	1.418	Jul 2015	0.549	Jul 2016	0.178	Jul 2017	-		0.178	0	8.330	Continuing
DOD Field Feeding Equipment	C/FP	Various : Various	3.615	0.920	Mar 2015	0.648	Mar 2016	0.203	Mar 2017	-		0.203	0	5.386	Continuing
Army Field Feeding Equipment Development	C/FP	PM Force Sustainment Systems (FSS) : Natick, MA	2.477	0.241	Mar 2015	-		-		-		-	0	2.718	Continuing
Subtotal			12.277	2.579		1.197		0.381		-		0.381	0.000	16.434	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Army Field Feeding Equipment	Various	TECOM/OEC/ATC : Warren, MI	4.052	0.240	Mar 2015	-		-		-		-	0	4.292	Continuing
Joint Service Food/Combat Feeding Equipment	Various	Various : Various	0.000	-		-		0.174	Mar 2017	-		0.174	0	0.174	0
Subtotal			4.052	0.240		-		0.174		-		0.174	0.000	4.466	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army								Date: February 2016					
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>				Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>					
	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.823	2.983		1.430		0.759		-		0.759	0.000	23.995	-

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
--	--	--

Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Transition advanced USMC equipment and systems to USMC for procur	[Redacted]																											
Transition advanced USN equipment and systems to USN for procureme	[Redacted]																											
Conduct operational test of individual ration components/packaging	[Redacted]																											
Conduct operational test of individual ration component/packaging	[Redacted]																											
Transition individual rations/ration components documents to DLA /servi	[Redacted]																											
Transition individual ration/ration components documents to DLA /servic	[Redacted]																											
Conduct operational test of Unitized Group Ration components/packagin	[Redacted]																											
Conduct operational test of Unitized Group Ration component/packaging	[Redacted]																											
Transition Unitized Group Ration component/packaging documents to D	[Redacted]																											
Transition Unitized Group Ration component/packaging document to DL	[Redacted]																											
Conduct Group Ration Airdrop Survivability Effort	[Redacted]																											
Conduct Group Ration Airdrop Survivability Efforts	[Redacted]																											
Complete transition to new recipe development/nutritional analysis softw	[Redacted]																											

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
--	--	--

Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Transition subset of completed AFRS recipes to Joint Services																												
(1) Transition CK P3I to RESET				▲ 1																								
(2) Initiate PQT Prototypes for advanced modular appliances		▲ 2																										
(3) Transition Autonomous Shipboard Cleaning System to Navy				▲ 3																								
Conduct root cause analysis on MTRHS																												
Conduct market survey and procure a hydroponics system																												
Testing to validate AMMPS generator interface and performance with CK																												
Develop Tech Data in support of CK ECP																												
Complete Alpha version of NFSAT software																												
Expand NFSAT capabilities to include LPD amphibious warfare ship class																												
Transition prototype equipment and technical data to USMC.																												
Conduct EMS CDR, and in-house T&E to integrate EMS into BEAR kitchen																												
Conduct OT&E of EMS in the BEAR kitchen system																												

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
--	--	--

Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Integrate JSERCS into BEAR system and conduct OT&E																												
(1) Update JSERCS TDP													▲ ₁															
Refine heat recovery prototype for integration and conduct OT&E.																												
(2) Transition TDP for the EMS, JSERCS, and heat recovery system to																	▲ ₂											

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Transition advanced USMC equipment and systems to USMC for procurement.	1	2013	4	2022
Transition advanced USN equipment and systems to USN for procurement.	1	2014	4	2022
Conduct operational test of individual ration components/packaging	1	2009	4	2015
Conduct operational test of individual ration component/packaging	1	2018	4	2022
Transition individual rations/ration components documents to DLA /services	1	2009	4	2016
Transition individual ration/ration components documents to DLA /services	1	2018	4	2022
Conduct operational test of Unitized Group Ration components/packaging	1	2009	4	2015
Conduct operational test of Unitized Group Ration component/packaging	1	2016	4	2022
Transition Unitized Group Ration component/packaging documents to DLA-TS	1	2009	4	2016
Transition Unitized Group Ration component/packaging document to DLA-TS	1	2018	4	2022
Conduct Group Ration Airdrop Survivability Effort	2	2015	4	2015
Conduct Group Ration Airdrop Survivability Efforts	1	2017	4	2017
Complete transition to new recipe development/nutritional analysis software	2	2015	4	2015
Transition subset of completed AFRS recipes to Joint Services	1	2015	4	2015
Transition CK P3I to RESET	4	2015	4	2015
Initiate PQT Prototypes for advanced modular appliances	2	2015	2	2015
Transition Autonomous Shipboard Cleaning System to Navy	4	2015	4	2015
Conduct root cause analysis on MTRHS	2	2015	4	2015
Conduct market survey and procure a hydroponics system	3	2015	4	2015
Testing to validate AMMPS generator interface and performance with CK ECP	1	2015	2	2015
Develop Tech Data in support of CK ECP	3	2014	4	2015
Complete Alpha version of NFSAT software	1	2016	4	2016

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
--	--	--

Events	Start		End	
	Quarter	Year	Quarter	Year
Expand NFSAT capabilities to include LPD amphibious warfare ship class and LCS	2	2015	4	2015
Transition prototype equipment and technical data to USMC.	1	2017	4	2017
Conduct EMS CDR, and in-house T&E to integrate EMS into BEAR kitchen system	2	2017	2	2017
Conduct OT&E of EMS in the BEAR kitchen system	3	2018	2	2019
Integrate JSERCS into BEAR system and conduct OT&E	1	2017	4	2017
Update JSERCS TDP	1	2018	1	2018
Refine heat recovery prototype for integration and conduct OT&E.	1	2018	3	2019
Transition TDP for the EMS, JSERCS, and heat recovery system to USAF	4	2019	4	2019

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>				Project (Number/Name) EL2 / <i>Army Field Feeding Equipment</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EL2: <i>Army Field Feeding Equipment</i>	-	0.000	0.333	1.295	-	1.295	1.867	1.598	0.966	0.994	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the development and demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency and survivability, and to reduce food service logistics requirements for the Army. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment, enhance safety in food service, and decrease fuel and water requirements. This project develops critical enablers that support the Army's Strategic Planning Guidance by developing and integrating critical expeditionary capabilities that maintain readiness; provide effective solutions that reduce the resource and operational energy footprint; provide modernized equipment; and enhance the field Soldier's well being. This project also reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for the Army.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017
<p>Title: Ice Making System</p> <p>Description: Develops an add-on ice making capability that automatically dispenses and seals 10 pound(lbs) bags at a rate of a minimum of 3,600 pounds of ice per day. This capability is based upon Army current operational requirements for ice which is four pounds per Soldier per day. This capability enables support for up to 900 personnel. Current operations require external support to provide personnel with ice for cooling drinking water in extremely arid environments. This capability will reduce the sustainment risk and cost associated with transporting this commodity from external sources. The objective requirement enables stockage of ice to assist with surge operations.</p> <p>FY 2016 Plans: Award contract for development of prototype Containerized Ice Making Systems and required Developmental Testing (DT).</p>	-	0.333	-
<p>Title: Battlefield Kitchen (BK)</p> <p>Description: Provide replacement of the obsolete Mobile Kitchen Trailer (MKT) system. The BK shall replace the MKT with a kitchen that provides fuel efficient, thermally controlled, closed combustion appliances within an environmentally controlled workspace. The BK shall provide rations for up to 300 Soldiers within 4 hours of setup. The BK provides refrigeration, running</p>	-	-	1.295

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) EL2 / <i>Army Field Feeding Equipment</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
water and a heated serving line using the same off-road prime mover as the MKT as well as transportability by rail, sea, fixed and rotary wing aircraft.			
FY 2017 Plans: Oversee contractor integration of developmental components and mature government supplied components into working BK prototype. Maintain concurrent development of Integrated Logistics Support (ILS) documentation and provisioning of government supplied mature components and subsystems.			
Accomplishments/Planned Programs Subtotals	-	0.333	1.295

C. Other Program Funding Summary (\$ in Millions)												
			<u>FY 2017</u>	<u>FY 2017</u>	<u>FY 2017</u>					<u>Cost To</u>		
	<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Complete</u>	<u>Total Cost</u>
	• RDT&E 654713.548: <i>Military Subsistence System</i>	2.983	1.430	0.759	-	0.759	0.358	0.472	1.148	1.178	Continuing	Continuing
	• RDT&E 643747.610: <i>Food Adv Dev</i>	3.348	0.021	5.299	-	5.299	6.579	4.830	4.508	4.631	Continuing	Continuing
	• RDT&E 643747.EL1: <i>Army Field Feeding Programs</i>	-	0.280	1.948	-	1.948	0.452	-	0.509	-	Continuing	Continuing
	• OPA M65806: <i>Assault Kitchen, Field Feeding</i>	4.889	3.632	5.167	-	5.167	4.660	4.165	4.605	6.200	Continuing	Continuing

Remarks

D. Acquisition Strategy
Complete System Development and Demonstration of food items and equipment for transition into competitive procurement contract. Complete advanced research efforts to support Engineer Change Proposals for previously developed equipment.

E. Performance Metrics
N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) EL2 / <i>Army Field Feeding Equipment</i>
--	--	---

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Management Support	Various	PM Force Sustainment Systems : Natick, MA	0.000	-		0.128	Jun 2016	0.125	Oct 2016	-		0.125	0	0.253	0
Subtotal			0.000	-		0.128		0.125		-		0.125	0.000	0.253	0.000

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Battlefield Kitchen	Various	PMFSS : Natick, MA	0.000	-		-		1.170	Mar 2017	-		1.170	0	1.170	0
Subtotal			0.000	-		-		1.170		-		1.170	0.000	1.170	0.000

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Ice Making System	Various	ATC/Ft Lee : Virginia	0.000	-		0.205	Jun 2016	-		-		-	0	0.205	0
Subtotal			0.000	-		0.205		-		-		-	0.000	0.205	0.000

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		0.000	-	0.333	1.295	-	1.295	0.000	1.628	0.000

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) EL2 / <i>Army Field Feeding Equipment</i>
--	--	---

Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Complete prototype Containerized Ice Making Systems (CIMS)																												
Design and build Battlefield Kitchen prototypes																												
Conduct DT on the Battlefield Kitchen																												
Conduct OT on the Battlefield Kitchen																												
Complete Milestone C and transition Battlefield Kitchen into production																												
Design and build prototype DESERT Systems																												
Conduct Developmental Testing (DT) on the DESERT Systems																												
Conduct Limited User Evaluation on the DESERT Systems																												
(1) Complete ECP and transition DESERT into production																									▲			

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) EL2 / <i>Army Field Feeding Equipment</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete prototype Containerized Ice Making Systems (CIMS)	1	2016	4	2016
Design and build Battlefield Kitchen prototypes	3	2017	1	2019
Conduct DT on the Battlefield Kitchen	1	2019	3	2019
Conduct OT on the Battlefield Kitchen	3	2019	4	2019
Complete Milestone C and transition Battlefield Kitchen into production	1	2020	2	2020
Design and build prototype DESERT Systems	2	2019	4	2019
Conduct Developmental Testing (DT) on the DESERT Systems	1	2020	4	2020
Conduct Limited User Evaluation on the DESERT Systems	1	2021	2	2021
Complete ECP and transition DESERT into production	3	2021	3	2021