



Army Field Feeding Systems



Kitchen	Name, LIN, AAO, OH	Capability	FUE	Prime Mover	Formations
	Containerized Kitchen (CK) LIN: C27633 AAO: 1033 O/H: 1015	All Rations Supports 301-800 Consolidated or Area Feeding	2001	MTV 5T	Pure fleet to H,S,I BCTs; Primary field kitchen for BCTs. Larger EAB units.
	Mobile Kitchen Trailer (MKT) LIN: L28351 AAO: 1619 O/H: Approx 3447	All Rations Supports 75 - 300 Consolidated Feeding	1975	LMTV 2 1/2T	Fielded to EAB Field Feeding Teams.
	Battlefield Kitchen (BK) LIN: Z05618 AAO: 1619 O/H: N/A	All Rations Supports 300 (T) 400 (O) Consolidated Feeding	Est. 2020	LMTV 2 1/2T	EAB Field Feeding Teams. Will replace the MKT.
	Kitchen Company Level Field Feeding (KCLFF) LIN: K28601 AAO: 1,763 O/H: 838	UGR-H&S; limited UGR-A Supports: 250 UGR-H&S, 150 UGR-A Remote / Small Group Feeding	1987	HMMWV & Trailer	Initially fielded to maneuver units. Also to EAB units with remote feeding requirements.
	Assault Kitchen (AK) LIN: A94943 AAO: 1,763 OH: 1,369	UGR-H&S; 250 UGR-H&S Remote / Small Group Feeding – On The Move Feeding.	2008	HMMWV & Trailer	Replaces KCLFF in Line Companies for H,S, & I BCTs, and some units requiring remote feeding (SF).





Assault Kitchen



Program Description: The AK is a highly mobile and flexible, expeditionary field feeding system to prepare operational rations for forward and/or remotely deployed units. It consists of a Tray Ration Heater (TRH) installed in a Light Tactical Trailer (LTT) with a HMMWV prime mover. Other components carried in the vehicle and trailer include a range cabinet, cookpot cradle assembly, power inverter, fuel supply system, insulated food and beverage containers, ice chest, serving tables, utensils, maintenance kit, racks and other ancillary equipment. It replaces the Kitchen, Company Level Field Feeding (KCLFF).

Capabilities:

- The tray ration heater cooks on the move, providing food service in transit, or feeding a company-sized unit within 90 minutes of arrival
- Able to serve multiple sites when operational conditions permit
- Able to be dismantled and employed statically at a base or outpost
- Cooks UGR Heat & Serve tray rations and limited UGR "A" ration menus

Requirements Document: ORD 29 March 2004 (Adopted from USMC)

Limitations:

- DA G8 considering curtailing AK procurement and retaining KCLFF for remainder of units.

Vendor: Rock Island Arsenal, IL

Average Procurement Unit Cost: \$62.1K (MSR); \$56.5K (Econ)

Proponent: CASCOM

ACAT Level: ACAT III

ARB: 28 Sep 2011

Current MS Decision: MS C March 2007

Recent Milestones or Events:

- Continuing production and fielding

Near Term Milestones or Events:

- Continuing production and fielding





AK Significant Activities



Recent Accomplishments

- Awarded base and supplemental integration orders to RIA April 2017

Next 12 Months

- Process NG funded order for 72 additional AKs
- Continue production and fielding





Battlefield Kitchen (BK)



Description: The BK is a full service mobile field kitchen for feeding up to 300 Soldiers three meals per day. It will prepare the full range of ration meals up to "line item" "A" rations. It will replace the aged, overloaded Mobile Kitchen Trailer (MKT) that uses open flame burners that vent exhaust into the kitchen. The BK's modular, closed combustion appliances will remove burner exhaust/heat/noise from the kitchen, providing a healthier environment. It will be trailer mounted and will use the same prime mover as the MKT, the Light Medium Tactical Vehicle (LMTV). The Army has been divesting the MKT, with over 2,000 MKTs replaced by the larger Containerized Kitchen (CK) on a one CK for two MKT basis in units where field feeding operations serve large, consolidated populations (i.e. Brigade Combat Teams). The BK will replace the remaining individual MKTs in smaller units.

Capabilities:

- On board generator, refrigerator, hand sink and ventilation
- Modular appliances are easily reconfigured or replaced, and are removable for set up in buildings or other structures
- 20-40% better fuel efficiency than current Army field kitchen appliances

Requirements Document: CDD 6 May 2014 (Joint Information)

Limitations:

- OPA funds required in FY19 to support accelerated production and fielding
- Additional OPA funds needed FY20-23 to reach Minimum Sustaining Rate (approx. \$15M total per year required)

Vendor: Berg Company, Spokane WA

Average Procurement Unit Cost: \$234.8K (MSR); \$223.1K (Econ)

Proponent: CASCOTM

ACAT Level: ACAT III

APB: 29 September 2016

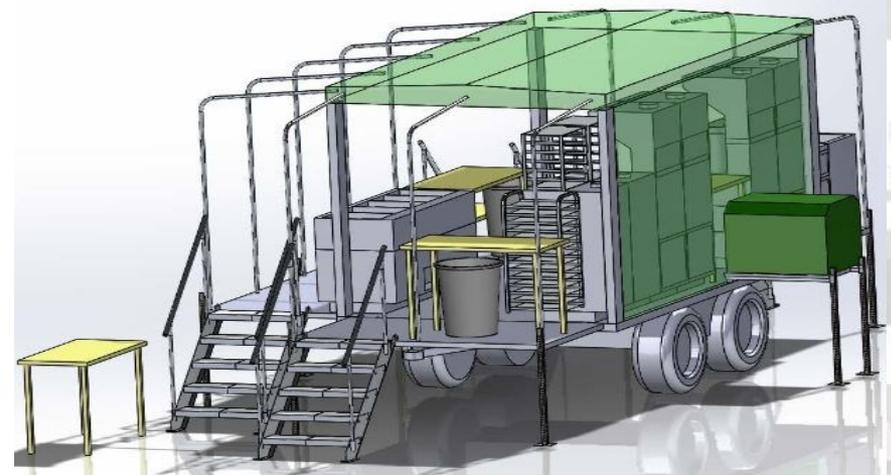
Current MS Decision: MS B 29 September 2016

Recent Milestones or Events:

- Preliminary Design Review January 2017
- Critical Design Review June 2017

Near Term Milestones or Events:

- Initiate Prototype Build July 2017





BK Significant Activities



Recent Accomplishments

- Critical Design Review conducted 14-15 June 2017

Next 12 Months

- CDR close out tentatively planned end of July 2017
- Prototype fabrication July-November 2017





Multi – Temperature Refrigerated Containerized System (MTRCS)



Authorized: 2424

POM Qty: 334

On-Hand: 1584

Description: The MTRCS provides the capability to transport and store refrigerated and frozen product on the battlefield in a single container. It can carry 3 days of rations for up to 800 Soldiers. It consists of an insulated 8'x8'x20' ISO intermodal container with an engine driven refrigeration unit. The compartments are separated by a removable partition facilitating loading and allowing the container to be tailored for different loads. The result is more efficient space utilization and reduced transportation requirements. The MTRCS accompanies each primary field kitchen and supports ration distribution by Quartermaster Supply Companies. It improves the efficiency of ration distribution and eliminates Ration Break Points and daily ration resupply runs by units in maneuver BCTs.

Recent Milestones or Events:

- Awarded production rebuy contract June 2016
- Completed Critical Design Review May 2017

Near Term Milestones or Events:

- Conduct First Article build May-Oct 2017
- Complete FAT Feb 2018

Capabilities:

- Refrigeration unit may be driven by integral diesel engine or electric motor
- Refrigeration able to operate on the move
- Insulated container maintains temperature for 12 hours at 120F without cooling
- Container has built in interfaces for transport on Palletized Load System (PLS) or Load Handling System (LHS) trucks

Requirements Document: ORD 24 April 2002 (Joint Interest)

Limitations:

- Production rebuy contract was competed as a small business set aside and the team including the former incumbent (DRS) was unsuccessful
- Rebuy was performance based due to lack of technical data, and the new configuration from a new source requires testing and Materiel Release

Vendor: DRS, Florence KY (bridge contract); Berg Co, Spokane WA (new contract)

Average Procurement Unit Cost: \$161.3K (MSR); \$156.1K (Econ)

Proponent: CASCOM

ACAT Level: ACAT III

APB: 11 December 2010

Current MS Decision: MS C July 2007



MTRCS





MTRCS Significant Activities



Recent Accomplishments

- Conducted Critical Design Review (CDR) in May 2017

Next 12 Months

- Manufacture First Article Test (FAT) prototypes May-September 2017
- Complete Preliminary Testing for FAT readiness
- Conduct of FAT October 2017-February 2018
- Initial submissions of TMs and training
- Perform Log Demo and User Demo at Fort Lee





MTRCS Pin Condenser Damage Update



Problem: MTRCS refrigeration unit condenser damaged by handle of hook arm retention pin on LHS/PLS vehicles during loading/unloading causing refrigerant loss and deadlining the MTRCS



Damaged Condenser

Last 6 months:

- Two 'guard' prototypes tested at ATC using LHS/PLS vehicle test protocols - both failed to protect MTRCS
- Revisited strategy with PM Heavy Tactical Vehicles (HTV) - Changed from MTRCS based solution to modifying the LHS/PLS pin
- Modified pin designs reviewed with PM HTV and HEMTT OEM (Oshkosh)
- Strategy reviewed at PEO level in April 2017 to align efforts



Alternative Pins

Path Forward:

- PM HTV has the lead to develop and fund pin modification efforts
- PM HTV working with TARDEC on in-house pin redesign and subsequent modification of product support documentation
- Technical data package to be obtained for procurement flexibility
- Potential for operator applied modification to be pursued
- Target locations with high concentration of MTRCS/LHS interaction for expedited pin change out
- Objective to initiate roll out in FY18



'Bumper' Style Guard





Containerized Kitchen (CK)



Authorized: 1033

POM Qty: 0

On-Hand: 1054

Program Description:

The CK is a mobile field kitchen that provides an efficient, rapidly deployable food service capability as part of the Army Field Feeding System (AFFS). It consists of a combination of existing military standard equipment and commercial components integrated into an expandable 20' ISO container mounted on a tactical trailer. It is towed by a 5 ton truck. The CK replaced two of legacy Mobile Kitchen Trailers (MKT) in larger units where food service operations are consolidated. The CK can support 800 soldiers (battalion level) with up to three hot meals per day. It is the primary kitchen used in Brigade Combat Teams. It uses open combustion appliances with limited ventilation. System modifications have been developed to address safety and operational issues.

Recent Milestones or Events:

- CK -10 TM Revision Validation April 2017
- AMMPS generator retrofit Modification Work Order (MWO)Verification May 2017

Near Term Milestones or Events:

- Field final CK systems 4Q FY17
- Begin AMMPS field retrofits 1QFY18

Capabilities:

- Feeds Up To 800 Meals 3x Per Day
- Running water
- Refrigerators
- On Board 10KW TQG (to be replaced with AMMPS)

Requirements Document: ORD 17 August 1995 (Independent)

Limitations:

- Heat build up in hot ambient conditions
- Possible carbon monoxide hazard if equipment not set up or operating properly
- Increasing reports of shelter and trailer corrosion
- Funding needed to complete engineering changes and procure mod kits and installation
- Lack of ongoing Modification funding line to support Field Feeding fleet mods

Vendor: OVC, Stearns, KY

Average Procurement Unit Cost: \$208K (O) \$229 (T)

Proponent: CASCOC

ACAT Level: ACAT III

APB: 3 December 2010

Current MS Decision: MS C August 1998





CK Heat Mitigation Update



Problem: Accumulation of heat during cooking operations in high temperature environments results in hazardous working conditions, requiring modified use schedules or system shutdown



Window Fans

Last 6 months:

- Developed drawing packages for components
- Developed pack out procedure to accommodate new hardware (ongoing)
- Requested FY17 supplemental funding and FY18-20 POM funding for CK modification

Path Forward:

- Incorporate equipment and installation and packout instructions in TMs and provisioning
- Pursue reprogramming of FY18 OPA funds if possible to begin kit procurement and issue
- Pursue UFR and/or POM funding to complete procurement and application to the CK fleet
- Use CK contract and other existing vehicles to procure kits



ECU Return Air Reroute



Cook Center Wall

Long Term:

- Retrofit of CKs with closed combustion appliances under development for the BK is the objective solution to eliminate high temperature operation issues





Food Sanitation Center (FSC) Modification



Authorized: 2623

POM Qty: 0

On-Hand: 2544

Program Description:

The Food Sanitation Center (FSC) provides the sanitation capability required to perform clean-up following food service operations in the field. They operate in conjunction with the Mobile Kitchen Trailer (MKT) or Containerized Kitchen (CK). The FSC consists of integrated sanitation equipment including sinks, racks, work tables, and water heating equipment housed in a tent. It uses a three sink sanitation method with three sinks maintained at different temperatures for successive cleaning, rinsing and sanitizing of pots, pans and cooking utensils. The modification adds automatic control of sink burners to maintain proper water temperatures for operator and food safety and a water transfer pump to conserve water.

Recent Milestones or Events:

- Mod kit installation initiated March 2017

Near Term Milestones or Events:

- Continuing kit fielding

Capabilities:

- Thermostatic Control Unit automatically maintains sink temperature for proper sanitation and user safety
- Water Reuse Pump Assembly allows indexing of sink water to reduce demand and environmental impact

Requirements Document: CDD 6 May 2014 (No Joint)

Limitations:

- Application of Modification Work Order (MWO) delayed due to HQDA disapproval of user application – Pursuing exception to policy to allow operator application
- Lack of ongoing Modification funding line to support Field Feeding fleet mods

Vendor: OVC, Stearns KY

Average Procurement Unit Cost: \$6K

Proponent: CASCOM

ACAT Level: ACAT III

APB: NA

Current MS Decision: NA





Containerized Ice Making System



Authorized: 59

POM Qty: 30

On-Hand: 0

Program Description:

The CIMS program provides the capability to produce potable ice on-site for the Provider Expeditionary (FPE) 600 pax camp and other small base camps. The CIMS is containerized for transport and is compatible with the rest of FPE. The maximum allowable footprint is an 8' x 8' x 20' ISO container with a single 1/3 TRICON size being the objective footprint. For logistics purposes any FPE container is limited to a max weight of 10,000 Lbs. The CIMS system is required to draw potable water from a standing source, manufacture ice cubes and automatically package them in 10 Lb bags. The threshold requirement is to produce 3600 Lbs/day of ice and have the ability to store 120 bags of ice at any one time.

Capabilities:

- Produce 3,600 (T) lbs to 7,200 (O) lbs of ice per day
- Automated bagging
- Storage for ice produced in 8 hours

Requirements Document: FPE CPD 27 February 2014 (Independent)

Limitations:

- LOGCAP contractor operated and maintained
- Bagger durability and reliability
- Degraded performance in hot weather
- Funding for procurement uncertain

Vendor: Multiple prototype vendors

Average Procurement Unit Cost: Est. \$200K

Proponent: CASCOM

ACAT Level: ACAT III

APB: N/A

Current MS Decision: N/A

Recent Milestones or Events:

- R&D contract awarded Sep 2015 (NSRDEC)
- IR&D candidate testing 4QFY16

Near Term Milestones or Events:

- DT/OT testing 1-3QFY18
- ECP to Force Provider 4QFY18





Facilities & Equipment Division POC's

Sup FS Sys Analyst	(804 - 734-3354
FS Sys Analyst	(804 - 734-3329
FS Sys Analyst	(804) - 734-3390
Eqt Specialist	(804) - 734-3450

