

To jump to a specific section of this Technical Data Package, click on the TAB number in blue located in the Table of Contents.



Technical Data Package

Solicitation

SPE3S1-16-R-0008

Meal, Ready-to-Eat (MRE) and
Humanitarian Daily Ration (HDR)

Table of Contents

Tab 1:

ACR-M-37, Meal, Ready-to-Eat Assembly Requirements

Tab 2:

MIL-PRF-44073, Packaging of Food in Flexible Packages

Tab 3:

Section C - MRE Description/ Specification

Technical data for MRE assembly and for Contractor Furnished Material (CFM) components

A. C-1 - Technical Data for Assembled MRE

B. C-2 - Technical Data for Contractor Furnished Material (CFM) components

Tab 4:

Section D - MRE Packaging and Marking

Packaging requirements for assembled MREs and CFM component items

A. Part I - Technical Data for MRE Assembly

B. Part II – Technical Data for Contractor Furnished Material (CFM) components

Tab 5:

Section E – MRE Inspection and Acceptance

A. Inspection and Acceptance requirements for Assembled MREs and CFM components

Tab 6:

Humanitarian Daily Ration (HDR)

A. Purpose

B. Section C- Description/Specification

C. Section D- Packaging, Labeling, Packing, Marking, and Unitization

D. Section E- Inspection and Acceptance

SECTION C

The Meal, Ready-to-Eat (MRE) provides an operational ration for the individual.

C-1 ITEM DESCRIPTION

ACR-M-037, MEAL, READY-TO-EAT (MRE), ASSEMBLY REQUIREMENTS

C-2 ASSEMBLY REQUIREMENTS

A. Components. The components are specified in table I.

TABLE I. Components

Component	Reference
<u>Entrées</u>	
Asian Style Beef Strips with Vegetables	PCR-A-005
Beef Patty, Grilled	PCR-B-029A
Jalapeno Pepper Jack	Flavor 2
Beef Ravioli in Meat Sauce	PCR-B-021A
Beef Shredded, in Barbecue Sauce	PCR-B-057
Beef Stew	PCR-B-020A
Beef Taco	PCR-B-054
Brisket Entrée (Gravy with Seasoned Beef Brisket Slices)	PCR-B-050
Cheese Tortellini in Tomato Sauce	PCR-C-020A
Chicken, Egg Noodles, and Vegetables, in Sauce	PCR-C-021A
Chicken Burrito Bowl	PCR-C-088
Chicken Chunks, White, Cooked, Canned or in Flexible Pouches, 5 oz. Pouch	A-A-20352B Type V
Chicken Pesto Pasta	PCR-C-069
Chili and Macaroni	PCR-C-027A
Chili with Beans	PCR-C-062A
Creamy Spinach Fettuccine (Egg Noodles, Spinach and Mushrooms in a Cream Sauce)	PCR-C-087
Elbow Macaroni in Tomato Sauce	PCR-E-019
Hash Brown Potatoes with Bacon, Peppers and Onions	PCR-H-012A
Meatballs in Marinara Sauce	PCR-M-015
Mexican Style Chicken Stew	PCR-M-016
Pizza Slice, Pepperoni	MIL DTL 32541
Pork Sausage Patty, Maple Flavored	PCR-P-045
Southwest Style Beef and Black Beans with Sauce	PCR-S-018
Spaghetti with Beef and Sauce	PCR-S-002

TABLE I. Components - Continued

Component	Reference
Tuna, Flexible Pouch, Chunk	A-A-20155D, Type B, Form I
Light, Water	Color a, Packing Media 1
Lemon Pepper, Regular (no more than 1.5 percent salt)	Flavor 1, Salt/Sodium Level (a)
Vegetable Crumbles with Pasta in Taco Style Sauce	PCR-V-010
<u>Starches and Soups</u>	
Black Beans in a Seasoned Sauce	PCR-B-056
Cornbread	PCR-C-075
Granola	PCR-G-003A
With Milk and Blueberries	Type I
Potatoes Au Gratin	PCR-P-048
Potatoes, Mashed	PCR-P-011A
Garlic	Flavor II
Santa Fe Style Rice and Beans	PCR-S-019
Snack Bread, Fortified	PCR-S-009D
Wheat Snack Bread, Single Pack	Type I, Style A
Italian Bread Sticks, Single Pack	Type IV, Style A
Multigrain Snack Bread, Single Pack	Type V, Style A
White Wheat Snack Bread, Single Pack	Type VI, Style A
Tortillas	PCR-T-008A
Plain	Flavor 1
Chipotle	Flavor 2
<u>Fruits</u>	
Apple Pieces in Spiced Sauce	PCR-A-001B
Cobbler	PCR-C-058A
Cherry Blueberry	Flavor 1
Fruits, Infused and Dried	A-A-20299C
Sliced Cranberries, Not Fortified	Type VII, Fortification a
Whole Raisins, Not Fortified	Type IX, Fortification a
Fruits, Wet Pack	PCR-F-002C
Pears, Sweetened, Sliced or Diced	Type IV
Mixed Fruit, Sweetened	Type V
Applesauce, with Raspberry Puree, Sweetened, Reg.	Type VI
Applesauce, Carbohydrate Enhanced, Sweetened, Reg.	Type VII
Applesauce, with Mango and Peach Puree, Sweetened, Reg.	Type VIII

TABLE I. Components - Continued

Component	Reference
<u>Desserts and Snacks</u>	
Meat and Poultry Snacks, Cured	A-A-20298C
Beef, Moist Cured/Kippered, Chopped and Formed Strips, Smoked	Variety A, Type II, Style a Class 1, Flavor (a)
Beef, Fermented, Chopped and Formed Sticks, Teriyaki	Variety A, Type IV, Style a Class 2, Flavor (b)
Cakes, Brownies, Muffin Tops and Filled Cakes	PCR-C-007F
Pound Cakes	Type I
Vanilla, <i>Trans</i> Fat Free	Flavor 1, Style 2
Lemon Poppy Seed, <i>Trans</i> Fat Free	Flavor 6, Style 2
Spice, <i>Trans</i> Fat Free	Flavor 7, Style 2
Carrot, <i>Trans</i> Fat Free	Flavor 10, Style 2
Marble, <i>Trans</i> Fat Free	Flavor 11, Style 2
Applesauce, <i>Trans</i> Fat Free	Flavor 12, Style 2
Muffin Tops	Type III
Chocolate Banana Nut, <i>Trans</i> Fat Free	Flavor 1, Style 2
Maple, <i>Trans</i> Fat Free	Flavor 2, Style 2
Cheese Spread, Cheddar, Fortified	PCR-C-039A
Plain	Type I
With Jalapeno Peppers	Type II
With Bacon	Type III
Cookies, Regular, Individual Serving Package	A-A-20295D, Type I, Class 1
Crisp	Bake Type a
Sugar, Patriotic	Style D, Shape (b)
Oatmeal, Plain	Style I, Flavor 1
Oatmeal, Chocolate Chunk	Style I, Flavor 6
Chocolate Chip, Plain	Style J, Flavor 1
Crackers, Fortified	PCR-C-037A
Plain	Type I
Vegetable	Type II
Dessert Powder, Pudding, Regular	A-A-20344A, Type I
Instant, Nonfat Dry Milk	Preparation Method C, Style 1
Vanilla	Flavor a
Chocolate	Flavor b

TABLE I. Components - Continued

Component	Reference
Filled Bakery Item	MIL-DTL-32221B
Filled French Toast	Type I
Cinnamon Bun	Type II
Apple Turnover	Type III
First Strike Bars	PCR-F-001
Chocolate, Regular	Flavor I, Style A
Apple-Cinnamon, Regular	Flavor II, Style A
Cran-Raspberry, Regular	Flavor III, Style A
Jelly, Fruit, Standardized, Single, Regular	A-A-20078D, Type I, Style 1
U.S. Grade A	Finished Product Quality a
Apple	Kind A
Grape	Kind M
Nut and Fruit Mix	PCR-N-003A
Nuts and Raisins with Pan Coated Chocolate Disks	Type II
Nut Butters and Nut Spreads	A-A-20328B
Regular, Stabilized	Class A, Type a
Fortified, Salted	Fortification 2, Seasoning (a)
Conventional	Agricultural Practices (1)
Peanut Butter, Smooth	Style I, Texture 1
Peanut Butter, Chunky/Crunchy	Style I, Texture 3
Peanut Spread, Smooth, Chocolate	Style II, Texture 1, Flavor 2
Nuts, Shelled, Roasted	A-A-20164D
Peanuts, Virginia or Runner Type, Dry Roasted, Salted	Type V, Style A
Cashews, Halves (Splits), Flavored (Jalapeno)	Type VI, Size 2, Style C
Almonds (Unblanched), Flavored (Smoked)	Type IX, Style C
Preserves (or Jams), Fruit	A-A-20079D, Type I
U.S. Grade A	Finished Product Quality a
Single Fruit, Blackberry, Regular	Group I, Flavor A, Style 1
Single Fruit, Strawberry, Regular	Group I, Flavor Q, Style 1
Trail Mix, Recovery	PCR-T-014

TABLE I. Components - Continued

Component	Reference
Snack Foods	A-A-20195D
Pretzels, Sticks, Plain, Salted	Type II, Style C, Flavor 1
Pretzels, Nuggets, Honey Mustard and Onion	Type II, Style E, Flavor 2
Filled Pretzels, Cheddar Cheese	Type II, Style F, Flavor 1
Baked Snack Crackers, Cheddar Cheese and Hot and Spicy Cheese	Type V, Flavor 1 and 2
Toasted Corn Kernels, Plain, Salted and Barbecue	Type VI, Flavor 1 and 2
Cheese Filled Crackers, Cheddar Cheese and Pepperoni Pizza	Type VII, Flavor 1 and 2
Toaster Pastries, Regular, Not fortified	A-A-20211C, Type I, Fort. b
Rectangular, Enriched Wheat Flour	Shape i, Grain Composition (1)
Single Serving Packet	Servings (a)
Frosted Brown Sugar Cinnamon, Without Sprinkles	Style B, Flavor 3, Frosting (B)
Frosted Chocolate Chip, With Swirled or Drizzled Icing	Style B, Flavor 12, Frosting (C)
<u>Candy</u>	
Candy and Chocolate Confections	A-A-20177E
Toffee, Chocolate Flavored, Roll	Type II, Style A
Pan Coated Candy	Type VI
Disks, Milk Chocolate, Plain	Style A, Flavor 1
Disks, Fruit Flavored, Original	Style A, Flavor 2, Flavor Style a
Disks, Fruit Flavored, Berry	Style A, Flavor 2, Flavor Style b
Disks, Fruit Flavored, Sour	Style A, Flavor 2, Flavor Style d
Disks, Peanut Butter, Plain	Style A, Flavor 4
Oval/Round, Milk Chocolate with Peanuts	Style B, Flavor 1
Licorice Style Candy, Bite Size, Cherry	Type X, Shape B, Flavor 1
Mint Candy, Rings, Peppermint	Type XI, Style B, Flavor 2

TABLE I. Components - Continued

Component	Reference
<u>Beverages</u>	
Beverage Bases (Powdered)	A-A-20098E
Sweetened with Non-nutritive Sweetener, Lap or Fin Seal Pouch	Type III, Design D
Fortified with Ascorbic Acid and Calcium	Formulation h
Orange	Flavor I
Beverage Powder, Carbohydrate Electrolyte, Flat Pouch	PCR-B-013A, Design A
Fruit Punch	Flavor I
Grape	Flavor II
Lemon-Lime	Flavor III
Orange	Flavor IV
Beverage Powder, Carbohydrate, Small Flat Pouch	PCR-B-055, Design E
Fortified with Ascorbic Acid and Enhanced with Maltodextrin	Formulation a
Lemon-Lime	Flavor 3
Orange	Flavor 4
Tropical Punch	Flavor 5
Chocolate Protein Drink Powder	PCR-C-082A
Cocoa Beverage Powder	A-A-20189C
Sugar Sweetened, without Marshmallows	Type I, Style B
Flat Interlocking Closure Pouch	Design B
Milk Chocolate	Flavor A
Chocolate Hazelnut	Flavor F
Drink Mixes, Coffee (Unflavored and Flavored)	A-A-20336B
Flavored Instant Cappuccino, Regular	Type V, Style A
Flat Interlocking Closure Pouch	Design B
French Vanilla	Flavor 1
Mocha	Flavor 2
Irish Cream	Flavor 4

TABLE I. Components - Continued

Component	Reference
<u>Other Items</u>	
Bag, Hot Beverage	MIL-PRF-32176
Barbecue Sauce	A-A-20335B
Plain/Regular, without Fruit Purees	Flavor I, Type B
Fork, Knife, and Spoon, Picnic (Plastic)	A-A-3109B
High Impact, Spoon, MRE, 7-Inch (Brown)	Type IV, Item 13
Hot Sauce	A-A-20097F
Extra Hot 4x	Type II
Chili and Lime	Type VII
Buffalo Style	Type IX
Catsup (Ketchup, Catchup)	A-A-20346B
Regular (Plain)	Flavor I
Mayonnaise, Salad Dressing, and Tartar Sauce	A-A-20140D
Mayonnaise, Fat Free	Type I, Style C
Mustard, Prepared	A-A-20036D
Yellow (Salad Style)	Type I
Paperboard Insert Card	MIL-PRF-44073G
Paperboard Sleeve	MIL-PRF-44073G
Ration Supplement, Flameless Ration Heater (FRH)	MIL-R-44398B
Spices and Spice Blends	A-A-20001B
Spices, Pepper, Red, Crushed	Type I, Class Z, Form 3
Syrup	A-A-20124D
Table	Type IV
Regular Calorie, Imitation Maple	Style 1, Flavor A

B. Accessory components. Accessory components are specified in table II.

TABLE II. Accessory Components

Component	Reference	Acc. Pack
Chewing Gum, Tablet, Regular	A-A-20175E, Type I, Size B	All
Without Caffeine	Style (1)	
With Xylitol Sweetener	Class 3	
Peppermint or Cinnamon <u>1/</u>	Flavor a or c	
Hand Cleaner (towelette)	A-A-461B	All
Unscented, Water-based	Type II	
Matches, Safety	A-A-59489B	A
Paper, 20 Splint Book	Type I, Class B	
Salt, Table, Iodized, 4 Grams	NaCl Monograph	All
Toilet Tissue, Institutional	A-A-59594A, Style II	All
Folded, One Ply, Perforated	Type A, Class 1, Sheet Size b	
Coffee, Soluble	A-A-20184C	A, C
Spray Dried, Agglomerated	Type II	
or Freeze Dried, Regular	or Type III, Style A	
Creamer, Non-Dairy, Dry	A-A-20043C	A, C
Regular, Original	Style I, Flavor A	
Sugar, Refined, White and Sugar	A-A-20135D	A
Brown		
White (Refined)	Type I,	
Granulated (fine or extra fine)	Style A	
1/7 Ounce		
Beverage Bases (Powdered) <u>1/</u>	A-A-20098E	B
Sweetened with Non-Nutritive	Type III	
Sweetener, Lap or Fin Seal Pouch	Design D	
Lemonade, Not fortified	Flavor 8, Formulation a	
Raspberry, Not fortified	Flavor 13, Formulation a	
Cranberry Grape, Not fortified	Flavor 22, Formulation a	
Sugar Substitutes, Non-Carbohydrate	A-A-20178C	C
Sucralose, Granular	Type IV, Style A	
Envelopes/Packets	Package 1	

1/ Flavors shall be procured in equal quantities and assembled in a distribution which provides the greatest variation.

C. Contents. The contents of each meal are specified in table III. Refer to table I for full citation and document number of components.

TABLE III. Contents

<u>Menu #1</u> Chili with Beans Cheese Spread, Cheddar, Plain Crackers, Vegetable Cornbread Snack Food, Cheese Filled <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve	<u>Menu #2</u> Beef Shredded in Barbecue Sauce Black Beans in a Seasoned Sauce Cheese Spread, Cheddar, with Jalapeno Peppers Tortillas, Plain Cookies <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Barbecue Sauce Accessory Packet C Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)
<u>Menu #3</u> Chicken, Egg Noodles, and Vegetables, in Sauce Fruits, Wet Pack <u>1/</u> Crackers, Plain Peanut Butter, Smooth Jelly/Jam <u>1/</u> Candy III <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Hot Sauce, Extra Hot Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #4</u> Spaghetti with Beef and Sauce Toaster Pastries <u>1/</u> Peanut Butter, Smooth Snack Bread, Multigrain Fruits, Infused and Dried <u>1/</u> Cocoa Beverage Powder, Milk Chocolate Jelly/Jam <u>1/</u> Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve

TABLE III. Contents - Continued

<u>Menu #5</u> Chicken Chunks First Strike Bar <u>1/</u> Cheese Spread, Cheddar, Plain Tortillas, Plain Trail Mix, Recovery Candy II <u>1/</u> Beverage Powder, Carbohydrate Electrolyte <u>1/</u> Hot Sauce, Buffalo Style Accessory Packet B Spoon Paperboard Insert Card (as applicable)	<u>Menu #6</u> Beef Taco Santa Fe Style Rice and Beans Cheese Spread, Cheddar, Plain Tortillas, Plain Nut and Fruit Mix, Nuts and Raisins with Pan Coated Chocolate Disks Beverage Bases, Sweetened with Non-nutritive Sweetener, Orange, Fortified Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)
<u>Menu #7</u> Brisket Entrée Potatoes Au Gratin Fruits, Infused and Dried <u>1/</u> Peanut Butter, Smooth Snack Bread <u>1/</u> Jelly/Jam <u>1/</u> Candy I <u>1/</u> Drink Mix, Flavored Instant Cappuccino, Irish Cream Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #8</u> Meatballs in Marinara Sauce Potatoes, Mashed, Garlic Cookies <u>1/</u> Cheese Spread, Cheddar, with Jalapeno Peppers Snack Bread, Italian Bread Sticks Meat Snacks <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Accessory Packet C Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)

TABLE III. Contents - Continued

<u>Menu #9</u> Beef Stew Cake, Pound, <i>Trans</i> Fat Free <u>1/</u> Peanut Butter, Smooth Jelly/Jam <u>1/</u> Snack Bread, Multigrain Snack Food, Pretzels <u>1/</u> Beverage Powder, Carbohydrate Electrolyte <u>1/</u> Hot Sauce, Extra Hot Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve	<u>Menu #10</u> Chili and Macaroni Cake, Pound, <i>Trans</i> Fat Free <u>1/</u> Cheese Spread, Cheddar, with Jalapeno Peppers Crackers, Vegetable Meat Snacks <u>1/</u> Candy I <u>1/</u> Beverage Powder, Carbohydrate Electrolyte <u>1/</u> Spice, Red Pepper, Crushed Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve
<u>Menu #11 Vegetarian</u> Vegetable Crumbles with Pasta in Taco Style Sauce Fruits, Wet Pack <u>1/</u> First Strike Bar <u>1/</u> Peanut Butter, Chunky/Crunchy Crackers, Plain Nuts <u>1/</u> Drink Mix, Flavored Instant Cappuccino, French Vanilla Hot Sauce, Chili and Lime Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #12 Vegetarian</u> Elbow Macaroni in Tomato Sauce Fruits, Wet Pack <u>1/</u> Cheese Spread, Cheddar, Plain Snack Bread <u>1/</u> Candy III <u>1/</u> Chocolate Protein Drink Powder Hot Sauce, Extra Hot Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)

TABLE III. Contents – Continued

<u>Menu #13 Vegetarian</u> Cheese Tortellini in Tomato Sauce Dessert Powder, Pudding <u>1/</u> Peanut Spread, Smooth, Chocolate Crackers, Plain Trail Mix, Recovery Beverage Powder, Carbohydrate Electrolyte <u>1/</u> Hot Sauce, Extra Hot Accessory Packet C Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve	<u>Menu #14 Vegetarian</u> Creamy Spinach Fettuccine First Strike Bar <u>1/</u> Peanut Butter, Smooth Crackers, Plain Snack Food, Pretzels <u>1/</u> Chocolate Protein Drink Powder Hot Sauce, Extra Hot Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve
<u>Menu #15</u> Mexican Style Chicken Stew Fruits, Wet Pack <u>1/</u> Snack Food, Cheese Filled <u>1/</u> Cheese Spread, Cheddar, with Jalapeno Peppers Crackers, Plain First Strike Bar <u>1/</u> Cocoa Beverage Powder, Chocolate Hazelnut Spice, Red Pepper, Crushed Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #16</u> Chicken Burrito Bowl Snack Food, Other <u>1/</u> Filled Bakery Item <u>1/</u> Tortillas, Plain Cheese Spread, Cheddar, Plain Hot Sauce, Extra Hot Beverage Powder, Carbohydrate, Fortified <u>1/</u> Accessory Packet C Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve

TABLE III. Contents – Continued

<u>Menu #17</u> Pork Sausage Patty, Maple Flavored Muffin Top, Maple, <i>Trans</i> Fat Free Peanut Butter, Smooth Crackers, Plain Nuts <u>1/</u> Beverage Powder, Carbohydrate Electrolyte <u>1/</u> Syrup, Table, Imitation Maple Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve	<u>Menu #18</u> Beef Ravioli in Meat Sauce Muffin Top, Chocolate Banana Nut, <i>Trans</i> Fat Free Cheese Spread, Cheddar, Plain Snack Bread <u>1/</u> Meat Snacks <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Hot Sauce, Extra Hot Accessory Packet C Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve
<u>Menu #19</u> Beef Patty, Grilled, Jalapeno Pepper Jack Cobbler, Cherry Blueberry Cookies <u>1/</u> Cheese Spread, Cheddar, with Bacon Tortillas, Plain Candy II <u>1/</u> Beverage Bases, Sweetened with Non-nutritive Sweetener, Orange, Fortified Ketchup Mustard Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #20</u> Hash Brown Potatoes with Bacon, Peppers and Onions Granola with Milk and Blueberries Filled Bakery Item <u>1/</u> Cheese Spread, Cheddar, Plain Crackers, Plain Nuts <u>1/</u> Beverage Bases, Sweetened with Non-nutritive Sweetener, Orange, Fortified Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve

TABLE III. Contents – Continued

<u>Menu #21</u> Tuna, Lemon Pepper Cake, Pound, <i>Trans</i> Fat Free <u>1/</u> Cheese Spread, Cheddar, Plain Tortillas, Plain Snack Food, Other <u>1/</u> Beverage Powder, Carbohydrate, Fortified <u>1/</u> Mayonnaise, Fat Free Accessory Packet B Spoon	<u>Menu #22</u> Asian Style Beef Strips with Vegetables Fruits, Wet Pack <u>1/</u> Peanut Butter, Chunky/Crunchy Jelly/Jam <u>1/</u> Snack Bread <u>1/</u> Candy III <u>1/</u> Cocoa Beverage Powder, Milk Chocolate Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve Paperboard Insert Card (as applicable)
<u>Menu #23</u> Pizza Slice, Pepperoni Chicken Pesto Pasta Cobbler, Cherry Blueberry Cheese Spread, Cheddar, Jalapeno Snack Bread, Italian Bread Sticks Cookies, Sugar, Patriotic Chocolate Protein Drink Powder Accessory Packet A Spoon Flameless Ration Heater Bag, Hot Beverage Paperboard Sleeve Paperboard Insert Card (as applicable)	<u>Menu #24</u> Southwest Beef and Black Beans with Sauce Apple Pieces in Spiced Sauce Cake, Pound, <i>Trans</i> Fat Free <u>1/</u> Meat Snacks <u>1/</u> Cheese Spread, Cheddar, Plain Tortillas, Chipotle Drink Mix, Flavored Instant Cappuccino, Mocha Accessory Packet B Spoon Flameless Ration Heater Paperboard Sleeve Paperboard Insert Card (as applicable)

1/ Flavors or types, as applicable, shall be procured in equal quantities and assembled in a distribution which provides the greatest variation of flavors and types in accordance with table IV.

TABLE IV. Menu distribution

Item	Menu	Flavor
Beverage Powder, Carbohydrate, Fortified	1, 2, 3, 8, 16,18, 21	Lemon-lime, orange, and tropical punch
Beverages Powder, Carbohydrate Electrolyte	5, 9, 10, 13, 17	Fruit punch, grape, lemon-lime and orange
Cakes, Pound, <i>Trans</i> Fat Free	9, 10, 21, 24	Vanilla, lemon poppy seed, spice, carrot, marble, and applesauce
Candy I	7, 10	Chocolate toffee rolls, licorice and mints
Candy II	5, 19	Pan coated candy: plain chocolate disks, peanut butter disks and chocolate with peanuts oval/round
Candy III	3, 12, 22	Original, berry and sour fruit disks
Cookies	2, 8, 19	Oatmeal, chocolate chip, and oatmeal chocolate chunk
Dessert Powder, Pudding	13	Vanilla and chocolate
Filled Bakery Item	16, 20	Filled French toast, cinnamon bun, and apple turnover
First Strike Bars	5, 11, 14, 15	Chocolate, apple-cinnamon, and cran-raspberry
Fruits, Infused and Dried	4, 7	Sliced cranberries and whole raisins
Fruits, Wet Pack	3, 11, 12, 15, 22	Raspberry applesauce, carbohydrate enhanced applesauce, mango and peach applesauce, pears, and mixed fruit
Jams and Jellies	3, 4, 7, 9, 22	Blackberry, strawberry, apple and grape
Meat Snacks	8, 10, 18, 24	Beef strips, smoked and beef sticks, teriyaki
Nuts	11, 17, 20	Dry roasted peanuts, jalapeno cashews, and smoked almonds
Snack Bread	7, 12 18, 22	Wheat and white wheat
Snack Food, Cheese Filled	1, 15	Filled cracker (cheddar cheese, pepperoni pizza) and Filled pretzel (cheddar cheese)
Snack Food, Other	16, 21	Toasted corn kernels (plain salted and barbecue) and Baked snack cracker (Cheddar cheese and hot and spicy cheese)
Snack Food, Pretzels	9, 14	Plain salted sticks and honey mustard and onion nuggets
Toaster Pastries	4	Frosted brown sugar cinnamon and frosted chocolate chip

SECTION D

D-1 PACKAGING

A. Components.

(1) Subassembly/accessory packet pouch. The subassembly/accessory packet pouch shall be a preformed pouch or a form-fill-seal pouch. Dimensions shall be sufficient to contain all components. Seals shall be a minimum 1/8 inch wide. A tear nick, notch or serrations shall be provided to facilitate opening the filled and sealed accessory packet. The average seal strength of the pouch seals shall be not less than 3.5 pounds per inch of width and no individual specimen shall have a seal strength of less than 3.0 pounds per inch of width. As an alternative to the seal strength requirement, the filled and sealed packet shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective seal width to less than 1/16 inch when tested for internal pressure resistance. The pouch shall be made from polymeric film or film combinations with adequate strength and thickness to contain and protect the components. The water vapor transmission rate (WVTR) of the film shall not exceed 6.2 g/m²/24hrs at 90% RH and 100°F when tested in accordance with ASTM F1249, Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor, ASTM E96/E96M, Standard Test Methods for Water Vapor Transmission of Materials or Method 3030 of MIL-STD-3010, Test Procedures for Packaging Materials and Containers. The exterior color of the packet shall be clear or tan.

(2) Time-temperature indicator (TTI) label. The TTI label shall be a 3/4 inch square, bull's-eye type, pressure sensitive adhesive label. The TTI label shall have an activation energy (E_a) of 24–30 kcal/mole, be protected from ultraviolet radiation, and have a shelf life of 1100 days at 80°F as pivot point.

(3) Meal bag. The meal bag shall be made from food grade, low density polyethylene (LDPE) tubing or tubing made from a blend of food grade, low density polyethylene (LDPE) and linear low density polyethylene (LLDPE). Additives may be used in order to improve sealability, peelability, tear resistance or other attributes provided all additives are approved for food contact. Polyethylene shall have a minimum thickness of 0.010 inch. Inside dimensions of the bag shall not exceed 8-1/2 inches by 13-1/4 inches. The color of the bag shall conform to number 20219, 30219, 30227, 30279, 30313, 30324 or 30450 of FED-STD-595, Colors Used in Government Procurement. One seal shall be a minimum 1/8 inch wide, continuous, peelable seal that forms a hermetic closure. The seal shall be designed with an inverted “V” shaped peel indicator along the seal path. There shall be a minimum of 1/2 inch between the apex of the “V” and the end of the bag. The seal strength of the peelable seal

shall be not less than 4 pounds per inch of width and shall be not greater than 10 pounds per inch of width. Alternative bag construction, bag materials, and material thicknesses may be used provided that the alternative method can be demonstrated to meet or exceed the requirements of this document, military abuse testing and controlled pest testing. Samples may be submitted to the contracting officer to be qualified on a case by case basis.

(4) Paperboard sleeve. The paperboard sleeve shall be constructed in accordance with figure 6 of MIL-PRF-44073. When folded along the score lines located at the bottom of the sleeve, an open-ended carton shall result. Each sleeve shall be securely sealed along the glue joint. The seal shall have a bond strength greater than the fiber tear of the paperboard. The color of the sleeve shall be natural kraft, tan or dull gray. The paperboard sleeve shall contain food product information in accordance with Section D-2 of the appropriate food product document(s).

(5) Paperboard insert card. The paperboard insert card shall not exceed 4 inches in width by 6 inches in length. The color of the insert card shall be natural kraft, tan or dull gray. The paperboard insert card shall contain food product information in accordance with Section D-2 of the appropriate food product document(s).

B. Assembly.

(1) Subassembly/accessory packet assembly. One of each applicable component as described in table II shall be inserted in an accessory packet pouch. If a subassembly is used, additional components may also be inserted in the packet. For a preformed pouch, components shall be inserted in the pouch and the pouch shall be closed with a heat seal not less than 1/8 inch wide. For a form-fill-seal pouch, components shall be placed in the body and the cover applied by heat sealing with a seal not less than 1/8 inch wide. The closure seal shall be free of foldover wrinkles or entrapped matter that reduces the effective seal width to less than 1/16 inch. The average seal strength of the pouch seals shall be not less than 3.5 pounds per inch of width and no individual specimen shall have a seal strength of less than 3.0 pounds per inch of width. As an alternative to the seal strength requirement, the filled and sealed packet shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance.

(2) Meal assembly. Each applicable component for each meal as described in table III shall be inserted in a meal bag. The bag shall be closed with a heat seal not less than 1/8 inch wide. The closure seal shall have an average seal strength of not less than 4 pounds per inch of width with no individual specimen test result less than 3 pounds per inch of width. The sealed meal bag shall not show any evidence of foreign odor.

D-2 LABELING

A. Subassembly/accessory packet. The subassembly/accessory packet shall be labeled on one face in permanent dark contrasting color ink with 'A', 'B' or 'C', as applicable. Alternatively, the packet letter may be embossed in the seal of the packet.

B. Meal bag. Each meal bag shall be correctly and legibly labeled on at least one face with permanent ink or other dark contrasting color with the information contained in accordance with Figures 1, 2 or 3, as applicable. The label shall cite the correct Menu number, name of entrée, French translation of entrée name (see table V) and name and address of assembler. Menus 1-4 and 13-16 shall be printed in accordance with Design 1 (Figure 1). Menus 5-8 and 17-20 shall be printed in accordance with Design 2 (Figure 2). Menus 9-12 and 21-24 shall be printed in accordance with Design 3 (Figure 3). The French translation printed on the meal bag, in accordance with the design specified above, shall be as specified in table V.

TABLE V. French Translation of Entrée Name

Entrée Name	French Translation
Asian Style Beef Strips with Vegetables	Dés de bœuf aux légumes, à l'asiatique
Beef Patty, Jalapeno Pepper Jack	Steak haché au fromage pimenté
Beef Ravioli in Meat sauce	Ravioli au bœuf, sauce à la viande
Beef Shredded, in Barbecue Sauce	Émincé de bœuf, sauce barbecue
Beef Stew	Ragoût de bœuf
Beef Taco	Taco au bœuf
Brisket Entrée (Gravy with Seasoned Beef Brisket Slices)	Tranches de poitrine de bœuf assaisonné
Cheese Tortellini in Tomato Sauce	Tortellini au fromage, sauce tomate
Chicken, Noodles, and Vegetables, in Sauce	Poulet, nouilles et légumes en sauce
Chicken Burrito Bowl	Burrito de poulet bol
Chicken Chunks, White, Cooked	Dés de poulet
Chicken Pesto Pasta	Poulet et pâtes au pesto
Chili and Macaroni	Chili et Macaroni
Chili with Beans	Chili aux haricots rouges
Creamy Spinach Fettuccine (Egg Noodles, Spinach, and Mushrooms in a Cream Sauce)	Fettucini aux épinards et champignons à la crème
Elbow Macaroni in Tomato Sauce	Coquillettes à la sauce tomate
Hash Brown Potatoes with Bacon, Peppers and Onions	Potée de pommes de terres râpées au bacon, oignons et poivrons
Meatballs in Marinara Sauce	Boulettes de viande, sauce Marinara

Mexican Style Chicken Stew	Ragoût de poulet à la mexicaine
TABLE V. French Translation of Entrée Name - Continued	
Entrée Name	French Translation
Pizza Slice, Pepperoni	Tranche de pizza, Pepperoni
Pork Sausage Patty, Maple Flavored	Saucisse de porc, saveur d'érable
Southwest Beef and Black Beans	Bœuf à la façon "Southwest" aux haricots noirs
Spaghetti with Beef and Sauce	Spaghetti en sauce à la viande de bœuf
Tuna, Chunk, Light, Water Packed, Lemon Pepper	Miettes de thon au naturel au poivre citronné
Vegetable Crumbles with Pasta in Taco Style Sauce	Crumbles de legumes et pâtes, sauce façon Taco

D-3 PACKING

A. Packing. Twelve meals shall be packed in a fiberboard box. Case "A" shall contain meals 1 through 12, and case "B" shall contain meals 13 through 24. The fiberboard box shall conform to RSC-L of ASTM D5118/D5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes and grade V2s of ASTM D4727/D4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes, except the requirements for dry burst strength shall be minimum 425 psi, the requirement for wet burst strength shall be minimum 250 psi and the laminated board thickness shall be 0.069 inches. [US Army Research, Development and Engineering Command; Natick Soldier Research, Development, and Engineering Center found that solid fiberboard shipping container material consisting of two outer facings of 90 pound wet strength linerboard and an inner ply of 69 pound linerboard met the performance criteria of this specification.] The box liner shall be a full inside width box liner fabricated from grade W5c fiberboard in accordance with ASTM D5118/D5118M, except the terminal ends of the liner shall overlap a minimum of 2 inches and no fastening of the overlap is required. The box shall be closed in accordance with closure method 2A1 of ASTM D1974/D1974M, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes; except the gap between the outer flaps shall be not more the 3/4 inch wide. Each box shall be reinforced with two girthwise nonmetallic straps. The inside dimensions of the box shall be 15-5/8 inches in length, 9-1/8 inches in width and 9-9/16 inches in depth.

D-4 UNITIZATION

A. Unit loads. Forty-eight boxes shall be arranged in unit loads in accordance with type I, class C of DLA Troop Support Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. Each load shall have 24 "A" cases and 24 "B" cases. At least two boxes in each tier shall be oriented to display the TTI label.

D-5 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DLA Troop Support Form 3556, Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence and as specified in the contract with the following exceptions:

(1) Identification markings normally placed on an end of the shipping container shall read from top to bottom, left to right, when the shipping container is rotated from its upright position onto its side for palletization. The major flaps of the shipping container closure immediately to the right of the marked end of the shipping container shall bear the following marking:

Contract data and other required markings

Date of pack

Lot number

Case A or B, as applicable

U.S. GOVERNMENT PROPERTY – COMMERCIAL RESALE IS UNLAWFUL

NOTE: WATER ACTIVATED Flameless Ration Heater, NSN 8970-01-321-9153,
supplied in each MRE bag

(2) Time Temperature Indicator label shall be centrally positioned on the panel. A minimum distance (quiet zone) of 1/4 inch from the nearest identification marking shall be maintained.

(3) One side panel of the shipping container shall be marked “MEAL, READY-TO-EAT, INDIVIDUAL” in letters not less than 1-1/4 inches high with the French translation “(Repas, Prêt-à-Consommer, Individuel)” marked underneath in letters not less than 1 inch. Underneath the ration nomenclature, in letters not less than 1/2 inch, the shipping container shall be marked “DO NOT ROUGH HANDLE WHEN FROZEN (0°F or below)”.

B. Unit loads. Unit loads shall be marked in accordance with DLA Troop Support Form 3556. In addition, each unit load shall be provided with a Material Safety Data Sheet (MSDS), in accordance with MIL-R-44398. The MSDS shall be packaged and attached to one side of the unit load. A copy of the MSDS shall be included with the shipping papers and a copy shall also be placed in the vehicle manifest.



Peelable Seal ↑

Meal, Ready-to-Eat, Individual

Warfighter Recommended,
Warfighter Tested,
Warfighter Approved

MRE

MENU 18 MEATBALLS IN MARINARA SAUCE

(BOULETTES DE VIANDE,
SAUCE MARINARA)

**THE WORNICK COMPANY
CINCINNATI, OHIO 45242**

**U.S. GOVERNMENT PROPERTY
COMMERCIAL RESALE IS UNLAWFUL**

**FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL
AIRLINES UNLESS SEALED IN ORIGINAL MEAL BAG**

FIGURE 1. Example of Design 1 of Meal Bag Graphics

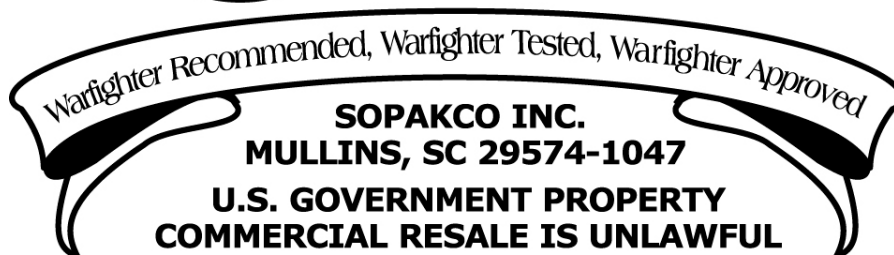
Peelable Seal ↑



MENU 18

Meatballs in Marinara Sauce

(BOULETTES DE VIANDE,
SAUCE MARINARA)



**FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL
AIRLINES UNLESS SEALED IN ORIGINAL MEAL BAG**

FIGURE 2. Example of Design 2 of Meal Bag Graphics

Peelable Seal ↑



MENU 18
MEATBALLS
IN MARINARA SAUCE
(BOULETTES DE VIANDE, SAUCE MARINARA)

MRE
MEAL, READY-TO-EAT , INDIVIDUAL

Warfighter Recommended,
Warfighter Tested,
Warfighter Approved

AMERIQUAL PACKAGING
EVANSVILLE, IN 47710

U.S. GOVERNMENT PROPERTY
COMMERCIAL RESALE IS UNLAWFUL

FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL
AIRLINES UNLESS SEALED IN ORIGINAL MEAL BAG

FIGURE 3. Example of Design 3 of Meal Bag Graphics

SECTION E INSPECTION AND ACCEPTANCE

The following quality assurance criteria, utilizing ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, are required. Unless otherwise specified, single sampling plans indicated in ANSI/ASQ Z1.4 will be utilized. When required, the manufacturer shall provide the Certificate(s) of Conformance to the appropriate inspection activity. Certificate(s) of Conformance not provided shall be cause for rejection of the lot.

A. Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

B. Conformance inspection. Conformance inspection shall include the examinations/tests and the methods of inspection cited in this section.

C. Packaging examination.

(1) Pouch material certification. The pouch material shall be tested for these characteristics. A Certificate of Conformance (CoC) may be accepted as evidence that the characteristics conform to the specified requirements.

Requirement	Requirement paragraph	Test procedure
Thickness of meal bag	D-1,A(3)	ASTM D2103 <u>1</u> /
Color of meal bag and subassembly/accessory packet	D-1,A(1) and D-1,A(3)	Visual evaluation and FED-STD-595, as applicable <u>2</u> /
Water vapor transmission rate	D-1,A(1)	ASTM F1249 <u>3</u> /, ASTM E96/E96M <u>4</u> / or Method 3030 of MIL-STD-3010 <u>5</u> /

1/ Standard Specification for Polyethylene Film and Sheeting

2/ Colors Used in Government Procurement

3/ Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor

4/ Standard Test Methods for Water Vapor Transmission of Materials

5/ Test Procedures for Packaging Materials and Containers

(2) Subassembly/accessory packet examination. The filled and sealed packets shall be examined for the defects listed in table VI. The lot size shall be expressed in packets. The sample unit shall be one packet. The inspection level shall be S-4 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects.

TABLE VI. Subassembly/accessory packet defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Not clean. <u>1/</u>
	201	Seal width less than 1/16 inch. <u>2/</u>
	202	Tear nick or notch or serrations missing or does not facilitate opening.
	203	Tear or hole or open seal.
	204	Label missing or incorrect or illegible.
	205	Pouch not sealed on four sides.

1/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause package damage (for example, glass, metal fillings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

2/ An effective seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, producing a hermetically sealed pouch.

(3) Subassembly/accessory packet contents examination. The filled and sealed packets shall be examined for the defects listed in table VII (this examination may be performed on the preformed packets after filling and prior to sealing). The lot size shall be expressed in packets. The sample unit shall be one packet, open or sealed. The inspection level shall be S-4 and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for minor defects.

TABLE VII. <u>Subassembly/accessory packet contents defects</u>		
Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Component not clean. <u>1/</u>
	201	Missing or unserviceable component.

1/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause package damage (for example, glass, metal filings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one package face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one package face.

(4) Assembled meal bag examination. The filled and sealed meal bags shall be inspected for the defects listed in table VIII. The lot size shall be expressed in bags. The sample unit shall be one bag. The inspection level shall be S-4 and the AQL, expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects. A minimum of 50 samples shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot. The inspection sample shall contain a proportionate amount of each of the meals.

TABLE VIII. Assembled meal bag defects

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
1			Tear or hole or open seal in cheese spread.
2			Swollen cheese spread pouch or swollen pouch of thermostabilized item.
3			Tear or hole or puncture in thermostabilized pouch.
	101		Menu component missing or incorrect assortment for menu. <u>1/</u>
	102		Meal bag not clean or outer packaging of its contents not clean. <u>2/</u>
	103		Foreign odor.
	104		Labeling missing or incorrect or illegible.
	105		Swollen peanut butter or jelly or jam pouch.
	106		Tear or hole or open seal in component packages.
	107		Crushed or broken component. <u>3/</u>
	108		Broken spoon.
	109		Chocolate toffee rolls or mints not packaged in barrier pouch.
	110		Bond strength of paperboard sleeve glue joint is not greater than fiber strength of paperboard sleeve. <u>4/</u>
	111		Dimensions of paperboard sleeve not as specified. <u>4</u>
	201		Tear or hole or open seal or split in meal bag.
	202		Tear or hole or open seal in subassembly/accessory packet.

TABLE VIII. Assembled meal bag defects - Continued

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
		203	Inverted "V" shaped peel indicator missing or not located as specified.
		204	Labeling graphics of meal bag not correct.
		205	Color of paperboard sleeve or paperboard insert card not as specified. <u>4/</u>
		206	Paperboard sleeve does not form an open-ended carton when folded along the bottom score lines. <u>4/</u>
		207	Dimensions of paperboard insert card not as specified. <u>4/</u>

1/ A missing entrée shall be cause for rejection of the lot.

2/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (i.e. glass, metal filings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

3/ For definition of crushed or broken, refer to applicable ration component document.

4/ A CoC may be accepted as evidence of conformance.

D. Methods of inspection.

(1) Seal testing. The pouch seals shall be tested for seal strength or internal pressure resistance as required in a, b, c, or d, as applicable.

a. Unfilled preformed subassembly/accessory packet pouch. The seals of the unfilled preformed pouches for the subassembly/accessory packet shall be tested for seal strength in accordance with ASTM F88/F88M, Standard Test Method for Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection shall be level S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. Three specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the results of the three specimens cut from that side. Any individual test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three-seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and end of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table VI, footnote 2/) shall be considered a test failure. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot.

b. Unfilled meal bag. The seals of the unfilled meal bags shall be tested for seal strength in accordance with ASTM F88/F88M. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the sealed end of each bag in the sample. Samples shall not be taken from the inverted "V" peel initiation. Any specimen with a seal strength less than 4 pounds per inch of width or greater than 10 pounds per inch of width shall be classified as a major defect and shall be cause for rejection of the lot.

c. Subassembly/accessory packet pouch closure. The closure seals of the pouches for the subassembly/accessory packet shall be tested for seal strength in accordance with ASTM F88/F88M. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. For the form-fill-seal pouches,

three specimens shall be cut from each side and each end of each pouch in the sample. The average seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or closure. Any individual test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three-seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and end of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table VI, footnote 2/) shall be considered a test failure. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot.

d. Meal bag closure. The closure seals of the meal bags shall be tested for seal strength in accordance with ASTM F88/F88M. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the closure seal of each bag in the sample. The average seal strength shall be calculated by averaging the three test specimens cut from that seal (the sample unit). Any test specimen result less than 3 pounds per inch of width shall be cause for rejection of the lot. Any average seal strength of less than 4 pounds per inch of width shall be cause for rejection of the lot.

(2) Unfilled meal bag and unfilled preformed subassembly/accessory packet pouch seal certification. A CoC may be accepted as evidence that unfilled bags or pouches conform to the seal strength requirements specified in D-1,A(1) and (3). When deemed necessary by the government inspector, testing of the unfilled preformed pouches for seal strength shall be as specified in E,D(1)a.

E. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table IX. The lot size shall be expressed

in shipping containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

TABLE IX. Shipping container and marking defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Marking missing or incorrect or illegible.
102		Outer flaps do not completely meet, leaving an opening greater than 3/4 inch between flap ends.
103		Inadequate workmanship. <u>1/</u>
104		Missing meal. <u>2/</u>
105		Not one of each menu specified.
	201	Time-temperature indicator missing or not centrally located on panel.
	202	Time-temperature indicator 1/4-inch quiet zone not maintained.
	203	Meal bag graphics do not coincide with specified design.

1/ Inadequate workmanship is defined as, but not limited to, incomplete closure of container flaps, loose strapping, inadequate stapling, improper taping, or bulged or distorted container.

2/ Each missing meal is a defect.

(2) Flap closure testing. The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0. The closure of the four outer flaps of the container shall be tested separately. A 90 degree angular bar with each leg approximately 5 inches long by 3 inches wide by 1/8 inch thick shall be used to test the flap closures. Insert one leg of the angular bar full length under the center of one outer flap. Insertion shall be made through the open slot between the outer flaps. Lift the container vertically by the other leg of the bar until the container is suspended. The complete upper surface of the inserted leg shall be in contact with the inner surface of the flap during the lifting and suspension of the container. Complete separation of the adhesive bond of one or more of the outer flaps, showing no evidence of fiber tear, shall be scored as a major defect.

F. Unit load examination. The unit load shall be examined in accordance with the requirements of DLA Troop Support Form 3507. Any nonconformance shall be classified as a major defect.

SECTION J REFERENCE DOCUMENTS

Unless otherwise specified, the applicable version of these documents is that which is active on the date of the solicitation or contract.

DLA Troop Support Forms

Form 3507	Loads, Unit: Preparation of Semiperishable Subsistence Items
Form 3556	Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence

MILITARY SPECIFICATIONS

MIL-PRF-32176	Bag, Hot Beverage
MIL-R-44398B	Ration Supplement, Flameless Ration Heater (FRH)
MIL-STD-3010	Test Procedures for Packaging Materials and Containers
MIL-PRF-44073	Packaging of Food in Flexible Pouches

FEDERAL STANDARDS

FED-STD-595	Colors Used in Government Procurement
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NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ) www.asq.org

ANSI/ASQ Z1.4	Sampling Procedures and Tables for Inspection by Attributes
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ASTM INTERNATIONAL www.astm.org

D1974/D1974M	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
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D2103	Standard Specification for Polyethylene Film and Sheeting
D4727/D4727M	Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes
D5118/D5118M	Standard Practice for Fabrication of Fiberboard Shipping Boxes
E96/E96M	Standard Test Methods for Water Vapor Transmission of Materials
F88/F88M	Standard Test Method for Seal Strength of Flexible Barrier Materials
F1249	Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor

For DLA Troop Support Website Posting

RDNS-SEC-EM

24 March 2016

TO: DLA Troop Support - Subsistence DSCP-FTRE

SUBJECT: ES16-031 (DSCP-SS-16-00812); Document change request to ACR-M-037, Meal, Ready-To-Eat (MRE), Assembly Requirements, substituting the Pizza Slice, Shelf Stable MIL-DTL-32541 with Chicken Pesto Pasta PCR-C-069 in Menu 23.

1. On 11 February 2015, the voting members of the Joint Services Operational Forum (JSORF) approved the inclusion of Pizza Slice into the MRE 37 Assembly Requirements (ACR-M-037).
2. In April 2015, Defense Logistics Agency (DLA) - Troop Support notified the Combat Feeding Directorate (CFD) that the deadline for the development and transition of all MRE 37 procurement documents would be accelerated to 1 December 2015 in support of the new 5 year MRE contract solicitation.
3. During the accelerated development, transition and coordination of the detailed specification for Pizza Slice, Shelf Stable (MIL-DTL-32541), there was significant discussion between CFD and interested industry suppliers with respect to formulation, as well as potential manufacturability and start-up issues for this novel ration component. Some of these issues have now manifested during scale-up production runs, which were designed to validate the specification and to help expand the potential commercial production base for a shelf stable pizza.
4. Due to these concerns, CFD is recommending a 1 year delay in DLA procurement of MRE Pizza Slice to allow for additional large scale industry producibility tests. These additional large scale producibility tests should resolve all formulation concerns, validate performance (acceptance and shelf stability) of industry produced product, and facilitate a more seamless transition of the Pizza Slice into MRE 38. This delay will ensure that only the highest quality product is placed into the hands of the Warfighter, and will mitigate the risk of a less than optimal product being introduced into the MRE.
5. As a result of this delay, CFD also recommends substituting the Pizza Slice, Pepperoni with Chicken Pesto Pasta for Menu 23 in ACR-M-37. During the 2015 JSORF, CFD had recommended removal of the Chicken Pesto Pasta entree from MRE 37 in order to facilitate introduction of the Pizza Slice. However, Warfighters still found Chicken Pesto Pasta to be an acceptable entrée with a mean score of 6.4 (like slightly to like moderately) over the past 5

years of field testing. CFD is now recommending that Chicken Pesto Pasta remain in the MRE for one additional year, until the MRE Pizza Slice is ready for introduction.

6. The assembly requirements and nutritional profiles for Menu 23 were reviewed by a registered dietitian from CFD and Chicken Pesto Pasta was found to be the best suitable substitution. Additional components within Menu 23 will include Cherry Blueberry Cobbler, Cheese Spread (Jalapeno), Italian Bread Sticks, Patriotic Sugar Cookies, Chocolate Protein Drink Powder, and Accessory Packet A. The recommended substitution will not have a negative impact on the overall nutritional content of the menus.

7. Natick submits the following changes to the subject document for all current, pending, and future procurements until the document is formally amended or revised.

a. Page 1, Section C-2, A, TABLE I, Insert “Chicken Pesto Pasta, PCR-C-069” before Chili and Macaroni.

b. Page 1, Section C-2, A, TABLE I, Delete “Pizza Slice, Pepperoni MIL-DTL-32541”.

c. Page 14, TABLE III, Menu 23, Delete “Pizza Slice, Pepperoni” and insert “Chicken Pesto Pasta”.

d. Page 18, TABLE V, Insert “Chicken Pesto Pasta, Poulet et pâtes au pesto” before Chili and Macaroni.

e. Page 19, TABLE V, Delete “Pizza Slice, Pepperoni, Tranche de Pizza, Pepperoni”.

PERFORMANCE SPECIFICATION

PACKAGING OF FOOD IN FLEXIBLE POUCHES

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the performance criteria for packaging materials and the packaging of food in flexible pouches to include the filling and hermetic sealing of the pouches and, when applicable, the packaging of the pouches into sleeves.

1.2 Classification. Pouches are of the following types, styles and designs, as specified (see 6.2).

1.2.1 Types.

Type I – Single Serving Pouch (SSP)

Type II – Institutional Size Pouch (ISP)

Comments, suggestions, or questions on this document should be addressed to US Army Research, Development and Engineering Command, Natick Soldier Research, Development and Engineering Center, RDNS-CFF, 15 Kansas St., Natick, MA 01760-5018 or emailed to elizabeth.r.painter2.civ@mail.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.dla.mil/>.

1.2.2 Styles.

Style 1 – Rectangular pouch

Style 2 – Shaped pouch with side spout (figure 4)

Style 3 – Shaped pouch with center spout (figure 5)

1.2.3 Designs.

Design A – Horizontal directional tear

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4 or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4 or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. None.

2.2.2 Other government documents, drawings and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Federal Food, Drug and Cosmetic Act and regulations (21 Code of Federal Regulations (CFR), Parts 170-199)

(Copies of this document are available from www.access.gpo.gov/nara or Superintendent of Documents, ATTN: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954.)

2.3 Non-Government publications. The following documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

MIL-PRF-44073G

D 999 – Methods for Vibration Testing of Shipping Containers

D 1974 – Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes

D 3985 – Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor

D 4727/D 4727M – Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes

D 5118/D 5118M – Standard Practice for Fabrication of Fiberboard Shipping Boxes

D 5276 – Test Method for Drop Test of Loaded Containers by Free Fall

F 372 – Standard Test Method for Water Vapor Transmission of Flexible Barrier Materials Using an Infrared Detection Technique

(Copies of these documents are available at www.astm.org or from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Performance characteristics.

3.1.1 Pouch material. The pouch material shall be capable of being fabricated into pouches. The material used for the pouch shall be generally recognized as safe (GRAS) for use with food in accordance with 21 CFR, Parts 170-199 or other standards and regulations. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirement, and promotes economically advantageous life cycle costs.

3.1.1.1 Oxygen transmission rate. The oxygen transmission rate (O₂TR) of the material shall not exceed 0.06 cc/m²/24 hrs/atm.

3.1.1.2 Water vapor transmission rate. The water vapor transmission Rate (WVTR) of the

material shall not exceed 0.01 gm/m²/24 hrs.

3.1.1.3 Thermal processing. The pouches shall be capable of withstanding the process specified in the applicable food document. If the material used is a multi-layered laminate, it shall show no evidence of delamination after thermal processing.

3.1.2 Pouch configurations and dimensions. Pouch configurations and dimensions for 5 and 8 ounce Single Serving Pouch (SSP) pouches shall be as specified in figures 1, 1A, 2A, 4, 5 or 6, as applicable (see 6.2). Pouch configuration and dimensions for the Institutional Size Pouch (ISP) shall be as specified in figure 3 (see 6.2). Commercial pouches [packaging material, construction, and graphics (colors, design and labeling)] shall be submitted to the Contracting Officer for review and approval and to US Army Research, Development and Engineering Command, Natick Soldier Research, Development and Engineering Center, RDNS-CFF for review and recommendation.

3.1.2.1 Directional tear. As applicable, the pouch material shall be modified (in one or more layers) to provide a straight tear along the lengthwise axis of the pouch.

3.1.3 Pouch filling.

3.1.3.1 Eight ounce pouch. Products requiring an average net weight of 8 ounces or less but more than 5 ounces shall be filled into an 8 ounce size pouch. Placeable products may be filled into an 8 ounce pouch.

3.1.3.2 Five ounce pouch. Products requiring an average net weight of 5 ounces or less shall be filled into a 5 ounce size pouch.

3.1.3.3 Institutional size pouch. Products requiring an average net weight ranging from 48 to 104 ounces shall be filled into an ISP.

3.1.4 Filled, sealed and thermoprocessed pouch.

3.1.4.1 Closure seal. The closure seal width shall be a minimum 1/8 inch for conventional heat seals or a minimum 1.0 mm for ultrasonic seals. The closure seal shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects. The closure seal shall be free of wrinkles, occluded matter, or evidence of entrapped moisture or grease that reduces the closure seal width to less than 1/16 inch at any location along its continuous path for conventional heat seals or reduces the closure seal width to less than 1.0 mm for ultrasonic seals.

3.1.4.2 Residual gas volume. Residual gas volume in filled and sealed SSP pouches shall not exceed 20 cubic centimeters (cc), except pouches with five ounces of fruit shall not exceed 10 cc. Residual gas volume in the filled and sealed ISPs shall not exceed 250 cc.

3.1.4.3 Internal pressure. The pouches shall be filled and hermetically sealed such that after thermal processing, the pouches shall withstand the applicable pressure for 30 seconds.

3.1.4.4 Camouflage. The color of outside surfaces of the SSP pouch, after thermal processing, shall contribute to field camouflage. For ISP, commercial pouches are acceptable.

3.1.4.5 Pouch defects. Filled, sealed and thermally processed pouches shall be free of damage (such as, but not limited to, tears, cuts, holes, or if a multi-layer laminate is used, abrasions through one or more layers in the pouch material, or leakage through any seal).

3.2 Environmental conditions.

3.2.1 Low temperature (Type I). After thermal processing, the filled and sealed SSP pouch shall withstand pouch abuse at 28°F with a survival rate of 75 percent.

3.2.2 High temperature (Type I). After thermal processing, the filled and sealed SSP pouch shall withstand pouch abuse at 160°F with a survival rate of 100 percent.

3.2.3 Standard temperature (Type II). After thermal processing, the filled and sealed ISP shall withstand pouch abuse at 72°F with a survival rate of 100 percent.

3.2.4 Frozen temperature (Type II). After thermal processing, the filled and sealed ISP shall withstand pouch abuse at -20°F with a survival rate of 75 percent.

3.3 Sleeve design. Sleeves, when specified in the applicable food product document, shall meet the following criteria.

3.3.1 Sleeve design for 8 ounce size pouches (Type I, Style 1). The SSP sleeve shall be constructed in accordance with figure 6. When folded along the score lines located at the bottom of the sleeve, an open-ended carton shall result. Each SSP sleeve shall be securely sealed along the glue joint. The seal shall have a bond strength greater than the fiber tear of the paperboard.

3.3.2 Sleeve color. The color of all sleeve surfaces shall be natural kraft, tan or dull gray.

3.3.3 Sleeve dimensions (Type I). The dimensions of the SSP sleeve shall be in accordance with figure 6.

3.3.4 Sleeve design (Type II). The ISP sleeve, when closed and sealed, shall enclose pouch to prevent physical damage. The sleeve may have open or closed ends.

3.3.5 Sleeve dimensions (Type II). The outside length, width and height of the ISP sleeve shall not exceed 12-13/16 by 10-3/4 by 2-1/8 inches.

3.4 Packaging of pouches in sleeves.

3.4.1 Pouch in sleeve (Type II). Each ISP sleeve shall contain one pouch. One end of ISP may be folded to accommodate fitting the pouch into the sleeve.

3.4.2 Sleeve closure (Type II). The top and bottom faces of the sleeve shall be compressed and the ends taped. The closure shall have a bond strength greater than the fiber tear of the fiberboard.

3.5 Sleeve label (Type II). The following instructions shall be correctly and legibly labeled on the ISP sleeve. Type size of the label shall be no smaller than shown below (printed on 8-1/2 by 11 inch paper), but can be larger.

ATTENTION!

PROTECTIVE SLEEVE-DO NOT THROW AWAY

**SAVE AND RE-USE TO PROTECT
POUCH FROM DAMAGE**

To Avoid Damaging Pouch:

- 1. Keep Pouch in Sleeve Until Ready to Heat, Then Remove.**
- 2. Insert Pouch Back Into Sleeve After Heating.**
- 3. Always Use Sleeves When Transporting Pouches in Insulated Food Containers.**
- 4. If Sleeves Are Unavailable, Stack Pouches With Fiberboard Pads Between Pouches.**

In addition, the product name shall be correctly and legibly labeled on the sleeve.

3.6 Paperboard insert card (Type I). As applicable, the paperboard insert card shall meet the following criteria.

3.6.1 Paperboard insert card dimensions. The paperboard insert card shall not exceed 4 inches in width by 6 inches in length.

3.6.2. 1 Paperboard insert card color. The color of the paperboard insert card shall be natural kraft, tan or dull gray.

4. VERIFICATION

4.1 Conformance inspection. Conformance inspection shall include the examinations and tests in this section, as defined in the contract, performed on specified samples (see 6.2).

4.2 Performance characteristics testing. The pouch material, pouch and sleeve, as applicable, shall be tested for the performance characteristics listed in table I.

TABLE I. Verification methods.

Characteristic <u>1/</u>	Requirement	Verification
Oxygen transmission rate	3.1.1.1	4.5.1
Water vapor transmission rate	3.1.1.2	4.5.2
Thermal processing	3.1.1.3	4.5.3
Pouch configurations and dimensions	3.1.2	Figures
Directional tear	3.1.2.1	4.5.4
Residual gas volume	3.1.4.2	4.5.5
Internal pressure	3.1.4.3	4.5.6
Camouflage (Type I), as applicable	3.1.4.4	4.5.7
Low temperature (Type I)	3.2.1	4.5.8.1
High temperature (Type I)	3.2.2	4.5.8.2
Standard temperature (Type II)	3.2.3	4.5.8.3
Frozen temperature (Type II)	3.2.4	4.5.8.4

1/ Compliance to the requirements for O₂TR, WVTR, pouch configurations and dimensions, **directional tear**, thermal processing, environmental conditions and camouflage may be verified by Certificate of Conformance (CoC).

4.3 Examination of pouch. After thermal processing, the pouches shall be visually examined for compliance. Defects and defect classifications are listed in table II.

TABLE II. Filled, sealed and thermally processed pouch defects

Category				Defect
<u>Critical</u>	<u>Major A</u>	<u>Major B</u>	<u>Minor</u>	
1				Swollen pouch.
2				Tear, cut, hole, or if a multi-layered laminate is used, abrasion through one or more layers in the pouch material or leakage through any seal.
3				Foldover wrinkle extending into the seal such that the closure seal is reduced to less than 1/16 inch for heat seals or less than 1.0 mm for ultrasonic seals. <u>4/</u>
4				Presence of entrapped matter (for example, product, moisture, grease, etc.) that reduces the closure seal to less than 1/16 inch for heat seals or less than 1.0 mm for ultrasonic seals. <u>4/</u>
5				Presence of delamination when a multi-layered laminate is used. <u>1/</u>
6				Closure seal less than 1/16 inch for heat seals or less than 1.0 mm for ultrasonic seals at any location along its continuous path. <u>4/</u>
	101			Unclean pouch. <u>2/</u>
	102			Any impression or design on the seal surfaces which conceals or impairs visual detection of seal defects. <u>3/</u>
	103			Minimum heat seal width not as specified in applicable figures.

TABLE II. Filled, sealed and thermal processed pouch defects (continued)

Category				Defect
<u>Critical</u>	<u>Major A</u>	<u>Major B</u>	<u>Minor</u>	
	104			Closure seal not located as specified.
	105			Labeling missing or incorrect or illegible.

MIL-PRF-44073G

151	Presence of delamination when a multi-layered laminate is used. <u>1/</u>
152	For heat seals, closure seal width less than 1/8 inch but greater than or equal to 1/16 inch.
201	Presence of delamination when a multi-layered laminate is used. <u>1/</u>
202	Tear notches missing or not as specified.
203	Tear notches not located as specified.
204	Depth of tear notches not as specified.
205	Color of SSP does not contribute to field camouflage, when applicable.
206	Foreign odor.

1/ Delamination defect classification:

Critical - Evidence of outer ply delamination such that the adjacent ply in the pouch body is exposed or evidence of two ply delamination such that the food contact layer is exposed.

Major B - Delamination of the outer ply in the pouch seal area that can be propagated to expose the adjacent ply at the food product edge of the pouch after manual flexing of the delaminated area. To flex, the delaminated area shall be held between the thumb and forefinger of each hand with both thumbs and forefingers touching each other. The delaminated area shall then be rapidly flexed 10 times by rotating both hands in alternating clockwise-counter clockwise directions. Care shall be exercised when flexing delaminated areas near the tear notches to avoid tearing the pouch material. After flexing, the separated outer ply shall be grasped between thumb and forefinger and gently lifted toward the food product edge of the seal or if the separated area is too small to be held between thumb and forefinger, a number two stylus shall be inserted into the delaminated area and a gentle lifting force applied against the outer ply. If separation of the outer ply can be made to extend to the product edge of the seal with no discernible resistance to the gentle lifting, the delamination shall be scored as a Major B defect. Additionally, spot delamination of the outer ply in the body of the pouch that is able to be propagated beyond its initial borders is also a Major B defect. To determine if the delaminated area is a defect, use the following procedure: Mark the outside edges of the delaminated area using a bold permanent marking open. Open the pouch and remove the contents. Cut the pouch transversely not closer

than 1/4 inch (plus or minus 1/16 inch) from the delaminated area. The pouch shall be flexed in the area in question using the procedure described above. Any propagation of the delaminated area, as evidenced by the delaminated area exceeding the limits of the outlined borders, shall be scored as a Major B defect.

Minor - Minor delamination of the outer ply in the pouch seal area is acceptable and shall not be classified as a minor defect unless it extends to within 1/16 inch of the food product edge of the seal. All other minor outer ply delamination in the pouch seal area or isolated spots of delamination in the body of the pouch that do not propagate when flexed as described above shall be classified as minor.

2/ Scale or dust on the outside of pouches caused by retort water may be removed by washing. The following examples shall not be scored as defects for unclean:

- a. Water spots.
- b. On SSP, two or less specks of dried product each of which measure 1/8 inch by 1/8 inch or equivalent area, or less. On ISP, ten or less specks of dried product each of which measure 1/8 inch by 1/8 inch or equivalent area, or less.
- c. Any foreign matter which presents no health hazard or no potential pouch damage and which readily falls off when pouch is lifted and shaken lightly.
- d. Very thin film of grease, oil, or product residue which is discernible to touch, but not readily discernible by visual examinations.
- e. Thin strips or drops of adhesive.

3/ If doubt exists as to whether or not the sealing equipment leaves an impression or design on the seal surfaces that could conceal or impair visual detection of seal defects, samples shall be furnished to the contracting officer for a determination as to acceptability.

4/ An internal pressure test may be used to verify pouch integrity for ultrasonically sealed pouches that are difficult to measure or quantify during visual inspection.

4.4 Examination of pouch and sleeve (or insert card). When applicable, the pouch and accompanying sleeve (or insert card) shall be examined for compliance. Defects and defect classifications are listed in table III.

TABLE III. Pouch and sleeve (or insert card) defects

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	

1		Tear, hole, or puncture through sleeve or open sleeve causing a hole in the pouch or obviously wet or stained sleeve due to leaking pouch. <u>1/</u>
	101	Tear or hole in sleeve exposing pouch to potential damage. <u>1/</u>
	102	Sleeve not clean. <u>1/</u>
	103	Bond strength in SSP sleeve glue joint is not greater than fiber strength of paperboard sleeve. <u>2/</u>
	104	ISP pouch does not fit into the ISP sleeve. <u>1/ 3/</u>
	105	Dimensions of paperboard sleeve not as specified. <u>2/</u>
	201	Tear or hole in sleeve not exposing pouch to potential damage. <u>1/</u>
	202	Color of sleeve or insert card not as specified. <u>2/</u>
	203	Labeling missing or incorrect or illegible.
	204	The ISP sleeve not closed as specified. <u>1/</u>
	205	Foreign odor.
	206	The SSP sleeve does not form an open-ended carton when correctly folded along the bottom scores. <u>2/</u>
	207	Dimensions of paperboard insert card not as specified. <u>2/</u>

1/ Type II only.

2/ A CoC may be accepted as evidence of conformance.

3/ Pouches with a folded end shall not be scored as a defect.

4.5 Tests.

4.5.1 Oxygen transmission rate. The oxygen transmission rate of the material shall be determined in accordance with ASTM D 3985, at 73°F and 50 % RH. Any oxygen transmission rate exceeding 0.06 cc/m²/24 hrs/atm shall be considered a test failure and shall be cause for

rejection of the lot.

4.5.2 Water vapor transmission rate. The water vapor transmission rate of the material shall be determined in accordance with ASTM F 372, at 100°F and 90 % RH. Any water vapor transmission rate exceeding 0.01 gm/m²/24 hrs shall be considered a test failure and shall be cause for rejection of the lot.

4.5.3 Thermal processing. Testing for thermal processing of the pouches shall be as follows: Pouches shall be filled with five, eight, or 48 to 104 ounces of water, as applicable to the pouch size, sealed and exposed to the same thermal processing conditions as required for filled and sealed pouches by the food product document. Following thermal processing, pouches shall be examined visually. Any pouch material defect as a result of thermal processing shall be considered a test failure and shall be cause for rejection of the lot.

4.5.4 Directional tear test. ~~The product in the pouch shall be pressed away from the intended tear path. The side panels of the pouch shall be pressed together along the intended tear path. The pouch shall be oriented with the long edge of the pouch on the horizontal, parallel to the floor. The long edge of the pouch (opposite the notched long edge) shall be supported on a horizontal surface, such as a table top. A pouch stand or apparatus to hold the pouch upright and stationary during the test may be used. Using thumb and forefinger of each hand the pouch shall be gripped on each side of the tear notch opening at one end of the pouch. Twisting the two sides of the tear notch away from the notch center the pouch shall be torn straight across and open along the axis of the adjacent lengthwise side seal while maintaining the horizontal orientation of the pouch on the supported surface, (if pouch opening cannot be initiated on the initial attempt, the test shall be performed using the notch at the opposite end of the pouch). If the path of the resultant pouch tear line reduces the width of the remaining opened pouch to less than 3 1/2 inches when measured from the outside edge of the opposite side seal to the lowest point along the tear line, it shall be considered a test failure and cause for rejection of the lot.~~ Pouches that have been designed to be opened lengthwise shall be tested for directional tear performance. Samples shall be randomly drawn from each production lot and tested for minimum width remaining after tearing. The samples shall be divided into two groups of equal numbers. For each group, the directional tear test shall be initiated from the opposing pouch end. The test may be performed on empty pouches that have not been retorted. If the path of the resultant pouch tear line reduces the short side width of the remaining opened pouch to less than 3-1/2 inches when measured from the outer edge of the pouch at any point along the tear line, it shall be considered a test failure and shall be cause for rejection of the lot.

4.5.5 Residual gas volume test. The samples for test shall be opened under 75°F ± 5°F water and the gases shall be collected by water displacement in a graduated cylinder or other calibrated tube. The volume of the gases shall be reported to the nearest 0.1 cubic centimeter (cc) for SSP. Any residual gas volume exceeding 20 cc in SSP shall be considered a test failure, except any residual gas volume exceeding 10 cc in SSP pouches filled with fruit shall be considered a test failure. The volume of the gases shall be reported to the nearest 1 cc for ISP.

Any residual gas volume exceeding 250 cc in ISP pouches shall be considered a test failure and shall be cause for rejection of the lot.

4.5.6 Internal pressure test. Internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The plates shall be $1/2$ inch \pm $1/16$ inch apart or 1 inch \pm $1/16$ inch apart for SSP, or 2 inches \pm $1/16$ inch apart for ISP. If a three-seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch; for testing of the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. For SSP, the pressure shall be 20 psig for the $1/2$ inch plate distance and 12 psig for the 1 inch plate distance. For ISP, the pressure shall be 10 psig for the 2 inch plate distance. Pressure shall be applied gradually until pressure set point is reached. The pressure set point shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the seals. Any rupture of the pouch or evidence of seal separation greater than $1/16$ inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than $1/16$ inch for heat seals or less than 1.0 mm for ultrasonic seals (see table II) shall be considered a test failure and shall be cause for rejection of the lot.

4.5.7 Camouflage (Type I). External visible color of the outside surfaces of the SSP pouch material after thermal processing shall conform to the range of the government approved and standardized color swatches. Standardized swatch samples have been provided to and are on file with each contractor, each material supplier, USDA, Natick, and DSCP. Visibly match the outside surface of the pouch material to the range of colors of the standardized color swatch samples. Failures shall be classified as minor defects.

4.5.8 Environmental conditions.

4.5.8.1 Low temperature (Type I). Fill the SSP pouches with water, seal and thermal process. Condition the unit packs in an atmosphere uniformly maintained at $28^{\circ}\text{F} \pm 2^{\circ}\text{F}$ for a period of 48 hours. During exposure, position the unit packs to allow free circulation of air around each pack. Conduct a pouch abuse test while still in the frozen state using the test apparatus shown in figure 2. For eight ounce unit packs, the drop height shall be 40 inches; for five ounce unit packs, the drop height shall be 64 inches. Drop each unit pack twice, once on each end. Recondition tested unit packs to ambient temperature for at least 24 hours and examine visually. Any pouch leakage shall be considered a test failure and shall be cause for rejection of the lot.

4.5.8.2 High temperature (Type I). Fill the SSP pouches with water, seal and thermal process. Condition the unit packs in an atmosphere uniformly maintained at $160^{\circ}\text{F} \pm 2^{\circ}\text{F}$ for a period of 48 hours. During exposure, position the unit packs to allow free circulation of air around each pack. Conduct a pouch abuse test using the test apparatus shown in figure 2. For

eight ounce unit packs, the drop height shall be 40 inches; for five ounce unit packs, the drop height shall be 64 inches. Drop each unit pack twice, once on each end. Recondition tested unit packs to ambient temperature for at least 24 hours and examine visually. Any pouch leakage shall be considered a test failure and shall be cause for rejection of the lot.

4.5.8.3 Standard temperature (Type II). Each ISP pouch, filled with either water or a representative food product and processed as specified in the applicable food document, shall be inserted into the sleeve. Four filled, sealed and thermal processed ISP pouches shall be packed in a fiberboard box conforming to style RSC-L of ASTM D 5118. The fiberboard shall conform to type CF, class D, variety SW, grade 275 of ASTM D 4727/D 4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes. The box shall be closed in accordance with ASTM D 1974. Condition the box of four ISPs in an atmosphere uniformly maintained at $72^{\circ}\text{F} \pm 2^{\circ}\text{F}$ for a period of 48 hours. Conduct a drop test in accordance with ASTM D 5276, Ten Drop Cycle at a height of 21 inches. Immediately after completion of the drop test, conduct a vibration test (on the same box of four ISPs) in accordance with ASTM D 999, at 268 RPM (4.5 Hz) for a period of one hour. Remove ISPs from the box and examine visually. Any cracked, split or leaking ISP at any location, or tear, hole, or puncture through the sleeve causing a hole in the ISP; or wet or stained sleeve due to one or more leaking ISPs; or any evidence of food product leakage from ISP shall be considered a test failure and shall be cause for rejection of the lot.

4.5.8.4 Frozen temperature (Type II). Prepare the box of four ISPs as specified in 4.5.8.3, but condition in an atmosphere uniformly maintained at $-20^{\circ}\text{F} \pm 2^{\circ}\text{F}$ for a period of 48 hours. While still in frozen state, conduct drop and vibration tests as specified in 4.5.8.3. Remove ISPs from the box and allow to fully thaw prior to visual examination. Any cracked, split or leaking ISP at any location, or tear, hole, or puncture through the sleeve causing a hole in the ISP; or wet or stained sleeve due to one or more leaking ISPs; or any evidence of food product leakage from ISP shall be considered a test failure and shall be cause for rejection of the lot.

4.5.9 Sleeve closure bond strength. Compliance with required bond strength in sleeve closure shall be verified by visually examining the paperboard flaps or the fiberboard sleeve for evidence of fiber tear after opening. Absence of fiber tear shall be considered a test failure and shall be cause for rejection of the lot.

5. PACKAGING

This section is not applicable to this specification.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The requirements for the packaging of food in flexible pouches cited by

this specification are intended for use in the production of retort food products for individual rations.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of the specification.
- b. Type, style, and design required (see 1.2).
- c. Conformance inspection (see 4.1).
- d. Pouch sizes for SSP (see 3.1.2 and figures).
- e. Pouch size for ISP (see 3.1.2 and figure 3).

6.3 Thermal processed products. The preparation and thermal processing of foods in hermetically sealed containers and finished product inspection should be established, controlled and verified by the processor in accordance with FDA (CFR Title 21 Part 113: Low Acid Canned Foods and Part 114: Acidified Foods) and USDA (CFR Title 9 Part 302 Subpart G: Canned Meat and Poultry Products) regulations.

6.4 Pouch material.

6.4.1 Type I pouch material. The US Army Research, Development, and Engineering Command, Natick Soldier Research, Development, and Engineering Center has found that for preformed SSP pouches, a material structure consisting of, from inside to outside, 0.003 to 0.004 inch thick polyolefin, 0.00035 to 0.0007 inch thick aluminum foil, 0.0006 inch thick biaxially oriented polyamide-type 6, and 0.0005 inch thick polyester meets the performance criteria of this specification. Alternatively, the aluminum foil layer and the biaxially oriented polyamide layer may be in either order. For the formed, tray-shaped body of a horizontal form-fill-seal (HFFS) SSP pouch, it has been found that a material structure consisting of, from inside to outside, 0.003 to 0.004 inch thick polyolefin, 0.0006 inch thick biaxially oriented polyamide-type 6, 0.0015 to 0.00175 inch thick aluminum foil and 0.0010-0.0014 inch thick oriented polypropylene meets the performance criteria of this specification. For the lidding material for the HFFS SSP pouch, it has been found that a material structure consisting of, from inside to outside 0.003 to 0.004 inch thick polyolefin, 0.00035 to 0.0007 inch thick aluminum foil and 0.0005 to 0.00075 inch thick polyester meets the performance criteria of this specification. The above values and ranges expressed for the thickness of thin gauge plastic films and aluminum foil are nominal values. A plus or minus 20% tolerance is typical for thin gauge plastic film thickness measurements and a plus or minus 10% tolerance is typical for aluminum foil thickness measurements.

6.4.2 Type II pouch material. The US Army Research, Development, and Engineering Command, Natick Soldier Research, Development, and Engineering Center has found that for

preformed ISP pouches, a material 5-layer structure consisting of, from inside to outside, 0.004 inch thick polyolefin, 0.00098 inch thick biaxially oriented polyamide, 0.00035 inch thick aluminum foil, 0.00059 inch thick biaxially oriented polyamide, and 0.00047 inch thick polyester meets the performance criteria of this specification. The above values and ranges expressed for the thickness of thin gauge plastic films and aluminum foil are nominal values. A plus or minus 20% tolerance is typical for thin gauge plastic film thickness measurements and a plus or minus 10% tolerance is typical for aluminum foil thickness measurements.

6.5 Sleeve design and material.

6.5.1 Type II Sleeve design and material. It has been found that a ISP sleeve constructed of grade 275 fiberboard in accordance with ASTM D 4727/D 4727M, oriented with flutes parallel to the sleeve width, jointed and hot melt glued along either the vertical length or bottom face of the sleeve, and then ends closed and compressed and securely taped across the open ends of the sleeve at their midpoints meets the performance criteria of this specification.

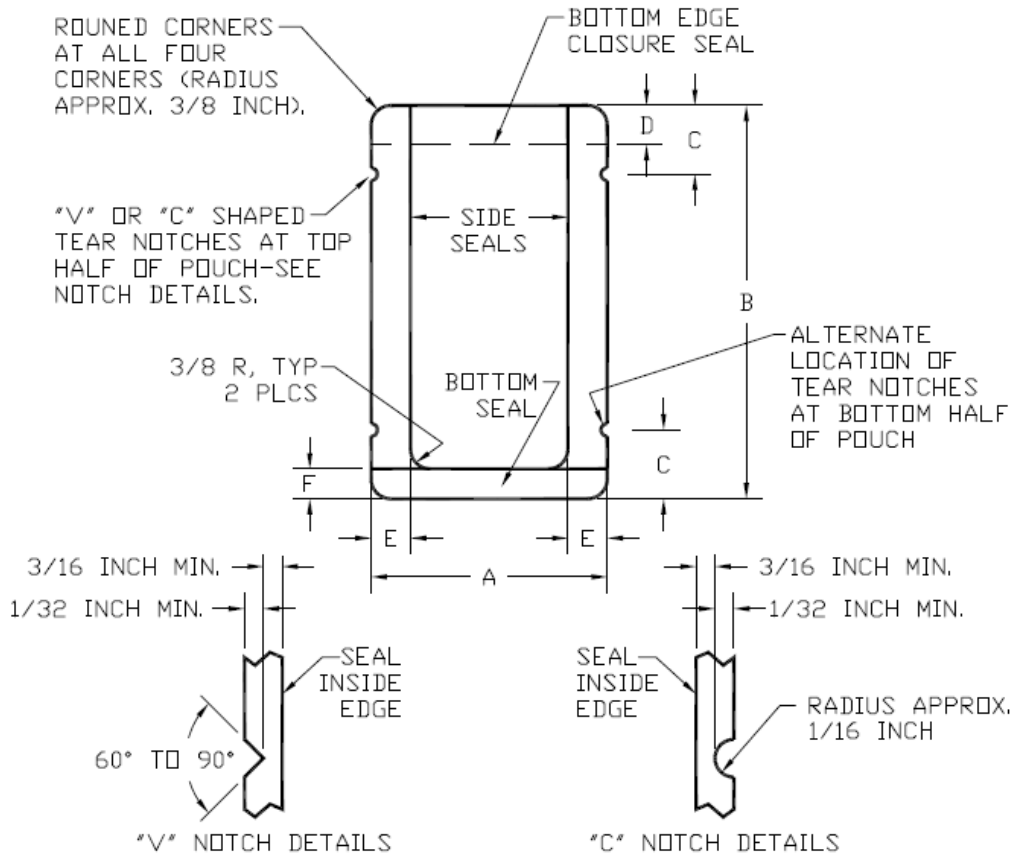
6.6 Directional tear tester. It has been found that a Directional Tear Tester developed under the Defense Logistics Agency Combat Ration Network Program, Short Term Project #3013, meets the performance criteria of this specification. With this apparatus, the pouch lays on a horizontal surface and is oriented with one short side of the pouch against a backstop. The tear notch is positioned between the two grippers. The test stand has a linear air slide that rotates the gripper that grips the pouch above the tear notch, initiates the tear, and then pulls the gripper straight across in a parallel line to the opposite short side seal, while maintaining the pouch position on the supported surface by the second gripper.

6.67 Subject term (key word) listing.

First Strike Ration® (FSR®)
Humanitarian Daily Ration
Meal, Ready-to-Eat™ (MRE™)
Operational rations
Institutional Size
Single Serving

6.78 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

MIL-PRF-44073G



POUCH SIZES	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
5 OUNCE SIZE	4 3/4 (+ 1/16 - 1/8)	6 1/16 TO 6 1/4	1 (± 1/16)	3/4 MAX.	7/32 MIN.	1/8 MIN.
		6 1/4 TO 7 3/8	1 1/2 ± 1/16	1 MAX		

FIGURE 1. Single Serving Pouch

MIL-PRF-44073G

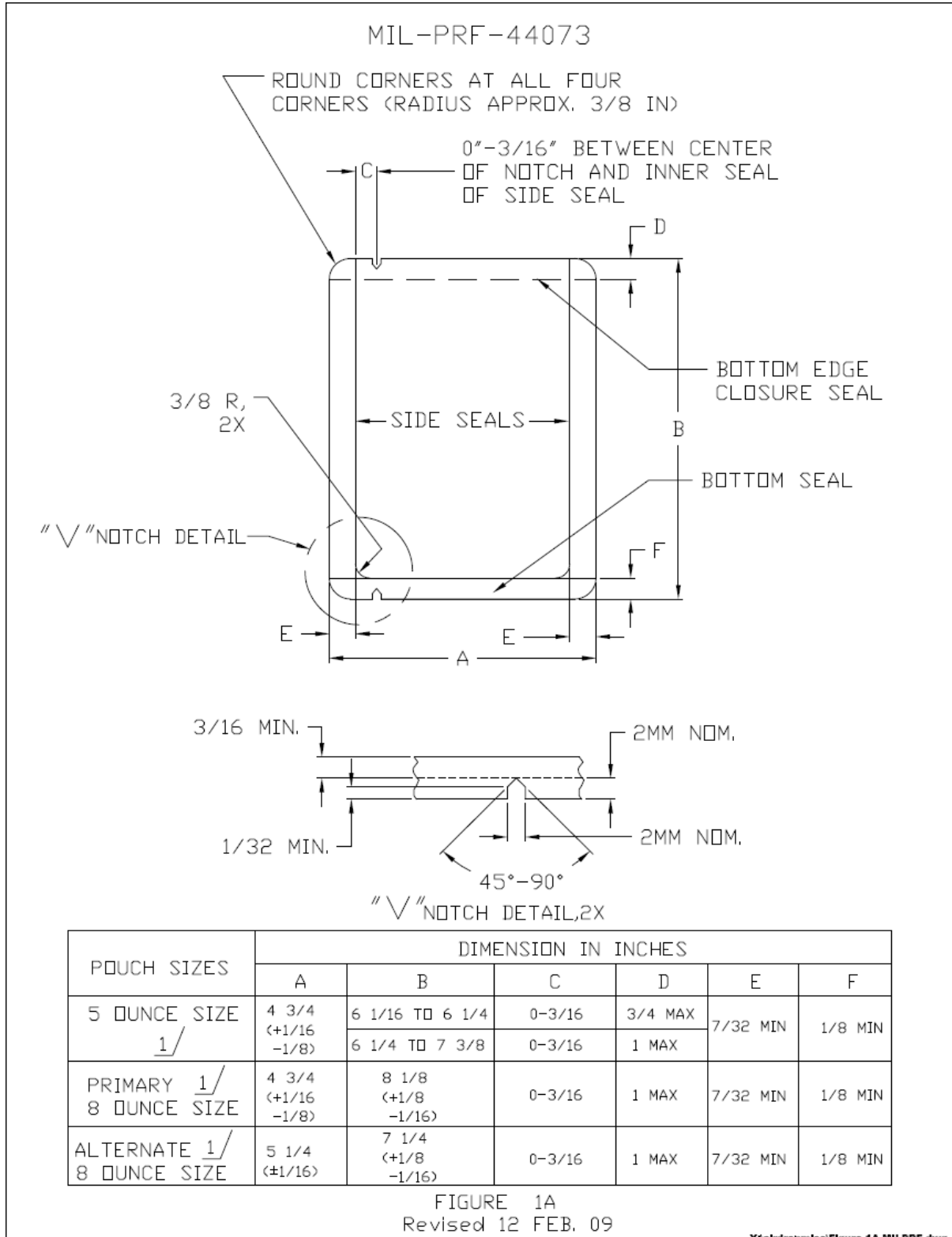


FIGURE 1A. Directional Tear Pouch

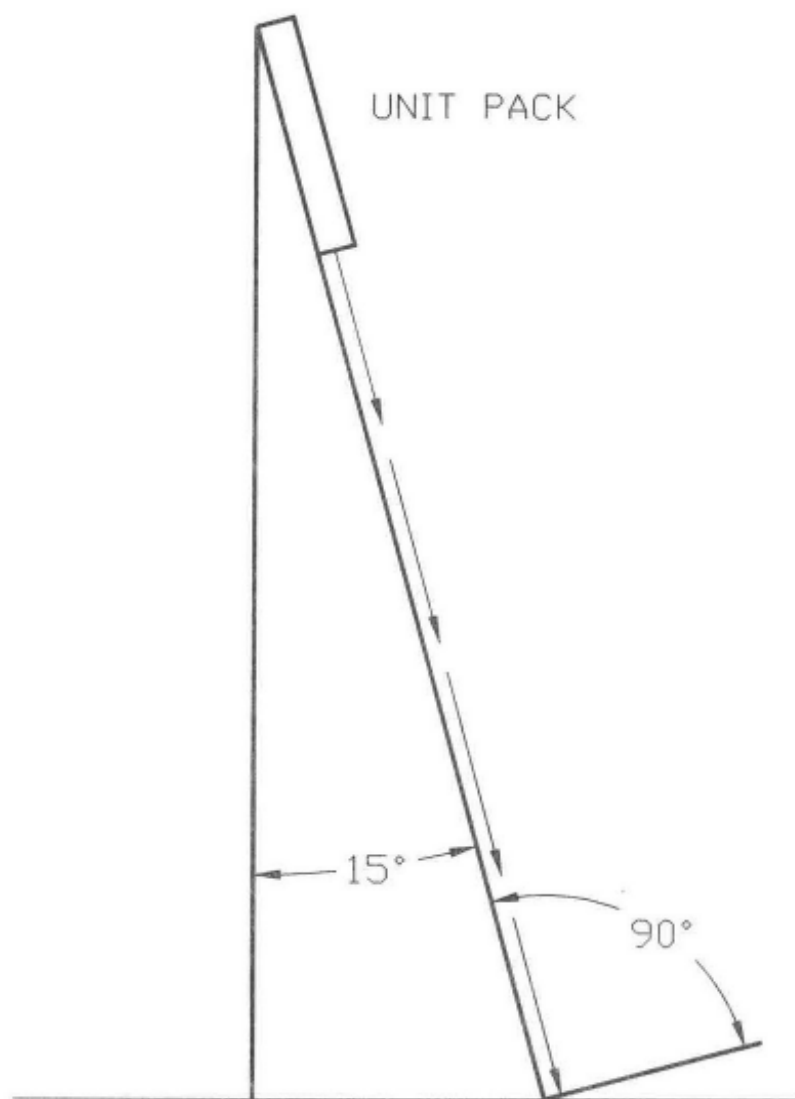


FIGURE 2
POUCH ABUSE TEST APPARATUS

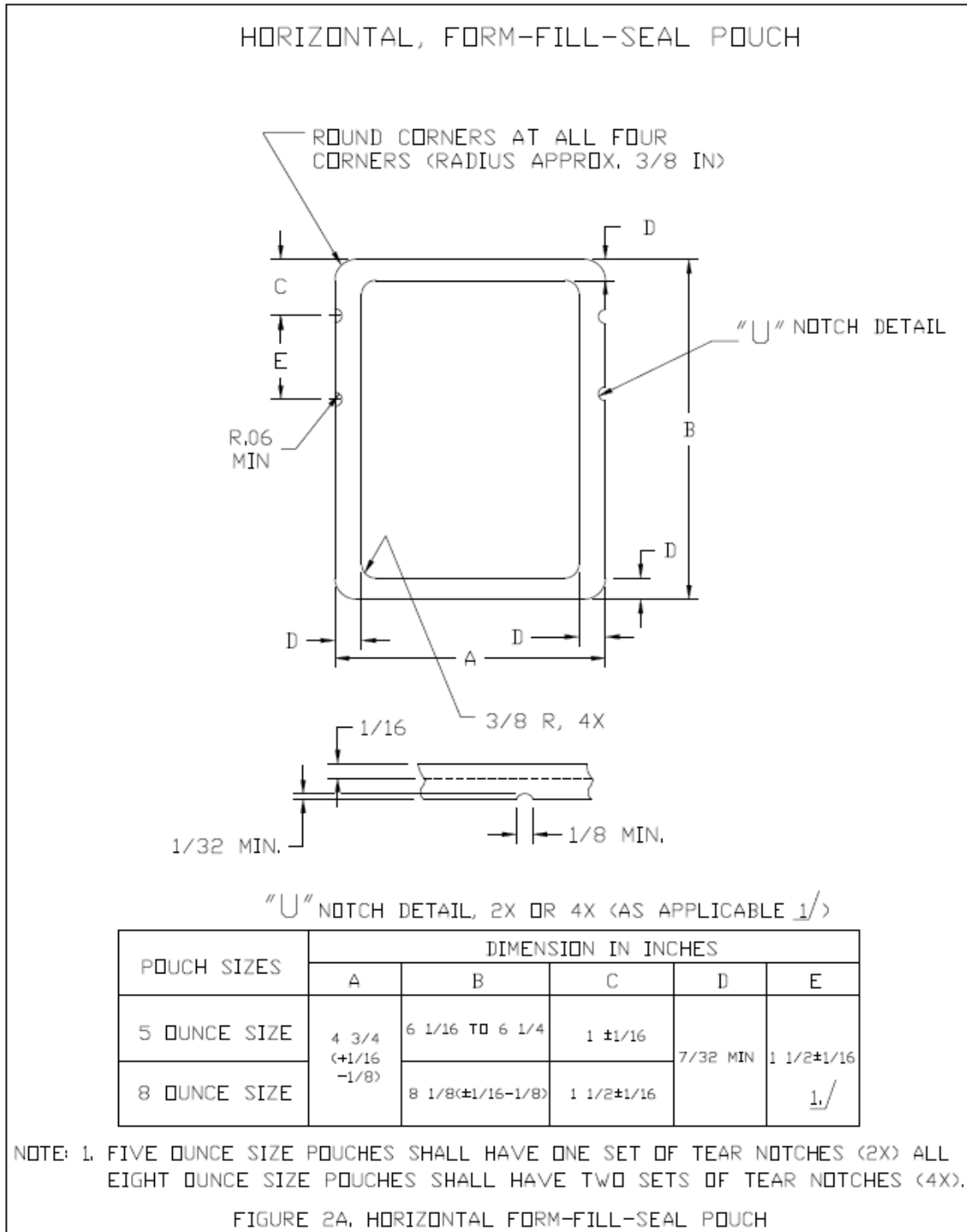


FIGURE 2A. Horizontal Form-Fill-Seal Pouch

MIL-PRF-44073G

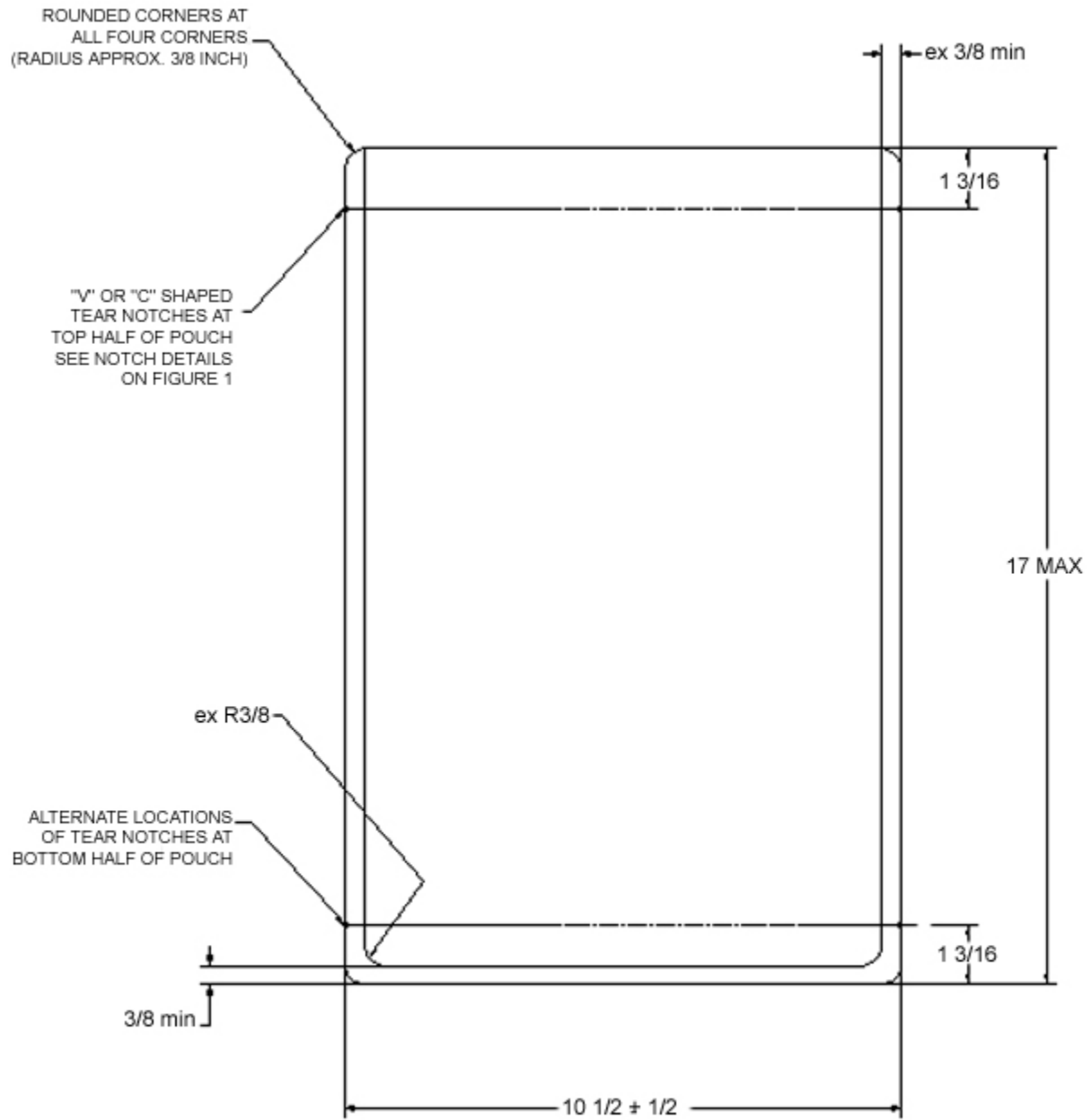


FIGURE 3. Institutional Size Pouch
(Not actual size)

MIL-PRF-44073G

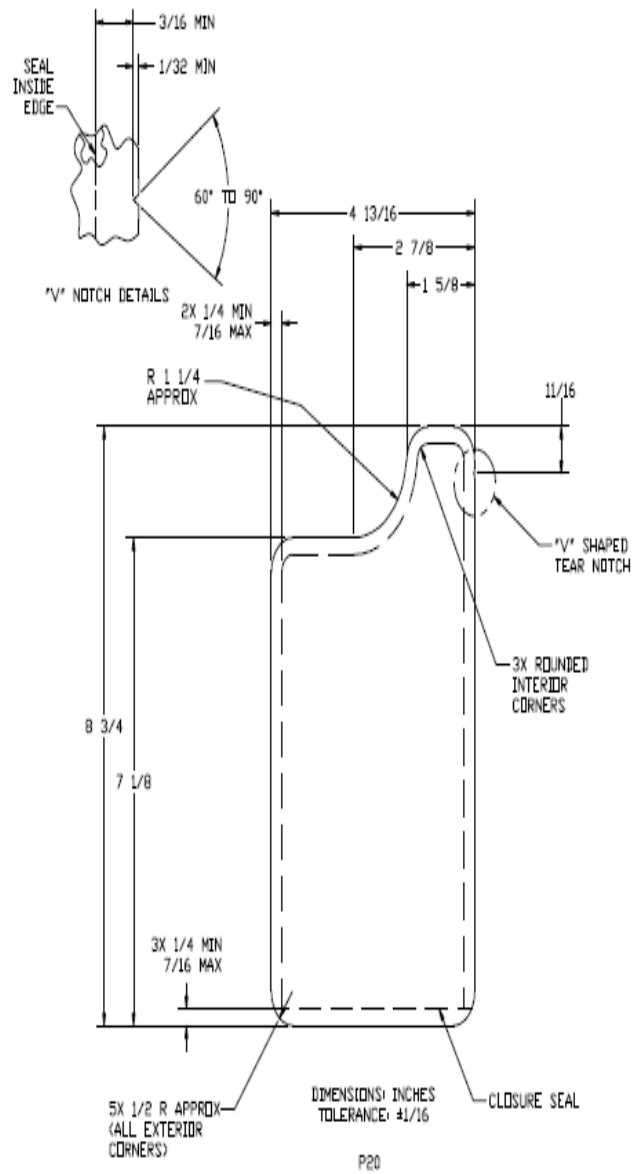


FIGURE 4. Side Spout Pouch

MIL-PRF-44073G

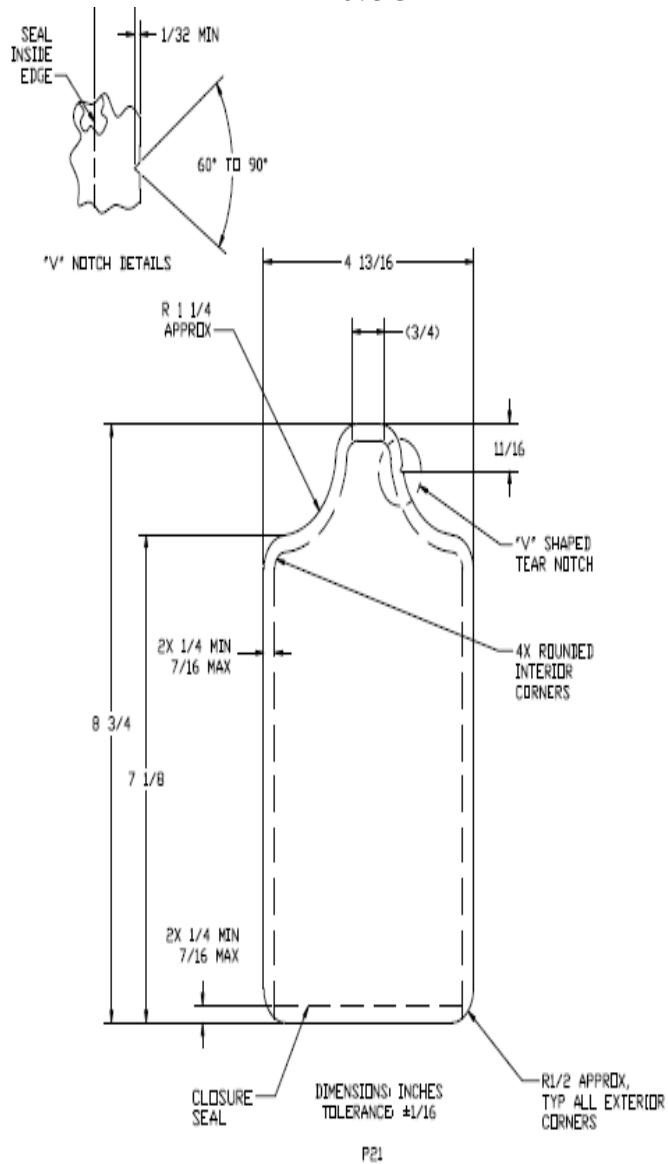


FIGURE 5. Center Spout Pouch

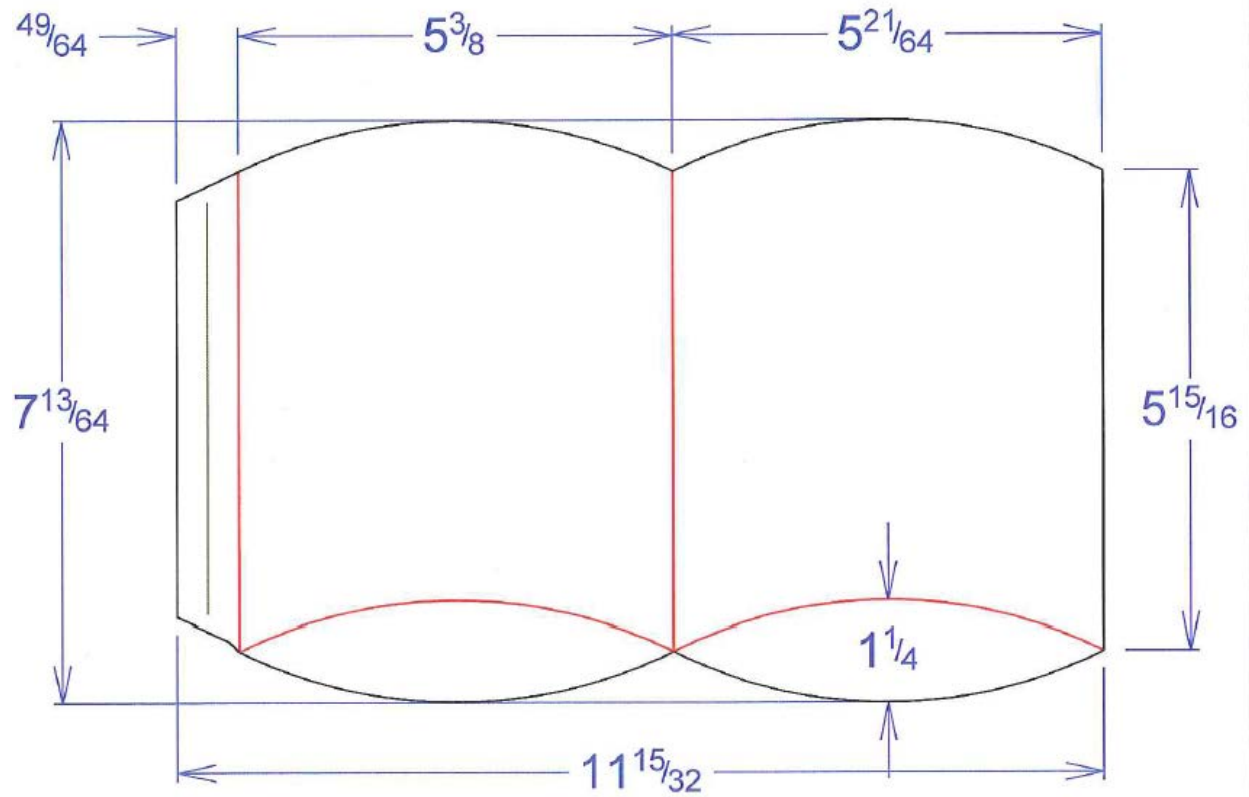


Figure 6. Sleeve Design

MIL-PRF-44073G

Custodians:

Army - GL
Navy - SA
Air Force - 35

Preparing activity:

Army - GL

(Project 89GP-2008-002)

Review activities:

Army - MD, QM
Navy - MC
DLA - SS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at <http://assist.dla.mil/>.

SECTION C - DESCRIPTION/SPECIFICATION

TECHNICAL DATA FOR MRE ASSEMBLY AND FOR CONTRACTOR FURNISHED MATERIAL (CFM) COMPONENTS

Specifications and related tier documents applicable to this solicitation:

<http://www.dla.mil/TroopSupport/Subsistence/Operationalrations/Frozen.aspx>

Note: The abbreviation “PKG&QAP” below in the Item Descriptions denotes the associated Packaging Requirements and Quality Assurance Provisions for that specific Commercial Item Description (CID).

C-1 DESCRIPTION/SPECIFICATION (ASSEMBLED MRE)

MEAL, READY-TO-EAT, INDIVIDUAL, Menus 1-12 (Case A); Menu. 13- 24 (Case B); 12 meals per shipping case, ACR-M-037, TPK-2 item

NSN: 8970-00-149-1094

C-2 DESCRIPTION/SPECIFICATION (CONTRACTOR FURNISHED MATERIAL (CFM) COMPONENTS)

A. ENTREES

BEEF PATTY, GRILLED, JALAPENO JACK; 2.6 oz flex pg, PCR-B-029, 8940-01-610-1718

BEEF RAVIOLI IN MEAT SAUCE; 8 oz flex pg, PCR-B-021, 8940-01-426-0553

BEEF, SHREDDED, IN BARBEQUE SAUCE; 8 oz flex pg, PCR-B-057, 8940-01-620-9418

BEEF, SOUTHWEST STYLE & BLACK BEANS, W/SAUCE; 8 oz flex pg, PCR-S-018, 8940-01-578-9100

BEEF STEW; 8 oz flex pg, PCR-B-020, 8940-01-550-1370

BEEF STRIPS, ASIAN STYLE, W/ VEGETABLES; 8 oz flex pg, PCR-A-005, 8940-01-591-4193

BEEF TACO FILLING; 8 oz flex pg, PCR-B-054, 8940-01-610-1730

BRISKET ENTRÉE; 8 oz flex pg, PCR-B-050, 8940-01-567-8631

CHEESE TORTELLINI IN TOMATO SAUCE; 8 oz flex pg, PCR-C-020, 8940-01-397-6661

CHICKEN BURRITO BOWL; 8 oz (227gm) flex pg, PCR-C-088, 8940-01-650-9564

CHICKEN CHUNKS, WHITE; 5 oz flex pg, CID A-A-20352, PKG&QAP, 8905-01-633-5153

CHICKEN, NOODLES AND VEGETABLES, IN SAUCE; 8 oz flex pg, PCR-C-021, 8940-01-426-2282

CHICKEN PESTO PASTA; 8 oz (227 g) flex pg, PCR-C-069, 8940-01-556-9404

CHILI AND MACARONI; 8 oz flex pg, PCR-C-027, 8940-01-375-4375

CHILI WITH BEANS; 8 oz flex pg, PCR-C-062, 8940-01-527-2311

CREAMY SPINACH FETTUCINI; 8 oz flex pg, PCR-C-087, 8940-01-645-0292

ELBOW MACARONI IN TOMATO SAUCE; 8 oz flex pg, PCR-E-019, 8940-01-645-0297

HASH BROWN POTATOES WITH BACON, PEPPERS AND ONIONS; 8 oz flex pg, PCR-H-012, 8940-01-631-1860

MEATBALLS IN MARINARA SAUCE; 8 oz flex pg, PCR-M-015, 8940-01-545-4861

MEXICAN STYLE CHICKEN STEW; 8 oz flex pg, PCR-M-016, 8940-01-588-7957

PORK SAUSAGE PATTY, MAPLE FLAVORED; 2.6 oz flex pg, PCR-P-045, 8905-01-567-8777

SPAGHETTI W/BEEF AND SAUCE; 8 oz flex pg, PCR-S-002, 8940-01-224-5675

TUNA, CHUNK, LIGHT, WATER, LEMON PEPPER; 4.5 oz flex pg, CID A-A-20155, PKG&QAP, Type B, Form I, Color a, Packing Media 1, Flavor 1, Salt/Sodium Level (a), 8905-01-579-8004

VEGETABLE CRUMBLES WITH PASTA IN TACO STYLE SAUCE; 8 oz flex pg, PCR-V-010, 8940-01-620-9458

B. STARCHES AND SOUPS

BLACK BEANS, SEASONED; 5 oz flex pg, PCR-B-056, 8940-01-620-9405

CORNBREAD; 2.5 oz flex pg, PCR-C-075, 8920-01-567-8725

GRANOLA, WITH MILK AND BLUEBERRIES; 57 gm flex pg, PCR-G-003, Type I, 8920-01-556-1172

ITALIAN BREAD STICKS; 2 oz flex pg, PCR-S-009, Type IV, Style A, 8920-01-579-8024

MULTIGRAIN SNACK BREAD; 2 oz flex pg, PCR-S-009, Type V, Style A, 8920-01-588-9007

POTATOES, AU GRATIN; 5 oz flex pg, PCR-P-048, 8915-01-588-9887

POTATOES, MASHED, GARLIC; 5 oz flex pg, PCR-P-011, flavor II, 8915-01-578-9072

RICE AND BEANS, SANTA FE STYLE; 5 oz flex pg, PCR-S-019, 8940-01-580-4428

C. **FRUITS**

COBBLER, CHERRY BLUEBERRY; 5.0 oz flex pg, PCR-C-058, Flavor 1, 8920-01-525-3546

CRANBERRIES, OSMOTICALLY DRIED; sliced, 57gm (2 oz) flex pg, CID A-A-20299, PKG&QAP, Type VII, Style B, Flavor 1, Fort a, Class (1), 8915-01-514-9298

RAISINS, OSMOTICALLY DRIED; 43 gm 1.5 oz flex pg, CID A-A-20299, PKG&QAP, Type IX, Variety A, Fort a, Class (1), 8915-01-525-3543

D. **DESSERTS AND SNACKS**

ALMONDS, UNBLANCHED, BARBEQUE FLAVORED; 19 gm flex pg, CID A-A-20164, PKG&QAP, Type IX, Style C, 8925-01-613-1300

ALMONDS, UNBLANCHED, SMOKE FLAVORED; 19 gm flex pg, CID A-A-20164, PKG&QAP, Type IX, Style C, 8925-01-525-3597

BEEF SNACKS, STRIPS, CURED, SMOKED; 22 gm flex pg, CID A-A-20298, PKG&QAP, Variety A, Type II, Style a, Class 1, Flavor (a), 8940-01-429-7067

BEEF SNACKS, STICKS, CURED, FERMENTED, TERIYAKI; 27 gm flex pg, A-A-20298, PKG&QAP, Variety A, Type IV, Style a, Class 2, Flavor (b), 8940-01-650-9581

CASHEWS, HALVES, JALAPENO; 19 gm flex pg, CID A-A-20164, PKG&QAP, Type VI, Size 2, Style C, 8925-01-578-5357

CINNAMON BUN; 3.5 oz (99 gm) flex pg, MIL-DTL-32221, PKG&QAP, Type II, 8920-01-578-9089

COOKIES, SUGAR, PATRIOTIC; 56 gm flx pg, CID A-A-20295, PKG&QAP, Type I, Class 1, Bake Type a, Style D, Shape (b), 8920-01-556-9408

CORN KERNELS, BARBECUE; 57 gm flex pg, A-A-20195, PKG&QAP, Type VI, Flavor 2, 8940-01-621-5507

CORN KERNELS, PLAIN; 57 gm flex pg, CID A-A-20195, PKG&QAP, Type VI, Flavor 1, 8940-01-578-8895

CRACKERS, FORTIFIED, PLAIN, 1.33 oz (37.8 gm) flex and vac pg, PCR-C-037, Type I, 8920-00-149-0795

CRACKERS, FORTIFIED, VEG; 1.33 oz (37.8 gm) flex and vac pg, PCR-C-037, Type II, 8920-01-450-1921

CRACKERS, CHEESE FILLED, CHEDDAR; 48 gm flex pg, CID A-A-20195, PKG&QAP, Type VII, Flavor 1, 8920-01-568-5158

CRACKERS, CHEESE FILLED, PEPPERONI PIZZA; 48 gm flex pg, CID A-A-20195, PKG&QAP, Type VII, Flavor 2, 8920-01-568-5168

DESSERT PDR, PUDDING, CHOCOLATE; 2.6 oz (75 gm) flex pg, CID A-A-20344, PKG&QAP, Type I, Prep Method C, Style 1, Flavor b, 8940-01-556-0061

DESSERT PDR, PUDDING, VANILLA; 2.6 oz (75 gm) flex pg, CID A-A-20344, PKG&QAP, Type I, Prep Method C, Style 1, Flavor a, 8940-01-556-0048

FILLED FRENCH TOAST; 3.5 oz (99 gm) flex pg, MIL-DTL-32221B, PKG&QAP, Type I, 8920-01-545-1811

FIRST STRIKE ENERGY BAR, APPLE CINNAMON; 2.3 oz (65 gm) flex pg, PCR-F-001, Flavor II, Style A, 8940-01-551-6056

FIRST STRIKE ENERGY BAR, CHOCOLATE; 2.3 oz (65 gm) flex pg, PCR-F-001, Flavor I, Style A, 8940-01-551-6059

FIRST STRIKE ENERGY BAR, CRAN-RASPBERRY; 2.3 oz (65 gm) flex pg, PCR-F-001, Flavor III, Style A, 8940-01-551-6066

NUTS AND RAISINS WITH PAN COATED CHOC DISKS; 66 gm (2.3 oz) flex pg, PCR-N-003, Type II, 8940-01-523-0786

PEANUTS, DRY ROASTED, SALTED; 28 gm flex pg, CID A-A-20164, PKG&QAP, Type V, Style A, 8925-01-450-4234

PRETZEL, STICKS; 28 gm flex pg, CID A-A-20195, PKG&QAP, Type II, Style C, Flavor 1, 8940-01-426-2499

PRETZELS, CHEDDAR, CHEESE FILLED; 51 gm flex pg, CID A-A-20195, PKG&QAP, Type II, Style F, Flavor 1, 8940-01-479-1850

PRETZELS, NUGGETS, HONEY MUSTARD AND ONION; 28 gm flex pg, CID A-A-20195, PKG&QAP, Type II, Style E, Flavor 2, 8940-01-621-5514

SNACK CRACKERS, BAKED, CHEDDAR CHEESE; 7 gm flex pg, CID A-A-20195, PKG&QAP, Type V, Flavor 1, 8940-01-525-3549

SNACK CRACKERS, BAKED, HOT & SPICY CHEESE; 47 gm flex pg, CID A-A-20195, PKG&QAP, Type V, Flavor 2, 8940-01-556-9440

TOASTER PASTRY, CHOCOLATE CHIP, FROSTED; 45 gm ind serv flrx pg, CID A-A-20211, PKG&QAP, Type I, Fort b, Shape i, Grain Comp (1), Serv (a), Style B, Flavor 12, Frosting Option (C), 8920-01-553-3111

TOASTER PASTRY, BROWN SUGAR CINNAMON, FROSTED; 45 gm ind serv flex pg, CID A-A-20211, PKG&QAP, Type I, Fort b, Shape i, Grain Comp (1), Serv (a), Style B, Flavor 3, Frosting Option (B), 8920-01-583-3244

TRAIL MIX, RECOVERY; 2.2 oz (62 gm) flex pg, PCR-T-014, 8940-01-650-9558

TURNOVER, APPLE FILLED, 3.1 oz (88 gm) flex pg, MIL-DTL-32221, PKG&QAP, Type III, 8920-01-579-7973

E. CANDY

CANDY, LICORICE, CHERRY, BITE SIZE; 63 gm (2.2 oz) flex pg, CID A-A-20177, PKG&QAP, Type X, Shape B, Flavor 1, 8925-01-556-9413

CANDY, MINT RINGS, PEPPERMINT; 32 gm (1.13 oz) flex pg, CID A-A-20177, PKG&QAP, Type XI, Style B, Flavor 2, 8925-01-631-1846

CANDY, PAN-COATED, FRUIT FLAVORED DISKS, BERRY; 59.5 gm (2.1 oz) flex pg, CID A-A-20177, PKG&QAP, Type VI, Style A, Flavor 2, Flavor Style b, 8925-01-545-0847

CANDY, PAN-COATED, FRUIT FLAVORED DISKS, SOUR; 59.5 gm (2.1 oz) flex pg, CID A-A-20177, PKG&QAP, Type VI, Style A, Flavor 2, Flavor Style d, 8925-01-591-4123

CANDY, PAN-COATED, FRUIT FLAVORED ORIGINAL; 59.5 gm (2.1 oz) flex pg, CID A-A-20177, PKG&QAP, Type VI, Style A, Flavor 2, Flavor Style a, 8925-01-01-426-1373

CANDY, PAN-COATED, CHOC DISKS; 47.9 gm (1.69 oz) flex pg, CID A-A-20177, PKG&QAP, Type VI, Style A, Flavor 1, 8925-01-008-0960

CANDY, PAN-COATED, CHOCOLATE W/PEANUT BUTTER; 43.4 gm (1.53 oz) flex pg, CID A-A-20177, PKG&QAP, Type VI, Style A, Flavor 4, 8925-01-493-4684

CANDY, PAN-COATED, CHOC DISKS, CHOC W/ PEANUTS; 49.3 gm (1.74 oz) flex pg, Type VI, Shape B, flavor 1, CID A-A-20177, PKG&QAP 8925-01-512-7627

CANDY, TOFFEE, ROLLS, CHOCOLATE FLAVORED; 28 gm (1 oz) ind wrapped, flex pg, CID A-A-20177, PKG&QAP, Type II, Style A, 8925-01-556-9428

F. BEVERAGES

CHOCOLATE PROTEIN DRINK POWDER; 2.5 oz (70 gm) flex pg, PCR-C-082, 8960-01-582-6624

G. OTHER ITEMS

BAG, BEVERAGE, HOT, ZIP-LOCK POLYBAG; MIL-PRF-32176, 8970-01-522-5200

HOT SAUCE; 1/8 fl oz flex pg, CID A-A-20097, PKG&QAP, Type II, 8950-01-578-9037

HOT SAUCE, BUFFALO STYLE; 1.5 fl oz flex pg, CID A-A 20097, PKG&QAP, Type IX, 8950-01-631-1073

HOT SAUCE, CHILI AND LIME; 1/8 fl oz flex pg, A-A 20097, PKG&QAP, Type VII, 8950-01-631-1093

KETCHUP, TOMATO, REGULAR; 10 gm flex pg, CID A-A-20346, PKG&QAP, Flavor I, Packaging type (5), 8950-01-289-3365

MUSTARD, PREPARED, YELLOW; 10 gm flex pg, CID A-A-20036, PKG&QAP, Type I, 8950-00-616-5474

INSERT CARD, PAPERBOARD; SSP, MIL-PRF-44073G, Type I, 8970-01-631-1828

PEPPER, RED, CRUSHED; 1 gm foil laminate pg, CID A-A-20001, PKG&QAP, Type I, Class Z, Form 3, 8950-01-644-9046

RATION SUPPLEMENT, FLAMELESS HEATER, for MRE, for ration assembly only; MIL-R-44398, 8970-01-349-7049

SLEEVE, PAPERBOARD, SSP; MIL-PRF-44073, Type I, 8970-01-622-8828

SPOON, PICNIC PLASTIC, HIGH IMPACT, 7 in; CID A-A-3109, PKG&QAP, Type IV, Item 13, 7340-01-508-2742

H. ACCESSORY COMPONENTS

CHEWING GUM, TABLET, SUGAR-FREE, PEPPERMINT; 2 per pg, CID A-A-20175, PKG&QAP, Type 1, Size B, Style (1), Class 3, Flavor a, 8925-01-523-4997

CHEWING GUM, TABLET, SUGAR-FREE, CINNAMON; 2 per pg, CID A-A-20175, PKG&QAP, Type I, Size B, Style (1), Class 3, Flavor c, 8925-00-680-0708

COFFEE, SPRAY DRIED, AGGLOMERATED OR FREEZE DRIED; 1.5 gm pg, CID A-A-20184, PKG&QAP, Type II or III, Style A, 8955-01-304-3619

HAND CLEANER TOWELETTE, UNSCENTED; CID A-A-461, PKG&QAP, Type II, 8520-01-507-9741

MATCHES, SAFETY; CID- A-A-59489, PKG&QAP, Type I, Class B, 9920-00-174-3194

PAPER, TOILET TISSUE, SHEET FORM PACKET; CID A-A-59594, PKG&QAP, Style II, Type A, Class 1, Sheet size B, 8540-01-508-3708

SALT, TABLE IODIZED, FINE GRANULATED OR EVAPORATED; 4 gm pg, US Food Chemicals Codex Sodium, Chloride Monograph, 8950-00-641-8980

SUGAR, REFINED GRANULATED, CANE OR BEET; 1/7 oz pg, CID A-A-20135, PKG&QAP, Type I, Style A, 8925-00-205-3144

SUGAR SUBSTITUTES, NON-CARBOHYDRATE, SUCRALOSE, 1 gm pg,
CID- A-A-20178, PKG&QAP, Type IV, Style A, Package 1, 8925-01-557-4041

C-3 DATE OF PACK

A. RATION ASSEMBLY

1. For assembled ration: Acceptance will be limited to assembled rations containing components, including the flameless ration heater, which have been processed and packed subsequent to date of award, except as otherwise specified below.

2. No product shall be older than 180 days (from date of product production) at time of final assembly, unless authorized by the contracting officer. These timelines are not applicable if a shorter time is required by the contract or the product document (ACR, PCR, CID, etc.).

3. For crackers at the ration assembly: The crackers shall not be more than 90 days old at time of unit packaging.

B. RATION COMPONENTS

1. For CFM Entrees, Starches and Soups, Fruits, Desserts and Snacks, Candy, Beverages, edible Other Items, and edible Accessory Components: Acceptance will be limited to product processed and packed subsequent to date of award.

C-4 MISCELLANEOUS REQUIREMENTS

A. COMPLIANCE WITH APPLICABLE REGULATIONS

1. The Contractor shall comply with 21 CFR §110 “Current Good Manufacturing Practice in Manufacturing, Packaging, or Holding Human Food” and all applicable regulations. The Contractor shall insure all sub-contractors comply with all applicable regulations. In addition, the contractor is required to comply with all with all applicable parts of the Code of Federal Regulations. For example, for low-acid canned-food manufacturers, 21 CFR §110 and §113 are applicable.

2. All products shall comply with all applicable Federal and State mandatory requirements and regulations relating to the preparation, processing, thermoprocessing, packaging, labeling, packing, storage, and distribution of those products and with all applicable provisions of the Federal Food, Drug and Cosmetic Act and regulations promulgated thereunder.

B. PERFORMANCE, PACKAGING AND QUALITY SPECIFICATIONS

1. This solicitation incorporates the individual Assembly Contract Requirements, Performance-Based Contract Requirements (PCR), Product Contract Requirements (PCR), Military Detail documents (MIIL-DTL), Military Performance documents (MIL-PRF), military specifications, Commercial Item Descriptions (CID), Sodium Chloride monograph, and Packaging Requirements and Quality Assurance Provisions (PKG&QAP) to form an integrated technical package.
2. Unless otherwise specified in Sections C, D, or E of this document, Sections C, D, and E of the ACR are applicable in their entirety.
3. Unless otherwise specified in Sections C, D, or E of this document, the packaging provisions and quality assurance provisions (verifications) for individual component items are cited in their respective PCRs, MIL-STDs, MIL-PRFs, PKG&QAPs, and MIL specs.
4. The processing guidelines, salient characteristics, manufacturer's/distributor's product assurances, regulatory requirements, performance requirements, requirements sections of MIL-STDs and MIL-PRFs, and military specifications in their entirety are applicable to this solicitation/contract.
5. Unless otherwise specified in individual PCRs or PKG&QAPs; the thermoprocessing of meat, poultry, fish, vegetables, and fruits shall be in accordance with MIL-PRF-44073, Packaging of Food in Flexible Packages; and the hot-fill processing of fruits shall be in accordance with MIL-PRF-44073, Packaging of Food in Flexible Packages.

C. PRODUCT SANITARILY APPROVED SOURCE REQUIREMENTS

1. As required by 48 CFR §246.408-70, Subsistence; AR 40-657/NAVSUP 4355.4H/MCO P10110.31H, Veterinary/Medical Food Safety, Quality Assurance, and Laboratory Service; DLAR 4155.3, Inspection of Subsistence Supplies and Services; DLAD 52.246-9044, Sanitary Conditions; and as clarified by the Armed Forces Food Risk Evaluation Committee, all Operational Ration Food Components shall originate from establishments sanitarily approved for supplying the specific food item.
2. Sanitary approval is established by:
 - a. Listing in the Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement (Worldwide Directory) as established by the Army Public Health Center, or
 - b. An establishment specifically exempted from listing in the Worldwide Directory by AR 40-657/NAVSUP 4355.4H/MCO P10110.31H paragraph 2-15a(2)(a) through (i).
3. This requirement applies to all Operational Rations and all Government Furnished Materiel (GFM) and CFM Operational Ration food components.

4. Requests for inspection and Worldwide Directory listing by USAPHC will be routed through DLA Troop Support-FTR for coordination and action. Situations involving sole sources of supply, proprietary supply sources, and commercial Brand Name items will be evaluated directly by the Chief, DLA Troop Support-FTR, in coordination with the Chief, Approved Sources Division, USAPHC.

5. In addition to the above, all producers of MRE food components shall be listed in the Worldwide Directory.

D. NUTRITIONAL REQUIREMENTS

1. A nutritional analysis for each product requiring a PDM shall be provided to the U.S. Army Natick Soldier Research, Development & Engineering Center (NSRDEC) within two weeks of the award of the contract and each time there is a major formulation change.

2. The Nutritional analysis shall be generated by the Genesis[®] R&D Food Analysis and Labeling Software (ESHA Research, Salem, OR, USA), version 9.0 or higher. The analysis shall be sent electronically to NSRDEC (attn.: Julie Smith (julie.e.smith30.civ@mail.mil)).

- a. The Genesis[®] food list files shall be provided for a 100 gm portion.
 - b. Genesis[®] food item files shall be included in the analysis file.
3. The ingredients and weight of each ingredient shall be included for each formulation.
- a. Nutrients included shall be:

Nutrient	Measurement		Nutrient	Measurement
Weight	gram		Kilocalorie	C
Protein	gram		Carbohydrate	gram
Dietary Fiber	gram		Fat (Total)	gram
Cholesterol	milligram		Fat (Saturated)	gram
Water	gram		Fat (Monounsaturated)	gram
Ash	gram		Fat (Polyunsaturated)	gram
Vitamin A	IU		Fat (Trans)	gram
Riboflavin	Milligram (B ₂)		Thiamin (B ₁)	milligram
Vitamin B ₆	milligram		Niacin (B ₃)	milligram
Vitamin C	milligram		Vitamin B ₁₂	milligram
Vitamin E (α-equivalents)	milligram		Vitamin D	milligram
Calcium	milligram		Folate	microgram
Iron	milligram		Selenium	milligram
Phosphorus	milligram		Magnesium	milligram
Sodium	milligram		Potassium	milligram
Zinc	milligram		Iodine	microgram
Fluoride	milligram			

b. The nutrients as required under the Nutrient Content paragraph and the verification of the nutrients as required under the Methods of Inspection paragraph in each specification is mandatory.

c. Nutrient measurements shall be to the first decimal.

E. INTEGRATED PEST MANAGEMENT PROGRAM REQUIREMENTS

1. The "Integrated Pest Management (IPM) Program Requirements for Operational Rations," of April 2011 is applicable to this DLA Troop Support Subsistence contract, except as specifically exempted in Section E of this solicitation/contract. The IPM program shall be in existence prior to contract award. The IPM plan and the associated pesticide labels and MSDS documents are not to be submitted to DLA Troop Support, unless specifically requested by the Contracting Officer. The contractor shall have these documents available for on-site review during a Quality Systems Management Visit (QSMV) or Quality Systems Compliance Audit. Evidence of any insect, rodent or pest infestation discovered in contact with materials or equipment used in the production of or found in an end-item component or assembly lot shall be cause for rejection of the involved lot. DLA Troop Support shall be notified when such pest activity has been found and informed of the corrective actions taken. IPM program requirements are found on the DLA Troop Support website at:

<http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx>

F. FOOD DEFENSE

1. The submission and implementation of a Food Defense Plan is required for this DLA Troop Support Subsistence contract. A Food Defense Plan shall be in existence prior to start of production. The plan shall address those areas of concern listed in the DLA troop Support Food Defense Checklist applicable to the contractor's facility/operation. To download a copy of the DLA Troop Support Food Defense Checklist, go to <http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx> or contact the applicable DLA Troop Support Contracting Officer or the Quality Audits & Food Defense Branch (DLA Troop Support-FTSB). Submit Food Defense Plans to the applicable DLA Troop Support Contracting Officer. The Quality Audits & Food Defense Branch (DLA Troop Support-FTSB) is the only DLA Troop Support office authorized to review and approve Food Defense Plans. All Food Defense Plans are maintained and secured by FTSB.

G. CONTRACTOR SANITATION PROGRAM

1. The "Contractor Sanitation Program – Operational Rations," of November 2015 is applicable to this DLA Troop Support Subsistence contract, except as specifically exempted in Section E of this solicitation/contract. The Contractor Sanitation Program shall be in existence prior to contract award. The program is not to be submitted to DLA Troop Support unless specifically requested by the applicable DLA Troop Support Contracting Officer. The contractor shall have the program available for on-site review during a QSMV or Quality Systems Compliance Audit. Evidence of any insect, rodent or pest infestation; foreign material; or

contamination discovered in contact with an end-item component or assembly lot shall be cause for rejection of the involved lot. Contractor Sanitation Program requirements are found on the DLA Troop Support website at:

<http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx>

H. ADDITIONAL REQUIREMENTS

1. Approval or acceptance of a Product Demonstration Model (PDM) shall not constitute a waiver of any specification requirement unless specifically stated by the Contracting Officer.

2. Components shall be utilized in assembly operation on oldest-date-of-pack basis. Contractor shall be solely responsible for the proper care and storage of all components.

3. The following applies to perishable raw and cooked beef, chicken, pork, turkey and other meats used in the production of operational rations:

a. All perishable meats shipped from the supplier to the processing plant shall be accompanied by either a USDA Grading Certificate (if required) or a Certificate of Conformance indicating compliance to specified requirements, including initial chilling or freezing date of the product, as applicable.

b. The ingredient supplier shall certify compliance with processing and packaging requirements for formed or breaded meats. Under no circumstance shall any meat or meat product be older than 180 days at time of use.

c. Chilled meats: Meats received in the chilled state shall not have been previously frozen and shall have been held at an internal temperature between 28°F and 40°F for a period not to exceed four days following initial chilling and prior to preparation and final processing.

(1) Upon arrival at the processing plant, if chilled product is not used within 72 hours, it shall be frozen and stored at a temperature not to exceed 0°F.

(2) Frozen product must be used within 180 days after slaughter

d. Frozen meats: Frozen meats received at the processing plant may be accepted provided the product internal temperature has never exceeded 20°F. Upon arrival at the processing plant, if not used immediately, the product shall be stored at a temperature not to exceed 0°F, and must be used within 180 days after slaughter.

4. All items thermostabilized by retorting shall be sealed and in the retort process within two hours of filling.

5. Maximum stacking height of assembled ration unit loads shall not be greater than four high.

6. In view of the fact that the ANSI/ASQ Z1.4 Standard does not contain the definitions for critical, major, and minor defects, the following definitions become contractually binding through their inclusion here:

a. Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

b. Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or reduce materially the usability of the unit of product for its intended purpose.

c. Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use of operation of the unit.

7. AGE OF INGREDIENTS: Contractors formulating and producing end-item operational rations food items, and for each item that is manufactured, shall maintain a list of ingredients (generic name, brand name, producer name, or supplier name in case of bulk packed plant or animal ingredients, country of origin) and the time and temperature serviceability limitations the contractor will impose on each ingredient. Each ingredient's time limitation is to be calculable using its date of pack as the starting point. A copy of this list will be made available to the Contracting Officer or to the USDA upon either's request. This paragraph does not modify time and/or temperature limitations specified for ingredients elsewhere in this solicitation/contract, including its technical data package and product specifications.

8. INGREDIENTS FROM FOREIGN SOURCES: When ingredients are from a foreign country, the contractor shall have that ingredient listed on their "Master List of Ingredients from Foreign Sources". For each ingredient, the Master List shall list the ingredient, the country of origin, and the product(s) in which the ingredient is used. The Master List shall be updated as necessary. The Master List shall be provided to the in-plant GQAR and, upon request, to DLA Troop Support Contracting Officer.

9. RATIONS NATIONAL CONTRACT (RNC) DELIVERIES AND USDA/USDC CERTIFICATION: All deliveries of USDA/USDC inspected Rations National Contract (RNC) product shall be USDA/USDC certified. Original USDA/USDC certificates shall accompany each delivery, however, assembler's may receive deliveries accompanied by facsimiles (faxes, scans, etc.) as preliminary evidence of certification. RNC product that requires USDA/USDC certification shall not be accepted without the appropriate original USDA/USDC certification

C-5 ADDITIONS, DELETIONS, AND/OR SUBSTITUTIONS

A. The following applies to Fat Testing:

1. For All documents that cite the Association of Official Analytical Chemists' Official Method of Analysis 985.15 (AOAC OMA 985.15 - Fat (Crude) in Meat and Poultry Products

(Rapid Microwave-Solvent Extraction Method)) for fat testing, add the following Alternate Test Methods:

- a.* 991.36 - Fat (Crude) in Meat and Poultry Products (Solvent Extraction (Submersion) Method)
- b.* 2007.04 - Fat, Moisture, and Protein in Meat and Meat Products Using the FOSS FoodScan™ Near-Infrared (NIR) Spectrophotometer
- c.* 2008.06 - Moisture and Fat in Meats by Microwave and Nuclear Magnetic Resonance Analysis

B. The following changes apply to A-A-20298, PKG&QAP, Meat and Poultry Snacks, Cured:

1. CID A-A-20298, Page 4, 6.3, Analytical and microbiological testing. For Aerobic Plate Count, add the following Official Methods of Analysis of the AOAC: (1) 990.12 (Aerobic Plate Count in Foods, Dry Rehydratable Film Method) (2) 2008 .10 (Enumeration of Aerobic Mesophilic Flora in foods)

2. CID A-A-20298 PKG&QAP, Page 7, Section D-2 LABELING, delete everything after “A. Pouches” and replace with the following:
“Each primary and/or overwrap package pouch shall be correctly and legibly labeled in accordance with applicable USDA regulations. Printing ink shall be permanent black ink or other dark contrasting color which is free of carcinogenic elements. Not to the exclusion of any information required by applicable USDA regulations, the label shall contain the following information:

- (1) Name and flavor of product(s) (letters not less than 1/8 inch high)
- (2) Ingredients
- (3) Date 1/
- (4) Net weight
- (5) Name and address of packer
- (6) “Nutrition Facts” label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable USDA regulations

1/ The date of pack shall be expressed as a four digit Julian code. The first digit shall indicate the year of production and the next three digits shall indicate the day of the year (Example, 14 February 2015 would be coded as 5045). The Julian code shall represent the day the product was packaged into the pouch and processed. Following the four digit Julian code, the other required code information shall be printed in the sequence as listed above.

NOTE: For commercially packaged items that are overwrapped, the above information required in accordance with applicable USDA regulations shall be printed on either the inner or outer

package or both, in accordance with applicable USDA regulations. in addition to any other labeling requirements, the product name and date shall be printed on the outer package."

C. The following change applies to MIL-PRF-44073, Performance Specification Packaging in Flexible Pouches:

1. Page 4, § 3.1.4.2 Residual gas volume, after "... not exceed 10 cc.", add the following: The residual gas volume in filled and sealed SSP pouches of Cobbler, produced in accordance with PCR-C-058, shall not exceed 20 cubic centimeters (cc)."

D. The following changes apply to PCR-C-082, Chocolate Protein Drink Powder:

1. Page 3, Section C-2, § H, (3) Delete "of six composite samples" and insert "sample".
2. Page 10, Section E-5, § B, (5) Delete paragraph beginning with "Sixty filled..." through "...rejection of the lot." And insert the following:

"Five filled and sealed pouches shall be selected at random from the lot regardless of lot size. Each sample shall be individually tested for microbiological activity in accordance with the Official Methods of Analysis (OMA) of the AOAC International or the Food and Drug Administration (FDA) Bacteriological Analytical Manual (BAM). For Aerobic plate count the average result for all samples tested must comply as provided in C-2, H(1). For *E. coli* and *Salmonella*, results for each sample must comply as provided respectively in C-2, H(2) and (3). Any result not conforming to the microbiological requirements shall be cause for rejection of the lot."

E. The following changes apply to PCR-N-003, Nut & Fruit Mix:

1. Page 5, Section C-2, § I Microbiological requirement Delete in its entirety.
2. Page 14, Section E-5, § A, Table I, footnote 7/ Delete in its entirety.
3. Page 15, Section E-5, § B, (5) *Salmonella* testing Delete in its entirety.
4. Page 16, Section E-5, § B,(6) Delete in its entirety and insert:
"(6) Aflatoxin content testing. Compliance with aflatoxin testing requirements can be achieved in either of the two methods (A) or (B) described below. Note that method (B) requires certain conditions to be met.

Method (A): The sample to be analyzed shall be a composite of the finished product taken from a set of eight filled and sealed pouches which have been selected at random from the lot. The composited sample shall be prepared and analyzed in accordance of the OMA of AOAC International, method 991.31(HPLC) or 998.03, with preparation of the sample performed according to AOAC Official Method 977.16. Test results shall be reported to the nearest whole

number. Government verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the requirement shall be cause for rejection of the lot.

Method (B): For prepackaged product (Types I, II, or III) received from a supplier that is not further processed or repackaged, the contractor will furnish a Certificate of Analysis that the aflatoxin in the finished product is not greater than 15 parts per billion (ppb). No additional testing is required. Results shall be reported to the nearest whole number.

For roasted peanuts, almonds, filberts, walnuts, and sunflower kernels received in bulk (to be used in finished product for Types I, II, or III), the contractor can accept a USDA certificate that the aflatoxin in the bulk ingredient lot is not greater than 15 ppb. (See the note at the bottom of this section.) If a USDA certificate does not accompany the ingredient bulk lot, the following alternate method of inspection may be used. The contractor shall have the bulk shipment sampled and tested by USDA. (Sampling of nut and kernel ingredients shall take place at the contractor location where the finished product will be placed into the pouch.) Steps (i) through (v) below apply to roasted peanut bulk lots. Step (vi) applies to almonds, filberts, walnuts, and sunflower kernels.

Three sets of representative, independently-drawn samples shall be submitted to the laboratory for testing – the number of sampling points and quantity of peanuts per sampling point to be determined using USDA procedures. Each of the three sets of samples shall be composited and respectively designated as test sample 1, test sample 2, and test sample 3.

Lots will be reported as negative for aflatoxin if test sample 1 has an aflatoxin level at or below 5 ppb. If test sample 1 is at or above 25 ppb the lot fails.

If the aflatoxin level for test sample 1 is above 5 ppb and less than 25 ppb, test sample 2 may be analyzed. Test results for test sample 1 and 2 will be averaged.

If the average aflatoxin level for test samples 1 and 2 is 10 ppb or less the lot will be reported as negative for aflatoxin, but fails if the aflatoxin level is at or above 20 ppb. If the average value for test samples 1 and 2 is above 10 ppb but less than 20 ppb, test sample 3 may be analyzed. The results of test samples 1, 2 and 3 will be averaged. If the average aflatoxin level for test samples 1, 2, and 3 is 15 ppb or less the lot will be reported as negative for aflatoxin. If the average aflatoxin level for test samples 1, 2, and 3 is above 15 ppb the lot fails.

Bulk lots determined to be conforming for aflatoxin as evidenced by a USDA certificate, in accordance with the above procedures will be considered acceptable for use as ingredients as long as both the bulk and end item lots' identities have been preserved and the bulk lot has been maintained under acceptable conditions (i.e., between approximately 40°F to 50°F at low humidity). Results shall be reported to the nearest whole number. Bulk roasted peanuts with aflatoxin greater than 15 ppb shall not be used as ingredients.

Bulk ingredient lots of almonds, filberts, walnuts, and sunflower kernels shall be sampled using USDA/AMS sampling procedures to yield one or two 10-pound composites, depending on the

lot size. The number of sample points accessed to create the 10-pound composite(s) will be based on the bulk lot size in pounds and USDA/AMS sampling procedures. The composites will be tested by the USDA/AMS laboratory using the designated methods, and reported on a USDA/AMS laboratory report. Bulk ingredient lots with aflatoxin results not greater than 15 ppb will be considered acceptable for use as long as the bulk and end item lots' identities have been preserved and the ingredients are maintained under acceptable conditions (i.e., between approximately 40°F to 50°F at low humidity). Results shall be reported to the nearest whole number. Bulk lots of almonds, filberts, walnuts, or sunflower kernels with aflatoxin greater than 15 ppb shall not be used as ingredients.

NOTE: A USDA Certificate of Analysis on roasted peanuts, almonds, filberts, walnuts, and sunflower kernels from the most recent crop year which have been kept in cold storage (between approximately 40°F to 50°F at low humidity) is acceptable. Contractor must attest to these storage conditions. If storage conditions for roasted peanuts are not established, a USDA certificate of analysis for aflatoxin on roasted peanuts will be considered current if not more than 30 days have elapsed since the date of the analysis.”

F. The following changes apply to CID A-A-20195 PKG&QAP, Snack Foods:

1. Page 15, on line immediately following paragraph (2), insert:

“If the conditions in (1) and (2) are not met, the following conditions apply for aflatoxin testing on toasted corn kernels:

- a. For toasted corn kernels lots received in bulk, the contractor shall have each bulk lot sampled and tested by USDA. 1/ If (a) the bulk lot shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, (b) the end item lots are manufactured using that bulk product, and (c) both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- b. For finished package end item toasted corn kernel lots received, the contractor shall have the shipment sampled and tested by USDA. If (a) the shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, then no further aflatoxin testing is required.
- c. If the conditions in (a) and (b) are not met, each end item lot must be sampled and tested by USDA.

Method of inspection: Three sample sets of representative independently drawn samples shall be submitted to the laboratory for testing – the exact quantity of samples per sample set (whether bulk product or pouched product) to be determined using USDA procedures. Each of the three sample sets shall be composited and respectively designated as test sample 1, test sample 2, and test sample 3. Lots will be reported as negative for aflatoxin if test sample 1 has an aflatoxin level at or below 5 ppb. If test sample 1 is at or above 25 ppb the lot fails. If the aflatoxin level for test sample 1 is above 5 ppb and less than 25 ppb, test sample 2 may be analyzed. Test results for test sample 1 and 2 will be averaged. If the average aflatoxin level for test samples 1 and 2 is

10 ppb or less the lot will be reported as negative for aflatoxin, but fails if the aflatoxin level is at or above 20 ppb. If the average value for test samples 1 and 2 is above 10 ppb but less than 20 ppb, test sample 3 may be analyzed. The results of test samples 1, 2, and 3 will be averaged. If the average aflatoxin level for test samples 1, 2, and 3 is 15 ppb or less the lot will be reported as negative for aflatoxin. If the average level for test samples 1, 2, and 3 is above 15 ppb the lot fails. End item lots determined to be negative for aflatoxin as evidenced by a USDA certificate will be considered acceptable. Bulk lots with aflatoxin greater than 15 ppb shall not be used as to produce finished product lots.

1/ Sampling may be conducted by Army Veterinary Inspectors using USDA procedures.”

G. The following change applies to A-A-20164D, Nuts, Shelled, Roasted:

1. Page 2, § 5.1.1: Delete: "U.S. No. I" and Insert: "U.S. Select Sheller Runner".

H. The following change applies to A-A-20097, Hot Sauce:

1. Page 4, § 6.1, Table I, Type VII, change the pH range to 2.8 - 3.4.

I. The following changes apply to PCR-T-014, Trail Mix, Recovery, Packaged in a Flexible Pouch:

1. Page 3, Section C-2, § I, delete in entirety.
2. Page 3, Section C-2, § J, change to “I. Aflatoxin”.
3. Page 12, Section E-5, § B, (6), delete in entirety.
4. Page 12, Section E-5, § B, (7), change to “(6) Aflatoxin testing”

J. The following changes apply ACR-M-037, Meal, Ready-To-Eat (MRE), Assembly Requirements:

1. Page 17, Section D-1, § A, (4) last sentence, delete “of the appropriate food product document(s)” and insert “of Section D, Part II- Technical Data for Contractor Furnished Material (CFM) Components in this solicitation”.
2. Page 17, Section D-1, § A, (5) last sentence, delete “of the appropriate food product document(s)” and insert “of Section D, Part II- Technical Data for Contractor Furnished Material (CFM) Components in this solicitation”.

SECTION D – PACKAGING AND MARKING

Part I – Technical Data for MRE Assembly

D-1. PACKAGING: Packaging level is A. Requirements applicable to subassembly packet/accessory packets, time-temperature indicator (TTI) labels, meal bags, subassembly/accessory packet assembly, and meal assembly are specified in Section D-1 of the currently contractual Assembly Contract Requirements (ACR) document.

D-2. LABELING: Labeling requirements applicable to subassembly/accessory packets and meal bags are specified in Section D-2 of the currently contractual Assembly Contract Requirements (ACR) document.

D-3. PACKING: Packing level is A. Packing Requirements are specified in Section D-3 of the currently contractual Assembly Contract Requirements (ACR) document.

D-4. UNITIZATION:

A. Unitization requirements are specified in section D-4 of the currently contractual Assembly Contract Requirements (ACR) document.

B. Unit load height shall not exceed 44 inches.^{1,2}

D-5. MARKING:

A. ASSEMBLED RATION SHIPPING CONTAINERS³: Shipping containers shall be marked in accordance with DLA Troop Support Form 3556, *Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence* and as specified in the contract with the following exceptions:

1. Identification/contract data markings normally placed on an end of the shipping container shall read from top to bottom, left to right, when the shipping container is rotated from its upright position onto its side for palletization. The following identification markings shall be applied to the shipping case end panel:

¹ Pallets shall conform to requirements cited in the general requirement section of DLA Troop Support Form 3507.

² Three-stringer construction is acceptable.

8970-00-149-1094
MEAL, READY-TO-EAT, INDIVIDUAL
12 MEALS³
WT. _____ CU. _____
CONTRACT NO. _____⁴
NAME, ADDRESS, AND ZIP CODE OF ASSEMBLY CONTRACTOR (e.g. TEFCO, INC.,
BROOMALL, PA 19101
U.S. GOVERNMENT PROPERTY – COMMERCIAL RESALE IS UNLAWFUL

2. The major flaps of the shipping container immediately to the right of the marked end of the shipping container shall bear the following markings:

DATE OF PACK/LOT NUMBER _____^{5, 6}
INSPECTION/TEST DATE _____^{5, 7, 8}
CASE TYPE and MENUS RANGE (designate A or B type case and menus range 1-12 or 13-24 as applicable)

3. Time Temperature Indicator shall be centrally positioned on a closure flap and shall conform to a single pattern of placement. A minimum distance (quiet zone) of ¼ inch from the nearest marking shall be maintained.

4. One side panel of the shipping container shall be marked “MEAL, READY-TO-EAT, INDIVIDUAL” in letters not less than 1-1/4 inches high with the French translation “Repas, Prêt-à-Consommer, Individuel) marked underneath in letters not less than 1 inch. Underneath the ration nomenclature, in letters not less than ½ inch, the shipping container shall be marked “DO NOT ROUGH HANDLE WHEN FROZEN (0° F or below)”.

³ Alternatively, the marking may be “12 MEALS A/A”.

⁴ The “Contract No.” line may precede or follow The “Name, address, and zip code of assembly contractor” line.

⁵ Contractor shall mark the applicable date of pack/lot number and inspection/test date by embossing, stamping, printing, stenciling, jet or laser printing on each shipping container.

⁶ For final assembled lots, the “date of pack/lot number” is defined as the quantity of finished product assembled within a production day. For purpose of marking shipping cases, the contractor may use either an open date (e.g. 5/25/2014) and/or a Julian Date (e.g. 4145).

⁷ The Shipping containers shall contain all of the required marking. The ration assembler shall be responsible for applying the required markings. The shelf-life for the assembled ration is 36 months at 80°F and shall be used in computing the Inspection/Test date.

⁸ To calculate Inspection Test Date (ITD), add shelf life value to Date of Pack. Example: If Date of Pack is 5/25/2014 and shelf-life is three years, then ITD is computed as follows: 5/14 + 3 = ITD 5/17.

DLA TROOP SUPPORT OWNED STOCKS (ACCT. NO. SCO300)

NOTICE

THIS PRODUCT HAS BEEN HELD UNDER CONTROLLED TEMPERATURE AND HUMIDITY CONDITIONS AND SHOULD NOT BE CONSIDERED OVERAGE BECAUSE OF THE DATE OF PACK AND THE DATE OF PACK SHOULD NOT BE THE CONTROLLING FACTOR IN DETERMINING ISSUANCE AND UTILIZATION OF THE PRODUCT FURTHER. FURTHER REFRIGERATION IS NOT REQUIRED.

5. For line items scheduled for delivery to controlled storage, the following additional special markings shall be printed on pressure-sensitive labels. One label shall be applied to each case end-panel on the end opposite the contractual markings and one label shall be applied adjacent to the unit load markings. The label shall read as follows:

1. The lettering of the above label shall be ¼ inch solid letters with the exception of the word “NOTICE” which shall be ½ inch solid letters.

2. At the Contractors’ sole discretion, the controlled storage markings as described above may be pre-printed on the shipping container or otherwise marked under any applicable requirements cited for marking of shipping containers. Under this alternative, it is the responsibility of the contractor to determine the quantity, if any, of such pre-printed shipping containers that will be necessary. It remains the responsibility of the Contractor to properly mark the shipping containers as required by contractual documents.

6. To be in compliance with OSHA requirements, when the shipping container contains Flameless Ration Heater (FRHs) the following information must appear on a major flap of the shipping case closure immediately to the right of the marked end panel. The upper case letters shall not be more than ¼ inch high. The lower case letters shall not be less than 3/16 inch high.

Note: WATER ACTIVATED Flameless Ration Heater,
NSN 9870-01-321-9153, supplied in each menu bag.

B. ASSEMBLED RATION UNIT LOADS⁹:

1. Unit loads shall be marked in accordance with DLA Troop Support Form 3556 except that the “marking and special markings” information required for the marking for palletized/containerized shipments (Form 3556, F.1) shall be as follows:

<p>GROSS WEIGHT AND CUBE NUMBER OF SHIPPING CONTAINERS PER LOAD (E.G., 48 CS) CONTRACT NUMBER JULIAN DATE OF PACK/LOT NUMBER</p>
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2. Marking may be accomplished by stenciling, printing or by pressure-sensitive labels and shall be positioned on two adjacent sides of the load. Size of lettering shall not be less ½ inch and shall be black. Markings shall be legible, non-fading and durable.

3. A Material Safety Data Sheet (MSDS) shall be placed on each unit load in accordance with MIL-R-44398. The MSDS shall be placed inside a clear or translucent plastic sleeve with “MSDS ENCLOSED” clearly printed in dark, contrasting ink. The plastic sleeve shall be securely attached to one side of the unit load with pressure-sensitive tape or adhesive.

4. One copy of the MSDS shall be included with the shipping papers and one copy shall also be included with the vehicle manifest.

⁹ Gross weight and cube shall include the weight and dimensions of the pallet base. The gross weight and cube may be determined by weighting and measuring five or more fully-unitized loads (or weighing components separately) for determining the average weight and cube of the unit load.

D-6. SECTION D CLAUSES:

A. The following clauses are incorporated in full text:

Active Radio Frequency Identification (aRFID) Tag Requirements for OCONUS Shipments

The contractor shall prepare and affix RF Tags to shipment containers, for all OCONUS shipments, and special CONUS training exercises as directed, in accordance with the following Radio Frequency (RF) tag requirements:

I. DEFINITIONS

RADIO FREQUENCY (RF) TAG: A small radio transceiver that can store user defined data in nonvolatile, read/write memory, and can be monitored and controlled by other devices. RFID tags may be “active”, which contain their own power source, or “passive”, which receive their power from an interrogator by RF transmission.

aRFID INTERROGATOR: Electronic device used to detect, “read” and “write” specific information on a RF tag

aRFID RETRIEVER COMPUTER: An industrial computer configured to receive signals via data cable from the aRFID Interrogator and “upload” aRFID Tag information via a phone line/network connection to destination server. It has no monitor or keyboard.

aRFID LAPTOP WRITE-STATION COMPUTER: A “laptop” computer configured to “write” tags in conjunction with a aRFID Interrogator.

aRFID WRITE SOFTWARE: The Government-owned software used in conjunction with aRFID equipment to gather aRFID tag data on military-sponsored shipments and report information for compilation in Government databases on regional servers for In-Transit Visibility.

TAG DOCKING STATION: An electronic device used to transmit data electronically from the laptop computer to the aRFID tag.

II. GENERAL INFORMATION

It is the objective of the Government to use aRFID Technology for all Class I (Food) containers going OCONUS in order to maintain Total Asset Visibility (TAV) of subsistence on the battlefield. The Army has incorporated RFID Technology into its Joint Vision 2010 Focused Logistics Program.

The aRFID application software to be used for aRFID tagging of OCONUS shipments is Government-owned. The Government shall provide the RF Write software and technical services required to facilitate implementation of RF tagging of shipments.

This includes surveying the Contractor/Supplier (hereinafter the “Contractor”) site for RF site preparation, installation and testing of hardware and software, installation of communications software interfaces to Government servers, and training vendor personnel to use the integrated software and hardware composing the RF tag “write” and “read” capabilities.

The Government points of contact (POC) for acquiring the aRFID software and technical services are:

Program Executive Office, Enterprise Information Systems
Product Manager for Automatic Identification Technology (PEO EIS, PM AIT),
help.rfitv@us.army.mil
Phone number: (800) 877-7925 or (703) 439-3850.

III. RF EQUIPMENT AND EQUIPMENT SUPPORT

HARDWARE: All aRFID equipment will be Government-Furnished Property (GFP). The Contractor shall contact and coordinate with the Government POCs for the delivery, installation and configuration of the RF Computers and RF Interrogator units; for initial inventory of RF tags; and for any other assistance or advice required.

Note: FAR clause 52.245-4, Government Furnished Property (Short Form) shall apply to all GFP provided to the Contractor.

1. **aRFID Retriever Computer:** Each Contractor will be supplied with one (1) aRFID Retriever Computer. The computer will have aRFID read software installed and has no keyboard and no monitor. It will automatically receive data from the RF interrogator and forward it to a regional server using a telephone line (toll-free number) to be provided by the Contractor.

2. **aRFID Laptop Write Station:** Each Contractor will be supplied with one (1) aRFID laptop computer configured with RF Write software. Connected with a RF Interrogator or a Tag Docking Station, this unit enables the Contractor to write shipment information to RF tags, and to up-load the written tag data to a regional server using a telephone line (toll-free number) to be provided by the Contractor.

3. **aRFID Interrogators:** Each Contractor will be supplied with aRFID Interrogators required for visibility of shipments as they enter and leave the contractor facility. The number of interrogators required will be determined during the site survey. The contractor may also be supplied with an aRFID interrogator for the aRFID laptop write station unless an aRFID tag docking station is utilized to write the tags.

4. aRFID Tags: The aRFID Tag model include ST 654/656 “active” tag with its own database engine and file system. It features 128 bytes of read/write memory and supports tag-initiated communication triggered by system sensors. It is hermetically sealed, waterproof, and able to withstand the shock and vibration of transportation. One (1) aRFID Tag model ST-656-1 is required for each container shipment. The initial inventory of aRFID Tags shall be provided by the Government for use on Government-sponsored shipments.

B. SOFTWARE: The Government will furnish all application software, and perform all actions required to install and test software, and then train Contractor personnel to use software and equipment to perform required aRFID tag activities.

C. aRFID INFRASTRUCTURE SUPPORT:

The Government shall coordinate and conduct a site survey of the vendor facility for installation of the RF equipment. The Contractor shall provide and prepare physical locations for aRFID equipment in accordance with the site survey.

The Contractor will provide the following infrastructure for the aRFID interrogator “read” station:

Mounting of a (GFP) bracket plate to support the aRFID Interrogator. The Government shall provide the bracket to the Contractor as GFE.

Installation of an un-switched 110VAC or 220VAC (as required) receptacle within two feet of the interrogator mount.

Installation of conduit or pathway for running of a data cable between the aRFID Interrogator and the aRFID Retriever Computer.

Shelf space for the aRFID Retriever Computer and installation of an un-switched 110VAC or 220VAC receptacle within two feet.

Installation of a telephone line near the aRFID Retriever Computer capable of dialing a toll-free number.

3. The Contractor will provide the following infrastructure for the aRFID laptop write station:

Shelf space with a 110VAC receptacle within two feet of the aRFID laptop write station location.

A telephone line near the aRFID laptop write station capable of dialing a toll-free number. The telephone line can be the same telephone line as installed in paragraph 2.5 above.

4. The Government shall install and test aRFID equipment after the supplier has completed site preparation work. The vendor shall provide assistance to the equipment installation team to facilitate installation and testing and to insure access to aRFID equipment locations.

VI. PROCEDURES

Each Contractor shall input data, or “write”, one aRFID tag for each OCONUS container load, or CONUS container when directed by the DLA, TROOP SUPPORT/E Item Manager, and affix the aRFID tag to the Container by the most secure method available, behind the locking bars. Each aRFID tag shall be written to contain the data attached, formatted as specified by the data definition for the 128k aRFID tag. The Government will provide training for contractor personnel to “write” the data to tags, and to “read” and upload tag data upon shipment container departure from contractor location. The data format is in the Operational Prototype Total Asset Visibility, TIPS-Write Import Document, 09 Sep 02, at attachment 1.

The Contractor shall be responsible for replenishing and maintaining its inventory of aRFID tags. The replenishment RF tags will be provided as Government furnished property (GFP), at no cost to the Contractor. Note however, that the Contractor shall be fully liable for any/all loss or damage of aRFID Tags in their possession. The Contractor shall obtain its replenishment RF Tags from the Defense Distribution Center for aRFID Tags:

Defense Distribution Center

Bldg 54, Bay D-5 (J4/5)

New Cumberland, PA 17070

E-mail: delivery@dla.mil

Please put in the subject line of the email:

aRFID TAG REPLENISHMENT REQUEST

Telephone: 1-800-456-5507

OCONUS Contractors shall remove all aRFID Tags affixed to containers delivered from CONUS origin, and retain for re-use. When the RF tag is removed from the container, the contractor shall invert the battery to deactivate the tag until it is ready for re-use. The removed/retained tag(s) should be reported on the Monthly aRFID Tag Inventory Log described in para. D below. Quantities of aRFID tags over the amount needed for normal operations will be stored until collected by field service engineers during regular aRFID maintenance visits.

Maintenance of GFP Hardware/Software: The Contractor shall promptly and directly contact the following for any maintenance/repair required for any aRFID Tag GFP hardware or software at:

E-mail: help.rfitv@us.army.mil
Toll-free: (800) 877-7925
Commercial: (703) 439-3850

The Contractor shall maintain a log for its inventory/use of aRFID Tags. The aRFID Tag Inventory Log shall, at a minimum, contain the following information and dates: initial inventory; detail of each aRFID Tag shipped (e.g. aRFID Tag serial #, container #, TCN, date shipped, destination); detail of any aRFID Tag returned to the RFID Mgmt Center; replenishment quantity, on-hand inventory. In addition note any aRFID Tags that are damaged or unserviceable. OCONUS Contractors shall include and detail aRFID Tags removed/retained from CONUS containers (e.g. aRFID Tag serial #, container #, TCN, origin,). This information shall be promptly provided by the Contractor on a monthly basis (the first week of each month) to the Contracting Officer or authorized Contracting Officer's Representative (COR), Program Executive Office, Enterprise Information Systems, Product Manager for Automatic Identification Technology (PEO EIS, PM AIT), help.rfitv@us.army.mil or Phone number: (800) 877-7925 or (703) 439-3850.

Upon request of the Contracting Officer, or COR, the Contractor shall promptly return any, or all, GFP RF Tags to the DDC RFID Management Center above. The Contractor shall prepare aRFID Tags for shipment as directed by the Government POCs, and shall make such shipment to the Defense Distribution Center at its own expense. The Government will not make payment for any return shipments.

1 Reference: Operational Prototype Total Asset Visibility, TIPS-Write Import Document, 09 Sep 02.

Part II –Technical Data for Contractor Furnished Material (CFM) Components

SUB-PART A: REQUIREMENTS FOR CFM COMPONENTS PACKAGED IN ACCORDANCE WITH MIL-PRF-44073 “PACKAGING OF FOOD IN FLEXIBLE POUCHES”.

D-1. PACKAGING:

A. Product shall be filled into pouches and processed in accordance with MIL-PRF-44073, Packaging of Food in Flexible Pouches, Type I, Style 1.

D-2. LABELING:

A. Pouches. Each pouch shall be correctly and legibly labeled. Printing ink shall be permanent ink of black or other contrasting color and shall be free of carcinogenic elements. Prior to thermal processing of the pouches, the product name, lot number, filling equipment number and time stamp shall be applied. All other marking may be applied before or after thermal processing.

1. Labeling information shall include:

a. Product name (not less than 1/8 inch high, commonly used abbreviations may be used).

(1) Pouch code includes: ¹⁰

(a) Lot Number

(b) Filling equipment identification number

(c) Company code or USDA establishment number (as applicable)

(d) Retort identification number and Retort cook number (Optional)

(e) Time stamp (hour and minute of filling/sealing operation)

(2) USDA official inspection legend for the packer's plant when applicable ¹¹

¹⁰ The lot number shall be expressed as a four digit Julian code. The first digit shall indicate the year of production and the next three digits shall indicate the day of the year (Example, 14 February 2015 would be coded as 5045). The Julian code shall represent the day the product was packaged into the pouch and processed. Following the four digit Julian code, the other required code information shall be printed in the sequence as listed above.

¹¹ May be placed on the paperboard sleeve if labeled under USDA/FSIS supervision as an identification service.

B. Paperboard sleeves.

1. The sleeves shall be clearly printed on one of the panels with permanent black ink as follows:^{12, 13, 14}

- a. Product name (7/32 to 9/32 inch-high block letters)
- b. Ingredients
- c. Net weight
- d. Name and address of packer
- e. “Nutrition Facts” label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA and USDA regulations.

2. Military nutrition information shall be printed on one of the entrée sleeve’s panels, as applicable. The information, provided by the contracting officer, shall be clearly printed with permanent black ink in an area no smaller than 4 inches by 5-1/4 inches.

For the following menus, print the corresponding military nutrition information graphics:

Menu 1	PCR-C-062	Military Rations Are Good Performance Meals
Menu 2	PCR-B-057	Do’s and Don’ts for Cold Weather Nutrition
Menu 3	PCR-C-021	Military Rations Are Good Performance Meals
Menu 4	PCR-S-002	Basic Heat Injury Prevention
Menu 5	PKG&QAP A-A 20352	Military Rations Are Good Performance Meals
Menu 6	PCR-B-054	Military Rations Are Good Performance Meals
Menu 7	PCR-B-050	Military Rations Are Good Performance Meals
Menu 8	PCR-M-015	Military Rations Are Good Performance Meals
Menu 9	PCR-B-020	What’s In An MRE
Menu 10	PCR-C-027	Food, Water, and Exercise are Tactical Weapons
Menu 11	PCR-V-010	Military Rations Are Good Performance Meals
Menu 12	PCR-E-019	Military Rations Are Good Performance Meals
Menu 13	PCR-C-020	Military Rations Are Good Performance Meals
Menu 14	PCR-C-087	Military Rations Are Good Performance Meals
Menu 15	PCR-M-016	Military Rations Are Good Performance Meals
Menu 16	PCR-C-088	Military Rations Are Good Performance Meals
Menu 17	PCR-P-045	Military Rations Are Good Performance Meals

¹² Applicable to entrees: With contracting officer approval, this information may be printed on the pouch in lieu of the paperboard sleeve.

¹³ Applicable to sides: With contracting officer approval, this information may be printed on the pouch or on a separate paperboard insert card in lieu of the paperboard sleeve.

¹⁴ Applicable to sides: If printed on the sleeve, it shall be configured to fit alongside similar information for an accompanying pouched product. Identity of accompanying pouched product and approval of label design shall be obtained from the contracting officer.

Menu 18	PCR-B-021	Military Rations Are Good Performance Meals
Menu 19	PCR-B-029	Military Rations Are Good Performance Meals
Menu 20	PCR-H-012	Military Rations Are Good Performance Meals
Menu 22	PCR-A-005	Military Rations Are Good Performance Meals
Menu 23	PCR-C-069	Military Rations Are Good Performance Meals
Menu 24	PCR-S-018	Military Rations Are Good Performance Meals

3. The product shall be formulated and labeled in accordance with all applicable FDA and USDA labeling regulations and policies. The sleeves (or pouches, or insert cards, as applicable) shall be labeled with the following product name.

ENTREES:

Menu 1	PCR-C-062	CHILI WITH BEANS
Menu 2	PCR-B-057	SHREDDED BEEF IN BARBECUE SAUCE
Menu 3	PCR-C-021	CHICKEN, EGG NOODLES, AND VEGETABLES, IN SAUCE
Menu 4	PCR-S-002	SPAGHETTI WITH BEEF AND SAUCE
Menu 6	PCR-B-054	BEEF TACO
Menu 7	PCR-B-050	BRISKET ENTRÉE GRAVY WITH SEASONED BEEF BRISKET SLICES
Menu 9	PCR-B-020	BEEF STEW
Menu 10	PCR-C-027	CHILI AND MACARONI
Menu 11	PCR-V-010	VEGETARIAN TACO PASTA (VEGETABLE CRUMBLES WITH PASTA IN TACO STYLE SAUCE)
Menu 12	PCR-E-019	ELBOW MACARONI IN TOMATO SAUCE
Menu 13	PCR-C-020	CHEESE TORTELLINI IN TOMATO SAUCE
Menu 14	PCR-C-087	CREAMY SPINACH FETTUCCINE (EGG NOODLES, SPINACH AND MUSHROOMS IN A CREAM SAUCE)
Menu 15	PCR-M-016	MEXICAN STYLE CHICKEN STEW
Menu 16	PCR-C-088	CHICKEN BURRITO BOWL (CHICKEN WITH RICE, BEANS AND VEGETABLES)
Menu 17	PCR-P-045	PORK SAUSAGE PATTY, MAPLE FLAVORED
Menu 18	PCR-B-021	BEEF RAVIOLI IN MEAT SAUCE
Menu 19	PCR-B-029	BEEF PATTY, GRILLED, JALAPENO PEPPER JACK FLAVOR, CARAMEL COLOR ADDED
Menu 20	PCR-H-012	HASH BROWN POTATOES WITH BACON, PEPPERS AND ONIONS
Menu 22	PCR-A-005	ASIAN STYLE BEEF STRIPS WITH VEGETABLES
Menu 24	PCR-S-018	SOUTHWEST STYLE BEEF AND BLACK BEANS WITH SAUCE

SIDES:

Menu 2	PCR-B-056	BLACK BEANS IN A SEASONED SAUCE
Menu 7	PCR-P-048	AU GRATIN POTATOES
Menu 8	PCR-P-011	GARLIC MASHED POTATOES
Menu 6	PCR-S-019	SANTA FE STYLE RICE AND BEANS
Menu 19 & 23	PCR-C-058	CHERRY BLUEBERRY COBBLER

NOTE: For use with A-A-20353 Chicken Chunks and A-A-20155 Tuna. When applicable, commercial pouch graphics (colors, design and labeling) shall be submitted to the Contracting Officer for review and approval and to the US Army Research, Development and Engineering Command Natick Soldier Research, Development and Engineering Center (RDNS-CFF) for review.

NOTE: For use with A-A-20353 Chicken Chunks. Type VI chicken chunks may be packaged in commercial gusseted pouches.

D-3. PACKING: It shall be the responsibility of the Assembly Contractor to ensure that CFM components shipped to a unit packager and/or to the assembly point is packed to assure product compliance with applicable end-item requirements.

D-4. UNITIZATION: It shall be the responsibility of the Assembly Contractor to ensure that CFM Product shipped to a unit packager and/or to the assembly point is unitized or otherwise shipped to assure product compliance with applicable end-item requirements and to be in accordance with applicable Federal and/or State regulatory requirements.

D-5. MARKING: Marking of CFM product shipping containers shipped to a unit packager and/or to the assembly point shall be in accordance with applicable Federal and/or State requirements, provided that a production lot number that indicates the production date of the contents is included. The lot number on the shipping container may be “in the clear”, a Julian date code, or such other code as must be explained in a letter to the Contracting Officer and to the applicable inspection personnel.

**SUB-PART B: PACKAGING, LABELING, PACKING, MARKING
REQUIREMENTS FOR CFM COMPONENTS NOT PACKAGED IN
ACCORDANCE WITH MIL-PRF-44073 “PACKAGING OF FOOD IN
FLEXIBLE POUCHES”.**

D-1. PACKAGING:

A. Individual component packaging requirements are found in the component’s technical specifications document:

1. For Performance-Based Contract Requirement and Product Contract Requirement (PCR) components: Packaging requirements are specified in Section D-1 of the PCR.
2. For Commercial Item Description (CID) components: Packaging requirements are specified in Section D-1 of the CID’s Packaging Requirements and Quality Assurance Provisions (PKG&QAP).
3. For MIL-DTL components: Packaging requirements are specified in Section D-1 of the MIL-DTL’s PKG&QAP.
4. For Ration Supplement, Flameless Ration Heater: Packaging requirements are specified in Section D-1 of the specification’s PKG&QAP .
5. For Sodium Chloride Monograph components: Packaging requirements are specified in Section D-1 of the monograph’s PKG&QAP.
6. For the Spoon, Picnic, Plastic: Each spoon shall be unit packaged separately in a snug-fitting conforming polyethylene wrapper/bag/envelope. The polyethylene film shall be 0.001 inch thick conforming to Type I, Class 2, Grades A, B, or C, Finish 1 of A-A-3174. Closure and forming seams shall be heat sealed in such a manner that after elimination of excessive entrapped air, the packaging material will closely conform to the spoon being unit packaged.

D-2. LABELING:

C. In addition to individual component labeling requirements, all components shall be labeled in accordance with all applicable FDA and USDA requirements, including “NUTRITION FACTS” labeling in accordance with the Nutrition Labeling and Education Act (NLEA).

D. When the unit packager/assembler is overwrapping commercially wrapped and labeled product that meets the requirements of the NLEA, it will only be necessary to apply product name and date-of-pack to the overwrapped pouch.

E. Individual component labeling requirements are found in the component's prime documents:

1. For PCR components: Labeling requirements are specified in Section D-2 of the PCR.
2. For CID components: Labeling requirements are specified in Section D-2 of the CID's PKG&QAP.
3. For MIL-DTL components: Labeling requirements are specified in Section D-2 of the MIL-DTL's PKG&QAP.
4. For Ration Supplement, Flameless Ration Heater: Packaging requirements are specified in Section D-1 of the specification's PKG&QAP .
5. For Sodium Chloride Monograph components: Packaging requirements are specified in Section D-1 of the monograph's PKG&QAP.
6. For the Spoon, Picnic, Plastic: The manufacturer's trade name/trademark, readily identifiable with the manufacturer, shall be molded on the underside of the spoon or alternatively, printed on each spoon packet.

D-3. PACKING: It shall be the responsibility of the Assembly Contractor to ensure that CFM components shipped to a unit packager and/or to the assembly point is packed to assure product compliance with applicable end-item requirements.

D-4. UNITIZATION: It shall be the responsibility of the Assembly Contractor to ensure that CFM product shipped to a unit packager and/or to the assembly point is unitized or otherwise shipped to assure product compliance with applicable end-item requirements and to be in accordance with applicable Federal and/or State regulatory requirements.

D-5. MARKING:

A. The marking of CFM component shipping containers shipped to a unit packager and/or to the assembly point shall be in accordance with paragraph 5.1.6.2 of ASTM D3591 "Standard Practice for Commercial Packaging", provided that a production lot number that indicates the production date of the contents is included.

B. The marking of CFM product shipping containers shipped to a unit packager and/or to the assembly point shall be in accordance with applicable Federal and/or State requirements, provided that a lot number that indicates the production date of the contents is included.

C. The lot number on the shipping container may be "in the clear", a Julian date code, or such other code as must be explained in a letter to the Contracting Officer and to the applicable inspection personnel.

PART III –Miscellaneous

D-1 SHIPPING AND COMINGLING OF LOTS:

A. Formation of Lots: In order to facilitate lot traceability at the assembler's plant, the following is required:

1. Lots shall be shipped on a first produced (and accepted) first out basis. No product shall be older than three months at time of shipments, except when a product at the manufacturer's plant is pending disposition instructions and/or action (request for waiver, deviation, rework, reinspection, etc) and/or as authorized by the Contracting Officer.

2. Each shipping case shall normally contain only one manufacturer's lot. If a partial shipping case remains at the end of the production day, dunnage shall be used to fill the remainder of the case and the outside of the case shall be marked indicating the number of pouches/items within. See the following sub-paragraph entitled "Mixed Code Lots" for exception.

3. Each unit load shall contain only one production lot, as a rule. However, when a partial unit load remains at the end of a production day, the contractor is permitted to complete the unit load with another lot's material. In this instance a unit load may consist of two lots to facilitate shipment.

4. When two lots are incorporated on one pallet, the lots shall be distinctly separated by the use of paper or other material suitable for this purpose. When this occurs, the contractor shall affix a unit load placard on two adjacent sides of the unit load, identifying each lot number on the load and the quantities of pouches/items within each lot.

5. Assemblers shall assemble one (1) component lot at a time, i. e., one (1) component lot shall be used at each assembly line until it becomes necessary to place another lot of the same component on the assembly line to maintain assembly flow.

6. Lot numbers and corresponding lot quantities shall be included on the shipping/receiving documentation, e.g. DD Form 250, WAWF Receiving Report. Thermostabilized items, water activity stabilized items and cheese spread shall also cite subcodes delivered.

B. Mixed Code Lots: In addition to the above, the following requirements shall apply to the shipment of "mixed code lots":

1. A "mixed code lot" is defined as a lot consisting of small quantities of components representing different lots. These components usually accumulate as the result of sampling for the purposes of incubation, USDA standby samples or for similar reasons.

2. Unit loads containing mixed code lots shall be identified by the use of unit load placards. The placards shall list all the lots and the quantities of pouches/items within each lot

contained on the pallet. The placards shall be affixed on two adjacent sides of the unit load. Lot numbers and corresponding lot quantities shall also be included on the corresponding shipping/receiving documentation, e.g. DD Form 250, WAWF Receiving Report.

3. Mixed code lots shall be periodically shipped to the assembler(s). Mixed code lots shall be shipped only when an entire unit load is completed of that single item or on a quarterly basis, whichever occurs first. Mixed code lot shipments may be less than a full unit load.

4. When the quantity of components from one production lot is less than that needed to fill a normal shipping container, product from more than one production lot may be used to fill a case. However, product from one production lot may not be used to partially fill more than one case. When a shipping case contains product from more than one production lot, a placard will be placed on the outside of the case that indicates the lot number and quantity for each lot.

C. Split Lots: Origin manufacturers have the choice of shipping an entire shift's production equaling one lot as follows:

1. The entire lot shall be shipped to only one assembler and received in accordance with the applicable Quality Systems Plan.

2. Whole lots may be split in two (2) portions for separate shipments.

(1) Split lot shipments may be shipped to more than one (1) assembler but not more than two (2) assemblers.

(2) No lot shall be split into more than two (2) portions and splitting individual subcodes is prohibited.

(3) Prior to splitting the lot for separate shipments, the lot shall be contractor and USDA inspected as one homogeneous lot, when origin USDA inspection is required.

(4) The origin manufacturer assumes full liability for both portions of a split lot shipment. Therefore, in the event of a defect determination, recall, product investigations, and/or other negative findings, both portions of the lot will be representative of the entire homogeneous lot and any action taken with regard to one portion will be taken with regard to the other portion, regardless of where the product was assembled.

(5) Associated lot shipping documentation will reflect split lot status, original lot quantities, and receipt inspection results.

(6) Both portions of all split lots will be stored in approved facilities only.

ASSEMBLY

SECTION E INSPECTION AND ACCEPTANCE

NOTE: FAR Clauses 52.246-2 and 52.246-11 are applicable to this solicitation/contract and shall be cited to properly enforce the Higher Level Contract Quality requirements.

NOTE: Those quality assurance provisions (product, packaging, packing, and regulatory requirements, procedures, and inspections) specified in Section E of this solicitation, and, as amended by this solicitation, those quality assurance provisions specified in the applicable Assembly Contractor Requirements (ACR) and in the Contractor Furnished Material (CFM) component technical requirements specifications are required for contractor, United States Army Public Health Command (PHC), and United States Department of Agriculture, Agricultural Marketing Service, Fruit and Vegetable Program, Specialty Crops Inspection Division (USDA-AMS) inspection.

Saving and reserving all rights under the general inspection requirements of Clause 246-9023, the procedures for inspection and acceptance will be as follows:

E-1. Quality Assurance Requirements for Ration Component Production Plants and Ration Sub Assembly and Assembly Plants.

E-1-A. Higher Level Quality Requirements - Documented Quality Systems Plan (QSP)

The contractor shall model the documented QSP after ISO/ANSI/ASQ 9001, a system that meets other recognized industry quality standards, or a process control system that is equivalent to or better than ISO/ANSI/ASQ 9001. The contractor shall identify the quality standard used to model their QSP. If the contractor proposes an alternate (i.e., non-standard) process control system, this shall be clearly stated in the QSP. Some contractors may have third party certification of their quality system, which the private sector devised to administer the ISO series standards. However, certification by any third party, to include Government certifications, is not required. Whether or not contractors want to use third party certification is completely optional on their part. Although certification information may be provided as documentation and evidence to support the system proposed by the contractor, third party certification/registration documentation is not a substitute for government quality assurance with regard to components used in the operational ration programs. Regardless of the standard or non-standard document used to model the documented QSP, the documented QSP shall address, at a minimum, the following elements (within each section of the element the contractor shall provide the information and address the questions, as applicable, listed in Operational Rations Quality Systems Audit Workbook I: Documented QSP Evaluation Guideline:

QSP General Outline

- I.** MANAGEMENT RESPONSIBILITY AND QUALITY SYSTEM DESIGN
- II.** TRAINING
- III.** DOCUMENT AND DATA CONTROL AND CONTROL OF QUALITY RECORDS
- IV.** CONTROL OF INSPECTION, MEASURING, AND TEST EQUIPMENT
(IAW NCSL Z540.3 or ISO 10012)

- V. CONTROL AND PROTECTION OF PRODUCT
 - 1. Handling, Storage, Packaging, Preservation, and Delivery Program
 - 2. Product Identification and Traceability Program
 - 3. Inspection and Test Status and Records
 - 4. Control of Nonconforming Material/Product
- VI. CONTRACT REVIEW, PURCHASING AND CONTROL OF CUSTOMER-SUPPLIED PRODUCT (Government-furnished material)
- VII. RECEIPT INSPECTION AND TESTING
- VIII. IN-PROCESS AND PROCESS INSPECTION AND TESTING:
 - 1. Manufacturing Process Control Techniques (MPC QAP)
 - 2. Statistical Process Control Techniques (SPC QAP)
- IX. REGULATORY CONTROLS
 - 1. General Regulatory Requirements (as applicable to the plant USDA-FSIS, FDA, GMP, HACCP, SSOP, USDA-Dairy, etc.).
 - 2. Integrated Pest Management and Sanitation Programs
- X. END ITEM INSPECTION AND TESTING (IAW product/material specifications/documents and ANSI/ASQ Z1.4)
- XI. INTERNAL AUDITS
- XII. CORRECTIVE AND PREVENTIVE ACTION PROGRAM
- XIII. IMPROVEMENT

NOTE: Integrated Pest Management Plan (IPM) and Contractor Sanitation Program: The IPM Plan is not required to be submitted but the questions concerning the facility's IPM listed in Section IX Regulatory Controls, Area 2 of the Quality Systems Audit Workbook I must be addressed within the QSP. Both the IPM Plan and Sanitation Program (Contractor Sanitation Program- Operational Rations, November 2015) must be in place at time of award and shall be made available for onsite review.

The documented QSP will be evaluated by the Operational Rations Quality System Audit Team (composed of DLA Troop Support-FTSB and USDA-AMS, Quality Systems Auditors), USDA-AMS Operational Rations Program Coordinator, and the Government In-Plant Quality Assurance Representatives (QAR) assigned to perform Government QA functions at contractors' facilities. Government personnel will use the Operational Rations Quality Systems Audit Workbook I: Documented QSP Evaluation Guideline (in conjunction with the standard or other document identified in the contractor's QSP) as the basic framework against which they will evaluate QSPs. Workbook I was developed to standardize the evaluations of documented QSPs (developed using ISO/ANSI/ASQ 9001, other recognized industry quality standards, or a non-standard contractor's specific process control system) submitted by contractors for the purpose of demonstrating their capability to meet the higher-level contract quality requirements using any of the aforementioned documents and for the contracting officer to assess a contractor's capability to meet the contract requirements.

NOTE: Although Government inspection personnel (USDA-AMS) are required to evaluate the contractors' QSPs, the QSP rating will be determined and assigned by DLA Troop Support-FTSB's Quality Systems Auditors.

Offerors/Contractors can request a copy of Workbook I by contacting the applicable contracting officer or DLA Troop Support-FTSB. Workbook I is also available online in PDF format at the following website: <http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx>

DLA Troop Support will recognize a contractor's quality system whenever it meets the contract requirements, whether the quality system is modeled on military, commercial, national, or international quality systems standards. The design and implementation of a QSP will be influenced by the varying needs of a company, its particular goals and objectives, the products produced, and the processes and specific practices employed in the operation. The intent of the requirement is for contractors to improve process capability and process control which, when used effectively, can result in a prevention-oriented approach rather than a detection approach that will improve product quality and lower cost through the use of a single quality system in any contractor facility.

A documented QSP is required when a contract references or requires a contractor to perform under the higher-level contract quality requirements. Contractors are responsible for complying with the quality system requirements set forth in their documented QSP in addition to all detailed requirements cited in the contract and for furnishing products that meet all requirements of the contract. Contractors are required to establish, document, submit for Government review, and maintain a quality system as a means of ensuring that product conforms to the requirements of the contract. The documented QSP shall include the quality system procedures and outline the structure of the documentation used in the quality system. When the requirements of the Statistical Process Control Quality Assurances Provision (SPC QAP) and/or the Manufacturing Process Controls and In-Process Inspection Quality Assurances Provision (MPC QAP) are applicable, these requirements must be addressed under the In-Process and Process Inspection and Testing section of the documented QSP. Redundant areas/requirements (cited in the MPC or the SPC QAPs) need only be addressed once in the QSP. The calibration of measuring and testing equipment shall, as a minimum, adhere to the requirements of NCSL Z540.3 or ISO 10012.

The Higher Level Contract Quality Requirements, Manufacturing Process Controls (MPC), and Statistical Process Controls Quality Assurance Provision (SPC QAP) apply to all CFM and GFM food components and Sub Assembly and Assembly Operations, except as indicated below:

The Higher Level Contract Quality Requirements, Manufacturing Process Controls (MPC), and Statistical Process Controls Quality Assurance Provision (SPC QAP) apply to all CFM and GFM food components and Sub Assembly and Assembly Operations, except as indicated below:

A. The following items are exempt from the Higher Level Contract Quality Requirements, MPC QAP and the SPC QAP (No QSP required): 1. Accessory package components 2. Condiments (even if packaged in laminated barrier pouches): hot sauce; ketchup; mayonnaise; mustard; etc. 3. Bulk packed items: beef snacks; ranger bar; First Strike bars; osmotic fruit; cookies (CID A-A-20295, PCR-C-031); almonds, roasted; cashews, roasted; peanuts, roasted; snacks (CID A-A-20195); commercial sandwich crackers/cookies; and bulk packed items procured using the commercial components solicitation (e.g., candies).

NOTE: Bulk packed, as used in this paragraph, means packing prior to finished product packaging. However, note that this does not prohibit the prime contractor on their own accord from requiring a QSP from their subcontractors for all products.

B. A QSP is required but SPC techniques are optional for the following items: Beverage bases, cheese spreads, cookies (CID A-A -20295, PCR-C-031), dairy component powders (cocoa beverages, dairy shakes, flavored coffees, non-dairy creamer, etc.), nut raisin mixes, peanut butter, peanut spread,

jellies/jams/preserves, and bulked-packed items that are individually packaged by an assembler/packer in military packaging (laminated barrier pouches). However, note that this does not prohibit the prime contractor from requiring SPC techniques from their subcontractors for all products on their own accord.

NOTE: TO THE EXTENT OF ANY INCONSISTENCY BETWEEN THE CONTRACT OR ITS GENERAL PROVISIONS AND A CONTRACTOR'S QSP AND/OR IMPLEMENTED QUALITY SYSTEM, THE CONTRACT AND THE GENERAL PROVISIONS SHALL CONTROL.

The QSP shall be submitted to DLA Troop Support-FTSB, through the Contracting Officer, for review no later than at time of bid submittal to determine if the QSP meets the acquisition needs. The QSP shall be DOCUMENTED, DATED, AND SIGNED BY A RESPONSIBLE COMPANY OFFICIAL and WILL BE DISTRIBUTED UNDER COMPANY LETTERHEAD TO THE ADDRESSEES BELOW:

A. ONE COPY SHALL BE MAILED (AT TIME OF BID SUBMITTAL) TO:

DLA Troop Support

ATTN: FTSB (Quality Systems Audit Team or Applicable Contracting Officer)
700 ROBBINS AVE., BLDG 6
PHILADELPHIA, PA 19111-5092

NOTE: It is important for BLDG. 6 to be included in the address above for timely delivery, especially for express deliveries.

B. AFTER CONTRACT AWARD ONE COPY SHALL BE MAILED PRIOR TO THE INITIATION OF PRODUCTION TO EACH OF THE FOLLOWING USDA-AMS OFFICES as applicable:

1. **USDA-AMS OFFICES:** When USDA-AMS is responsible for performing Government source inspection at a ration facility one copy shall be mailed to each of the following USDA-AMS offices:

a. **CHIEF, CONTRACT SERVICES BRANCH**

USDA, AMS, SCP, SCI DIVISION
ATTN: Richard Boyd
1400 INDEPENDENCE AVE. SW
ROOM 0726, SOUTH BLDG.
WASHINGTON, DC 20250-0247

b. **USDA-AMS INSPECTION AREA OFFICE:** The contractor/subcontractor shall contact USDA-Contract Services Branch (202-720-5021) for the applicable area office address (College Park, GA; Covina, CA; Hunt Valley, MD; North Brunswick, NJ; South Bend, IN; Richmond, VA; Oshkosh, WI; Stockton, CA; Winter Haven, FL; Yakima, WA, etc.).

2. USDA-AMS IN-PLANT INSPECTOR/GQAR: When a Government (USDA-AMS) inspector is assigned to perform Government source inspection at a contractor/subcontractor facility, one copy shall be **personally delivered to the Government inspector prior to the initiation of production.**

3. U.S. ARMY VETERINARY INSPECTION PERSONEL: When Army Veterinary Inspectors (AVIs) are responsible for performing Government source inspection at operational rations assembly plants, one copy shall be personally delivered to the resident AVI/GQAR prior to the initiation of production/assembly. The contractor/subcontractor shall contact USAPHC for questions regarding AVI's inspection services.

**ARMY PUBLIC HEALTH CENTER
VETERINARY SERVICES PORTFOLIO**
Attn: MCHB-IP-VF
CHIEF, OPERATIONAL RATIONS
5158 BLACKHAWK ROAD
BLDG. E5158
ABERDEEN PROVING GROUND, MD 21010-5403

4. DEFENSE CONTRACT MANAGEMENT AGENCY (DCMA): When DCMA inspectors are responsible for performing Government source inspection at the flameless ration heater (FRH) manufacturing facility, one copy shall be personally delivered to the resident Government QAR prior to the initiation of production. The contractor/subcontractor shall contact the applicable DCMA office for inspection services.

a. DCMA GARDEN CITY
605 STEWART AVE.
GARDEN CITY, NY 11530-4761

b. DCMA DAYTON
1507 WILMINGTON PIKE
DAYTON, OH 45444-5300

Aforementioned Government inspection personnel and In-Plant Government QARs shall fax, e-mail, or mail (via priority mail) their evaluations and comments regarding the contractor's QSPs and/or QSP's revisions, **within 20 calendar days** from the day of receipt of the QSP/revision.

Failure to submit comments within the suspense date may result in DLA Troop Support-FTSB Quality Systems Auditors not including the applicable inspection agency's comments in Government QSP joint evaluations. In-Plant Government QARs are also required to report quality systems noncompliance within **one working day** using the Corrective Action Request (CAR) Form. QSP evaluations and CARs shall be faxed to the DLA Troop Support -FTSB Operational Rations Quality Systems Audit Team at

fax number (215) 737-0379, the current DLA Troop Support -FTSB's personnel E-mail addresses or mailed to the following address **(the preferred and most expeditious method is via E-mail or fax):**

DLA Troop Support
ATTN: FTSB (Quality Systems Audit Team)
700 ROBBINS AVENUE, BLDG. 6
PHILADELPHIA, PA 19111-5092

During the Acquisition Phase: During the acquisition phase (prior to contract award), the documented QSP will only be considered either sufficient or insufficient for production (no unacceptable/acceptable rating will be assigned). If a plan as presented is determined to be insufficient for production (which would occur if it does not address the aforementioned minimum elements and include documents/procedures indicated in Workbook I as applicable, or if it is determine that the plan as presented will result in an increase in the consumer's risk, production of nonconforming products or does not meet specification requirements/acquisition needs), the contracting officer, at his/her discretion, may provide the contractor with DLA Troop Support-FTSB's QSP evaluation comments as to the cause(s) of why the plan was considered insufficient for production and with the opportunity to resubmit a revised QSP. **If a contractor has previously submitted a QSP and the rating was, at a minimum, marginally acceptable, the contractor may reference this QSP by date and only changes (if deemed necessary) need to be submitted at time of bid submittal for this or for future contracts.**

After the Acquisition Phase: After the Acquisition Phase (after contract award), if the contractor submitted a new QSP, DLA Troop Support-FTSB will assign a rating of acceptable, marginally acceptable or unacceptable (to a QSP rated sufficient for production during the acquisition phase) within 60 days of contract award. **If a contractor's QSP is rated unacceptable after contract award, the QSP must be revised to receive, at a minimum, a marginally acceptable rating within 90 days of contract award.** The contractor can submit changes to improve the plan throughout the life of the contract.

DLA Troop Support-FTSB Quality Systems Auditors evaluate, assign QSP ratings, and approve or disapprove changes to the QSP. **QSP procedures or changes to a QSP that may involve a change to a specific contractual requirement (cited in the contract TDP/ items specification/CID) must be coordinated and approved by the Contracting Officer.** To expedite the evaluation process, all QSP changes **(that do not involve a specific contractual change) shall be simultaneously** provided to the In-Plant GQAR and a copy faxed, E-mailed, or mailed to DLA Troop Support-FTSB and each applicable office for their review. The GQAR's in-plant evaluation will be considered sufficient for production, unless specifically rejected by DLA Troop Support-FTSB after the contractor submits the change to DLA Troop Support. The contractor's documented QSP is considered a living document and continuous improvements are highly encouraged.

Implementation, compliance, effectiveness, and continuous improvement of the QSP (implemented quality system) and the Food Defense Plan will be monitored by on-site quality systems compliance audits conducted throughout the life of the contract by the Operational Rations Quality Systems Audit Team and evaluations/internal audits conducted by the In-Plant Government QARs.

If a contractor fails to submit an acceptable QSP or copies of their QSP's revisions to the Government for review or does not comply with other requirements of the contract, the Government may decline to perform verification acceptance inspection at that time and or refuse to accept any product produced in accordance with FAR 46.102 and 46.407. Additionally, the Government may also withdraw the acceptance of a QSP during the contract period if it is determined that the contractor has not implemented, complied with the documented QSP, or the implemented quality system is not sufficient to meet minimum contractual requirements.

NOTE: DLA Troop Support-FTSB and/or the Government QARs shall immediately notify the Contracting Officer of **ALL** noncompliance to specific contractual requirements. DLA Troop Support-FTSB will notify and/or obtain contracting officer's support/involvement when a contractor fails to comply with the approved documented QSP requirements or fails to respond to quality systems deficiencies noted during an on-site compliance audit or evaluations/audits conducted by In-Plant Government QARs.

The offeror/contractor agrees to maintain current, and make available, all documents and/or records required by the documented QSP for Government review at any time throughout the life of the contract and for three years after final delivery on the contract (to include any documents/records maintained by any subcontractor used by the prime contractor to fulfill a Government contract).

NOTE: The procedures of how a contractor intends to comply with the requirements of the MPC QAP or the SPC QAP, as applicable, shall be covered in the In-Process and Process Inspection and Testing Section of the contractors' documented QSP/Quality Manual. If the contractor uses a different/numbering system than the Section/Element number cited in the TDP, the contractor's should cross-reference each applicable section of their QSP.

FOOD DEFENSE PLAN (FDP). The DLA Troop Support Subsistence Directorate provides world-wide subsistence logistics support during peacetime as well as during regional conflicts, contingency operations, national emergencies, and natural disasters. At any time, the United States Government, its personnel, resources and interests may be the target of enemy aggression to include espionage, sabotage, or terrorism. This increased risk requires DLA Troop Support to ensure steps are taken to prevent the deliberate tampering and contamination of Operational Rations.

As the holder of a contract with the Department of Defense, the Contractor should be aware of the vital role they play in supporting our customers. It is incumbent upon the Contractor to take all necessary actions to secure product produced for and delivered to all DLA customers. The Government strongly recommends that all firms review their food defense plans relating to plant security and security of the products produced in light of the heightened threat of terrorism, and secure product from intentional adulteration/contamination.

The Contractor shall comply with its Food Defense Plan (as submitted as the Food Defense portion under this contract solicitation) to prevent product tampering and contamination, and assure overall plant security and food safety. The Contractor must take all practicable measures that are within its control to deter or prevent tampering or contamination of supplies provided for under this contract solicitation. The

Contractor must immediately inform DLA Troop Support Subsistence of any attempt or suspected attempt by any party or parties, known or unknown, to tamper with or contaminate subsistence supplies.

Food Defense Plans will be evaluated to ensure compliance with the DLA Troop Support Food Defense Checklist. A copy of the Checklist is available online at

<http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx> or through the applicable Contracting Officer or the DLA Troop Support Quality Audits & Food Defense Branch at 215-737-8656.

NOTE: The Food Defense Plan may be modified at any point prior to contract start-up/implementation or during the period of performance. Whenever a change is made to the Food Defense Plan, it shall be submitted to the Contracting Officer for evaluation.

DLA Troop Support-FTSB will conduct Food Defense Audits/reviews during Compliance Audits and/or other visits to verify the implementation, compliance and effectiveness of the firm's Food Defense Plan. If a Food Defense Plan (including Food Defense Plans Covered in QSP) was previously submitted to DLA Troop Support, identify the office, name of the person the plan was submitted to, date of submittal, and rating assigned.

NOTE: If more than one facility under direct control of the contractor will be used to produce and/or store product, a separate Food Defense Plan for each facility must be submitted. A completed DLA Troop Support Food Defense Checklist, by itself, is not a Food Defense Plan but may be included as part of the Plan.

E-1-B. The following is applicable to this contract:

QUALITY ASSURANCE PROVISION MANUFACTURING PROCESS CONTROLS AND IN-PROCESS INSPECTIONS

This clause supplements process control guidance of the International Organization for Standardization (ISO)/American National Standards Institute (ANSI)/American Society for Quality (ASQ) 9000 Series standard, or equivalent standards with process controls, and is applicable when the contract requires a higher-level quality system in accordance with Federal Acquisition Regulation (FAR) 46.202-4. The Contractor shall:

(a) Ensure that all manufacturing operations are carried out under controlled conditions which will adequately assure that product characteristics and criteria specified by contract are achieved and maintained in the produced item. Controlled conditions include documented process control and in-process inspection procedures, adequate methods for identifying and handling material, and adequate production equipment and working environments.

(b) As a minimum, perform inspections, examinations and/or tests, during manufacturing on those product characteristics which cannot be inspected at a later stage, and ensure that process controls are implemented and effective.

(1) Manufacturing processes shall be evaluated to determine which process characteristics have an effect on the quality of the produced item. These manufacturing processes shall be identified and requirements for their control shall be specified in written process control procedures.

(2) When in-process inspection of material is not practical, control by monitoring processing methods, equipment, and personnel shall be provided. Both in-process inspection and process monitoring shall be provided when control is inadequate without both.

(3) Prompt corrective action shall be taken when noncompliance or out of control conditions occur.

(c) Clearly identify each in-process inspection and process control point at appropriate locations in the manufacturing operation.

(d) Prepare clear, complete, and current written procedures for:

(1) Each in-process inspection. Identify: the type, frequency, and amount (sampling plan/100 percent) of inspection; product characteristics to be inspected; criteria for approving and rejecting product; the record for documenting inspection results; and the method for identifying the inspection status of approved and rejected product.

(2) Each process control. Identify the criteria, frequency, and records used verifying control of the process.

(3) Assessing the adequacy of in-process inspections and process controls. The Contractor's quality organization shall assure by periodic surveillance that procedures are followed and are effective. Records of this surveillance will be maintained.

(e) Make the documented inspection system available for review by the Government Quality Assurance Representative prior to the initiation of production and throughout the life of the contract. The Government is under no obligation to perform verification inspection or to accept product produced under the contract until the Government has received acceptable written procedures, and has been afforded the opportunity to evaluate the inspection system. Acceptance of the Contractor's inspection system by the Government does not bind the Government to accept any nonconforming supplies that may be produced by the Contractor. Periodic evaluations of the system may be made by the Government throughout the life of the contract.

E-1-C. The following Statistical Process Control Quality Assurance Provision (SPC QAP) applies to this contract:

**QUALITY ASSURANCE PROVISION
STATISTICAL PROCESS CONTROLS
DLA Troop Support FT-12-001**

The requirements of this QAP shall be addressed in the Documented Quality System Plan (QSP) when applicable. Redundant areas/requirements cited in this QAP or the MPC Clause need only be addressed once in the In-Process and Process Inspection and Testing Section and/or other applicable section of the contractors' documented QSP/Quality Manual. The characteristics requiring control will be those characteristics providing the best assurance of product conformance to end item contractual requirements. Therefore, the techniques (SPC/MPC) selected to control the processes shall be those that can best and most effectively/efficiently control the characteristics identified and provide the best assurance that the system implemented will consistently produce product conforming to contractual requirements. If the contractor uses a different/numbering system than the Section/Element number cited in the TDP, the contractor's QSP should cross-reference each applicable section/element of their QSP.

I. General Requirements:

A. The offeror/contractor agrees to manage and improve process performance through the evaluation of the quality of the product at the prime contractor and, when required by contract, at subcontractor facilities, using SPC techniques or MPC techniques.

B. Minimum criteria are established in the American Society of Quality (ASQ) standards B.1, B.2 and B.3 (formerly the ANSI standards Z1.1, Z1.2, and Z1.3). Alternate SPC techniques such as short run methods are also allowed where applicable.

C. This QAP applies to all work performed at the prime contractor and, when required by contract, at subcontractor facilities. However, in those instances where it is not required of the subcontractor by contract, it does not prohibit the prime contractor from requiring it from their subcontractor of their own accord.

D. The implementation of SPC techniques (or alternate MPC techniques) and procedures shall be prepared in accordance with this provision and included in the documented QSP. Each offeror shall address the requirements of this QAP in their documented QSP (Section/Element VIII) and included with the proposal, when applicable. Failure to do so may result in rejection of the offer.

E. Exclusion of documented QSP submission: If a contractor has previously submitted a QSP and the rating was, at a minimum, marginally acceptable, the contractor may reference their QSP by date and only changes (if deemed necessary) need to be submitted at time of bid submittal for this or for future contracts.

1. Offerors who consider themselves eligible for exclusion of the documented QSP at bid submittal, based on satisfactory utilization of a previously approved QSP for identical or similar supplies, are to submit a written request for exclusion (RFE) to the Procuring Contracting Officer (PCO).

The offeror shall identify in the RFE the contract number(s) under which the supplies were previously furnished by them and accepted by the Government; and the applicable item nomenclature and National Stock Number(s); and the date of the documented QSP. QSP changes/revisions/updates, if applicable, need to be submitted along with the RFE at time of proposal. NOTE: Changes/revisions/updates must be well identified, dated and organized to facilitate posting to the QSP.

2. If techniques selected (MPC, SPC, or combination of both) were determined to be adequate (in a QSP previously submitted and approved by DLA Troop Support - FTSB), the offeror shall certify that these techniques are still adequate to effectively control the processes and that the system implemented is still capable of consistently producing conforming product.

II. SPECIFIC REQUIREMENTS:

A. The offeror shall identify the characteristics to be controlled using SPC techniques (or the alternate MPC techniques). Application of SPC techniques shall be considered for all characteristics identified by performing pareto analysis on the defects from previous production, or projection of potential defects in future production, to discern the vital few and repetitive type failures from the trivial many. Additionally, offerors are encouraged to calculate quality costs to assist in determining what

characteristics or processes to control statistically (QSP Element XIII). These defects, and all other characteristics identified by the offeror from process capability studies on current production, shall be subject to the application of SPC techniques or other analyses. The characteristics requiring control will be those characteristics providing the best assurance of product conformance to end item contractual requirements. In addition to the characteristics identified by the offeror, the following characteristics will be controlled using SPC techniques, MPC techniques, or other alternate controls methods deemed appropriate and effective in controlling the processes. Alternate controls to SPC and MPC must be clearly identified and explained in detail in the In-Process and Process Inspection and Testing Section of the contractors' documented QSP/Quality Manual. **The description of SPC or MPC techniques shall be sufficient to allow a reviewer unfamiliar with the item or the contractor's production operation to properly assess the applicability of the control measures/techniques being proposed.**

1. For Thermostabilized, High-Pressure Processed, or Hot Filled Items: (1) Laminated barrier pouch/tray integrity (absence of tears, cuts, holes, delamination, abrasions, leakage, and non-fusion bonded seals, etc.), (2) Polymeric tray integrity (absence of tears, cuts, holes, delamination, abrasions, leakage, and non-fusion bonded seals, etc.) and (3) All thermostabilized items - the critical control points of the process schedule as determined by the contractor's Processing Authority and critical control points of the retort process schedule. The critical control points, other control points, and the contractor's Processing Authority shall be clearly identified in the Regulatory Controls Section and/or the In-Process and Process Inspection and Testing Section of the contractor's QSP, as applicable.

2. For Water Activity Stabilized Items: (1) Laminated barrier pouch/tray integrity (absence of tears, cuts, holes, delamination, abrasions, leakage, and non-fusion bonded seals, etc.), (2) Polymeric tray integrity (absence of tears, cuts, holes, delamination, abrasions, leakage, and non-fusion bonded seals, etc.) and (3) All water activity-stabilized items - control of water activity, and oxygen scavenger placement. The control points shall be clearly identified in the In-Process and Process Inspection and Testing Section of the contractor's QSP.

3. Flameless Ration Heater (FRH): The FRH chemical formulation and those processes that affect the formulation, performance, and the packaging (including over-wrapped FRH) of the FRH. The control points shall be clearly identified in the In-Process and Process Inspection and Testing Section of the contractor's QSP.

4. Assembly Operations: The use of SPC and/or MPC techniques is required. However, the Assembler shall determine application of SPC/MPC techniques for the assembly and sub assembly processes by performing a Pareto analysis. NOTE: The assembler shall identify the type of controls (MPC, SPC, or both) being applied for each process identified. The control points for the assembly and subassembly processes shall be clearly identified in the In-Process and Process Inspection and Testing Section of the Assembler's QSP.

5. For Other Items SPC techniques are optional.

B. The SPC and MPC techniques (or combination of both) will be evaluated as part of the documented QSP for the firm or firms eligible for award.

C. A documented QSP determined to be Insufficient for Production during the acquisition phase or seriously deficient may preclude the offeror from receiving an award. However, the PCO has the final authority and he/she may permit an offeror to revise a deficient QSP provided it is reasonably capable of being made sufficient for production or acceptable. Failure to negotiate a sufficient for production and/or acceptable QSP, as applicable, may also preclude the offeror from receiving an award.

D. **SPC Program:** The information requested in Workbook I, In-Process and Process Inspection and Testing Section (Area 1 and 2 as applicable) shall be covered in the applicable section of the contractor's QSP. For characteristics as designated by the Offeror and/or the Government to be controlled using SPC or MPC techniques as indicated above, the QSP, as a minimum, must address the following: The QSP must identify and define each in-process control point (IPCP) and/or process control point (PCP) in sequence in relation to the production, subassembly/assembly flow or chain of events (from weighing/mixing/batching of ingredients/materials, packaging, to final product); clearly identify the control technique selected (SPC/MPC or combination) to control each process identified; the number of samples selected, location of sample selection, and frequency of sampling at each IPCP and PCP identified; include procedures that describe the production/assembly operations and how the contractor ensures these are carried out under control conditions to assure that product characteristics and criteria specified in the contract are achieved and maintained in the finished product (end item); and identify documents that are the basis for the SPC/MPC program including internal audits, textbooks, standards, and/ or Government documents.

E. **Structure (policy/scope):** The QSP shall identify the contractor's policy for applying SPC and the contractor's goals and commitments regarding SPC and continuous process improvement. The contractor may also discuss alternatives to SPC techniques (MPC techniques or other control technique) that have successfully reduced/prevented the production of defects. Information must be covered in the Management Responsibility and Quality System Design Section I of the QSP or other applicable section of the contractor's QSP.

F. **SPC Training:** Information must be covered in the Training Section of the QSP or other applicable section of the contractor's QSP.

G. **Vendor/Subcontractor/Purchase Controls:** Information must be covered in the Contract Review, Purchasing, and Customer-Supplied Product of the QSP or other applicable section of the contractor's QSP.

H. **Manufacturing Controls: (IAW Quality Assurance Provision, Manufacturing Process Controls and In-Process Inspection as applicable).** The information requested in Workbook I, In-Process and Process Inspection and Testing Section (Area 1 and 2 as applicable) should be covered in the applicable section of the contractor's QSP (for characteristics as designated by the Offeror and/or the Government to be controlled using SPC or MPC techniques as indicated above): The QSP must clearly identify the control technique selected (SPC/MPC or combination) to control each process identified. Must include procedures that describe the production/assembly operations and how the contractor ensures these are carried out under control conditions to assure that product characteristics and criteria specified in the contract are achieved and maintained in the finished product (end item).

I. Statistical Process Control Procedures (General): The information requested in Workbook I, In-Process and Process Inspection and Testing Section (Area 1 and 2 as applicable) should be covered in the applicable section of the contractor's QSP (for characteristics as designated by the Offeror and/or the Government to be controlled using SPC or MPC techniques as indicated above):

1. **Criteria for Using SPC Techniques:** How the contractor determined which processes were appropriate for use of SPC or MPC techniques; process capability studies (application); types of charts used and rationale for use; and computer hardware/software used for SPC (if applicable).

2. **SPC Auditing and Review Procedures:** This information must be covered under the Internal Audit Section or other applicable section of the contractor's QSP

3. **SPC Records.** How the following records apply/correlate to the SPC program: Incoming inspection, manufacturing inspection, subcontractor inspection, internal and external failure reports, corrective action reports, control charts, scrap and rework reports, lessons learned, recommendations and feedback, etc. The information must be included in the In-Process and Process Inspection and Testing Section (Area 1 and 2 as applicable), the Document and Data Control and Control of Quality Records Section of the QSP or in the applicable section of the contractor's QSP.

J. When the documented QSP is rated acceptable and the system implemented is effective in consistently producing conforming product, the contractor may qualify for Government verification skip-lot inspection (Procedures for Alternative Skip-Lot End Item Inspection Requirements for Government Verification Inspections for Operational Rations). The Government reserves the right to return to the original acceptance sampling requirements if Government source inspection is waived, skip-lot is not in the best interest of the Government or for other causes as indicated in the procedure. The documented QSP shall be documented, dated, and signed by a responsible company official, and will be distributed under company letterhead as indicated in preceding paragraph "Higher Level Requirement - Quality Systems Plan (QSP)". The contractor is required to incorporate the requirements of this SPC QAP in the In-Process and Process Inspection and Testing Section (Area 1 and 2 as applicable) of the QSP or other applicable sections of the contractor's QSP.

E-1-D. The contractor's documented QSP and implemented Quality Systems are to be verified by the in-plant Government QARs/inspectors, when Government source inspection is required, in accordance with the Operational Rations Documented QSP Evaluation Workbook I, the regulation/file code of the respective inspection agency, and the particular requirements detailed in the contract.

E-2. Particular Requirements for Ration Assembler

E-2-A. The word "contractor" as used herein, shall mean the ration assembly/sub assembly contractor to which this contract applies.

E-2-B. The contractor will have a quality assurance program that supports continuous improvement in accordance with paragraph E-1 above and the particular requirements applicable to the MRE outlined herein for the final assembly of the MRE ration, the unit packaging of food components, accessory bags and menu sub-assembly pack bags.

E-2-C. Government verification inspection and testing (conducted by the GQAR or Government laboratory) shall be withheld, at a minimum, until the contractor's completed inspection results are presented to the Government's Quality Assurance Representative (GQAR). Unless otherwise

authorized, in writing, by the contracting officer, the GQAR and/or Government laboratory shall not perform Government verification inspection/testing unless the contractor's lot submittal package (inspection/test results-including analytical testing) provided to the GQAR indicates conformance to ALL contractual requirements.

E-2-D. Government verification inspection may be accomplished by utilizing smaller sample sizes provided sampling plans utilized do not increase producer's sampling risk as assessed by applicable (ANSI/ASQ Z1.4) operating characteristic curves. Contracting Officer approval must be obtained prior to skip lot and/or reduced inspection.

E-2-E. When Army Veterinary Inspectors (AVI), representatives of the Army Public Health Center, are designated cognizance for the support of the Government's quality assurance requirements, the responsibilities and authorities cited in the regulations, command policies, etc. of the respective agency and those regulations, command policies, etc. to which that agency is subject, are applicable to the contract in conjunction with the quality assurance requirements of the contract.

E-2-F. AVI inspection is required for the sub assembly packaging, at the assembly plant, of bulk-packed items that are individually packaged by an assembler/packer into military packaging (laminated barrier pouches), accessory bags, menu sub assembly pack, and MRE final assembly, i.e., MRE menus and final cases. When the sub assembly packaging of the aforementioned products occurs at a location not under the supervision of the Army Veterinary Inspector, the process shall be under the requirements of contractor-paid USDA,AMS,FV,SCI Division inspection. When dairy component products (cocoa beverages, dairy shakes, flavored coffees, non-dairy creamer, puddings, granolas with milk and fruit, ice cream sandwich, etc.), are packaged into finished product at the assembler's plant, in-process and final inspection will be under the requirements of contractor-paid USDA, AMS, FV,SCI Division inspection. Regardless of the Government agency designated cognizance for the support of the Government's quality assurance requirements at the supplier's production/assembly facility, a USDA laboratory will perform all Government verification testing. The contractor shall bear all expenses incident thereto, including costs of samples and all associated costs for preparation and mailing. Costs shall be assessed in accordance with the Government laboratory testing charges for individual test characteristics and number of tests required by the specification or contract. A list of fees may be obtained from the appropriate USDA laboratory. The regulations, file codes, etc. of the respective inspection agency are applicable to the contract in conjunction with the quality assurance requirements of the contract.

E-2-G. Plan for the Inspection Job (PIJ)

(A.) Prior to initiating production of supplies, the contractor must furnish information to and cooperate in the completion by the QAR of DLA Troop Support Form 3587 (Plan for the Inspection Job (PIJ)) which may include, but not necessarily be limited to, the following data or information:

1. Detailed production schedule.
2. Lot size, lot presentation, and sampling procedures and techniques.
3. Facilities to be provided Government personnel.
4. Name(s) and title(s) of authorized contractor representatives.
5. Agreement that the cognizant quality assurance service will be notified in advance of each day's production so that arrangements can be made by the Government to have Quality Assurance Representatives (QAR) available.
6. Procedures for notification of critical defects, ex. swellers, leakers and/or excessive amounts of defects being found.

(B.) The PIJ prepared by the QAR is deemed complete and approved for the production of supplies as described therein when dated and signed by the contractor and the QAR. A copy of the completed and

signed PIJ and subsequent revisions shall be submitted to DLA Troop Support -FTSB. Preparation of this document may require preproduction/postaward conferences between Government and contractor representatives. The contractor shall sign and date the PIJ to signify agreement to all terms and conditions therein. Production of supplies shall not commence until the document is signed by both parties. The document may remain in effect for subsequent contracts provided it is reviewed (revised as necessary) at quarterly intervals, initialed and dated by the contractor and the QAR to certify currency. The document shall be revised/amended prior to production of new items not included in the basic document or whenever significant changes occur in contractual inspection documents that necessitate modification. When signed by both the contractor and the QAR, the PIJ document is contractually binding. Failure of the contractor to comply with the document will be reported by the QAR to the contracting officer for appropriate action for noncompliance with the inspection requirements of the contract. However, occasional minor deviations from the scheduled production hours or lot size(s) cited in the PIJ may be approved by the QAR for cogent reasons. The contractor shall make no changes in the approved PIJ document without submitting a written request detailing the change and receiving written approval from the QAR. In the event the contractor and the QAR cannot agree on any detail of the content of the document, the QAR shall refer the conflict to the contracting officer for resolution.

E-2-H. Traceability Requirements and Examination

The ration assembler shall maintain records identifying the menu components used in packing and assembling each end item lot. These records shall maintain traceability of components to the extent that a lot and contract number of a component can be traced to an assembled end item lot. The system should also enable the assembler to list component contract numbers and lots within a particular end item lot. The assembled end item lot, usually one day's production, shall be clearly identified on the exterior of each case. In addition, the ration assembler shall maintain records of when and where assembled end item lots for a particular assembly contract have been shipped. The ration assembler shall provide the AVI (Army Veterinary Inspector) with a copy of the lot traceability records prior to shipment of each assembled lot. The following non-food items are exempt from traceability requirements: hand cleaner, matches, spoons and toilet tissue.

The purpose of the above, is to maintain traceability of a component lot through the assembly operation, in depot storage and up to the customer's receipt of the MRE ration. This is necessary in the event of a recall/ALFOODACT for DLA Troop Support to isolate suspect product in the depot system and to notify customers of potentially hazardous product.

In addition to the manual system described above, the ration assembler shall input traceability data on a daily basis into the computerized program. The ration assembler will input all traceability data daily, and provide a hard copy print out to veterinary personnel on a daily basis.

Each lot of assembled rations shall be examined to determine compliance with lot traceability requirements prior to shipment. The examination shall be accomplished by using the same sampling plan and samples examined under Section E, paragraph C. (4) Assembled meal bag examination of the applicable version of the Assembly Requirements (ACR). AQLs are not applicable for the traceability examination. The component lot numbers are recorded from the samples and compared against the lot traceability records provided by the assembler. A defective component lot number is a code which does not correlate with traceability records. Missing or illegible component lot numbers are not to be scored as defects unless there is reason to believe that the component represents a lot other than a lot listed by the traceability records. The finding of any defect will be cause for rejection of the lot.

E-2-I. Assembly of Mixed Code Lots

Mixed lots are small quantities of components representing different lots. These lots may be received from GFM or CFM contractors and/or may include component material from the salvage

operation or other sources that has been determined to be conforming and authorized for use in assembly. Unit loads containing mixed code lots, shall be identified as such by the use of unit load marking panels. The unit load marking panels shall list all the lots contained on the pallet; they shall be affixed to two sides of the unit load. The assembly contractor may periodically assemble the mixed lots into one lot. Mixed lot components shall be exhausted by assembling them into a final lot at least once every quarter but may be assembled into two consecutive production days if not more than once a month. For the purpose of precluding residual mixed lot components, all mixed lots components in-house prior to the final week of scheduling assembly production, shall be used in final assemblies delivered under this contract.

E-2-J. When the original lot of a component is still available at the assembly plant, components, including inspection samples, will be returned to their original lot for assembly into MRE finals.

“E-2-K. Receipt Inspection (CFM and RNC)

In addition to the origin inspection specified above, the supplies delivered shall be subject to receipt inspection at destination in accordance with the following criteria:

All items delivered (CFM and RNC) shall be receipt inspected in accordance with the assembler's receipt inspection program as outlined in the assembler's Quality Systems Plan (QSP). The contractor's receipt inspection program will be verified by the U. S. Army Veterinary Inspection (AVI) personnel at the assembly plant. Receipt inspection must include examination for the presence of internal infestation, foreign material, and contamination. Any evidence of insect or rodent infestation, foreign material, or contamination shall be cause for rejection of the entire production lot. Any receipt inspection failure applicable to a particular production lot shall be considered to be representative of the entire production lot and shall be cause for rejection of the entire production lot.

Receipt examinations for pouch integrity (CFM and RNC) shall be performed in accordance with origin pouch examination criteria for each production lot of cheese spread and product packaged in accordance with MIL-PRF-44073. Samples for receipt inspection (ex. 200 samples items packaged in accordance with MIL-PRF-44073) shall be selected throughout the lot at the destination point (applicable for entire lots or split lots). Mixed code lots as defined in the Technical Data Package will be considered as a single lot. Receipt inspection for pouch integrity of entire production lots or split lots from the origin producer to their own assembly plant located within the same state should be performed at their option or performed in accordance with the assembler's QSP.

For RNC product, at no time may the assembler's receipt inspection be more severe than origin inspection criteria. Defect classifications and descriptions shall correspond to the origin specification defect classifications. Defects found in RNC deliveries shall be verified by the AVI and their findings reported to DLA. Final responsibility for the disposition of RNC product will rest with the Government. The Government may base its decision on the contractor's inspection results. Except for the finding of evidence of insect or rodent infestation, foreign material, contamination, or other food-safety issues, or missing USDA/USDC Certification, the Government's final determination of acceptance or rejection of RNC product shall be based upon the results of an AVI inspection performed using origin inspection criteria.

For wet pack fruit (including applesauce and spiced apples), abrasions at destination, found during the assemblers receipt inspection, may be classified as a major defect and accepted under an Acceptable Quality Level (AQL), if the assembler so chooses. Each assembler would be required to specify in their QSP the AQL for the acceptance of abrasions, based on sampling size. If an assembler chooses not to accept abrasions as a major defect, they may leave the defect as critical, which would result in failure of the lot if found. AQLs for abrasions contained in the assembler's QSP must be approved by DLA Troop Support - FTSB. If the lot is not accepted at one destination due to an

abrasion(s) and the lot is redelivered to a second destination without rework, the finding of an abrasion during receipt inspection will be cause for rejection of the entire lot.

Grand lotting of more than one production lot of homogeneous components within a shipment for the purpose of receipt inspection may be performed, except for pouch integrity as cited above. There will be no grand lotting of items packaged in accordance with MIL-PRF-44073 or with PCR-C-039 for pouch integrity inspection. When the total shipment is inspected as a single lot, the identity of the items must be maintained and samples must be drawn from each lot in proportion to its size. Homogeneous components are defined as follows: items procured by identical prime documents (identical PCRs, Commercial Item Descriptions) except for items packaged in accordance with MIL-PRF-44073 and PCR-C-039.

The reliability of the contractor's receipt inspection system will be determined by the AVI in accordance with paragraph "Reliability Conditions" cited in the assembly solicitation. However, the frequency of verification of the contractor's receipt inspections will remain at the discretion of the Government."

E-2-L. In the event the assembler is also a manufacturer of component(s) of the MRE, the requirements of paragraphs E-1, E-2, E-3, E-4, and E-5 are required where applicable to components being manufactured.

E-2-M. Subcontracts

(1.) The contractor agrees that the Government shall have the right to perform a source inspection of components to be used in the manufacture of the supplies covered herein whenever the contracting officer deems such an inspection appropriate; where source inspection requires the additional consent to inspection from subcontractor, the contractor agrees to obtain such consent.

(2.) In addition to obtaining consent to inspection from subcontractors, the prime contractor agrees to stipulate the applicable inspection provisions cited in paragraphs E-1, E-2, E-3, E-4, and E-5 as requirements in the contract(s) with the subcontractor(s).

(3.) The prime contractor shall furnish with his offer a written certificate to the contracting officer as to the name of the subcontractor(s) utilized, including location and item procured. This includes the suppliers of the flameless ration heaters and packaging and packing materials requiring source inspection by the DCMA Quality Assurance Representatives. In the event the listing needs to be revised after award is made, the prime contractor shall furnish a revised listing to the Contracting Officer.

(4.) The prime contractor shall be responsible for the performance of all subcontractors. The prime contractor shall impose the responsibility for quality control, inspection, and providing inspection records on subcontractors, as required to insure compliance with specifications and conformance to contract requirements. Such inspections shall be accomplished by contractors, subcontractors, or when required by the applicable federal inspection agency at contractor or subcontractor expense. However, to the extent that the offeror does propose to utilize subcontractors for the performance of this contract, determination by the Contracting Officer of the prospective subcontractor's responsibility will be necessary in order to determine the responsibility of the offerors; and this determination of responsibility shall be based on the same factors as are applicable to the determination of the responsibility of the offeror.

(5.) To enable the contracting officer to make a determination of responsibility, each offeror must furnish with his offer the name and address of each subcontractor from whom it proposes to obtain the component(s).

E-3. Quality Assurance Requirements for Ration Assembler, Ration Component Production Plants and Ration Sub Assembly and Assembly Plants.

E-3-A. For food items packaged and/or processed in accordance with MIL-PRF-44073 and procured as contractor furnished material (CFM) components, when the manufacturer/packager is the prime

contractor (assembler), or a subcontractor, origin inspection shall be contractor paid United States Department of Agriculture, Agricultural Marketing Service, Fruit and Vegetable Division, Processed Products Branch (USDA,AMS,FV,PPB) inspection in accordance with Clause 246-9023, unless otherwise specified by this solicitation/contract. The regulations, file codes, etc. of the respective inspection agency are applicable to the contract in conjunction with the quality assurance requirements of the contract. Optional contractor testing provided by Clause 246-9024 is applicable, unless otherwise specified by this solicitation/contract. When permitted by the applicable food component specification, a Certificate of Conformance (COC) for ingredients shall be provided in accordance with FAR Clause 52.246-15.

E-3-A-1. Quality Assurance Provisions to be used with product packaged and/or processed in accordance with MIL-PRF-44073, Packaging of Food in Flexible Pouches

Inspection of finished product lots packaged and/or processed in accordance with MIL-PRF-44073 shall be in accordance with the inspection requirements cited in Section 4 of MIL-PRF-44073, Section E of the component's Performance-based or Product Contract Requirement or Packaging Requirements and Quality Assurance Provisions for CID as applicable, and the provisions cited herein.

NOTE: The following quality assurance provisions are to be used in conjunction with MIL-PRF-44073 and are in addition to those cited in Performance-based Contract Requirements, Product Contract Requirements and Packaging Requirements and Quality Assurance Provisions documents and supersede those documents where applicable. The following quality assurance criteria, utilizing ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, are applicable unless otherwise amended herein.

QUALITY ASSURANCE PROVISIONS (PACKAGING AND PACKING MATERIALS)

A. Packaging.

(1) Pouch material testing. The pouch material shall be examined for the characteristics listed in table I of MIL-PRF-44073 for Type I. The lot size, sample unit, and inspection level criteria for each of the test characteristics are listed below. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot.

Characteristic	Lot size expressed in	Sample unit	Inspection level
Oxygen transmission rate	yards	1/2 yard	S-1
Water vapor transmission rate	yards	1/2 yard	S-1
Camouflage	yards	1/2 yard	S-1
Thermal processing	pouches	1 pouch	S-2
Low temperature	pouches	1 pouch	S-2
High temperature	pouches	1 pouch	S-2
Directional tear	pouches	1 pouch	S-3

(2) Filled and sealed pouch testing. The filled and sealed thermoprocessed, high-pressure processed or hot-fill processed pouches shall examined for the characteristics listed in table I of MIL-PRF-44073 for Type I. The lot size, sample unit, and inspection level criteria for each of the test characteristics are listed below. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot.

Characteristic	Lot size expressed in	Sample unit	Inspection level
Residual gas volume	pouches	1 pouch	S-2
Internal pressure	pouches	1 pouch	S-2 ¹

¹ When a three-seal tester is used, a separate set of samples is required for testing of the closure seal.

(3) Pouch examination. The pouches shall be examined for the defects listed in table II of MIL-PRF-44073 for Type I. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed and thermally processed pouch or high-pressure processed pouch. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major A defects, 2.5 for major B defects, and 4.0 for minor defects. **Two hundred sample units shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot.**

(4) Examination of sleeve ². When applicable, the sleeve shall be examined for the defects listed in table III of MIL-PRF- 44073 for Type I. The lot size shall be expressed in units of sleeves. The sample unit shall be one sleeve. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major defects and 2.5 for minor defects.

² Or separate paperboard insert card when used in lieu of the paperboard sleeve.

E-3-A-2. Additional Quality Assurance Provisions for MIL-PRF-44073, Packaging of Food in Flexible Pouches

The following procedures for sampling and inspection shall also be applied when an end-item's filled and sealed pouch examination is required to be performed in accordance with paragraph 4.3, "Examination of pouch", of MIL-PRF-44073. These procedures shall be applied to inspection results where critical defects are a determining factor in the rejection of a lot.

Change in severity of inspection shall be based on the critical defect category and determined by component type, regardless of lot size. For Normal inspection the sample size shall be 200 sample units and for Tightened inspection 315 sample units examined for critical defects and the finding of any critical defect shall be cause for rejection of the lot. Normal inspection will be used at the start of inspection. Normal inspection shall continue unchanged for the critical category of defects on successive lots except where the procedures given in ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, require a change in the severity of the inspection, from Normal to Tightened. The procedures given in ANSI/ASQ Z1.4 shall be used to switch from Tightened inspection to Normal inspection. There will be no "reduced" inspection option. The Government has the right to discontinue Government inspection as cited in ANSI/ASQ Z1.4 or the MPC clause or both.

1. The Government QAR will notify the contractor of a change in the severity of inspection as a result of Government origin inspections. The contractor is required to perform inspections which provide the same risk (equal or better) as those performed by the Government (ex: the contractor must select for end item examination, as a minimum, the same number of samples selected by the Government for end item inspection).

2. Upon notification by the Government QAR of change of severity of inspection from Normal to Tightened, and at the request of the Contracting Officer, the contractor shall submit a corrective action plan to the Government QAR and the Contracting Officer. Government QAR will withhold inspection of lots produced after notification until the requested corrective action plan is received and approved. The corrective action plan shall contain, as a minimum, the following:

- A. Root cause of the deficiency.
- B. Action taken to correct the deficiency.
- C. Action taken to correct and prevent recurrence of root cause of deficiency.
- D. Corrective action effective date(s).
- E. Contractor, subcontractor, or supplier representative responsible for implementing corrective action.

As authorized by the Contracting Officer. Discontinuation of inspection may be invoked by the Contracting Officer when there is a pending action against a contractor to improve the quality of the submitted product/material, a contractor fails to submit a corrective action plan, and/or a corrective action plan is not effective in correcting or in preventing recurrence of root cause of the deficiency.

In addition to the above, the Contracting Officer, at his discretion, may invoke increased inspection for critical defects at origin and/or destination when determined to be in the best interest of the Government.

E-3-A-3. Analytical/ Nutrient Content Testing Requirements for finished products packaged and/or processed in accordance with MIL-PRF-44073

The following applies to the nutrient content testing for entrees, starches and soups, and fruits found in the PCR or PKG&QAP:

Applicable to Fat and Salt Content Testing: The composite sample shall be prepared and analyzed in accordance with the latest edition of the Official Methods of Analysis of AOAC International (OMA) as cited in the PCR. If an AOAC method does not specify specific times, temperatures, or methodology for preparation of a sample, preparation of samples shall be as follows: The unopened pouches shall be gently warmed in a 140°F water bath for 15 minutes to melt fat adhering to the inside of the pouches. The pouches shall be composited in a Waring blender or equivalent.

E-3-A-4. Additional Quality Assurance Requirements for MRE Tuna

As indicated in the Packaging Requirements and Quality Assurance Provisions for Commercial Item Description (CID) A-A- 20155, "Tuna, Canned or in Flexible Pouches" and CID A-A-20155, MRE and FSR pouched tuna shall be under contractor-paid origin inspection provided by the U.S. Department of Commerce (USDC) in accordance with USDC fees and charges. Alternatively, if pouched tuna production occurs at a facility producing MRE entree items under USDA/AMS inspection, or if determined to be in the best interest of the government, the MRE pouched tuna entrees shall be inspected by USDA/AMS under USDA/AMS fees and charges. The regulations, file codes, etc. of the respective agency are applicable to the contract in conjunction with the quality assurance requirements of the contract.

(a) For each lot of tuna produced for offer to the government, finished product contractor testing and USDA verification testing for methyl mercury and histamine content shall be performed in accordance with the requirements, procedures, and testing cited in paragraphs C-2,H and E-5,B,(4) of Packaging Requirements and Quality Assurance Provisions for CID A-A-20155 and in the current contractual documents.

(b) Alternative testing procedure: As an alternative to the methyl mercury and histamine testing procedures specified in E-3-A-4(a) above and with the consent of the contracting officer, end-item USDA verification testing for methylmercury and histamine for each lot may be performed by using a composite sample in accordance with paragraph E-5,B,(5) of Packaging Requirements and Quality Assurance Provisions for CID A-A-20155.

E-3-A-5. Commercial Sterility Requirement for finished product packaged in accordance with MIL-PRF-44073

Thermally processed pouches shall be free of swelling or microbial activity when tested in accordance with the following commercial sterility test.

Commercial sterility test. Incubate filled, sealed and thermally processed pouches as follows:

Meat, poultry, fish, pudding and vegetables: Incubate at $95^{\circ}\text{F} \pm 5^{\circ}\text{F}$ for 10 days, unless otherwise specified by the inspection agency.³

Fruit: Incubate at $80^{\circ}\text{F} \pm 5^{\circ}\text{F}$ for 10 days.³

³ Select a minimum of one pouch from each retort load. Select pouches from different areas within the retort. For a continuous cooking process, an inspection level of S-3 shall be used to establish sample size.

E-3-B. Quality Assurance Provisions and Packaging Requirements for Other Food Components

For other food components, when the finished product packager is the prime contractor (assembler) or a subcontractor, origin conformance inspection shall be contractor paid USDA,AMS,FV,PPB inspection in accordance with Clause 246-9023, except as specified in E-2-F and except for the following items: candy and chocolate confections, hot sauce, chewing gum, salt, coffee (CID-AA-20184), and sugar. Optional contractor testing is provided by the alternate inspection requirements Clause 246-9024. When permitted by the applicable food component specification, a Certificate of Conformance (COC) for ingredients shall be provided in accordance with FAR Clause 52.246-15. Compliance with applicable product and packaging requirements will be determined by the contractor and by the GQAR on the finished product in accordance with the applicable provisions in the PCR, CID, MIL-document, solicitation, contract, and purchase order and their applicable Quality Assurance Provisions and Packaging Requirements. For products procured using both CID and PKG&QAP specifications, the applicable analytical and microbiological requirements, procedures, and testing requirements are specified in the product's PKG&QAP specification unless elsewhere superseded by this document.

Regardless of the Government agency designated cognizance for the support of the Government's quality assurance requirements at the supplier's production/assembly facility, a USDA laboratory will perform all Government verification testing. The contractor shall bear all expenses incident thereto, including costs of samples and all associated costs for preparation and mailing. Costs shall be assessed in accordance with the Government laboratory testing charges for individual test characteristics and number of tests required by the specification or contract. A list of fees may be obtained from the appropriate USDA laboratory.

E-3-C. Quality Assurance Requirements for Bulk Packed CFM Accessory Items, Bulk Packed CFM Food Items, and Bulk Packed CFM Non-Food Items.

When the above items are procured as CFM, verification inspection by the Government may be performed at destination in accordance with origin requirements or the contractors QSP receipt inspection provisions and to include, at a minimum, an inspection for count, condition, and identity, the

presence of any internal infestation or the presence of foreign material. In addition, the Government may inspect the manufacturer's product at destination by comparison with samples of the manufacturer's product selected from commercial distribution channels.

The supplies or services furnished under the contract shall be covered by the most favorable commercial warranties the contractor gives to any customer for such supplies or services and the rights and remedies provided therein are in addition to and do not limit any rights afforded to the Government by the Supply Warranty Clause 52.246-17.

Bulk packed, as used in this paragraph, means packing prior to finished product packaging.

E-3-D. Quality Assurance Requirements for Ration Supplement Flameless Heater, for Meal, Ready-to-eat (FRH):

(1.) In order to ensure delegation of authority for Government quality assurance support, the following information shall be provided to the Contracting Officer by the contractor after award of the contract and prior to start of production:

Name, address and point of contact of FRH manufacturer

(2.) The following information shall be provided to the contractor by the Contracting Officer at such time as the contractor furnishes the above information:

Name and address of Defense Contract Management Agency (DCMA)

having quality assurance cognizance at the FRH manufacturer's plant.

(3.) DCMA shall provide the quality assurance support for the contract on the behalf of the Government at the FRH manufacturer's plant. The contractor through their FRH manufacturer is responsible for arranging for the quality assurance support by DCMA. Contractor shall perform or have performed all examinations and tests indicated by the applicable specification(s).

(4.) When the FRH is procured as contractor furnished material, FAR Clause 52.246-2; FAR Clause 52.246-11, Higher Level Quality Requirements; Statistical Process Control Quality Assurances Provision (SPC QAP); and Manufacturing Process Controls and In-Process Inspection Quality Assurances Provision (MPC QAP) are applicable. The plans shall be prepared, submitted, reviewed, evaluated, and verified in accordance with the provisions cited in paragraphs E-1, above, except that the appropriate DCMA shall have cognizance for the support of the Government's quality assurance requirements. The regulations, file codes, etc. of the respective agency are applicable to the contract in conjunction with the quality assurance requirements of the contract. One copy of the FRH manufacturer's Higher Level Quality Systems Plan and SPC plan shall be submitted to DLA Troop Support - FTRC and one copy of the plan shall be provided to the DCMA QAR assigned to the FRH manufacturer's plant.

(5.) The particular quality assurance requirements cited in paragraphs E-1, E-2, E-3, E-4, and E-5, as applicable, are required for this item with exception of E-4-E and E-4-F.

E-3-E. Additional Sanitary Conditions Requirement for Product Containing Dairy Ingredients

For dairy component powders and freeze dehydrated dairy products (cocoa beverages, dairy shakes, puddings, flavored coffees, non-dairy creamer, granola with milk and blueberries, ice cream sandwich, etc.), all processing and packaging plant(s) and all plants providing dairy ingredients to the dairy processing plant(s) must be listed in the "Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement", published by the U. S. Army Public Health Command(PHC) as cited in paragraph (1) of Clause 246-9044 SANITARY CONDITIONS as used in this solicitation. Suppliers also agree to inform the contracting officer immediately upon notification that a manufacturing plant is no longer sanitarily approved and/or is delisted from another agency's listing, as indicated in paragraph

(2) of Clause 246.-9044. The contracting officer will also be notified when sanitary approval is regained and listing reinstated.

E-3-F. Additional Quality Assurance Requirements for MRE Crackers

(A.) The following inspection criteria applies: Contractor-paid USDA origin inspection in accordance with solicitation/contract including Clause 246-9023 (General Inspection Requirements), FAR Clause 52.246-15 (Certificate of Conformance) and Clause 246-9024 (Optional Contractor Testing). The following PCR-C-037 paragraphs are applicable:

(1) At the cracker manufacturer when crackers are bulk packed: paragraphs E,A., Definitions; E,B(2), Conformance inspection (for product); E-5,A, Product examination; E-5,B(2), Net weight, are required. Calcium and fat testing, required by E-5,B(3) Analytical in paragraph (B.) below, may be performed by individual bulk lot testing.

(2) At the cracker manufacturer when crackers are unit packed: All Section E paragraphs are required, except paragraph E,B(2), Periodic review evaluation, and E-5,B(1), Self life.

(B.) When the end item crackers are packaged by the ration assembly contractor or at a unit packager other than the cracker manufacturer, the following PCR-C-037 paragraphs are applicable and inspections shall be conducted by the assembly contractor, subject to Government verification: Paragraphs E,A., Definitions; E,B(1), Product standard inspection; E,B(3), Conformance inspection (for packaging and packing); E-5,B(3), Analytical; E-6,A(1), Pouch material certification; E-6,A(2), Pouch vacuum examination; E-6,A(3), Filled and sealed pouch examination; and E-6,A(4), Seal testing. When calcium and fat testing, required by E-5,B(3) Analytical, are performed by bulk lot, the calcium and fat content of the finished product lot shall be verified by the Government QAR using the USDA certification for calcium and fat content of the bulk lot(s) used to make the finished product lot. Paragraph E-5,A., Product examination, is required when requested by DLA Troop Support Contracting Officer.

(C.) Cracker shelf life. PCR-C-037 paragraph E-5,B(1), Shelf life, is required for the ration assembler, subject to Government verification.

(D.) Cracker End Item Testing for moisture and pH. If the contractor does not want to perform end item testing on each finished lot (where paragraph E-5,B(3) is required), the contractor shall select one of the following options and place such option in the QSP and shall not change the option until written permission is obtained from the Contracting Officer, or steps are previously included in the QSP.

(1) Crackers packaged within 45 days of production. The contractor shall request and provide the GQAR a Certificate of Analysis (COA) from their bulk cracker supplier and also a copy of their own COA if a verification test (for compliance with moisture and/or pH analytical requirements) is conducted by the contractor at receipt. Government testing and acceptance will be based on the bulk lot testing results if crackers packaged within 45 days of production. Government testing shall be contractor-paid USDA bulk lot testing at origin, however, as an alternative to contractor-paid USDA testing, the contractor may request that government bulk lot testing be performed on receipt by the Department of Defense. If the bulk crackers supplier's COA and/or the contractor's COA indicate(s) noncompliance (applicable if the contractor conducts verification at receipt and results obtained are nonconforming), the Government reserves the right to verify the COA through actual testing by a Government laboratory. In the event that the Government detects irregularity in the contractor's testing system or the cracker producer's, the designated GQAR will withhold approval until Government laboratory test results show that product is conforming. The "Alternative Inspection Requirements for Selected Items" (Clause 246-9024) shall apply. Government retesting will be performed at the Government laboratory where the original test in question was performed. USDA certification of bulk

lot compliance for moisture and pH may be offered to assembly GQAR, in lieu of a COA from the bulk supplier, as contractor's verification of compliance.

(2) Crackers packaged within 90 days of production. The contractor shall request and provide the GQAR a copy of the Certificate of Analysis (COA) from their bulk supplier and also a copy of their own COA if a verification test (for compliance with moisture and/or pH analytical requirements) is conducted by the contractor at receipt. Government testing and acceptance shall be conducted on the end item filled and sealed cracker lot packaged by the contractor (under this option the crackers shall be packaged within 90 days of the bulk lot date of production). If the cracker supplier's COA and/or the contractor's COA indicates noncompliance (applicable if the contractor conducts verification at receipt and results obtained are nonconforming), the Government reserves the right to verify the COA through actual testing by a Government laboratory. In the event that the Government detects irregularity in the contractor's testing system or the cracker producer's, the designated GQAR will withhold approval until Government laboratory test results show that product is conforming. The "Alternative Inspection Requirements for Selected Items" (Clause 246-9024) shall apply. Government retesting will be performed at the Government laboratory where the original test in question was performed. USDA certification of bulk lot compliance for moisture and pH may be offered to assembly GQAR, in lieu of a COA from the bulk supplier, as contractor's verification of compliance if no contractor verification testing is conducted at receipt.

(E.) Bulk lot cracker supplier test results, USDA test results, and contractor test results shall be provided to DLA Troop Support - FTSB.

E-3-G. End Item Testing.

Compliance with applicable end-item specific technical data requirements will be determined by the contractor and by the GQAR on the finished product in accordance with the applicable provisions in the food component specification, solicitation, contract, and purchase order and their applicable Packaging Requirements and Quality Assurance Provisions specifications. Regardless of the Government agency designated cognizance for the support of the Government's quality assurance requirements at the supplier's production/assembly facility, a USDA laboratory will perform all Government verification testing. The contractor shall bear all expenses incident thereto, including costs of samples and all associated costs for preparation and mailing. Costs shall be assessed in accordance with the Government laboratory testing charges for individual test characteristics and number of tests required by the specification or contract. A list of fees may be obtained from the appropriate USDA laboratory.

E-4. Quality Assurance Requirements for Ration Assembler, Ration Component Production Plants and Ration Sub Assembly and Assembly Plants.

E-4-A. Packaging and Packing Materials

Packaging components (e.g., fiberboard shipping boxes, cartons, rollstock, preformed pouches, packets, accessory and menu sub assembly pack bags, material & menu bags, strapping materials, fiberboard caps, adhesive, tape, etc.) are subject to the Certificate of Conformance FAR Clause 52.246-15. The Government QAR shall have the responsibility for verifying COC's as necessary. Any inspections required by the specifications may be performed by the Government to assure compliance with the specifications. FAR Clause 52.246-15 shall also apply to bond strength tests on retort pouches.

E-4-B. General Inspection (Examination/Testing) Requirements

(A.) When contractor determines as a result of his inspection(s) or QSP, or is informed by the QAR as a result of verification inspection, that the supplies do not conform to contractual requirements, he has the following alternatives:

1. Produce and inspect a new lot.
2. Screen or rework and reoffer conforming supplies (provided screening or reworking is not detrimental to the product and does not conflict with other requirements, e.g. time, temperature, etc.) See "Rework of Nonconforming Product Pre or Post Acceptance" for applicable situations.

3. Request the Contracting Officer to consider acceptance of the nonconforming supplies in accordance with paragraph "Request for Rework, Request for Waiver, Request for Deviation, or Reinspection of Nonconforming Supplies".

4. When valid technical reason(s) exist for suspecting the verity of the inspection results, request the Contracting Officer's permission to reinspect the supplies without screening or reworking. The request must be made in writing in accordance with paragraph "Request for Rework, Request for Waiver, Request for Deviation, or Reinspection of Nonconforming Supplies". Any lot with one or more valid critical/major A defect(s) will not be reinspected without reworking or screening of all units. Examples of valid technical reasons are:

- A. After finding the lot nonconforming for net weight, it is discovered that the scales used for the inspection were out of adjustment or

- B. After finding the lot nonconforming for a chemical test characteristic, it is discovered that a chemical used in the analysis has deteriorated or had not been properly prepared.

(B.) The contractor may petition the Government (through the Contracting Officer) for skip lot or a reduction in verification inspection at such time that the contractor believes his quality program is fully acceptable and reliable. There will be no "skip lot" or "reduced" inspection option for critical defects.

E-4-C. Government verification inspection and testing (conducted by the GQAR or Government laboratory) shall be withheld, at a minimum, until the contractor's completed inspection results are presented to the Government's Quality Assurance Representative (GQAR). Unless otherwise authorized, in writing, by the contracting officer, the GQAR and/or Government laboratory shall not perform Government verification inspection/testing unless the contractor's lot submittal package (inspection/test results-including analytical testing) provided to the GQAR indicates conformance to ALL contractual requirements

E-4-D. Operational Ration Component Lot Number and Lot Inspection

The component lot number for thermally processed (retorted), high-pressure processed, and hot-filled products packaged in flexible pouches shall be defined as the Julian lot number assigned at the origin manufacturer's plant and the inspection lot shall include only product produced in one work-shift. For products packaged in tray pack containers (metal/poly) and other products (including the FRH and final assembled lots), a lot number is defined as the quantity of finished product produced/assembled within a production day (Julian date) and the inspection lot shall include product produced in no more than one production/assembly day. The Government QAR reserves the right to separate an inspection lot into smaller inspection lots. The Sample for Government and contractor's end item lot inspection may be drawn after all units comprising the lot have been produced or samples may be drawn during production of the lot. If stratified sampling is utilized (drawing sub-samples from each sub-lot/sub-code during production of the lot), the sub-samples must be drawn at random from the sub-lot and not inspected until all the sub-samples are combined to make-up the complete sample for the applicable lot size (the formation of the lot and lot size is defined as the manner in which the lot is to be presented for Government end item verification inspection).

E-4-E. Periodic Review Samples

All food components that are inspected by USDA-AMS will be subject to periodic review sampling and examination/testing during contract production in accordance with the following criteria: For each calendar month of production, the USDA-AMS inspector will randomly select twelve sample units from a conforming lot of each item (i.e., each type, flavor, etc.) produced and inspected for product examination by USDA-AMS. As instructed by DLA Troop Support, the USDA-AMS inspector shall ship nine of the samples, at the contractor's expense, to the addresses below, once per month.

Six samples selected by USDA/AMS will be sent to:

CHIEF, CONTRACT SERVICES BRANCH
USDA, AMS, SCP, SCI DIVISION
1400 INDEPENDENCE AVE. SW
ROOM 0726, SOUTH BLDG.
WASHINGTON, DC 20250-0247

Three samples selected by USDA-AMS will be sent to:

DEPARTMENT OF THE ARMY
RDNS-SEC-EMR
NATICK SOLDIER SYSTEMS CENTER
10 GENERAL GREENE AVENUE
NATICK, MA 01760
POC: (508) 233-5037

The USDA/AMS inspector shall retain three samples for standby use, and return them to the contractor if not needed.

E-4-F. Alternative Skip-Lot End-Item Inspection Requirements for Government End-Item Verification Inspections for Operational Rations.

The "Procedures for Alternative Skip-Lot End Item Inspection Requirements for Government End-Item Verification Inspections for Operational Rations", dated March 2001, are applicable to current and future contracts. The switching procedures cited in ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection and Attributes shall not be used for Government verification inspections. For products requiring a drained weight examination, the following is also required: The contractor shall provide the Government Quality Assurance Representative (GQAR) a copy of the current production standard (PDM/First Article) formula (including ratios of ingredients), and formulation records for each production lot submitted for Government end item verification inspection. The GQAR shall initiate skip-lot inspection based on Government verification inspections results of each product and notification that the contractor's Quality System Plan (QSP) was rated acceptable by DLA Troop Support - FTSB. The Government verification inspection may be further decreased (e.g., skip-lot inspection frequency 1 in 6, 1 in 10, etc.) by the Contracting Officer if he/she determines that this is in the best interest of the Government or he/she may discontinue skip-lot inspection for Government verification inspection if it is determined that skip lot is not in the best Interest of the Government.

The sampling plans switching procedures cited in ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection and Attributes, are authorized to be used only by the contractors during the performance of contractor's end item verification inspections. Producers using the switching procedures, cited in ANSI/ASQ Z1.4, during the performance of their end item inspections must train personnel and follow **all of the switching rules** cited in the standard. As indicated in the standard, the

sampling scheme is a combination of sampling plans with switching procedures, and each sampling plan has its own set of rules by which a lot is to be inspected and accepted or rejected. Samples may be drawn after all units comprising the lot have been produced or samples may be drawn during production of the lot. However, for those contractors that are using stratified sampling (drawing subsamples from each subplot during production of the lot), the subsamples must be drawn at random from the subplot and not inspected until all the subsamples are combined to make-up the complete sample for the applicable lot size (the formation of the lot and lot size is defined as the manner in which the lot is to be presented for Government end item verification inspection in accordance with paragraph "Operational Ration Component Lot Numbers"). All other inspection procedures must be reviewed by the GQAR, included in the QSP, and approved by the Contracting Officer. The producer's end item verification inspection results must be well documented and the GQAR must be informed in advance of the specific switching procedure (normal, tightened, reduced) being utilized for each product qualified under the standard.

E-4-G. Rework Of Nonconforming Product Pre or Post Acceptance

Rework of Nonconforming Product: The Government QAR must be informed and provided documentation of all rework results when product is presented for Government verification inspection or prior to Government inspection as indicated below.

A. Corrective Action (Rework/Screen Inspections) Taken Prior to Government Inspection

(Receipt, In-Process And End-Item Inspections): Unless otherwise specified below, all reworks and screening inspections conducted prior to the initial Government inspection of the lot do not require approval from the Government. Although the GQAR must be informed of all reworks, the contractor is not required to obtain approval to take corrective and preventive action as deemed necessary to ensure compliance with contractual requirements.

NOTE: All requests for rework shall be accompanied with a comprehensive rework plan. The rework plan will include rational information and data that supports the rework plan and ensures the elimination of nonconforming material from the lot. When a contractor determines as a result of his end item inspection(s) or QSP that supplies do not conform to contractual requirements and the supplies cannot be reworked (such as drained weight, viscosity, piece size, residual air, etc.), he has the alternative to request the Contracting Officer for a waiver for the nonconforming requirement. If the Contracting Officer approves the waiver request for a specific requirement, the written waiver approval shall be provided to the GQAR when the supplies are presented for Government Verification Inspection (the skip-lot inspection does not apply in this case). The GQAR shall only inspect the supplies for compliance with all requirements of the contract, except the waived requirement. The Contracting Officer, in special circumstances, may request nonconforming supplies to be inspected by the GQAR, after the waiver for the nonconforming requirement has been provisionally approved, to determine severity of nonconformance only. Due to the type of statistical sampling cited in the contract, under no circumstances shall a lot found nonconforming by the contractor be inspected by the GQAR to determine conformance to a requirement that has previously been established as nonconforming by the contractor's inspection. After any lot's failure or rework, if the lot is reinspected, it will be both Contractor and Government inspected at the next higher sample size.

B. The Following Reworks Must Be Coordinated with the Supervisory GQAR and, As Required, Approved by the Applicable DLA Troop Support-FTR Office.

- 1. Insect or Rodent Infestation/Contamination: Reworks must be approved by FTR/FTSB.**
- 2. Food Safety and Foreign Material:**

(a) All corrective actions performed on product due to foreign material and/or processed/unprocessed container mix-ups must be approved by FTR. NOTE: In addition to FTR approval, approval by the cognizant regulatory agency, FDA, USDA-FSIS, or USDC, is required.

(b) Any product that is offered to the Government that has been produced using a bulk product or an ingredient product lot(s) that has, at any time, been identified as containing or having contained foreign material must be approved by FTR. When product is presented for Government verification, the Government QAR must be informed and provided documentation identifying the foreign material and all corrective action taken to render the bulk/ingredient product serviceable.

(c) Thermal process deviations or deviations from the preparation, formulation or critical factors cited in the approved process schedule must be accompanied by a detailed letter from the plant's Processing Authority. The involved subcode(s), the deviation, and the disposition of the product shall be clearly identified when the complete lot is presented for Government end item verification inspection. If the producer fails to provide enough information/data in the case of a deviation, the GQAR shall contact FTR for approval to proceed with the Government end item verification inspection.

(d) Retesting/reinspection/rework of product that tested positive for food borne pathogens is not authorized.

(e) These requirements are in addition to applicable Code of Federal Regulations or other regulatory requirements (USDA-FSIS, FDA, USDC).

NOTE: Deviations (that occur during or prior to the production of a product) from specific preparation/formulation/ingredient requirements cited in the specifications shall be submitted as a request for product deviation and must be approved and coordinated with the Specification Preparing Activity (Natick) through the applicable contracting officer.

3. Container Integrity Defects: All reworks due to container integrity defects (critical defects only) noted during the producer's end item inspection, the Government's final lot end item verification inspection, the Government's or assembler's receipt inspection, or noted when the established action number/level (as cited in the contractor's QSP) is exceeded during the in-process assembly operation must be approved by the applicable contracting officer, unless a 100% container rework of the entire lot is conducted at source or at the assembler. All containers exhibiting the same or other container integrity defects must be removed during the 100% container rework and noted on the rework paperwork. Reworked lots will be inspected or re-inspected, as applicable, by the GQAR at the location of the rework using the next larger sample size (for example, from 200 samples to 315, or if a second rework, from 315 samples to 500 samples). Rework results must be included with other paperwork when the lot is presented for Government end item verification inspection.

4. Second Time Reworks: All second time reworks must be approved by the applicable FTR contracting officer.

5. Nonconformances Noted During Government Inspection for End Item Compliance: All rework requests submitted for defects noted during Government inspection for end item compliance must be approved by the applicable contracting officer, unless exempted under paragraph 3 above.

6. For reworks requiring the Government's approval, the contractor may submit a standard rework procedure (SRP), for certain defects, under the contractor's documented QSP section XII - Corrective and Preventive Action Program. The SRPs must be specific and these must be evaluated by DLA Troop Support-FTR, FTSB, and approved by the applicable contracting officer.

7. If the contractor elects to rework nonconforming product, it must be reworked and reoffered within 30 days from date of initial rejection.

8. All requests for rework shall be accompanied with a comprehensive rework plan. The rework plan will include rational information and data that supports the rework plan and ensures the elimination of nonconforming material from the lot. See "Request for Rework, Request for Waiver, Request for Deviation, or Reinspection of Nonconforming Supplies". After any lot's failure or rework, if the lot is reinspected, it will be both Contractor and Government inspected at the next higher sample size.

E-4-H. Request for Rework, Request for Waiver, Request for Deviation, or Reinspection of Nonconforming Supplies

(A.) When the requirements cited in the section of this solicitation entitled “Rework Of Product Pre or Post Acceptance” require that a written request for deviation, waiver, rework, or reinspection must be furnished, as appropriate, to the Contracting Officer and cognizant Government QAR, that request shall at a minimum contain the following:

1. Contractor's name and address.
2. Contract number, lot number(s), and quantity.
3. Item nomenclature and NSN, whether a component or end item.
4. Specification number, table/paragraph number, sample size, AC/REJ number(s), defect number(s), number of defects. Identify the pouch codes of defective units.
5. Classification of defects: Critical _____ Major _____ Minor _____
6. Cause of nonconformance or deviation, and corrective and preventive action.
 - a) State the root cause of the deficiency.
 - b) State the corrective action and the preventive action contractor has taken/will take to preclude recurrence.
 - c) If preventive action is not possible, state why.
7. If deviation/nonconformance is of a recurring nature, the frequency of occurrence and date/contract/lot number of last occurrence.
8. Effect on cost/price.
9. Effect on delivery schedule.
10. Full justification for request for deviation, waiver, rework or reinspection.
11. Submit in-process data (MPC, SPC) and contractor and Government end-item records for the involved lot(s). Submit retort records, copy of process schedule and letter from Processing Authority if a process deviation.
12. Applicable to the defect found or class of defects for critical defects, identify the situations where the lot exceeded control limits (out-of-control, exceeded action level or number) according to in-process records (MPC, SPC), and identify the corrective actions taken for each instance.

NOTE: All requests for rework shall be accompanied with a comprehensive rework plan. The rework plan will include rational information and data that supports the rework plan and ensures the elimination of nonconforming material from the lot. After any lot's failure or rework, if the lot is reinspected, it will be both Contractor and Government inspected at the next higher sample size.

(B.) When a valid technical reason for reinspection is offered and permission is granted by the PCO, the contractor shall take corrective action to eliminate the cause of the inspection revealed failure; reinspect the nonreworked lot after taking the corrective action, and evaluate the results of the initial inspection and the reinspection by means of recognized statistical methods.

1. If the statistical tests reveal no significant difference between the results of the two inspections, acceptability will be based on reinspection results. A significant difference is one that is real and not due to chance variation. Statistically, a difference which has a 0.05 probability of occurring by chance alone is usually considered a significant difference.

2. If such statistical tests reveal no significant difference between the results of the two inspections, both results will be reported to the Contracting Officer.

A. The results of the two inspections will be averaged and acceptability will be based on whether the resulting average meets the requirement, when the requirement is an average (variable) requirement.

B. The results of the initial (original) inspection will be the basis for the acceptability decision when the requirement is a unit (attribute) requirement.

E-4-I. Reliability Conditions

(A.) The Government may perform verification inspection (examination, testing or both) to assure that the inspection performed or certificates furnished by the contractor are reliable. Initially, the amount of verification inspection may equal the amount of inspection performed by the contractor. It is the intent of the Government to be able to rely on the contractor so that the amount of verification may be reduced

accordingly. In the event the Government determines by means of verification inspection, surveillance of the contractor's inspection activity, or the submission by the contractor to the Government of nonconforming supplies that the contractor's inspection results or certificates from any plant are not reliable, the Government reserves the right to increase the rate or amount of verification inspection to and including full lot-by-lot inspection and to charge the contractor for the costs incurred for any or all Government examinations and tests performed on supplies from the plant/plants determined to be unreliable after such time as the contractor is advised in writing of the particular inspection concerning which his unreliability is established. In addition, the Government reserves the right to sample and inspect for compliance with contract requirements all supplies produced for the Government remaining in the contractor's facilities at the time of notification in an other than reliable status, even though said supplies may have been produced prior to receipt of notification. It is to be especially noted that the Government is contracting for a complete and reliable inspection system as well as a product conforming to all requirements of the contractual document(s). When any element of the contractor inspection system (a particular test or examination of the end item or component) has been determined to be unreliable, the Government reserves the right to consider the inspection system as a whole unreliable, and to return to full lot-by-lot verification (and charge therefore) for each and every examination and test. Examination and testing by the Government and charges to the contractor will continue until such time as the contractor's reliability is again established to the satisfaction of the Contracting Officer. Evaluation of contractor's examination results and review of test results will be accomplished by the Government Quality Assurance Representative (GQAR). Final evaluation of contractor's test results will be accomplished by the applicable DLA Troop Support Operational Rations Office and DLA Troop Support - FTSB, Subsistence Supplier Operations Directorate.

(B.) The GQAR may perform verification inspection on any of the lots presented by the contractor to determine if the inspection results reported by the contractor are a reliable indication of product quality. Verification inspection results may be compared with product acceptance criteria set forth in the contract and/or with contractor inspection results for the purpose of determining if verification inspection performed by the GQAR may be reduced. This reduction in Government verification inspection may be effected through less frequent inspection (skip lot/modified skip lot), reduced severity of inspection, or both. Contracting Officer's approval must be section obtained before switching the degree of inspection severity to reduced inspection even though all criteria have been met. .

(C.) Unless otherwise specified in the contract, verification inspection performed by the GQAR will be in accordance with the specification Quality Assurance Provisions regardless of any approved alternative procedures employed by the contractor.

(D.) Unless otherwise specified, when the contractor inspection results have been determined to be unreliable, the next determination as to reliability will be made:

1. For examination characteristics. After the production and examination of not less than three or more than five lots.
2. For test characteristics. After six day's production or after the number of days necessary to produce and test six inspection lots, whichever is greater.

NOTE: During the period the contractor's test system is considered unreliable, supplies will be accepted or rejected on the basis of Government laboratory test results.

3. For Certificate of Conformance. After two inspection lots of component items, except that return to a reliable status will be based on conformance of a component item to requirements if inspection results are not submitted by the contractor.

(E.) After a contractor has been notified that his inspection system has been found to be unreliable, the status or unreliability will continue until the Government notifies the contractor that a reevaluation has been completed and the results indicate that the inspection system is considered as regaining a reliable status. In addition to the requirements in the immediately preceding sub-paragraphs (D) 1, 2, or 3, time

will be required by the Government to review the contractor's results by the evaluators, complete verification inspection, perform statistical analysis, and to notify the contractor. The contractor will be charged for costs incurred by the Government for inspecting lots (including costs associated with sampling) used for evaluating reestablishment of an acceptable inspection system status.

(F.) Whenever considered necessary as an aid in determining reliability of contractor inspection, the Government will determine, by the use of recognized statistical methods, if there is a significant difference between inspection results furnished by the contractor and the results of verification inspection.

(G.) Supplies, which have been found nonconforming by the contractor, may be subjected to special Government verification examination of the lot or lots in question. The verification examination results for each such lot so selected will be compared with the contractor's results using the lot-by-lot comparability determination procedure for reliability only and shall not be used for acceptance or rejection of production lots.

(H.) In the event the Government elects not to perform verification inspection prior to delivery and acceptance, payment will not be delayed provided the contractor's inspection results indicate the end item and components (including packaging, unitization, packing, labeling and marking materials) conform to the specification requirements, and further provided that said results are presented in the manner prescribed herein.

(I.) Normally, verification inspection will be performed on a stationary lot basis, regardless of physical location, at any time prior to acceptance. Warehousing charges for labor, reconditioning, and any other such costs incident to sampling for examination and/or testing will be borne by the contractor, except when examination is performed at a point other than the premises of the contractor, sub-contractor or contractor's freezer or warehouse.

(J.) Conformance of supplies, or parts thereof, will be determined in accordance with the applicable specification tolerances, acceptable quality levels and sampling procedures contained in the contract except as provided herein. At destination, the original inspection lots need not be reconstituted. For sampling purposes, supplies delivered under the contract may be grouped to form lots. The size of the sample will be determined by the sampling procedures specified in the contract for the quantity of supplies on which action is proposed. Whenever the contract does not provide criteria to determine the number of sample units, the number of containers selected for appropriate number of sample units, the number of containers selected for sampling will be the square root of the number of containers in the lot. Frozen product may be inspected for determination of compliance with all terms of the contract. If necessary, the product or samples, as appropriate, may be defrosted to the extent required to accomplish this inspection. At origin, the contractor will employ a procedure for identifying the inspection status of material before, during, and after processing.

(K.) The contractor's inspection system will be considered unreliable if a statistical comparison of contractor and Government inspection results indicates noncomparability. The noncomparable status will serve to notify the contractor of the significant disparity between the Government verification results and the contractor's results without either result indicating nonconformance. The Contracting Officer and/or GQAR will notify the contractor when his inspection system is considered unreliable and change inspection system status to unreliable. The Contracting Officer and/or GQAR will notify the contractor of any change in the inspection system status and of all reevaluations, whether or not a change in the inspection system is applicable.

(L.) The contractor's inspection system will be considered unreliable when the Government inspection results indicate nonconforming product and a significant difference is observed between the contractor and verification inspection results. The Contracting Officer and/or GQAR will notify the contractor of any change in the inspection system status and of all reevaluations, whether or not a change in the inspection system is applicable.

(M.) Standby inspection samples. The Government reserves the right to withdraw and hold, for inspection purposes, standby samples of components or finished products or both. Samples not used will be returned to the contractor.

(N.) The contractor may be liable for certain inspection costs for examination or tests (for end item or components, separately) performed by the Government.

(O.) When the contractor is liable for costs, as defined by this contract, the following will apply:

1. The GQAR will notify the contractor in writing when the contractor's inspection system is determined to be unreliable. A copy of this letter containing the reason(s) for such determination will be forwarded through the appropriate CQAE(s) to the PCO(s). During the period of unreliability, the GQAR will submit weekly reports of applicable inspection costs, including travel expenses, through the CQAE(s) to the PCO(s) for review and collection. Inspection costs will be computed at the rate of \$35.00 per hour. Hours will be computed based on total hours for all inspectors used to perform inspection (i.e., three inspectors at three hours each = nine hours total). Actual travel expenses will be determined in accordance with applicable travel regulations. Upon reestablishment of reliability the GQAR will notify the contractor in writing and submit a copy of this letter, along with a final report of examination costs, through the CQAE(s) to the PCO(s). The contractor may appeal the assessment of examination costs in writing to the PCO stating full justification to refuse these costs. The PCO will provide a written decision on the appeal to the contractor. Assessment of examination costs will be based upon the dates of GQAR notification to the contractor.

2. The contracting officer will notify the contractor in writing when the contractor's test system is determined to be unreliable. The GQAR and the DLA Troop Support Quality Assurance will report applicable costs/charges related to Government sampling and testing to the contracting officer for collection.

3. Costs devoted to actual travel time will be computed at the current authorized hourly rate, computed to the nearest quarterly hour increment.

4. Laboratory testing costs will be assessed at cost.

5. Warehouse cost. Warehouse labor costs as reported by destination will be assessed at cost.

6. Miscellaneous expenses. Related expenses which can be reasonably computed will be assessed at actual cost.

7. The contractor shall be liable for Government costs (i.e., man- hours, travel, per diem, administration, etc.) incurred as a result of the failure of the contractor to notify the inspection service of change(s) in production schedule. Costs will be computed and reported by the GQAR as detailed above.

E-5. FAR and Clauses

NOTE: Where “DD Form 250, Material Inspection Receiving Report (MIRR)”, “DD Form 250 (MIRR)”, “DD Form 250”, etc., is cited in the FAR and Clauses contained in this section, read the citation as “DD Form 250, Material Inspection Receiving Report (MIRR) or Wide Area Work Flow Receiving Report”, as applicable.

52.246-11 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below. [If more than one standard is listed, the offeror shall indicate its selection by checking the appropriate block.]

.....Title	Number	Date	Tailoring
<input checked="" type="checkbox"/> ...Quality Management Requirements Standard	ANSI/ISO/ASQ Q9001	2008	Note 1
<input type="checkbox"/>	_____	_____	_____

NOTE 1: At the election of the contractor, the contractor may select an industry standard equivalent to ANSI/ISO/ASQ Q9001; cite the Title, Number, and Date and Tailoring (if any) and check the appropriate box.

E-6 INSPECTION AND ACCEPTANCE BY THE GOVERNMENT

(a) Saving and reserving to the government all rights under the inspection provision, the following is applicable to this acquisition:

Inspection at: (X) Contractor's Plant, () Destination, AND

Acceptance at: (X) Contractor's Plant, () Destination, upon execution of Receiving Report in Wide Area Work Flow by the authorized government representative.

(b) Resultant awards or contract will contain the name and address of the office responsible for performance of inspection.

(c) Offeror shall indicate below the location where supplies will be inspected:

Plant: _____

Street: _____

City/State/Zip: _____

Technical Data for Humanitarian Ration (HDR)

PURPOSE

The purpose of these requirements is to enable the Government to procure a complete daily ration in one package sufficient to meet the Salient Characteristics and other provisions of this document. The ingredients, formulations, and components offered must not contain prohibited material as defined in this document. However, they must provide the established nutritional requirements as specified in the Salient Characteristics.

The Government shall have sole authority to determine acceptability of products offered. A Humanitarian Daily Ration composed of the following entrees and complementary components may be used by Offerors as a general guide to show the types of components that have been found to be acceptable in the past. This is in no way intended to limit selections of entrees or complementary components nor is it intended to excuse any of the requirements found in the Salient Characteristics of this document.

MEAL EXAMPLE

Lentil stew
Beans and rice
Fig bar
Fruit pastry
Shortbread cookie
Crackers
Peanut butter
Fruit flavored spread
Spoon
Insert cards

Accessory Components

Salt
Pepper
Pre-moistened towelette
Red cayenne pepper
Refined sugar
Book, plain paper safety matches
Plain paper napkin

NOTE: The Government reserves the right to determine acceptability of pictorial utilization instructions and/or other graphics as required elsewhere in this document. In the event of multiple awards, and at the option of the Government, in the instant procurement and in any future procurements, pictorial

utilization instructions and/or other graphics submitted in accordance with these requirements may be used by the Government, without attribution, restriction, or compensation to promote standardization of the Humanitarian Daily Ration.

Entree pouches, sleeves and meal bags are required to be in accordance with the referenced specifications. However, size and net weight of pouches/sleeves/meal bags is at the discretion of the offeror provided the same protection afforded by the packaging to the MRE ration is maintained for the humanitarian daily ration. Colors shall be as described in the packaging paragraphs in Section D of this document.

SECTION C

DESCRIPTION/SPECIFICATION

TECHNICAL DATA FOR HDR ASSEMBLY

C-1 DESCRIPTION/SPECIFICATION (ASSEMBLED HDR)

8970-01-375-0516

RATION, HUMANITARIAN, READY-TO-EAT, shelf stable; one meal per individual per day; 10 meals per case; animal products, animal by-products, ethyl alcohol, ethyl alcohol based ingredients prohibited; minimal amounts of dairy products permitted

C-2 SALIENT CHARECTERISTICS

The Humanitarian Daily Ration shall be comprised of the following salient characteristics:

A. All food components shall be ready to eat (no preparation necessary) and shall be palatable.

B. All entrée components shall be shelf stable and shall be commercially sterile. Commercially sterile wet-pack fruit shall not be offered as an entrée, but shall be identified as a commercially sterile component.

C. Each meal shall consist of at least two entrée components and enough food complementary components sufficient to provide the minimum nutritional requirements set forth in C-2, C.1. and C-2, C.2. Entrees and complementary components shall not contain “prohibited ingredients” (see Section C-2, C.3. for definition of prohibited ingredients). Entrees and complementary components may include dairy products; however, dairy amounts shall not exceed levels considered acceptable for lactose-intolerant individuals. Bread and grain products, as well as fortified cereals and biscuits, milk-based puddings, fruit rolls and fruit sauces, which can be easily digested by infants and children, are considered important components. Further examples of acceptable products are listed in paragraph C-2,

C.4. Each meal, including nonfood complementary components (see Section C-2, D.), shall be packaged in a meal bag (see Section D-1, C.).

1. Total calories per meal bag shall be not less than 2200.
2. Nutrient and micro nutrient levels shall meet the requirements in the tables below:

NUTRITION REQUIREMENTS

MACRONUTRIENT	GRAMS	CALORIES	PERCENT
Fat	67-73	600-660	27-30
Protein	55-70	220-286	10-13
Carbohydrates	NLT 345	NLT 1380	NLT 60

MICRONUTREINT	AMOUNT
Vitamin A	9800 mcg stabilized retinol equivalent
Vitamin C	60 mg
Vitamin D	10 mcg
Iron	12 mg
Calcium	1300 mg
Phosphorus	1300 mg
Folate	400 mcg
B ₁	1.5 mg
B ₁₂	2 mcg
B ₆	2 mg
B ₂	1.7 mg
Niacin	18 mg
Zinc	15 mg
Magnesium	350 mg
Calcium/Phosphorous Ratio	1:1

3. "Prohibited ingredients" is defined as the total exclusion of beef, pork, poultry, fish, or any other animal product or animal by-product from all ration components-or from use in the preparation or processing of all ration components, including animal-based cooking fats or oils, except that dairy products are permitted in amounts digestible by lactose-intolerant individuals. In addition, products containing ethyl alcohol or ingredients derived from or containing ethyl alcohol are prohibited.

4. Examples of acceptable food products include, but are not limited to, cereal, grain, legume, vegetable, or a combination of vegetable, grain, fruit, and nut-based products. Other acceptable

products include, but are not limited to, vegetable stews, potato/other nutritious tubers, soy products, pastas, lentils/other beans, wheat/rice/corn/other cereal products, pasta, fruit rolls, fruit/grain bars, wet pack/dried fruits, fortified biscuits, nuts/nut pastes, iodized salt and/or other spices.

D. Each meal bag shall include a 7-inch plastic spoon and a non-alcohol-based, pre-moistened towelette, containing an anti-microbial agent in a leak-proof package. The cleansing solution in the towelette shall comply with the Consumer Products Safety Act and shall not be hazardous or toxic under normal conditions of use.

E. The minimum shelf life of the assembled ration shall be 36 months at 80° F (27° C).

F. Each shipping container shall contain ten filled and sealed meal bags.

G. Offerors shall provide a minimum of two entree component varieties per shipping container. No entrees shall be duplicated within a meal bag. Description of entrees shall be limited to generic nomenclature of the product.

H. Packaging, labeling, packing, marking, and unitization of HDR components and assembled shipping cases shall be as specified in Section D of this document.

C-3 MISCELLANEOUS REQUIREMENTS

A. A nutritional profile of each meal and complete ingredient descriptions of each component shall be provided by the Offeror with the Offer*. All meal configurations and nutritional data shall be approved by the Natick Soldier Research Development and Engineering Center (NSRDEC) prior to any awards that may result from solicitation. Such submission shall not relieve successful Offerors from complying with any of the provisions of these requirements.

* A nutritional analysis shall be generated by the Genesis[®] R&D Food Analysis and Labeling Software (ESHA Research, Salem, OR, USA), version 9.0 or higher. The analysis shall be sent electronically to NSRDEC (attn.: Julie Smith (julie.e.smith30.civ@mail.mil)). A nutritional analysis for each product shall be provided with the award of the contract and each time there is a major formulation change. For each component, the Genesis food list files shall be provided for 100-gram portion sizes along with the food component files (for unique components entered into the contractor's database). The ingredients and the weight of each ingredient shall be included for each formulation. The nutrients as required under Section C-2 Salient Characteristics above are still required.

The nutrients included shall be as follows:

Weight (grams); Vitamin A (IU); Thiamin B₁ (mg); Riboflavin – Vitamin B₂ (mg); Niacin – vitamin B₃ (mg); Vitamin E (mg); Vitamin B₁₂ (mcg); Calcium (mg); Iron (mg); Folate (mcg); Vitamin C (mg); Phosphorus (mg); and Zinc (mg).

B. COMPLIANCE WITH APPLICABLE REGULATIONS

1. The Contractor shall comply with 21 CFR §110 “Current Good Manufacturing Practice in Manufacturing, Packaging, or Holding Human Food” and all applicable regulations. The Contractor shall insure all sub-contractors comply with all applicable regulations. In addition, the contractor is required to comply with all with all applicable parts of the Code of Federal Regulations. For example, for low-acid canned-food manufacturers, 21 CFR §110 and §113 are applicable.

2. All products shall comply with all applicable Federal and State mandatory requirements and regulations relating to the preparation, processing, thermoprocessing, packaging, labeling, packing, storage, and distribution of those products and with all applicable provisions of the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

C. INTEGRATED PEST MANAGEMENT PROGRAM REQUIREMENTS

The “Integrated Pest Management (IPM) Program Requirements for Operational Rations,” of April 2011 is applicable to this DLA Troop Support Subsistence contract, except as specifically exempted in Section E of this solicitation/contract. The IPM program shall be in existence prior to contract award. The IPM plan and the associated pesticide labels and MSDS documents are not to be submitted to DLA Troop Support, unless specifically requested by the Contracting Officer. The contractor shall have these documents available for on-site review during a Quality Systems Management Visit (QSMV) or Quality Systems Compliance Audit. Evidence of any insect, rodent or pest infestation discovered in contact with materials or equipment used in the production of or found in an end-item component or assembly lot shall be cause for rejection of the involved lot. DLA Troop Support shall be notified when such pest activity has been found and informed of the corrective actions taken. IPM program requirements are found on the DLA Troop Support website at: <http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx>

D. PRODUCT SANITARILY APPROVED SOURCE REQUIREMENTS

1. As required by 48 CFR §246.408-70, Subsistence; AR 40-657/NAVSUP 4355.4H/MCO P10110.31H, Veterinary/Medical Food Safety, Quality Assurance, and Laboratory Service; DLAR 4155.3, Inspection of Subsistence Supplies and Services; DLAD 52.246-9044, Sanitary Conditions; and as clarified by the Armed Forces Food Risk Evaluation Committee, all Operational Ration Food Components shall originate from establishments sanitarily approved for supplying the specific food component.

2. Sanitary approval is established by:

a. Listing in the Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement (Worldwide Directory) as established by the Army Public Health Center, or

b. An establishment specifically exempted from listing in the Worldwide Directory by AR 40-657/NAVSUP 4355.4H/MCO P10110.31H paragraph 2-15a(2)(a) through (i).

3. This requirement applies to all Operational Rations and all Government Furnished Materiel (GFM) and CFM Operational Ration food components.

4. Requests for inspection and Worldwide Directory listing by USAPHC will be routed through DLA Troop Support-FTR for coordination and action. Situations involving sole sources of supply, proprietary supply sources, and commercial Brand Name components will be evaluated directly by the Chief, DLA Troop Support-FTR, in coordination with the Chief, Approved Sources Division, USAPHC.

E. FOOD DEFENSE

1. The submission and implementation of a Food Defense Plan is required for this DLA Troop Support Subsistence contract. A Food Defense Plan shall be in existence prior to start of production. The plan shall address those areas of concern listed in the DLA troop Support Food Defense Checklist applicable to the contractor's facility/operation. To download a copy of the DLA Troop Support Food Defense Checklist, go to <http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx> or contact the applicable DLA Troop Support Contracting Officer or the Quality Audits & Food Defense Branch (DLA Troop Support-FTSB). Submit Food Defense Plans to the applicable DLA Troop Support Contracting Officer. The Quality Audits & Food Defense Branch (DLA Troop Support-FTSB) is the only DLA Troop Support office authorized to review and approve Food Defense Plans. All Food Defense Plans are maintained and secured by FTSB.

F. CONTRACTOR SANITATION PROGRAM

1. The "Contractor Sanitation Program – Operational Rations," of November 2015 is applicable to this DLA Troop Support Subsistence contract, except as specifically exempted in Section E of this solicitation/contract. The Contractor Sanitation Program shall be in existence prior to contract award. The program is not to be submitted to DLA Troop Support unless specifically requested by the applicable DLA Troop Support Contracting Officer. The contractor shall have the program available for on-site review during a QSMV or Quality Systems Compliance Audit. Evidence of any insect, rodent or pest infestation; foreign material; or contamination discovered in contact with an end-item component or assembly lot shall be cause for rejection of the involved lot. Contractor Sanitation Program requirements are found on the DLA Troop Support website at: <http://www.dla.mil/TroopSupport/Subsistence/FoodSafety/FoodQuality.aspx>

SECTION D

PACKAGING/LABELING/PACKING/MARKING/UNITIZATION

D-1 PACKAGING

A. Entrees shall be filled and sealed into heat-sealable flexible pouches in accordance with the processing and packaging requirements of MIL-PRF-44073, Packaging of Food in Flexible Pouches, Type I, except for size and color. Wet-pack fruit shall be filled into pouches and processed in accordance with MIL-PRF-44073, Packaging of Food in Flexible Pouches, Type I. Applesauce shall be packaged in a side or center spout pouch.

B. Complementary food components, other than wet-pack fruits, shall be filled and sealed into laminated packaging material containing gas and moisture barrier properties sufficient to provide the required shelf life. OXYGEN SCAVENGERS SHALL NOT BE USED. The color shall be 17178 of FED-STD-595. Complementary components such as, red pepper, pepper, salt, and sugar, if packaged in a separate accessory packet, may alternatively be filled and sealed into laminated packaging material containing gas and moisture barrier properties sufficient to provide the required shelf life. Matches (unprinted), and napkin may be included.

C. Entrees, food complementary components, and nonfood complementary components shall be packed into meal bags fabricated in accordance with the requirements of this contract's Assembly Contract Requirement (ACR) document, except for size, color, and labeling. The color shall be 32356 of FED-STD-595. Labeling shall be as stipulated herein.

D-2 LABELING

A. All labeling shall be in accordance with FDA requirements including nutritional facts labeling in accordance with the Nutritional Labeling and Education Act (NLEA). Maximum size of print for such required FDA labeling shall be the minimum size permitted by those requirements and with the requirements stated below.

B. Commercially sterile product's pouches shall be correctly and legibly labeled. Printing ink shall be permanent ink of black or other contrasting color and shall be free of carcinogenic elements. Prior to thermal processing of the pouches, the product name, lot number, filling equipment number and time stamp shall be applied. All other marking may be applied before or after thermal processing.

1. Labeling information shall include:

- a. Product name (not less than 1/8 inch high, commonly used abbreviations may be used).

(1) Pouch code includes: ^{1/}

- (a) Lot Number
- (b) Filling equipment identification number
- (c) Company code
- (d) Retort identification number and Retort cook number (Optional)
- (e) Time stamp (hour and minute of filling/sealing operation)

C. Commercially sterile product's pouches shall include a paperboard insert card labeled as follows: The paperboard insert cards shall be clearly printed on one of the panels with permanent black ink as follows:

- (a) Product name (7/32 to 9/32 inch-high block letters)
- (b) Ingredients
- (c) Net weight
- (d) Name and address of packer
- (e) "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA and USDA regulations.
- (f) "HUMANITARIAN DAILY RATION", "FOOD GIFT FROM THE PEOPLE OF THE UNITED STATES OF AMERICA" with pictorial utilization instructions

^{1/} The lot number shall be expressed as a four digit Julian code. The first digit shall indicate the year of production and the next three digits shall indicate the day of the year (Example, 14 February 2015 would be coded as 5045). The Julian code shall represent the day the product was packaged into the pouch and processed. Following the four digit Julian code, the other required code information shall be printed in the sequence as listed above.

D. Complimentary foods component packaging material shall be labeled with the Nutrition Facts label in accordance with the Nutrition Labeling and Education Act (NLEA) and all other applicable FDA regulations. In addition, a Meal Pictograph shall be printed on each package in accordance with Figure 1, attached. The Meal Pictograph outline and the words "UNITED STATES OF AMERICA" shall be in black. The Meal Pictograph is not required on condiments or spreads. Pictorial utilization instructions shall be included on each package. Alternatively, for components other than the entrees, an insert may be placed inside each meal bag showing pictorial utilization instructions for each component.

E. Meal bags shall be labeled: “HUMANITARIAN DAILY RATION”, “FOOD GIFT FROM THE PEOPLE OF THE UNITED STATES OF AMERICA”, and with the number of the meal packed inside. In addition, the meal bag shall be marked with a pictorial representation indicating that the bag should be opened and the contents eaten. The letters “USA” and a pictorial representation of the Flag of the United States of America shall also be prominently displayed. A graphic (for example, an arrow) that indicates the peel initiator point is required. A lot number ^{1/} shall be applied to each meal bag.

F. The following information shall also be printed prominently on each meal bag in English, French, and Spanish:

“THIS BAG CONTAINS ONE DAY’S COMPLETE FOOD REQUIREMENT FOR ONE PERSON.”

D-3 PACKING

A. It shall be the responsibility of the Assembly Contractor to ensure that all product for use in the HDR shipped to a unit packager and/or to the assembly point is packed such as to ensure product compliance with applicable end-item requirements.

B. Ten meal bags shall be snugly packed into V2s fiberboard shipping containers with liner in accordance with the requirements of this contract’s Assembly Contract Requirement (ACR) document, except for count, configuration of the meal bags within the shipping container, and references to Case A and Case B. Time-Temperature Indicator (TTI) labels shall be applied to the shipping containers in accordance with all the requirements and quality assurance provisions of ACR. Configuration of the meal bags within the shipping container shall be at the discretion of the contractor as determined by dimensions of filled meal bags but such packing shall be without crushing or otherwise causing damage to the meal bags or product.

D-4 MARKING

A. Marking of shipping containers containing product for use in the HDR when shipped to a unit packager and/or to the assembly point shall be marked in accordance with applicable Federal and/or State requirements, provided that a production lot number that indicates the production date of the contents is included. The lot number on the shipping container may be “in the clear”, a Julian date code, or such other code as must be explained in a letter to the Contracting Officer and to the applicable inspection personnel.

B. Assembled ration shipping containers shall be marked in accordance with DLA Troop Support FORM 3556 and the following: ^{2/}

NSN: 8970-01-375-0516

HUMANITARIAN DAILY RATIONS

NO. OF MEALS 10

WEIGHT CUBE_____

CONTRACT NO. LOT NO.____

NAME AND ADDRESS OF ASSEMBLER

DATE PACKED: _____

In addition to the above markings, a pictorial representation of the flag of the United States of America shall be printed on one end of the sleeve with the words “food gift from the people of the United States of America.”. One side of the shipping container shall be marked with “HUMANITARIAN DAILY RATIONS” in capital letters not less than 1-1/2 inches high and with a meal pictograph in accordance with Figure 1 attached. The dimensions shall be not less than 2-1/2 inches wide and 3-1/4 inches high and a one color process (black) may be used.

C. Unit loads of assembled rations shipping case shall be marked in accordance with DLA Troop Support FORM 3556, except the identification, contract data, and special markings shall not apply and, in lieu thereof, unit loads shall be marked on 2 adjoining sides as follows:

1. Gross Weight and Cube (including pallet base)
2. Number of shipping containers per load

2/ Contractor is responsible for applying weight and cube.

D-5 UNITIZATION

A. It shall be the responsibility of the Assembly Contractor to ensure that all product for use in the HDR shipped to a unit packager and/or to the assembly point are unitized or otherwise shipped so as to assure product compliance with applicable end-item requirements and to be in compliance with Federal and or/State regulatory requirements.

B. Wooden Pallets All pallets constructed of non-manufactured wood must be Heat Treated and Certified as such IAW requirements cited in DLA Troop Support Form 3507. “International Palletization/Dunnage Requirements”.

C. Assembled shipping containers shall be palletized and prepared in unit loads in accordance with type I, class B, requirements of DLA Troop Support Form 3507, except metallic strapping and/or edge protectors are prohibited. For illustration of a type I, class B, see Figure 2 of DLA Troop Support Form 3507).

D. Time-Temperature Indicator (TTI) labels shall be applied to the unit loads in accordance with all the requirements of and quality assurance provisions of the ACR.

E. Unit load height shall not exceed 44 inches.



Figure 1. Meal Pictograph

SECTION E

INSPECTION AND ACCEPTANCE

The provisions contained Section E – MRE Inspection and Acceptance apply to the Humanitarian Daily Ration, except as amended by specification requirements for Humanitarian Daily Ration, Section E – Inspection and Acceptance, below:

E-1 For Entrees and Components (including Packaging and Packing Materials):

A. Contractor is responsible for receipt inspection at assembly plant for all items to include, as a minimum, compliance with the applicable requirements.

E-2 For the Assembled Ration:

A. Inspection and acceptance shall be at origin (assembler),

B. The contractor will provide calorie, nutrient, and micronutrient counts upon request.

C. The Government reserves the right to perform laboratory testing to verify that all nutritional requirements are in compliance with contractual requirements.

D. In the event the Government determines the product to be unsatisfactory, it shall have the rights provided in the Supply Warranty Clause, cited elsewhere in the contract. A valid quality complaint affecting the serviceability of the product, resulting from this procurement, may be used as determination factor in future performance ratings.

E. The Higher Level Contract Quality Requirements (Quality Systems Plan), Quality Assurance Provision - Manufacturing Process Controls and In-Process Inspections (MPC), and Quality Assurance Provision - Statistical Process Controls Quality Assurance Provision (SPC) clauses are applicable for HDR assembly and commercially sterile component manufacturing. Offerors with existing QSP/MPC/SPC plans may reference these plans if they cover the proposed work on a resultant contract. However, prior to production the contractor shall establish and advise the DLA Troop Support-FTSB of any changes, especially process control points used in their contractor inspection system for HDR production that differs from current MRE plans. Production can commence upon notification by the Contracting Officer. DLA Troop Support shall be provided a copy of the changes.

F. The manufacturer of the commercially sterile entrees (subcontractor) is required to provide the assembler (prime contractor) with certification/verification that the entrees have completed and passed appropriate incubation testing.

G. In lieu of performing the examinations and tests cited in the Quality Assurance Provisions of ACR and section '4. Verification' for MIL-PRF-44073 (i.e. those examinations and tests not excepted in part or in whole by Sections E-3 and E-4, below), the contractor may offer a Certificate of Conformance (COC) as verification of conformance to the Quality Assurance Provisions of ACR, the provisions of section '4. Verification' of MIL-PR.F-44073, and traceability of finished product and components. The Government Quality Assurance Representative may accept the assemblers COC as verification of the examinations and tests contained in the Quality Assurance Provisions of ACR-M, the provisions of section '4. Verification' for MIL-PRE-44073, and the traceability requirements, except as noted in section E-3, and E-4. The Certificate of Conformance (CoC) shall accompany each shipment of assembled product. The CoC shall identify the lots in the shipment and shall contain a statement that the involved lots are in compliance with the requirements of this solicitation and contract.

E-3 Exception to paragraph E., C., (4) OF ACR

A. Applicable to HDR only, delete paragraph E., C., (4) Assembled meal bag examination of ACR and insert the following:

The Government shall perform inspection at origin in accordance with the following: Assembled meal bag examination for HDR. The filled and sealed meal bags shall be inspected for the defects listed in Table I. The lot size shall be expressed in bags. The sample unit shall be one filled and sealed meal bag. The inspection level shall be S-4 and the AQL expressed in terms of defects per hundred units shall be 2.5 for major defects and 6.5 for minor defects. A minimum of 50 samples shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot. The sample meal bags shall be selected from shipping containers which have been filled, sealed, sleeved, and strapped. The inspection sample shall contain a proportionate amount of each of the menu numbers.

NOTE Samples examined by the Government shall be separate samples from those examined by the contractor in performing the inspection requirements of the applicable QSP. See Paragraph E-2-e. above.

TABLE I: HDR Meal Bag and Component Bag Defects:

<u>Category</u>			<u>Defect</u>
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
1			Tear, hole, or puncture in commercially sterile pouch
2			Swollen pouch of commercially sterile item

101	Menu component missing or incorrect assortment for menu package
102	Foreign odor
103	Not clean - the meal bag or any of the outer packaging of its contents ^{1/}
104	Labeling missing, incorrect, or illegible (meal bag)
105	Labeling missing, incorrect, or illegible for commercially sterile component packaging
106	Tear, hole, puncture, or open seal in complementary component packaging ^{2/}
107	Crushed or broken cracker ^{3/}
108	Broken spoon
201	Meal bag labeling missing, incorrect, or illegible. ^{4/}
202	Tear, hole, open seal, or split in meal bag
203	Pictorial utilization instructions missing for commercially sterile and/or complementary components
204	Labeling (nomenclature & lot #) missing, incorrect or illegible for complementary components

1/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause package damage (i.e. glass, metal fillings, etc.), or generally detracts from the clean appearance of the package. The following examples shall NOT be scored as defects for unclean:

- a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.
- b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.
- c. Water spots.

d. Very thin film of grease, oil, or product residue which is discernible to touch, but is not readily discernible by visual examination.

2/ Starting at seal rim to form a continuous 1/16 inch seal completely closed and void of air gaps.

3/ Examination for crushed product shall be performed on closed component bags. A bag containing crushed, or broken crackers shall be indicated by any bag that contains a cracker less than the nominal dimension (minus 1/4 inch) in length or width (indicating crushing of the length or width); that has any depression (other than docker holes or serrations) when the bag is passed through the fingers while exerting sufficient finger grip pressure to feel the serrated areas (indicating crushing in thickness); that has movement of the cracker particles felt through the bag (indicating broken or crushed crackers).

4/ This includes the following: 1) "HUMANITARIAN DAILY RATION", 2)"FOOD GIFT FROM THE PEOPLE OF THE UNITED STATES OF AMERICA", 3) Number of the meal packed inside.

E-4. EXCEPTION TO PARAGRAPH E., E., (1) of ACR

For the purpose of acceptance at origin, paragraph E., E., (1) Shipping container and marking examination shall be verified by the assembler's certificate of conformance and by examination of the shipping containers for compliance with the marking requirements of DLA Troop Support FORM 3556 and additional requirements as given in Technical Data for Humanitarian Daily Ration, Section D, subsection D-4 Marking, using ANSI/ASQ Z1.4. The following sampling plan applies:

The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-2 and the AQL expressed in terms of defects per hundred units shall be 4.0 for major defects and 10.0 for total defects.

NOTE: For the purposes of COC verification and/or Warranty inspection by the Government, the provisions of paragraph E., E., (1) Shipping container and marking examination apply in full.

E-5. Traceability Requirements

The ration assembler shall maintain records identifying the menu components used in packing and assembling each end item lot. These records shall maintain traceability of components to the extent that a lot and contract number of a component can be traced to an assembled end item lot. The system should also enable the assembler to list component contract numbers and lots within a particular end item lot. The assembled end item lot, usually one day's production, shall be clearly identified on the exterior of each case. In addition, the ration assembler shall maintain records of when and where assembled end item lots for a particular assembly contract have been shipped. The ration assembler shall provide the AVI (Army Veterinary Inspector) with a copy of the lot traceability records prior to shipment of each

assembled lot. The following non-food items are exempt from traceability requirements: hand cleaner, matches, spoons and toilet tissue.

The purpose of the above is to maintain traceability of a component lot through the assembly operation, in depot storage and up to the customer's receipt of the HDR ration. This is necessary in the event of a recall/ALFOODACT for DLA Troop Support to isolate suspect product in the depot system and to notify customers of potentially hazardous product.

In addition to the manual system described above, the ration assembler shall input traceability data on a daily basis into the computerized program. The ration assembler will input all traceability data daily and provide a hard copy print out to veterinary personnel on a daily basis.

E-6. Traceability Examination

No finished product traceability examination is required. See E-2-G.