

**SECTION C**

The First Strike Ration® (FSR™) provides a special purpose operational ration for the individual during the first 72 hours of a mission.

**C-1 ITEM DESCRIPTION**

**ACR-F-08, FIRST STRIKE RATION® (FSR™) ASSEMBLY REQUIREMENTS**

**C-2 ASSEMBLY REQUIREMENTS**

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

TABLE I. Components

Component	Reference
<u>Entrees</u>	
Chicken Breast Fillets, Seasoned	<a href="#">A-A-20361</a>
Garlic and Herb Seasonings	Type I
Barbecue Sauce	Type II
Chicken Chunks, White, Cooked, Canned or in a Pouch, 7 oz. Pouch	<a href="#">A-A-20352</a> , Type VI
Filled Bakery Item	<a href="#">MIL-DTL-32221A</a>
Filled French Toast	Type I
Cinnamon Bun	Type II
Apple Turnover	Type III
Blueberry Turnover	Type IV
Filled Wrap	<a href="#">MIL-DTL-32347</a>
Barbecued Seasoned Pork	Type I
Mexican Style Beef	Type II
Salmon, Flexible Retort Pouch, Pink, Deep Skinned and Boneless, Other, Mango Chipotle, Regular Sodium	<a href="#">A-A-20158E</a> , Type B, Species IV, Style c, Packing media 3, Flavor 2, Sodium Level (a)
Sandwich, Breakfast, Shelf Stable, Bacon Cheddar	<a href="#">MIL-DTL-32223</a>
Sandwich, Shelf Stable	<a href="#">MIL-DTL-32141</a>
Nacho Flavored Beef	Type I
Pepperoni	Type II
Honey Barbecue Chicken	Type III
Honey Barbecue Beef	Type IV
Italian Style	Type V

TABLE I. Components - Continued

Component	Reference
Tuna, Flexible Pouches	<a href="#">A-A-20155D</a> , Type B,
Chunk, Light, Water, Lemon Pepper, Regular Salt	Form I, Color a, Packing Media 1, Flavor 1, Salt/Sodium Level (a)
Chunk, Light, Water, Sweet and Spicy Regular Salt	Form I, Color a, Packing Media 1, Flavor 3, Salt/Sodium Level (a)
Solid, White (Albacore), Water, Unflavored, Regular Salt, 3 ounce	Form II, Color b, Packing Media 1, Unflavored, Salt/Sodium Level (a)
<u>Starches and Soups</u>	
Bagel, Plain	<a href="#">MIL-DTL-32219</a> , Type I
Crackers, Fortified, Plain	<a href="#">PCR-C-037</a> , Type I
Snack Bread, Fortified	<a href="#">PCR-S-009C</a>
Wheat Snack Bread, Twin Pack	Type I, Style B
Spread Soup Mix	<a href="#">PCR-S-023</a>
Cheddar Potato with Artificial Bacon Bits	Type II
Tortillas	<a href="#">PCR-T-008</a>
<u>Fruits</u>	
Fruits, Wet Pack	<a href="#">PCR-F-002C</a>
Applesauce, Carbohydrate Enhanced, Sweetened, Regular Style, Style 2 or 3 spout pouch	Type VII
Applesauce, Carbohydrate Enhanced, Sweetened, Regular Style, Cinnamon, Style 2 or 3 spout pouch	Type IX
Fruits, Osmotically Dried	<a href="#">A-A-20299A</a>
Sliced Cranberries, Not Fortified	Type VII, Fortification a
Raisins, Not Fortified	Type IX, Fortification a

TABLE I. Components - Continued

Component	Reference
<u>Beverages</u>	
Beverage Bases (Powdered)	<a href="#">A-A-20098E</a>
Sweetened with Nutritive Sweetener, Ascorbic Acid and Maltodextrin, Flat Interlocking Closure Pouch	Type II, Formulation e, Design B
Orange, Lemon-Lime, Grape, Fruit Punch, Lemonade or Tropical Punch	Flavors 1, 4, 5, 7, 8 or 10
Chocolate Protein Drink	<a href="#">PCR-C-082</a>
Dairyshake Powder, Fortified with Calcium and Vitamin D, 70 g.	<a href="#">PCR-D-002A</a>
Vanilla or Strawberry Banana	Flavors I or IV
Flat Interlocking Closure Pouch	Design B
<u>Desserts and Snacks</u>	
Beef and Turkey Snacks, Cured	<a href="#">A-A-20298B</a>
Beef, Moist Cured/Kippered, Chopped and Formed, Strips	Variety A, Type II, Style a, Class 1 Package J
Teriyaki or Barbeque	Flavors (b) or (c)
Beef, Moist cured/Lactate, Natural Style, Nuggets	Variety A, Type III, Style b, Class 4
Cranberry	Flavor (g)
Turkey, Moist cured/Lactate, Natural Style, Nuggets	Variety B, Type III, Style b, Class 4
Smoked	Flavor (a)
Caffeinated Chocolate Pudding	<a href="#">PCR-C-081</a>
Style 2 or 3 Spout Pouch	
Cakes and Brownies, and Muffin Tops	<a href="#">PCR-C-007D</a>
Cake, Lemon Poppy Seed Pound Cake	Type I, Flavor 6
Candy and Chocolate Confections	<a href="#">A-A-20177E</a>
Caffeinated Mints, Round Tablets, Sugar Free	Type XII, Style B
Peppermint	Flavor 1
Cheese Spread, Cheddar; Fortified	<a href="#">PCR-C-039</a>
Plain or with Jalapeno Peppers	Type I or II
Dessert Bar	<a href="#">PCR-D-004</a>
Mocha, Peanut Butter or Chocolate Banana Nut	Flavors I, II or III
Energy Gel, Mixed Berry	<a href="#">PCR-E-018</a> , Flavor I
First Strike™ Bar, Mini	<a href="#">PCR-F-001</a> , Style B
Chocolate, Apple-Cinnamon, Cran-Raspberry or Mocha	Flavors I, II, III or V

TABLE I. Components - Continued

Component	Reference
Nut and Fruit Mix	<a href="#">PCR-N-003</a>
Nut and Raisins with Pan Coated Chocolate Disks	Type II
Nuts with Raw Sunflower Kernels and Infused Fruit	Type III
Nuts, Shelled, Roasted	<a href="#">A-A-20164D</a>
Almonds (Unblanched), Flavored (Smoked)	Type IX, Style C
Peanut Butter and Peanut Spread	<a href="#">A-A-20328A</a>
Peanut Butter, Regular, Smooth, Stabilized, Fortified	Style I, Class A, Texture 1, Type a, Fortification b
Snack Foods	<a href="#">A-A-20195D</a>
Pretzels, Bavarian or Hard, Rods, Sticks, Twists or Nuggets, Plain, Salted	Type II, Style A, B, C (Flavor 1), D (Flavor 1) or E (Flavor 1)
Filled Pretzels, Cheddar Cheese	Type II, Style F, Flavor 1
Baked Snack Crackers, Hot and Spicy Cheese	Type V, Flavor 2
Toasted Corn Kernels, Plain, Salted	Type VI, Flavor 1
Cheese Filled Crackers, Cheddar Cheese	Type VII, Flavor 1
Toaster Pastries	<a href="#">A-A-20211B</a>
Regular, Frosted, Brown Sugar Cinnamon, Without Sprinkles, Enriched	Type I, Style B, Flavor 3, Frosting Option (B), Grain Composition (1), Fortification b, Shape i, Servings (a)
Wheat Flour, Not Fortified, Rectangular, Single Serving Packet	
<u>Other Items</u>	
Barbecue Sauce, Plain/Regular, Without Fruit Purees	<a href="#">A-A-20335A</a> , Flavor I, Type B
Chewing Gum	<a href="#">A-A-20175D</a>
Tablet, Large, with Caffeine, Regular, Peppermint	Type I, Size C, Style (2), Class 1, Flavor a
Cinnamon	Flavor c
Disk, Regular, with Caffeine, Regular, Peppermint	Type VII, Size B, Style (2), Class 1, Flavor a
Cinnamon	Flavor c
Hot Sauce <u>2/</u>	<a href="#">A-A-20097F</a>
Extra Hot 4x, 1/8 fl. oz. pouch	Type II
Mayonnaise, Salad Dressing and Tartar Sauce	<a href="#">A-A-20140D</a>
Mayonnaise, Fat Free	Type I, Style C
Fork, Knife and Spoon, Picnic (Plastic)	<a href="#">A-A-3109B</a>
High Impact, Spoon, MRE, 7-inch (Brown)	Type IV, Item 13
Re-closeable Interlocking Plastic Bag	<u>1/</u>

1/ The plastic bag shall be 0.003” thick, beige, opaque, LDPE, minimum 10 inches wide by 12 inches long, with double track zippers.

2/ Hot sauce may be packaged in the subassembly/accessory packet or loose in the meal bag.

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

TABLE II. Accessory Components

Component	Reference	Acc. Pack
Chewing Gum, Tablet, Regular, Without Caffeine, Xylitol Sweetened, Peppermint or Cinnamon	<a href="#">A-A-20175D</a> Type I, Size B, Style (1), Class 3, Flavor a or c	A, B, C
<u>1/</u> Hand Cleaner (Pre-moistened Towelette), Unscented, Water Based	<a href="#">A-A-461B</a> , Type II, 2 towelettes per accessory pack	2 A, B, C
Matches, Safety	<a href="#">A-A-59489A</a> , Type I, Class B	A, B, C
Salt, Table, Iodized, 4 grams	<a href="#">NaCl Monograph</a>	A, B, C
Toilet Tissue, Institutional, Folded, One Ply, 4-1/2 by 4-1/2 inches	<a href="#">A-A-59594</a> , Style II, Type A, Sheet size b	A, B, C
Coffee, Soluble, Freeze Dried, Regular	<a href="#">A-A-20184B</a> , Type III, Style A, Pack 2	A
Creamer, Non-Dairy, Dry, Regular, Original	<a href="#">A-A-20043C</a> , Style I, Flavor A	A
Sugar, 1/7 ounce	<a href="#">A-A-20135D</a> , Type I, Style A	A
Beverage Base (Powdered) <u>1/</u> Sweetened with Non-Nutritive Sweetener, Lap or Fin Seal Pouch	<a href="#">A-A-20098E</a> Type III Design D	B
Lemonade, Non-fortified	Flavor 8, Formulation a	
Raspberry, Non-fortified	Flavor 13, Formulation a	

1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution

C. Contents. The contents of each meal are specified in table III.

TABLE III. Contents

<u>Menu #1</u>	<u>Menu #2</u>	<u>Menu #3</u>
Filled French Toast	Toaster Pastry	Cake, Lemon Poppy Pound
Sandwich, Breakfast Bac. Ch.	Sandwich, Italian Style	Sandwich, Honey BBQ Beef
Sandwich, Pepperoni	Chicken Chunks	Tuna, Lemon Pepper
Cheese Spread, Jalapeno	Tortillas	Tortillas
Snack Bread	Peanut Butter	Cheese Spread, Plain
Dessert Bar, Peanut Butter	Crackers	Crackers
First Strike™ Bar, Chocolate	Dessert Bar, Mocha	Dessert Bar,
Beef Snack, Teriyaki	First Strike™ Bar, Apple-	Chocolate Banana Nut
Beef Snack, Barbeque	Cinnamon	First Strike™ Bar, Mocha
Snack, Pretzels	Beef Snack, Teriyaki	First Strike™ Bar, Cran-
Fruit, Zapplesauce®, Cinnamon	Beef Snack, Barbeque	Raspberry
Nut Fruit Mix, Type III	Fruit, Zapplesauce®	Snack, Corn Kernels
Chocolate Protein Drink	Fruit, Dried, Cranberries	Fruit, Zapplesauce®
Beverage (1) <u>1/</u>	Nuts, Almonds	Nut Fruit Mix, Type III
Gum, Caffeine, Cinnamon	Beverages (2) <u>1/</u>	Beverages (2) <u>1/</u>
Hand Cleaner	Gum, Caffeine, Peppermint	Candy, Caffeinated Mints
Re-closeable Plastic Bag	BBQ Sauce	Mayonnaise
Spoon	Hot Sauce <u>2/</u>	Hot Sauce <u>2/</u>
Accessory Packet B	Hand Cleaner	Hand Cleaner
	Re-closeable Plastic Bag	Re-closeable Plastic Bag
	Spoon	Spoon
	Accessory Packet B	Accessory Packet A

1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution. When menu contains two beverages, they shall be different flavors.

2/ Hot sauce may be packaged in the subassembly/accessory packet or loose in the meal bag.

TABLE III. Contents - Continued

<u>Menu #4</u>	<u>Menu #5</u>	<u>Menu #6</u>
Filled Cinnamon Bun	Filled French Toast	Filled Apple Turnover
Filled Wrap, Mexican Beef	Toaster Pastry	Filled Wrap, BBQ Pork
Chicken, BBQ	Sandwich, BBQ Chicken	Chicken, Garlic and Herb
Cheese Spread, Jalapeno	Salmon, Mango Chipotle	Cheese Spread, Plain
Snack Bread	Peanut Butter, Plain	Bagel, Plain
Beef Snack, Cranberry Nugget	Crackers, Plain	Beef Snack, Cranberry Nugget
Dessert Bar, Peanut Butter	Turkey Snack	Snack, Filled Pretzel, Cheddar
First Strike™ Bar, Mocha	Snack, Corn Kernels	Dessert Bar, Mocha
Energy Gel, Mixed Berry	First Strike™ Bar, Cran-	First Strike™ Bar, Apple-
Snack, Filled Pretzel, Cheddar	Raspberry	Cinnamon
Fruit, Zapplesauce®	Energy Gel, Mixed Berry	Caffeinated Chocolate Pudding
Fruit, Raisins	Nut Fruit Mix, Type II	Fruit, Dried, Cranberries
Beverages (2) <u>1/</u>	Fruit, Zapplesauce®, Cinnamon	Dairyshake,
Gum, Caffeinated, Cinnamon	Chocolate Protein Drink	Strawberry Banana
Hot Sauce <u>2/</u>	Beverage (1) <u>1/</u>	Beverage (1) <u>1/</u>
Hand Cleaner	Candy, Caffeinated Mints	Gum, Caffeinated, Peppermint
Re-closeable Plastic Bag	Hand Cleaner	Hot Sauce <u>2/</u>
Spoon	Re-closeable Plastic Bag	Hand Cleaner
Accessory Packet A	Spoon	Re-closeable Plastic Bag
	Accessory Packet C	Spoon
		Accessory Packet C

1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution. When menu contains two beverages, they shall be different flavors.

2/ Hot sauce may be packaged in the subassembly/accessory packet or loose in the meal bag.

TABLE III. Contents - Continued

<u>Menu #7</u>	<u>Menu #8</u>	<u>Menu #9</u>
Filled Blueberry Turnover	Filled French Toast	Filled Cinnamon Bun
Sandwich, Beef Nacho	Sandwich, BBQ Chicken	Sandwich, Italian
Tuna, Sweet and Spicy	Tuna, Albacore	Chicken, Garlic and Herb
Spread, Cheddar Potato Bacon	Bagel, Plain	Tortillas
Crackers, Plain	Snack, Filled Cracker,	Spread, Cheddar Potato Bacon
Snack Bread	Cheddar	Crackers, Plain
Snack, Baked Cracker,	Beef Snack, Barbeque	Snack, Corn Kernels
Hot and Spicy Cheese	Beef Snack, Teriyaki	Beef Snack, Cranberry Nugget
Turkey Snack	Dessert Bar,	First Strike™ Bar, Cran-
First Strike™ Bar, Chocolate	Chocolate Banana Nut	Raspberry
First Strike™ Bar, Apple-	First Strike™ Bar, Mocha	Caffeinated Chocolate Pudding
Cinnamon	Fruit, Zapplesauce®, Cinnamon	Fruit, Dried, Raisins
Nut Fruit Mix, Type III	Nut Fruit Mix, Type II	Dairyshake, Vanilla
Fruit, Zapplesauce®	Dairyshake, Vanilla	Beverage (1) <u>1/</u>
Beverages (2) <u>1/</u>	Beverage (1) <u>1/</u>	Candy, Caffeinated Mints
Gum, Caffeinated, Cinnamon	Gum, Caffeinated,	Hand Cleaner
Mayonnaise	Peppermint	Re-closeable Plastic Bag
Hand Cleaner	Mayonnaise	Spoon
Re-closeable Plastic Bag	Hand Cleaner	Accessory Packet B
Spoon	Re-closeable Plastic Bag	
Accessory Packet A	Spoon	
	Accessory Packet A	

1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution. When menu contains two beverages, they shall be different flavors.

2/ Hot sauce may be packaged in the subassembly/accessory packet or loose in the meal bag.

## SECTION D

### D-1 PACKAGING

#### A. Components.

(1) Subassembly packet/accessory packet. The subassembly/accessory packet 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 of the filled and sealed pouch. 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 pouch 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. The pouch shall be made from polymeric films 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  $6.2 \text{ gm/m}^2/24\text{hrs}/90\%\text{rh}/100^\circ\text{F}$  when tested in accordance with ASTM F 372, Standard Test Method for Water Vapor Transmission Rate of Flexible Barrier Materials Using an Infrared Detection Technique; ASTM E 96, Standard Test Methods for Water Vapor Transmission of Materials or Method 3030 of FED-STD-101, Test Procedures for Packaging Materials. The exterior color of the pouch 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 (Ea) of 24–30 kcal/mole, be protected from ultraviolet radiation and have a shelf life of 730 days at 80°F as pivot point.

(3) Meal assembly packet. The meal assembly packet shall be of sufficient thickness and strength to contain the meal components without tearing or spillage of meal contents throughout assembly, packing and distribution.

B. Assembly.

(1) Subassembly/accessory packet assembly. One of each applicable component as described in table II shall be inserted in a pouch. If a subassembly is used, additional components may also be inserted in the pouch. For a preformed pouch, contents 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 pouch 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 assembly packet. **The packet shall be a single bag or pouch.** The meal assembly packet shall be shrink wrapped or heat-sealed (as applicable). If closed by heat seal, the seal shall be not less than 1/8 inch wide. The sealed assembly packet shall not show any evidence of foreign odor. The size of the finished meal assembly packet shall allow for the packing of nine meals into the box.

**Comment [Sj1]:** ES13-002 (DSCP-SS-13-08695), change 07, 9- Nov- 12; p.10, D-1,B(2), after first sentence on line 2, insert new sentence "The packet shall be a single bag or pouch".

**D-2 LABELING**

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

B. Meal assembly packet. Each packet shall be correctly and legibly labeled in accordance with the colors and design of the FIRST STRIKE RATION® label shown in figure 1. (NOTE: The registered label design of the U.S. Army Research, Development and Engineering Command, Natick Soldier Research, Development and Engineering Center is available electronically.) As an alternate labeling method, a pre-printed self-adhering 0.002 inch thick polyester label may be used.

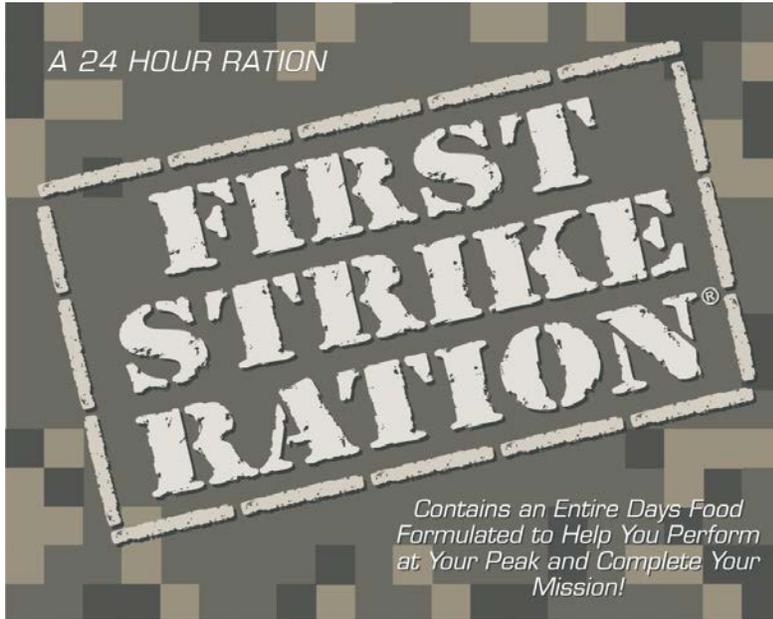


Figure 1. First Strike Ration® Label.

The following information shall also be printed on the packet:

- Contractor's name and address
- Appropriate menu number and contents

**D-3 PACKING**

A. Packing. Nine meals, one of each menu, shall be packed in a fiberboard box. The fiberboard box shall conform to RSC-L, of ASTM D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes, grade V2s of ASTM D 4727/D 4727M, 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. [The U.S. Army Research, Development & Engineering Command, Natick Soldier Research, Development and Engineering Center has found that solid fiberboard shipping container material consisting of two outer facings of 90# wet

strength linerboard and an inner ply of 69# linerboard meets 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 D 5118/D 5118M, 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 D 1974, 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 16-11/16 inches in length, 9-1/8 inches in width and 10-1/4 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 DSCP FORM 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. 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 DSCP 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  
U.S. GOVERNMENT PROPERTY – COMMERCIAL RESALE IS UNLAWFUL

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.

(2) One side panel of shipping container shall be marked "FIRST STRIKE RATION®" in letters not less than 1-1/4 inches high.

B. Unit loads. Unit loads shall be marked in accordance with DSCP FORM 3556.

## 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) Subassembly/accessory 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.

Characteristic	Requirement para	Test procedure
Color of subassembly/accessory pouch	D-1,A(1)	Visual evaluation
Water vapor transmission rate	D-1,A(1)	ASTM F 372, ASTM E 96 or Method 3030, FED-STD-101 <u>1/</u>

1/ ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials

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

FED-STD-101 Test Procedures for Packaging Materials

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

(3) Subassembly/accessory packet examination. The filled and sealed packets shall be examined for the defects listed in table IV. 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 IV. 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.

(4) Subassembly/accessory packet contents examination. The filled and sealed packets shall be examined for the defects listed in table V (this examination may be performed on the preformed pouches 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 V. Subassembly/accessory packet contents defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Component not clean. <u>1/</u>
	201	Missing or unserviceable component.
	202	Plastic shrink film missing from around screw cap of hot sauce bottle or hot sauce bottle leaking, as applicable.

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.

(5) Assembled meal packet examination. The filled and sealed meal packets shall be inspected 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 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 VI. Assembled meal packet defects

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
1			Tear or hole or open seal in sandwich, filled wrap, filled bakery item, cheese spread, salmon, tuna or chicken pouch.
2			Swollen sandwich, filled wrap, filled bakery item, cheese spread, salmon, tuna or chicken pouch.
	101		Menu component missing or incorrect assortment for menu.
	102		Meal packet not clean or outer packaging of contents not clean. <u>1/</u>
	103		Foreign odor.
	104		Labeling missing or incorrect or illegible.
	105		Swollen peanut butter or spread soup pouch.
	106		Tear or hole or open seal in component packages.
	107		Crushed or broken component. <u>2/</u>
	108		Broken spoon.
	201		Tear or hole or open seal in meal packet. <u>3/</u>
	202		Tear or hole or open seal in subassembly/accessory packet.
	203		Plastic shrink film missing from around screw cap of hot sauce bottle or hot sauce bottle leaking, as applicable.
	204		Re-closeable interlocking plastic bag not as specified.

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1/ 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.

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

3/ The holes provided in shrink films to allow venting of air to facilitate effective application of shrink wrap film are permitted and shall not be scored as defects. In addition a single vent hole in a preformed bag not greater than 1/4 inch diameter is allowed and shall not be scored a defect.

D. Methods of inspection.

(1) Seal testing. The pouch seals shall be tested for seal strength or internal pressure resistance as required in a or b, 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 F 88, 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 test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored 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 bottom seals 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 IV, 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. 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 F 88. 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 test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored 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 bottom seals 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 IV, 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.

E. Packing.

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

Category		Defect
Major	Minor	
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.
	201	Time-temperature indicator missing or not centrally located on panel.
	202	Time-temperature indicator 1/4-inch quiet zone not maintained.

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 a major defect.

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

**SECTION J REFERENCE DOCUMENTS**

Unless otherwise specified, the issues of these documents are those active on the date of the solicitation or contract

**DSCP FORMS**

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

**FEDERAL STANDARDS**

FED-STD-101	Test Procedures for Packaging Materials
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**NON-GOVERNMENTAL STANDARDS**

AMERICAN SOCIETY FOR QUALITY (ASQ) [www.asq.org](http://www.asq.org)

ANSI/ASQ Z1.4	Sampling Procedures and Tables for Inspection by Attributes
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ASTM INTERNATIONAL [www.astm.org](http://www.astm.org)

D 1974	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
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
E 96/E 96M	Standard Test Methods for Water Vapor Transmission of Materials
F 88	Standard Test Method for Seal Strength of Flexible Barrier Materials
F 372	Standard Test Method for Water Vapor Transmission Rate of Flexible Barrier Materials Using an Infrared Detection Technique

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## For DLA Website Posting

RDNS-CFF

9 November 2012

TO: DLA-FTRE

SUBJECT: ES13-002 (DSCP-SS-13-08695) Document Change, ACR-F-08, First Strike Ration® (FSR™), Assembly Contract Requirements Document

1. On 13 Aug 2012, Defense Logistics Agency-Troop Support awarded the 9-Menu First Strike Ration® (FSR™) assembly contract (FSR-08) to the vendor. The vendor is in the early planning stages of this assembly. On 21 Sept 2012, the vendor sent Natick an initial concept of a Horizontal Form Fill Seal (HFFS) Menu Bag they are proposing for use in FSR-08, stating that this proposed HFFS packaging design will facilitate manufacturability efficiency of their FSR-08 assembly operations.
2. On 23 Sep 2012, Natick contacted Defense Logistics Agency –Troop Support (DLA-Troop Support), requesting permission for Natick to present the vendor's HFFS Menu Bag proposal direct to the Services for their review/comment. DLA-Troop Support granted Natick permission to do as requested.
3. Natick has identified a few concerns regarding the vendor's proposed HFFS design. Their design features what Natick refers to as a 'saddlebag' configuration that packages the ration into two distinct formed pouches that are co-joined by the HFFS top web. Several distinct perceptions, issues or concerns emerge with this proposed 'saddlebag' design configuration as delivered: 1) increased packaging materials/battlefield waste; 2) increased cube with unorthodox dual pouch design; 3) potential for 'pouches' being separated, thereby delivering less than intended target nutrition with resultant caloric deficit and performance degradation; and 4) elevated importance/need for FSR familiarization/orientation training regarding mission use of new 'saddlebag' design.
4. It is critical that Soldiers (a) receive the entire packaged ration (i.e., that the two pouches are not intentionally or otherwise separated) and (b) understand that the package(s) constitute the full days supply of food intended to be consumed by grazing (thereby achieving the full nutritional performance benefit). Beyond the obvious operational advantages and distinctions that separate it from the MRE™ (e.g., the 50% reduction in weight and cube vs.

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the MRE™) the current FSR™ represents a significant logistics advantage that appeals to Soldiers. Even the perception that this is compromised can be problematic.

5. Natick sent the Services an email expressing our concerns regarding the vendor's proposed HFFS design, along with accompanying pictures of said 'saddlebag' configuration. Natick requested a reply with their concurrence/non-concurrence to the recommendation that the vendor's proposed HFFS packaging design not be allowed for use in FSR-08. Natick also provided the Services with follow-on information they requested on cube/weight comparisons between 1) the current FSR-07 and the vendor's 'saddlebag' configuration proposed for use in FSR-08 and 2) the current FSR-07 and the MRE™.

6. The following Service representatives were contact and their replies were:

Army– Concurs with Natick  
Marine Corps– No Reply  
SOF– No Reply

7. Request FEST make the following change to the Assembly Contract Requirements document, ACR-F-08, for the First Strike Ration® (FSR™) for use in all current, pending, and future contracts:

- a. Page 10, paragraph D-1, B, (2) Meal assembly, Line 2, following the first sentence, INSERT: "The packet shall be a single bag or pouch." The new paragraph to read as follows: "Each applicable component for each meal as described in table III shall be inserted in a meal assembly packet. The packet shall be a single bag or pouch. The meal assembly packet shall be shrink wrapped or heat sealed (as applicable). If closed by...the packing of nine meals into the box."