PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION D

D-1 PACKAGING

A. Packaging. The specified net weight of product (see section C of applicable product document) shall be packed in a barrier pouch as described below.

(1) Pouches. The pouch is intended to be used as a unit pack and as a rehydrating pouch that is used for consumption of the entree.

a. Pouch material. The pouches shall be fabricated from 0.0035 inch thick linear low density polyethylene sealant layer laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then bonded with 10 pound per ream low density polyethylene to 0.0006 inch thick biaxially oriented nylon. The three plies shall be laminated with the nylon on the exterior of the pouch. Alternatively, pouches may be fabricated from 0.0035 inch thick linear low density polyethylene sealant layer laminated or extrusion coated to 0.0006 inch thick biaxially oriented nylon, which is laminated to 0.00035 inch thick aluminum foil which is bonded to 0.0005 inch thick polyester. The linear low density polyethylene sealant film shall be heat sealable and capable of producing a fusion seal or shall be heat sealable and peelable. All tolerances for thickness of pouch materials shall be plus or minus 20 percent. The structure shall be approved for food contact with the addition of near boiling water. For Style A, Meal Cold Weather, the complete exterior surface of the pouch shall be colored white overall with a color in the range of 37778 through 37886 of FED-STD-595, Colors Used in Government Procurement. For Style B, Food Packet Long Range Patrol, the complete exterior surface of the pouch shall be uniformly colored in the range of 20219, 30219, 30279, 30313, 30324, or 30450 of FED-STD-595. The material shall show no evidence of delamination, degradation, or foreign odor when heat sealed or fabricated into pouches. The material shall be suitably formulated for food packaging and shall not impart an odor or flavor to the product.

b. Pouch construction. The pouch shall be a prefabricated, square bottom gusset style bag having inside dimensions of 3-3/8 inches (± 1/8 inch) for the face width, 2-9/16 inches (± 1/8 inch) for the gusset width, and 10 inches (± 1/8 inch) in length. The pouch shall be fabricated by heat sealing a fin seal down the length of the pouch and a bottom seal along the face of the pouch. Heat seals shall have a minimum width of ¼ inch. The fusion heat seal shall have an average seal strength of not less than 7 pounds per linear inch and no individual specimen shall have a seal strength of less than 6 pounds per linear inch when tested as specified in section E,E-5,A.(3)a. The peelable heat seal shall have an average seal strength of not less than 6 pounds per linear inch with no individual sample less than 5 pounds per linear inch and no individual sample greater than 14 pounds per linear inch when tested in accordance with section E,E-5,A.(3)a. Fusion heat sealed pouches shall be provided with appropriate tear nicks, notches or serrations to facilitate easy opening of the pouch. Suggested tear notch locations are provided in figure 1.

c. Pouch filling and sealing. The pouch shall be filled with the specified net weight of product (see section C of applicable product document). The filled pouches shall be sealed under a vacuum level of 23 inches of mercury. The sealed pouches shall show no evidence of material degradation, or delamination. The closure seal shall be free of foldover

wrinkles or entrapped matter that reduces the effective closure seal to less than 1/16 inch. Seals shall be free of impression or design on the seal

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION D CONTINUED

surface that would conceal or impair visual detection of seal defects. The fusion heat seal shall have an average seal strength of not less than 7 pounds per linear inch and no individual specimen shall have a seal strength of less than 6 pounds per linear inch when tested as specified in section E,E-5,A(3)b. The peelable heat seal shall have an average seal strength of not less than 6 pounds per linear inch with no individual sample less than 5 pounds per linear inch and no individual sample greater than 14 pounds per linear inch when tested in accordance with section E,E-5,A.(3)a or b. The filled pouch shall have a minimum 1/8 inch width heat seal.

D-2 LABELING

A. Pouches. Each pouch shall be clearly printed or stamped, in a manner that does not damage the pouch, with a food compatible, permanent black ink, or other dark, contrasting color, which is free carcinogenic elements or ingredients. The information shall be located on the body of the pouch opposite the fin seal, and not closer than 1/16 inch to any seal. If a non-contact type printer is used, the information may be located anywhere on the pouch (in one complete print), except the fin seal face and the closure seal area. The label shall contain the following information:

NAME OF ENTREE
ADD 16 OUNCES HOT WATER (~3/4 CANTEEN CUP) TO POUCH. STIR, WAIT ~10 MINUTES. HOT WATER MAY BE ADDED IN STAGES TO KEEP FOOD HOT
Ingredients
Date 1/
Net weight
Official establishment number
Contractor's name and address
“Nutrition Facts” label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA/USDA regulations

1/ Each pouch shall have the date of pack noted by using a four digit code beginning with the final digit of the current year followed by the three digit Julian day code. For example, 9 December 1997 would be coded as 7343. The Julian day code shall represent the day the product was packaged into the pouch.

B. Pouches with peelable seals shall be clearly printed, not more than ½ inch from the closure seal as follows:

PEELABLE SEAL (letters not less than 1/8 to 7/16 inch block letters)

D-3 PACKING

A. Packing for shipment to ration assembler. Not more than 35 pounds of pouched product shall be packed in layers in a fiberboard shipping container constructed in accordance with an appropriate style, class, variety, and grade of ASTM-D-5118, Standard Practice for Fabrication of Fiberboard Shipping Boxes. Each container shall be securely closed in accordance with an appropriate annex of ASTM-D-1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers. When metal fasteners are used in the box manufacturer’s joint or set-up, the fasteners on the

inside of the box shall be covered with tape to protect the contents from mechanical damage.

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION D CONTINUED

D-4 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DPSC Form 3556, Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION D CONTINUED

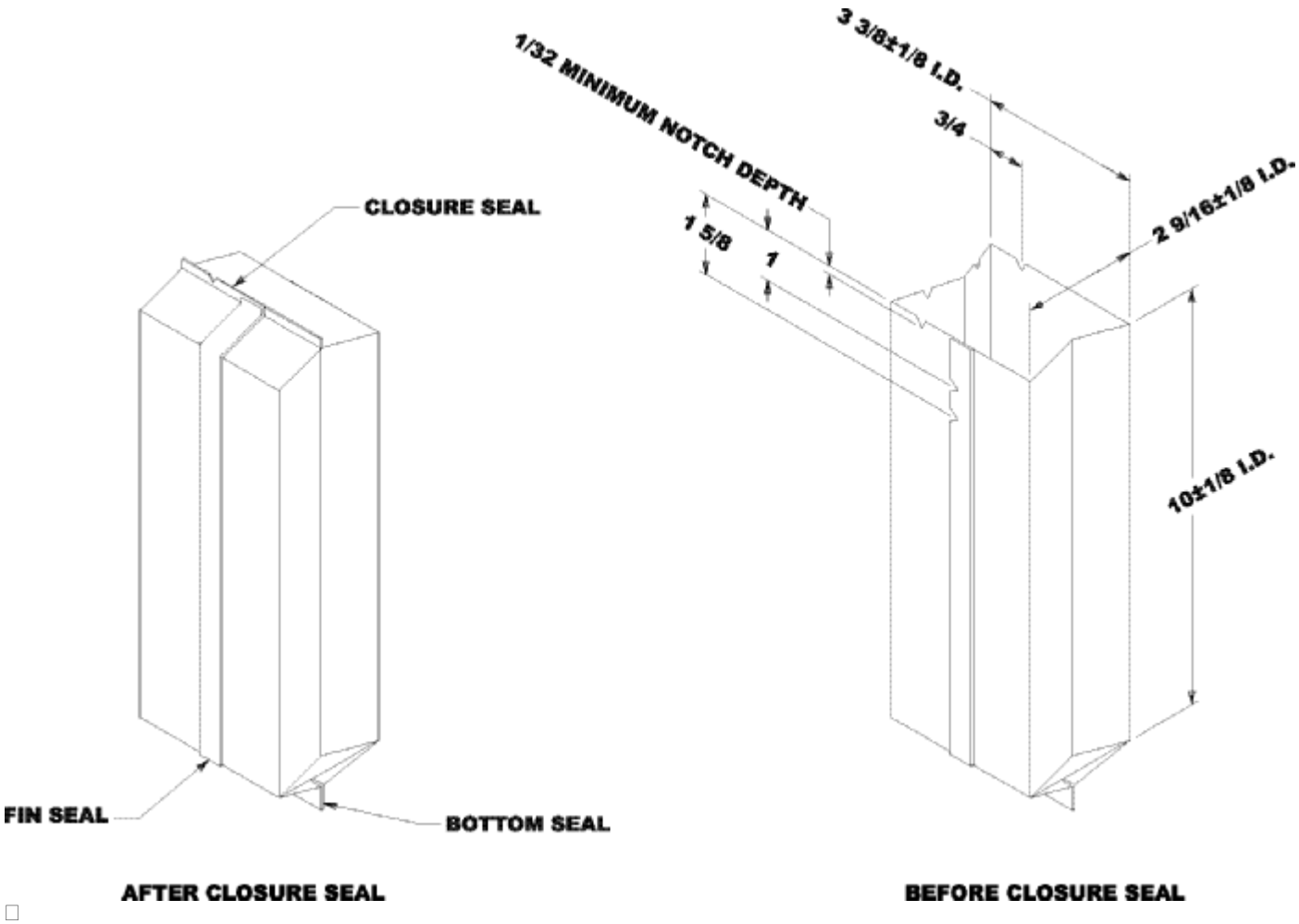

FIGURE 1

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION E INSPECTION AND ACCEPTANCE

E-5 PACKAGING AND PACKING MATERIALS

Definitions.

(1) 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.

(2) 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.

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are required.

A. Packaging.

(1) Pouch material certification. Material listed below may be accepted on the basis of a contractor's certification of conformance (CoC) to the indicated requirements. Compliance to 21 CFR substances in contact with near boiling water (< 212 °F) may be verified by CoC. In addition, compliance to the requirements for inside pouch dimensions and dimensions of manufacturer's seals may be verified by CoC.

Requirement	Requirement Paragraph	Test procedure
Thickness of films	D-1,A.(1)a	As specified in L-P-378 1/ except that for laminated material a machinists' micrometer may be used provided that its graduations and accuracy conform to the requirements of L-P-378
Aluminum foil thickness	D-1,A.(1)a	As specified in ASTM-B-479 2/
Laminated material identification and construction	D-1,A.(1)a	Laboratory evaluation
Color of laminated material	D-1,A.(1)a	Visual evaluation by FED-STD-595 3/

1/ FED L-P-378, Plastic Sheet and Strip, Thin Gauge, Polyolefin

2/ ASTM-B-479, Specification for Annealed Aluminum Foil For Flexible Barrier Application

3/ FED-STD-595, Colors Used in Government Procurement

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION E CONTINUED

(2) Filled and sealed pouch examination. The filled and sealed pouches shall be examined for the defects listed in table I. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be general inspection level I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 0.65 for major defects and 4.0 for minor defects.

TABLE I. Filled and sealed pouch defects 1/

Category		Defect
Major	Minor	
101		Tear, hole, or open seal.
102		Seal width less than 1/16 inch. 2/
103		Presence of delamination. 3/
104		Unclean pouch. 4/
105		Pouch has foreign odor.
106		Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. 5/
107		Any evidence of loss of vacuum. 6/
108		Peelable pouch does not open where indicated.
	201	Label smudges, is missing, incorrect, or illegible.
	202	Tear nick, notch or serrations missing or does not facilitate easy opening (applicable to fusion sealed pouches only).
	203	Seal width less than 1/8 inch but greater than 1/16 inch.
	204	Presence of delamination. 3/

1/ Any evidence of rodent or insect infestation shall be cause for rejection of the lot.

2/ The effective closure seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, from side seal to side seal that produces a hermetically sealed pouch.

3/ Delamination defect classification:

Major - Delamination of the outer ply in the pouch seal area that can be propagated to expose aluminum foil 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-counterclockwise directions. Care shall be exercised when flexing delaminated

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION E CONTINUED

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 classified as a major 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 defect. To determine if the laminated area is a defect, use the following procedure: Mark the outside edges of the delaminated area using a bold permanent marking pen. Open the pouch and remove the contents. Cut the pouch transversely not closer than 1/4 inch (± 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 classified as a major 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 defects.

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

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

b. Dried product which affects less than 1/8 of the total surface area of one pouch face (localized and aggregate).

c. Water spots.

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

6/ The filled and vacuum sealed pouches shall be visually examined for conformance to the vacuum requirement in section D,D-1,A.(1)c not less than 96 hours after filling and sealing. The sealed pouch shall continue to exhibit

tight adherence to the surface contours of the contents when a pulling force is applied at the top and bottom seal. This force shall be applied by holding the top and bottom seal between the thumb and forefinger of each hand, while simultaneously exerting a slight pull with both hands. Any evidence of loss of vacuum shall be classified a major defect.

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION E CONTINUED

(3) Seal testing. The pouch seals shall be tested for seal strength as required in a or b.

a. Unfilled preformed pouch seal testing. The seals of the unfilled preformed pouch 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 size shall be the number of pouches indicated by inspection level S-1. Three adjacent specimens shall be cut from the sealed side or end of each pouch in the sample. The average seal strength shall be calculated by averaging the three specimens cut from that side or end. When testing the end seal of the pouch, one of the three specimens shall be cut from the center of the seal incorporating the folded fin seal juncture of the heat seal. For fusion heat seals, any average seal strength of less than 7 pounds per linear inch or any test specimen with a seal strength of less than 6 pounds per linear inch shall be cause for rejection of the lot. For peelable heat seals, any average seal strength of less than 6 pounds per linear inch or any test specimen with seal strength of less than 5 pounds per linear inch or greater than 14 pounds per linear inch shall be cause for rejection of the lot.

b. Pouch closure seal testing. The closure seals of the pouches 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 size shall be the number of pouches indicated by inspection level S-1. For the closure seal on preformed bags, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. One of the specimens shall be cut from the center of the seal incorporating the folded fin seal juncture of the heat seal. 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. For fusion heat seals, any average seal strength of less than 7 pounds per linear inch or any test specimen with a seal strength of less than 6 pounds per linear inch shall be cause rejection of the lot. For peelable heat seals, any average seal strength of less than 6 pounds per linear inch or any test specimen with seal strength of less than 5 pounds per linear inch or greater than 14 pounds per linear inch shall be cause for rejection of the lot.

B. Packing.

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

Major: National stock number, item description, contract number,

name and address of producer, or date of pack missing, incorrect or illegible
Container not properly closed
Components missing, damaged, or not as specified

Minor: Other required markings missing, incorrect, or illegible
More than 35 pounds of product

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH

SECTION J REFERENCE DOCUMENTS

DPSC FORM

DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence, May 96

FEDERAL SPECIFICATION

L-P-378 - Plastic Sheet and Strip, Thin Gauge, Polyolefin

FEDERAL STANDARD

FED-STD-595 - Colors Used in Government Procurement

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

ANSI/ASQCZ1.4-1993 - Sampling Procedures and Tables for Inspection by Attributes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

B 479 - Specification for Annealed Aluminum Foil For Flexible Barrier Application

D 5118 - Standard Practice for Fabrication of Fiberboard Shipping Boxes

D 1974 - Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers

F 88 - Seal Strength of Flexible Barrier Materials

AOAC INTERNATIONAL

Official Methods of Analysis of the AOAC International

AMSSB-RCF—F(N)(Friel/4261) 15 May 2000

TO: DSCP-HSL(J. Woloszyn/4435) DDC00-078

SUBJECT: Document Changes to Packaging Requirements and Quality Assurance Provisions for Dehydrated Product in a Brick pack Pouch

1. Reference:

a. Memo from AMSSB-RCF—F(N)(Friel) to DSCP-HRAC(D.Arthur), dtd 10 May 2000, SUBJECT: Request for Engineering Support, Meal, Cold Weather, Bid Qualifications; SPO300-00-R-7066; Wornick; DSCP Case Number 1R-019-00 (ES00-093)

2. For procurement of Meal Cold Weather/Food Packet Long Range Patrol items, the U.S. Army Soldier and Biological Chemical Command, Soldier Systems Center requests that DSCP implement the changes cited below.

The following changes are provided to the subject document for all current, pending and future procurements until the document is formally amended or revised:

a. Section D-1, A. (1) c., line 3, after “under a”, insert “minimum”

DONALD A. HAMLIN
Team Leader
Food Engineering Services Team
Combat Feeding Program

ES REQUIRED MFriel

CF:
Alyward
Loveridge
Richards
Valvano
Sherman
Beward
Hoffman
Richardson
Salerno
Wagner
D. Arthur
Malason
Woloszyn

AMSSB-RCF—F(N)(Friel/4261) 9 November 2000

TO: DSCP-HRAC(Lowry/7773) ES01-008

SUBJECT: Request for Engineering Support; Packaging Requirements and Quality Assurance Provisions for Dehydrated Product in Brickpack Pouch; and Scrambled Eggs, PCR-E-001; DSCP# 1-R-033-00

1. Date received: 7 November 2000
Date due: ASAP
Date replied: 9 November 2000

2. Natick concurs with the request for changes to the subject documents based on information received from DSCP, the contractor and USDA.

3. Natick requests that for the current contract, a stick on label shall be used to correct the rehydration instructions. Since the brick package's closure seal is the peelable seal and the exact location is not easily controllable in production, a measurement from the top of the bag is more producible.

For filled bags the label shall be applied on a flat surface at the upper middle of the brick pouch such that the closure seal is not covered.

For unfilled bags the printed rehydration instructions shall be covered with the stick on label with the new information.

4. The following changes are provided to Packaging Requirements and Quality Assurance Provisions for Dehydrated Product in Brickpack Pouch for all current, pending and future procurements until the document is formally amended or revised:

a. Section D-2, A., make the following changes:

(1) line 9, between "NAME OF ENTRÉE" and "ADD 16 OUNCES---", insert "FOR MEAT ENTRES"

(2) line 11, insert new statement:
"FOR EGG ENTREES: ADD 8 OUNCES OF HOT WATER (~1/3 CANTEEN CUP) TO POUCH. STIR, WAIT ~5-10 MINUTES. HOT WATER MAY BE ADDED IN STAGES TO KEEP FOOD HOT."

b. Section D-2, B., line 1, delete "1/2 inch from the closure seal", insert "1-1/2 inch from the top of the unfilled pouch".

DONALD A. HAMLIN
Team Leader
Food Engineering Services Team
Combat Feeding Program

ES REQUIRED MFriel

CF:
Alyward
Richards
Valvano
Sherman
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M. Konrady
Hamlin
Hoffman
Beward
Wagner
H. Richardson
Salerno
M.Malason
D.Anthony
J.Lecollier
C.Galligan
D.Kavanagh
D.Arthur
A.Lowry