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# **TM-01-97 HOT MEAL™ EVALUATION**

**By: Staff Sergeant Richard Dew**

## **TECHNICAL MEMORANDUM**

**Submitted by  
Staff Sergeant Richard Dew  
Royal Canadian Mounted Police**

**October, 1997**

**NOTE: Further information  
about this report can be  
obtained by calling the  
CPRC information number  
(613) 996-6343**



## EXECUTIVE SUMMARY

The RCMP evaluated the HOT PACK™ self-heating meals for potential use in a variety of situations such as prisoner meals, meals for Emergency Response Teams, in rural areas where long patrols are conducted, marine and other applications.

HOT PACK™ meals were developed to provide easy, balanced, and nutritious hot meals. The meal is ready for consumption in 12 minutes; no stove, matches or fire is required. A selection of menus is available, and the cost per meal is reasonable.

For additional information, contact David Clark or Suzanne Paquette at Canland, 411, chemin du Lac Mercier, C.P. 450, Mont-Tremblant, Quebec JOT 1Z0. Their telephone number/fax number is (819) 425-7241.

## RESUME

La GRC a mis à l'essai les repas autochauffants HOT PACK MC pour voir si on ne pourrait pas les utiliser pour nourrir par exemple des prisonniers, des Groupes d'intervention d'urgence, des patrouilleurs qui font de longues patrouilles dans les zones rurales, des membres du Service de la marine.

Les repas HOT PACK MC sont faciles à préparer, équilibrés et nutritifs. Ils sont prêts en douze minutes, sans poêle-cuisinière, allumettes ou feu. Divers plats sont disponibles et leur coût est raisonnable.

Pour d'autres renseignements, prière de communiquer avec David Clark ou avec Suzanne Paquette au Canland, 411, chemin du Lac Mercier, B.P. 450, Mont-Tremblant, Quebec, JOT 1Z0. Numéro de téléphone ou de télécopieur : (819) 425-7241.

AD!!



A HOT MEAL

ANYWHERE!

ANYTIME!

**N**EW: HOT PACK, **self-heating** nutritious meals.

**E**ASY: NO FIRE, MATCHES OR STOVE NEEDED.

**P**RACTICAL: NO refrigeration required.

**S**IMPLE: Just activate heater.

**Q**UICK: A hot meal in 12 minutes.

**C**OMPLETE PACK: HEATER, MEAL, WATER SACHET, PLATE, FORK,  
KNIFE, SALT & PEPPER.

## HOTPACK® (TM) - Evaluation

Hotpack® samples were purchased by Contract Policing Branch and forwarded to Divisions for evaluation, during December 1995.

### EVALUATORS

The food packs were evaluated by personnel performing the following duties:

- Emergency Response Teams (ERT)
- Search and Rescue (SAR)
- Underwater Recovery Team (URT)
- Police Service Dog (PSD)
- Guard Room
- Isolated Posts
- Snowmobile
- General duty

### CURRENT SOURCE OF MEALS

The traditional source of meals for the above included:

- Box lunch
- Bag lunch/beans
- Cold sandwich
- Fruit
- Tea/coffee
- Army rations
- Commercial meals

### MEAL RATINGS

#### TURKEY STEW

Taste Rated:

Excellent	40%
Satisfactory	60%
Unsatisfactory	--

Appearance:

Excellent	30%
Satisfactory	60%
Unsatisfactory	10%

Quantity/Amount:

Excellent	10%
Sufficient	70%
Insufficient	20%

***SHEPHERD'S PIE***

Taste Rated:

Excellent	30%
Satisfactory	70%
Unsatisfactory	--

Appearance:

Excellent	10%
Satisfactory	90%
Unsatisfactory	--

Quantity/Amount:

Excellent	10%
Sufficient	<b>50%</b>
Insufficient	<b>40%</b>

***HASH BROWN AND SAUSAGE***

Taste Rated:

Excellent	29%
Satisfactory	71%
Unsatisfactory	--

Appearance:

Excellent	14%
Satisfactory	86%
Unsatisfactory	—

Quantity/Amount:

Excellent	14%
Sufficient	43%
Insufficient	43%

**OVERALL CONCEPT RATING**

Excellent	89%
Satisfactory	11%
Unsatisfactory	--

**POSITIVE COMMENTS**

- Hot and compact
- Easy to use
- Light weight
- Good flavour
- Well presented
- Convenient
- Viable source of heat, even after food consumed.
- Can be used anywhere/anytime/any weather.

**RECOMMENDATIONS RECEIVED FOR USE:**

- ERT, SAR, PSD
- Tactical Troops
- Surveillance personnel
- Remote operations
- Remote postings
- Prisoner meals
- Inland Water Patrols (iwt)
- Snowmachine Patrols

## COST OF CURRENT MEALS

Breakfast: \$5.00 to \$ 8.00  
Lunch: \$5.00 to \$10.00  
Dinner: \$5.00 to \$15.00

## OTHER COMMENTS

1. Packs could include more vegetables.  
**Comment:** The company is exploring adding additional vegetables.
2. Larger portions.  
**Comment:** Packs are identical to Canadian Army rations, ie: come off the same production line. Members could eat a second meal, or supplement the current meal with a chocolate bar, apple etc.
3. Food could be a little hotter.  
**Comment:** The company is considering adding a second or larger heater for users in extremely cold climates.
4. More variety in food choices.  
**Comment:** The company is exploring adding additional foods to their line.
5. Under extremely cold conditions it is difficult to put the meal pack in the heating pouch.  
**Comment:** The meal could be added to the pouch when it is known in advance the food will be required.
6. All crystals in the heater did not get wet, thus heater did not product maximum heat.  
**Comment:** Subsequent testing failed to verify this as a problem if directions for use were followed.
7. Hotpack® package could be smaller, like the military counterpart.  
**Commen :** The military food pack counterpart requires some form of traditional, external, heat. As a result, the military package can be smaller.

A NEW, Quick, Easy, Low Cost Solution for  
OVERNIGHT PRISONER FEEDING,  
SEARCH AND RESCUE &  
SPECIAL OPERATIONS!



A fortuitous meeting...

In March 1995, David Clark, President of Canland visited the Contracts Division of the R.C.M.P. in Ottawa to present a new quick, easy, low cost solution for overnight prisoner feeding and special operations to Staff Sergeant Richard Dew. This meeting was fortuitous to say the least.

Staff Sergeant Dew was very enthusiastic about the new concept giving excellent advice and counsel as well as encouragement.

Staff Sergeant Dew's commitment to promote any idea that might benefit his colleagues and heighten their performance is well-known. That coupled with his experience and involvement with other associations on an national scale created a source of information that was invaluable and helped in taking the decision of bringing HOT PACK,, self-heating meals to the market.

In England, a can is used,,

Originally, David Clark offered the Contracts' Department of the R.C.M.P. "a meal in a can" that had a heating device incorporated in its outer layer. This ingenious concept was from England and had been regularly used by many of the police departments in that country. **It** appeared to be very successful.

After discussions with Richard Dew, David knew that a market for this type of product existed but he needed to clear the way through Canadian Customs. Customs advised David to contact Agriculture and Agri-Food Canada for clearance since this was a meat product. Only then would he be able to obtain a permit to bring in the "meals in a can". This meeting took place and was enough to discourage any faint hearted person. What he was told was not what he wanted to hear. The Canadian Government would not allow the product to be imported into Canada. The regulations stipulate that all meat products coming into this country must have facilities approved by the Canadian government and this applies to both the slaughterhouses and the canning factories. The latter was not a problem but the former was.

## A stumbling block...

This was a definite stumbling block. Further investigation led David to consult a Canadian manufacturer of meals to see if the "can technique" could be used but with a Canadian meat content.

After many hours of research and discussion, it became obvious that although the can technology had proved itself over many years - it was now considered by those in the industry rather dated - eg. Cans are heavy, bulky, difficult to pack taking a lot of space for transport, can not be used if they freeze (because on defrosting the can can burst). Finally, the heating element between the 2 layers of the can was not ideal since it contained lime which is not considered "user friendly".

So what was the alternative? A pre-cooked meal sealed in an aluminum pouch which has all the attributes of the can plus many advantages was suggested. It is lightweight, less bulky, easier to store and transport, no problems with freezing (the flexible aluminum pouch lets it defrost and not burst). In addition, the aluminum foil pouch does not need to be refrigerated and can be stored at normal room temperatures with a minimum shelf-life of three years. Like a can, if it is not blown, it can be used.

So, a meal sealed in an aluminum pouch was the way to go but what about the heating element?

During Desert Storm, the Americans had begun to use a new style of meal heater. Previously, pouch meals had to be placed into hot water to heat them ready for eating. During intense covert operations and battle conditions behind enemy lines, fires could not be used. The new heater was invented and named a "Flameless Ration Heater". "FRH"s would be issued with the troops "Meals Ready to Eat, commonly known as MREs (meal in a pouch).

The heater is a brilliant invention. It consists of a plastic heater sleeve containing the heating element which is a combination of Magnesium Alloy powder, Sodium Chloride and a wetting agent. To activate the heater all the troops did was to place their unopened meal pouch inside the sleeve and pour a small amount of water into the sleeve. The meal was ready to eat in 15 minutes having reached a temperature of +60°.

After many hours of searching, David finally found the manufacturer of these heaters and following intensive discussions, they agreed to give Canland exclusive rights to market them in Canada.

Progress was being made at last!! NOT WITHOUT A NUMBER OF OTHER PROBLEMS TO OVERCOME.

The American heater and sleeve were not suited to the Canadian meal pouch being too small and not generating enough heat. A joint

development project was soon underway between the company of the heaters and Canland. Prototypes of the Canadian-style heater were designed and MARK II was born. MARK II proved to be even more effective and efficient than the original US heaters.

The new heaters raised the temperature of the meal to 80°C in just 12 minutes and after tests was found to completely defrost and heat a frozen meal to an acceptable level in 25 minutes.

**HOT PACK,, is introduced,-.**

After numerous prototypes were produced and evaluated, **HOT PACK,, self-heating meals** as we know them were introduced to the Canadian market on October 1st, 1995.

One **HOT PACK,, self-heating meal box** contains

1. A high energy-giving, pre-cooked meal in an aluminum pouch.
2. A heater sleeve with heater element sealed inside.
3. A 40 ml sachet (4 tbsp) of water to activate the heater element.
4. A knife, fork, pepper, salt and napkin set.
5. A polystyrene plate.

**HOT PACK,, self-heating meals** are perfectly packaged and complete in every aspect. **NO FIRE, MATCHES OR STOVE NEEDED. YOU CAN HAVE A HOT, NUTRITIOUS MEAL - ANYWHERE! ANYTIME!**

**HOT PACK,,** contains a DELICIOUS PRE-COOKED MEAL THAT CAN BE STORED AT ROOM TEMPERATURE WITH A LONG SHELF-LIFE (**IN MOST CASES 3 YEARS**). SIMPLY ADD WATER TO THE HEATER SLEEVE TO ACTIVATE AND YOU HAVE A HOT, NUTRITIOUS MEAL IN JUST 12 MINUTES.

**HOT PACK,, self-heating meals** were introduced to R.C.M.P. personnel at the Search & Rescue meeting in Kelowna last October. They were viewed by many as being an outstanding new concept for SAR emergency feeding and use by ERT, URT, MARINE and DOG UNITS.

**Three delicious menus are available:**

**SHEPHERD'S PIE** - Evenly roasted pure lean ground beef, mixed with **crispy** corn kernels and diced potatoes seasoned with a blend of fine spices and herbs.

TURKEY & VEGETABLE STEW - A mouth-watering mixture of turkey chunks, fresh potatoes, carrots, peas and spices in a gourmet sauce.

SAUSAGE & HASH BROWNS - A breakfast menu of pork sausages cooked the old-fashioned way accompanied by a handful of diced home fried potatoes.

Budgeting made easy:

The cost of HOT PACK<sup>®</sup> self-heating **meals** is only \$4.95 per **meal**.

Not only is the cost low, but it also allows you to establish a food budget within controllable parameters.

1 CASE (12 individual HOT PACK,, self-heating meals) + \$59.40 + shipping & handling.

For further information, please contact

CANLAND  
411, **chemin du Lac Mercier**  
C.P. 450  
**Mont-Tremblant (Québec)**  
JOT 1Z0

**Tel/Fax (819) 425-7241**

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Prepared by: Suzanne Paquette / David Clark



## OFF THE PRESS



## A FIRST IN CANADA !

HOT PACK<sup>TM</sup> self-heating meals were launched in Canada on

October 1, 1995

and introduced to Search & Rescue during the North American SAR EXPO '95 which was held in Kelowna on October 13-21.

HOT PACK, self-heating meals offer

A NEW FEEDING CONCEPT for  
SAR, TACTICAL & MARINE OPERATIONS!

Enjoy a Hot, Nutritious Meal ... ANYWHERE! ANYTIME!

in just 12 MINUTES.

### INCIDENTS...

- CALL # 1: A hiker is reported missing!  
Last seen 10 hours ago in a remote, densely forested area.  
It is 4 pm, 2°C and raining.
- CALL # 2: A boat has capsized.  
It is bitterly cold.  
Divers are called to assist.

CALL # 3: Skiers are in trouble.  
There has been an avalanche.  
The dog team is required.

CALL # 4: A plane has crashed In the mountains.  
An helicopter is requested by the SAR Team  
Commander.

CALL # 5: A forest fire has been reported. Campers appear to  
be trapped.  
A crew is sent out to investigate.

All of the situations above have a common problem...

"HOW DO YOU FEED YOUR TEAM AND KEEP THEM AT OPTIMUM PERFORMANCE".

## A RECOMMENDATION...

Every ERT, URT, MARINE UNIT and DOG TEAM should have a stock of HOT PACK, self-heating meals readily available.

WHY? Because you never know how long your team will be out and therefore need feeding. HOT PACK, self-heating meals can give you the peace of mind in knowing that your team can have a low cost, hot, nutritious meal when needed - ANYWHERE! ANYTIME!

## 6 HOT POINTS -

- \*\*\* A hot meal when needed can improve performance and morale.
- \*\*\* Can be used ANYTIME! ANYWHERE! in an emergency situation.
- \*\*\* Easy to carry - weighs less than 300 g.
- \*\*\* Long shelf-life - no outdated stock.
- \*\*\* High energy food content.
- \*\*\* Tasty meals at low cost.
- \*\*\* Three delicious menus to choose from.

## A CHOICE:

**SHEPHERD'S PIE** - Evenly roasted pure lean ground beef, mixed with crispy corn kernels and diced potatoes seasoned with a blend of fine spices and herbs.

**TURKEY & VEGETABLE STEW** - L mouth-watering mixture of turkey chunks, fresh potatoes, carrots, peas and ● plc.\* In . gourmet sause.

**SAUSAGE & HASH BROWNS** - A breakfast menu of pork ~~sausages~~ cooked the old-fashioned way accompanied by a handful of diced home fried potatoes.

**ORDERS:** Minimum quantity of 1 case (12 meals of 1 recipe).

**COST:** \$59.40/case (\$4.95/meal) + SHIPPING & HANDLING.

## FOR MORE INFORMATION:

CANLAND  
411, Chemin du Lac Mercier  
C.P. 450  
Mont-Tremblant (Québec)  
JOT 1Z0

TEL/FAX: (819) 425-7241

Prepared by Suzanne Paquette/David Clark

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## HOT PACK™ self-heating meals offer:

A Quick, Easy, Low Cost Solution for  
Overnight Prisoner Feeding and  
Special Operations.

### HOT PACK,, self-heating meals will provide:

- ⊙ A balanced, nutritious hot meal.
- ⊙ Simply activate the heater and your meal is ready in 12 minutes.
- ⊙ No stove, matches or fire needed.
- ⊙ Can be eaten ANYTIME! ANYWHERE!
- 3 Selection of menus.
- ⊙ Low cost \$4.95\* per menu.
- ⊙ Stored at normal room temperatures.

**HOT PACK,, self-heating meals WILL. SAVE TIME AND MONEY,**

\*\* Hot food is always readily available / no staff time needed or wasted providing take home-style meals.

\*\* **CONVENIENT & COST EFFECTIVE** in the following areas:

~~~ Overnight prisoner feeding in police stations.  
~~~ Rural area long distance patrolling (cars, vans, snowmobiles, patrol boats).  
~~~ Police/Emergency response teams.  
~~~ Covert operation feeding.  
~~~ Search & Rescue.

\*\* A hot meal when needed can **IMPROVE PERFORMANCE AND MORALE.**

\*\* Not affected by extremes in temperatures.

\*\* Long lasting shelf-life / no outdated stock.

**Three delicious menus are available:**

**SHEPHERD'S PIE** - Evenly roasted pure lean ground beef. mixed with crispy corn kernels and diced potatoes seasoned with a blend of fine spices and herbs.

**TURKEY & VEGETABLE STEW** - A mouth-watering mixture of turkey chunks, fresh potatoes, carrots, peas and spices in a gourmet sauce.

**SAUSAGE & HASH BROWNS** - A breakfast menu of pork sausages cooked the old-fashioned way accompanied by a handful of diced home fried potatoes.

ORDERS: Each case contains 12 individual Hot Pack, self-heating meals of one recipe.

COST: \$59.40 + SHIPPING & HANDLING.

FOR MORE INFORMATION:

David Clark / Suzanne Paquette  
Canland  
411, chemin du Lac Mercier  
C.P. 450  
Mont-Tremblant, Quebec JOT 1Z0

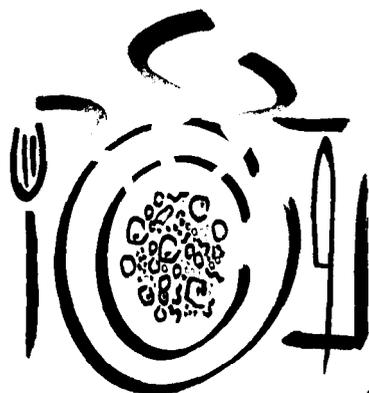
TEL/FAX: 1 819 425 7241

\* Prices subject to change without notice.

# HOT PACK™

Self-Heating Nutritious Meals

INDIVIDUAL SERVING



## Turkey & Veggie Stew

A mouth-watering mixture of turkey chunks, fresh potatoes, carrots, peas and spices in a gourmet sauce.

◆◆◆◆ PRODUCT OF CANADA ◆◆◆◆

## A HOT MEAL

on the go!  
Anywhere  
Anytime

NO  
matches

NO  
fire

NO  
stove

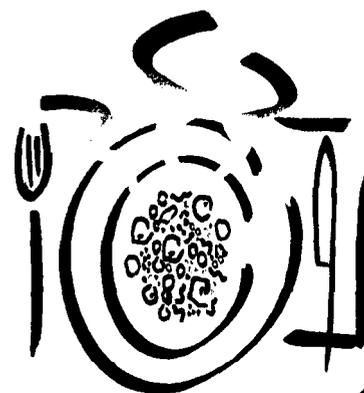
NO  
refrigeration  
needed

**SIMPLE!**  
Just add water to  
Heater  
Sleeve

# HOT PACK™

Repas nutritifs avec source de chaleur intégrée

PORTION INDIVIDUELLE



## Ragout de dinde et légumes

Un mélange appétissant de dinde en cube, pommes de terre fraîches, carottes, pois et épices servi dans une sauce alléchante.

◆◆◆◆ PRODUIT DU CANADA ◆◆◆◆

## TOUT CE QU'IL FAUT:

Source de chaleur  
Repas alléchant  
Sâchet d'eau (40 ml)  
Assiette/Fourchette  
Serviette  
Sel/Poivre

Prêt en  
**12**  
minutes

240g

de M.S.O.

## UN REPAS CHAUD

pour la saison d'hiver!  
N'importe où  
N'importe quand

pas besoin d'allumettes  
d'ajout de feu

de pain  
de viande

**FACILE!**  
Verser l'eau  
dans le sachet  
de source de chaleur