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- (2) Mr. Michael G. Cernak
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- (2) Mr. Roger Goulet
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SOLDIER SYSTEMS COMMAND

NEWS FROM THE SOLDIER SYSTEMS COMMAND/ U.S. ARMY NATICK RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (SSCOM(NRDEC))

SSCOM (NRDEC) SUPPORTS FORCE XXI WARFIGHTING EXPERIMENT WITH FIELD FEEDING EQUIPMENT

The U.S. Army Soldier Systems Command's Natick Research Development and Engineering Center (SSCOM(NRDEC)) recently participated in an Advanced Warfighting Experiment (AWE) held at the National Training Center (NTC), Fort Irwin California. During this highly successful AWE, future capabilities the Army will have for preparing rations in the field were demonstrated. From 5 March to 4 April 1997 SSCOM(NRDEC) provided a prototype Containerized Kitchen (CK) outfitted with Modern Burner Units (MBU), and an Automatic Dishwashing System (ADS) developed by SSCOM(NRDEC) for the Air Force, to the 11th Armored Cavalry Regiment (ACR) (OPFOR) for operational and life support during the month long exercise. The OPFOR is the opposing force for war games against an experimental force. The purpose of the AWE was for this experimental force to evaluate emerging technology proposed for integration into the Army.

The request for assistance from the 11th ACR to provide field services to the more than 1,000 augmentees taking part in the AWE was welcomed as a rare opportunity to gain valuable user and operator feedback on the latest developments in field services under harsh field conditions. An SSCOM support team accompanied the equipment to promote the command, provide technical support and gather user feedback during the entire exercise.

The CK and ADS were deployed at Camp Thunderhorse, an area at Ft. Irwin. These systems were put to use in serving an average of 500-600 soldiers per meal. Besides field service equipment, soldiers at all levels had the opportunity to experience the latest in field rations. SSCOM arranged for the shipment of 61,000 cases of the new Meal, Ready-to-Eat (MRE) XVI to support the entire AWE rotation. By all accounts, soldier and leader alike, the latest ration was a resounding success.

One of the greatest benefits realized by SSCOM is the exposure gained not only across the Army, but U.S. and foreign services alike. Without exception, visitors were impressed with the advancements

made in the areas of kitchens, burners, and field sanitation. The Commanding General of NTC, Brigadier General William Wallace, referred to the SSCOM participation as "A zero defect operation." In addition to promoting the command, the exercise afforded SSCOM engineers and technicians the opportunity to test current designs and incorporate user input by making on-site modifications to prototypes with the benefit of instant feedback. In several instances, the additional testing resulted in system design modifications that will dramatically influence future testing and production costs.

Soldiers enjoyed high quality meals over a sustained period that most have never before experienced in a field environment. Additionally, the MBUs offered much needed safety and efficiency improvements in food service operations. Soldiers operating the CK saved an average of 45-60 minutes each meal in preparation time.

Please contact David Carney, (508) 233-4105 for further details of military field feeding systems.

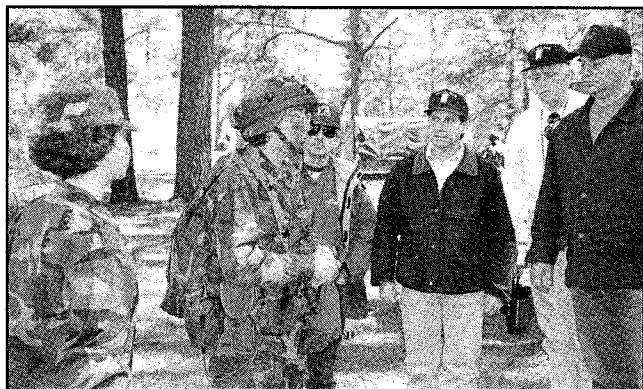
"TALES FROM THE CR-IPT"

On 21-22 February 1997, a Combat Ration-Integrated Product Team (CR-IPT), which included nine of the Research and Development Associates (R&DA) along with Brian Hill and Peter Sherman of the U.S. Army Soldier Systems Command's Natick Research, Development and Engineering Center visited the Joint Readiness Training Center at Fort Polk, LA. Jim Fagan, Brian Hill and Keith Schroeder (AMC Science Advisor assigned to Fort Polk) were instrumental in setting up this visit. The purpose of the visit was to bring the ration consumers and the producers together to obtain face-to-face feedback from the soldiers on their impressions and suggestions on current operational combat rations and to familiarize the manufacturers with the challenges and actual field conditions experienced by soldiers under simulated but highly realistic battlefield conditions. The visit was hosted by the 142nd Corps Support Battalion (CSB) of Fort Polk's Warrior Brigade. The R&DA members who made up the CR-IPT were: Mary Anne Jackson of My Own Meals, Inc.; John Wiginton and John McQuay of The Wornick Co.; Fred Johnson of Thermo Pac, Inc.; Lonnie Thompson of SOPAKCO, Inc.; Henry (Bud) Strassheim, III of LAND

O'FROST, Inc.; Richard (Pete) Cota of COUNTRY ROADS RV & MARINE; Michael Grant of The Chinet Company and Alan Koerber of AMERQUAL Foods.

deployed during Operations Desert Shield/Storm. Team members spoke to the soldiers as they sat and ate their MRE's.

the life of the item, and/or improve reliability, maintainability and supportability.



On 22 February 1997, the CR-IPT ate breakfast at the Enlisted Dining Facility before going to the JRTC Command Conference where they received the JRTC and Fort Polk Command Briefings. The

At the completion of the FTX visit, the Team was transported to the Military Operations in an Urban Terrain Training Facility at Fort Polk, where they received a briefing and participated in a walking tour of the mock city.

On the evening of 22 February 1997, twenty soldiers and officers of the Warrior Brigade were invited to a working dinner sponsored by the R&DA to go over the day's events and to learn about items currently in development. All participants agreed that the visit was a demonstrated success and that it may have served as the beginning of a process which can have tremendous beneficial impacts on the soldier and the combat ration producer community.

Both initiatives offer significant merit for possible future enhancements to Operational Rations. The High Barrier Non-Foil Primary Packaging System proposal seeks to eliminate foil-based packaging materials in Meal, Ready-to-Eat (MRE) components as well as develop a high barrier menu bag secondary packaging system. Expected benefits include a net decrease in cost of ration packaging, an increased use of commercial non-foil packaging materials, improved reliability, reduced battlefield waste, increased use of brand name packaging and potential for expanded military use of newly developed low barrier biodegradable packaging materials. Increased acceptance of new ration items by the soldier may be achievable through increased commercial/brand name recognition.



Team was then transported to the training site where they were given an in-briefing by the 142nd CSB Commanding Officer. After the briefing the Team deployed into the field to witness a Field Training Exercise

A more comprehensive report on the CR-IPT visit to Fort Polk will be included in the 51st Annual Meeting and Exposition Conference and Activities Report.

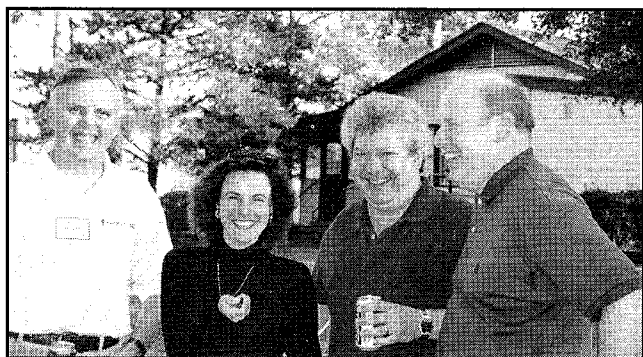
Point of Contact is Brian Hill, (508) 233-4103.

Under the Nonflammable Ration Heater initiative, SSCOM(NRDEC) will configure the new NRH to replace the current Flameless Ration Heater. The new heater, which was successfully completed under an in-house R&D program that leveraged a Phase II Small Business Innovative Research (SBIR) contract, was originally intended to provide improved safety as it produces no hydrogen by-products. The NRH utilizes the heating potential of hydrating and neutralizing compressed powders to produce a heater which is safe, stable, and capable of unrestricted operation. The end products of the heater are also non-hazardous and environmentally safe for disposal. This R&D effort resulted in an item which met all identified performance requirements and was clearly demonstrated as an effective, improved, lower cost alternative to the Flameless Ration Heater (FRH) which is the standard heater currently used with the MRE.

OPERATIONS AND SUPPORT COST REDUCTION (OSCR) INITIATIVES

In March 1997, the Sustainability Directorate (SusD) of the U.S. Army Soldier Systems Command's Natick Research, Development and Engineering Center (SSCOM(NRDEC)) was notified that two SusD Operations and Support Cost Reduction (OSCR) proposals entitled "High Barrier Non-Foil Primary Packaging System" and "Nonflammable Ration Heater (NRH)" were approved and funded by the HQ, U.S. Army Materiel Command in excess of \$1 million dollars. This marks the first ever OSCR initiatives approved for Natick RD&E Center and SSCOM.

These OSCR initiatives are significant not only as a first in an area of increasing importance to the DoD, namely to reduce O&S costs, but also for the added funding to enable aggressive pursuit of programs which might otherwise have not been possible. Total projected dollar net benefits of these two initiatives is in excess of \$30 million dollars over a 10 year economic life. These efforts stand out as evidence to the successful and dedicated teaming of individual contributors both within the RDEC, the Command and industry to ensure effective visibility of the effort, solid technical merit and feasibility of the work, benefit to the soldier, and clear and convincing supporting analysis demonstrating the return on investment to the DoD.



"R&DA Warriors at Work"

(FTX). While in the field, Team members were given opportunities to observe training operations, try on combat equipment and talk to soldiers while they ate in the main camp area or at perimeter outposts. The soldiers were issued MRE XV's which were produced in 1995. These MRE's included many of the improvements which resulted from feedback from troops

The Supply Management Army (SMA) OSCR program provides funding to support engineering design efforts that reduce secondary item acquisition costs, extend

POC is Joseph Zanchi, (508) 233-4609.

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