



TOP OFF II SUPPLEMENTAL REPORT

**ILLINOIS
FIRE / EMS / SPECIAL OPERATIONS EXERCISE
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Compiled By:
Mutual Aid Box Alarm System
(MABAS)
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TOP OFF II

TECHNOLOGICAL FIELD TESTS

As part of Top Off II's field exercise, three different technological prototypes were put to the test. All three prototypes offered the latest in technological advancements, and were field tested by first responders.

The field tests were coordinated by the Emergency Response Technology Program, which is managed by the National Technology Transfer Center in Wheeling, WV. The ERT Program is sponsored by the Department of Homeland Security/FEMA and NASA, to identify various existing and evolving technologies, which might be transferred for use and application to other fields, including the nation's emergency first responders.

The three technological devices field-tested during Top Off II by first responders were:

- Haz-Mat Smart-Strip™;
- SIR 3000 Barrier Penetrating Radar
- Incident Commanders Radio Interface

Haz-Mat Smart-Strip™:

Haz-Mat Smart-Strips™ were used by first responders to determine the existence of on site liquid hazardous materials, including many of the different types of militarized chemical agents. The Haz-Mat SMART Strip is a cost effective, chemical detection "warning badge", which self adheres to a firefighters turnout coat. If exposed by contact with a hazardous liquid chemical, it alerts the wearer of the chemical by reactions on the front panels of the strip.

Users of the Safety Solutions, Inc. Haz-Mat Smart-Strip™ found its application simple and highly beneficial for first responders. The inexpensive device was easily interpreted and monitored. The Haz-Mat SMART Strip has a current use and application within the emergency first response community.

SIR 3000 Barrier Penetrating Radar:

The Geophysical Survey Systems, Inc SIR 3000 was used by the Technical Rescue Team Technicians (USAR Light Teams), and the product developer applied the device on a simulated collapsed concrete and rebar building pile, attempting to locate live-trapped victims. The device was used, and successfully located some of the entrapped live victims at depths up to 10 feet. The device was not successful in locating other entrapped victims, especially those buried deeper in the thirty-five foot tall pile.

Areas where the density of concrete was extremely thick or steel and rebar were involved between the SIR 3000 and the live victim, proved the device has limitations. Victims who were not located by the SIR 3000 were often buried within the thick concrete and/or metal and steel shielding.

The SIR 3000 has tremendous potential for field search and rescue work. Its current capabilities, as demonstrated by the Top Off II field test, suggest a need for further product development before the product device gains true operational field use and application.

Incident Commanders Radio Interface™ (ICRI):

The ICRI System is a highly portable system offering frequency interoperability between various radio frequencies. The ICRI System is a "Black Box", which portable radios from various responding agencies on different radio frequencies can plug into. The optional result is full radio frequency interoperability. Field responders at Top Off II found the device achieved radio frequency interoperability easily and quickly. The ICRI device was given to several non-technical participating emergency responders who were asked to follow system startup and interconnecting written directions. Without technical prompting or assistance, the first responders had the system operational, providing interoperability in approximately ten minutes.

The ICRI System proved operationally field worthy and delivered as advertised. The ICRI System currently has a place in the emergency response community.