Satellite Telephone Equipment

Supersedes:
Effective: 5-14-2007

Section 1.0 Introduction

(a) Metro-Boston Homeland Security Region (MBHSR) public safety agencies recognize the need for reliable backup communications capabilities to support interoperable communications across disciplines and jurisdictions. To address this need, portable satellite phones have been purchased for key leaders across the MBHSR to ensure backup communications capabilities for public safety agencies and first responders in the event of a loss of primary and/or secondary communications means.

(b) The purpose of this SOP is to establish the authority, procedures and guidelines for operating and maintaining the portable satellite phones within the MBHSR and is applicable to the nine MBHSR jurisdictions receiving said equipment. These nine jurisdictions include: Boston, Brookline, Cambridge, Chelsea, Everett, Quincy, Revere, Somerville, and Winthrop.

Section 2.0 Purpose

(a) The principal objective of the regional satellite phone effort is to provide key leaders from various MBHSR agencies a backup means of communications. Not only can this equipment serve as a backup communications capability for use at each agency's discretion in day-to-day operations, but it will additionally provide an interoperable communications resource in the event all other forms of communication fail.

(b) The satellite phones are assigned to the agency heads of MBHSR police departments, fire departments, public health, emergency management, jurisdiction executives, and other key leaders. These personnel and their assigned satellite phone are provided in Appendix A.

Section 3.0 Authority

(a) The U.S. Department of Homeland Security designated Boston a high-threat urban area in July 2003 as part of the Office for Domestic Preparedness' (ODP) Urban Area Security Initiative (UASI) grant program. As the core city, Boston oversaw the delineation of the region, and created the Boston Mayor's Office of Homeland Security (MOHS) to integrate and manage all homeland security activities. The UASI region was subsequently named the Metro Boston Homeland Security Region (MBHSR) and consists of nine jurisdictions: Boston, Brookline, Cambridge, Chelsea, Everett, Quincy, Revere, Somerville, and Winthrop. The MOHS was subsequently renamed as the Mayor's Office of Emergency Preparedness (MOEP).

(b) In partnership with the region's Communications Interoperability Subcommittee (CIS), MOEP led an effort to develop a Communications Interoperability 5-year

Strategic Plan that addresses and prioritizes how the MBHSR can enhance interoperable communications capabilities during response to emergency incidents.

(c) As part of the implementation of the MBSHR Communications Interoperability 5-year Strategic Plan, the region has purchased Iridium 9505A portable satellite phones for key public safety leaders across the region.

Section 4.0 Overview of the Equipment

(a) The satellite equipment included in this effort is comprised of Iridium 9505A portable phones in ruggedized cases that are supported by the Iridium Satellite system. Each jurisdiction has agreed to pay for the monthly operating costs of the phones and is therefore responsible for its monthly bill from SatCom Direct, the current provider of Iridium satellite phone equipment and service. Monthly reoccurring costs include, but are not limited to, the monthly base rate for activation as well as the per minute fee for phone usage.

(b) An overview of the key functions of the satellite phone and guidelines for operation are provided in Appendix B.

Section 5.0 Operating Procedures

(a) The Iridium 9505A satellite phone provides a backup means of communications when used **outdoors** and is not capable of providing service within buildings. To operate the 9505A, the user must be within a clear line-of-site of the sky in all directions. This is to ensure connection with the Iridium satellites. In the Boston area, at any given time one to three satellites are within view.

(b) Daily use of the portable satellite phones is at the discretion of the public safety agency and user who accept responsible for the costs incurred. The following procedures are intended to establish common guidelines for use in the event of a regional emergency as well as procedures for regular use in testing and planned events to ensure equipment familiarity.

(c) In the event of a regional emergency, all portable satellite phones should be powered on to support regional communications. The following are examples of the types of incidents or regional activities which shall cause users to power on their portable 9505A satellite phones:

i) **The region wide failure of both the Public Switched Telephone Network (PSTN) and the cellular telephone network.** This failure could be the result of major infrastructure damage sustained during a hurricane, earthquake, or other natural event; the result of an extended region wide power failure; the result of technical problems within telephone switching systems; or the result of sabotage or a major terrorist attack.

ii) **The region wide opening of MBHSR Emergency Operations Centers (EOC):** If a jurisdiction currently has dispatch center notification policies in place, the powering on of portable satellite phones should be included in said notification scheme.

(d) The following are examples of the types of incidents or regional activities which may cause users to power on their portable 9505A satellite phones; a decision which is at the discretion of each jurisdiction:

i) **The failure of either or both the Public Switched Telephone Network (PSTN) and the cellular telephone network within a city or major part of a city.** Failure in this context may also mean that the networks are technically operational but congested to the point of being inaccessible.

ii) **The opening of a MBHSR Emergency Operations Center (EOC):** If a jurisdiction currently has dispatch center notification policies in place, the powering on of portable satellite phones should be included in said notification scheme, particularly when communications problems are apparent during EOC activation.

iii) Any other event in which one or more users determine that satellite phone communications are useful to support public safety communications needs.

Section 6.0 Testing and Usage

(a) The testing and usage outlined in this SOP is intended to ensure that the user is familiar with the basic operation of the satellite equipment and that the equipment is functional. Testing is a key aspect of any regional satellite phone as outlined in the federal report "Independent Panel Reviewing the Impact of Hurricane Katrina on communications Networks: Report and Recommendations to the FCC",

"There were functionality issues with satellite communications – largely due to lack of user training and equipment preparation… Users who had not been trained or used a satellite phone… reported frustration and difficulty in rapid and effective use of these devices."

Based on these lessons learned and best practices throughout the country, the MBHSR has developed a regional testing and usage procedure as outlined below.

(b) Regular, monthly testing will be conducted on all portable satellite phones for the first year of activation to ensure a user is familiar with the procedures for placing and receiving a call. After a year, the frequency of testing will be reviewed by the CIS and new guidelines will be reissued at that time. It is the responsibility of each jurisdiction to ensure compliance with the following testing procedures:

i) Testing will be conducted monthly for the first year of activation and managed by each jurisdiction/agency's dispatch center or designee. The dispatch center or designee will track and initiate calls to all portable satellite phones in the jurisdiction.

ii) Monthly at a set, scheduled time, the responsible dispatch center or designee will place a call to each portable satellite phone within their jurisdiction/agency.

iii) The user will successfully answer the call, conduct a voice quality check and end the call.

iv) The user will then place a call back to the dispatch center or designee using the portable satellite phone, conduct a voice quality check, and end the call.

v) Each jurisdiction must submit a report to MOEP at the end of every testing period reporting completion of these testing procedures. MOEP will track compliance, contact any jurisdictions that are failing to regularly conduct testing and periodically notify the CIS of the status of regional compliance.

(c) The MBHSR region should utilize the portable satellite phones, as appropriate, in planned events to ensure regular usage of the equipment. The portable satellite phones may be utilized to support communications between key MBHSR leaders for the purposes of command and control functions, emergency response coordination, or other public safety communications deemed necessary.

Section 7.0 Maintenance Procedures

(a) The following guidelines outline regular maintenance intended to ensure that the equipment is fully operational.

(b) In order to properly maintain the satellite equipment each agency must ensure that the following steps are taken regularly:

i) Each jurisdiction must ensure that both lithium ion batteries provided with the portable satellite phones are fully charged. The battery level should be checked during the testing period outlined above. The charge for both batteries will need to be verified by placing the battery within a portable satellite phone and visually checking the battery status bars on the front menu screen. Depending on the method of charging (AC or DC power source), the time required to fully charge the battery can range anywhere from four to six hours.

ii) Rotate and extend the antenna to ensure functionality.