HAZARDOUS DEVICES

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LOCATION AND RENDER SAFE PROCEDURES

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HAZARDOUS DEVICES HANDBOOK

US ARMY

MISSILE & MUNITIONS CENTER & SCHOOL

REDSTONE ARSENAL, AL

LOCATION AND RENDER SAFE PROCEDURES

1. General.

In this period we are going to discuss a variety of possible actions that you may take to defeat a hazardous device. You must remember that you, as bomb technicians, must evaluate the situation within the limitations imposed upon you by the availability of tools and equipment.

2. Procedure.

a. Device is found.

NOTE: A quick sketch of device or photograph should be made and returned to CP!

(1) Discuss circumstances surrounding device.

(2) Can a high order explosion be accepted?

(3) If the device functions, will it cause catastrophic results?

(4) What type of construction is involved?

(5) Is access difficult or easy? (May dictate type and amount of equipment.)

NOTE: Be aware of the possibility of secondary devices. With eyes closed, stand still and listen to the enviroment (detection of clocks or timer can often be accomplished by this method).

b. Listen:

(1) Place stethoscope pickup near the package on the surface on which it lies. (This will not unnecessarily disturb the package.)

(2) Apply stethoscope pickup gently to package (determines presence or absence of a working clock or timer).

c. Discuss type of fuzing possible. If it is the first one of its kind, consider it to be the most hazardous type to the bomb technician. Field may be narrowed somewhat if bomber's signature is recognized. (Do not make the assumption that it is exactly the same as a previous one!)

d. X-Ray:

(1) Determination of types of possible fuzing, internal components, and contents can be accomplished by x-raying.

NOTE: Make this operation as remote as possible. Past experience has indicated that three packages in England were sensitive to x-rays and exploded.

(2) Position x-ray gear carefully to insure good radiograph.

(3) Develop film away from bomb scene.

(4) Examine x-ray.

NOTE: Minute scanning of x-ray is important. Ascertain presence or absence of relays, mercury switches, bi-metal bars, springs, and helical coils, and try to identify all components so that clues to possible arming and firing systems can be noted.

NOTE: Take at least two x-rays.

e. Freezing:

(1) The determination has been made from the interpretation of an x-ray picture that the package does contain batteries and clocks, therefore, application of liquid nitrogen (LN_2) is an appropriate step.

(2) Operation must be remote because hidden hazards may still exist.

(3) All preparations should be performed away from site to limit exposure time.

(4) Actuation of freezing gear should be accomplished from a safe area, one that is not likely to be affected by blast or fragmentation.

(5) Preparation of package by taping to surface must be accomplished.

NOTE: The size of the package should be taken into consideration, type of construction, possibility of a contribution from materials on scene (gas, oxygen, other volatile or hazardous substances - also consider wind direction and velocity).

(6) Jar if possible, if situation permits.

f. Removal (requires pre-planning):

(1) Are there any physical limitations to remote removal:

(a) Can the package be maneuvered easily?

(b) Are there any physical obstructions that would prevent remote removal?

(c) Is hand removal the only way to remove the package?

(d) Is hand entry possible?

NOTE: Hand entry must never be performed on a pipe bomb.

(2) Is the item so bulky or would it be too dangerous to move?

(3) Can remote gear be rigged?

(4) What method of removal would be the most appropriate? What would be the least hazardous? And what method would expedite its removal?

g. Transportation:

(1) Once an item is frozen and tranportation to the safe disposal area (SDA) is elected, keep the item in liquid nitrogen (LN_2) while transporting.

(2) Plan your movements.

h. At safe disposal area:

(1) Remove item from transporter remotely.

(2) If no requirement exists for evidence or technical intelligence, counter charge the package and destroy.

(3) If requirement exists for evidence or TI, use the safest means to recover the required material. Do it remotely if it will adequately take care of the situation.

(a) Gas gun.

(b) Tri-tongs.

(c) Shotgun.

(d) Tape and line.

(e) Explosive means.

1. De-armer.

2. Det cord.

3. Shape charge.

4. Remote wire cutters.

5. Flying plate.

(4) After entry is gained, separate explosive train, immobilize firing system after careful analysis of circuitry. If necessary, save for evidence or TI, or destroy.

LOGICAL SEQUENCE OF OPERATIONS CHART