

Operations Manual

San Diego County Sheriff's Department

Bomb/Arson Unit

Operations Manual

November 2019

This operations manual has been written to form guidelines for the functioning of the Bomb/Arson Unit. This document is subordinate to the San Diego Sheriff's Department Policy and Procedures manual. All employees assigned to the Bomb/Arson Unit will read, adhere to and be held accountable for the contents of this operations manual.

This manual addresses issues of Departmental interface, such as personnel matters, as well as general and specific operations. All members of the Bomb/Arson Unit are encouraged to submit revisions or proposals to add/delete or make changes to this manual. Revisions to this manual must be reviewed and approved by the Emergency Services Captain through the chain of command.

A full review of this manual will be conducted in January of odd numbered years.

Bomb/Arson Unit

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1.0 **Administration**

1.1 **Introduction**

The Bomb/Arson Unit investigates all matters relating to arson, suspicious fires and fires causing death or serious injury. The unit also investigates explosions (Post Blast) including explosions causing death or injury, the recovery, render safe, storage and disposal of explosives from improvised explosive devices (IED), homemade explosives (HME) including chemicals used in HME, fireworks and military ordnance. In partnership with FBI Special Agent Bomb Technicians, Sheriff's Bomb/Arson personnel assist with selected missions. Unit investigators also conduct license checks on persons involved in the storage and use of high and low explosives and the licensing of pyrotechnic operators. The Bomb/Arson Unit also conducts compliance audits of arson registrants.

The San Diego Sheriff's Department Bomb/Arson Unit is available to all areas of the county, including any agency requesting our assistance.

1.2 **Policy**

The policy of the Sheriff's Department Bomb/Arson Unit is to provide investigative expertise in the area of fire, post blast investigations, the render safe of any explosive device or safe handling/transportation/storage or disposal of explosives. These services are available to any agency upon request.

1.3 **Goal**

The goal of this manual is to establish guidelines for professional practices by the Sheriff's Bomb/Arson Unit. These guidelines and practices will assist in providing maximum safety to the public and the unit investigators.

1.4 **Mission**

Explosives

1. Render safe and/or remove suspected improvised explosive devices, incendiary devices, explosive chemicals, pyrotechnics and military ordnance. Including maritime operations.
2. Provide for legal, proper and safe transportation, disposal and/or storage of explosives and other items noted above.
3. Conduct post blast investigations.
4. Collect and preserve evidence.
5. Provide Tactical Bomb Tech support, calls or training, for any agency.
6. Store, maintain and inventory Bomb Squad equipment.

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7. Provide dignitary protection when requested by the United States Secret Service or any other acceptable dignitary protection mission.
8. Provide multi hazard support at special events that may be potential targets of opportunity. Typical events like; Super Bowl, All-Star game, parades, political/public gatherings, Breeders Cup, etc.
9. Prepare and participate in explosives related training programs.
10. Maintenance of and familiarization with the technical library of FBI Bomb Data Center publications and other explosives related materials.
11. Compile and report technical data on explosive devices and incidents.
12. Develop agency emergency response plans for bomb threats, actual improvised explosive devices (IED) and bomb crime scenes.
13. Develop and promulgate bomb threat awareness and safety programs for public and private organizations.
14. Disposition of confiscated illegal fireworks.
15. Identify and conduct periodic safety inspections of privately owned and maintained explosives storage magazines in San Diego County as the Issuing authority.
16. Enter all calls for service and unit/individual training into the ATF Bomb Arson Tracking System (BATS).
17. Once all mandatory classes are complete, continue to attend necessary and relevant training, at least 40 hours per year.

Fire

1. Attempt to determine the origin and cause of all fires investigated by the Bomb/Arson Unit.
2. Collect and preserve evidence from fire scenes.
3. After conducting a complete and thorough investigation, prepare cases for issuance by the District Attorney's Office or United States Attorney's Office when appropriate.
4. Prepare and provide courtroom testimony.
5. Prepare and participate in fire related training.
6. Conduct compliance checks of arson registrants.

7. Maintain and be familiar with a technical library of fire related material, including; NFPA 921 and 1033.
8. Develop and promulgate arson/fire awareness for public and private organizations.
9. Once all mandatory classes are complete, continue to attend necessary and relevant training, at least 40 hours per year.
10. Enter all calls for service and unit/individual training into the ATF Bomb Arson Tracking System (BATS).

2.0 Personnel

2.1 **Duties and Responsibilities**

All Bomb/Arson Unit personnel and Bomb/Arson Detectives in Training are responsible for knowing the duties and responsibilities as outlined in this section and manual.

Bomb/Arson Sergeant – The Sergeant reports to the Special Enforcement Detail Lieutenant and directly supervises the Bomb/Arson Unit Detectives. The Sergeant is also the Sheriff's Bomb Squad Commander. The Bomb/Arson Sergeant is responsible for the safe and efficient operation of the unit and will ensure the unit detectives are properly trained and equipped to perform their duties.

Bomb/Arson Detective – Bomb/Arson Detectives report to the Bomb/Arson Sergeant and may assume the role of acting sergeant at the unit Sergeant's discretion. In addition to fulfilling the unit mission, detective's will maintain proficiency with specialized tools and techniques, including the PAN, robot, bomb suit, render safe procedures, vehicles, drones,...etc.

Bomb/Arson Detective in Training – A detective in training is a deputy who is not permanently assigned to the Bomb/Arson Unit, but operates and trains with the unit as a collateral duty to their full-time assignments. Selection for Detectives in Training will be limited to those Deputies selectable from the department selection process.

Bomb/Arson Reserves – The Bomb/Arson Reserve Deputy reports to the Unit Sergeant, but can also receive assignments from the Unit Detectives. Under most circumstances, the reserve deputy should be under the direct supervision of Bomb/Arson personnel. The Reserve Deputy will assist detectives with their daily duties in furtherance of the unit mission.

2.2 **Selection and Screening Process**

All Deputy Sheriff's and Sergeants will be selected in accordance with the guidelines set forth in the Department Policy and Procedure Manual, section 3.19. In addition to the selection criteria established by the Department, deputy

sheriff candidates are required to successfully complete the following process at the discretion of the Bomb/Arson Sergeant. Perspective candidates may be required to complete a written exam, agility test and/or fitness test and be interviewed by a panel of bomb technicians and fire investigators. The panel may consist of outside agencies including ATF, FBI and the San Diego Fire Bomb Squad. Candidates must be able to pass an FBI background check to obtain a secret security clearance. The FBI also has minimum physical fitness qualifications to attend the Hazardous Devices School. These qualifications include the passing of a complete physical with a height to weight standard.

Deputies who successfully complete the selection process are eligible to be assigned to the Bomb/Arson Detective in Training program at the discretion of the unit Sergeant with concurrence from the Emergency Services command and the selected individual's command. Members of the Bomb/Arson Detective in Training program may be selected to fill full-time positions in the Bomb/Arson Unit as they arise. Assignment to the Bomb/Arson Detective in Training program is not a guarantee an individual will be assigned to the Bomb/Arson Unit as a full-time Detective.

The Bomb/Arson Sergeant will make the selection of full-time detectives with concurrence of the SED Lieutenant. The Emergency Services Captain will have the final say regarding personnel selection.

Since assignment to the Bomb/Arson Detective in Training program is a collateral duty, the unit Sergeant and/or the individual's commanding officer, may remove the individual from the program at any time without cause.

2.3 Bomb/Arson Detective in Training

If an individual is accepted into the program, they will generally take an observation and assist role. They will be expected to make as many training days (Wednesday) as possible. Team work and availability to the unit is critical. This will give the deputy an opportunity to evaluate their desire to step into the Bomb/Arson Unit as a full-time detective and the unit personnel to evaluate the individual's skill and ability to function as a bomb technician and fire investigator.

The Detective in Training may be sent to training at the expense of the Bomb/Arson Unit with approval from the individual's command.

2.4 Physical Fitness

All full-time members of Bomb/Arson will be afforded two hours each workday for physical training. All Bomb/Arson personnel are expected to remain in appropriate physical condition as determined by the unit Sergeant.

2.5 Physical Examinations

Every member of the Bomb/Arson Unit is required to pass a yearly multi-phase physical examination.

Each member of the unit is responsible for scheduling and attending the exam once provided notice from the Sheriff's Medical Liaison Unit. The exam will be completed prior to the time allotted on the notification.

2.6 Call-out Responsibilities

The Bomb/Arson Unit provides "24-hour On-Call" service throughout the County of San Diego and any other requesting agency. All personnel assigned to the Bomb/Arson Unit are expected to be available for call-out 24 hours a day, 7 days a week via cell phone (Text, email or phone call). In the event of a call-out, personnel are expected to respond to the call-out without unnecessary delay. Detectives will have their issued equipment available and in proper working order. All personnel are expected to respond to all call-outs upon request, unless prior arrangements have been made with the unit Sergeant.

Readiness – All personnel shall maintain ready access to personally assigned equipment and shall maintain that equipment in good working order. Equipment defects/deficiencies will be immediately reported to the unit Sergeant.

2.7 Use of Alcohol or Medication

Personnel who have consumed alcoholic beverages or taken medication shall report that information to the unit Sergeant prior to responding to a call-out. It is the responsibility of the detective to notify the unit Sergeant of their inability to safely respond to a call-out.

If any personnel are taking any medication that may affect their ability to perform daily activities, the unit Sergeant will be notified.

3.0 Training

3.1 Purpose

Establish a training process for all new investigators entering the Bomb/Arson Unit.

3.2 Policy

It is the responsibility of the Bomb/Arson Sergeant and Training Coordinator to train all new candidates in the fields of bomb disposal and fire investigation in a timely manner. Training will provide for the safety of the new investigator and reduce the possibility of liability to the Sheriff's Office. This basic training should be completed within the first two (2) years of the deputy's transfer into the Bomb/Arson Unit. Each new investigator will be shown how to access the department Detective Manual and be responsible for knowledge of its contents.

3.3 Minimum Basic Training

There may be times when new detectives have not completed the basic investigations required training. If this is the case, the new detective should

attend the following classes within the first year of assignment to the Bomb/Arson Unit;

- A. ICI Core Course (Basic Investigations) 80 hours
- B. ICI Arson/Explosives Investigations 40 hours
- C. Interview and Interrogations 40 hours
- D. Field Evidence Technician 40 hours
- E. Emergency Responder HazMat (ERHM) 40 hours

3.4 Minimum Specialized Training

Specialized training should be completed within the first two (2) years of assignment to the Bomb/Arson Unit. With the lack of availability of some classes, this may not always be possible. The following classes would take almost 23 weeks to complete;

- A. FBI Hazardous Devices Certification Course 260 hours
- B. Fire Investigation 1A, 1B, and 1C 40 hours each
- C. Wildland Fire Investigations 40 hours
- D. FEMA U.S. Fire Administration National Fire Academy 80 hours
- E. ATF or FBI Post Blast Investigations 40 hours
- F. ATF or FBI Large Vehicle Post Blast Investigations 40 hours
- G. National Improvised Explosive Familiarization (NIEF) 32 hours
- H. ATF Advanced Explosive Demolition Techniques 80 hours
- I. ATF Homemade Explosives 40 hours
- J. ATF Pyrotechnics 40 hours
- K. Texas A&M Advanced Ordnance Recognition for Law Enforcement 80 hours
- L. Confined Space Entry Technician 40 hours
- M. Maritime Operations Bomb Tech (MOBT)

Because of the specialized nature of the missions and investigations conducted by the Bomb/Arson Unit, not all classes can possibly be listed. As other classes become available, Bomb/Arson staff will evaluate the need for the class.

Bomb/Arson Deputies in Training will attend classes with permission from their command staff and the Bomb/Arson Sergeant. The classes will be paid for by the Bomb/Arson Unit budget.

3.5 Recertification and In-Service Training

- A. FBI Hazardous Devices School Recertification, 40 hours, is required every three (3) years. To remain certified, the bomb technician must have a class date assigned by HDS staff. If the technician does not have a class date, the technician will not be assigned as a primary technician on any bomb related calls.
- B. Seminars sponsored by the International Association of Bomb Technicians and Investigators (IABTI), The California Conference of Arson Investigators (CCAI), and the California Department of Forestry (Wildland Fires) are all valuable training opportunities.

- C. On-going In-service Bomb/Arson Training will be scheduled and each member of the unit will receive a minimum of sixteen (16) hours of training monthly. This is the amount required by the FBI Hazardous Devices School.
- D. In addition to the monthly required training, all full time Bomb/Arson personnel should attend at least two (2) 40 hour classes, one related to bombs/explosives and one related to fire investigations each year. This is important to remain up to date with current trends in each expertise.
- E. All training will be documented in the ATF Bomb Arson Tacking System (BATS).

4.0 **Safety Procedures**

4.1 **Introduction**

Portions of this section were developed by the FBI Hazardous Devices School guidelines.

4.2 **Purpose**

To establish safety procedures for all unit members, along with required safety clothing and equipment for use in explosive disposal and fire scene investigations. Preservation of human life is of paramount concern to all public safety agencies and individuals responsible for safe disposal of all explosive hazards. The safety principles outlined in this section shall be followed.

4.3 **Situational Analysis**

The analysis should immediately determine whether the situation is life threatening, requiring immediate action, or non-life threatening.

- A. Life Threatening Situation: Clear and present threat to life, including the Bomb Technicians life.
 - 1. Analyze device and situation to determine threat level.
 - 2. Take action necessary to eliminate or reduce threat level.
 - 3. When the life threat is eliminated, revert to non-life threatening procedures.
- B. Non-Life Threatening Situation: Threat is only to property, no lives are at risk.
 - 1. Utilize essential safety equipment unless physically impossible due to environment.
 - 2. Analyze suspect item and environment.
 - 3. Employ remote procedures and techniques (robotics, hook and line, etc.)
- C. Priority: Throughout the decision making process, the following considerations, listed in the order of priority are paramount:

1. Public Safety.
2. Safety of the deputies on scene, including the Bomb Technician.
3. Collection and preservation of evidence.
4. Protection and preservation of public and private property.
5. Convenience to the public and/or restoration of services.

4.4 Safety Principles

Preservation of human life is of paramount concern to all public safety agencies and individuals responsible for the safe disposal of all explosive hazards. The following safety principles shall be followed:

1. A bomb squad response team must include a minimum of two (2) Bomb Technicians with essential safety equipment.
2. Only bomb squad personnel or those requested by the bomb squad shall be permitted within the bomb scene or bomb disposal operational perimeter (exclusion zone).
3. Paramedics and emergency fire personnel should be present when the bomb squad responds to the scene of a suspicious or actual explosive device or dangerous explosive or flammable chemical(s).
4. A bomb helmet and flak vest will be worn by all Bomb Technicians during initial bomb/IED survey. A bomb suit may also be worn if the circumstances dictate the wearing of the bomb suit.

4.5 Range Safety

1. A minimum of two (2) Bomb Technicians should be at the Sheriff's Bomb Range or any other location during disposal and rendering safe operations.
2. The Sheriff's Communications Center and the Bomb/Arson Sergeant will be aware of all range activities involving the detonation of explosives.
3. A fire department engine company will be on the range during significant disposal operations that may cause brush fires.
4. NO SMOKING down range or when explosives are exposed from portable magazines. Smoking is allowed in designated areas only.
5. No unauthorized radio transmissions are allowed during disposal or training operations while explosives are being utilized. Minimum distance for transmission is 300 feet from suspected bomb or explosives.
6. Except with a trainee, only one Bomb Technician will be allowed down range while in the process of capping in.
7. All disposals of pyrotechnics, gunpowder, mixed chemicals, or the burning of dynamite will be accomplished REMOTELY. This procedure entails either the use of an electric squib, safety fuse or powder trailer for the burning of gunpowder, dynamite, pyrotechnics or mixed low explosive chemicals.
8. Bulk chemicals, normally confiscated in a bomb or pyrotechnic lab, will not be burned inside the lower range disposal range pit. These chemicals will be burned in the same manner as gunpowder.
9. To reduce the possibility of STATIC ELECTRICITY during hot/dry Santa Ana conditions, the ground around the disposal pit berm will be watered down with a fire hose prior to disposal.
10. The loading of fireworks into the Chinese disposal pit will be performed while wearing protective clothing and equipment (PPE).

- a. Fire Helmet with face shield.
 - b. Nomex hood and goggles.
 - c. Three-quarter length fireman's turnout coat or shirt.
 - d. Nomex pants or turnouts.
 - e. Multi-layer Kevlar fire gloves.
11. One Bomb Technician will be assigned to stand by the disposal pit in full safety equipment, same as noted above. This Bomb Technician's primary function is to stand by holding one of the full-size fire extinguishers (water filled) and observe the entire loading operation for possible fire. This assignment begins with the loading of pyrotechnics from the explosive magazine and extends to the final capping in procedure at the bomb range.
12. The designated Bomb Technician will be the Range Safety Officer (RSO) and will be responsible for the following of all safety procedures.

4.6 Explosive Magazines

1. MAGAZINES – Bomb Range
 - a. The designated storage facility for all explosives used by the Sheriff's Bomb/Arson Unit.
 - b. The designated storage facility for all explosives, flammables and other hazardous substances not accepted by the Sheriff's Property and Evidence Unit.
 - c. The designated storage facility for the San Diego Fire Department Bomb Squad, ATF and FBI.
2. MAGAZINE DESIGNATION
 - a. MAGAZINE A – high and low explosives storage along with explosives related to evidence.
 - b. MAGAZINE B – Pyrotechnic explosives stored for proper disposal and pyrotechnic evidence.
 - c. MAGAZINE C – All blasting caps, along with blasting cap evidence storage.
 - d. MAGAZINE D – Ammunition storage.
 - e. MAGAZINE E – Arc magazine for storage of shock tube caps.
3. MAGAZINE SAFETY PROCEDURES:
 - a. No radio transmissions within 300 feet of the explosive magazines.
 - b. Separate blasting caps (detonators) and explosives (main charge) when storing or transporting.
 - c. The magazines will be inspected on a regular basis, at least once a quarter. Inspections will consist of inventory, cleanliness and condition of inventory.
 - d. Under no circumstances will a functional device be placed inside a magazine, including incendiary devices. Only explosives rendered safe by a Bomb Technician will be placed in a magazine.

- e. Smoking, open flame and combustibles are prohibited from being within 50 feet or stored in a magazine.
- f. Cleaning: Magazines floors shall be regularly swept, kept clean, dry, free of grit, paper, empty boxes and rubbish. Brooms and other cleaning utensils shall not have any exposed spark producing metal parts. Sweepings from the magazine floor and other rubbish shall be removed to a safe place and destroyed. Magazine floors stained with nitroglycerin shall be cleaned according to instruction by the explosives manufacturer.
- g. Magazine Repairs: When explosive magazines are in need of inside repairs, all explosives shall be removed and the floors cleaned. In making outside repairs, if there is a possibility of causing sparks or fire, the explosives shall be removed from the magazine. Explosives removed from a magazine, under repair, shall either be placed within another magazine or placed a safe distance from the magazine where they shall be guarded and protected until repairs have been completed, at which time they shall be returned to the magazine.
- h. Bomb/Arson personnel will maintain explosive magazine logs for all items stored in a magazine, one log for each magazine. A copy of each log will be kept in the Bomb/Arson Unit office.
- i. Magazine Keys: Keys will only be issued to Sheriff's Bomb/Arson personnel.

4.7 Safety Clothing

On-call response of unit members shall be in approved safety clothing such as a fireman's turnouts or other "Nomex" clothing, depending on whether it is a fire, explosive or chemical related incident. The following safety clothing dress code is being established for DEPUTY SAFETY and UNIFORM CONTINUITY.

1. Fire Scene

- a. Structure Firefighting Helmet (Black).
- b. Respirator Face piece.
- c. Forestry Shirt (yellow Nomex) or Fireman's three-quarter length turnout coat.
- d. Pants (Nomex brush pants).
- e. Safety Boots.
- f. Protective gloves for use on fire scene investigations.

2. General Disposal

- a. Helmet with face shield.
- b. Nomex hood and safety goggles or safety glasses.
- c. Three-quarter length fireman's turnout coat or Nomex brush shirt.
- d. Nomex pants.
- e. Safety or fire bunker boots.
- f. Multi-layer Kevlar fire gloves
- g. No nylon clothing will be worn, 100% cotton is preferred.

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3. Contaminated Bomb Scene (Blood or other bodily fluids)

- a. Full or half mask respirator.
- b. Tyvex or similar disposable suit.
- c. Chemical gloves.
- d. Fire or chemical boots.

4. Destructive Device or Suspected Device

Based on the totality of the circumstances and taking into account the threat level, the primary Bomb Technician going down range, has the discretion to determine the appropriate safety clothing to don.

- a. Bomb Suit.
- b. Helmet with blast rated face shield and heavy vest.
- c. No nylon clothing will be worn, 100% cotton is preferred.

5. Wearing of the Tactical Work Uniform

For the sake of uniformity and an all-around professional appearance, all Bomb/Arson Unit personnel will be required to wear the designated tactical work uniform approved by the unit sergeant.

The Bomb/Arson Unit has many missions and duties on a day to day basis. While at the range or on callouts an approved T-Shirt, BDU style pants with belt or flight suit and proper shoes or boots will be worn. Shorts maybe worn at the range only when no outside visitors are present and the unit is not conducting demolition operations.

Off-site non-callout duties, while providing training, giving presentations or equipment demonstrations, a polo shirt with the unit logo (Law Enforcement Bomb Crab) BDU style pants with proper shoes or boots should be worn.

Court attire will be discussed with the Deputy District Attorney (DDA) handling the case. If requested by the DDA, a conservative suit and tie will be worn. A clean/pressed, well maintained blouse with subdued patches, badge, name plate and law enforcement bomb crab with BDU style pants and shined boots should be worn.

Proper Attire

- a. T-Shirts may be long or short sleeve, usually 100% cotton, no holes, no stains and not excessively faded. The T-Shirt will have the Bomb/Arson Unit logo (LE Bomb Crab) over the left chest, SHERIFF BOMB/ARSON may be on the upper back of the shirt. The T-Shirt should be black, OD green or tan.
- b. Polo Shirts will have a embroider Bomb/Arson Unit logo. The polo should be black, but may be any conservative color.
- c. Blouse tops (5.11 Style 72002) will have subdued patches, including; shoulder, badge, name plate and a metal subdued law enforcement

- bomb crab. The blouse will be in excellent shape, pressed, no holes or stains and matching the 5.11 BDU pants.
- d. Flight suits will be olive drab military Nomex flight suit with subdued shoulder patches, badge and name patch.
- e. BDU style pants, OD green, black or tan.
- f. Shorts 5.11 (Summer months only), OD green, black or tan
- g. Footwear, Black or tan boots, polished black boots for court. Conservative trail or mountain shoes may be worn.

NOTE: WEARING OF SAFETY BODY ARMOR

Based on the Bomb Technician's personal safety, the situation and scene and the particular rendering safe procedures used, the use of this body armor is at the discretion of the supervisor and his/her technician's combined decision.

Example – as taught at the Hazardous Devices School by the FBI Bomb Instructors:

The wearing of body armor in extremely closed-in spaces can actually be detrimental, at times, to the Bomb Technician's personal safety while attempting to render safe a destructive device. The Bomb Technician's technical training, the use of safety equipment and consultation with the rest of the team members should be considered.

4.8 Decontamination

Working in Bomb/Arson will expose detectives to various chemicals and heavy metals, especially during fire investigations, hazardous/explosive chemicals and use of department weapons (Qualifications). After each possible exposure, detectives should take time to properly decontaminate with the provided products, field wipes, field wash, foaming soaps or hand scrub.

All investigative aids like picks and shovels will also be cleaned and decontaminated to avoid cross-contamination. Turnouts/brush gear should be washed after each use or at least monthly. Calfire has the proper decon washer and dryer.

4.9 Grounding Procedures

Proper grounding reduces the possibility of injury or death to personnel from premature initiation of explosives caused by electrostatic discharge from the human body. Due to the possibility of premature initiation of electrically initiated firing trains by electrostatic discharge, all personnel utilizing the Sheriff's Bomb Range will strictly adhere to these procedures.

1. Grounding Procedures (Demolition):

- a. Prior to touching an electrical initiator, the operator will touch the grounding conductor or the external surface of the blasting cap magazine which should be on the ground.

- b. Before passing an electrical initiator (i.e. electrical blasting cap) from one person to another, each person must touch the grounding conductor or the hand shake method.
- c. Before touching an explosive charge primed with an electrical initiator, the operator will touch the grounding conductor.

2. Loading and Firing Disrupters (PAN) or Explosive Tools

- a. During the loading of disrupters, operators involved in the loading of disrupters will ground themselves before touching any electrical initiator, by touching the grounding conductor. Personnel will also similarly ground themselves when utilizing any static sensitive explosive (i.e. black powder)
- b. During deployment of disrupters, operators involved in the placement of disrupters will ground themselves by touching the grounding conductor before connecting the disrupter to the firing wire and before positioning a loaded disrupter. Grounding will be accomplished with the free hand, not through the disrupter.

3. During Disposal Operations

- a. Personnel involved in disposal operations will ground themselves by touching the grounding conductor before touching any electrical initiators or static sensitive explosives.

NOTE: All Bomb/Arson personnel are responsible for ensuring that all operators comply with all grounding procedures.

4.10 Demolition Safety

Demolition operations are one of many critical duties performed by the Sheriff's Bomb/Arson Unit. Demolitions can include old detreating explosives, chemicals and other hazardous materials.

Demolition operations should employ all the best practices from the various classes attended by Bomb/Arson personnel. Classes from HDS (Basic and recertification) and ATF (AEDT) would be good examples.

4.11 X-ray Source Radiation Safety Program (AB911 Compliance)

The Radiation Safety Officer (RSO) will be the Bomb Squad Commander. The RSO shall ensure the radiation safety activities are being performed in accordance with the requirements of 17 CCR 30336.7(b) in the daily operation of the unit radiation safety program.

Training will be conducted at least annually covering topics such as; department inspections, information on new procedures or equipment, accidents or errors and steps to prevent recurrence and an opportunity for personnel to ask questions related to radiation safety.

When an x-ray source is in use, the minimum evacuation distance from the x-ray source will be a minimum of 300 feet.

4.12 Radiation Monitoring for Program (RMP)

All personnel will be issued a radiation dosimeter (badge). The dosimeter will be worn at all times when dealing with radioactive material, during training or an actual incident. The dosimeter will also be worn when using any x-ray source for x-ray operations during training or an actual incident.

The badge will be sent quarterly to the contracted company and processed. A report will be sent by the company and stored in the shared Bomb Arson folder, under Radiation Monitoring Program (RMP). A copy of the report will also be provided to each employee.

5.0 Field Procedures

5.1 Introduction

The following procedures are in compliance with the FBI Hazardous Devices School and Training standards. This section will establish response and handling procedures in dealing with explosive/hazardous materials.

The Sheriff's Bomb/Arson personnel will dispose of hazardous materials which are classified as incendiaries, combustibles, flammables or explosive. Generally, no Bomb/Arson personnel are to respond to any location for the mere recovery and disposal of non-explosive chemicals or unknown substances that are possibly toxic in nature.

5.2 Explosives / Explosive Chemicals / Hazardous Materials

The following steps are intended as a guide and will vary with each situation/incident:

- a. Ascertain the correct location and the best possible information as to what the item may be. The Hazardous Incident Response Team (HIRT) is the best contact (County HazMat).
- b. Advise the incident commander at the scene the item should not be handled or moved and if necessary, advise the evacuation of the area.
- c. Advise the Sheriff's Emergency Communication Center Supervisor if the call did not originate with them.
- d. Upon arrival at the scene, don appropriate PPE prior to going down range.
- e. If the chemical is considered too dangerous for HazMat to handle and cannot be safely transported to the Sheriff's Bomb Range, the substance may be blown in place. This operation will be determined by the HazMat and Bomb/Arson personnel on scene.
- f. Fire/EMS personnel should be on scene ready to assist as needed.
- g. Only one Bomb Technician should approach the material.
- h. Prior to any action on the Bomb Technician's part, advise the incident commander the intended course of action.

- i. The Sheriff's Emergency Communication Center will be notified at the completion of the operation.

5.3 Tactical Bomb Technician

The Sheriff's Bomb/Arson Unit can provide a wide variety of support to Sheriff's SED and other tactical teams throughout San Diego County. This support includes; the use of robots and other surveillance equipment such as drones.

There are times when Tactical Bomb Technicians will integrate with a SWAT team during the service of high risk warrants where IED's might be expected, active shooters or terrorist incidents to name a few.

5.4 Improvised Explosive Device / IED / 10-89D

The following steps are intended as a guide and will vary with each situation/incident:

- a. Ascertain the correct location and the best possible information regarding what the item may be. Always go prepared with the proper equipment.
- b. Advise the incident commander, the item should not be handled or moved. If necessary recommend evacuation of the area.
- c. Advise the Sheriff's Emergency Communication Center Supervisor if the call did not originate with them.
- d. Upon arrival at the scene, don appropriate PPE prior to going down range.
- e. Once two Bomb Technicians are on scene, the primary Bomb Tech will approach and examine the item. This may be accomplished by remote means, i.e. robot or drone.
- f. After gathering all available information, x-rays, threats...etc. the decision will be made to implement render safe procedures or move the device to a safe disposal area.
- g. If the device is to be rendered safe in place or anywhere except an approved disposal area, advise the incident commander.
- h. If the device is to be removed to the disposal area in the bomb containment vehicle, the Bomb Technician operating the vehicle may secure marked patrol vehicles as escorts.
- i. The Sheriff's Emergency Communication Center Supervisor will be notified of the route to be taken to the disposal area.
- j. Upon arrival at the disposal site, the device will be removed from the bomb containment vehicle and disposed of or rendered safe as the situation dictates. On completing the disposal operation, the escorting vehicle may be dismissed and the Sheriff's Emergency Communication Center will be advised.

5.5 Military Ordnance

The Bomb/Arson Unit responds to found ordnance throughout San Diego County. Most found ordnance calls can be handled by one Bomb Technician. If the call will require a blow in place operation, two Bomb Technicians should be

present. The following steps are intended as a guide and may vary with each individual situation;

- a. Advise the incident commander at the scene, the ordnance must not be disturbed. Also advise of particular hazards like in military flares.
- b. Upon arrival, approach and examine the ordnance visually, this may be robotic, drone or Bomb Technician approach.
- c. If the ordnance is unfamiliar or there is any question as to the proper handling of the ordnance, request assistance from other sources, other Sheriff's Bomb Technicians or military Explosive Ordnance Disposal (EOD) units.
- d. If the ordnance is familiar, handle appropriately.
- e. If the ordnance is evidence, secure and transport to the Sheriff's Bomb Range for storage.

5.6 Vehicle Bomb Procedures

Due to the explosive nature of the vehicle bomb and its large kill zone, it is very difficult to establish any clear cut guidelines on how this situation is to be handled. The initial response will be a full team response. Personnel from the FBI and ATF will also be requested to respond. The San Diego Fire Bomb Squad Commander will be notified of the situation.

5.7 Commercial Explosives

The following steps are intended as a suggested guide only and will vary with each incident:

- a. Approach suspected material. This can be accomplished by robot, drone, Bomb Technician or any combination.
- b. Once it is determined the material is a commercial explosive, obtain a description of the explosive, measure size, color, approximate number and manufacturer and count number of each item.
- c. Blasting Caps: Describe length, diameter, crimps on side if electric; length and color of wires and type of shunt; information from tags or labels when possible.
- d. Un-shunted caps should be shunted before transporting.

For old deteriorated dynamite or any other sensitive unstable explosives:

- a. Neutralize with WD-40, acetone, diesel fuel or motor oil.
- b. Remove remotely with bomb basket and/or robot.
- c. Remove by hand in bomb suit.
- d. Burn or counter charge in place.

After it is determined the item may be safely removed, the explosives may be placed in a bomb transporter (Single vent or TCV) to the designated disposal area. At no time should the transporter rating be exceeded. If larger quantities of explosives are present, the area will be secured and the necessary number of trips will be made to safely remove the explosives.

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The vehicle will then proceed to the disposal area, driving in a safe and prudent manner.

5.8 Maritime Operations

Maritime operations include devices or possible devices in an area around water, in water or on a structure (dock, boat, ship, etc.) above water.

Minimum training will include the following;

- A. Public Safety Dive Training POST certified class
- B. Maritime Operations Bomb Technicians (MOBT)
- C. DHS Underwater Hazardous Device (Search) Course or equivalent
- D. FBI Underwater Post Blast Investigation Course or equivalent
- E. Underwater Hazardous Device Countermeasures Course
- F. Twenty-five hours of dive time

Minimum Sustainment for MBT Certification:

- A. At least two days of underwater hazardous device dive training or dive operations per quarter. Divers should dive monthly to include operations with other local dive teams, US Navy, Sheriff's Dive Unit, Harbor Police or other UHDT in Southern California.
- B. Maintain personal dive equipment for deployment at all times.

5.9 Total Containment Vessel (TCV)

The TCV is a portable device that can be taken to a scene where there is a need to detonate explosives that cannot be transported or to use the TCV to conduct a safe transport. The vessel can totally contain the detonation in the event of a WMD/CBRNE type incident or vent the detonation if safe to do so. Evidence samples can be taken before or after the detonation if necessary.

- A. The TCV should be used in accordance with the manufactures instructions.
- B. Based on the totality of the circumstances, items should be loaded into the TCV remotely if possible. Reasonable PPE should be worn, accounting for safety and mobility of the bomb technician.
- C. While the TCV was designed and manufactured to withstand repeated 10 pound blasts and one time 20 pound blast, reasonable step should be taken to stay clear of the TCV when conducting detonations. Non Bomb Squad Personnel will be at least 200 feet away from the TCV and behind solid cover. Bomb Squad personnel may be closer if needed, but also behind solid cover. No personnel will be down range of the TCV door.

6.0 Fire Procedures

6.1 Purpose

The purpose of this section is to determine the responsibility for the effective investigation of arson and other crimes where fire is involved. Also see Sheriff's Policy and Procedure section 6.8.

6.2 Fire Investigations

Upon notification by the Sheriff's Emergency Communications Center, the Bomb/Arson Sergeant or acting sergeant will contact the requesting deputy or agency to determine the need for Sheriff's Bomb/Arson Investigators.

Bomb/Arson Investigators will be dispatched once the response criteria are met. The goal of the investigation will be to determine the origin and cause of the fire. All proper PPE will be worn while investigating the fire, including the half face respirator when inside or nearby the area of burn/damage.

If during the investigation the cause is found not to be arson, a report will be generated to document the incident. All reports will be completed within 60 days of the incident. If the report cannot be completed within the 60 days, the Bomb/Arson Sergeant will be notified and the reason documented in RMS.

7.0 Explosive Handling Procedures

7.1 Purpose/Policy

The purpose of this section is to establish response and handling procedures in dealing with electric and non-electric blasting caps and high explosives. It is the policy of the Bomb/Arson Unit to confiscate, store as evidence if necessary and dispose of all recovered explosives in a safe manner according to law. Also see Sheriff's Policy and Procedure section 6.7.

7.2 Electric and Fuse Type Blasting Caps

1. Fuse-type caps are similar in appearance to electric caps with the exception that fuse caps have no lead wires. Fuse-type caps are not subject to accidental detonation by electricity.
2. Electric blasting caps are subject to accidental detonation from static electricity, radio frequency energy (while extremely rare), extraneous electricity from high voltage power lines and lightning.
3. Both types of blasting caps should be protected from bending, crushing, heat, shock, and friction and will only be handled by Bomb/Arson Personnel.

7.3 Storage of Explosives and Blasting Caps

1. High explosives and blasting caps will not be stored at any Sheriff's facility or other partner agency. Fireworks in good condition may be stored at any facility temporarily. Ammo cans have been provided for this storage.

2. Bomb/Arson Unit personnel will be notified and the explosives will be placed in the Bomb/Arson magazine by Bomb/Arson personnel.

7.4 High and Low Explosives

1. Due to the tendency of dynamite and other high explosives to become unstable and dangerous with age and deterioration, these items will only be handled by members of the Bomb/Arson Unit.
2. Bomb/Arson personnel transporting dynamite to a disposal site may utilize uniformed personnel and marked patrol units for escort and traffic control.
3. All handling of explosives, including explosives used in demolition, will be under the supervision of a Range Safety Officer, Bomb/Arson personnel or personnel certified to handle explosives.

8.0 Bomb Threats

8.1 Purpose/Policy

The purpose of this section is to delineate the responsibility for the effective investigation of crimes involving the use, or threat of use of explosives/IED's. Also see Sheriff's Policy and Procedure section 6.9.

8.2 Bomb Threat Response

As a general rule, Bomb Technicians should not be involved in the search portion of bomb threats. To a Bomb Technician everything is suspicious. Response to a bomb threat is at the discretion of the Bomb/Arson Sergeant.

Bomb threat investigations will be handled by the area investigators or detectives from the agency of responsibility.

8.3 Suspected or Actual Device is Located

If a suspected or actual device is located, the Bomb/Arson Sergeant will be notified of the discovery immediately. The Bomb/Arson Sergeant will direct the proper response from Bomb/Arson personnel.

Upon the discovery of a suspicious object or actual device, evacuation of all persons, including deputies/officers should immediately be accomplished to an area safe from flying debris, at least 300 feet away. In a larger building, generally evacuation of the effected floor and the floor above and below is sufficient. This can change based on many variables including the size of the suspected device.

9.0 Blood Borne Pathogens

9.1 Purpose/Policy

The Bomb/Arson Unit Blood Borne Pathogens Exposure Control Plan is designed to protect unit personnel when exposure to blood products or other potentially infectious materials may occur.

It is the responsibility of all unit personnel to utilize maximum safety PPE to protect themselves from physical jeopardy from exposure to blood borne pathogens.

Protecting personnel from occupational exposures to disease causing viruses and bacteria has become an important issue in many work places. Work situations which present the possibility for contact with blood, bodily fluids, or biological/chemical agents pose infectious disease risk.

9.2 Situational Analysis

Potential exposure situations for Bomb/Arson Investigators are noted below:

<u>WORK TASK</u>	<u>Exposure Situation</u>
Fire Death Scenes	Handling of burned bodies at fire scenes.
Post Blast with Injury or death	Handling of body parts which are covered with blood.
Rendering First-aid to victims	Contact with blood and other bodily fluids.
Performing CPR	Contact with saliva, open wounds of the mouth, aerosol droplets.
Handling violent suspects	Getting bitten, contact with blood and other bodily fluids
Processing crime scenes	Contact with blood, other bodily fluids, contaminated items or surfaces.

9.3 Proper PPE Procedures

The following safe work practices apply to the general duties associated with Bomb/Arson personnel:

1. Gloves must be worn by detectives whenever they anticipate touching blood, bodily fluids, mucous membranes, or non-intact skin while they conduct their operations.
2. Gloves must be worn when handling items or surfaces obviously contaminated with blood or bodily fluids.

3. Hands and other skin surfaces should be washed immediately and thoroughly with water and antiseptic cleanser if contaminated with blood or other bodily fluids.
4. Detectives must take precautions to prevent injuries caused by needles, syringes and other sharp objects.
5. Clothing which becomes contaminated with blood or other bodily fluids during operations should be removed immediately and separated until properly laundered.
6. Whenever detectives handle uncooperative individuals, they should make every effort to obtain compliance from the individual and request additional cover to deter violent attacks from the individual.