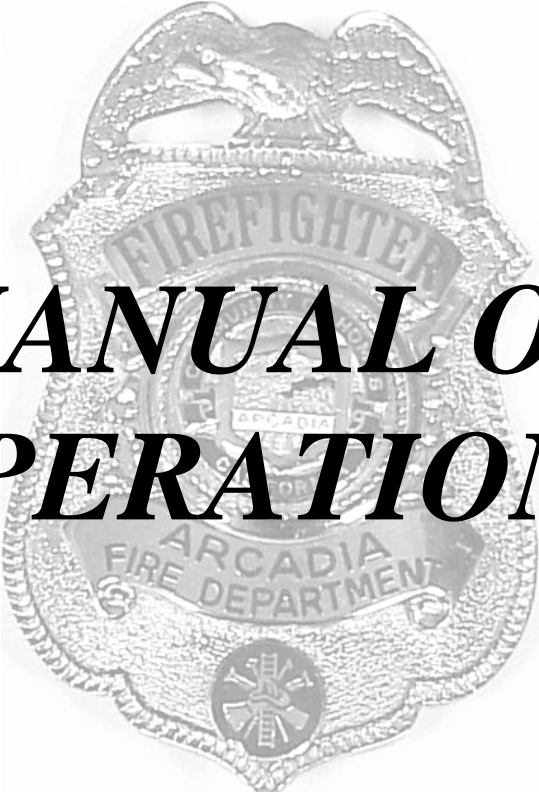


*Arcadia Fire Department*

A silver fire department badge with an eagle at the top, a Maltese cross at the bottom, and the text "FIREFIGHTER" and "ARCADIA FIRE DEPARTMENT" on a central shield.

***MANUAL OF  
OPERATIONS***

***\*Standard Operating Guidelines\****

Revised 7/3/2017

# MANUAL OF OPERATIONS

## \*STANDARD OPERATING GUIDELINES\*

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**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**INCIDENT COMMAND**

**Number:** 100  
**Revision Date:** 12/01/2012  
**File Name:** Inc Command

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The Incident Command System (ICS) is designed to control and direct the resources committed to an incident. In this manner incident objectives can be accomplished effectively and in priority order. The process begins with the first arriving officer and system is implemented as the incident dictates.

This policy is designed to assure that all members of the department understand the implementation of the Incident Command System during emergency incidents.

**POLICY**

The Arcadia Fire Department shall implement and operate within the Incident Command System at all emergencies

All Arcadia Fire Department personnel shall meet the minimum requirement of ICS 200 in-order to comply with Federal Government NIMS implementation by January 1, 2005. We will accomplish this by complying with the following:

- ❖ All members shall utilize ICS Publication 420-1 (Field Operations Guide) and ICS Publication 120-1 (Operational System Description) as outlined in our department Size-Up Policy.
- ❖ All fire department personnel shall be trained at a minimum level of ICS 200
- ❖ All members shall successfully complete an Incident Command training program provided by the Arcadia Fire Department.
- ❖ All members shall be required to have a minimum of four hours of training a year on the Incident Command System.

**PROCEDURE**

The Arcadia Fire Department responds to a wide range of emergency incidents. In order to effectively manage personnel and resources and to provide for the safety and welfare of personnel, the following procedures shall be implemented:

**Size-up:** The first unit on scene shall provide an initial size-up report to Verdugo dispatch and responding units.

**Assuming Command:** The first in Officer assumes command and shall retain command until relieved by the Battalion Chief or a superior officer. If the incident requires immediate intervention by the first arriving unit, the company officer may pass command to an appropriate unit on scene. Upon assuming command, the command post location shall be announced and manned.

**Incident Name:** The geographic name should be a one or two syllable word. The name can be a street, landmark or town, e.g., “Duarte IC”, “ Fairview IC”, “Race Track IC”. The most appropriate time to announce the incident name is during the “follow-up” report.

**Command Post:** The first vehicle to arrive will often be used as the incident command post. When this is not practical, the IC may use another vehicle or a geographical location (e.g. Fire Station 107) to identify the incident command post. The most appropriate time to announce the Command Post location is during the “follow-up” report. Command sheets and incident command boards shall be initiated by the first in chief officer at the command post.

**Passing Command:** During the early stages of incidents, the IC may need to leave the command post for a size-up or supervision of personnel. If this can be accomplished with a quick return to the command post, it is unnecessary to transfer command. A protracted absence from the command post necessitates the transfer of command to a specified officer on an assisting company. The initial IC will remain in command until an assisting company arrives at scene. At that time command may be passed with a radio transmission (e.g. “Engine 105 from Engine 106, I am passing command to you”). This initial radio transmission shall include information required in the follow-up report. The new IC will make the follow-up report and command the incident.

**Transfer of Command:** After the initial IC has implemented the initial Incident Action Plan, preparation for the transfer of command to the first arriving chief officer shall be made. The following information shall be transferred:

- General situation status.
- Initial Incident Action Plan.
- Deployment and assignments of operating companies.
- Appraisal of the needs for additional resources at that time.
- Specific safety hazards, life and property loss potentials.

**Automatic Holding:** All incoming companies shall stop and “hold” approximately one block (or ¼ mile for brush) from the incident and announce their holding position to the IC (e.g. “First Avenue IC, Engine 107, holding on Santa Anita and Huntington”). IF an intersection in not appropriate, use direction and distance (e.g. “First Avenue IC, Truck 105 holding ¼ mile east”).

**Check-In:** Check-in is required on all greater alarm incidents and is encouraged any time the IC wants to reduce radio traffic during the early stages of command.

The purpose of check-in is to provide an accounting of all resources that responded to an incident. The IC can check-in resources without assistance on most incidents; however, when responding resources exceed five to ten companies, the IC can become overloaded attempting to assign the resources one at a time. The IC can prevent this problem by assigning the check-in manager function to a company or individual located at the Command Post, Base, or Staging. The steps for this process are as follows:

- Decide on a logical location for easy access to the incident.
- Assign a Company or individual as Base or Staging.
- Brief the Base or Staging company / individual.
- Report the location, travel routes, and radio designation to the Verdugo Dispatch
- Personnel shall remain as a team in staging, base, etc., until assigned.

**Radio Communication:** There are three standard reporting formats: Size-up, Follow-up, and Status. Size-up and Follow-up are reported to Verdugo Dispatch. Status reports are from resources or division/group supervisors to the IC.

### **Recommended Size-Up Report Format**

#### Structure Fires

- Location of fire by address.
- Description of occupancy
- Numerical floor height and type of occupancy, e.g., two story commercial
- Products of combustion, e.g., fire, light/heavy smoke, nothing showing, etc.
- Special instructions if needed (e.g., exposures, location of fire within stated structure).

#### Brush Fires

- Location of fire by address or intersection. If an intersection, identify which side, e.g., N, W, S, E.
- Size of fire in acres.
- Type of fuel (e.g., light brush, grass, etc.)
- Speed of spread.
- Spread direction.
- Special instructions if needed (e.g., homes or values threatened).

#### Hazardous Materials Incidents

- Location of incident by address or intersection.
- Type of occupancy or carrier transporting hazardous material (e.g., railroad car, LPG tanker, gasoline truck, etc.)
- Type of material involved if known. Is incident moving or static (e.g., spill running into storm drains, spill confined to street by diking, cloud moving in N/W direction, etc.).
- Is incident with fire or without fire.

#### Multi-Casualty Incidents

- Location of incident by address or intersection.
- Type of incident (e.g., overturned bus, chemical spill, downed aircraft, etc.).
- Estimation on the number of victims.
- Follow-up Report

#### **Recommended Follow-Up Report**

The Incident Commander shall:

1. Identify the incident with a one or two syllable geographic name if possible (e.g., “Sunset IC”, “Foothill IC”, etc.).
2. Identify the Incident Command Post location.
3. State other pertinent information, e.g., additional resources required (e.g., second or third alarm assignment, specialized equipment, allied agencies, etc.)
4. State the “Check-In” location and travel routes, if required; this can be Staging, Base, Command Post, Division, Camp, Heliport, etc.
5. On incidents requiring two or more Divisions, the Incident Commander may request a command frequency assignment from Verdugo Dispatch.
6. Provide status reports to Verdugo when requesting additional resources and at 30-45 minutes intervals.

**Status Report:** The IC needs information from his Division/Group Supervisors to evaluate if the goals and objectives are being achieved in the Incident Action Plan. The standard format is as follows:

- Situation: Describe the problem(s) and related information.
- Progress: State progress since last report.
- Needs: Resource needs for handling the problems.
- Accountability



**Terminology:** Radio communications between units at an incident shall be on the assigned tactical frequency assigned. Radio traffic should be held to a minimum consistent with having adequate information for completing assignments and status reports. The intent of these guidelines is to provide brief, accurate communications.

1. When giving assignments, tell the officer the objective; state what you want, not how to do it. (e.g., “Engine 105 from IC protect the east exposure.”).
2. Companies will acknowledge radio assignments by repeating the order. (e.g., “IC from Engine 105 copied east exposure.”)
3. The Company Officer will use the Company Call Sign for communication to identify his company (e.g., “Engine 107”, “Truck 105”, “RA 106”, etc.).
4. When other members of a company want to communicate, they will use their company call sign and their rank. (e.g., “Engine 107 Engineer, Truck 105 Fire Fighter.”).

NOTE: When two Fire Fighters are assigned to the same company they must identify themselves by Unit, Rank, and Last Name. (e.g., Truck 105 Fire Fighter Smith.)

EXCEPTION: Command assignments will use proper terminology as indicated in current incident Command System literature. (e.g., Division/Group, Lobby, Staging, etc.).

5. Emergency Traffic: Emergency traffic should be used to report any danger occurrence or when incident objectives cannot be met. The individual can request emergency traffic through the IC. The IC will then request Verdugo Dispatch to clear the air.

#### APPENDICES

Appendix I: Radio Communication Examples

Appendix II: Definitions

## APPENDIX I

### Radio Communication Examples

#### A TYPICAL SIZE-UP REPORT FOR A STRUCTURE FIRE, NOTHING SHOWING.

Initial Size-Up report:

“Verdugo, Engine 105, 12 Bonita with nothing showing from a two story apartment building.”

Verdugo.’s size-up report:

(Alert tones), “ 12 Bonita, Engine 105 reports nothing showing from a two story apartment building.”

Follow-up report:

“Verdugo, Engine 105, can handle, food on the stove, out 5 minutes.”

Verdugo’s follow-up report:

(Alert tone), “Engine 105 can handle, food on the stove, out five minutes.

#### A TYPICAL SIZE-UP REPORT FOR A STRUCTURE FIRE WITH SMOKE SHOWING.

Initial size-up report:

“Verdugo Engine 107, 123 W. Huntington with light smoke showing on the second floor of a three story (Apartment, commercial, etc.) building.”

Verdugo.’s size-up report:

(Alert tones), 123 W. Huntington, Engine 107 reports light smoke showing on the second floor of a three story building.”

Follow-up report:

“Verdugo, Engine 107 and Truck 105 can handle, couch fire, out 20 minutes.”

Verdugo.’s follow-up report:

(Alert tone), “123 W. Huntington, Engine107 and Truck 105 can handle, couch fire, out 20 minutes.”

#### A TYPICAL SIZE-UP REPORT FOR A WORKING STRUCTURE FIRE.

Initial size-up report:

“Verdugo. Truck 105, 5100 S. 3<sup>rd</sup> St., with fire showing from a one story commercial building threatening exposures to the south.”

Verdugo.’s size-up report:

(Alert tones), “Truck 105, 5100 S. 3<sup>rd</sup> St. with fire showing from a one story commercial building threatening exposures to the south.”

Follow-up report:

“Verdugo. Truck 105 is Third Ave. IC and requesting a 2<sup>nd</sup> alarm. Staging at 3<sup>rd</sup> and Camino Real, approach from the north. Command Post in front of building, companies out one to two hours.”

Verdugo’s follow-up report:

(Alert tone), “Copied Truck 105 Third Ave IC, requesting 2<sup>nd</sup> alarm, staging at 3<sup>rd</sup> and Camino, approach from the north. Command Post in front of building, companies out one to two hours.”

#### A TYPICAL SIZE-UP REPORT FOR A BRUSH FIRE

Initial size-up report:

“Verdugo, Engine 107 on scene Valencia Blvd. with smoke showing in one acre of heavy brush with 5 mph winds from the Northeast pushing fire uphill. No structures threatened at this time.”

Verdugo’s size-up report:

\*Alert tones), “Valencia Blvd., E107 reports smoke showing in one acre of heavy brush with 5 mph winds from Northeast pushing fire uphill. No structures threatened at this time.”

Follow-up report:

“Verdugo, Engine 107 is Foothill IC, 1<sup>st</sup> Alarm can handle, out two hours. Command Post at Engine 107.”

Verdugo’s follow-up report:

(Alert tones), “Copied Engine 107, Foothill IC, 1<sup>st</sup> Alarm can handle, out two hours. Command Post at Engine 107.”

#### A TYPICAL SIZE-UP REPORT FOR A HAZARDOUS MATERIL SPILL.

Initial size-up report:

“Verdugo, Engine 105 on scene 210 freeway, east bound at Santa Anita. With one overturned tanker leaking unknown product, no fire, wind from the North.”

Verdugo’s size-up report:

(Alert Tones), “210 freeway, Engine 105 reports one overturned tanker leaking unknown product, no fire, wind from the North.”

Follow-up report:

“Verdugo, Engine 105 Freeway IC, requesting LA County hazmat to check-in at the Command Post at Engine 107, companies out three hours.”

Verdugo’s follow-up report:

(Alert tones), “Verdugo copied, Engine 105 Freeway IC, copied request for LA County hazmat to report to Command Post at Engine 105, companies out three hours.”

#### A TYPICAL SIZE-UP REPORT FOR A MULTI-CASUALTY INCIDENT:

Initial size-up report:

“Verdugo, Engine 106 on scene 4700 S. Rosemead with one overturned school bus carrying 25 passengers.”

Verdugo’s size-up report:

(Alert tones), “4700 S. Rosemead Engine 106 reports one overturned school bus with 25 passengers.”

Follow-up report:

“Verdugo, Engine 106 Rosemead IC, requesting 2 Engines, 1 Truck, additional RA, 5 Ambulances to check-in at Rosemead and Huntington, Command Post at 4720 S. Rosemead. Notify Medical Alert Center (MAC) we have 10 critical and 15 minor injuries, companies out one hour.”

Verdugo’s follow-up report:

(Alert tones), “Verdugo copied Engine 106 Rosemead IC, requesting 2 Engines, 1 Truck, additional RA, 5 Ambulances to check-in at Rosemead and Grand. Notify MAC of 10 critical and 15 minor injuries, companies out one hour.”

## Appendix II

### Definitions

1. Allocated: Resources dispatched to an incident that have not yet check-in.
2. Assigned: Resources checked-in and assigned a work task on an incident.
3. Automatic Holding: A location for assisting companies to stop and “hold” one block (or ¼ mile for brush) from the incident and announce their holding position to the IC. This procedure notifies the IC that companies are ready for assignment and to allow a smooth implementation of the Incident Action Plan.
4. Check-In: Locations where resources check-in at an incident. The locations are: Incident Command Post, Incident Base, Camps, Staging areas, Helibases, Division Supervisors.
5. IC: Incident Commander.
6. ICP: (Incident Command Post): Center of authority at Emergency Incidents.
7. ICS: Incident Command System.
8. Incident Action Plan: (IAP) The plan, developed by the IC, that guides the strategical and tactical operations. In early command, this is a verbal plan (see 420-1 for information on written plans). A basic incident action plan is not complete unless it includes:
  - A clear definition of goals and objectives
  - Time limits



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**INCIDENT COMMAND  
RESOURCE REQUEST  
FOR ADDITIONAL ALARMS**

**Number:** 100.1  
**Revision Date:** 12/03/2012  
**File Name:** Additional Alarms

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide guidelines for ordering additional resources when the magnitude of the incident has exceeded the resources on hand.

To provide guidelines for placing resources back in service after the resource is no longer needed at an incident.

**POLICY**

1. When it is determined by the Incident Commander that an incident has exceeded the assigned resources, additional resources shall be requested.
2. All Officers shall effectively manage resources utilizing the Incident Command System.
3. The Incident Commander, or Planning Chief if established, will develop a demobilization plan as soon as practical.

**PROCEDURE**

**ORDERING ADDITIONAL RESOURCES**

The Incident Commander must balance tactical assignments through progressive forecasting with the available resources to be assigned. During the forecasting process, the Incident Commander may reach a point where he/she begins to debate whether to request additional resources or not. In such cases, request the additional resources. If the resources are not needed, they can easily be placed back in service.

As a standard, the Incident Commander should utilize the greater alarm mechanism; this is the quickest method of obtaining resources, provides for automatic move-ups and indicates the incident is in an extended mode. Additional alarms should be requested sequentially which includes going from a 1<sup>st</sup> alarm to a 2<sup>nd</sup> alarm, 2<sup>nd</sup> alarm to 3<sup>rd</sup> alarm etc. The Incident Commander should avoid multiple single resource requests.

The Incident Commander must be aware of both the capability and response time of additional resources and effectively integrate these facts into the request.

Some incidents develop slowly, while some develop very rapidly. Some situations require the request for additional alarms or upgrading an assignment upon knowledge of particular address, occupancy, characteristics or conditions; in other situations, the Incident Commander will initiate some fire control activities, ask for reports and request additional alarms as required.

As the incident expands, the Incident Commander must expand the command staff to effectively manage the additional resources by utilizing proper span-of-control.

Additional resources may be requested for the following conditions:

1. An actual or potential situation exists and the life hazard exceeds the fire, rescue and EMS capabilities of the initial alarm.
2. The number, location and condition of actual victims exceed the rescue/treatment capabilities of on scene companies.
3. An actual or potential situation exists and the property protection demand exceeds the fire control capabilities of initial alarm companies.
4. Fire conditions become more severe or the situation deteriorates significantly.
5. All companies have been committed and the fire is not controlled.
6. On scene personnel are depleted due to exhaustion or injury. The Incident Commander must forecast the effect the fire will have on personnel and provide for the support of such personnel in advance.
7. The Incident Commander runs out of resources (personnel, apparatus, water, equipment, etc.).
8. There is evidence of significant fire, but companies are unable to determine location and extent.
9. The commitment of on scene companies is not effective in controlling the incident.
10. Companies cannot effectively perform early property loss control operations.
11. Situation becomes so widespread or complex that the Incident Commander can no longer effectively manage the situation which will require a larger Incident Command organization and more Branch, Group or Division functions.
12. The weather is or has the potential to have an effect on resources.
13. To have appropriate resources in staging to meet the needs of the incident.

## RELEASING RESOURCES

Early into the incident the Incident Commander, or the Planning Chief if established, must develop a demobilization plan. The importance of releasing available resources back into the Verdugo system cannot be over emphasized. During the course of greater alarm incidents available resources throughout the Verdugo system are spread thin, either working the original incident or on move-up assignments. Consequently creating coverage gap's which can extend throughout Area C.

As the incident de-escalates the demobilization plan should be placed into affect. The release of resources should not jeopardize incident operations or the safety of Firefighters continuing to work on the incident.

The demobilization plan should concentrate on releasing resources whose home jurisdiction is furthest away from the incident location.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**FIRE ATTACK GROUP /  
INTERIOR DIVISION**

**Number:** 100.2  
**Revision Date:** 12/04/2012  
**File Name:** Interior Division

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide Department Officers guidelines for assigning groups or divisions on structure fire incidents.

To provide a mechanism for the transfer of essential information from companies to the Incident Commander. This is very important for two reasons; first, Fire Fighter accountability, which directly equates to Fire Fighter safety and second, transmitting the Incident Action Plan (IAP) to companies working to control the incident.

**RESPONSIBILITY**

It is the responsibility of the First-In Company Officer, or the Incident Commander, on incidents where crews will be working inside a structure beyond the investigation mode, to establish either Fire Attack Group or an Interior Division.

**FIRE ATTACK GROUP**

During the initial stages of a fire it may be necessary to assign a company as Fire Attack Group. The sole purpose of the Fire Attack Group is to find, attack, and extinguish the fire. The Fire Attack Group Supervisor will be responsible for supervising the crew(s) assigned to the group.

Additional responsibilities inside the fire building such as search & rescue, salvage, overhaul etc., will be assigned by the Incident Commander to additional resources on an as needed basis. Once knockdown has been achieved, the Company Officer assigned as Fire Attack Group Supervisor can be reassigned as Interior Division and be responsible for more tasks within the structure.

**INTERIOR DIVISION**

Company Officers that establish or are assigned as Interior Division could be responsible for any of the following tasks and/or other fireground activities:

- Fire Attack
- Search and Rescue
- Salvage
- Overhaul
- Fire Cause and Origin



### FIRE ATTACK GROUP AND INTERIOR DIVISION REPORTS

Company Officers that assumes or are assigned to either group or division shall be responsible for providing the Incident Commander with Personnel Accountability Reports (PAR) and/or reports that includes Conditions, Actions, and Needs (CAN) at the Incident Commanders request or when necessary, which could include:

- Fire or Smoke conditions
- Progress achieved
- Possible fire extension
- Actions being taken
- The need for additional resources
- Personnel accountability
- Results of search and rescue
- Necessary salvage and overhaul
- Personnel accountability

### PROCEDURE

Fire Attack Group or Interior Division shall be established by the Incident Commander or First-In Company Officer depending on the size and complexity of the fire beyond the investigation mode. This will allow the Company Officer to focus on the single task of finding, attacking and extinguishing the fire or for a multi-functional supervisor to supervise and coordinate all emergency activity within the structure.

Transition from Fire Attack Group to Interior Division can be made by the Company Officer or the Incident Commander as the size and complexity of the fire changes and allows for the Company Officer to effectively manage additional resources and responsibilities.

Interior Divisions should be considered (i.e. Division 1, Division 2) on multi-story structures, if the Incident Commander or First-In Company Officer believes the incident would be more effectively managed depending on the height, size and complexity of the structure.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**PERSONAL PROTECTIVE  
EQUIPMENT**

**Number:** 101  
**Revision Date:** 11/08/2012  
**File Name:** PPE

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to assure that all personnel are prepared to commence fire suppression or rescue operations immediately upon arrival at an emergency scene while maintaining the highest degree of personal safety for all personnel.

**POLICY**

This procedure shall apply to all personnel operating at the scene of any emergency incident or training exercise.

All equipment shall be issued or approved by the Arcadia Fire Department and meet all requirements set forth by governing bodies.

**PROCEDURE**

**I. Structure/Vehicle Fire**

Full protective equipment shall consist of helmet, Nomex flash hood, turnout coat, turnout pants, SCBA, boots and gloves. All equipment is to be properly worn, coats closed and fastened with collars turned up.

**II. Wildland Fire**

Wildland/Brush personal protective equipment shall consist of helmet (fitted with wildland shroud), goggles, department issued Nomex brush jacket (yellow with name and "Arcadia Fire" stenciled on back), department issued Nomex brush pants, department issued boots, long sleeve cotton tee shirt and respiratory protection, if needed. Members shall "layer" personal protective equipment. This is accomplished by wearing the Nomex jacket over the long sleeve cotton shirt and uniform pants under the Nomex pants.

Department authorized wildland boots include the "Hawthorn Explorer" and the "White's Original Smoke Jumper". To ensure these boots are broken in properly they may be worn annually as station boots from May 1<sup>st</sup> through December 1<sup>st</sup>. While performing public education/demonstrations members must wear their department issued safety boots.

### III. Medical Incidents

Disposable gloves shall be worn on all emergency medical responses.

Masks and safety glasses shall be worn whenever there is potential contact with splash, spray splatter, droplets of blood or other potentially infectious materials and where the contamination of the mucous membranes of the eyes, nose or mouth can be reasonably anticipated.

Disposable gowns or protective clothing shall be worn when there is the possibility of exposure to excessive blood, body fluids or excreta.

### IV. Hazardous Materials/Weapons of Mass Destruction

Wear highest level of protection available for all suspected hazardous material, biological or chemical WMD events:

SCBA will protect against airborne particles (including biological agents, chemical vapors and gases)

Turnouts may not provide sufficient protection against high concentrations of biological or chemical agents.

Your protective equipment may need to be decontaminated or disposed.

### V. Enforcement

As with any safety procedure, primary responsibility for adherence to this procedure rests with each individual. Company Officers are responsible for enforcement of this procedure within their respective companies. Authority to deviate from this procedure rests solely with the Company Officer who bears full responsibility for the results of any deviation.

### VI. Application

All personnel shall wear protective equipment according to the following guidelines:

1. Operations shall not commence until all involved personnel have donned all necessary protective equipment.
2. Under no circumstances shall any aspect of personal safety be sacrificed in order to increase the speed of emergency operations.

3. Firefighting personnel shall wear full protective equipment when responding to any type of alarm indicative of fire, potential fire, explosion, potential explosion, or release of any type of hazardous material. Personal protective equipment shall be donned prior to boarding the apparatus.

NOTE: Full protective equipment shall be optional for drivers, rescue personnel and Chief Officers while responding to an incident. Upon arrival, members shall don proper safety equipment prior to engaging in emergency activities.

4. If an alarm is received while the apparatus is moving, the apparatus shall come to a complete stop, personnel will then don full protective clothing. At no time shall protective clothing be donned while the vehicle is moving.
5. All personnel operating power tools, hydraulic tools, forcible entry tools or any other equipment that may cause injury shall wear full protective clothing. Full protective equipment is also required for all personnel in the immediate area of the tools being used.
6. Gloves shall be worn at all times when the possibility of hand injuries exists. Examples may include during use of hand tools, hose evaluations and ladders.
7. All personnel operating at incidents where there is a possibility that tools, equipment or other debris may cause head injury shall wear helmets with chinstraps in place. This shall include personnel operating above or below ground.
8. Damage to personal protective equipment shall be reported immediately to the Battalion Chief. The Battalion Chief shall inspect the damaged article and order it replaced or repaired. Equipment damaged to the extent that its protective ability is impaired shall not be used. The Officer in charge of PPE shall be notified of damage, ordered equipment or replacement of PPE upon occurrence.
9. Incident Commanders may use their discretion to determine the appropriate level of protective equipment required for personnel operating at incidents where no specific guidelines have been established. In all cases, personnel shall be required to wear all personal equipment necessary to protect against foreseeable hazards.
10. Alterations to any safety equipment, such as removal of coat liners, are prohibited.

#### IV. Equipment Inspections

1. Inspection Process and Criteria:

- (a.) Preparation for Inspection

- (i) Ensure garments are clean. If any part of the garment has been contaminated by hazardous materials or biological agents, make sure they have been decontaminated.

- This is important for your safety, and to ensure that potential problems are not masked by incidental residue.
- (ii) Place Garment on a clean surface in a brightly lighted area.
  - (iii) Separate outer shell from inner liner, remove **Drag Rescue Devise** (DRD) and suspenders.

Pay close attention to high abrasion areas such as at the shoulders, back/waist area, knees, crotch and seat. If you see potential damage to the outer shell or thermal liner, examine the corresponding area on the moisture barrier.

(b.) Inspection of the DRD:

- (i) Thoroughly inspect the DRD for chemical deterioration, discoloration, cuts or holes, pulled stitches, unusual wear, broken or frayed fibers, and burn damage or discoloration from heat.

(c.) Inspection of the Inner Liner and Outer Shell Attachment System:

- (i) Locate the zipper and/or snap attachments.
- (ii) Check zipper for functionality and corrosion.
- (iii) Disconnect and examine snaps for corrosion and ensure their attachments to the garments are secure. Ensure all snaps function well.

(d.) Inspection of the Outer Shell (Routine and Advanced Procedure)

- (i) Fabric: Examine for dirt, discoloration, thin spots, holes, tears, embrittlement, cracking, burns, abrasions, and worn spots.
- (ii) Discoloration is a sign of overexposure to light or heat.
- (iii) Grasp any part of the fabric that may be damaged or flawed in both hands, and try to push your thumbs through the fabric. If fabric punctures, replace or repair.

(e.) Closure System:

- (i) Hook and loop – Engage and disengage hook and loop attachments to make sure they function well. Examine for worn, abraded, curled, or melted pieces that require replacement. Check stitching for loose thread that would require repair.
- (ii) Zippers – Examine all zippers for functionality and corrosion that would require replacement. Check stitching for loose threads that would require repair.
- (iii) Hardware – Examine all hardware for corrosion or other damage that would require replacement. Check that their attachment to the Garment is secure.

- (f.) Labels: Verify that all Safety, Cleaning and Information labels are on the Garment and are legible.

(g.) Recordkeeping:

Record all activities; results of inspections, cleaning, repair, and retirement on Disposal Record Forms issued to each Fire Department Member. Disposal Record Forms shall be maintained for all Turnout coats and pants issued, for the life of service. Disposal Record Forms shall be forwarded, with Turnouts for disposal or retirement, to the Fire Department Member assigned to Personnel Protective Equipment.

The Fire Chief, or designee, shall conduct annual inspections of all PPE Disposal Record Forms.

2. Routine Inspection:

Garment inspections, including its outer shell, liner, DRD and other components at the following times:

- Upon receipt of the new Garment or replacement component;
- After each use or at least monthly (whichever is greater) during the useful life of the Garment;
- After exposure to heat, flames, chemicals, or firefighting agents (including foam and water);
- After exposure to body fluids (including blood);
- After washing, repair or decontamination.

3. Quarterly Inspection

Each quarter Company Officers shall personally inspect all protective equipment for each member assigned to their company. The Company Officer shall assure that personnel have all necessary equipment in usable condition. The inspection shall be confirmed by completing a Personal Protective Equipment Inspection Report and submitting it to the Battalion Chief and Officer in Charge of Departments PPE program.

4. Annual Inspection:

Issued garments shall undergo an annual inspection by the Fire Chief or designee, an expert in the Fire Department PPE, a verified Independent Service Provider, or by the manufacturer of the garment. If a member has a concern regarding the garment's fit for use, he or she may request an inspection through channels.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**SELF CONTAINED  
BREATHING APPARATUS**

**Number:** 102  
**Revision Date:** 12/31/2016  
**File Name:** SCBA

**Review Date:** 6/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**OBJECTIVE**

To assure that all personnel are prepared to perform emergency operations while maintaining the highest degree of personal safety for all personnel.

**INTRODUCTION**

The use of self-contained breathing apparatus (SCBA) is an essential part of the complete personal protective equipment provided for each member of the fire department. As such, all personnel are expected to utilize SCBA whenever the need for respiratory protection is indicated.

**DESCRIPTION**

It shall be the policy of the fire department that personnel not be exposed to any hazardous atmosphere without the benefit of an SCBA. Instances of exposure shall be promptly and thoroughly investigated by the Battalion Chief. The Battalion Chief shall make appropriate recommendations to prevent a recurrence and submit them in writing to the Fire Chief.

This procedure shall apply to all personnel responding to any type of fire or other emergency incident.

Each firefighter bears full responsibility for adherence to this procedure. Authority to deviate from this procedure rests with the Company Officer and the Incident Commander who bear full responsibility for results of any deviation.

For the purposes of this procedure, the following definitions shall apply:

- *Use of SCBA* – the wearing of SCBA with the face piece in place, connected to the regulator and breathing air from the SCBA cylinder.
- *Hazardous Atmosphere* – any atmosphere that is contaminated with smoke, gasses, or other by-products of combustion: or any atmosphere that contains any known contaminants not normally present in clean air. An atmosphere that is oxygen deficient or suspected of being oxygen deficient shall also be considered hazardous.

The use of SCBA is mandatory for all personnel working under the following conditions:

- where the atmosphere is known to be hazardous
- where the atmosphere is suspected of being hazardous
- where the atmosphere may rapidly become hazardous

This policy shall apply to personnel involved in the following conditions:

- in an active fire area
- inside any building involved in a fire
- in a potential fire or explosion area; such as a gas leak or fuel spill
- where smoke is visible in the atmosphere, including vehicle fires, dumpster fires and outdoor rubbish fires
- where toxic products are present, suspected of being present, or could be rapidly released without warning
- in unventilated confined spaces, unless specific tests are performed to assure the atmosphere is safe
- in any below grade areas where an emergency exists, unless specific tests are performed to assure the atmosphere is safe
- in any areas suspected of containing carbon monoxide, including all areas under overhaul after a fire

Personnel using SCBA shall also wear complete personnel protective equipment as outlined in the protective clothing SOG.

Removal of the SCBA is at the discretion of the Company Officer with the concurrence of the Incident Commander. Premature removal must be avoided especially during overhaul operations. Prior to removal of SCBA, atmospheric monitoring must be conducted to assure air quality.

Any of the following conditions in the working area require continued use of self-contained breathing apparatus:

- Carbon Monoxide (CO) levels of 25 ppm or greater
- Oxygen (O<sub>2</sub>) levels of 19.5% or less
- Continued presence of smoke from combustion

Personnel operating in area where the atmosphere could become contaminated, but where there would be sufficient warning prior to posing a danger, may wear SCBA with the face piece removed. However, the SCBA must be in a ready state such that it is available for immediate use.

Each member is responsible for restoring to service the SCBA they used during any emergency. This shall include replacing the cylinder with a full cylinder, cleaning of the face piece and harness, testing the unit for proper operation, and stowing the SCBA in its assigned position. If a problem is discovered



it is to be immediately reported to the Company Officer and the SCBA is to be tagged “Out of Service” and a repair order completed.

### **WORK PERIODS WHEN USING SCBA**

- After one 45 work period members will report to the rehab area for fluids, rest, cooling (active and/or passive) and medical evaluation.
- Company Officers should be constantly evaluating the mental status and general appearance of their crews and report to rehab for evaluation when necessary.
- A work period shall be defined as consumption of one 45 minute bottle of air and will require assignment to rehab. Exception: using 30 minutes or less air from a 45 minute bottle.

### **RULES OF AIR MANAGEMENT**

- Air Management is critical to the health and safety of our members.
- Firefighters shall continuously monitor and manage their air supply.
- Entry team members should help monitor each other’s air level.
- Firefighters shall make every effort to exit the fire building or hazardous atmosphere before their low-air warning alarm activates.
- Entry personnel must take into account the need for residual air to complete the decontamination process.
- A low-air warning alarm activation at an emergency scene is a warning that a firefighter may be in trouble.

### **AIR MANAGEMENT STANDARD**

It is expected that all members plan for and complete their exit from the IDLH before their low-air alarm is activated. This can be accomplished by adhering to the following items:

1. All personnel using self-contained breathing apparatus will:
  - Ensure air supply will be above 4000 psi before entering an IDLH
  - Monitor their consumption of air and advise their supervisor when they are at  $\frac{3}{4}$ ,  $\frac{1}{2}$ , and  $\frac{1}{3}$  remaining in their SCBA air supply.
2. Company Officers or Crew Leaders will update their supervisor and/or Incident Commander when the following air levels are achieved.
  - When any member of crew reaches 50%
  - When any member of crew reaches 33% (this is a potential emergency if not near immediate exit of the IDLH)
  - When any member of crew reaches 10% (this is an emergency)
  - When requesting relief due to air supply trigger point

3. If any members low-air alarm is activated in the IDLH, the leader shall report the following information to the proper supervisor:
  - Unit Identifier
  - Location
  - Low-Air Status
  - Estimation of time to exit IDLH

#### **WHEN TO CHECK AIR STATUS**

- Prior to Entry
- When Changing locations on the fire ground such as moving to a different room or travelling upstairs or downstairs
- When changing assignments/tasks. (Reassigned from primary search to salvage)
- At the conclusion of each task/assignment



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**PERSONNEL ACCOUNTABILITY**

**Number:** 103  
**Revision Date:** 12/31/2016  
**File Name:** Personnel Acct

**Date:** 6/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The Personnel Accountability System shall be utilized at all incidents, where potential for injury or death to responders is found to exist. ALL PERSONNEL ON SCENE ARE RESPONSIBLE FOR SAFETY.

**RESPONSIBILITIES**

**I. Incident Commander (IC)**

- A. Utilization of the Incident Command System at all emergency incidents.
- B. The Incident Commander must maintain an accountability and inventory worksheet at incidents.
- C. The Incident Commander is responsible for establishing management divisions or groups and assigning officers to run them.
- D. The Incident Commander must track companies assigned to divisions or groups.
- E. The Incident Commander will maintain a worksheet of activities and operations at the incident.
- F. The Incident Commander must have officers conduct an accountability check periodically to make certain all personnel are safe.

**II. Division/Group Supervisors**

The Division or Group Supervisors are responsible for tracking companies assigned to their division or group and knowing the location of each company. The Division / Group Supervisor will conduct an accountability of the companies when ordered by the I.C or more often as warranted.

**III. Company Officers**

The Company Officer is responsible for knowing the location of each member of his or her company. The Company Officer will make certain that all members of his/her company are safe and accounted for when conducting accountability checks.

**IV. Firefighters/Engineers or other Responders**

Firefighters are responsible for staying with their assigned company and making certain the Company Officer knows their assignment and location.

V. Personnel Accountability Report

- A. A personnel accountability report call (PAR) shall be conducted at least every ten minutes at all working structure fires or at any hazardous incident.
- B. The clock starts when the first arriving unit is on scene and reports smoke, fire or other hazardous condition.
- C. At PAR, the Incident Commander contacts each Company Officer (at small incidents with six or fewer units are involved). The Company Officer shall verify visually that each member of his/her company is safe. The Company Officer shall report his/her PAR and location to the IC. At larger incidents or when divisions or groups have been established, the Incident Commander should contact each division or group by radio and ask for a PAR. The Division or Group Supervisor shall contact each Company Officer operating under his/her command. The Company Officer shall verify visually that each member of his/her company is safe. The Company Officer shall report the results of his/her PAR to the Division or Group Supervisor. The Division or Group Supervisor shall report to the I.C the identification of each company or unit operating in their command and the results of PAR.

VI. Evacuation Procedure

- A. If the Incident commander determines a need to evacuate the building the dispatch center will be contacted to provide a warble tone over the fireground channel(s) and then announce to all personnel the need for evacuation.

The Incident Commander shall conduct a PAR of all companies on the incident to verify that the evacuation order has been heard and complied with.

- B. In addition to traffic requiring evacuation, the following standardized audible signal can be used to indicate evacuation.
- C. The Evacuation Signal will consist of repeated short blasts of the air horn for approximately 10 seconds, followed by 10 seconds of silence. This sequence of air horn blasts for 10 seconds followed by a 10-second period of silence will be done 3 times; total air horn evacuation signal including periods of silence will last 50 seconds. The Incident Commander shall designate specific apparatus to sound the evacuation signal using air horns. This should be done in conjunction with the radio announcement of “Emergency Traffic”, with direction for emergency scene personnel to evacuate the hazard area. The Incident Commander shall request Division/Group Supervisors or Company Officers to account for all personnel under their command.

D. The Dispatch Center should continue to advise the Incident Commander of the elapsed time at each additional 15-minute interval, or until cancelled by the IC or until the incident is declared under control; i.e., knockdown.

VII. Accepted Method of Accountability

CAD System

The primary way that an IC or RIC Group will maintain accountability of exactly which members are on scene of an incident, is by utilizing the information that is in the CAD System. This information can be obtained by printing a roster of units assigned to the incident. BC command vehicles are equipped with MCT's and printers. In the event that a printer is malfunctioning or not available, incident information can be gathered from an MCT and transcribed by hand.

VIII. Mutual Aid

- A. When a mutual aid unit arrives with all personnel assigned, the I.C shall utilize PAR by simply using the company's call sign.
- B. The Incident Commander may carry accountability roster cards to be passed out to and completed by mutual aid companies in staging.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**EMERGENCY TRAFFIC**

**Number:** 103.1  
**Revision Date:** 12/31/2016  
**File Name:** Emergency Traffic

**Date:** 6/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To communicate to personnel over the radio on an incident that an extraordinary hazard exists, or when a sudden change in conditions has created an imminent danger to the personnel working on the incident.

In the event that a firefighter is experiencing an emergency requiring a MAYDAY, MAYDAY procedures will be followed as outlined in Arcadia Fire Department Standard Operating Guideline # MAYDAY.

**PROCEDURE**

1. Consistent with the intent and spirit of all emergency message formats, in the event of an “EMERGENCY TRAFFIC” transmission, the IC may activate the emergency radio tones to ensure radio silence prior to communicating the nature of the hazard. As with all emergency message formats, when the message has been communicated, acknowledged and/or resolved the IC shall state “Resume Normal Radio Communications”
2. All officers should consider the many incident dynamics before declaring “EMERGENCY TRAFFIC”. Overuse of the hailing term “EMERGENCY TRAFFIC” could lead to diluting its urgency. If the incident is organized efficiently and unity of command exists, the safety concern could potentially be transmitted to Division and Group supervisors via radio or face to face.
3. In the event the emergency traffic warrants an immediate evacuation, The Incident Commander (IC) is responsible for making orderly and thorough contact with all on-scene personnel. Using clear text/plain language to identify the conditions, the IC should announce “All companies evacuate the building”, “Change from an offensive to defensive attack” or any other critical incident information that requires an immediate notification to all personnel on-scene.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**MAYDAY PROCEDURES**

**Number:** 104  
**Revision Date:** 12/31/2016  
**File Name:** MAYDAY

**Review Date:** 6/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**I. INTRODUCTION**

The National Fire Protection Association (NFPA) has two standards that contain specific requirements regarding the safety and accountability of firefighters:

NFPA 1500 Standard on Fire Department Occupational Safety and Health Program

NFPA 1561 Standard on Emergency Services Incident Management System

**II. PURPOSE**

The purpose of this document is to provide a guideline for the rescue of firefighters through the implementation of area-wide Rapid Intervention Standard Operating Guideline (SOG). This guideline addresses the use of common terminology, multi-agency communication procedures, firefighter survival procedures, and expectations of command officers.

**III. GLOSSARY OF TERMS**

**ACCOUNTABILITY** - Maintaining the status and location of all resources committed to an incident.

**CLEAR TEXT** - The use of plain language is intended to describe a clear picture and reduce confusion at incidents, particularly where different agencies are working together. Clear Text used plain English without Ten Codes and without agency specific terminology.

**COMMAND CHANNEL** - A radio channel, designated by the Incident Commander (IC), which is provided for communications between the IC and tactical-level management components (i.e. Divisions and Groups) during emergency incidents.

**COMPANY UNITY** – A term used to indicate that a fire company or unit shall remain together in a cohesive, identifiable working group, to ensure personnel accountability and the safety of all personnel. A company officer or unit leader shall be responsible for the adequate supervision, control, communication, and safety of the personnel of the company or unit.

**EMERGENCY/ALERT CHANNEL** – The radio channel utilized by firefighters reporting a Mayday. When the Emergency Alert Button (EAB) is activated, some handheld radios automatically switch to this channel and lock in the “repeat” mode until the radio is reset.

**EMERGENCY TRAFFIC** – The hailing term used to clear designated radio channels and alert incident personnel when a deteriorating or extremely hazardous condition exists, or there is a critical change in tactics that on-scene personnel need to be advised.

**EMERGENCY RADIO TONE** – A distinctive high/low tone initiated by the IC or communications center on the Command and Incident Tactical Channel(s).

**EMERGENCY ALERT BUTTON (EAB)** – The orange button located on the handheld radio, and on the lapel microphone. This button activates the emergency notification feature of the handheld radio, and is a critical component for firefighter safety. Depressing the button alerts the communications center and/or IC of a Mayday. The EAB is commonly referred to as the Emergency Trigger or E-Trigger.

**ESCAPE ROUTE** – A pre-planned and clearly identified route of travel that firefighting personnel are to take to access safety zones or other low risk areas.

**EVACUATION SIGNAL** – A measure taken that audibly signals to all personnel that there is an immediate need to evacuate a hazardous area of the incident. It will consist of repeated short blasts or the air horn for approximately 10 seconds, followed by a 10 second period of silence. This sequence of air horn blasts for 10 seconds followed by a 10 second period of silence will last 50 seconds. The IC shall designate specific apparatus to sound the evacuation signal using air horns. This should be done in conjunction with the radio announcement of “EMERGENCY TRAFFIC” following the Emergency Radio Tone. Clear directions must be given to scene personnel to evacuate the hazard area.

**FIREFIGHTER DOWN, FIREFIGHTER MISSING, or FIREFIGHTER TRAPPED** – Clear test terms used for radio communication to notify personnel on-scene at an emergency that a Mayday has or is occurring.

**IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH)** – Any atmosphere that poses an immediate hazard to life or an atmosphere that produces immediate irreversible debilitating effects on the health of a human.

**INCIDENT TACTICAL CHANNEL** – The radio channel designated by the agency’s communication center or by the IC for tactical communications. Additional tactical channels may be required, depending on the scope and complexity of the incident.

**“MAYDAY, MAYDAY, MAYDAY”** – The hailing term used to clear designated radio channels and alert incident personnel when a firefighter’s life is in danger and immediate assistance is required.

**PERSONNEL ACCOUNTABILITY REPORT (PAR)** – A verbal roll call of personnel and companies assigned to an incident. This roll call can be given by individual companies or by Divisions and Group.



**RADIO IDENTIFIER** - The unique pre-assigned alphanumeric code assigned to each radio. The alphanumeric code is transmitted each time the push to talk button is depressed.

**RAPID INTERVENTION COMPANY/CREW (RIC)** – A company/crew with fully equipped responders who are on the scene of an incident specifically assigned to initiate the immediate rescue of a firefighter.

**RAPID INTERVENTION GROUP (RIG)** – A functional component of the incident command system consisting of resources that are on the scene under the command of a Rapid Intervention Group Supervisor specifically assigned to initiate the immediate rescue of a firefighter.

**RAPID INTERVENTION TACTICAL CHANNEL** – The assigned tactical channel used by RIC or RIG. Personnel assigned to RIC or RIG will operate on this channel when communicating with other assigned rapid intervention personnel. This channel is not to be mistaken for or assigned as the Emergency Alert Channel.

**SELF-SURVIVAL PROCEDURES** - Actions of firefighter performs during a “MAYDAY” to alert rescuers and improves survivability.

**TWO OUT** – A company consisting of a minimum of two fully equipped responders who are on site and specifically assigned to initiate the immediate rescue of a firefighter.

#### **IV. COMMUNICATION**

During incidents, communication procedures must provide for the transmission and reception of both routine and emergency messages. Typically, these messages fall into four categories:

##### **A. Routing Tactical**

- Tactical direction from the IC assisting resource
- Tactical reports from the assisting resource to the IC
- Periodic PARs as needed or required by policy.

##### **B. Command**

- Overall incident management
- Routing messages to the communications center

##### **C. Emergency Traffic**

- Change in operations, offensive to defensive operations; withdraw personnel from the structure, etc.

#### D. Mayday

- Assisting agency resources must be able to transmit a Mayday situation in a manner that will be received by the IC, when a firefighter is down, missing or trapped.
- The IC must be able to notify all resources, including assisting agencies, whenever a Mayday situation exists in order to clear radio traffic in the case of a down, missing or trapped firefighter.
- The IC must be able to receive a Mayday from the assisting agency resource in order to initiate the appropriate response.

#### **Multi-agency Communications Options.**

When multiple agencies that do not share the same frequencies for day to day operations are working on an incident, there is a possibility for communication issues. Below are four scenarios to improve communications.

##### **1. Agency Representative**

The IC must ensure that they have a communication plan in place that provides for radio communications with all resources operating in the hazardous area. Consider requesting an agency representative from the assisting department to report to the ICP when inter-agency communications may be challenging.

- Personnel from the assisting agency will communicate with their Agency Representative per agency policy.
- The Agency Representative should remain at the ICP.
- The IC on any extended and/or greater alarm incident shall request an Agency Representative from an assisting agency when a firefighter from the assisting agency experiences a Mayday.

Caution is required when agencies do not have common communications and information is being relayed through an Agency Representative, as the company officer will not be able to hear communications between the IC and the other resources assigned to the incident.

##### **2. Each firefighter of the assisting agency comes equipped with a portable radio that is able to communicate on the Incident Tactical Channel.**

- The IC and personnel from the assisting agency will communicate on the Incident Tactical Channel
- The firefighter should transmit Mayday alerts on the Incident Tactical Channel.
- All personnel operating on the incident shall clear radio traffic.

**3. Only the company officer from the assisting agency has a portable radio that is able to communicate on the Incident Tactical Channel (either the officer brings a radio or obtains on from the ICP)**

- The IC should request an agency representative from an assisting agency to report to the ICP to maintain communications with the assisting agency's firefighters.
- The IC and company officer will communicate on the Incident Tactical Channel.
- The company office will communicate incident information and Mayday alerts with his/her crew using their agency's portable radio.
- The company officer must acknowledge a Mayday transmitted by one of his/her personnel and transmit the Mayday to the IC on the Incident Tactical Channel.

Caution must be exercised when utilizing this option. Crewmembers must maintain situational awareness and be prepared to initiate communication, as it does not take into account the company officer becoming incapacitated and being unable to communicate.

- If the company officer does not acknowledge a Mayday, the firefighter should activate the EAB.
- If the company officer from the assisting agency does not have a portable radio that can communicate with the ICP the company officer shall leave a firefighter at the ICP to provide a communication link between his/her company and the ICP.
- The company officer and the IC will engage in routine tactical communications through the firefighter providing the communication link at the ICP.
- Personnel, including the company officer, will transmit Mayday on the tactical frequency normally used by their agency.
- The firefighter providing the communication link at the ICP shall advise the IC of the Mayday.
- If the firefighter providing the communication link at the ICP does not acknowledge a Mayday, the firefighter should activate the EAB.
- The communication center must confirm the receipt of the Mayday with the IC.

Caution is required when using this option as the company officer will not be able to hear communications between the IC and other resources assigned to the incident.

**4. IC equipped to communicate with assisting agency**

- The IC and personnel from the assisting agency will communicate on the Incident Tactical Channel.
- The firefighter should transmit Mayday alerts on the Incident Tactical Channel.
- The IC shall request an Agency Representative to assist monitoring the assisting agency's dispatch channel and mayday/alert channel.
- If the IC is equipped with only one radio providing this capability, he/she should monitor the needed frequencies utilizing the Scan feature.

## **EAB Considerations**

There will be time when an EAB will be accidentally activated on an incident. The IC and resources assigned to rapid intervention must assume that any firefighter operating at an incident that has activated his/her EAB is in need of rescue until the activation is confirmed false. Some agencies utilize radios equipped with an EAB that, when activated, is not monitored by their communications center. In this case, it is the responsibility of the IC to monitor the Emergency/Alert Channel and respond to request for help on that frequency.

Caution must be exercised when it is recognized that an EAB utilized a simplex or direct channel. These EAB activations are not monitored by the communications center. The IC will need to monitor for activations and make the appropriate notifications to the communications center.

## **V. FIREFIGHTER SURVIVAL PROCEDURES**

### **Person(s) Needing Rescue**

An individual assigned to an incident shall use the hailing term “Mayday, Mayday, Mayday” to announce a “*Firefighter Missing, Down or Trapped*”. This shall be initiated by a member when his/her life is in danger and the situation cannot be corrected in 30 seconds. **The “Mayday” call shall be delivered on the Incident Tactical Channel.** A “Mayday” shall also be initiated by any member assigned to an incident if they have knowledge that another firefighter’s life is in danger and they need immediate assistance.

Note: If after two (2) “Mayday” attempts the member does not receive acknowledgement on the incident tactical channel he/she shall activate the Emergency Alert Button (EAB) and declare the “Mayday” again verbally. An individual assigned to an incident, shall use the hailing term “Mayday, Mayday, Mayday” to announce a Firefighter Down, Missing or Trapped. This hailing shall be used for themselves, or for another firefighter that is in danger and requires immediate assistance.

### **Initiate a Mayday**

The following situations require the immediate initiation of a Mayday call.

- Injured and/or Disabled (Firefighter Down) resulting in reduced ability to exit safely.
- Separated from Crew or lost (Firefighter Missing). Loss of visibility or no physical contact with hose line and/or partner.
- Trapped, pinned, and/or entangled in debris (Firefighter Trapped) mobility compromised due to heat, structural collapse, debris, and/or inoperable/blocked doors/exits.
- Self Contained Breathing Apparatus (SCBA) malfunction or low air alarm activation in an IDLH and unable to reach an exit.

- Any life threatening condition that cannot be resolved in 30 seconds. The 30- second rule serves as a reminder to focus on self-rescue and to gather as much information about the situation as possible.

Once a member recognizes they are in a “Mayday” situation or if any other member becomes aware of a member in a “Mayday” situation, it is imperative to give simple, but pertinent information, using the three “W’s” method (**Who, What, Where**). This will assist in locating and rescuing the member in need. The following is a scenario and example of the three “W’s” along with a sample radio communication.

**SCENARIO:** Firefighter Smith from Engine 31 becomes trapped while fighting fire on the third floor towards the Bravo side. It is important the who, what and where is obtained from the down firefighter. Below is a sample exchange of information.

**Radio Communication:**

FF Smith: “MAYDAY, MAYDAY, MAYDAY”

IC: Initiate or request emergency tones from dispatch to clear radio frequencies;

IC: Transmit “All Companies clear this channel for a Mayday. Member calling Mayday, go!”

FF Smith: “This is Firefighter Smith from Engine 31” (**WHO** are you?) “I am Trapped, I need Help” (**WHAT** is your condition?) “I am on Third Floor Bravo side”

(**WHERE** are you?)

The IC will then acknowledge the trapped firefighter and initiate a rescue immediately.

**VI. EXPECTATIONS OF COMMAND**

**Incident Commander Responsibilities**

In the initial stages of the incident, the IC shall maintain accountability by documenting situation and resource status. On large or complex incidents, additional staff may be assigned to oversee these functions. Each Branch Director, Division and Group Supervisor, and Company Officer is responsible for maintaining accountability of all personnel and resources under their command.

At an emergency incident, the IC shall be responsible for the overall management of the incident and the safety of all personnel involved at the scene. The IC shall:

- Be responsible for overall personnel accountability for the incident.
- Designate Two Out team, Rapid Intervention Crew/Company, or Rapid Intervention Group according to the safety needs of the incident.
- Maintain an awareness of the location and function of all companies or crews at the scene of an incident.

- Initiate an accountability worksheet at the beginning of the incident and maintain the system throughout the operation.
- Provide for additional accountability based on the size, complexity, or needs of the incident. This can be accomplished by reducing the span of control.
- Provide for communications and interoperability with mutual aid resources.
- Provide resources for the rescue of personnel operating at emergency incident

### **Branch Director/Division and Group Supervisor Responsibilities**

- Supervise and account for companies and/or crews operating in their specific area of responsibility.
- Obtain briefings from the IC.
- Position companies for effective deployment.
- Facilitate the tracking and accountability of assigned companies and crews.

### **Company Officer Responsibilities**

- Directly accountable for members under their command.
- Maintain an ongoing awareness of the location and condition of all company personnel.

## **VII. INCIDENT COMMANDER MAYDAY PROCEDURES**

When a May Day situation is reported, the Incident Commander is responsible for ensuring the following actions are taken:

### **A. Procedures Prior to a Mayday Occurring**

- The IC is maintaining accountability of resources assigned to the incident
- The IC is monitoring fire ground conditions and evaluating the effectiveness of current tactics
- The IC is monitoring the necessary channels.

Rapid Intervention Group Tactical Channel (If Assigned)  
Emergency Channels 14 & 16  
Administrative (Dispatch) Channel as Assigned  
Incident Command Channel if assigned  
Incident Tactical Channel(s)

## **B. Procedures During Mayday Incident**

1. The IC states “All companies on the incident clear this radio channel unless you have emergency traffic, firefighter calling a Mayday identify”
2. The IC documents necessary Who, What and Where information.
3. The IC will advise companies working on the incident the type of emergency, advise them to maintain company units and radio discipline.
4. The IC will notify dispatch center of the Mayday, request additional resources and request an Emergency Alert Tone if the tone will not interfere with rescue operations.
5. The IC will deploy the rapid intervention crew or instruct RIG to do so.
6. The IC will have all companies maintaining their current operation assignment unless redirected for initial rescue.
7. The IC or RIG will maintain constant communication with the member declaring the Mayday.

## **C. Procedures After a Mayday Incident**

After a Mayday situation, the IC should:

1. Conduct a PAR of all companies to ensure all members are accounted for.
2. Once the PAR is complete and all personnel are accounted for the IC should transmit to all companies “All Clear – Resume normal radio communications”.
3. Notify the dispatch center the Mayday has concluded.
4. Ensure the firefighter that experienced the Mayday received a medical evaluation.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RAPID INTERVENTION CREW  
(RIC)**

**Number:** 105  
**Revision Date:** 12/31/2016  
**File Name:** RIC

**Date:** 6/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The need for a RIC or RIC Group performing a firefighter rescue in a rapid timeframe cannot be overemphasized. As a member of a Rapid Intervention Crew, your duty to rescue a downed or missing firefighter will come without warning.

**RESPONSIBILITY**

It shall be the responsibility of the IC to establish a team of trained fire personnel for the purpose of firefighter rescue at all working structure fires or other emergency incidents where members will be operating in an atmosphere that is Immediately Dangerous to Life and Health (IDLH).

It shall be the responsibility of all members of the Department to become familiar with and comply with this guideline at all working structure fires or other emergency incidents where members will be operating in an atmosphere that is IDLH.

The exception to this policy is if an incident requires fire personnel to enter an IDLH atmosphere where a life safety issue has presented itself prior to the arrival of additional resources.

**SCOPE**

This guideline will define the purpose and concepts of effective firefighter rescue. It will also set standard operating guidelines for personnel that are assigned to a Rapid Intervention Company (RIC) or a Rapid Intervention Group (RIG Group) at an emergency incident.

**PROCEDURE**

The factors that determine the degree to which Rapid Intervention Companies are formed and deployed are incident driven. While the "Two In/Two Out" requires a standby team of at least two members to be organized to back up the initial entry team before they enter into an IDLH atmosphere, the initial stages of an incident do not necessarily constitute a situation in which a Rapid Intervention Company or a Rapid Intervention Group must be designated. In the early stages of an incident, a company not working in an IDLH atmosphere and not assigned to a critical task, may be reassigned to perform the duties of a Rapid Intervention Company.

**As incidents grow in complexity, the IC shall designate a Rapid Intervention Group to stand by.**

The IC should consider two companies as a minimum for Rapid Intervention. The reasons for two companies as a minimum standard are: to provide the rescuers a team to assist with any firefighter rescue, as well as provide a Rapid Intervention Company for the rescuers should the need arise. The IC should consider adding a USAR company as part of the Rapid Intervention Group.



When a Rapid Intervention Group is created, the RIC Group Supervisor will often be filled by the initial company officer assigned to rapid intervention. After notifications have been made and chief officers begin to arrive on scene, the IC should appoint a chief officer to the position of RIC Group Supervisor. The RIC Group Supervisor should set up a status board in close proximity to the Incident Command Post. This will allow the IC and the RIC Group Supervisor to be in close contact should a rescue be required.

The responsibility of RIC or RIC Groups is separated into three mode categories:

**1.) STANDBY MODE** - This mode must be assumed by the first company that has been assigned to rapid intervention. This is the most frequent mode. The Standby Mode is meant to be simple and quick. The concept of this mode is to immediately place a minimum of one fully staffed engine or Truck Company in a “ready to react” position. The team members will be equipped with a RIC Kit and shall have been assigned a Rapid Intervention Tactical Channel. When the decision is made to rescue a firefighter, the Standby Mode will change to the Deployment Mode.

Before members are put into the Standby Mode, they should gather a cache of tools that will equip them should the need for a firefighter rescue present itself.

**2.) SUPPORT MODE** – This mode is assumed only after the Standby Mode has been assumed. The function of rapid intervention in this mode is to create conditions on the fireground in which firefighters will not need to be rescued, or to create conditions that would facilitate more effective firefighter rescues. The Support Mode will be assumed concurrently with the Standby Mode and will never replace the Standby Mode.

The concept of the Support Mode is to have additional rapid intervention members, who are not in the Standby Mode, accomplish the following:

- Set up the RIC Group Status Board (located in the BC Suburban)
- Gather vital incident information and begin to record that information on the RIC Group Status board.
- Create horizontal openings adjacent to firefighting activities for emergency egress. This must be accomplished with ventilation in mind. At no time should there be an opening created that would create an unfavorable condition due to an influx of air to the fire.
- Throw additional ladders for members operating above ground to have more options for egress.

**All measures that are taken during the Support Mode must be conducted in coordination with the operations at the incident so as not to interfere with the strategy and tactics of the incident.**

**3.) DEPLOYMENT MODE** – This mode is assumed when there is an immediate need to locate and rescue a downed firefighter. In the Deployment Mode, the time to reach the downed or missing firefighter(s) must be kept to a minimum to ensure their survival. When the Deployment Mode is assumed, the command structure must be maintained in the Rapid Intervention Group. Strict guidelines and accountability for each member of the RIC Group must be maintained to effectively rescue downed firefighters. The Deployment Mode will occur during the most intense time period on the fireground. While panic, anxiety and fear of the downed firefighter's survivability are the main concern for everyone on the fireground, all RIC members must remember that their ability to stay calm and react with decisiveness will be the difference in accomplishing a successful rescue.

In the event that a firefighter rescue presents itself, the IC must revise operations strategy and tactics to the new situation. The IC must apprise all divisions, groups, or companies of the new strategy and tactics. This update must include specific instructions to these companies and ensure that they understand their assignments. The need to use companies for continued fire control may be necessary.

**The RIC Group Supervisor must take command of the rescue operations and ensure that appropriate tactics are being used to affect the rescue of the down firefighter.** It is imperative that the RIC Group Supervisor quickly determine the effect that adjacent crews are having on the rescue and report this information to the IC immediately. Any adjacent companies that are not needed to support the rescue or contain the fire should be removed from the immediate area.

The IC should assign a Paramedic Rescue to stand by in the immediate area of the deployed RIC Team. The personnel assigned to the Paramedic Rescue should be ready to provide immediate medical treatment to the rescued member(s). For this reason, paramedics should not be reassigned to any other function during this time. In a high-rise incident, paramedics shall bring all necessary equipment to treat and transport firefighters to the Staging floor.

Company commanders or members in the immediate area of a firefighter rescue situation should take whatever action is necessary to safely assist the firefighter rescue. Companies working in the immediate area may have the best opportunity to accomplish a quick rescue. This does not condone independent action.

Firefighting efforts must intensify in the area that a member is believed to be down, missing, or trapped. Additional resources may need to be assigned to support fire suppression operations in addition to the RIC Group activities. Company commanders who feel that their company can affect the rescue must take into consideration the following:

- Your company's current position
- The time you and your company have been "on air"
- The location of the member requiring the rescue
- Accountability for your company's actions (must keep IC/Division informed)

**Rapid Intervention Group and ICS**

If an incident does not appear that it will be under control within the first 15 minutes after initial units have arrived, the IC should consider assigning a chief officer to the position of RIC Group Supervisor. Consideration should be given to assign the third arriving chief officer this position after the IC and Safety Officer positions have been filled.

Within the command structure on an incident, the Rapid Intervention Group will report directly to the Operations Section Chief. If the Operations Section Chief position is not filled, the Rapid Intervention Group will report directly to the IC.

The following is a diagram of the ICS with a Rapid Intervention Group in place:



## **Radios and Frequencies**

The effective use of radios and radio frequencies can be the deciding factor as to whether a RIC deployment will be successful or not. It is important to understand that most members operating on the fireground are using a portable radio. A portable radio does not have the wattage to communicate when there is a mobile radio transmitting on the same frequency at the same time. All personnel must maintain strict radio discipline and should remain off the radio during the Deployment Mode unless it is absolutely critical to the firefighter rescue.

The IC and the RIC Group Supervisor must establish a communication plan that will allow the proper frequencies to be used during an incident. Early provisions for this plan will eliminate confusion and will lend itself to a more efficient RIC Group. The following are radio channels that must be established at any incident where the need for rapid intervention is present:

- Incident Tactical Channel(s) – Red 2, Red 8, etc.
- Emergency Trigger Channel ICIS – Red 14 and 16
- RIG Tactical Channel – Red 9

When a RIG has assumed the **Standby Mode** the following radio channels should be monitored:

- RIG Tactical Channel
- Emergency Trigger Channel – Red 14 and 16
- Command Channel
- Incident Tactical Channel (see note)

*Note:* There may be a need to monitor the Incident Tactical Channel if this is the only means of communication by the affected member, during rescue operations.

## **Establishing The Rapid Intervention Group**

When the first company arrives to the incident and engages in activities that are inside of an atmosphere that is IDLH, the IC shall immediately consider establishing a Rapid Intervention Company. If the incident appears to be controlled and will continue to stay controlled by the initial units, the need to establish a Rapid Intervention Group may not be necessary. Simply establishing a Rapid Intervention Company may be sufficient to provide the needed resources for a safe working environment. However, if the incident appears to be dynamic and growing, the IC should consider establishing a Rapid Intervention Group.

The company that has been assigned to the Rapid Intervention Group must ensure the following steps are taken immediately: (Use the acronym RIC)

- **R** – Request additional companies to fill out the needs for the assignment. A minimum of two companies are required to effectively accomplish any firefighter rescue. It is the responsibility of the RIC Group Supervisor to ensure that the proper staffing level of the RIC Group has been provided.
- **I** – Implement a Rapid Intervention Company to assume the Standby Mode. The Standby Mode must be assumed as soon as possible to provide for potential firefighter rescue.
- **C** – Collect Information and set up the RIC Group Status Board. This is the point where the members who are not in the Standby Mode will begin a reconnaissance to determine the building layout as well as other building features. The RIC Group Supervisor should locate the RIC Group Status Board in close proximity to the Command Post.

### **The Rapid Intervention Group Status Board**

Tracking the activities of a RIC Group for a RIC Group Supervisor can be overwhelming. For this reason, the RIC Group Status Board has been designed to track and control resources assigned to the RIC Group. Initial incident information must be properly documented so that if a firefighter rescue is needed, the RIC Group will know exactly what to do in the fastest timeframe possible. Essentially, the RIC Group Status Board assists with incident accountability.

The following information must be included on the RIC Group Status Board:

- Layout of the building and ICS assignments. (Divisions, Groups, etc.)
- Radio frequency assignments (Command, Tactical, RIG, Emergency Trigger Channel)
- Timeline of incident
- Timeline of each deployed Rapid Intervention Company and sketch of their location

### **Location of Rapid Intervention Companies**

Selecting locations of individual RIC Teams in the Standby Mode is extremely important to ensure that the least amount of time is taken to accomplish a firefighter rescue. The IC or RIC Group Supervisor must ensure that as the geographic locations of members in the IDLH atmosphere change, the RIC Team locations must change as well. In high-rise fire incidents, RIC Teams should be located in staging. This will allow for a rapid deployment if the need for a firefighter rescue arises. If there are conditions that prohibit a RIC Team from deploying quickly to a firefighter rescue, it is best to add an additional RIC Team.

### **Rapid Intervention Tools and Equipment**

Equipment and tool considerations for RIC will not be the same for every incident. This is especially true when responding into a known rescue situation. Consideration should be given to the following factors when selecting equipment and tools:

- Building size and configuration (basement, multi-floor, etc.)
- Building construction (masonry, wood frame, etc.)
- Building collapse hazards during the rescue
- Personnel available to complete the rescue
- Accessibility and obstacles (barred windows, steel doors, etc.)
- Visibility (current and predicted)

Only the minimum tools necessary to complete a rescue should be taken by the RIC. Since incidents vary in scope and severity, there is no all-encompassing list of tools that can be used on every incident. Nevertheless, consideration should be given to the following items as a starting point:

- Thermal Imager(s)
- RIC Kit(s)
- Litter Basket or Skedco Sled
- Lightweight forcible entry tools. (Halligan, Axe, etc.)
- Rotary saw
- Chainsaw
- Chalk or crayon.
- Inside ladder (10', 12' or 14')
- Pike Pole and/or Rubbish Hook
- Additional lifeline rope bags
- Debris bag
- Cyalume© Light Sticks
- Lighting equipment (portable generator, lights, cords, etc.)
- Spare air bottles

The RIC Kit will consist of the following minimum requirements:

- Nylon bag
- 60 minute air bottle
- 1<sup>st</sup> stage pressure regulator w/ intermediate pressure hose and a Universal Air Connection
- 1 face piece (compatible with other components)
- 2<sup>nd</sup> stage regulator
- 100' of minimum 3/8" kern-mantle rope with knots tied every 50'
- Flashlight
- External 2" carabiner
- Medical shears (penny cutters)
- Heavy duty wire/cable cutters
- External PASS device
- Portable strobe light
- 2 – search slings



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**PRIMARY AND SECONDARY SEARCH**

**Number:** 106  
**Revision Date:** 11/08/2012  
**File Name:** Primary Search

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide guidance in the provision of a primary and secondary search. Primary and secondary search is a critical component of offensive firefighting operations.

**PROCECURE**

A primary and secondary search shall be conducted in all offensive structural firefighting operations.

**PROCEDURE**

**I. Primary Search Procedures**

- A. A primary search shall be conducted to verify occupant status on every offensive firefighting operation.
- B. The search and rescue team will consist of a minimum of two (2) firefighters equipped with:
  1. Full turn-outs with SCBA
  2. Personal alarm device
  3. Portable radio
  4. Light box or flashlight – one per person
  5. Marking device – chalk or paint stick
  6. Forcible entry tool
  7. Tether (red webbing)
  8. Light at point of entry
  9. Rope bag – one per person
  10. Thermal Imaging Camera
- C. Hose line should be deployed immediately to protect the search and rescue team and their avenues of escape.

- D. The area should be ventilated as quickly as possible. Rapid and effective ventilation can drastically improve the interior environment of the structure. In addition to increasing the safety of personnel, ventilation will speed search and related fire control operations.
- E. During interior searches if the door is closed, feel the door for excessive heat prior to opening.
- F. Before entering the room or building to be searched, it will be the policy of this Department to always:
1. Verify your personal alarm device is activated.
  2. Prior to entering a building, the search team should develop a search plan. The search team should inform the IC that they are entering, the number of people in the search team, the location they are entering from, and the direction they are heading. Example: “RA106 entering A side of the structure with two, right hand turns.”
  3. Upon entering a building, if the search team turns right they should stay in contact with the walls on their right, and continue to their right sweeping the floor area. If the search team enters the building and turns left, they should stay in contact with the walls on their left, and continue to their left sweeping the floor area.
  4. Search teams should keep in mind that they should use their drop bags, by tying one end off to an anchor point outside of the building. Using the drop bag will allow you to:
    - a. Speed up your exit from the building by following your rope to the outside without having to follow the walls.
    - b. Will give the search team another reference point in the event that they lose contact of the walls.
    - c. In the event that the search team themselves become trapped, rescuers will be able to quickly find the first search team by following the rope line.
  5. Check under beds and furniture.
  6. Thoroughly check closets and bathrooms for victims.



7. Open windows as you move around the room.

*Opening windows in the room being searched will aid the rescuer by removing heat and smoke, thus increasing visibility and giving the victims added time to be rescued.*

8. Keep in verbal contact with other members of the search team.

*If fire is encountered, closing the door will often contain the fire temporarily. Immediately notify the IC of the location of the fire.*

- G. When a room has been thoroughly searched, close the door and make a slash through your company assignment number on the lower third of the door.

This will indicate to others that the room has already been searched and who conducted the primary search. This procedure will be conducted on every room searched.

- H. If victims are encountered during the primary search, notify the IC of your location, status of the victim(s), number of victim(s) and if additional personnel or equipment will be needed to remove the victim(s).

- I. EMT's or paramedics will evaluate victims removed from an area with a hazardous atmosphere.

- J. After completion of the primary search, and having found no victims, report an "All Clear" to the IC.

- K. Upon reporting an "All Clear" to the IC, report to the Incident Commander for another assignment.

## II. Secondary Search Procedures

- A. A secondary search shall be conducted in a planned and coordinated effort utilizing primary search tactics to verify occupant status on all offensive firefighting operations. Secondary searches shall be conducted after the fire has been knocked down and structure ventilation has been initiated.

- B. The secondary search shall not be conducted by the crew, or crews, who conducted the primary search.

The secondary search is a more thorough search of the involved structure, conducted at a slower pace making sure all rooms and voids have been checked for potential victims.

- C. The secondary search team will consist of a minimum of two (2) firefighters equipped with the same personal equipment listed for the primary search team.

- D. Due to the differences between a primary and secondary searches equipment needs may be different. Equipment to move and lift heavy materials may be needed by a secondary search team to verify victims are not hidden in void spaces.
- E. If victims are encountered during the secondary search, notify the IC of your location, status of the victim(s), number of victim(s) and if additional men or equipment will be needed to remove the victim(s).
- F. EMT's or paramedics will evaluate victims removed from an area with a hazardous atmosphere.
- G. After completion of the secondary search, and having found no victims, report an "All Clear" to the IC.
- H. Upon reporting an "All Clear" to the IC, report to the assigned company officer for another assignment.

### III. Conclusion

The primary search system is not absolutely foolproof. Extending a primary search means only that search teams have quickly gone through the interior to verify that everyone the team can locate is out. The primary search is often done under hot, smoky, dark, rushed and sometimes desperate conditions. Although the primary search system is not perfect, it offers the best chance of locating, protecting and removing fire victims.

The secondary search system is designed to verify all occupants have exited, or been removed, from the involved structure. The secondary search is conducted thoroughly and at a much slower pace than the primary search and may require tools designed for the moving and lifting heavy materials to locate victims. The secondary search helps to ensure that no potential victim, or victims, remain within the involved structure.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**REHAB AND MEDICAL EVALUATION**

**Number:** 107  
**Revision Date:** 11/08/2012  
**File Name:** Rehab

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide rehabilitation and medical treatment to departmental personnel who have been engaged in training or emergency incidents.

**PROCEDURE**

1. Pre-Incident and Training Operations.
  - a. Members shall maintain proper hydration, nutrition, and diet to maintain normal body function.
  - b. For scheduled events, prehydration shall include an additional 16 ounces of fluids within 2 hours prior to the event.
2. Incident Scene and Training Rehabilitation
  - a. Rehabilitation operations shall commence whenever emergency operations or training exercises pose a safety or health risk to members.
  - b. Emergency medical services staff in rehabilitation shall have the authority, as delegated from the incident commander, to use their professional judgment to keep members in rehabilitation or to transport them for further medical evaluation or treatment
  - c. Members shall undergo rehabilitation following:
    - The use of a second 30 minute self-contained breathing apparatus (SCBA) cylinder.
    - A single 45 minute cylinder
    - A single 60 minute cylinder
    - 40 minutes of intense work without SCBA.

A supervisor shall be permitted to adjust the time frames depending upon work or environmental conditions.
3. Rehabilitation efforts shall include the following
  - Relief from climatic conditions
  - Rest and recovery

Active and/or passive cooling or warming as needed for incident type and climate conditions  
Rehydration (fluid replacement)  
Calorie and electrolyte replacement, as appropriate, for longer duration incidents  
Medical monitoring  
Member accountability  
Release

4. Rest and Recovery

a. Members shall rest for a minimum of 20 minutes following:

The use of a second 30 minute cylinder  
The use of a single 45 or 60 minute cylinder  
40 minutes of intense work without SCBA

b. Supervisor shall be permitted to adjust the time frames depending upon work or environmental conditions.

c. Members shall not return to operations if:

They do not feel adequately rested

If EMS or supervisory staff present see evidence of medical, psychological, or emotional distress

If the member appears otherwise unable to safely perform his or her duties

5. Cooling and Warming

Members who feel warm or hot shall remove protective clothing, drink fluids, and apply active and / or passive cooling as needed for incident type and climate conditions

6. Fluid / Calorie Replacement

a. Members entering rehabilitation shall consume fluids to satisfy thirst during rehabilitation and be encouraged to continue hydrating after the incident.

b. Members shall replace calories and electrolytes as required, particularly during incidents of more than 3 hours and incidents where members are likely to be working for more than 1 hour.

c. The Department shall ensure that appropriate calorie and electrolyte replacements are available.

d. The Department shall ensure that a means to wash members' hands and faces is available whenever calorie replacement will be used.

7. Medical Monitoring and Emergency Medical Care.

- a. EMS shall be available as part of the incident scene rehabilitation for the evaluation and treatment of members.
- b. EMS personnel shall evaluate members arriving at rehabilitation for symptoms suggestive of a health and / or safety concern.
- c. Symptomatic members, or members with abnormal findings shall receive additional monitoring during rehabilitation.

8. Company/Crew Level Rehabilitation

- a. All members entering and leaving rehabilitation shall be assigned by the incident commander and shall be tracked through the personnel accountability system.
- b. Company officers shall ensure that members remain hydrated and that potable fluids are available.
- c. Company officers shall assess their crew at least every 45 minutes and more frequently when working in extreme conditions to determine their need for rehabilitation.

9. Documentation

- a. Time-in / time-out for members / crews entering or leaving the rehabilitation area shall be documented.
- b. Where emergency care is provided, a patient care report shall be generated.

10. Post Incident Rehabilitation

Supervisors shall encourage members to continue fluid intake after the incident.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**EMERGENCY DECONTAMINATION**

**Number:** 108  
**Revision Date:** 11/08/2012  
**File Name:** Emergency Decon

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

Emergency responders are exposed to chemical and biological agents that are used in the day-to-day operations of many businesses located in our community. When hazardous chemicals or biological agents are released “accidentally”, first responders place themselves in dangerous positions in an attempt to mitigate the problem.

Today the threat of chemical and biological terrorism has become a pressing public safety concern. History has shown that no community is immune. Acts of terrorism transcends all geographic and demographic boundaries. These acts, which are also known as weapons of mass destruction (WMD), have created an urgent need to provide protection for first responders in a manner that has not been a concern in the past. First responders must be trained and equipped to protect themselves and provide initial action for the public. Decontamination should be conducted to protect citizens, personnel, equipment and the environment from harmful effects of the contaminates. Decontamination minimizes the uncontrolled transfer of contamination from the hazard site to clean areas. This includes being able to manage and mitigate incidents effecting large numbers of victims. The process of decontamination involves specialized training and equipment to ensure the safety of the public.

California Code of Regulations (CCR) Title 8, Chapter 4, Section 5192 (q) (6) (B) 5, states that first responders as the operations level shall “...know how to implement basic victim, equipment and rescue personnel decontamination procedures”.

29 Code of Federal Regulations (CFR) 1910.120 (q) states decontamination must be addressed at all incidents involving hazardous materials.

**CONSIDERATIONS**

Decontamination must be considered as soon as possible to save lives. Firefighters should use resources that are immediately available and start decontamination. In most cases water carried on the apparatus might be the most expedient means to deliver water at a low pressure.

**PROCEDURE**

**Methods of Decontamination**

**Dilution** – The use of copious amounts of water to flush off or dilute contaminates from persons, clothing tools and equipment. This is the preferred method due to ease of implementation, effectiveness and relative low cost.

**Absorption** – The “picking-up” of a liquid material like a sponge. This method may require the use of specially products designed for a particular material.

Discarding –The process of removing and disposing of the contaminated clothing and equipment. This is also a preferred method for ease of implementation, effectiveness and relatively low cost.

Neutralization – Chemically altering the contaminant to an innocuous or less harmful state (not normally used for decontamination of victims)

#### Primary or Emergency Decontamination

Emergency decontamination refers to decon that is urgent and field expedient. Most often refers to the decon of civilians or emergency response personnel that have had direct exposure to a potentially hazardous substance. Emergency decontamination involves:

- Stripping clothes
- Flushing with water
  - 2 to 5 minutes for skin contact
  - At least 15 minutes for eye contact

#### 1. Isolate victims

Communicate instructions

Move away from hazard

Upwind, upgrade & upstream

Segregate male / female if possible

Collect personal items

Strip down to briefs (bio & radioactive wet clothing first)

Keep clothing away from the face (avoid breathing agent)

- Cut clothing head to toe, front to back

#### 2. Use hose lines and elevated master stream

Fog nozzles with low pressure to rain down on the victims (i.e. shower)

Minimize exposure to responders

Wear rubber gloves when possible

#### 3. Communicate instructions

Arms out / legs apart

Wash top down

If a biological or radioactive agent, start washing as they remove cloths.

#### 4. Provide cover

Get blankets, sheets

#### 5. Consider yourself contaminated.

Take appropriate precautions and decontaminate yourself.

In a mass casualty mass / decontamination situation immediate, emergency treatment may be needed to save a life; therefore, emergency decontamination shall be started without a formal and complete *contamination reduction corridor*.

Emergency decontamination considerations include the following:

- Safety of all emergency response personnel is the primary concern
- Use proper personal protective equipment (PPE)
- Self contained breathing apparatus (SCBA)
- Operate uphill, upwind & upstream
- Protect against secondary contamination
  - Structural firefighting clothing is not designed for working in hazardous chemical environments

#### Respiratory Decontamination

- Remove victim from the hazardous environment
- Relocate victims to a clean and safe location
- Administer oxygen as needed
- Remove bulky clothing which may have trapped gases

#### Secondary Decontamination

Secondary decontamination is provided to civilians or emergency response personnel that may have been exposed, but are not displaying any related symptoms.

Secondary decontamination involves the following:

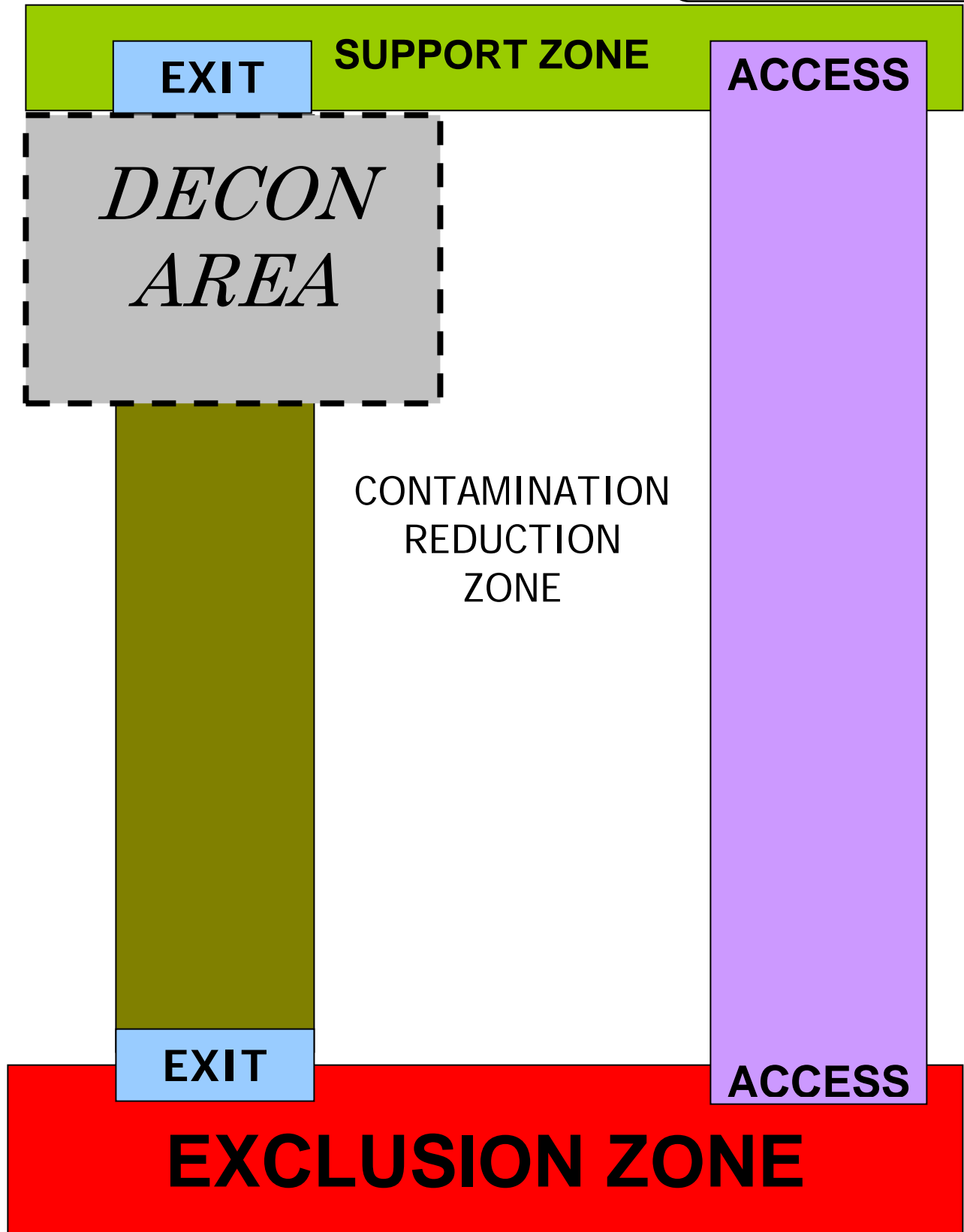
- Water run-off issues
- Provisions for modesty
- Use of equipment such as tents, trailers, tarps, containment basins and showers
- Also referred to as Medical Decontamination

#### Water run-off

The Environmental Protection Agency has indicated that water run-off is a “secondary” concern in terms of containment. Life safety is the “primary” concern. If personnel, equipment and time are available, water run-off measures may be implemented.

When establishing the decontamination operation, every effort shall be made to ensure water run-off does not flow toward or pool in the Support Zone.







**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**MASS DECONTAMINATION  
OF AMBULATORY VICTIMS**

**Number:** 109  
**Revision Date:** 11/08/2012  
**File Name:** Mass Decon - Amb

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The Arcadia Fire Department is committed to the safety of all employees at emergency incidents. The purpose of the following Decontamination Plan is to provide guidelines by which Arcadia Fire Department can quickly and effectively decontaminate victims of Industrial Accidents and Terrorism incidents. The premise of this Plan will assist in providing continuity of practice between the various agencies within our city.

This plan is designed for the First Responders and not intended to modify any policies or procedures that are established and designed for Hazardous Materials Response.

**Emergency Decontamination** is the initial or gross decontamination intended to rapidly remove as much contamination as possible. Emphasis is placed on rapidly performing this procedure to minimize the effects of the contaminating agent.

First responders will initiate this process by directing victims to remove their clothing down to their undergarments and then showering the victims utilizing the most expeditious process available.

**Mass Decontamination** is the multiplication of the emergency decontamination process sufficient to accommodate large numbers of contaminated persons.

**Technical Decontamination** is the deliberate and precise decontamination using pools, special decontamination solutions, monitoring methods, and specially trained personnel. (HMRT, Department of Defense, Military, etc.)

**PROCEDURE**

A. Chemical, Biological and Nuclear Incidents

This decontamination plan will be utilized regardless of the agent used. Generally speaking, chemical agents, particularly the Nerve Agent class, result in immediate symptoms ranging from muscle tremors or respiratory distress to Salivation, Lacrimation, Urination, Diarrhea, Gastro Intestinal and Emesis (SLUDGE) or even death. Some chemical agents, such as vesicants (Blister Agents), may not exhibit symptoms for several hours.

Biological Agents will typically display symptoms within 3-7 days after exposure and generally present as flu type symptoms. When Nuclear or Radiological Agents are utilized symptoms may be immediate or may take 4-5 days to manifest. There may be no outward signs to identify that a radiological source is present.

**B. General Response Information:**

1. Incidents where possible dissemination is occurring or has just occurred.
  - a. Approach up wind, up hill if possible.
  - b. Rely on dispatch information. The presence of multiple victims should be an immediate indicator that this “is not business as usual”.
  - c. Give a concise size up. Be specific about what you see.
  - d. Attempt to identify agent if possible by noting signs and symptoms exhibited by victims.
  - e. Request additional resources early.
  - f. Note obvious conditions and advise other responding additional units.
  - g. Consider “Ground Zero” as presenting the greatest hazard.
  - h. Initial crews should wear full personal protective equipment and double glove of Nitrile and latex. Leather gloves may be worn over inner gloves for additional tear protection.
  - i. Protect yourself from inhalation exposure first.
  - j. Establish Control Zones
    1. Hot (Exclusion Zone)
    2. Warm (Contamination Reduction Zone)
    3. Cold (Support Zone)
  - k. There always exists the possibility of additional devices. Briefly check the area prior to setting up Treatment areas, the incident command post

- l. If an additional device is located:
  1. Evacuate the area
  2. Address victims via public address system on apparatus.
- m. Communicate the need for their assistance.
- n. Evacuate victims upwind, uphill, and upstream of incident.
- o. Implement MVI / MCI protocols.
- p. Request Medical Alert Center make notification to area hospitals of potential impact.
- q. Complete risk analysis in conjunction with health department officials and determine an incident action plan (IAP).
- r. Determine the need for Decontamination
  1. Are the victims symptomatic?
  2. Do they appear to have been contaminated?
  3. Are the victims complaining of :
    - a. Skin irritation
    - b. Respiratory irritation
  4. Have instruments detected the presence of a contaminant?
- s. Isolate Victims / Patients into a Safe Refuge Area.
  1. Address potentially exposed victims via Public Address system on apparatus
    - a. Try not to use words that would cause undue stress to the victims:  
  
*EXAMPLE: “ Ladies and Gentlemen: You may have been exposed to a potentially hazardous substance. We are doing everything possible to help you but we need your help. As a precaution, we are asking you to calmly follow the directions of the firefighters. “*
  2. Give clear and concise directions.

3. Evacuate victims upwind, uphill, and upstream of incident.
4. Segregate the symptomatic from the asymptomatic victims. Attempt to segregate symptomatic male and female patients.
5. Do not move deceased victims.
6. Some victims will leave the scene regardless of your efforts. Do not attempt to physically restrain these people. Medical Alert Center will advise nearby hospitals that they may be receiving patients who have self-triaged themselves and what decontamination requirements are needed.
7. Declare an MVI / MCI
  - a. Carry out Decontamination procedures

**NOTE:**

*Traditionally, non-disaster hazardous materials operations have focused on providing a “clean” patient to the medical care provider. An infected or exposed person may be contagious or contaminated. This prospect results in the potential for spreading a contaminant. Be aware that decontamination as it applies to chemical or radiological exposure victim may not be equally effective for the victim exposed to a biological agent.*

**EMERGENCY DECONTAMINATION PROCEDURES**

Once the decision is made to quickly decontaminate victims, a thorough knowledge of these procedures will expedite the operation. The first and most important point to remember is YOUR SAFETY! Be a part of the solution and not a part of the problem. Also remember that emergency decontamination is NOT always the best decision. Know when to implement emergency decontamination procedures and when it is best not to act too quickly.

**A. Protection of Personnel**

1. All personnel who come in contact with or have the potential to come in contact with any exposed victims must wear:
  - a) For chemical agents:
    - 1) A minimum of full structural firefighting Personal Protective Equipment (PPE) including SCBA with mask securely in place and breathing air. A minimum of two layers of gloves, Nitrile and latex.

b) For biological agents:

- 1) Standard communicable disease ensemble including eye protection and a minimum of a HEPA mask with double layer latex gloves - SCBA is the preferred method of providing respiratory protection.

c) For radiological incidents:

- 1) A minimum of full structural firefighting PPE including SCBA with mask securely in place and breathing air.
- 2) A minimum of two layers of Latex gloves.
- 3) Employ the principals of Time, Distance and Shielding.

**NOTE:**

*When handling radiological incidents, First Responders can best protect themselves by using the principals of time, distance, and shielding. When responding to incidents suspected to be a radiological hazard, increase approach distances and employ monitoring early. Although First Responders may become contaminated after coming into contact with patients prior to decontamination, there is minimal possibility of exposure provided that First Responders wear appropriate structural firefighting ensemble and protect their respiratory tract with SCBA. Once patients have been decontaminated, regardless of how much radiation they received, they cannot expose or contaminate anyone else.*

2. All personnel who have come in contact with or may have come in contact with exposed victims must proceed through the decontamination line before entering the cold zone.

B. Setting up the Decontamination Corridor

1. Select a large area that is upwind and uphill from the Hot Zone.
2. Consider weather conditions when selecting site.
3. Remember that you may be dealing with hundreds of victims.
4. A minimum of two decontamination lines must be established (one for civilian and one for emergency personnel).

**NOTE:**

*When sufficient resources are on scene and there are large numbers of victims needing decontamination, form additional decontamination lines by adding additional engine companies to the sides of those engines that formed the original emergency decontamination corridor. Additionally, response personnel must be evaluated for decontamination needs prior to release from the incident.*

5. Engines should be placed twelve to fourteen feet apart.
6. Place salvage covers on the ends of apparatus to provide for modesty.
7. Attach two and one half-inch (2 ½”) fog nozzle to a side two and one half-inch (2 ½”) discharge.
8. Engines should be at idle with discharge gates one-quarter (¼) open.
9. If possible, engines should pump in volume to limit pressure.
10. Adjust flow at nozzle and set for wide fog pattern (setting nozzle to partial flush seems to work best). Adjust pattern so it drops just short of opposite Engine Company.
11. Decontamination streams should form a wide intersecting cone pattern with stream from adjacent Engine Company.
12. **If resources are available**, control run off to greatest extent possible but remember that decontamination (life hazard) takes priority over environmental concerns. Control runoff to ensure it will not flow into clean areas that have not been secured.
13. If run-off is not confined, notify agencies that will be impacted downstream.
14. Segregate male and female patients when possible.
15. Take into consideration families, small children, the elderly, and physically or mentally challenged.
16. Male and female decontamination corridors can be quickly established using engines and salvage covers. Use your imagination, but remember that decontamination is a priority.
17. Isolate those who refuse to comply with your directions to prevent further contamination of victims and responders. If possible, keep them in the warm zone until decontamination is completed. DO NOT physically restrain these people.

#### C. Decontamination Process

##### 1. Ambulatory Patients

- a) Have victims remove outer clothing down to their undergarments.
  - 1) Approximately 80% to 90% of the contaminants will be removed by removing clothing.

- 2) Remember to provide for modesty for all victims.
- 3) Place victim's clothing and personal belongings into a clear plastic bag twist the top of the bag and secure with. Attach a water- resistant Property Tag to the top of the bag. Place the 2<sup>nd</sup> half of the tag on the victim for later identification.

**NOTE:** *Law enforcement personnel may need contaminated personal belongings as evidence.*

- 4) Victims will pass from the Hot Zone to the Safe Refuge Area where they will be evaluated and prioritized for treatment. Secondly, this area is where the collection of information, and prevention of the spread of the contaminant by the patients occurs. These patients will then be passed to decontamination personnel.
- 5) The preferred decontamination solution is liquid soap and water. If this is not available, use plain water.
  - a. Instruct victims to wash themselves from top to bottom, front to back.
  - b. Victims should stay in decontamination stream for approximately 1 min.
  - c. Provide for modesty for each patient before leaving the decontamination corridor.
  - d. Consider blankets, sheets, towels from a local store or hotel; Tablecloths from restaurants; H/M modesty suits; etc.
  - e. Use your imagination but make every effort to provide modesty protection for all victims.
  - f. After decontamination, the Decontamination Unit Leader and / or the Medical Unit Leader will assess the patients for adequacy of decontamination. If hazardous materials personnel are available, random testing for residual contaminant may be done. **However, patients should not be quarantined or denied treatment and / or transportation while awaiting testing.** Normally, patients who proceed through the decontamination corridor will be presumed clean.

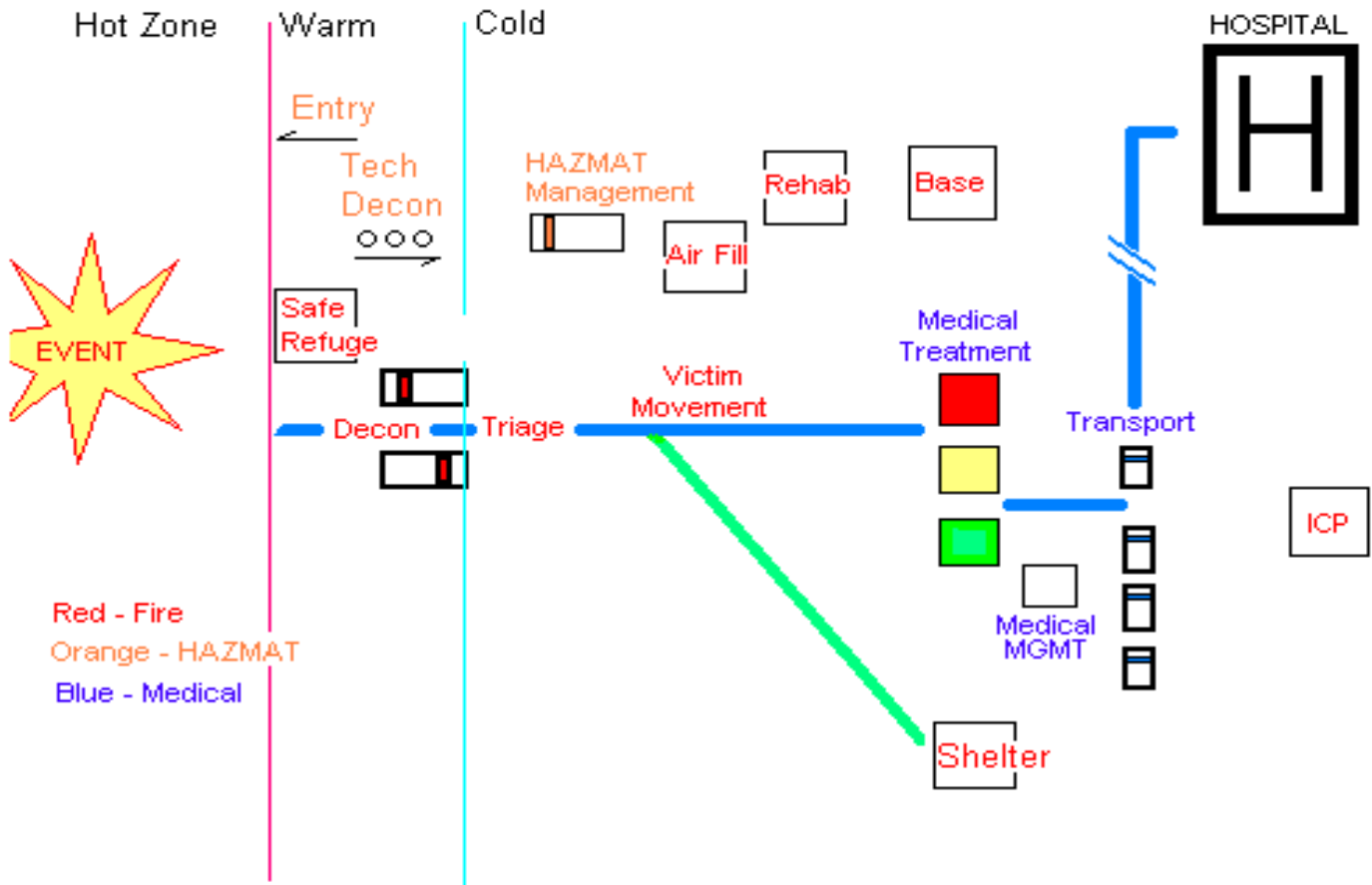
**NOTE:**

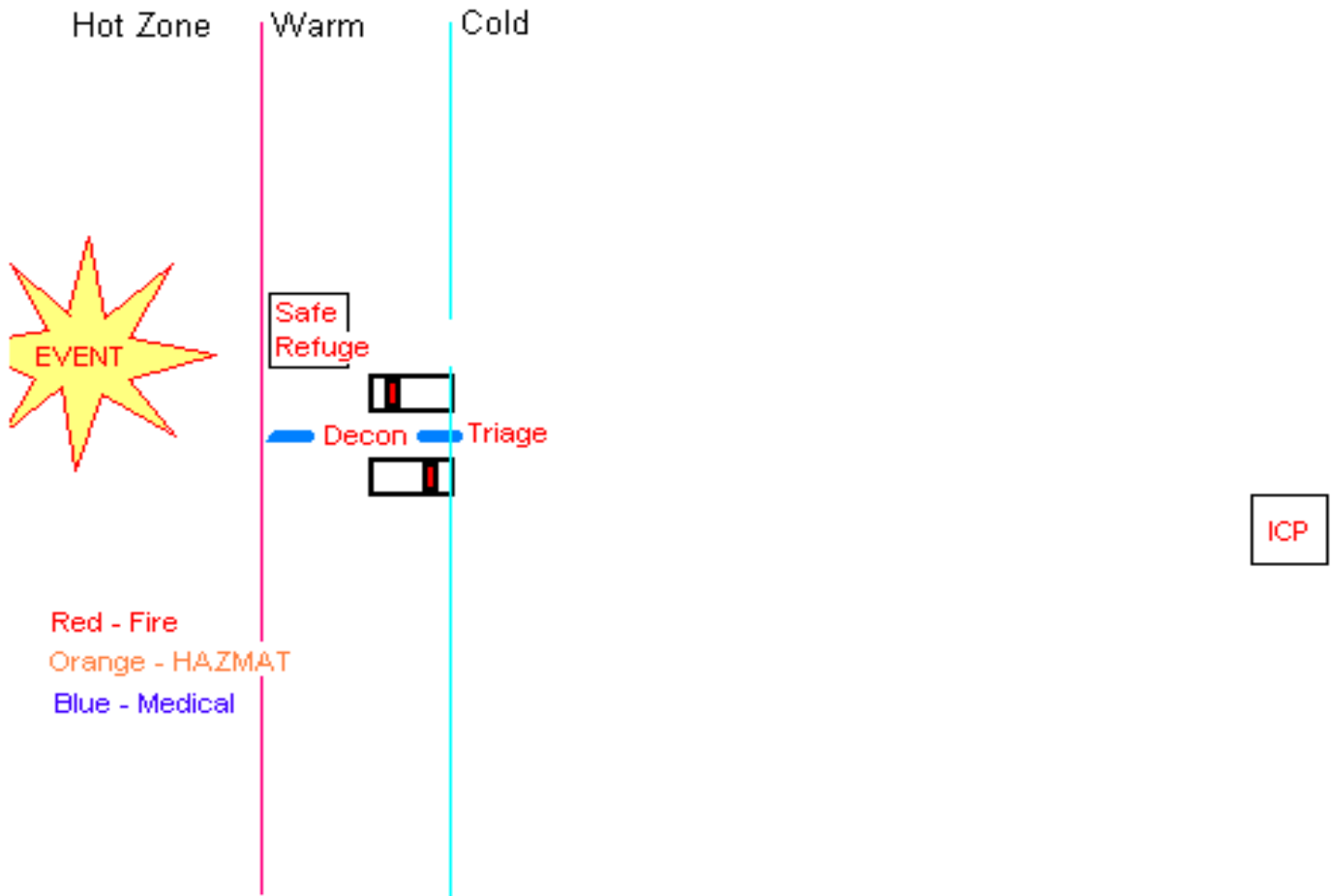
*Unlike an industrial chemical hazardous materials incident, the priorities of a WMD incident are rapid decontamination, rapid treatment, and transportation when necessary. Due to the potentially large numbers of victims, adequacy of decontamination must be presumed.*

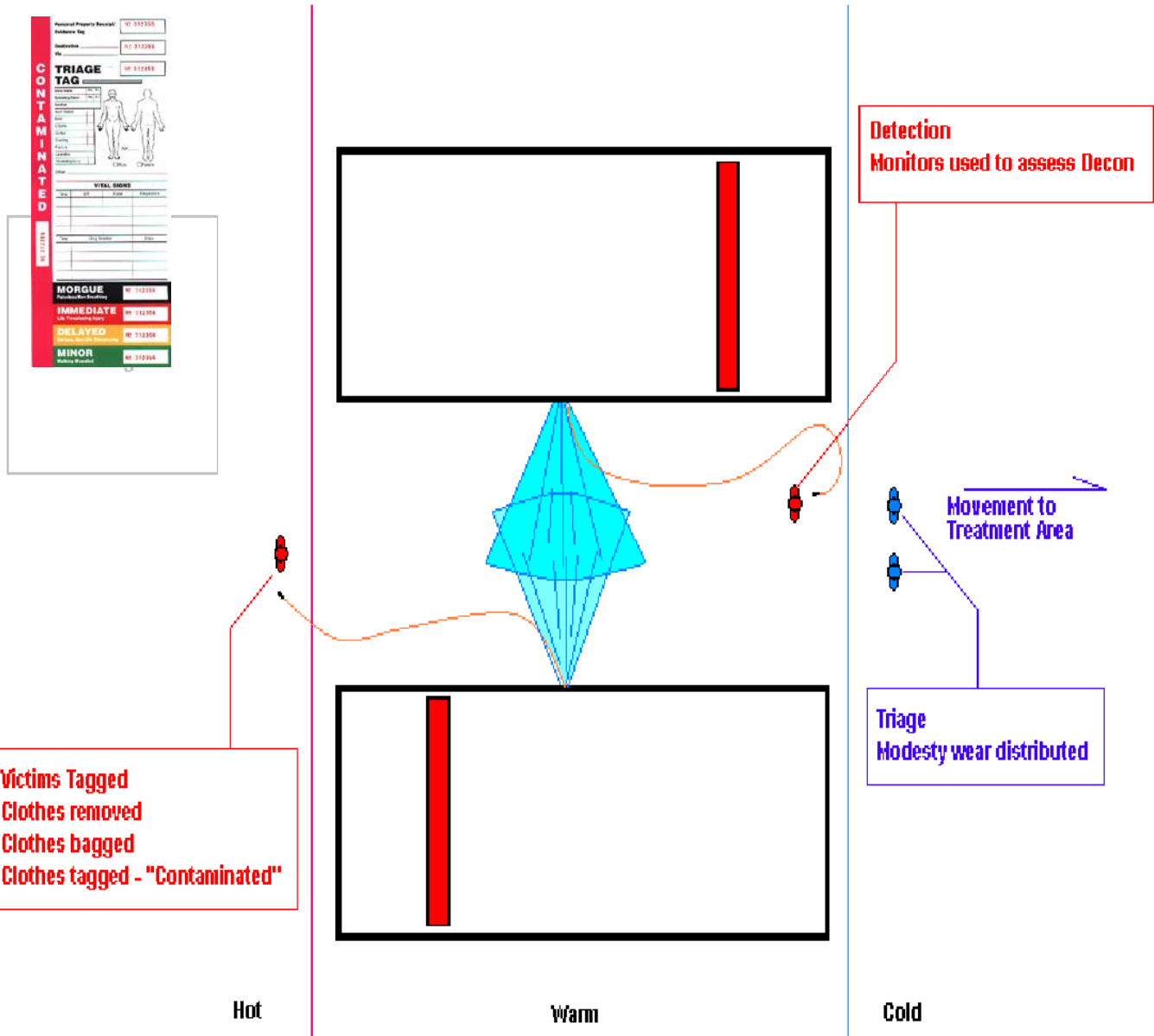


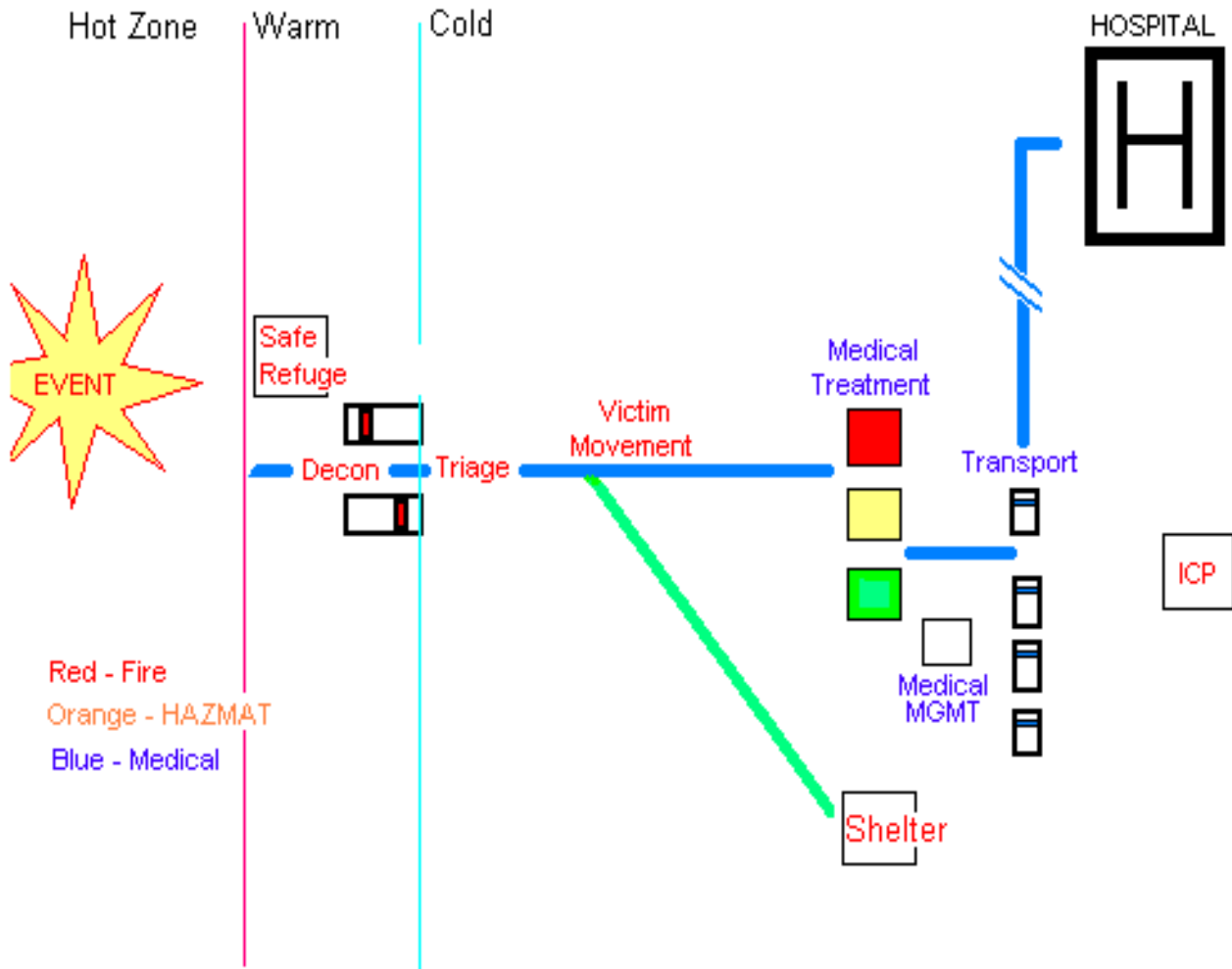
2. Deceased

- a. Remember that this is a crime scene and deceased patients are the responsibility of the Coroners office.
- b. Patients who have expired prior to decontamination shall remain where they were found until directed otherwise by an on-scene Deputy Coroner.
- c. Patients who have expired after decontamination shall be moved to a temporary morgue site as directed by MCI protocol.











**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**INCIDENT SAFETY OFFICER**

**Number:** 110  
**Revision Date:** 11/08/2012  
**File Name:** Safety Officer

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To ensure the safety of all Arcadia Fire Department personnel at emergency incidents.

**PROCEDURE**

**A. Response to Emergency Incidents**

1. The use at an emergency incident of the most qualified officer as a Safety Officer is acceptable until notification and arrival of the department Incident Safety Officer. The initial Safety Officer will be appointed by the IC and should be a Fire Officer with some fire ground experience and concern for the well being of personnel.
2. The following situations are mandatory Incident Safety Officer responses unless canceled by the Incident Commander:
  - a. 2nd alarm or greater incidents
  - b. Major injury incidents and hospitalization to department personnel.
  - c. Hazardous materials incident
  - d. Technical rescue incidents
  - e. Department vehicle accidents resulting in serious injuries or fatalities to either department or civilian personnel
  - f. As requested by the Incident Commander

**B. Training and Qualifications**

1. All personnel assigned as Incident Safety Officers should meet the following minimum standards;
  - a. Rank of Captain or above
  - b. Be an experienced fire officer with sufficient experience to make informed safety related observations and when necessary, decisions.
  - c. Possess the expertise and communication skills to deal with safety related issues during emergency and non-emergency incidents.
  - d. Hazardous Materials First Responder / Operational

**C. Notification of Incident Safety Officer**

1. Verdugo dispatchers shall page the Incident Safety Officer when they are needed at an incident.
2. Upon arrival at the scene, the Incident Safety Officer or I.C shall notify Verdugo.

#### D. Responsibilities

1. The Incident Safety Officer (ISO) function is to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations.
2. The ISO shall monitor the scene and report the status of conditions, hazards and risks to the incident commander.
3. The ISO shall ensure the personnel accountability system has been implemented.
4. The ISO shall provide the incident commander with a risk assessment of incident scene operations.
5. The ISO shall ensure that safety zones, collapse zones, hot zones and other designated hazard areas are communicated to all members present on scene.
6. The ISO shall ensure that a rapid intervention crew (RIC) is available and ready for deployment
7. Obtain a briefing from the I.C
  - a. Status of the incident
  - b. Summary of the incident organization
  - c. Summary of known hazards
  - d. Special instructions
  - e. Copy of the Incident Action Plan (IAP). Oral briefing if no written IAP exists.
8. Participate in planning meetings
  - a. Review suggested strategy
  - b. Identify potentially hazardous situations
  - c. Advise the General Staff of hazardous situations
  - d. Advise the planning staff of resource needs
9. Review the Incident Action Plan for safety implications
  - a. Receive reports from incident personnel concerning safety matters
  - b. Personally survey incident environment and operations as appropriate
  - c. Obtain and review Situation Unit information to identify unsafe situations
10. Exercise emergency authority to stop and prevent unsafe acts
  - a. Determine appropriate action to ensure personnel safety
  - b. Coordinate with incident supervisory personnel as required
  - c. Determine if situations requires the use of emergency authority

11. Investigate accidents that have occurred within the incident area
  - a. Receive notifications of accidents
  - b. Obtain information concerning accidents by:
    - i. Interview personnel
    - ii. Visit the accident scene
    - iii. Collect evidence
    - iv. Collect reports concerning the accident
  - c. Identify the cause of the accident
  - d. Recommend corrective action
  - e. Prepare accident reports and submit to the I.C.
12. Assign assistants as needed
13. Review and approve the Medical Plan
14. Develop hazardous materials site safety plan as required
15. Maintain Unit Activity Log ICS 214 as needed

E. Check Lists

1. Copies of Incident Checklists are attached to this document.



Smoke / Water Through Walls

Opposing Hose Lines

<p><b>INITIAL ACTIONS</b></p> <ul style="list-style-type: none"> <li>o Wear proper Identification</li> <li>o Obtain briefing from I.C. <ul style="list-style-type: none"> <li><input type="checkbox"/> Situation status</li> <li><input type="checkbox"/> Resource status</li> <li><input type="checkbox"/> Known hazards or concerns</li> </ul> </li> <li>o Prioritize duties <ul style="list-style-type: none"> <li><input type="checkbox"/> Risk assessment</li> <li><input type="checkbox"/> Reconnaissance</li> <li><input type="checkbox"/> Resource evaluation</li> <li><input type="checkbox"/> Reporting / planning</li> </ul> </li> <li>o Time tracking</li> <li>o Determine need for additional ISO</li> </ul> <p><b>RISK ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>o Define risk level for Action Plan <ul style="list-style-type: none"> <li><input type="checkbox"/> Life at risk</li> <li><input type="checkbox"/> Property at risk</li> <li><input type="checkbox"/> Mitigation only</li> </ul> </li> <li>o Determine frequency and severity of hazards</li> <li>o Prioritize hazard control recommendations</li> <li>o Address unacceptable risk situations <ul style="list-style-type: none"> <li><input type="checkbox"/> Stop or alter if life threatening</li> <li><input type="checkbox"/> Immediately notify I.C.</li> </ul> </li> </ul> <p><b>RECONNAISSANCE</b></p> <ul style="list-style-type: none"> <li>o 360 degree scene survey</li> <li>o Identify principle hazards and locations <ul style="list-style-type: none"> <li><input type="checkbox"/> Validate hot/warm/cold zones</li> </ul> </li> <li>o Evaluate environment <ul style="list-style-type: none"> <li><input type="checkbox"/> Stable – not likely to change</li> <li><input type="checkbox"/> Stable – may change</li> <li><input type="checkbox"/> Starting to change</li> <li><input type="checkbox"/> Rapidly changing</li> </ul> </li> <li>o Structure involved <ul style="list-style-type: none"> <li><input type="checkbox"/> Construction type</li> <li><input type="checkbox"/> Excessive loads</li> <li><input type="checkbox"/> Loads imposed</li> </ul> </li> <li>o Evaluate collapse potential <ul style="list-style-type: none"> <li><input type="checkbox"/> Structural degradation</li> <li><input type="checkbox"/> Excessive loads</li> <li><input type="checkbox"/> Scope of collapse</li> <li><input type="checkbox"/> Stability profile after collapse</li> </ul> </li> <li>o Define scope of utility involvement</li> </ul>	<ul style="list-style-type: none"> <li>o Evaluate effects of weather</li> <li>o Identify access/ egress routes</li> <li>o Define traffic hazards</li> <li>o Observe tactical assignments <ul style="list-style-type: none"> <li><input type="checkbox"/> Tactical effectiveness</li> <li><input type="checkbox"/> Team effectiveness</li> <li><input type="checkbox"/> Tool application / effectiveness</li> <li><input type="checkbox"/> Action plan compatibility</li> </ul> </li> <li>o Check exposure of teams <ul style="list-style-type: none"> <li><input type="checkbox"/> Proper PPE</li> <li><input type="checkbox"/> Aware of hazard(s)</li> <li><input type="checkbox"/> Appropriate risk level</li> <li><input type="checkbox"/> Look outs</li> <li><input type="checkbox"/> Escape routes</li> <li><input type="checkbox"/> Communications</li> <li><input type="checkbox"/> Safe zones</li> </ul> </li> <li>o Determine injury potential <ul style="list-style-type: none"> <li><input type="checkbox"/> Fall hazards</li> <li><input type="checkbox"/> Rehab profile</li> </ul> </li> <li>o Evaluate apparatus placement/exposure</li> <li>o Monitor radio communications <ul style="list-style-type: none"> <li><input type="checkbox"/> Dysfunctional</li> <li><input type="checkbox"/> Status reports</li> <li><input type="checkbox"/> MAYDAY report</li> </ul> </li> </ul> <p><b>RESOURCES</b></p> <ul style="list-style-type: none"> <li>o Check scene attendance <ul style="list-style-type: none"> <li><input type="checkbox"/> Too many / too few</li> <li><input type="checkbox"/> Plans for additional resources</li> <li><input type="checkbox"/> Staging area</li> </ul> </li> <li>o Determine rapid intervention crew status</li> <li>o Determine number of crews at risk</li> <li>o Check effectiveness of accountability system</li> <li>o Start incident timer <ul style="list-style-type: none"> <li><input type="checkbox"/> Dispatch assistance</li> <li><input type="checkbox"/> Anticipate total on scene time</li> </ul> </li> <li>o Evaluate rehab process and effectiveness</li> <li>o Assess need for CISD</li> </ul> <p><b>AFTER THE INCIDENT</b></p> <ul style="list-style-type: none"> <li>o Document existing hazards</li> <li>o Document ISO actions</li> <li>o Prepare after action report</li> <li>o Participate in after action meeting/critique</li> </ul>
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Apparatus Placement  
Fireground Accountability  
Escape Routes  
Twenty Minute Rule  
Yesterdays Or Old Intelligence

Fire Not Visible Or Below People  
Flowing Water In, No Water Out  
Inclined Floors / Walls / Voids  
Cracked Exterior Walls  
Electricity, Gas & Utilities Controlled  
Rapid Intervention Crews  
Safety



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**STAGING OPERATIONS**

**Number:** 111  
**Revision Date:** 11/08/2012  
**File Name:** Staging Ops

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide a standard system of initial placement for responding apparatus, personnel and equipment prior to assignment at incidents

**PROCEDURE**

- I. Level I – Staging Procedures
  - A. Level I Staging applies to normal day to day alarms which are usually handled by the initial assignment.
  - B. The first Engine Company and Truck Company (including RA's) will respond directly to the scene and operate to best advantage. The first-in officer will assume position of IC and maintain this position until relieved.
  - C. All other units, i.e. 2<sup>nd</sup> engine, will stage in their direction of travel, uncommitted, at the nearest corner of uncommitted hydrant, or at a location that conforms to the intent of these procedures to maximize effective operations.
  - D. Staged units should choose a location providing a maximum of possible tactical options with regard to:
    1. Access
    2. Direction of Travel
    3. Water Supply
    4. Other Factors
  - E. Staged units will, in normal response situations, report company designation on scene and their staging location i.e. "Engine 105 on scene, staged at Camino and First."
  - F. Staged units will stay off the air until orders are received from IC/Operations. If it appears that the IC/Operations has forgotten the staged units, after a reasonable amount of time, the staged units will contact IC/Operations and re-advise of their standby status.

- G. These staging procedures attempt to reduce routine radio traffic, but in no way should reduce effective communications or the initiative of officers to communicate. If staged companies observe critical tactical needs they should advise IC/Operations.
- H. Companies should continue response to the incident until a company report “on-scene”. When a first arriving company reports “on-scene”, Level I Staging will begin within these guidelines.
- I. It shall be the responsibility of Dispatch to confirm the arrival of the first unit on scene.
- J. Pre-fire plans and SOG will identify exceptions to Level I Staging with regard to the special functions that must be performed in that particular occupancy. In the absence of such tasks, regular Level I Staging procedures will automatically apply.
- K. When in Level I Staging, all unit members shall remain on board the apparatus in full safety gear and breathing apparatus when possible. Company officers shall be held strictly accountable for enforcing this rule.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**MULTIPLE CASUALTY INCIDENTS**

**Number:** 112  
**Revision Date:** 12/31/2016  
**File Name:** Multi Casualty

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To establish standard guidelines for multiple casualty incidents and to insure proper utilization of all personnel responding to a **Multiple Casualty Incident (MCI)**.

**POLICY**

It shall be the policy of the fire department personnel that all personnel shall follow the guidelines as outlined in this document.

**PROCEDURE**

- I. An MCI is defined as any potential for, or actual incident, where first-in responders are unable to give sufficient aid, due to a lack of manpower, equipment, and/or medical transportation.

The MCI procedure is to be used as a starting point and/or guideline to assure that each function is carried out in a systematic and organized manner to a successful completion.

The objective of this SOG is to designate individual responsibility and to eliminate any confusion or questions pertaining to responses involving multiple victims.

- II. ICS Structure

The MCI is structured under the guidelines of the Incident Command System. The first in company officer will assume incident command until relieved by the first arriving chief officer.

The size of the incident and number of patients will determine how the incident is organized. On incidents with fewer patients all functions could be organized under a Medical Group Supervisor. On incidents with multiple patients there may be a need for better span of control. In that instance a Triage Unit Leader, a Treatment Unit Leader, and a Transportation Unit Leader would be assigned.

- III. Physical Layout

If a treatment area is established the amount of patients, location of the loading zone, and safety of the patients should be considered when choosing a location.

When a staging area is considered, its access to the loading zone and away from the incident should be considered.

#### IV. Responsibilities

##### A. First in Engine/Truck Company

1. The first arriving company officer shall size up the incident and take command.
2. The IC will request appropriate resources, and a staging area for incoming equipment.
3. The IC will work with the personnel on scene to determine number and category of patients.
4. The crew of the first in company will begin triage of the patient after ensuring the scene is safe.

##### B. First in Rescue Ambulance

###### 1. Patient Person

- a. The patient person of the first in RA will be the initial Treatment Unit Leader unless otherwise assigned by the incident commander.
- b. The priority as to what victims are transported to the hospital first shall lie upon the first-in paramedics.
- c. As the incident grows the first-in paramedics will be assigned to a specific unit, group or division.

###### 2. Radio/Report Person

- a. The radio person on the first in RA shall establish Medical Communications (MED COMM)
3. The priority as to what victims are transported to the hospital first shall lie upon the first-in paramedics.
4. When possible the first arriving rescue ambulance will remain on scene until the completion of the incident.

##### C. Medical Communications (MED COMM)

1. The base station will be contacted when there is up to five patients. On an incident with greater than five patients the radio person will contact the medical alert center utilizing either mobile phone or radio.
2. When contacting the medical alert center, the radio person will utilize the Los Angeles County Department of Health Services (LA Co DHS) chart for the hospital zone. The radio person will follow LA Co DHS policies 519 through 519.6d.

3. The information needed by MED COMM prior to making contact with the base station or medical alert center includes:
  - a. Number of Patients
  - b. Age of Patients (adult vs pediatric)
  - c. Type of Injury (trauma or medical)

D. Incident Priorities

1. Incident Commander
2. Triage Unit Leader
3. Treatment Unit Leader
4. Transportation Unit Leader

E. Golden Triangle of Patient Transportation

- F. As a MCI grows in size and complexity, one of the key components in efficiently transporting patients is establishing the Golden Triangle of Patient Transportation. The three parts of the triangle are:

1. Transportation Unit Leader
2. Treatment Unit Leader
3. Medical Communications Coordinator

Transportation Unit Leader initiates the moving of the patients and determines destination.

V. Documentation

While on scene, a triage tag shall be completed for all patients.

Patient name, chief complaint, destination and time left the incident shall be documented on a separate form. This will be used for incident documentation and to assist with family reunification.

A patient care report shall be completed by the agency that transports the patient.

VI. References

California Field Operations Guide 420-1 Chapter 15 Multi Casualty Incidents  
Los Angeles County Department of Health Services Management of Multi Casualty Incidents Reference 519



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RESPONSE TO  
WEAPONS OF MASS DESTRUCTION  
(WMD)**

**Number:** 113  
**Revision Date:** 11/08/2012  
**File Name:** Response to WMD

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this document is to establish clear guidelines for first responder actions in the event of a suspected terrorist incident involving Weapons of Mass Destruction (WMD). These guidelines address the role of first responders, dispatchers and command staff in mitigating the initial crisis period following a WMD incident.

**PROCEDURE**

**Incident Management**

1. All incidents or threats involving weapons of mass destruction, whether nuclear, biological or chemical shall be managed by a designated supervisor from the Police Department, using a Unified Command Post.
2. Emergency responders from Police, Fire, Public Works or other support units shall use the Incident Command System (ICS) in coordinating such events
3. The ranking police supervisor or commander shall direct operations pursuant to the guidelines established by the Los Angeles County Sheriff's Department for all Los Angeles County law enforcement agencies.

**Response**

1. Stage upwind
2. Personal Protective Equipment
  - Wear highest level of protection available for all suspected biological or chemical WMD events:
  - SCBA WILL protect against airborne particles (including biological agents, chemical vapors and gases)
  - Turnouts may not provide sufficient protection against high concentrations of biological or chemical agents.
  - Maintain a safe distance and call for appropriate assistance.
  - Your protective equipment may need to be decontaminated or appropriately disposed of.
3. CONSIDER SECONDARY DEVICES designed to harm First Responders, such as spraying, exploding or breaking devices, which may be concealed in a box, suitcase, or other container.

## **Fire Responder Actions**

1. Establish Command
  - Incident Command System (ICS): Identify Incident Command Post (ICP)
  - Unified Command: Notify arriving agencies of location of ICP
2. Isolate and Deny Entry
  - Establish exclusionary (hot) zone
  - Utilize Emergency Response Guide (ERG) for suggested evacuation distances.
3. Initial approach to mass casualties
  - Avoid physical contact
  - Use megaphone or P.A. for communication
  - Direct ambulatory casualties to a safe area
  - Warn casualties of identified hazards
  - Begin decontamination (see decontamination guidelines)
4. Support Hazmat team and other personnel as they arrive
5. Initial Fire Department response shall consist of the on-duty Battalion Chief responding to the field command post to maintain liaison with the Police Incident Commander. In consultation with the Incident Commander, the Battalion Chief will determine the appropriate response for fire, paramedic and rescue units, and designate a staging area.
  - The Battalion Chief shall remain at the Command Post to ensure continuity of communication and coordinated use of resources.

## **Evacuations**

1. Responsible officials should make the decision to evacuate only after evaluating the threat. Automatic evacuations or total evacuations of a building or area may lead to additional threats and may affect future events; the next bomb may be set up outside in anticipation of the total evacuation. Responsible officials might consider an evacuation of the building or area if the situation dictates. There are three evacuation considerations.

*No Evacuation* — When responsible officials make a determination of no evacuation, all personnel in the area may continue with the normal routine.

*Partial Evacuation* — When responsible officials make a determination of a partial evacuation, only essential or needed personnel remain behind to continue operations.

*Total Evacuation* — In a total evacuation, evacuate all personnel within the building or to a designated location.



2. After responsible officials make an evacuation decision, enforce the minimum distance recommended for evacuation as suggested in the chart on the following page of this module. Once the Bomb Squad determines size of the device, consider enlarging the minimum safe distance as necessary.
3. Responders should remember that it is far easier to reduce the size of a zone of safety than it would be to expand it later.

### **Evacuation Distances**

The evacuation chart included as Attachment A shows common devices, their explosives capacity, and associated evacuation distances for personnel located indoors and outdoors. The listed evacuation distances are consistent with the explosives capacity of the device. Lethal air-blast ranges extend to at least one-half the building evacuation distance.

1. The member in charge may give the order to have the location evacuated if they believe it is necessary.
2. Whenever a menace to the public health or safety is created by a calamity such as floor, storm, fire, earthquake, explosion, accident or other disaster, peace officers may close the area where the menace exists for the duration thereof, to any and all persons not authorized by such officer to enter or remain within the closed area.

### **Communications**

To ensure continuity of response and action consistent with a Unified Command, all activities by police, fire and support units must be reported to the Command Post. The Command Post will authorize actions consistent with the Incident Action Plan and the needs of the incident. Clear, concise communications is imperative to the success of operations.

### **Threat Analysis**

1. The Incident Commander or his/her designee shall consult with the person(s) in charge of the location where the threat is focused or a person(s) whose knowledge of the incident location provides the appropriate information to assess the credibility of the threat.

#### Credible Threat

- Clear and control the area. Treat the area as a hot zone until proven otherwise.
- Make evacuation decisions
- If the decision is made to evacuate, advise evacuees to take personal property such as purses, coats, brief cases, etc.
- Designate search teams (May be police, fire and /or representatives of the targeted location) to evaluate the area.

- If a suspected explosive device is located, open doors and windows to minimize primary damage from a blast and secondary damage from fragmentation
- Do not approach a suspected device. Note location and general description. Provide this information to the Command Post.
- Do not use radios, mobile data terminals or cell phones within 1,000 feet of a suspected device. This includes radar and video transmitting equipment
- Obtain assistance:
  - Sheriff's Bomb Squad
  - LA County Health Hazmat
  - Area C Haz-Mat response
  - Mutual Aid request LA County Fire Hazmat if necessary
  - FBI
  - Alcohol Tobacco and Explosives (ATF)

#### Non-Credible Threat

- When consultation with the responsible person(s) of the location and the totality of the circumstances leads the police supervisor and FBI to believe the threat is not credible, the emergency services response may be discontinued.
  
- In the absence of any credible evidence suggesting a valid threat, the responsible person must be advised that the decision to close a business, evacuate the premises or remain open rests solely with them (responsible party)

#### **Triage and Treatment**

1. Assign Multi Casualty Branch ICS positions:
2. Medical Group Supervisor
3. Triage Unit Supervisor
4. Treatment Unit Supervisor
5. Transport Group Supervisor

#### **Self-Treatment for nerve agent exposure**
















1. Recognize early symptoms of exposure: Don't panic
  - Heavy salivation (drooling)
  - Lacrimation (tearing)
  - Rhinorrhea (runny nose)
  - Shortness of breath
  - Nausea

2. Administer Duo Dote auto injector antidotes
3. Proceed to Mass Decontamination Corridor
4. Proceed to Triage Unit after decontamination

**Documentation**

1. Observations
2. Scene size-up
3. Evidence
4. Signs and symptoms of victims
5. Number of victims
6. Actions taken
7. Number of people transported
8. Tests conducted
  - Type of test
  - Who conducted it
  - Results

Attachment A

	Threat Description		Explosives Mass <sup>1</sup> (TNT equivalent)	Building Evacuation Distance <sup>2</sup>	Outdoor Evacuation Distance <sup>3</sup>
High Explosives (TNT Equivalent)		Pipe Bomb	5 lbs 2.3 kg	70 ft 21 m	850 ft 259 m
		Suicide Belt	10 lbs 4.5 kg	90 ft 27 m	1,080 ft 330 m
		Suicide Vest	20 lbs 9 kg	110 ft 34 m	1,360 ft 415 m
		Briefcase/Suitcase Bomb	50 lbs 23 kg	150 ft 46 m	1,850 ft 564 m
		Compact Sedan	500 lbs 227 kg	320 ft 98 m	1,500 ft 457 m
		Sedan	1,000 lbs 454 kg	400 ft 122 m	1,750 ft 534 m
		Passenger/Cargo Van	4,000 lbs 1,814 kg	640 ft 195 m	2,750 ft 838 m
		Small Moving Van/ Delivery Truck	10,000 lbs 4,536 kg	860 ft 263 m	3,750 ft 1,143 m
		Moving Van/Water Truck	30,000 lbs 13,608 kg	1,240 ft 375 m	6,500 ft 1,982 m
		Semitrailer	60,000 lbs 27,216 kg	1,570 ft 475 m	7,000 ft 2,134 m
	Threat Description		LPG Mass/Volume <sup>1</sup>	Fireball Diameter <sup>4</sup>	Safe Distance <sup>5</sup>
Liquefied Petroleum Gas (LPG - Butane or Propane)		Small LPG Tank	20 lbs/5 gal 9 kg/19 l	40 ft 12 m	160 ft 48 m
		Large LPG Tank	100 lbs/25 gal 45 kg/95 l	69 ft 21 m	276 ft 84 m
		Commercial/Residential LPG Tank	2,000 lbs/500 gal 907 kg/1,893 l	184 ft 56 m	736 ft 224 m
		Small LPG Truck	8,000 lbs/2,000 gal 3,630 kg/7,570 l	292 ft 89 m	1,168 ft 356 m
		Semitanker LPG	40,000 lbs/10,000 gal 18,144 kg/37,850 l	499 ft 152 m	1,996 ft 608 m

<sup>1</sup> Based on the maximum amount of material that could reasonably fit into a container or vehicle. Variations possible.  
<sup>2</sup> Governed by the ability of an unreinforced building to withstand severe damage or collapse.  
<sup>3</sup> Governed by the greater of fragment throw distance or glass breakage/falling glass hazard distance. These distances can be reduced for personnel wearing ballistic protection. Note that the pipe bomb, suicide belt/vest, and briefcase/suitcase bomb are assumed to have a fragmentation characteristic that requires greater standoff distances than an equal amount of explosives in a vehicle.  
<sup>4</sup> Assuming efficient mixing of the flammable gas with ambient air.  
<sup>5</sup> Determined by U.S. firefighting practices wherein safe distances are approximately 4 times the flame height. Note that an LPG tank filled with high explosives would require a significantly greater standoff distance than if it were filled with LPG.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**TRENCH RESCUE**

**Number:** 114  
**Revision Date:** 11/08/2012  
**File Name:** Trench Rescue

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide guidance for rescue teams to safely approach, shore, enter and retrieve victims following a trench rescue. Rescuers shall not enter unsafe trenches or excavations. An unsafe trench is one that has indications such as fissures, overhangs, etc. such that it may be prone to collapse and is not adequately shored.

**PROCEDURE**

I. Definition

Any excavation that is over five feet in depth, and is deeper than it is wide.

II. Approach

Due to the potential for secondary collapse being caused by the weight of additional vehicles and personnel, responding units shall establish staging no closer than 150 feet to the excavation. Reconnaissance shall be done by the persons most knowledgeable and trained in trench rescue incidents and/or Company Officers of the first arriving units in order to minimize the number of personnel that may be exposed to the hazardous condition.

- A. Order any personnel in the trench out immediately
- B. Order all heavy equipment to be shut down
- C. Do not allow any hand tools to be removed. These may serve as clues to the location of trapped victims.
- D. Locate and secure the job foreman.

III. Manpower and Equipment

- A. Entrapped person response – 1 engine, 1 truck, 2 US&R, 1 Haz-Mat, 1 BC, 1 RA
- B. Request Air Unit and possible additional RA
- C. Establish rehab, medical and staging areas
- D. Establish the Incident Command System

IV. Site Preparation: Create Three Zones

- A. Hot Zone – 0 to 50 feet  
No apparatus except those directly involved in the rescue operation are to be permitted within this area. The number of personnel in this area is to be controlled in order to minimize the potential for a secondary collapse.

B. Warm Zone – 50’ to 150’

Establish a “control zone” in this area in order to control access into the Hot Zone. The Command Post will be established in this area.

C. Cold Zone – 150’ to 300’

This will be the Staging Area, PIO Operations, Rehab and all other staff support shall function in this area.

V. Assign a Safety Officer

This position is vital and can be assumed by a Company Officer upon arrival. If a more experienced or knowledgeable person in the field of trench rescue is available, he/she should be assigned to this position. The Safety Officer is responsible for personnel safety during the entire operation and ensuring that proper procedures are being followed for the safe extrication of the victim(s) and can stop the operation at any point if the safety of the rescuers is being unduly compromised. More than one Safety Officer may be needed under certain conditions.

VI. Size Up and Assessment

This is done in order to develop an action plan based on the level of safe working conditions. Since the excavation has already proven itself to be weak, use extreme caution in approaching the area. A trench is weakest along its edge. Always approach from the ends. Since it is impossible to predict the type of conditions that will be encountered, the following are some factors that will influence the first arriving officer’s decisions and subsequent actions.

- A. Depth of excavation
- B. Amount of soil that has collapsed
- C. Depth of soil covering the victims
- D. Number of victims that are trapped
- E. Last known or possible location of victims
- F. Potential hazardous or toxic atmosphere
- G. Potential for secondary collapse
  - 1. Cracks in the soil
  - 2. Chunks of soil falling off
  - 3. Water causing erosion

VII. Risk Assessment

Risk management is a method used to reduce exposure to hazards; however, many hazards cannot be avoided completely. Properly placed and installed shoring will be used to reduce the risk of cave-in and reduce the hazards associated with trench rescue incidents.

A risk assessment plan is a tool for determining which risks are acceptable. NFPA 1500, 6-2.1.1. The concept of risk management shall be utilized on the basis of the following:

- (a) Activities that present a significant risk to the safety of members shall be limited to situations where there is a potential to save lives
- (b) Activities that are routinely employed to protect property shall be recognized as inherent risks to the safety of members and actions shall be taken to reduce or avoid the risks
- (c) No risk to the safety of members shall be acceptable when there is no possibility to save lives or property

#### VIII. Prepare Shoring Equipment

The shoring equipment to be used shall be determined by the resources immediately available and the first in officer (IC).

- A. Ladders as uprights or struts
- B. Plywood sheeting
- C. 2" x 8" uprights
- D. Hydraulic shores
- E. Screw jacks
- F. Air bags
- G. Timbers

Note: Place all equipment no closer than two times the depth of the trench to avoid extra weight on the lip of the trench.

#### IX. Personal Safety Equipment

All personnel must wear the following safety equipment:

- A. Helmet
- B. Gloves
- C. Eye protection should be worn while working in the trench.
- D. Safety shoes
- E. Long pants
- F. Personnel operating power equipment must have eye and hearing protection.
- G. Monitor atmospheric conditions prior to entry. This is a confined space and SCBA's may be required.

#### X. Install Escape Ladder

Place a ladder in the trench, to be used if a rescuer falls.

## XI. Edge Protection

If the edge is not clean, the lip along the long edge of the trench is to be cleaned back approximately two feet in order to provide a safe working surface. This is done by approaching the trench from the ends and having one person standing on the end of a plank and removing soil from the area in front of him/her. The person then moves back off the plank and the plank is then moved forward into the area just cleaned. The process is repeated until an adequate area has been cleaned to allow for rescuers to operate safely. The plank serves to distribute the weight of the rescuer and reduce the pressure on any one spot along the trench.

## XII. Shoring Systems, Struts and Uprights

All shoring shall be in compliance with the State Fire Marshall's Emergency Shoring and Trench Rescue curriculum.

### A. Vertical Uprights

1. Vertical uprights shall be minimum 2" x 8" material, 2" x 10" or 2" x 12" preferred
2. Vertical uprights shall be placed no further than 4 feet apart in type C soil (previously disturbed, / collapsed)
3. Vertical uprights may be spaced up to 8 feet apart in compact, standing solid soil

### B. Horizontal Struts

1. Wood - Minimum 4" x 4" material
2. Screw jacks – Minimum 1 ½" diameter
3. Air bags
4. Top strut no more than 24" below soil level
5. Spaced no further than 4 feet apart -Bottom strut 18" from the bottom of the trench



**TRENCH RESCUE WORKSHEET**

**SAFETY OFFICER**

Acceptable risk for SAFE OPERATION

Exercise authority to STOP and PREVENT UNSAFE ACTS

Obtain briefing form incident Commander

Participate in Planning Process

Maintain Safety Zones and Perimeter control

Maintain edge protection

Eliminate trip hazards

Emergency escape ladder every 25 feet

Control vibration hazards

Observe water accumulation/ prepare for removal

Observe/monitor stress cracks

Establish rehab area

Evaluate rescues crews - rotate every 20 min. maximum

Atmospheric monitoring - evaluate readings

Appoint scribe

**Document ALL actions - Incident Action Plan**



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**CARBON MONOXIDE INCIDENTS**

**Number:** 115  
**Revision Date:** 11/08/2012  
**File Name:** Carbon Monoxide

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The intention of this policy is to provide a source of information for department members responding to incidents involving carbon monoxide. Carbon monoxide exists at all structure fires. The decision to remove self-contained breathing apparatus (SCBA) will be based on the presence or permissible exposure limit (PEL) of carbon monoxide.

Carbon monoxide is a colorless, odorless, tasteless gas. Limited or mild exposure to carbon monoxide may cause nausea, dizziness or headaches. Higher amounts or severe exposure may result in brain damage, heart damage or even death.

Carbon monoxide is the incomplete burning of any material containing carbon, such as gasoline, natural gas, oil, propane, coal or wood. One of the most common sources of carbon monoxide is the internal combustion engine.

The Department of Health Services and Cal/OSHA have determined **the exposure limits for a normal healthy adult is 25 parts per million (ppm) over an eight (8) hour period or 200 ppm for any period.**

**PROCEDURE**

**Structure fires:**

Before the removal of self-contained breathing apparatus (SCBA) the Incident Commander and/or Incident Safety Officer will monitor the atmosphere in which personnel will be working. Using a calibrated atmospheric monitor, readings will be taken in the affected area. Readings should be documented by the I.C. Documentation should include: Time and numeric reading of the monitor. Carbon Monoxide levels shall be below 25 ppm to allow the removal of SCBA. Continuous monitoring and positive pressure ventilation may be required to ensure a safe working environment. The final decision to remove the SCBA shall be made by the Incident Commander and/or Incident Safety Officer.

**Residential/Commercial Carbon Monoxide Detector Alarms:**

Response to carbon monoxide alarms shall be a CODE 2 response unless:

1. Smoke/Fire is present
2. Occupants complain of CO poisoning symptoms (headaches, dizziness).

Residents/occupants should be removed to an open area. Fire/Rescue personnel should monitor the atmosphere using a calibrated carbon monoxide monitor. It is recommended that personnel don self-contained breathing apparatus before entering an area with an activated carbon monoxide alarm. Readings should be taken continuously to determine the presence or absence of carbon monoxide.

*Number: 115*  
*Revision Date: 11/08/2012*  
*File Name: Carbon Monoxide*

**ACTIONS:**

**Carbon Monoxide Present:**

If carbon monoxide is detected (any reading greater than ambient or outside atmosphere) attempts should be made to locate the source. Check the heating system, including ducts, fireplace, doors/windows near the garage area, possible running vehicles in close proximity and all gas appliances. Remove and or eliminate the source of carbon monoxide. Positive or natural ventilation should be used to remove existing CO. Ventilation should continue until carbon monoxide levels are at, or below the outside ambient reading.

**Carbon Monoxide Absent:**

In the event no abnormal readings are detected, false activation or a faulty detector determination should be made. The resident/occupant should be assured the area is safe. Advise the occupant to replace the defective CO detector and/or batteries.

The gas company will assist with the following situations:

1. Fire personnel are unable to locate the source of a positive CO reading.
2. Occupants are hospitalized or death results from CO exposure.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RESPONSE TO BEE INCIDENTS**

**Number:** 116  
**Revision Date:** 11/08/2012  
**File Name:** Bee Response

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To establish procedures for the safety of emergency personnel that may be involved in or respond to Africanized Honeybee (AHB) incidents, including the possibility of anaphylactic shock in victims.

**BACKGROUND**

When the African Honeybees originally arrived in North America, their wingspan was a little larger than the wingspan of our local bee population. Since the arrival of the AHB's, the local bee population had inbred with the AHB's creating a new standard and consistent wingspan for all bees. The only true way to determine an AHB is to do DNA testing on the actual bee. According to San Gabriel Valley Mosquito & Vector Control District, all bee responses should be considered an AHB response.

The District no longer removes swarms of bees – these are transitory groups of bees that are often reported as clustered on a wall or hanging from a tree branch. These bees do not have a nest (honey comb) to defend, will often move on within a few days, and are not aggressive unless physically provoked. Urge residents to leave them alone and give them the opportunity to leave the area. Those wishing to have them removed immediately can contact a private pest control operator or bee keeper (there is a charge for these services.)

**PROCEDURE**

- I. Response
  - A. A medical response to an AHB incident (multiple stings from flying insects) shall include one engine and one rescue ambulance.
  - B. Personnel shall establish an exclusion zone of a minimum of 300 feet around the insects. All civilians that are not in buildings or vehicles shall be moved to a safe refuge area. Civilians in homes/buildings within the exclusion zone should remain inside with windows, doors and vents closed.
  - C. As of April 24, 2009, San Gabriel Valley Mosquito & Vector Control District has refocused their priorities and staffing to concentrate their resources on the most pressing public healthy concern – controlling mosquitoes and reducing the risk of human disease.
- II. Bees Reported Outside: This includes beehives, flying and or swarming.
  1. Single Engine response, Code 2.

2. Requests to remove Bee NESTS on **residential property** (established colonies in tree cavities or thick vegetation) will be placed on a waiting list in the order received and responded to as time permits. The District is not licensed to handle structural pest control problems, thus bees nesting inside wall spaces, attics, and other man-made structures must be removed by a private pest control company. In these situations, please refer residents to the yellow pages under “bee removal” or “pest control”.
3. Bees nesting in a **public place** (parks, schools, hospital grounds, etc) will still be handled as a priority and responded to as soon as possible.
4. *If immediate action is necessary*, foam the bees with 1% solution of either class A foam. Consider contacting contact city contracted pest control company and Arcadia Public Works to respond to assist with clean up.

II. Bees Reported Inside A Structure Or On A Structure:

1. Single Engine response, Code 2.
2. Evaluate the situation and assist occupants in reducing exposure to bees.  
On private property inside or on a structure, San Gabriel Valley Mosquito & Vector Control District will not respond. In these situations, please refer residents to the yellow pages under “bee removal” or “pest control”.  
On City property inside or on a structure, San Gabriel Valley Mosquito & Vector Control District will not respond, contact city contracted pest control company.

Phone Numbers

San Gabriel Valley Mosquito & Vector Control District  
(626) 814-9466 Monday-Friday 7:00am – 3:30pm

III. Standard Procedure

- A. When responding personnel encounter an active swarm of bees stinging a victim, the following shall be done:
  1. Stop one block from the incident. All personnel shall donn full protective clothing including turnout pants, coat, helmet, gloves and rescue bee veil. Pant cuffs, coat sleeves, collars and front of coat along the snaps shall be taped securely against the body with duct tape for additional protection. The bottom of the turnout coat shall also be taped.
  2. All personnel not immediately involved with the rescue should seek refuge in an enclosed vehicle or structure.

3. Place a 1½” hose line in service. The nozzle should be on a wide fog spray and directed to drive the insects away from the victim. The fog spray should be directed 30 feet into the air and back down to the ground in circular motions. If possible, place a second 1½ ” hose line with fog nozzle for additional protection and continue fog spray until rescue personnel are in a safe refuge area.
4. Water should drive the bees away and temporarily immobilize them for a short time, but they will recover and continue to attack.
5. A 1% solution of either Class A or AFFF foam sprayed on AHB’s is sufficient to immediately immobilize the bees for an indefinite period of time.

#### IV. Special Situations

##### A. No Protective Equipment

When personnel encounter flying, stinging insects, without a protective hose line or safe refuge area, they should retreat from the area, running in a zig zag pattern. Cover the eyes, nose and mouth, as bees prefer to sting in these areas.

1. Do not attempt to hide in trees or brush.
2. AHB that are in a defensive mode around their hives will pursue potential threats from humans or animals up to ¼ mile from their hive. Defensive AHB’s may become offensive from vibrations, loud noises and similar disturbances, e.g. sirens.
3. Jumping into water is of little protection. AHB will remain in the area for ½ hour or longer.

##### B. Wildland

When personnel encounter either active or inactive swarms of bees in the wildland without a protective hose line, safe refuge area or full turnout gear, they should don the wildland veil and retreat rapidly from the area. If possible, air drops with foam or retardant may be effective in killing and/or disorienting AHB and allow potential victims to escape to a safe refuge area.

1. Wildland veils are to be worn over the helmet, with the pull string pulled snug around the neck. Ensure brush coat collars are up and Velcro secure. This will protect the neck and face. An insect veil is a lightweight piece of fabric worn over the head and neck region to reduce exposure to bee stings.
2. Wildland protective clothing must be tucked in and all openings wrapped securely against the body. This will prevent entry of flying, stinging insects.

### C. Special Considerations

The District will no longer assist Fire Department personnel with clean-up of bees sprayed with foam on residential or public property. Dead bees can be disposed of in regular trash cans. Consider requesting Public Works to assist with clean up and disposal when needed.

In smaller, less active situations, using a shop vacuum with a couple of Tablespoons of corn starch inside the shop vacuum prior to use will immobilize live bees indefinitely and then can be disposed of in the trash.

### V. Wildland Rescue

- A. Personnel with full wildland protective clothing, wildland veils donned and openings of clothing wrapped securely against the body shall perform rescues involving flying, stinging insects.
- B. All personnel not involved with the rescue shall seek shelter by moving to a safe refuge.
- C. Victims shall be quickly covered with a fire shelter or blanket for protection.
- D. Victims shall be moved to a safe refuge area as soon as possible.

### VI. Medical Aid

All BLS providers shall follow the procedures outlined below in the treatment of poisonous stings.

1. Perform primary patient survey.
2. Ensure adequate airway using oropharyngeal or nasal pharyngeal airway if necessary.
3. Administer oxygen at 4-6 liters per minute by nasal cannula if no respiratory distress is noted.
4. Perform a secondary patient survey taking note of any sting marks, welts, hives, or associated injuries. Assess for localized systemic reaction to the bee stings.
5. Remove stinger as soon as possible by scraping or flicking it by using a fingernail or credit card. Never pinch or otherwise attempt to pull the stingers out because the venom sac will continue to pump venom into the victim.
6. Remove the victim's outer layer of clothing to assist in dislodging stingers.

7. Apply cold packs to affected areas.
8. Place patient in a position of comfort, minimizing the patient's activity. Monitor vital signs at least every ten minutes.
9. Transport patient to closest emergency facility.

VII. Acute Allergic Reaction and Anaphylactic Shock

In the treatment of acute allergic reaction and anaphylactic shock, follow the above BLS guidelines. ALS assessment by paramedics may include:

1. Administration of epinephrine.
2. Two (2) large bore IV's or normal saline, wide open.
3. Transport Code 3.





**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**FLAMMABLE LIQUID SPILLS**

**Number:** 117  
**Revision Date:** 11/08/2012  
**File Name:** Flammable Liquid

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide a guideline to Department personnel involved in the handling of a flammable liquid spill.

**RESPONSIBILITY**

It shall be the responsibility of all Department personnel to follow these guidelines in the handling of flammable liquid spills to insure safety of firefighters and citizens and to protect the environment from unnecessary contamination.

**PROCEDURE**

**A. Upon Arrival**

1. When approaching the scene, slow down or stop if necessary to assess any visible action-taking place, is the situation active or static?
2. Attempt to determine hazardous area.
3. Determine if rescue or evacuation of civilians is necessary.
4. Formulate an incident action plan (IAP)
  - a. Safety of firefighters and citizens.
  - b. Evacuation of endangered area if necessary.
  - c. Control of situation.
  - d. Stabilization of spilled material.
  - e. Disposal or removal of spilled material.
5. If determined to be in excess of 42 gallons consider a HAZMAT response.
  - a. Written incident action plan (IAP)
  - b. Incident Safety Officer (Assuring personnel safety and anticipating additional hazards.)
  - c. Exclusion, Contamination Reduction and Support zones (Hot, Warm, Cold)
  - d. Assistant Safety Officer (Responsible for creating the site safety, and site entry plan. This position is normally filled and handled by the HAZMAT Company Officer.)

**B. Safety**

1. All personnel should be in full protective clothing.
2. Have hose line charged, and/or extinguisher pulled and ready.
3. Safety Officer (may be company officer).
4. Keep all bystanders away from hazardous area.
5. Remove all ignition sources in the hazard area.
6. Park apparatus up hill and up wind from hazard.

### C. Confinement

1. Do not permit the flammable liquid to run off into storm drains, sewers or drainage systems
2. Isolate the spill to the smallest possible area using the following techniques:
  - a. Absorbents
  - b. Diking
  - c. Damming
  - d. Diversion

### D. Control

1. Attempt to stop leak by shutting off valves.
2. Attempt to plug leak with appropriate plugging device.
  - a. Plug and dike
  - b. Redwood plug

### E. Notification

1. Notification to the Office of Emergency Services (OES) is required under the following conditions:
  - a. All significant spills or threatened releases of hazardous materials, including oil must be made immediately reported. Liquid spills of 42 gallons or more must be reported to OES.
  - b. Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or threatened hazard to human health and safety or to the environment, if released into the workplace or the environment.<sup>1</sup>
2. Contact Numbers
  - a. OES Warning Center: (916) 845-8911
  - b. OES 24 Hour Hot Line: (800) 852-7550
  - c. OES Local Office: (562) 795-2900

### F. Disposal

1. Have a tow company remove absorbent.
2. Contact Arcadia Public Works to remove absorbent once product has been positively identified.
3. For large spills a private contractor, specializing in hazardous waste clean-up, may be required.

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<sup>1</sup> OES Hazardous Materials Unit, California Hazardous Material Spill/Release Notification Guidance, (Nov. 2011) p.13



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**DUMPSTER FIRES**

**Number:** 118  
**Revision Date:** 11/08/2012  
**File Name:** Dumpster Fires

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to provide a safe and effective method of handling fires in dumpsters. This includes trash compactors at Westfield Shopping Center.

**RESPONSIBILITY**

Officers shall ensure that all members comply with this guideline, to ensure the safety of personnel operating in and around dumpster fires.

**PROCEDURE**

**A. SAFETY**

1. All members involved in suppression operations shall be in full protective clothing, including SCBA.
2. Operate upwind from fire, if possible.
3. Understand that a dumpster is storage for unregulated trash and that the contents may be water reactive, explosive or have oxidizing agents in them.
4. Any member experiencing any unusual signs and symptoms after extinguishing a dumpster fire shall receive medical attention.
5. If hazardous materials are present, contact and coordinate with the Arcadia Police Department and Los Angeles County Health Haz-Mat, and/or Area C Haz-Mat units if needed.
6. All equipment and PPE shall be decontaminated before being placed back into service or used.

**B. EXTINGUISHMENT**

1. Fire control shall be conducted using no less than a 1-1/2" hose line.
2. If the dumpster is up against a building, it should be moved when possible into an open area away from building to prevent possible extension to the building.
3. All by-standers shall be removed from the area.
4. An attempt should be made to determine what is burning by contacting the occupancy using the dumpster.
5. Consider water run off as a potential hazardous material.

**C. WESTFIELD SHOPPING CENTER**

1. The roll-up doors can be opened by key or manually (Mall security has the key).
2. There are 10 trash compactors on site.
3. Each compactor has 2 1/2" hose ports bilaterally on the top of the compactor for filling the compactor with water.
4. To remove, shut down breaker to compactor and disconnect hydraulic hoses (quick release).
5. Use tow strap on back of engine to pull compactor out of building, and be prepared with a chock block to stop the compactor from rolling, compactors do not have brakes.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**MOTOR VEHICLE FIRES**

**Number:** 119  
**Revision Date:** 11/08/2012  
**File Name:** Motor Vehicle Fire

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this Guideline is to assist members in the safe handling of motor vehicle fires and associated hazards. This procedure identifies operational tactics for safely controlling motor vehicle fires.

**RESPONSIBILITY**

The majority of vehicle fire incidents are easily resolved, although, all possess the potential for disaster. It should be the endeavor of all members to anticipate potential hazards and efficiently resolve the incident with safety in mind at all times.

**PROCEDURE**

**1. FIRE GROUND OPERATIONS**

- The minimum level of protection for firefighters is full protective clothing and breathing air from their SCBA. Captains must wear full protective clothing in order to directly supervise crews. Engineers must wear full protective clothing during suppression activities. High visibility vests shall be worn in accordance to Dept. Policy #607. High Visibility Vests.
- The minimum size of hoseline shall be a 1-1/2" handline.
- A Dry-Chemical extinguisher shall be placed in a position to support suppression activities.

**2. APPARATUS PLACEMENT**

- Apparatus should be placed upwind and uphill of the incident if possible. This is to afford protection from hazardous liquids and vapors and reduces smoke in the work area, creating a safe work area taking into consideration the potential for fuel tank rupture.
- Consideration must be given to using the apparatus as a barrier, to shield the incident scene from traffic hazards. Warning lights should be left operating, in conjunction with the use of traffic cones where needed. The use of flares by fire and police should be used with caution; consider the potential for flammable liquids and vapors.
- Additional consideration should be given to positioning the apparatus at an angle to better allow the removal of any hose from pre-connect transverse hose beds.
- See Department Policy 300.2 Safe Parking While Operating In or Near Vehicle Traffic for further information.

### 3. WATER SUPPLY

- If the water carried on the responding apparatus will not be sufficient, early considerations must be given to additional water supply sources. A Ladder Company may be used as an improvised standpipe at incidents on elevated freeways or parking garages.

### 4. FIRE ATTACK

- Take initial action to ensure control over vehicle movement. Use chock blocks, etc. to prevent unexpected movement during firefighting operations.
- Caution: Tires exposed to fire may explode causing a vehicle to drop suddenly.
- A working fire involving the interior of the vehicle passenger compartment will damage the vehicle beyond repair. As such, the attack plan should consider the vehicle as a "write off" and a safe and appropriate approach and fire attack must be implemented.
- Where patients are trapped in the vehicle, first water should be applied to protect the occupants and permit rescue.
- When rescue is not a factor, first water should be applied for several seconds to extinguish fire or cool down the area around any fuel tanks or fuel systems. This is especially important if the fuel tanks are Liquidified Petroleum Gas (LPG) or Liquid Natural Gas (LNG).
- At least one member of the attack team must have forcible entry tools in his/her possession to provide prompt and safe entry into the vehicle. Use of a crow bar or hux bar to prop the hood open as this will protect against spring failure.
- In many motor vehicle incidents it may become necessary to break window glass. This can be accomplished by striking the glass in a corner. Most auto glass is tempered and will break out in small chips. The exception is the front windshield, which should be safety glass. Beware of tinted glass as it has the ability to camouflage a smoke filled vehicle.

### 5. HAZARDS AND SAFETY CONSIDERATIONS

It shall be the responsibility of all members to consider the following hazard and safety considerations:

- Liquid Petroleum Gas (LPG) and Liquid Natural Gas (LNG) are becoming common place as fuel for vehicles. Pressure release devices can create a lengthy "blow torch" effect, or should the pressure relief device fail, a BLEVE may occur. Vehicles may not be marked to identify this fuel hazard. If there is flame impingement on a visible LPG/LNG storage tank, take action to control the fire and cool the tank.
- If vapors escaping from the storage tank relief valve have ignited, allow the LPG/LNG to burn while protecting exposures and cooling the tank. Flow of gas through piping can be controlled by shutting off the valve at the storage tank, or emergency shut off if equipped.

- Energy Absorbing Bumpers: Consist of gas and fluid filled cylinders that, when heated during a fire, will develop high pressures which may result in the sudden release of the bumper assembly. This could result in serious injury to anyone in its path. Bumper assemblies have been known to travel 25 feet.
- Batteries: Explosion hazard due to presence of hydrogen vapors. Avoid contact with battery acid. When the situation is stable, disconnect battery cables (ground cable first).
- Combustible Metals: Some vehicles have various parts made of combustible metals, such as engine blocks, heads, wheels, etc. When these metals are burning, attempts to extinguish them with water will usually add to the intensity of the fire. Large quantities of water, however, will cool the metal below its ignition temperature. After some initial intensification, the fire should go out. Dry chemical extinguishers can also be effective.
- Trunk, Rear Hatch and Engine Hoods: Hold-open devices may employ, along or in any combination with any of the following: springs, gas cylinders, extending arms, etc. When gas cylinders are exposed to heat, failure or rupture of these devices should be expected. Excessive pressure may develop in lift assists causing a trunk, hatch or hood to fly open with explosive force when the latch mechanism is released. To insure personal safety, be sure to allow sufficient clearance when releasing latches.
- Fires involving the trunk/cargo area should be approached with extreme caution. Contents may include toxic, flammable or other hazardous materials. Expect the worst!
- Fuel Tanks: May be constructed of sheet metal or plastic. A rupture or burn-through may occur with these tanks causing a rapid flash fire of the fuel. Do not remove gas cap, as tank may have become pressurized. Do not direct hose stream into tank, as this will cause pressurization of tank, with a possible result of burning fuel spewing from the tank fill opening.
- Interior: Well sealed interiors of modern vehicles present the potential for backdraft. Use caution when opening doors or breaking windows. Appropriate approach, ventilation, and safety concerns must be considered. Have a charged handline ready before making entry.
- Vehicle Stability: Tires or split rims exposed to fire may explode, causing the vehicle to drop suddenly. Expect exploding rim parts or tire debris to be expelled outward from the sides.
- Approach the vehicle at a 45 degree angle from the front or rear of the vehicle for maximum protection from potential flying debris such as energy absorbing bumpers and exploding rim and tire parts.
- Some larger vehicles, such as buses, employ an air suspension system. When these systems are exposed to heat or flame, they may fail, causing the vehicle to SUDDENLY drop several inches.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**OBSERVING AN EMERGENCY  
WHILE RESPONDING**

**Number:** 120  
**Revision Date:** 11/08/2012  
**File Name:** Observing Emerg

**Review Date:** 03/25/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this policy is to provide a guide for Department personnel who observe a second emergency incident while responding to an incident.

**RESPONSIBILITY**

Department members who observe a second emergency incident while responding to an emergency incident shall evaluate the circumstances and determine which incident is of greater need of fire department services. In most cases the original incident will remain the first priority when department members are faced with the decision of deciding which incident to respond to.

**PROCEDURE**

If a single unit is responding to an incident, it will be the responsibility of the highest ranking officer/member to assess and determine one of the following.

- 1) The responding unit continues to the original incident and notifies Dispatch to assign appropriate resources to the observed incident, i.e. APD for a non-injury T/C.
- 2) The unit chooses to remain at the scene and notifies Dispatch to assign additional resources to the original incident.

If multiple units are responding together, it will be the responsibility of the highest ranking officer to assess and determine one of the following.

- 1) All responding units continue to the original incident and notify Dispatch to assign appropriate resources to the observed incident, i.e. APD for a non-injury T/C.
- 2) Split the responding units so one unit remains at the scene of the observed incident and another continues to the original incident. Dispatch shall be notified to assign additional resources as necessary.
- 3) All units to remain at scene and notify Dispatch to assign additional resources to the original incident.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**MAILBOX FIRES**

**Number:** 121  
**Revision Date:** 11/08/2012  
**File Name:** Mailbox Fires

**Review Date:** 03/25/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide an effective method of handling fires in United States mailboxes and postal installations.

**PROCEDURE**

I. Postal Authority Notification

- a. Have dispatch contact the U.S. Postal Authority and request that a representative respond to the scene.
- b. In the event dispatch is unable to contact the U.S. Postal Authority, the Company Officer will be responsible for proper notifications.

II. Control and Extinguishment

- a. Control mailbox fire, if possible, without breaking open the boxes.
- b. Use CO2 or dry chemical to extinguish fires in mailboxes. Avoid the use of water if possible.
- c. If the contents of a mailbox are exposed, a member of the Fire or Police Department shall remain at the scene until the arrival of a postal authority representative.
- d. Unless the contents are exposed, standby will normally not be required. Fire Companies leaving the scene prior to arrival of Postal Authorities shall secure the box against continued use.





**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RESPONSE TO VIOLENT INCIDENTS**

**Number:** 122  
**Revision Date:** 12/31/2016  
**File Name:** Violent Incidents

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to establish guidelines for the safe response of Fire Department companies to incidents involving violence. Violent incidents are defined as any type of incident in which Fire Department members may be exposed to harm as a result of a violent or threatening act.

**PROCEDURE**

**DISPATCH AND RESPONSE**

1. All personnel will wear department issued body armor when responding to a violent incident.

Company Officers or Incident Commander will provide direction to their personnel if additional PPE will be worn. The type of call that companies are responding to will dictate the additional equipment that would be worn.

- On a response to an Active Shooter/Active Killer, personnel assigned to a Rescue Task Force shall wear their structure helmet and be dressed in their normal work uniform. **Turnouts or brush jacket should not be worn in this situation.**
- On a response to a gun shot wound where the suspect has left the scene and the scene has been cleared by law enforcement, company officers may require their personnel to wear brush jackets over their body armor.
- On a violent incident involving a fire, proper structural firefighting PPE shall be worn over the body armor.

When companies are responding to this type of incident they will communicate and receive direction on the PPE to be worn and discuss their travel route and staging location. If they are in quarters this will be done face to face. If the companies are responding from different locations they will communicate over the radio.

2. Fire units may contact APD Dispatch on Fire Tac and request additional information or monitor APD frequency for information such as Code 4, safe for Fire to enter scene. Verdugo communications will advise specific instructions such as;
  - a. Recommended response route
  - b. Any special conditions
  - c. Location for fire units to stage

3. Fire units may be directed to stage until the arrival of police units. Stage a safe distance from the incident, or out of sight of the incident, with at least two (2) means of egress (backing out doesn't count). Units shall notify Verdugo Dispatch when they are staging and the location.
4. Members should remember that the crowd may be a hazard.
5. Units should turn off warning lights when staged and then turn them back on when completing the response to the scene. Turning off warning lights at the scene may reduce crowd attraction to the incident.

If Fire Department companies respond to an incident of an unknown nature and find themselves in a violent situation, they will immediately retreat to a safe location. Emergency traffic should be used if necessary. Verdugo shall notify APD Dispatch and should request a police response.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RESCUE TASK FORCE**

**Number:** 122.1  
**Revision Date:** 12/31/2016  
**File Name:** RTF

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The Arcadia Fire Department will respond to a variety of incident types that may involve violence. Violent incidents include: Assaults, stabbings, shootings (including mass shootings or Active Shooter Incidents), bombings or bomb threats, attempted suicides, hostage situations, gang related acts, terrorist acts, civil unrest, riots, and the deliberate release of hazardous materials. Depending on the tactics employed and the actions of the suspect(s), these incidents can become more complex due to resulting or subsequent gunfire, explosions, fires, and/or chemical, biological or radiation releases.

**PROCEDURE:**

This policy is based on reference material from Urban Fire Forum 2013, FEMA USFA Active Shooter Guidelines 2013, Hartford Consensus 2013, Tactical Emergency Casualty Care (TECC) guidelines, National Fallen Firefighter's Life Safety Initiative 12, CFFJAC Unified Response to Violent Incidents, FIRESCOPE, and OSHA Regulations.

**I. DISPATCH CONSIDERATIONS**

- A. Confirm type of violence, number of suspects and whereabouts, number of potential victims, location, and other intelligence related to type of threat
- B. Obtain location of Law Enforcement (LE) Incident Command Post (ICP) and suggested fire resource Staging Area
- C. Dispatch resources to Staging Area based on nature of incident and standard response plan
- D. Initial Dispatch will follow Verdugo Dispatches normal procedures for a shooting victim.
  1. 1 Engine Company/Truck Company
  2. 1 ALS Unit
  3. 1 Battalion Chief

**II. RESPONSE CONSIDERATIONS**

- A. Confirm type of incident
- B. Don appropriate PPE for situation (see AFD Guideline 122 Response to Violent Incidents)
- C. Verify scene security issues

- D. Determine safe response route(s)
- E. Determine a safe staging location based on type of incident and dispatch instructions. Staging will occur at a safe location. Apparatus and all personnel will be prepared for immediate response once the scene is cleared by law enforcement
- F. Maintain mobility to retreat
- G. Maintain LCES
- H. Maintain Situational Awareness (540 degrees)

### III. COMMAND CONSIDERATIONS

- A. First arriving company/chief officer will make contact with law enforcement IC
  - 1. Obtain situation briefing
  - 2. Establish Unified Command
  - 3. Determine Unified Objectives
  - 4. Establish common communication methods (radio, phone, and/or face-to-face)
  - 5. Determine need for Rescue (RTF) or Suppression (STF) Task Forces
  - 6. Determine level of "Force Protection" required
- B. Order appropriate resources
  - 1. Fire resources
  - 2. EMS resources
  - 3. Technical Rescue Team (TRT)
  - 4. Hazardous Material Response Team
  - 5. Support personnel
- C. Determine/establish perimeter and control zones (Hot, Warm, Cold) and entry/access control points. Prior to deploying an RTF team, threat zones must be identified:
  - 1. **Hot Zone:** Areas where there is known hazard or life threat that is direct and immediate. An example of this would be any uncontrolled area where the active shooter could directly engage an RTF team. RTF teams will not be deployed into a Hot Zone.
  - 2. **Warm Zone (also known as the area of indirect threat):** Areas that ACPD has either cleared or isolated the threat where there is minimal or mitigated risk. This area can be considered clear but not secure. This is where the RTF will deploy, with security, to treat victims.
  - 3. **Cold Zone:** Areas where there is little or no threat, either by geography to threat or after area has been secured by Police (i.e., Casualty Collection Points). An area where AFD will stage to triage, treat, and transport victims once removed from the warm zone.
  - 4. Ensure perimeter/zones are relayed to all personnel

### IV. EMS/RESCUE CONSIDERATIONS

- A. Determine appropriate staging location for EMS resources
  - 1. Provide for rapid access to Treatment/Transportation Area
- B. Determine if EMS will be part of Rescue Task Force (RTF)
- C. Implement MCI protocols (when three or more patients)
- D. Establish Casualty Collection Points (CCP) and Treatment/Transportation Area

- E. Provide rapid egress of patients to designated extraction points
- F. Identify and secure Landing Zones (LZ's) in coordination with law enforcement
- G. Develop ambulance loading ingress/egress (traffic plan)
- H. Consider need for decontamination of victims and responders
- I. Maintain all patient handling/treatment areas as part of the crime scene

#### V. FIRE SUPPRESSION CONSIDERATIONS

- A. Evaluate scene safety with law enforcement prior to making entry
- B. Determine fire attack strategy (offensive vs. defensive)
- C. Determine need and level of force protection required
- D. Assess risks of ammunition and/or explosives, gas, radiation etc., under fire conditions
- E. Consider use of unstaffed master streams
- F. Consider application of water from areas of cover
- G. Emphasize fast attack; salvage, ventilation, and overhaul should be limited.
- H. Consider need for Hazardous Materials Response Team and/or Technical Rescue Team
- I. Consider need for decontamination of victims and/or fire personnel from exposure to chemicals, radioactive or biological exposure

#### DEFINITIONS

##### HOT ZONE:

The area where a direct and immediate threat exists. A direct and immediate threat is very dynamic and is determined by complexity and circumstances of the incident. Examples of direct and immediate threat are an active shooter, a barricaded suspect, a hostage situation, a high-risk warrant service and possible terrorist acts. This could also be classified as the “inner perimeter” by law enforcement; an area within the range of active gunfire or secondary devices, Immediately Dangerous to Life and Health (IDLH).

##### WARM ZONE:

The area where a potential threat exists, but the threat is not direct or immediate. An example of this is an unknown location of suspect(s) in a given area already cleared. Fire department resources may be requested to enter into warm zones, but should only be done with force protection, cover and concealment. These instances could be utilized for rapid extraction of multiple victims or officers down who need immediate assistance. Prior to entering into a warm zone a Risk versus Gain Analysis should have been completed. Law enforcement could also refer to the warm zone as part of the “inner perimeter”.

COLD ZONE:

The area where no significant danger or threat can be reasonably anticipated. This could be achieved by distance, geographic location or inaccessible areas from the incident. The cold zone is the location for staging of resources, Command Post, and the Treatment/Transportation Area, and is located within the general perimeter of the incident. This zone should be maintained as part of the crime scene and should have law enforcement security. LE may also classify this zone as part of the “outer perimeter”.

CONCEALMENT:

Concealment is anything that hides you from suspect observation and can be natural or man-made. Concealment does not protect you from suspect(s) gunfire. Do not think that you are protected from gunfire just because you are concealed. Natural concealment includes such things as bushes, grass, trees, and shadows. If possible, natural concealment should not be disturbed.

COVER:

Cover gives protection from bullets, fragments of exploding rounds, flame, nuclear effects, and biological and chemical agents. Natural cover includes such objects as logs, trees, stumps, ravines, and hollows. Manmade cover includes such things as vehicles, trenches, walls, rubble and craters. Build or locate cover such as shielding behind vehicles, walls and/or natural barriers.

FORCE PROTECTION:

Actions taken by law enforcement to prevent or mitigate hostile actions against personnel, resources, facilities, and critical infrastructure. These actions conserve the operational ability of fire and EMS resources so they can be applied as needed.

CASUALTY COLLECTION POINTS (CCP):

Similar to a Safe Refuge Area at a Hazardous Materials incident, the CCP is an area within the Warm Zone where victims are extracted or directed to, in order to be readied for transfer to the Treatment Area, located within the Cold Zone. RTF teams will work together to transport/direct victims to the CCP and then to the Treatment Area. Multiple RTF’s will typically be required to expedite rescue and movement of victims. LE officers should conduct initial “screening” of victims at the CCP in order to ensure that wounded suspects are not a threat to Fire/EMS personnel.

RESCUE TASK FORCE (RTF):

Team of Fire/EMS personnel coupled with LE Force Protection, assembled as a cohesive team, to enter into a Warm Zone environment in order to rescue savable victims. The task force moves together at all times and does not separate to accomplish other tasks. The Task Force Leader (TFL) will be from LE, with an assistant TFL from Fire. The team will conduct a pre-entry briefing which will include team tactics as well as an emergency escape/exit plan.

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*Revision Date: 12/31/2016*  
*File Name: RTF*

The RTF members will carry minimal EMS and litter equipment, using the “Light is Right” concept. Victim treatment in the Warm Zone will be limited to life-saving BLS actions, primarily airway control (OPA, NPA, or occlusive chest dressing) and hemorrhage control (tourniquets and trauma dressings). Victims will be rapidly extracted to Casualty Collection Points (CCP), using rapid type litter moving equipment (SKED, Carry-All, etc.) Additional RTF’s will move victims from CCP’s to the Triage/Treatment/Transportation Area.

RTF members will not enter the Hot Zone and will immediately exit the Warm Zone if it becomes compromised. Force Protection will remain with rescuers at all times, while in the Warm Zone. RTF members will not remove deceased bodies.

**SUPPRESSION TASK FORCE:**

Team of fire personnel coupled with LE Force Protection, assembled as a cohesive team, to enter into a Warm Zone environment in order to extinguish fires. The task force moves together at all times and does not separate to accomplish other tasks. The Task Force Leader (TFL) will be from LE, with an assistant TFL from Fire. The team will conduct a pre-entry briefing which will include team tactics as well as an emergency escape/exit plan.

The Suppression T/F will normally use defensive tactics, including the use of unstaffed master streams. In all cases, the Suppression T/F should use minimal suppression tactics to control fire spread/growth and plan for rapid egress. Fire streams should not be used intentionally to control crowds.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**CIVIL DISTURBANCE RESPONSE**

**Number:** 123  
**Revision Date:** 08/01/2012  
**File Name:** Civil Disturbance

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to outline the Fire Department's protocol dealing with incidents involving civil disturbances. The procedure describes response modes, security, command structures, and cooperative approaches with the Arcadia Police Department and other agencies.

**DEFINITION**

Within this procedure, a civil disturbance is defined as a situation involving a random act, or several random or specific acts of violence, directed at firefighters, other persons, or property.

**PROCEDURE**

The Arcadia Fire Department shall use a two-tiered approach to respond to incidents involving civil disturbances. It shall be the responsibility of all members to be alert to potential or actual hazards due to a civil disturbance. There are times when such potential is high and well known; however, at other times, a single act or incident can spontaneously escalate into a significant disturbance.

**NOTIFICATIONS**

Any company experiencing an act of violence against them shall immediately report the incident to Verdugo Dispatch Center. Verdugo will notify the Duty Battalion Chief. If the severity of the situation dictates that a Tier-One or Tier-Two response is in order, the following notifications will be made:

- Fire Chief
- Deputy Fire Chief
- Arcadia Police Dispatch

Verdugo shall be requested to notify all AFD stations of the situation. The notification will include a brief description; identify the boundaries, and duration of effect. When an incident occurs, the first due Company Officer, his/her Battalion Chief and a Supervisor from the Arcadia Police Department will meet to determine the appropriate level of response for the area in question.

**TIER-ONE RESPONSE**

When an actual act of violence towards firefighters has occurred at a specific location of the City (i.e., a random bullet fired at a fire apparatus, but resulting in no injuries), and there are no indications that the situation involves any other related acts, a perimeter shall be identified a minimum of 1/2 mile in each direction from which the act occurred. Until deemed to be safe by the on-duty Battalion Chief, Fire Department companies shall not respond into that area without a police escort, and shall stage according to the requirements of the Standard Operating Guideline 122, *Response to Violent Incidents*, when they do enter the area.



Any fire station located inside the established perimeter shall have all their resources reassigned to a station outside the perimeter or to a Level II staging area. All support apparatus will also be relocated.

Fire stations located adjacent to the perimeter area will remain in their stations but shall go into a "Lockdown" mode for security reasons. All doors will be closed and locked. Members will remain indoors until area is cleared by APD.

### **TIER-TWO RESPONSE**

When a series of actual acts of violence have occurred in a specific area of the City (i.e., unrelated set fires, a series of assaults, or looting), a perimeter encompassing one or more square miles shall be established around the area. A Unified Command Post shall be established well outside that perimeter. Command shall establish Level II Staging near the Command Post and request appropriate resources.

Close communications shall be maintained between all assigned resources. The Command Post will direct all responses into the identified area. Verdugo will direct all requests for emergency service in the identified area to the Incident Commander. Verdugo will also advise Command of all emergency requests to perimeter areas. Command shall determine the appropriate response to the incident (if any), obtain a police escort, and actually direct the companies to respond.

All resources responding into the perimeter will be grouped (no single company responses) and with police escorts. Responding units will communicate only with Command. Request for additional assistance by a company/unit shall be directed to Command, utilizing the emergency traffic procedure if necessary. Upon completion of the call, account for personnel and return to Staging. In addition to Command, Verdugo must also monitor all radio traffic. If disturbances are occurring in more than one area of the City, this system may be duplicated in other locations. When operating in a Tier-Two situation, emphasis must be placed on stabilizing the incident as rapidly as possible, if safe to do so, and then pulling out.

### **SAFETY CONSIDERATIONS:**

- No single company responses will be permitted in Tier-Two situations.
- Police escorts will be required.
- All Fire Department personnel will respond to and from all emergencies in full protective clothing (helmet, bunkers, etc.) and body armor, personnel will remain in this level of PPE until returned to staging or their assigned fire station.
- Use of sirens and air horns within the perimeter should be avoided. Emergency lighting may be used.
- When responding to Tier-One and Tier-Two situations, apparatus must be placed in a manner that will allow for rapid, unobstructed, retreat from the area. Apparatus must also be parked in a manner that best protects the crew.
- When operating in Tier-One and Tier-Two modes, all tools and equipment located on the exterior of apparatus must be removed and placed in interior compartments.

- Crews should be careful about radio communications. Outside speakers on apparatus broadcast all messages (to the public). MCT's or cellular phones should be used as much as possible for sensitive communications.

### **TACTICAL CONSIDERATIONS**

- Victims may be more effectively treated in a potentially violent situation if the victim is rapidly removed from the scene to a safe / exterior treatment area (scoop and run).
- When no lives are at stake, emphasis will be on protecting savable property. Buildings, vehicles, etc. that are fully involved with no or little exposure problem, may be left to burn.
- Emphasis will be fast attack, heavy streams to rapidly control and extinguish the fire and then exit the area. Routine salvage, ventilation and overhaul practices may be discontinued. Use of hand lines should be limited.
- All fire units will enter the perimeter as intact groups or Task Forces, travel in groups or Task Forces, operate in groups or Task Forces, and return in groups or Task Forces.

### **OTHER CONSIDERATIONS**

- Any civil disturbance has the potential of escalating into a major situation.
- A fire station or other City facility, or school, if appropriately located, may make an excellent Command Post and staging area and can be easily secured. Think big! Schools may allow more effective space.
- Activation of the City Emergency Operations Center (EOC).



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**WATER RESCUE**

**Number:** 124  
**Revision Date:** 08/01/2012  
**File Name:** Water Rescue

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to provide a guideline for conducting safe and efficient water rescue/recovery operations.

**RESCUER SAFETY:**

- **DO NOT** wear turnouts, work boots, or fire fighting helmet while engaged in any water related incident. It is recommended to keep tennis shoes with you during periods of predicted rain. Wear a flotation vest and helmet designed for water rescue operations within 10 feet of the waters edge.
- The force of water traveling at 9 MPH will exert 151 pounds force to your legs and 302 pounds to your body!

**PROCEDURE**

**TACTICAL CONSIDERATIONS**

1. One unit to the reported point of entry - Gather information, relay description of clothing, age, time of entry, physical condition, etc. and number of victims to responding units.
2. Assign a Tactical Group: Down stream of the point of entry
  - A. Deployment of throw rings, flotation devices, tension diagonal, throw bags and/or inflated fire hose are some of the options, depending on time.
  - B. Secure responsible party or witness.
  - C. Request additional resources as needed.
  - D. Assess the hazards.
    - a. Hazards associated with water rescue operations would be: volume, velocity, and temperature of water, floating debris, unusual drop-offs, hydraulic effects, and depth of water.
  - E. Assign a Safety Officer

- F. Assign a Safety Group: Down stream of the tactical unit.
  - a. This group will set-up as a safety. Deploy tension diagonal and/or throw bags as a back up-safety if the upstream attempts fail or a rescuer falls in.
- G. Assign an Upstream Division to spot floating debris and notify down stream personnel.
- H. Request a helicopter for aerial recon and spotting hazards.
- I. Implement Personnel Accountability System.

3. The order of water rescue procedures from low risk to high risk will be:

TALK the victim into self-rescue. If possible, the victim can be talked into swimming to shore or assisting the rescuers with his/her own rescue.

REACH: If possible, the rescuer should extend his/her hand or some other object, such as a pike pole, to remove the victim from the water.

THROW: If the victim is too far out in the water to reach, rescuer(s) should attempt to throw the victim a throw bag or some piece of positive flotation (i.e., PFD, rescue ring). Downstream personnel should be in position during the rescue operation. If the victim is able to grab the throw bag, the rescuer can pendulum belay or haul the victim to the nearest bank.

TERMINATION

1. Personnel accountability.
2. Equipment accountability.
3. Consider debriefing.
4. Secure the scene. Return to service.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**CONFINED SPACE OPERATIONS**

**Number:** 125  
**Revision Date:** 09/20/2012  
**File Name:** Confined Space

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to establish guidelines for conducting confined space rescue operations. Confined spaces include caverns, tunnels, pipes, tanks, and any other locations where ventilation and access are restricted by the configuration of the space. These factors may also apply to basements or attics. Confined space incidents may involve injured persons, persons asphyxiated or overcome by toxic substances, cave-ins or fires occurring within the space.

**PROCEDURE**

**PHASE I TACTICAL CONSIDERATIONS**

**I. THE PRIMARY ASSESSMENT**

- A. Command should attempt to secure a reporting party (RP) or witness to the accident to determine exactly what happened.
- B. An immediate assessment of the hazards present to rescuers should be performed.
- C. An assessment of the victim(s) should be performed.
- D. Determine how many victims have been affected.
- E. Determine how long the victims have been down, the mechanism of injury, and the survivability profile of the victim(s).
- F. Establish communications with the victim(s) as soon as possible.
- G. Locate confined space permit and all other information about the space.

**II. THE SECONDARY ASSESSMENT**

**A. The Confined Space**

- 1. Determine what type of confined space this is.
- 2. What types of products are stored in the confined space?
- 3. What known hazards are present; mechanical, electrical, etc?
- 4. Location and number of victims affected.
- 5. Diagram of confined space, including entry and egress locations.

THE SECONDARY ASSESSMENT: The Confined Space (continued)

6. Structural stability of the confined space.
7. Hazardous material size-up.
8. Obtain copy of permit.

B. Personnel and Equipment

1. Determine if there is an adequate number of trained personnel on scene to manage the rescue/recovery; at least eight (8).
2. Consider the effect of temperature extremes on personnel, and consider early rotation of personnel operating on scene, approximately every 15 to 20 minutes, 30 minutes maximum.
3. Consider if the proper equipment is on-scene to complete the operation. This includes, but is not limited to:
  - a. Atmospheric monitoring equipment. At least one hazardous materials response unit to assist with atmospheric monitoring.
  - b. Explosion proof lighting.
  - c. Explosion proof communications.
  - d. Supplied air breathing apparatus or remote air.
  - e. Cascade system.
  - f. Victim removal systems/equipment.
  - g. Ventilation equipment with necessary duct work.

**PHASE II PRE-ENTRY OPERATIONS**

III. MAKE THE GENERAL AREA SAFE

- A. Establish a perimeter. The size of the perimeter should be dictated by the atmospheric conditions, wind direction, structural stability, etc.
- B. Stop all unnecessary traffic in the area.
- C. Assure running vehicles park downwind from incident.
- D. Establish ventilation to general area if necessary.
- E. Assign Safety Officer and establish Rehab.

IV. MAKE THE RESCUE AREA SAFE

- A. Determine exactly what hazards and products are within the confined space.
- B. Conduct atmospheric testing in the space to determine oxygen level, flammability, and toxicity. Based on readings, identify proper level of personal protective equipment. Any instruments used to monitor the confined space shall have:
  - 1. An audible alarm.
  - 2. Be calibrated to 10% of the LEL of the calibrant gas.
  - 3. Have the audible alarm set at:
    - Oxygen 19.5%, low and Oxygen enriched 23.5%
    - Flammability 10% alarm set
    - Toxicity carbon monoxide 25 ppm
    - Hydrogen sulfide 10 ppm
  - 4. Any Oxygen readings below 12%, recognize that the LEL reading may not be accurate.
  - 5. Provide atmosphere readings at least every 5 minutes
- C. Utilities, including electrical, gas and water should be secured and locked out. If it is not possible to lock/tag out/blank out, post a guard to assure the utilities are not turned on during the operation.
- D. Any product that is in, or flowing in, the confined space must be secured and blocked off if possible. It may be determined that the space must be drained of any product prior to entry.
- E. Any manufacturing or processing equipment must be shut down prior to entry. If possible, all equipment should be locked/tagged out and brought to a zero energy state.
- F. The structural stability of the confined space should be evaluated. If there is a potential for collapse, appropriate measures must be taken to assure the structural stability of the space.

V. VENTILATION

- A. Determine the proper type of ventilation for the space.
- B. Establish the proper ventilation of the confined space.

- C. Consider the effects on the atmosphere that positive or negative pressure ventilation will have (i.e., increase or decrease flammability of atmosphere). It could require both positive and negative ventilation (pushing and pulling). This will be based on the vapor density or molecular weight of the product.
- D. Consider negative pressure ventilation if there is only one entry point. Atmospheric monitoring will be required to ensure a non-explosive environment is present in the exhausted vapor area.
- E. Consider the effects the exhaust is having on the operation.

### **PHASE III ENTRY OPERATIONS VICTIM REMOVAL**

#### **VI. SELECTION OF PERSONNEL**

- A. The proper personnel shall be selected to make entry into the confined space. A minimum of two persons should be assigned to make entry. All personnel on the entry team shall have vital signs taken and recorded prior to entry, if time permits.
  - 1. Assign a Rescue Group. Rescue Group shall provide a minimum 2:1 ratio of personnel outside the confined space to support personnel inside. This shall include a standby rescue team with a 1:1 ratio to provide immediate assistance to personnel in the confined space.
  - 2. All entry and back-up personnel should be properly trained in confined space rescue procedures and capable of carrying out the rescue/recovery.

#### **VII. SELECTION OF PERSONAL PROTECTIVE EQUIPMENT**

- A. The proper level of personal protective equipment should be worn by all entry and back-up personnel. This shall include helmet, gloves, proper footwear, goggles, turnouts, and appropriate harness, Class III is recommended.
- B. All entry and back-up personnel shall wear SABA or SCBA when making entry into the confined space. SABA (supplied air breathing apparatus) is recommended.
  - 1. Entry personnel shall use personal air monitoring devices that monitor flammability and oxygen as a minimum.



VIII. COMMUNICATION AND LIGHTING

- A. If the confined space has a flammable atmosphere, entry personnel should have intrinsically safe or explosion proof communication equipment. If this equipment is not available, a tag line for communication or a message relay person may be used.
- B. If the entry team is entering a dark confined space, ensure that the proper type of lighting is used. If explosion proof lighting is not available, then cyalume type lights must be used by the entry team.

IX. ORIENTATION OF CONFINED SPACE

- A. Prior to entry into the confined space, obtain a blue print or diagram of the space if possible. All entry and backup personnel should be made aware of the layout of the space to be entered.
- B. All entry and back-up personnel, Command Staff and Safety shall be made aware of the action plan and the back-up plan prior to entry.
- C. Rescuer tag lines may or may not be appropriate in the confined space, depending on the specific layout. Tag lines could become an entanglement hazard.

X. VICTIM REMOVAL EQUIPMENT

- A. If possible, the entry team should bring a supply of breathable air for the victim.
- B. Pure Oxygen shall not be used in a confined space that has a potentially flammable atmosphere. Rescuer's should not remove their breathing apparatus and give it to the victim.
- C. Entry team should consider the necessary victim retrieval equipment prior to entry. This includes respiratory protection for the victim.

XI. ASSESSING CONDITION OF VICTIM(S)

- A. Upon reaching the victim(s), entry personnel should do an immediate primary survey of the victim. If appropriate, treatment should be started immediately.
- B. A quick but thorough secondary assessment of the victim should be done. If time permits, entry personnel should attempt to treat serious injuries prior to removal.
- C. If indicated, complete C-spine precautions should be administered. NOTE: Because of the difficulty removing the victim from the space, optimum C-spine precautions may not be possible.

**XII. VICTIM PACKAGING**

- A. After treatment of immediate life threatening injuries, the victim(s) should be packaged for removal from the space. This may include using a backboard, stokes basket, ked board, LSP half back, or some other similar device designed for extrication.
- B. Prior to removal from the space, the entry team should secure any loose webbing, buckles, straps, or any other device that may hinder the extrication process.

**XIII. VICTIM REMOVAL SYSTEM**

- A. Determined the appropriate method of extrication prior to removal of victim. This may include a vertical or horizontal haul system constructed of ropes, pulleys, and other hardware, with a minimum of a 2:1 mechanical advantage.
- B. As a general rule, entry personnel should not allow the victim between the rescuer and the point of egress.
- C. Immediately after reaching the point of egress, entry personnel shall transfer the victim to treatment personnel.
- D. ALS level evaluation should be conducted on the victim.
- E. If the victim is contaminated from product inside the space, a Decontamination Group and corridor shall be established and used prior to transport of victim.

**PHASE IV. TERMINATION**

**XIV. PREPARATION FOR TERMINATION**

- A. Conduct personnel accountability.
- B. Remove tools and equipment used for rescue/recovery. If there has been a fatality, consider leaving tools and equipment in place for investigative purposes.
- C. If entry personnel and/or equipment have been contaminated during the rescue/recovery, proper decontamination procedures shall be followed prior to placing equipment back in service.
- D. Secure the scene.
- E. Evaluate personnel, CISD if the situation dictates it.
- F. Consider debriefing.
- G. Return to service.

XV. CONSIDERATIONS

A. Notifications:

- a. Fire Chief.
- b. Deputy Fire Chief.
- c. Battalion Chief to cover the City.

B. Weather:

- a. Heat. Consider rotation of crews.
- b. Cold. Consider effects of hypothermia on victim and rescuers.
- c. Rain. Consider the effects of rain on the hazard profile.

C. Time of Day. Is there sufficient lighting for operations extending into the night.

D. Consider the effect on family and friends; keep family informed.

E. Assign a P.I.O., consider news media.

F. OSHA notification, if there has been an injury or death.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**GRASS FIRE OPERATIONS**

**Number:** 126  
**Revision Date:** 09/20/2012  
**File Name:** Grass Fire

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

This shall serve as an operational guide for all Arcadia Fire Department members in fire operations involving Grass or Brush.

**RESPONSIBILITY**

This guide shall apply to all members while operating at the scene of a Grass or Brush fire. This guideline shall also be used in accordance with Arcadia Fire Department Standard Operating Guideline # 101, *Personal Protective Equipment*.

**PROCEDURE**

For the purpose of this Guideline, Grass/Brush fire operations shall also be referred as Wildland fire operations.

1. At the time of alarm all members should perform their own size-up, as to time of day, weather conditions, and location of the incident.
2. Company Officers upon arrival shall give a report on conditions (Size-up) to Verdugo. This Size-up shall include:
  - Location of the incident.
  - Size of the fire in feet or by acres.
  - Type of fuel involved: grass, brush (light, medium, or heavy fuel).
  - Rate of spread (creeping/running) and spread direction (uphill/downhill).
  - Wind speed and direction.
  - Exposures threatened or not threatened.
  - You and your company's actions.
3. Company Officers shall also give Verdugo a follow-up report including the following information:
  - Name the Incident.
  - Identify a Command Post location.
  - Request appropriate resources if incident is outside of Verdugo's automatic aid jurisdiction, resources must be requested through mutual aid (Sierra Madre, L.A. Co Fire, U.S.F.S.)
  - Identify a staging and/or check-in location.

All members shall incorporate LCES (Lookout, Communication, Escape routes, and Safety) into all operations.

### Considerations

1. Where the fire is currently, where is the fire going, and where will it be in the next hour?
2. Announce what you see en-route and note size, shape, color, and angle of the smoke column, as it tells you the wind direction and air stability, and hints as to what is burning.

### Strategy

1. Assign resources to the most urgent tasks, life safety, and exposure protection.
2. Determine whether to make a direct attack or an indirect attack or a combination of the two.

### Direct Attack

1. Used when the fire perimeter is burning at low intensity and fuels are light, allowing for safe operation at the fire edge.
2. Control efforts, including line construction, are done at the fire perimeter, which becomes the control line.
3. Unless special situations dictate otherwise, line construction will start from an anchor point. Keep one foot in the black.
4. Advantages:
  - Safest place to work. Firefighters can usually escape into the burn
  - There is minimal area burned.
  - No additional area is intentionally burned.
  - Full advantage is taken of burn out areas
  - May reduce the possibility of the fire moving into the crowns of the trees or brush.
  - Eliminates the uncertain elements of backfiring.
2. Disadvantages
  - Firefighters can be hampered by heat, smoke and flame.
  - Control lines can be very long and irregular, because the line follows edge of fire.
  - Firefighters may accidentally spread burning materials across line.
  - Doesn't take advantage of natural or existing barriers.
  - Usually more mop up and patrol.

### Indirect Attack

1. Use when direct attack is not possible or practical.
2. Fireline is located some distance from fire's edge.
3. Terrain, fuels, fire behavior, and available resources will dictate fireline placement.
4. Burning out of indirect line is handled as a second phase of line construction.

5. Advantages

- Can locate line along favorable topography
- Take advantage of natural or existing barriers
- Firefighters work out of smoke and heat
- More time to construct line.
- Allows line to be constructed in lighter fuels
- May be less danger of slop over

6. Disadvantages

- More acres will be burned
- May be dangerous to firefighters, because they are some distance from the fire and can't observe it
- Fire may cross line before it fires out
- Burning out may leave unburned islands
- Brings into play the dangers of backfiring
- Fails to take advantage of line that has already burned out

Tactical Watch Outs

1. Building fireline downhill
2. Building underslung or mid-slope fireline
3. Building indirect fireline or unburned fuel remains between you and the fire
4. Attempting frontal assault on the fire
5. Terrain and/or fuels make escape to safety zones difficult
6. Small fire emerging into a larger fire or an isolated area of a large fire
7. Suppression resources are fatigued or inadequate
8. Assignment or escape route depends on aircraft support
9. Night-time operations
10. Wildland-Urban interface operations

Equipment Placement

1. Identify escape routes and safety zones
2. Always stay mobile
3. Back equipment in for quick escape
4. Mark entrance to long driveways to show that protection is in place
5. Park in a cleared area.
6. Keep egress route clear
7. Have protection line charged
8. Do not make long hose lays
9. Keep sight contact with all crewmembers

### Structure Protection

1. All actions, including LCES, should be based on a fire behavior prediction. Remember to time tag your tactics based on your fire behavior prediction.
2. Structures must be triaged, (Defendable vs. Not Defendable). Defendable is defined as a structure in which your crew and engine will not be affected if the fire makes a significant run on your position.
3. Place companies ahead of where the fire is going.
4. Employ LCES and ensure all members are on the same page.
5. Lay out enough hose to cover the structure, including the roof, park apparatus in a safe location (headed out), leave the engine running.
6. Preventive actions to protect the structure include, but are not limited to; close all doors, drapes, curtains, and garage door. Connect garden hose to engine, ladders to the roof away from the fire. Remove combustible outside objects away from the structure. Leave lights on inside the structure.

### Water Usage

1. Utilize class “A” foam, Compressed Air Foam (CAFS) or gels if possible.
2. Let fire burn to the structure that is being protected; apply water to the structure as needed while letting the brush burn itself out.
3. Let fire burn to the control line, utilizing water to prevent the torching of trees and tall brush. Torching can produce large amounts of heat and fire brands, which can hamper fire extinguishment and increase the potential for the fire to spot.
4. Letting the fire burn out at the structure or control line will reduce the amount of mop-up required. A clean burn requires minimal mop-up and less water.

**REMEMBER, THERE IS NO VALUE IN WETTING DOWN BRUSH, TREES, AND FIRE RESISTIVE ROOFS AHEAD OF THE FIRE.**

### The Fire Environment

The Wildland fire environment consists of three major components: Weather, Topography, and Fuels.

1. WEATHER has been described as the most variable of the three.
  - Most severe winds are caused by dry foehn winds (Santa Ana)
  - Thunderheads have the potential to develop strong and erratic winds
  - Temperature has a direct impact on humidity and air movement, and pre-heating of fuels
  - Stable air discourages vertical movement and decreases fire activity
  - Unstable air encourages vertical movement of the air and increases fire activity
  - Perform hourly weather calculations in your assigned operational area

2. TOPOGRAPHY is the most constant of the three major components.
  - Steepness of the slope is the most important factor
  - South and West facing slopes generally have the greatest number of trees, while North slopes typically have heavier fuels, higher fuel moisture, lower fire spread, and fewer fire starts
3. FUELS are the part of the environment that actually carries the fire.
  - Light fuels consist of grasses and weeds
  - Moderate fuels consist of coastal sage scrub
  - Heavy fuels are mixed chaparral
  - Know what the Fine Dead Fuel moisture content is in your assigned operational area

**Fuel Moisture is generally considered the most important influence on the flammability of fuels. Live Fuel Moisture content is considered critical at levels of 60 % or below. Fine Dead Fuel Moisture content is considered critical at levels of 6 % or less.**

### Mop Up

The principles of mop up follow:

1. Start work on each position of line just as soon as possible after line construction and burning out are completed. Treat most threatening situations first.
2. Allow fuel to burn completely if it will do so promptly and safely.
3. On small fires, all fires should be extinguished in the mop up, where quantities of burning material are not so large as to make this impractical.
4. On large fires, completely mop up enough of the area adjacent to the line to be certain no fire can blow, spot, or roll over the fire line under the worst possible conditions.
5. Search for smoldering spot fires.
6. All smoldering material that is not put out with water or dirt should be spread well inside of lines.
7. Eliminate or put into a safe area all less flammable fuels, such as rotten logs and snags that are outside but near the control line.
8. Eliminate all burned trees inside of line that could throw sparks over line or fall over the line. Only qualified personnel shall fell trees.
9. Put all rolling material in a position that it cannot possibly roll across the line.
10. Look for indications of hot spots; swarming gnats, white ash, ground which shows pin holes, and wood boring insects.



11. Use water sparingly, but use enough to do the job. Match the amount of water to the job.
12. Adding Class A foam to water will greatly increase effectiveness in mop up of deep-burning fuels.

### Firefighter Safety

Annually and while en-route, review the **TEN STANDARD FIREFIGHTING ORDERS.**

Annually and while en-route, review the **18 WATCH-OUT SITUATIONS.**

**Remember that heat is a major safety problem and all personnel should be kept well hydrated. Personnel should have access to drinking water and carry canteens or similar water containers. Sterile water bottles can be cleaned, filled with drinking water, and carried in the brush web gear. Wildland firefighting is a physically demanding operation and members should be fit and prepared mentally for a very hot, fast moving, and dangerous environment.**



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**STRUCTURE FIRES –  
FUMIGATION**

**Number:** 127  
**Revision Date:** 09/20/2012  
**File Name:** Fumigation

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide a guide in fighting structure fires undergoing fumigation.

Vikane gas is the most common fumigant used in fumigation. Vikane gas fumigant is an inorganic chemical. The active ingredient is Sulfuryl Fluoride and is relatively non-reactive as a gas. No corrosive effects have been detected when this chemical has been used as directed. It can, however, react with strong bases such as photo developing solutions. Vikane is a colorless, odorless, gas under pressure that has no warning properties. Skin contact with Vikane is not considered a problem, however contact with liquid Vikane can cause freeze damage. The fumigation industry standard is to wear SCBA when atmospheric conditions equal 5ppm or higher of Sulfuryl Fluoride.

**RESPONSIBILITY**

All department members shall familiarize themselves with this guideline. Company officers shall ensure that members involved with fighting structure fires undergoing fumigation are also familiar with this guideline.

**PROCEDURE**

Full structure protective equipment and SCBA according to Department Guideline # 101, Personal Protective Equipment, shall be worn while engaged in any operations involving structures undergoing fumigation.

Remove the plastic tarps covering the structure. Typically, the tarps are held on with spring-loaded clamps and usually can be removed by tugging on the cover from the ground. Companies assigned roof operations shall be concerned with slipping on the tarps that cover the structure. After the tarps have been removed, typical structure fire operations can be anticipated, including typical ventilation.

Reference: Structural Fumigation Manual, Dow AgroSciences



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**NATURAL GAS EMERGENCIES**

**Number:** 128  
**Revision Date:** 08/04/2012  
**File Name:** Natural Gas

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this document is to establish guidelines to assist first responders in the control and handling of Natural Gas Emergencies. Fire department units may encounter natural gas in a variety of situations and incident types, each presenting a different set of hazards and problems. The following guidelines present an approach, which will be applicable in the majority of situations, but do not replace good judgment and experience in dealing with any particular incident.

Natural gas is much lighter than air and will usually dissipate rapidly in the outside environment. Inside buildings, however, it tends to pocket, particularly in attics and dead air spaces. The flammable limits are approximately 4% to 15% in air. Natural gas itself is nontoxic; however it displaces oxygen and can result in asphyxiation if in a confined space.

**PROCEDURE**

**A. Natural Gas Leak – Outside**

1. First arriving apparatus shall spot engine in safe area, up-wind, and up-hill.
2. Evacuate civilians from immediate area if needed.
3. Remove sources of ignition from immediate area including fire apparatus.
4. Try to locate area of leak using a gas-monitoring device. If leak is at or past the gas meter, attempt to control leak at the shut off valve.
5. Contact Verdugo and ask for a Gas Company representative to respond to incident location. Give a brief description of the incident
6. If leak is from a natural gas main running underground do not attempt to shut gas off, the gas company will determine best method of control.
7. If the leak involves a fire, **do not attempt to extinguish**, let the product burn and protect exposures until gas can be shut off at the valve or at a remote location by the Gas Company.

**B. Safety: Natural Gas Leak – Outside**

1. All personnel shall have on full protective equipment with SCBA according to Department Guideline # 101, Personal Protective Equipment.
2. Utilize protection line with Firefighter breathing air when Gas Company is attempting to control leak.
3. Utilize APD for traffic control to assure a safe working environment for personnel.

C. Natural Gas Leak – Inside a Structure

1. Spot apparatus away and up-wind/up-hill from structure or building.
2. Consider evacuation of the structure and other exposures.
3. Use atmospheric monitoring device to determine if there is a gas leak, start from the outside working your way into the structure checking voids and high areas, as natural gas is lighter than air.
4. Use atmospheric monitor to assure that oxygen levels are within normal limits.
5. If determined that a gas leak has occurred attempt to shut gas off at appliance supply valve or meter.
6. Do not operate electrical switches in structure.
7. Shut off utilities using outside panel if certain the panel is clear of natural gas.
8. Ventilate structure from outside. **Be aware that ventilation may lower the concentration of natural gas into its flammable range.**
9. Restoration of gas services should be done by Gas Company personnel only.
10. If gas leak involves fire, protect exposures and confine fire to area of origin until gas can be shut off. Once gas is shut down approach as a structure fire.

D. Safety: Natural Gas Leak – Inside a Structure

1. All personnel shall have on full protective equipment with SCBA according to Department Guideline # 101, Personal Protective Equipment.
2. Call for APD if needed for traffic control to assure a safe working environment for personnel.
3. Monitor air in structure, Natural Gas itself is nontoxic; however it displaces oxygen and can result in asphyxiation.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**TRUCK COMPANY OPERATIONS**

**Number:** 129  
**Revision Date:** 12/01/2012  
**File Name:** Water Rescue

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this document is to establish guidelines to assist Truck Company personnel in the control and handling of various Emergencies. Fire department personnel may encounter a variety of situations and incident types, each presenting a different set of hazards and problems. The following guidelines present an approach, which will be applicable in the majority of situations, but do not replace good judgment and experience in dealing with any particular incident.

**SCOPE**

Truck Company Emergency Operations including fire ground, vehicle extrication and water removal.

**PROCEDURE**

Upon arrival at any emergency operation, the company commander shall complete a size up and establish objectives and tactical priorities based on:

- A. Life Safety
- B. Environment
- C. Property Conservation

These priorities should be used when developing an action plan for any operation.

**FIRE GROUND**

- A. Fire ground objectives and tactical decisions should be based on the risk assessment of the situation conducted by the truck company officer.
  - 1. We will risk our lives a great deal, if necessary, to protect savable lives.
  - 2. We will risk our lives some, and in a calculated manner, to protect savable property.
  - 3. We will not risk our lives at all to protect lives or properties that are already lost.
- B. Good knowledge of truck company operations by the first in engine company officer is critical. This initial IC will be giving the truck company its first assignment upon arrival at an incident. In addition, proper placement of the first engine on scene can help or hamper the first due truck company and its operation.
- C. Initial primary truck assignments can be grouped into inside and outside responsibilities. They are as follows:

1. Inside Responsibilities

- Forcible Entry
- Search and Rescue
- Controlling the Extension of Fire
- Assisting Attack Operations
- Salvage
- Overhaul

2. Outside Responsibilities

- Ventilation  
Horizontal  
Vertical  
Positive Pressure Attack  
Positive Pressure Ventilation
- Utilities  
Electricity  
Natural Gas  
Water

- D. When assigned these duties the Truck Company Officer should consider the personnel needed to accomplish the tasks assigned. Due to the needs for laddering or accessing large structures, if the Truck Company officer feels that to accomplish a particular task they will need additional personnel, they should make the request through the Incident Commander, Operations or Division/Group if established.
- D. The first arriving Truck Company Officer should work in concert with the first in Engine Company Officer to determine access points into the structure and the type of ventilation to meet the objectives to safely and effectively mitigate the incident.
- E. During fire ground operations, the Truck Company shall maintain accountability of his/her crew and maintain communications with the Incident Commander, Operations or Division/Group if established.

EXTRICATION

- A. A response to extrication with people trapped is a dynamic event. The first in engine company officer on scene must relay essential information to the truck company officer including the number of people trapped, best access to the incident and where to spot apparatus once on scene.

- B. Once on scene, the Truck Company Officer should conduct their own size up and consider the following priorities:
- PPE check
  - Fire Safety
    - Fire extinguisher on the “deck” and staffed
    - Charged, staffed protection line
  - Vehicle Stabilization – step chocks or vehicle stabilizers
  - Battery Disconnected
- C. Truck Company Officer’s should talk to the paramedic in charge of the trapped person(s) inside the vehicle and determine the best method to remove the patient.
- Cover everyone within the vehicle with the rescue blanket.
  - Locate, identify and if possible disable all Supplemental Restraint Systems in the vehicle.
- D. Once the Truck Company Officer has developed the action plan, they shall notify the Incident Commander if additional personnel are needed to accomplish the extrication.

#### WATER REMOVAL

- A. On water removal incidents, the Truck Company Officer needs to identify the type of water to be removed (clean or sewer). The Arcadia Fire Department does not pump or remove sewer water.
- B. Truck Company Officer’s should determine the resources necessary to accomplish the water removal keeping in mind personnel safety and property conservation.
- Keeping companies available on scene to handle life safety calls.
  - For a larger business, obtain their loss prevention personnel to assist with water removal. This will allow Department resources to remain available for additional calls for service.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**RAILROAD FIRE INCIDENTS**

**Number:** 130  
**Revision Date:** 12/01/2012  
**File Name:** Water Rescue

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this Guideline is to assist Department members in the safe handling of fire incidents involving railroad locomotives, boxcars, tank cars, and passenger cars.

**RESPONSIBILITY**

Due to unified response, the possibility of railroad emergencies in other jurisdictions does exist, however these incidents are rare. It should be the endeavor of all members to anticipate potential hazards and efficiently resolve the incident with safety in mind at all times.

**PROCEDURE**

**SAFETY**

The minimum level of protection for ALL members is full protective clothing, and breathing apparatus according to Department Guideline # 101, Personal Protective Equipment.

As is true with any incident, decisions cannot be made until the problem is identified and evaluated. With railroad accidents, the potential for a serious problem is likely and decisions can be of grave importance to the safety of personnel and the public. The variety of products carried and their associated hazards stress the importance of an early identification of the commodities involved.

As you approach, observe the scene from a distance for indications of what is involved. The general type of car often provides a clue as to the form of product. Tank cars are for liquids; boxcars will carry anything that is packaged, baled, or otherwise contained. Gondolas will hold bulk solids while hoppers will carry solids in bulk, but of a smaller size such as grains or pellets. Any of these products can possess hazardous properties. The color of a tank car has no relation to the identity of the product carried. Approximately 40 products are required to have their name stenciled in 4-inch letters on the sides of cars. These include mostly flammable gasses.

**IDENTIFICATION**

**Placarding**

Products falling under Department of Transportation requirements for hazardous materials warning placards can be your next source of information. DOT placarding places materials into very general categories that relate to their most severe hazardous properties. A four digit numerical code used in conjunction with the placard will further categorize the products and when used in conjunction with DOT Emergency Response Guidebook, will give general information about the physical properties, hazards, and guidelines for handling the variety of situations you may encounter. Binoculars can provide an extra measure of safety as you approach the incident.



WARNING: DOT placards are not required for shipments that do not exceed 1000 pounds and are transported in trailers on flat cars (TOFC) or containers on flat cars (COFC). Commodities classified as ORM-D may not require placarding. ORM-D refers to Other Regulated Materials, Section D and speaks of certain consumer commodities or products packaged for consumer consumption. Use caution when identifying the contents of TOFC and COFC loads, waybills for these shipments are generated from trucking bills of lading, the trucking industry is not as strictly policed and mistakes regarding loads and placarding have been discovered. Hazardous materials that were not properly listed on shipping papers have been involved in accidents.

### Waybills

The best source of product identification is the waybill. The waybill is the shipping paper of the railroad. Each car's waybill is identified by the car's ID number located in the upper left hand corner of the waybill. Railcar ID numbers are stenciled on the sides and ends of the cars. Do not trust your memory; write down the car ID number. If one digit is wrong, you can receive information that is wrong and misleading. Waybills, for operating trains, are usually found in the locomotive or with the conductor. For cars located in yards or spotted at an industrial site, contact the Chief Railroad Dispatcher of the responsible railroad. Information on a waybill must include commodity name, hazard class, placard notation, placard endorsement and total quantity. Waybills will be distinctly labeled for hazardous materials other than combustible liquids. Explosives, radioactive, and poison gas products will be marked as such; all others will be marked DANGEROUS. Waybills will also identify the shipper, the destination and may include emergency phone numbers.

Included on the waybill is the Standard Transportation Commodity Code: The STCC (stick) code number is a seven-digit number and every product shipped has such a number. If the STCC number begins with the digits "49", the product is a hazardous material. This STCC number can be used to obtain hazardous materials information.

A train "Consist" (sometimes called wheel report) is a computer-generated list of cars beginning with the locomotive, listing each car in sequence by number to the end car. On this list, placarded cars will be indicated as such. The consist is found in the locomotive with the waybills and can be used to the advantage of first responders when car numbers are not readily apparent. In fire conditions, or in derailments, car numbers may be obscured. If the car, or cars, in question can be identified as being located between, or to the rear, or forward of known cars, use of the consist and waybills can ultimately provide the necessary information. Again, given enough information, railroad computers can provide the consist of the affected train.

### ASSISTANCE FROM RAILROAD

During railroad incidents, railroad personnel can be of great assistance. They can often provide that extra bit of information regarding the special operating features of their equipment. They can also provide the tools and heavy equipment necessary to handle such incidents.

### Train Crews

Locate and account for the train crew. Barring injuries, they will be your first source of information and help. Train crews are in radio contact with the railroad dispatcher and can request additional assistance.

### Notification

Contacting the right railroad company can save valuable time and bring assistance to the incident quicker. A railroad company name on the side of a car is of little value. Cars loaded by one railroad may pass through the hands of several railroads before the shipment has reached its final destination. It is the railroad that operates on that track that will provide information and assistance.

When requesting assistance from the railroad, you may have some confusion in identifying your location. Railroads determine their location on track by milepost markers, switch numbers and other means. Street names and addresses mean little to railroad personnel.

## FIREFIGHTING

### Locomotives

A primary concern with any locomotive fire will be with shutting down the engine and disconnecting electrical power. Three emergency fuel cut-off switches are available and are clearly marked. Two are located outside and adjacent to fuel fill openings on either side of the locomotive. A third is in the cab near the engineer's station at the electrical panel. Operation of any one switch will shut down the engine. Expect up to 30 seconds for the engine to stop.

With the engine stopped, all electrical systems will be off except for the 74 volt battery system. A double knife blade switch is located in a cabinet below the electrical panel in the cab. Operate this switch to disconnect the batteries after the engine has stopped. With everything off and de-energized, access to the engine and various other compartments is safely gained through numerous doors and panels. Firefighting now, becomes matter of gaining access and applying extinguishing agents.

### Tank Cars

When the decision has been made to initiate firefighting, approach and take positions that will avoid the domes and the ends of tank cars. The domes are where pressure relief devices will be located and the ends are considered a weak point if the tank fails. The position of the relief valve is important. Operation may cause liquid rather than vapor to be discharged if the tank is lying on its side. In this case, pressure will not be adequately relieved and liquid gases produce vapor volumes 300 to 500 times greater, compounding an already serious situation. Flame impingement on the vapor space of a closed container is the most dangerous.

A frost line will indicate the liquid level but will not always be present and is never present with insulated tanks. The vapor space is where water application is effective. At each point of flame contact, 500 GPM is considered minimum. Entry to close valves or plug leaks should only be attempted after establishing effective cooling. Safety devices, rupture discs or relief valves, are designed to operate at 75% of tested tank pressure. The operation of a pressure relief device does not ensure adequate pressure reductions to prevent tank rupture. Intermittent operation of a relief valve indicates that the combination of cooling and valve operation is controlling pressure build up. A lazy flame indicates a leak at the relief valve or reduced pressures at a rupture disc.

A vapor rich flame is characterized by a smoky yellow-orange flame. A nearly blue-red, snapping, smokeless flame indicates the tank is almost empty and cooling water at this point could reduce pressure and draw the flame inside the tank causing an explosion. An increase in audible pitch or volume of fire at a relief valve indicates that cooling is ineffective and the situation is deteriorating.

A BLEVE (Boiling Liquid Expanding Vapor Explosion) is preceded by a shrill, high pitched, scream at the relief valve. The shortest period of time recorded for a BLEVE to occur was 18 minutes after exposure to fire. Tanks have been known to rocket considerable distance. On take off they can pivot and change direction from original alignment. Fragments have gone in every direction and large sections have traveled as far as 2500 feet. Evacuation of 3000 feet in all directions is considered minimum.

### Box Cars

An Indirect attack is a method of fighting fires in railroad box cars containing cotton, dry express (unrefrigerated cargo), baggage and mail. When the decision is made to utilize the indirect method the procedures used shall include keeping the car doors closed, cutting a small hole in the roof of the car directly above the fire, and inserting a fine spray stream in this hole. The fire within the car is subsequently extinguished by reduction of the temperature below ignition point, smothering the fire and/or eliminating oxygen within the car below the point required to continue combustion.

In extinguishing the fire, car doors are to remain CLOSED at all times until the fire has been extinguished. Locate the seat of the fire within the car by visual observation of paint blistering, hand exploration of car, or by wetting down the car with water and observing the location of the fastest rate of evaporation. Once the fire location has been determined, cut a small hole in the car roof, directly above the fire, just large enough to insert and move a spray nozzle from side to side. This can be accomplished best with an axe. The roof material is usually metal, single thickness or double thickness separated by an insulating material, which can be penetrated easily with an axe. Water in a fine spray form should then be introduced through the hole into the car to cover the fire area. The car doors should not be opened until it is evident that the fire is extinguished.

To be certain extinguishment is complete a waiting period of ten minutes should elapse after smoke is no longer visible from the hole in the car roof before opening car doors. If the fire has already burned a hole in the floor of the car, this hole should be immediately plugged with a spray nozzle, if possible, while the indirect method is employed. This indirect method permits extinguishment with less exposure to products of combustion and a minimum of water damage, the fire is further confined to its exact area of origin, making it easier to determine the true cause of the fire.

### Passenger Cars

Firefighting can pose considerable problems with access. Most fires are extremely hot and difficult to reach. Removal of occupants and cutting electrical power are primary considerations. If an interior attack is attempted, firefighters will face severe conditions. Temperatures will be extremely hot and smoke will be heavy and acrid. An outside attack is the best initial action until conditions permit entry.

Every door should be opened and every window removed to improve access and vent the heat and smoke. Ladders will be necessary to reach the windows of some cars. No attempt should be made to cut through the roof or walls. This tactic is almost impossible and will waste valuable time.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**ELECTRICAL EMERGENCIES**

**Number:** 131  
**Revision Date:** 12/31/2016  
**File Name:** Electrical

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

This guideline will establish a standard approach and response to the report of utility pole or transformer fire incidents.

Electricity always seeks the lowest level or a ground and will travel any path necessary as it seeks a ground. A direct path to ground is when contact is made between something energized and a portion of the body such as a hand, arm, head or other body part. An indirect path to ground occurs when contact is made with something that is energized including, equipment, or straight stream hose line.

Personnel should use caution when spraying water on or around energized electrical equipment. Hose streams conduct current. Never spray directly into power lines or energized equipment. Your responsibility is to protect life and the surrounding area.

When transformers burn, some may contain Polychlorinated Biphenyls (PCB) which are very hazardous and can be fatal. PCB is a mixture of chemicals that are clear to yellow oily liquids or solids. They are used as insulating fluids in electrical systems. Contact with both gases and oils released during incident should be avoided and runoff must be contained.

**POLICY**

It is the policy of the Arcadia Fire Department that personnel should take all necessary precautions and follow procedures as stated in this document when responding to incidents involving utility poles and transformer fires.

**PROCEDURE**

1. Determine the type of electrical problem and request the appropriate power company to respond, if needed.
2. Give dispatcher proper location of incident (pole number, address, etc).
3. Set up an exclusion zone. Request Police Department assistance when necessary. The rule of thumb for establishing an electrical incident exclusion zone is to maintain the distance of one complete span of wires on either side of fallen wires.
4. Park apparatus outside of exclusion zone.
5. Order additional resources as necessary.

## A. SAFETY

1. Do not fight electrical fires with water unless you or the power company has de-energized the system. Protect exposures if power has not been shut off.
2. Be careful when spotting equipment and deploying hose lines. Electrical lines may fall on apparatus, personnel or hose lines.
3. Do not walk under transformers as they may contain PCB's, or burning oil. Transformers will explode.
4. Wear protective clothing in accordance with Arcadia Fire Department SOG # 101, Personal Protective Equipment.
5. Do not open shutters on vaults. This may cause an explosion due to accumulation of flammable gases and the introduction of oxygen.
6. Keep bystanders clear of hazardous area.
7. Do not open pole-mounted switches; they are for use by power company personnel only.
8. Do not assume that telephone or cable wires are not energized; they may be in contact with energized electrical wires.
9. Do not use water to control pole fires unless de-energized by the power company. Protect exposures if power has not been shut off.
10. Avoid standing in puddles of water run-off during fire fighting operations when energized electrical equipment may be involved or nearby.
11. Assume that all wires down are energized and act accordingly.
12. If the incident requires the handling or cutting of energized/possibly energized lines, Full PPE, eye protection, and Class 00 Electrical safety gloves must be worn.
13. All rated Hot Sticks, Pigtails, and Hot Cutters must be dry and wiped clean with Rosin cloth prior to use.
14. Do not use non-rated equipment such as pike poles, non-rated cutters and non-rated ropes to handle downed wires.
15. Electrical fires can be handled effectively by shutting down power source.

## B. WIRES DOWN

1. Consider all downed wires energized.
2. If downed wires are present, locate both ends.
3. Request PD for possible evacuation and street closures.
4. Members should not move wires unless necessary to rescue victims, and then only after all safety precautions have been observed.
5. Be careful when laying hose lines and spotting apparatus as additional power lines may fall.
6. Establish an exclusion zone; include fences, vehicles, guardrails, railroad tracks and puddles of water that may be electrically energized.
7. Standby and keep the public away from the scene until wires are de-energized by power company personnel.

### C. CUTTING WIRES

1. Electrical wires should only be cut if absolutely necessary.
2. Cutting should be confined to the "low side", 480 volts or less, and only with electrical cutters and Class 00 electrical safety gloves that are rated higher than the voltage being cut.
3. Wear full structure PPE, including eye protection, and Class 00 electrical safety gloves with protective liners.
4. When it is necessary to cut the service lines to a structure, cut power at the drip loops. Do not cut the ground wire (the center aluminum braided wire). Cut each wire at different lengths to reduce the possibility of the cut lines arcing against each other. Turn head to avoid sparks and possible arching when cutting.
5. When cutting a wire at the pole, cut one wire at a time, the power side first and as high as possible. Cut each wire at different lengths to reduce the possibility of the cut lines arcing against each other. Turn head to avoid sparks and possible arching when cutting.

### D. UTILITY POLE / TRANSFORMER FIRE CONTROL

1. Do not extinguish utility pole or transformer fires with water unless life is threatened or a major structural component of power pole is threatened or until directed by power company personnel.
2. Request Police Department for possible evacuation and street closures.
3. Request utility company to respond.
4. Give pole number if available.
5. Dry chemical is the best extinguishing agent for energized electrical fires.
6. Contain pools of oil around transformer, call for appropriate Haz-Mat response.
7. If a structure fire involves electrical service or wiring, the power to the building will be shut off.
8. Power company personnel will be notified anytime fire department personnel shut off electrical service to a structure.

### E. VEHICLE RESCUE

1. Uninjured or mildly injured victims should stay in vehicle until Power Company personnel can shut off power to downed lines.
2. If an uninjured person desperately wants to remove them self from an energized vehicle, advise them to jump well clear of the vehicle without touching any part of the vehicle and the ground at the same time.
3. If it is necessary to care for an injured patient or remove patient from an energized vehicle prior to power company arrival, proceed with the proper PPE and proper electrical equipment (rated hot sticks, pig tail, cutters, class 00 gloves etc.), the wire can be pulled or cut free of the vehicle.
4. Do not utilize pike poles, non-rated ropes or equipment not rated to handle energized electrical lines during vehicle rescues.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**SUBSTATION AND UNDERGROUND  
ELECTRICAL EQUIPMENT**

**Number:** 131.1  
**Revision Date:** 08/10/2012  
**File Name:** Substation

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

This guideline establishes a standard approach and response to substation or underground electrical equipment incidents.

Electricity will seek the lowest level or a ground and will travel any path necessary as it seeks a ground. A direct path to ground occurs when contact is made between something energized and a portion of the body such as a hand, arm, head or other body part. An indirect path to ground occurs when contact is made with something that is energized, including equipment or a straight stream hose line.

Personnel should use caution when spraying water on or around energized electrical equipment. Hose streams conduct electrical currents and should not be sprayed directly into manholes or energized equipment. A fog pattern should be used and efforts should be made to protect the surrounding area and exposures.

Incidents that require Fire Department personnel to enter electrical substations or underground vaults to rescue and remove persons in need of assistance, present very serious potential dangers. In order to operate safely in these situations, special actions must be addressed prior to rescue.

**POLICY**

Personnel should take all necessary precautions and follow procedures as stated in this document when responding to incidents involving underground electrical equipment.

**PROCEDURE**

**Manhole Incidents:**

- Request utility company to respond
  1. Give address or location
  2. Obtain ETA
- Request Arcadia Police Department for possible evacuation and street closures
- Secure area and deny entry
- If rescue is needed
  1. Follow Arcadia Fire Department SOG # 125, *Confined Space Rescue Operation Guideline*
  2. Determine if additional resources are necessary
  3. Effect rescue upon conformation that the equipment is de-energized from a utility company representative
  4. Department personnel will be in full PPE per SOG # 101, *Personal Protective Equipment*
  5. A charged hose line will be deployed and manned



- Be aware of explosion potential
  1. Protect exposures from a safe distance
  2. Stay clear of manhole covers over electrical vaults, manhole covers can blow off and fly as far as 150 feet
- Extinguish fire upon conformation that the equipment is de-energized from a utility company representative

**Sub-Station Incidents:**

- Request utility company to respond
  1. Give address or location
  2. Obtain ETA
- Request Arcadia Police Department for possible evacuation and street closures
- Secure area and deny entry
- Perform reconnaissance from safe distance
  1. Equipment inside fenced area is energized
- Be aware of explosive potential
- If rescue is needed
  1. Establishment of the Incident Command System, with an established Incident Commander is required to avoid premature commitment to unknown risks
  2. Make sure utility representative deems area is safe prior to entry if risks are unknown
  3. Determine if additional resources are necessary
- Place apparatus in a safe location and away from overhead wires
- Protect exposures from a safe distance
- Extinguish fire upon confirmation that the equipment is de-energized from utility company representative



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**PUBLIC INFORMATION OFFICER  
(PIO)**

**Number:** 132  
**Revision Date:** 08/10/2012  
**File Name:** PIO

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To serve as the dissemination point for all media releases related to major incidents within the City of Arcadia when the Fire Department is the lead agency.

**POLICY**

The Arcadia Fire Department shall ensure that information is provided on request; that information released is consistent, accurate and timely and that appropriate information is provided to the public all required agencies, departments and City officials.

**PROCEDURE**

**A. Start-Up Actions**

1. Check in upon arrival at the EOC.
2. Report to the EOC Director.
3. Obtain a briefing on the situation.
4. Determine your personal operating location and get set up.
5. Review your position responsibilities.
6. Identify yourself as the PIO by putting on the vest with your title. Print your name on the EOC organization chart next to your assignment.
7. Clarify any issues regarding your authority and assignment and what others in the organization do.
8. Open and maintain a position log.
9. Determine 24-hour staffing requirements and request additional support as required.
10. Determine the need for group or unit establishment. Make required personnel assignments as staff arrives at the EOC.
11. Request additional resources through the appropriate Logistics Section Unit.

12. Based upon the situation as known or forecast determine likely future Branch/Unit needs.
13. Think ahead and anticipate situations and problems before they occur.
14. Using activity log, maintain all required records and documentation to support the After-Action Report and the history of the emergency/disaster. Document:
  - Messages received
  - Actions taken
  - Decision justification and documentation
  - Requests filled
  - EOC personnel, time on duty and assignments

**B. General Operational Duties**

1. Keep up to date on the situation and resources associated with your Branch/Unit/Position. Maintain current status reports and displays.
2. Keep EOC Director advised of your status and activity and on any problem areas that now need or will require solutions.
3. Establish operating procedure with the Information Systems Branch of the Logistics Section for use of telephone, radio, and data systems. Make any priorities or special requests known.
4. Review situation reports as they are received. Verify information where questions exist.
5. Anticipate potential situation changes, such as severe aftershocks, in all planning. Develop a backup plan for all plans and procedures requiring off-site communications.
6. Determine and anticipate support requirements and forward to your Section Coordinator.
7. Monitor your position activities and adjust staffing and organization to meet current needs.
8. Use face-to-face communication in the EOC whenever possible and document decisions and policy.
9. Ensure that your personnel and equipment time records and a record of expendable materials used are provided to your Section Coordinator at the end of each operational period.
10. Brief your relief at shift-change time. Ensure that in-progress activities are identified and follow-up requirements are known.

### C. Position Operational Duties

1. Secure guidance from the EOC Director regarding the release of available information.
2. Keep the EOC Director advised of all unusual requests for information and of all major critical or unfavorable media comments. Provide an estimate of the impact and severity and make recommendations as appropriate.
3. Coordinate all media events with the EOC Director.
4. Schedule and post times and locations of news briefings in the EOC, Media Information Center and other appropriate areas.
5. Prepare and provide approved information to the media. Post news releases in the EOC, Media Information Center and other appropriate areas.
6. Develop an information release program.
7. Interact with other branches/groups/units to provide and obtain information relative to public information operations.
8. Coordinate with the Situation Status Unit of the Planning/Intelligence Section and define areas of special interest for public information action. Identify means for securing the information as it is developed.
9. Maintain an up-to-date picture of the situation for presentation to media.
10. Obtain, process, and summarize information for presentations.
11. Provide periodic briefings and press releases about the disaster situation throughout the affected areas. Refer media representatives to incident level PIOs for specific information.
12. As required, periodically prepare briefings for the jurisdiction executives or elected officials.
13. Respond to information requests from the EOC Director and EOC Management Team.
14. Ensure that a rumor control function is established as necessary, and has the means for identifying false or erroneous information. Develop procedure to be used to squelch such information.
15. Provide sufficient staffing and telephones to efficiently handle incoming media and public calls and to gather status information.

16. Consider establishing and staffing a hot-line to answer inquiries from the public.
17. Prepare, update, and distribute to the public a Disaster Assistance Information Directory containing locations to obtain food, shelter, supplies, health services, etc.
18. Prepare a briefing sheet to be distributed to all employees at the beginning of each shift so they can answer questions from the public, such as shelter locations, water distribution sites, DACs, etc.
19. Broadcast emergency information/updates on local cable channel either through the message board or live taping of Mayor, EOC Director, etc.
20. Arrange for meetings between media and City officials or incident personnel.
21. Provide escort service to the media and VIPs; arrange for tours and photo opportunities when available staff and time permit. Coordinate VIP tours with Liaison.
22. Assist in making arrangements with adjacent jurisdictions for media visits.
23. Determine which radio and TV stations are operational.
24. Determine requirements for support to the emergency public information function at other EOC levels.
25. Monitor broadcast media, and use information to develop follow-up news releases and rumor control.
26. When federal emergency response teams respond, coordinate activities through the Los Angeles County Operational Area to ensure coordination of local, state and federal public information activities.
27. Ensure that announcements, information and materials are translated and prepared for special populations (non-English speaking; non-readers; elderly; the hearing, sight and mobility impaired; etc.)
28. Prepare materials that describe the health risks associated with each hazard, the appropriate self-help or first aid actions and other appropriate survival measures.
29. Prepare instructions for people who must evacuate from a high-risk area, including the following information for each threat: evacuation routes; suggestions on types and quantities of clothing, food, medical items, etc. the evacuees should bring; location of shelters.

30. During periods of increased national readiness, or in time of need, prepare materials that address national security survival tips.
31. Issue timely and consistent advisories and instructions for life safety, health and assistance.
  - What to do and why.
  - What not to do and why not.
  - Hazardous areas and structures to avoid.
  - Evacuation routes, instructions and arrangements for persons without transportation or special needs (non-ambulatory, sight impaired, etc.).
  - Location of mass care shelters, first aid stations, food and water distribution points, etc.
  - Location where volunteers can register and be given assignments.
  - Street and freeway overpass conditions, congested areas to avoid and alternate routes to take.
  - Instructions from the coroner and public health officials pertaining to dead bodies, potable water, human waste and spoiled food disposal.
  - Weather hazards when appropriate.
  - Public information hotline numbers.
  - Status of Local Proclamation, Governor's Proclamation or Presidential Declaration.
  - Local, state and federal assistance available; locations and times to apply.
  - Disaster Application Center (DAC) locations, opening dates and times.
  - How and where people can obtain information about relatives/friends in the emergency/disaster area. (Coordinate with the Red Cross on the release of this information.)
32. Issue other information pertaining to the emergency/disaster (acts of heroism, historical property damaged or destroyed, prominence of those injured or killed, other human interest stories).
33. Through the Los Angeles County Operational Area, coordinate with state, federal or private sector agencies to get technical information (health risks, weather, etc.) for release to the public and media.
34. Ensure file copies are maintained for all information released.
35. Provide copies of all releases to the EOC Director.
36. Prepare final news releases and advise media representatives of points-of-contact for follow up stories.

#### D. Deactivation

1. Ensure that all required forms or reports are completed prior to your release and departure.
2. Be prepared to provide input to the After-Action Report.
3. Determine what follow-up to your assignment might be required before you leave.

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*Revision Date: 08/10/2012*  
*File Name: PIO*

4. Deactivate the Emergency Public Information position and close out logs when authorized by the EOC Director.
5. Leave forwarding phone number where you can be reached.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**HAZARDOUS MATERIALS RESPONSES**

**Number:** 133  
**Revision Date:** 09/20/2012  
**File Name:** Haz Mat

**Review Date:** 03/25/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this guideline is to ensure an effective, safe, and efficient response to all Hazardous Materials incidents.

**RESPONSIBILITY**

It shall be the responsibility of all Department personnel to follow these guidelines when responding to a Hazardous Material incident to insure safety of firefighters and citizens and to protect the environment from unnecessary contamination.

**PROCEDURE**

I. Initial Response to Incident

- a. Always respond in full PPE, per Standard Operating Guideline #101, *Personal Protective Equipment*
- b. Approach Upwind, Upgrade, and Upstream
- c. S.I.N. – Safety, Isolation, and Notification:
  - Safety- Safe approach at a safe distance, slow down and turn off A/C, keep vehicle headed away from incident, use spotting scope or binoculars.
  - Isolation- Isolate and deny entry, establish perimeters and control zones.
  - Notification- Mandatory notifications, Resource requests, and Report of Conditions.
- d. Assess the situation
  - Identify product and route of travel.
  - Look for any casualties.
  - Identify other essential site conditions.
- e. Establish Incident Command Post (ICP) and implement Incident Command system and Unified Command.
- f. Initiate written Incident Action plan.
- g. Establish work zones and entry control points.
- h. Employ immediate countermeasures:
  - Rescue.
  - Evacuation.
  - Emergency medical care
  - Temporary containment
  - Victim decontamination
  - Public warning



## II. Identification and Hazard Assessment (IDHA)

- Identify chemical name
- Assess all hazards
- Assess properties
- Assess variables
- Predict behavior/outcome

## III. Information Sources

- MSDS (Material Safety Data Sheet)
- Placards and Labels
- Shipping Papers
- Reference Guides (Emergency Response guidebook-ERG)/ (Jane's CHEM-BIO Handbook)
- NFPA 704 warning system

## IV. Confinement

- a. Do not permit the hazardous materials to run off into storm drains, sewers or drainage systems
- b. Isolate the material to the smallest possible area using the following techniques:
  - Absorbents
  - Diking
  - Damming
  - Diversion
- c. Confinement should be conducted in a defensive manner, reducing exposure to personnel

## V. Notification

- a. Request Haz-Mat response through Verdugo Fire Dispatch (Burbank HM 12, Glendale HM 24, 2- engines, 1- truck, Air Utility, 1- RA, and 1- BC) and L.ACO Health Dept.
- b. Notification to the Office of Emergency Services (OES) is required under **Government Code Section 8568**, which requires local governments to notify OES of all hazardous materials incidents.
  - All significant spills or threatened releases of hazardous materials, including oil must be made immediately.
  - Any material that (because of its quantity, concentration, or physical or chemical characteristics) poses a significant present or threatened hazard to human health and safety or to the environment, if released into the workplace or the environment must be reported.

#### Contact Numbers

- a. OES Warning Center: (916) 845-8911
- b. OES 24 Hour Hot Line: (800) 852-7550
- c. OES Local Office: (562) 795-2900

California Vehicle Code Section 2454. (a) vests responsibility for incident command of on-highway hazardous materials incidents with the law enforcement agency having primary traffic investigation authority on the highway where the incident occurs.

#### VI. Decontamination

- Follow guideline state forth in Standard Operating Guideline #108, *Emergency Decon* to decontaminate first responders
- Follow guideline state forth in Standard Operating Guideline #109, *Mass decon of Ambulatory Victims* to decontaminate civilians

#### VII. Disposal

If a hazardous waste is identified as **non-threatening**:

**PRIVATE PROPERTY:** Hazardous materials located on private property are the responsibility of the property owner or the occupant of said property. The Incident Commander (IC) may assist the owner/occupant with supplying information; however, it is the owner/occupants responsibility to make necessary contacts for removal/disposal.

**PUBLIC PROPERTY:** Arcadia Public Works Division personnel shall be dispatched to transport the substance to the City of Arcadia's Service Center located at 11800 Goldring Road for proper containment and future disposal.

If the substance is identified as **hazardous/threatening** or if tests are inconclusive:

**PRIVATE PROPERTY:** Hazardous materials located on private property are the responsibility of the property owner or the occupant of said property. The IC may assist the owner/occupant with supplying information; however, it shall be the owner/occupants responsibility to make necessary contacts for removal/disposal. See attachment for available waste removal companies. In situations where the material generates an immediate danger to the public and the owner/occupant cannot be contacted or located, the IC shall make necessary arrangements for mitigation at the owners/occupants expense.

*Number: 133*  
*Revision Date: 09/20/2012*  
*File Name: Haz Mat*

**PUBLIC PROPERTY:** The IC shall request a private hazardous materials waste removal company for disposal. Los Angeles County Health Department will work with the private hazardous material waste company for proper removal. The Incident Commander will have the authority to dedicate the use of City funds for hazardous materials response. The City of Arcadia will use **United Pumping Services (626) 961-9326** for waste removal. See attachment for additional waste removal companies.

### **HAZARDOUS MATERIAL WASTE REMOVAL COMPANIES**

*Effective as of June 5, 1997*

*Phone #'s verified 6/5/07*

*Phone #'s verified 8/19/12*

United Pumping      24 hours    Commercial/Residential  
City of Industry  
\*City Account  
(626) 961.9326

Servco                      24 hours    Disaster Restoration  
Monrovia  
(888) 600.4411  
(626) 447.4111



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**U S & R RESPONSES**

**Number:** 134  
**Revision Date:** 11/08/2012  
**File Name:** USAR

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide guidelines for all Arcadia Fire Personnel who may respond to Urban Search and Rescue incidents. These may include, but not limited to, trench rescue, confined space, building collapse, rope rescue, and other technical rescue emergencies. The following is to be used as a guideline when dealing with any US&R related incident, but not to replace good judgment and experience when dealing with these situations.

**SCOPE**

It is the goal of the Arcadia Fire Department to train and certify each member in US&R procedures.

**PROCEDURE**

The following are the required courses to become US&R certified:

- Rescue System 1 - 40 hour course that instructs low and high angle rope rescue systems and wood frame structure shoring.
- Rescue System 2 - 40 hour course that instructs breaching, shoring, lifting heavy objects and victim removal from collapsed buildings and heavy objects.
- Confined Space Rescue - 40 hour course that instructs victim removal from under ground vaults, confined and concealed spaces.
- Trench Rescue - 24 hour course that instructs safe removal of victims from collapsed trenches.
- Hazmat First Responder - 40 hour. course that instructs safe and effective response to hazardous material incidents and weapons of mass destruction.
- Emergency Medical Technician.
- After June 2008, members will be required to attend a 24-hour State Certified Low Angle Rescue class to obtain their US&R certification.

All US&R responses are to be manned by three Arcadia Fire members and three Monrovia Fire Department personnel, as outlined in the MOU between the Arcadia and Monrovia Fire Departments establishing a joint US&R program. US&R responses may include local jurisdiction, Area C and Regional Task Force (CA-RTF-4) responses.

### **Local and Area C Response**

Local and Area C responses do not require the above certifications, however they are highly recommended. A dedicated Engine crew will staff the US&R for local and Area C responses. Upon dispatch for a US&R related incident within Area C, Engine crew members will take the Engine out of service with Verdugo then man and respond in the USAR. Personnel shall leave the Engine in quarters and respond to the incident on the USAR. It shall be the responsibility of the Captain assigned to the USAR to ensure that Monrovia Fire Department, Truck 101, along with its three members are dispatched and attached to the USAR response. The USAR unit will respond to the dispatched location and team up with Truck 101 personnel. If the dedicated Engine is unavailable for response, it will be left to the discretion of the on duty Battalion Chief as to which AFD engine will respond in its place.

### **Regional Task Force Response, CA-RTF-4**

Incidents outside Area C, which may be requested by OES, will require certified members for response. It shall be the responsibility of the on duty Battalion Chief, along with shift personnel, to identify certified members each morning and report to Verdugo Dispatch, which certified members would respond to US&R related incidents. Upon dispatch of a US&R response outside Area C, the identified AFD members will staff the US&R unit. The certified Monrovia personnel will respond to Fire Station that houses the USAR Unit and together with the AFD members, man and respond in USAR unit.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**HIGH RISE OPERATIONS**

**Number:** 135  
**Revision Date:** 09/20/2012  
**File Name:** High Rise

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this guideline is to assure that all personnel are prepared to commence fire suppression or rescue operations immediately upon arrival at a fire in a high rise building while maintaining the highest degree of safety for all personnel.

The purpose of this guideline is to ensure an effective, safe, and efficient response to all high rise fire incidents.

**RESPONSIBILITY**

It shall be the responsibility of all Department personnel to follow this guideline when responding to a high rise fire incident to insure the safety of firefighters and citizens.

**SCOPE**

The High Rise Operations guideline shall be utilized at all fire incidents involving buildings five or more stories in height.

**PROCEDURE**

**FIRST IN ENGINE COMPANY**

- 1) Radio Size-Up
  - i) Structure Fires
    - a. Location of fire by address.
    - b. Description of occupancy.
    - c. Numerical floor height and type of occupancy, e.g., eight story high rise.
    - d. Products of combustion, e.g., fire, light/heavy smoke, nothing showing, etc.
    - e. Special instructions if needed (e.g., exposures, location of fire within stated structure).
  
- 2) Assume Incident Command
  - i) Responsible for the management of all incident operations.
  - ii) Plans and directs the overall strategy for control of the incident and establishes the organizational elements necessary to deal with the incident.
  - iii) Orders and/or releases resources and directs and coordinates staff activities.
  
  - iv) If unable to adequately manage incident due to immediate responsibilities (i.e. Rescue operations, firefighting...), pass command to arriving Battalion Chief or second-in Company Officer.

- 3) Lead Company into Building for Fire Attack/Investigation
- i) Proceed to lobby taking ALL company personnel, with appropriate equipment.
  - ii) Obtain information from security/building management.
    - a. What is the nature of the emergency?
    - b. Where is the emergency located?
    - c. Is there an alarm system annunciator panel in the building?
    - d. Is the building equipped with a Fire Control Room for emergency use?
    - e. What is the lobby phone number?
    - f. How many people are in the building at this time? (residential vs. office building).
  - iii) Obtain items from lock box, if provided.
    - a. Retain one copy of the building inventory sheet and ONE set of keys; remaining contents of lock box are to be used by the Lobby Control Officer.
  - iv) By the use of a safe route, proceed to the area where the emergency exists.
    - a. Captain determines means of ascent and relays stairwell identification to incoming companies.
    - b. If the Captain cannot communicate from inside the building with the incoming companies, the Engineer will stay outside with the apparatus to relay messages (when relieved, the Engineer reports to the Lobby Control Officer).
    - c. As the Fire Attack Team ascends, the officer should periodically report conditions in the building, including conditions on each floor, to the Incident Commander for information purposes and to assure adequate communications are maintained.
- NOTE: Elevators shall not be used as a means of ascent in a building under investigation for a fire emergency until it is determined by AFD personnel that the entire elevator shaft is not threatened with fire.
- v) The Fire Attack Officer shall evaluate the two floors below the reported fire floor for its use as a staging area and communicate this information to the Incident Commander. In addition, this officer should determine if the floor plan is adequate for use as a staging area.
- 4) Primary Responsibility is to Locate and Identify the Emergency and Determine its Scope
- i) The Fire Attack Team shall then locate the emergency, check for vertical extension and give a Follow-up Report.
    - a. What is burning?
    - b. Are occupants endangered?
    - c. What is the potential for vertical extension; interior and exterior?
    - d. What is the potential for horizontal extension?
    - e. What is the best route for resources going to staging? What is the best route for resources going from staging to the fire floor and above?

- ii) Company Officer assumes the role of Division (floor number) and attacks the fire.
  - a. If they cannot extinguish the fire, they must endeavor to protect the vertical openings and contain the fire until help arrives.
  - b. Division Supervisor must keep the Incident Commander informed as to progress and conditions in the fire area.

## **SECOND IN ENGINE COMPANY**

- 1) Water Supply
  - i) Supplying water to the FDC of the building will be the responsibility of the second arriving Engine Company.
- 2) Back-up Fire Attack
  - i) Once the FDC is supplied with water, the Captain and Firefighter(s) will report to IC and request a new assignment. (Typically backing up the fire attack team.)

## **FIRST IN TRUCK COMPANY (Lobby Control)**

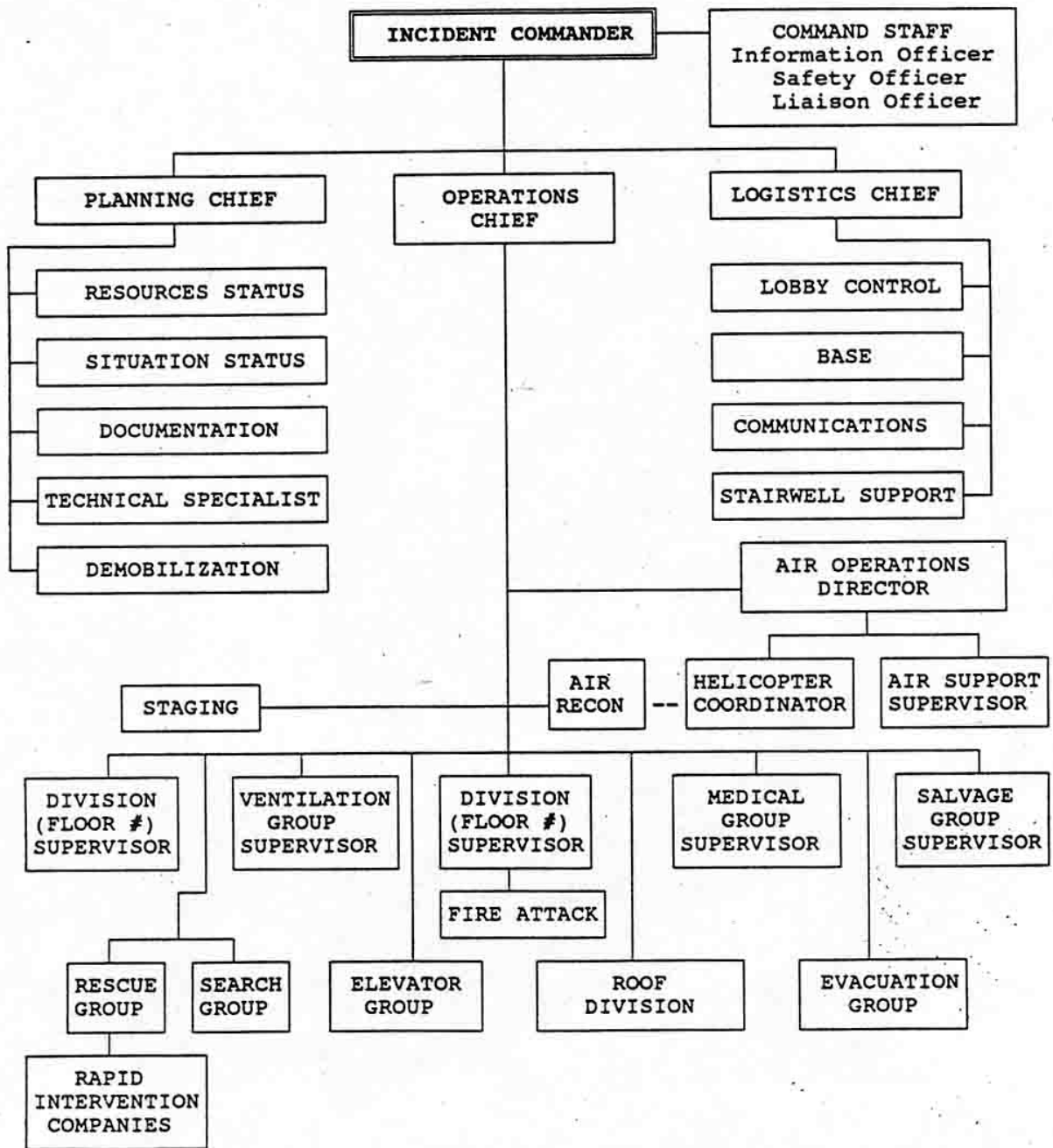
- 1) Control Elevators and Vertical Access Routes (Stairwells)
  - i) Elevators--Recall and Location
    - a. Recall all elevators to the lobby, using the emergency service control, and secure them at that location; notify the Incident Commander of the elevator status.
    - b. Elevators shall not be used until it is determined that the shaft and all exits are not, or will not be threatened by smoke or fire and that there will be no disruption of electrical power
    - c. The judgment whether or not the elevators are safe for personnel use will rely heavily on reports from the Fire Attack Officer
  - ii) Stairwell Access
    - a. Stairwells shall be used for the initial ascent until the elevators can be verified by AFD personnel as safe for our use.
    - b. Designate stairwells for specific use. It may be desirable to designate specific stairwells for Fire Department personnel use and a secondary stairwell for movement of equipment or civilian evacuation.
    - c. Locate stairwell ground floor openings and open as necessary. Post personnel to control entry and direct civilians exiting the building (consider using APD personnel for this purpose).
- 2) Control Air Handling System
  - i) In the event of an actual fire, shut down the building's air handling system (consult building engineer, if available).
  - ii) Consider the use of the HVAC system in post-1974 buildings for smoke removal.
  - iii) Consider use of stairwell pressurization fans (automatic or manual operation) in building not equipped with HVAC smoke removal systems.
  - iv) Consider use of Fire Department blowers to effectively create or augment the natural flow of air in the stairwells.



- 3) Monitor Fire Control Room, Annunciator Panel & Building Communication System(s)
  - i) Check the annunciator panel to determine type and location of problem
  - ii) Using building public address system control evacuation, providing information and direction to building occupants.
- 4) Coordinate Logistical Support Between Base and Staging
  - i) Prioritize movement of personnel and equipment between Base and Staging.
- 5) Verify Fire Pump Operation
  - i) Buildings equipped with a fire pump, verify the buildings fire pump is operating
    - a. If the buildings fire pump is operating, the operating pressure must be transmitted through Lobby Control to the Incident Commander, or Operations if in place.
    - b. The engineer supplying the fire sprinkler FDC should pump 10 psi less than the pressure being supplied by the buildings fire pump. For example, the buildings fire pump is operating at 125 psi the engine's discharge pressure should be 115 psi. In this situation the buildings fire pump will continue to pump the fire sprinkler system. The object is to allow the buildings fire pump to supply the water until the demand for water becomes greater than the fire pump can supply.
    - c. If the engineer supplying the fire sprinkler system is pumping 10 psi less than the pressure being supplied by the buildings fire pump and the engine discharge pressure drops, the engineer must increase the discharge pressure to the original buildings fire pump pressure. For example, the buildings fire pump is operating at 125 psi and the engine's discharge pressure was at 115 psi but has now dropped to 85 psi, the engineer should increase pump discharge pressure to 125 psi. In this situation the engine is now pumping the fire sprinkler system.
    - d. During this pumping evolution, engineers should keep water flowing through the engines fire pump to keep the pump cool.

### **THIRD IN ENGINE COMPANY**

- 1) Establish Staging
  - a. Ascend by a safe route and set up Staging, typically two floors below the fire.
  - b. Staging is the assembly point where a reserve of personnel and equipment are maintained awaiting assignment within the building.
  - c. Announce Staging location over the fireground tactical channel.
- 2) Establish Base
  - a. Engineer to set base at least 200 feet from building and not in proximity to the command post and becomes Base Area Manager.
  - b. Initially reports to the Incident Commander and then to the Logistics Chief when that position is implemented.
  - c. Maintain a reserve resource level as determined by the Incident Commander.
  - d. Maintain level by requesting additional resources through Logistics to the Incident Commander.





**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**AUTOMATIC SPRINKLER SYSTEMS**

**Number:** 136  
**Revision Date:** 08/12/2012  
**File Name:** Fire Sprinklers

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this document is to establish a guideline to assist fire department members when connecting to fire department sprinkler connections. A supplemental water supply should be utilized as soon as possible to insure that the fire does not overwhelm the system, and further aids in the extinguishment of the fire. In most cases, it is best to have the engine at a hydrant away from the risk of falling glass and debris, however, situations will vary and the company officer should use his/her best judgment when making their decision.

**RESPONSIBILITY**

It is the responsibility of company officers to insure that all members of their crew understand and follow the operational guideline when connecting to fire department sprinkler connections.

**PROCEDURE**

1. Identify sprinkler connection location.
2. If location is safe, connection may be supplied utilizing either a forward or reverse hose lay.
3. Unsafe location, sprinkler connection shall be supplied utilizing a reverse lay.
4. Reverse lay, shall be deployed utilizing 4" hose, tri-wye, 4" double male fitting and adequate 2 1/2" hose to make all connections at the FDC.
5. Forward lay, shall be deployed utilizing 4" hose and adequate 2 1/2" hose to make sprinkler connections at the FDC.
6. Pump 150 psi to the FDC.

**Buildings with Fire Pumps**

1. In buildings equipped with a fire pump, fire personnel must verify that buildings fire pump is operating. Verification of the buildings fire pump is a responsibility of Lobby Control.
2. If the buildings fire pump is operating, the operating pressure must be transmitted through Lobby Control to the Incident Commander or Operations if established.
3. The engineer supplying the fire sprinkler FDC should pump 10 psi less than the pressure being supplied by the buildings fire pump. For example, the buildings fire pump is operating at 125 psi the engine's discharge pressure should be 115 psi. In this situation the buildings fire pump will continue to pump the fire sprinkler system. The object is to allow the buildings fire pump to supply the water until the demand for water becomes greater than the fire pump can supply.

4. If the engineer supplying the fire sprinkler system is pumping 10 psi less than the pressure being supplied by the buildings fire pump and the engine discharge pressure drops, the engineer must increase the discharge pressure to the original buildings fire pump pressure. For example, the buildings fire pump is operating at 125 psi and the engine's discharge pressure was at 115 psi, but has now dropped to 85 psi, the engineer should increase pump discharge pressure to 125 psi. In this situation the engine is now pumping the fire sprinkler system.
5. During this pumping evolution, engineers should keep water flowing through the engines fire pump to keep the pump cool.

#### Buildings with Combination Systems

1. When pumping combination systems thought should be given whether to pump in volume vs. pressure due to the large volume of water that may be required.
2. Combination systems have a minimum capacity of 500 gpm's for the system. A general rule of thumb is that each standpipe outlet on an individual floor represents a 250 gpm flow. For example, three standpipe outlets on the floor would indicate the system is capable of supplying 750 gpm's.
3. Stairwell connections on combination systems have volume reducers, each outlet only allowing a specified pressure. This is very important to crews on Fire Attack as the fire flow required may not be the flow that is capable of being delivered from the standpipe outlet. To overcome this issue:
  - Remove the pressure regulating device located within the standpipe outlet if possible
  - Remove the adjustable tip from the Elkhart nozzle and utilize the interior smooth bore tip. This will reduce the nozzle pressure required, increasing discharge flow.

#### Residential Structures

1. Residential sprinkler systems are not pressure tested to the same level as commercial sprinkler systems. Therefore, residential sprinkler systems should not be pressurized more than the initial static pressure of the system.

#### Post Fire Operations

1. Automatic sprinklers should not be shut off until the fire has been extinguished.
2. Buildings with combination systems the use of sprinkler plugs may be necessary to keep standpipes charged for hose lines.
3. Assist occupant with restoring the automatic sprinkler system.
4. Notify the Fire Prevention Bureau in the event of automatic sprinkler activation.
5. Notify the Fire Prevention Bureau and the Arcadia Building Department if the automatic sprinkler system can not be restored.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**STAND PIPE OPERATIONS**

**Number:** 137  
**Revision Date:** 08/12/2012  
**File Name:** Stand Pipe Ops

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

This shall serve as an operational guide for all Arcadia Fire Department members in fire operations involving Stand Pipes.

**RESPONSIBILITY**

It shall be the responsibility of all Department personnel to follow these guidelines when assigned to Stand Pipe operations.

Personnel safety shall be the first priority, determine safe areas of operation, away from multistory structures and away from potential collapse zones.

**PROCEDURE**

1. Identify stand pipe location.
2. If location is Safe, stand pipe may be supplied utilizing either method forward or reverse.
3. Unsafe location, stand pipe shall be supplied utilizing a reverse lay.
4. Reverse lay, shall be deployed utilizing 4" hose, Triamese, 4" double male fitting and adequate 2 1/2" hose to make Stand Pipe connections.
5. Forward lay, shall be deployed utilizing 4" hose and adequate 2 1/2" hose to make stand pipe connections.
6. Stand Pipe shall be pumped utilizing the following formula:  
Discharge Pressure = Friction Loss + Stand Pipe + Head Pressure + Nozzle Pressure
7. Do not pump the system greater than 200 psi, unless the stand pipe system has been specifically designed to withstand higher pressures.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**ROPE RESCUE**

**Number:** 138  
**Revision Date:** 08/12/2012  
**File Name:** Rope Rescue

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to establish guidelines for conducting rope rescues, training, maintenance of rope and related equipment. Because of the number of potential sites and situations that could be encountered, this procedure will not define a specific evolution to use, but will give guidelines to follow for conducting safe and effective operations.

**DEFINITION**

Rope rescue is defined as any rescue attempt that requires rope and related equipment to safely gain access to, and remove victims from, hazardous geographic areas with limited access such as mountains, high rise buildings, above or below grade structures, by means of rope system. Rope rescues are divided into two general categories; non-technical and technical.

Non-technical evacuations are those of less than 40 degree inclination. Technical evacuations are considered those from 40 degrees to 90 degrees. Technical evacuations may require the assistance of US&R trained personnel.

**TACTICAL CONSIDERATIONS**

- I. PHASE I – Initial Actions
  - a. Assume Command.
  - b. Secure Responsible Party or Witness.
  - c. Locate the Victim
  - d. Assess the Need for Additional Resources. Number of victims, location and condition of victims, estimated angle of terrain, distance to victim, and estimated time of extraction.
  - e. Assign a Safety Officer
  - f. Develop an Action Plan.
  
- II. PHASE II - Rescue Operations
  - a. Implement the Action Plan. Rescue operations should be conducted with from low risk to high risk. Rescues should be conducted with the least amount of risk to rescuers necessary to rescue the victim. Low risk operations are not always possible but should be considered first.
  - b. The order of rescue from low risk to high risk would be:
    1. Talk the victim into self-rescue.

2. For terrain less than 40 degree inclination, (non-technical) most first responders have the equipment and training to assist the victim down. If the victim is ambulatory, he/she can walk down with the assistance of rescuers. If the victim is injured or unable to assist in their own rescue, he/she shall be packaged properly in a stokes basket and carried to safety.

#### PHASE II - Rescue Operations- continued

3. The stokes extrication should be conducted with a minimum of 4 litter bearers. Bearers should face the direction of travel during the extrication. If appropriate, a tag line should be attached to the litter for assistance through unstable areas.
4. For terrain of greater than 40 degree inclination and the victim is ambulatory, he/she may be assisted down by rescuers with the use of a belay/tag line. If appropriate, rescuers should set up an anchor system for the belay.

If the victim is not ambulatory, rescuers shall build an anchor system and prepare for a steep angle evacuation. The victim shall be packaged properly in a litter and prepared for the extrication. There shall be at least 3 litter attendants assisting with the litter evacuation. Attendants should face the anchor during the evacuation and be clipped into the litter. A separate raising/lowering line and belay line shall be set up for raising or lowering during steep angle evacuations.

5. Evacuations greater than 60 degrees are considered high angle operations. This may include putting the victim(s) in a harness and raising or lowering them, or packaging them in a litter for the raising and/or lowering.
6. In any case, a 10:1 safety factor shall be maintained and a double rope technique shall be used if at all possible. If possible, a separate anchor should be used for the working line and the belay line.
7. Helicopter operations are considered high risk operations. Several factors must be considered before deciding on the use of a helo for extrications. Some of these factors are: time of day, condition of victim, difficult access to the victim.

#### III. PHASE III - Termination

- a. Personnel Accountability.
- b. Consider debriefing
- c. Secure the scene. Return to service.
- d. Additional Considerations
  1. HEAT. Consider rotation of crews.
  2. COLD. Consider effects of hypothermia on victim and rescuers.
  3. RAIN. Consider the effects of rain on the hazard profile.
  4. TIME OF DAY. Is there sufficient lighting for operations extending into the night.
  5. Consider the effect on family and friends; keep family informed.
  6. Consider news media; assign a P.I.O.

## **ROPE RESCUE EQUIPMENT** - Specifications, Care and Maintenance

### **ROPE**

#### Uses

Rappel line, lowering line, safety belay, litter tag line, or in mechanical advantage pulley systems. It is not intended to be used as a tow rope, utility line, etc. This is to be considered a life safety line only. The rescuer's life as well as the victim's may depend on it.

#### Construction

Nylon, low-stretch / static kernmantle

Have an inner core and an outer sheath

Outer sheath protects core

75%-85% of the ropes strength comes from the core, depending on manufacturer

#### Specifications

Diameter: 1/2" (12.7mm)

Strength: 9,000 pounds (loses approximately 15% when wet)

Lengths: 150' for most companies; up to 300' lengths

#### Maintenance

Inspect, visually after each use, for damage to sheath, dirt or mildew, and feel for soft spots in rope core, by "running" or pulling the rope between thumb and index finger.

Wash when dirty.

Immediately remove damaged rope from service

#### Core

Wash with mild nonchlorine-based detergent and water. Hang loosely and allow to air dry out of direct sunlight. Once rope is dry, it is stuffed, not coiled, in rope bag and stored in a dry, dust-free place, where not exposed to chemical (petroleum, alkalis') and direct sunlight.

#### Precautions

1. NEVER step or stand on the rope.
2. Don't drop rope from great heights when it can be carried down.
3. Don't drag rope across ground or apparatus bays.
4. Provide edge protection.
5. Avoid nylon passing on nylon; i.e., rope passing over itself, another rope or webbing.
6. Keep all rope and webbing material out of petroleum and alkaline products, and if forced to use in applications where contamination will occur (around wheels, axles, etc.), remove from service.



## **WEBBING**

### Uses.

Anchor slings, gear slings, harness, and lashing.

### Construction.

Nylon, tubular.

### Specifications.

One inch wide; Strength of 4,000 pounds.

### Maintenance.

Same as rope.

### Care.

Same as rope.

### Precautions.

Same as rope.

## **ACCESSORY CORD**

### Uses

Loops of 8 mm accessory cord can be attached to a host rope by a prusik hitch to form attachment points for pulleys.

### Construction.

Nylon, low stretch / static kernmantle.

### Specifications.

Accessory cord diameter may vary from 6 mm to 9 mm, depending on application.

### Maintenance.

Same as rope.

### Care.

Same as rope.

### Precautions.

Same as rope.

## **CARABINEERS**

### Uses.

To link various pieces of gear together, or to add friction to a system.

### Construction.

Locking, steel, pin type or key lock, not lock sleeve dependent. Locking, aluminum, pin type or key lock, not lock sleeve dependent.

### Specifications.

Steel: 40 kN breaking strength. Aluminum: 30 kN to 40 kN breaking strength.

### Precautions.

1. Keep clean.
2. Don't drop or throw.
3. Load only in the long axis, no side loading.
4. Don't forget to lock the gate.
5. Inspect for cracks, worn spots, and smooth operation.

## **PULLEYS**

### Uses

Reduce friction.

Change direction.

To gain mechanical advantage.

### Construction

Sealed ball bearing, anodized aluminum sides.

### Specifications

2" and 4" size. 36 kN minimum breaking strength.

### Precautions

1. Keep clean.
2. Don't drop or throw.
3. Inspect for smooth operation, elongated holes.

## **GENERAL PRECAUTIONS**

1. Make sure all knots are tied and dressed correctly.
2. Maintain a 10:1 safety margin
3. Rescuers shall not approach an edge without being tied in
4. Rescuers shall wear appropriate PPE.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**DEBRIS FLOW/  
LANDSLIDE RESPONSE**

**Number:** 139  
**Revision Date:** 12/05/2012  
**File Name:** Debris Flow

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

The purpose of this procedure is to provide a guideline for conducting safe and efficient rescue/recovery operations in the aftermath of a debris flow/landslide.

**PROCEDURE**

**The Primary Assessment**

- Attempt to secure a reporting party or witness to the accident to determine exactly what happened.
- An immediate assessment of the hazards present to rescuers should be performed.
- An assessment of potential victims should be performed.
- Determine how many victims have been affected.
- Determine how long the victims have been down and the survivability profile of the victim(s).

**Secondary Assessment**

- What known hazards are present; natural gas, electrical, etc?
- Location and number of victims affected.
- Hazardous material size-up.

**Personnel and Equipment**

- Determine if there are an adequate number of personnel on scene to manage the rescue/recovery.
- Request additional resources i.e. Fire, Law, Public Works, Building and Code Division, Sheriff, Cal Trans., Urban Search and Rescue Teams and Fire Camp Hand Crews may be of value when known victims are entrapped.
- Consider the effect of temperature extremes on personnel, and consider early rotation of personnel operating on scene, approximately every 15 to 20 minutes, 30 minutes maximum.
- Consider if the proper equipment is on-scene to complete the operation:
  - a. Thermal imaging cameras **may or may not** be of value in locating victims or hot engine parts depending on the depth of the soil. Metal detectors used by Public Works to locate below grade pipes may be useful in locating metal vehicles under the soil.

- b. Heavy equipment (back hoes, front loaders, dump trucks, etc. can be ordered from Public Works for immediate use during actual rescue operations. Heavy equipment needed for clearing road access with no rescue concern can be ordered from Cal Trans.
- c. Consider assigning heavy equipment to work the perimeter of a landslide area to provide access to rescuers, and to dig out spaces to place removed soil during rescue operations.
- d. Consider utilizing Emergency Trench Rescue and Structure Shoring techniques to prevent soil movement during search and rescue operations.
- e. Consider Fire Camp Hand Crews for deploying sand bags to divert debris flow.
- f. Landslide search and rescue operations can often take many hours to several days to complete, order flood lights, sanitation facilities and rest and rehab resources if the incident will take multiple operational periods.

#### Incident Command System

- Establish a remote incident command post and staging area(s). Different resources i.e. Fire, Law, Heavy Equipment, Ambulance, etc. may require separate staging areas due to function and size of equipment.
- Form a Unified Command with other emergency response Supervisors i.e. Fire, Law, Public Works, Cal Trans. Develop an Incident Action Plan (IAP) with agreed upon operational objectives.

#### Isolate and Deny Entry

- Establish a perimeter
- Stop all unnecessary traffic in the area
- Evacuation
  - a. Make the decision to evacuate only after evaluating the threat

#### Make the Area Safe

- Assign an Incident Safety Officer.
- Determine exactly what hazards and products are within the debris flow/landslide perimeter.
- If a landslide has occurred, a secondary landslide is often possible.
- Utilities, including electrical, gas and water should be shut off. If it is not possible to shut off the utilities, post a guard to assure the utilities are not turned on during the operation.
- If there is a potential for structure collapse, appropriate measures must be taken to assure the structural stability of the structure during rescue operations.
- Heavy equipment should be used with caution where known or potential victims may be located due to the possibility of victim injury, secondary collapse, noise and vibration.
- Assign observer(s) with radio communications and evacuation signaling capability to monitor the slide area to give responders advanced warning of secondary landslides or falling debris. Safety Officers and observers have found binoculars useful during landslide search and rescue operations.

- Consider marking, painting and measuring surface cracks to monitor for additional movement.
- Use standardized emergency signals:
  - a. Evacuate – Repeated short blasts of the air horn for approximately 10 seconds, followed by 10 seconds of silence. This sequence of air horn blasts for 10 seconds followed by a 10-second period of silence will be done 3 times; total air horn evacuation signal
  - b. All Stop – 1 long blast
  - c. Resume Operations – 1 long & 1 short blast

#### Victims

- Upon reaching the victim(s), personnel should do an immediate primary survey of the victim. If appropriate, treatment should be started immediately.
- A quick but thorough secondary assessment of the victim should be done. If time permits, personnel should attempt to treat serious injuries prior to removal.
- If indicated, complete C-spine precautions should be administered. NOTE: Because of the difficulty removing the victim from the space, optimum C-spine precautions may not be possible.
- Remember that “crush injury syndrome” and “compartment spacing” of body fluids is a real medical concern for patients who have been trapped under heavy weights such as soil for extended periods (2 – 4 hours) of time. Review of these medical conditions and proper treatment protocols is crucial for successful patient recovery and survival.

#### Preparation for Termination

- Conduct personnel accountability.
- Remove tools and equipment used for rescue/recovery. If there has been a fatality, consider leaving tools and equipment in place for investigative purposes.
- Secure the scene.
- Evaluate personnel, CISM if the situation dictates it.
- Consider debriefing.

#### Considerations

- Notifications:
  - a. Fire Chief
  - b. Deputy Fire Chief
  - c. Battalion Chief to cover the City
- Weather:
  - a. Cold. Consider effects of hypothermia on victim and rescuers.
  - b. Rain. Consider the effects of rain on the hazard profile.
- Time of Day. Is there sufficient lighting for operations extending into the night.
- Consider the effect on family and friends; keep family informed.
- Assign a P.I.O., consider news media.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**COMBUSTIBLE METAL FIRES**

**Number:** 140  
**Revision Date:** 12/05/2012  
**File Name:** High Rise

**Review Date:** 03/25/2017

**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide a guideline to Department personnel involved in the handling of a combustible metal fire.

If not properly identified and handled, combustible metal fires present a unique and dangerous hazards to firefighters.

Combustible metals such as magnesium, titanium, zirconium, tantalum, lithium and sodium are becoming more prevalent in use, shipment and are being recycled much more frequently. Many new products are now being made from these materials including vehicles, increasing the quantities of these metals existing and traveling through the City.

**RESPONSIBILITY**

Fire Prevention Bureau will apprise fire suppression personnel of all commercial occupancies that handle, manufacture or store, 100 pounds or more of any type of combustible metals, and that these occupancies have the appropriate extinguishing agent on site to control the amount of combustible metals they handle, manufacture or store.

It shall be the responsibility of all Department personnel to follow these guidelines in the handling of combustible metal fires to insure the safety of firefighters and citizens and to protect exposed structures.

It shall be the responsibility of company officers to familiarize themselves and their crew with this guideline and to pre-fire plan any/all structures containing 100 pounds or more of combustible metal.

**SCOPE**

Combustible metals fall into four categories:

1. Alkali Metals: Alkali metals are water reactive under non-fire and fire conditions. Applying water to alkali metals will result in fire and extreme reactions. Alkali metals include lithium, sodium, rubidium, cesium, radium and potassium.
2. Alkali Earth, Transitional and Other Metals: Alkali earth, transitional and other metals in non-fire situations do not present the same hazards as alkali metals, however, when burning Alkali earth, transitional and other metals can become extremely dangerous if water is utilized as an extinguishing agent. Alkali earth metals include magnesium, beryllium, calcium and strontium; Transitional metals include titanium, hafnium, niobium, tantalum and zirconium. Other metals include aluminum powder and flakes.

Most metals in the form of powders, dusts and chips will ignite and burn. Powders and dusts are by far the greatest concern; they have a greater surface area and a high explosion potential should they become airborne in a natural environment or during attempts to extinguish a fire. As a rule, larger products of combustible metals such as bars, ingots, heavy castings and thick plates are virtually impossible to ignite; in most cases, they will self-extinguish when the heat source is removed. Aluminum powders have the highest inherent explosive power of all combustible metal dusts.

Combustible metal fires can produce extreme temperatures ranging from 5,000°F to 8,500°F. These temperatures result in the dissociation of water to its basic elements of hydrogen and oxygen. In a basic sense, 100 gallons of water that is applied to a combustible metal fire is the same as applying the hydrogen equivalency of 42 gallons of gasoline to a combustible metal fire. Application of carbon dioxide has similar results with the dissociation of carbon and oxygen.

These temperatures present extreme hazards to Department personnel entering a structure where a combustible metal fire may be burning, due to rapid heat buildup and fire spread characteristics. The temperatures encountered with a combustible metal fire will far exceed those for which personal protective gear are designed for.

Combustible metal fires can produce flames of blue-green, orange-to-white in color and smoke can be white or grayish in color, if only the combustible metal is involved. Smoke will also appear to be exiting the structure at a much higher velocity than in a normal structure fire because of the high burning temperatures of combustible metals.

**Fires involving large quantities of combustible metals are impossible to extinguish and are extremely difficult to contain if not caught in the incipient stage and controlled with a Class D extinguishing agent appropriate for the metal involved. In most cases, the heat generated by a metal fire will make it impossible to apply an appropriate agent to control the fire once it is beyond the incipient stage.**

#### **PROCEDURE**

1. Size-Up; a proper size-up and identification of the materials involved, the physical state of the product, chips, powder, fines, dust, etc.; and the quantity of the product involved or potentially involved.
2. Ensure control of utilities to affected areas.
3. Obtain Material Safety Data Sheets for the involved products and, if available, contact those familiar with the product hazards.
4. Fire involving large quantities of product within structures can result in rapid heat build-up and smoke generation, beyond that which is normally encountered in fires involving ordinary combustibles. Fire beyond the incipient stage within structures can place personnel at extreme risk.

5. If fires can be safely isolated, the best course of action is to allow them to burn out.
6. Uninvolved product, with the exception of alkali metals, and exposures can be protected by hose streams if adequate precautions are taken. It is extremely important that care is taken to prevent runoff from hose streams coming in contact with burning material or molten product.
7. Extreme caution needs to be taken for fires involving combustible metal powders, dusts, and fines. This is the most hazardous form of combustible metals. Explosions are possible with these products, especially if product becomes airborne with an ignition source.
8. Small and incipient fires may be contained utilizing Class D extinguishing agents, dry sand, or dry salt. Refer to Attachment A for the list of compatible extinguishing agents for combustible metal fires.
9. Most fires involving combustible metals can only be extinguished by providing an inert atmosphere of argon or helium, if those products are dry.
10. Water in contact with molten combustible metals will result in violent steam and hydrogen explosions and reactions. Control of domestic and fire protection water systems must be considered in fires involving a structure to prevent water contact with burning material.
11. Large fires are impossible to extinguish. The best approach is to isolate the material as much as possible if it can be done safely. Protect exposures with water streams if adequate drainage is present to prevent contact of water with the burning material. Let the fire burn out naturally to minimize hazards to personnel and losses to exposures.
12. In most cases, combustible metal fires will burn quickly and begin to develop an oxide crust that will limit open burning of the product. It is extremely important that the crust is not disturbed until the metal has completely oxidized to the point of extinguishment. Depending on the size of the fire, this can take 24-hours or longer.
13. Even though there may not be any signs of external burning, the metal can remain extremely hot and continue to present thermal injury risk to department personnel, and risks associated with water application if the oxidized crust is disrupted prior to complete extinguishment.
14. Thermal Imaging Cameras can assist with determining if the burning material has cooled to the point of complete extinguishment.
15. Consider Fire or Health Haz-Mat teams, there is a potential for this type of incident to develop into a hazardous materials incident.



## **UNUSUAL HAZARDS OF COMBUSTIBLE METALS**

1. Water applied to a burning combustible metal will result in an increase in burning intensity.
2. Application of carbon dioxide has similar effects as water; the carbon dioxide adds to the intensity of the burning. Most combustible metals will ignite and burn in 100-percent carbon dioxide atmospheres.
3. Dry chemical extinguishers have no effect on combustible metal fires.
4. Halogenated extinguishing agents have no effect on combustible metal fires, with the decomposition of the products producing hazardous byproducts.
5. A primary metal fire displays intense orange-to-white, or blue-green flames and may be associated with a heavy production of white or grayish smoke.
6. When water is applied to burning combustible metal, it actually disassociates to basic compounds of oxygen and hydrogen. Similar results occur with carbon dioxide.
7. Dusts, fines and powders of combustible metals present an explosion hazard, especially in confined spaces.
8. Turnings and chips of combustible metals can ignite and burn with intensity, especially if they are coated with petroleum based oils. There have been instances of spontaneous combustion.
9. The larger the product, the lower the likelihood of ignition. Bars, ingots, heavy castings and thick plates are virtually impossible to ignite and, in most cases, will self-extinguish when the heat source is removed.
10. Burning combustible metals can extract moisture from concrete and similar products that can intensify burning and cause spalling and explosion of the products. Burning metal will destroy asphalt and extract moisture from rock.
11. Fire involving combustible metals cannot be extinguished, they can only be controlled, unless they are placed in an inert atmosphere of argon or helium. Fire involving large quantities should be allowed to cool for at least 24-hours prior to being disturbed to prevent re-ignition. Fire will oxidize the metal.
12. Combustible metal fines and powders that are stored and contain moisture can produce hydrogen gas.

ATTACHMENT A

Appropriate Extinguishing Agents for Combustible Metals

Table 3. Combustible Metal Fire Extinguishing Agents Quick Reference Guide

Extinguishing Agent	Alkali Metals		Aluminum	Magnesium	Niobium	Tantalum	Titanium	Zirconium
	(Potassium, NaK, Sodium)	(Lithium)						
Coke (Carbon Micro-spheroids)	YES	YES	YES	YES	YES	YES	YES	YES
Met-L-X	YES	NO	YES	YES	YES	YES	YES	YES
Lith-X	YES	YES	NO	NO	NO	NO	NO	NO
Copper Powder	YES	YES	YES*	NO	NO	NO	NO	NO
Dry Flux	YES	YES	YES	YES	NO	NO	NO	NO
Dry Sand	YES	YES	YES	YES	YES	YES	YES	YES
Dry Lithium Chloride	YES	YES	NO	NO	NO	NO	YES	YES
Dry Soda Ash	YES	YES	YES	YES	NO	NO	YES	YES
Dry Sodium Chloride	YES	YES	YES	YES	YES	YES	YES	YES
Water	NO	NO	NO	NO	NO	NO	NO	NO
Foam	NO	NO	NO**	NO	NO	NO	NO	NO
Argon	YES	YES	YES	YES	YES	YES	YES	YES
CO <sub>2</sub>	NO	NO	NO	NO	NO	NO	NO	NO
Nitrogen	YES	NO	NO	NO	NO	NO	NO	NO
Halon	NO	NO	NO	NO	NO	NO	NO	NO
Halon Replacements	NO	NO	NO	NO	NO	NO	NO	NO

NOTE: When combustible metals are blended with other materials, the extinguishing agent used should be compatible with the combustible metal.

Green text indicates the preferred extinguishing agents, blue indicates acceptable agents.

\*Copper powder can be used on aluminum fires but requires large quantities to be effective.

\*\*Aqueous film-forming foam (AFFF) has been shown to be effective on aluminum paste fires in the incipient stage where a Class B solvent is the primary fuel.

Source: Based on NFPA 484, Standard for Combustible Metals, Metal Powders, and Metal Dusts, Table A.13.3.3. Used with permission.



**ARCADIA FIRE DEPARTMENT**  
**Standard Operating Guideline**

**GOLD LINE**

**Number:** 141  
**Revision Date:** 12/31/2016  
**File Name:** Gold Line

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To provide guidance for Arcadia Fire Department personnel on the Gold Line light rail system. This SOG includes how to approach, how to control hazards and the life safety components unique to the light rail system.

**PROCEDURE**

1. Approach

A. Size Up: The first unit on scene shall provide an initial size-up report to Verdugo dispatch and responding units. Size Up shall include:

- Location of the train
- Accessibility to train including response route
- Type of emergency
- Number of victims
- Potential for secondary issues
  - Entrapment with extrication
  - Fire to surrounding area
  - Downed power lines

B. Follow up Report: Every effort should be made to complete a full 360 around the incident. Information gained through this should be passed on to dispatch and responders through the follow up report.

C. Establish Incident Command

D. Request Additional Resources

Below are the units dispatched to various types of incidents involving the Gold Line

- Train derailment – 3 Engines, 2 Truck, 2 US&R, 1 Hazmat, 2 BC, 2 RA
- Train fire – 3 Engines, 2 Trucks, 1 BC, 1 RA
- Traffic collision with train – 2 Engines, 1 Truck, 1 RA, 1 BC
- Train Vs. Pedestrian - 2 Engines, 1 Truck, 1 RA, 1 BC

Additional Resources may include:

- Addition Rescue Ambulances
- Train Righter
- Addition train for passenger evacuations
- USAR Companies

#### E. Notifications

CHP (For section of Gold Line within the 210 Freeway)

APD (For section of Gold Line within the City of Arcadia)

Los Angeles County Sheriff Transit Safety

Rail Operations Center (ROC) The following information may need to be relayed when contacting the ROC:

- Type of incident
- Location of incident
- Gold Line Train
- Location
- Station
- Intersection
- Mile Marker
- Which Track
  - Track 1 Northbound (Headed toward Azusa)
  - Track 2 Southbound (Headed toward East LA)
- What do you want the ROC to do
- Shut down all rail traffic or just one track.
- Shut down power

#### F. Assign a Safety Officer

#### G. Establish staging

### 2. Hazard Control

As part of the size up the first in officer need to determine if the electrical power to the Gold Line needs to be shut off and to what extent. Shutting down power can be as simple as shutting down power to a single train car by lowering the pantograph to as complex as turning off all power to a section of track. Officers need to consider the impact on the entire section of track when shutting off power through a blue light station or ROC. Additional impact would include:

- Heat emergencies due to passengers stuck inside of non-ventilated train cars

- Trains and passengers stuck in remote areas increasing the size and scope of the emergency

#### Shutting Down Electrical Power

- Lowering the Pantograph (Either done by the train operator or manually using the hand crank)
- Disconnecting the train car batteries
- Blue Light Station
- Rail Operations Center

### 3. Life Safety Features

Three life safety features of the Gold Line are standpipes, access gates, and blue light stations.

A. Standpipes – All standpipes are wet but not pressurized. When utilizing a standpipe an additional engine company will need to be assigned to pump the system.

- Newcastle Park Access Road to West End of Iconic Bridge
  - The FDC and hydrant is located at Newcastle Park (143 W. Colorado Blvd.) on the West end of Newcastle West of the driveway.
  - Standpipes are located every 200' from Newcastle Park to the West end of the Iconic bridge.
- Baldwin Ave standpipe
  - Hydrant and FDC located on Baldwin under the freeway next to the south bound lanes.
  - Standpipe outlet is located in the freeway center divider on West Bound side of freeway.

#### B. Access Gates

- Spring Hill Suites (99 N. 2<sup>nd</sup> Ave)

Located in South parking lot on West side

- 2<sup>nd</sup> Ave. and Huntington Dr.
- 5<sup>th</sup> Ave. Stairwell
- Cornell Dr. and Windsor Rd.

C. Blue Light Stations (BLS)

There is an access point with a cement pad on the West Bound I-210 at mile marker 15.9. The pad contains a Blue Light Station (BLS)

- End of E. St. Joseph St (entrance to parking structure)
- West bound I-210 at mile marker 15.9
- Maintenance road at Newcastle Park
- 5<sup>th</sup> Ave stairwell

D. Traction Power Sub Station (TPSS)

The Gold Line receives its electrical power through Traction Power Sub Stations. There are numerous TPSS along the Gold Line. There are two located within the City of Arcadia. They are located at:

- The Los Angeles County Arboretum (North/East Corner: access off of W. Colorado Blvd)
- End of E. St Joseph St.



**ARCADIA FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINE**

**INCIDENT RISK MANAGEMENT**

**Number:** 142  
**Revision Date:** 12/31/2016  
**File Name:** Inc Risk Mgmt

**Date:** 06/20/2017  
**Approved:** \_\_\_\_\_  
Michael E. Lang, Fire Chief

**PURPOSE**

To establish guidelines that ensure the risks faced by fire personnel are minimized through a risk management assessment as guided by NFPA 1500 *Fire Department Occupational Safety & Health Program*.

**PROCEDURE**

1. Upon the arrival of the Incident Commander (IC), they will integrate risk management when formulating a size-up and when developing strategy and tactics for the incident.
2. The responsibility for risk assessment is a continuous process for the entire duration of each incident. The IC should continually reevaluate conditions to determine if the level of risk has changed and when a change in strategy or tactics is necessary.
3. Arcadia Fire Department Risk Management Guidelines:
  - Activities that present a significant risk to safety of members shall be limited to situations where there is a potential to save endangered lives.
  - Activities that are routinely employed to protect property and the environment shall be recognized as inherent risks to the safety of members, and actions shall be taken to reduce or avoid these risks.
  - No risk to the safety of members shall be acceptable when there is no possibility to save lives or property.