

TRI-COUNTY SPECIAL OPERATIONS UNIT

STANDARD OPERATING PROCEDURES

Special Operations Emergency Response

Special Operations Response Team

PURPOSE

The purpose of these procedures is the establishing of guidelines for team members and is intended to cover in a general way the duties and procedures of the Special Operations Response Team.

Special Operations incidents can be so varied in nature that specific procedures can not be written for all incidents. This unit shall focus on but not be limited to Hazardous Materials, WMD events, High angle and low angle rescue, trench rescue, Water rescue and recovery, Ice rescue, Confined Space Rescue.

Fires, spills and other types of emergencies involving hazardous materials require extreme caution to be exercised by all members to ensure the safety of everyone involved at these types of emergencies. Sometimes our best option will be to do nothing offensively. Isolating the area and letting the incident run its course may be the best objective.

The health and safety of our employees along with the public is always our first priority.

All actions taken must be deliberate and planned with safety in mind. Every effort must be made to obtain and evaluate all available information concerning the incident before any actions are taken.

The authority having jurisdiction shall have the responsibility for the incident throughout its duration.

A National Incident Management System (NIMS) shall be used at all incidents. The NIMS allows for a co-command of the incident if needed when our team responds outside of our jurisdiction. The Team Leader will supervise the operations of the Special Operations Team. A safety officer will be appointed.

The Initial Fire Department Policy and Procedures shall govern for all other areas not covered within these procedures.

Entry Team

Entry team entrance qualifications:

- a. Certified FFI
- b. Incident command
- c. Terrorism Awareness
- d. Hazmat Operations
- e. CPR & first aid
- f. 2 years experience on department
- g. Chief must sign agreement form for use of equipment and insurance of individual

Entry team continuing education

- a. Within 2 years must complete HAZMAT Technician course (that meets OSHA requirements) And specialize in one special rescue operation.
- b. Must keep up current certifications and participate in the required training for the Tri County Special Operations Team.
- c. Within 4 years must specialize in two additional special rescue operations

Support Teams

EMS Support Team entrance qualifications:

- a. EMT-PS
- b. Incident Command
- a. Terrorism Awareness
- b. Hazmat Operations
- c. Advanced Cardiac Life Support
- d. 2 years experience on department or service
- e. Chief must sign agreement form for use of equipment and insurance of individual

EMS Support Team continuing education

- a. Must keep up current certifications and participate in the required training for the tri county special operations team.

Operations Support Team

Operational Support team will consist of personnel to help with Communications, Fire fighting, Decon runners and other EMS support

- a. Incident command
- b. Terrorism Awareness
- c. Hazmat Operations
- d. CPR & first aid
- e. 2 years experience on department
- f. Chief must sign agreement form for use of equipment and insurance of individual

Operations Support Team continuing education

- a. Must keep up current certifications and participate in the required training for the tri county special operations team.

DEFINITIONS

ALOHA

Aerial location of hazardous atmospheres computer modeling program.

Authority having jurisdiction

The local fire, police, or sheriff department of the jurisdiction in which the hazardous materials release occurs.

BRH

Iowa Department of Public Health, Bureau of Radiological Health.

EPA

Environmental Protection Agency.

Emergency response phase

The phase of the incident where a threat exists to the public, property or the environment due to the release or potential release of a hazardous substance.

IDLH

Immediately dangerous to life and health.

IDNR

Iowa Department of Natural Resources.

LGR

Local Government Reimbursement program.

mR/hr

Amount of radiation energy over one hour.

Marplot

Computer program containing county maps.

NRC

National Response Center.

PEL

Permissible exposure limit as set by OSHA.

Potential Responsible Party

The person or company who is the owner or in possession of the hazardous substance and/or its container involved in the incident.

DISPATCH ASSIGNMENT

Due to the specialized equipment required and complex nature of special operations incidents the dispatch assignment will consist of:

Local Fire Department
Medical monitoring

Local County Special Ops Team
Law Enforcement

Additional dispatch will be the entire Special Ops Team.

DUTIES AND RESPONSIBILITIES

The Special Operations Team shall ensure the following duties and responsibilities are accomplished:

- Establish a command center and NIMS.
- Determine and physically mark the control zones to include: hot, warm and cold zones.
- Inform potential responsible parties of their legal and financial obligations.
- Provide specialized equipment, materials, and trained personnel to operate at special operations incidents.
- Coordinate with all agencies involved in the incident.
- Maintain records pertaining to activities at the incident.
- Serve as a resource for the jurisdiction having authority of the incident.
- Remain at the incident until the emergency response phase is declared over.

INITIAL SPECIAL OPERATIONS ALARM

When a call for a special operations alarm is dispatched, the Team Leader shall handle the incident making the decision on appropriate actions to take and coordinate the following:

- Obtain information on location; **name of the on scene responder and telephone number**, type of incident, materials, containers, injured persons etc.
- Provide as soon as possible isolation distances for the incident.
- Insure the recorder shall record all actions and times in regards to the incident beginning with the initial dispatch.

COMMUNICATION

- Special Operations Team communications with on scene responders can be by radio or by telephone.
- All members entering the Hot Zone or Operations Zone shall wear a portable radio.
- Disruption or failure of communication with personnel in the Hot or Operations Zone shall require the exit of members until communications are restored.

- Hand signals shall also be reviewed at the pre entry briefing.
- Continual sounding of the air horn and an “**urgent message**” by radio will signal the immediate withdrawal from the Hot or Operations Zone. These procedures shall be reviewed at the pre-entry briefing.

TASK ASSIGNMENTS

- **Team Leader:**

Upon arrival the team leader shall locate the incident commander to receive a brief and make recommendations regarding placement of the hot zone and enforcement procedures. Communicate and coordinate with any possible responsible party or technical advisors.

It shall be the duty of the team leader to directly oversee the activities and decisions of the team and to ensure that the actions of the team are properly documented.

Assume back – up position.

- **Recorder:**

Immediately upon dispatch the recorder shall obtain information on chemicals and containers involved and begin research. Information shall be recorded on haz mat data worksheets. For non-haz mat incidents, the recorder shall take an accurate record of all activities, times, and persons involved.

Contact the IDNR and the EPA NRC.

The recorder shall be primarily responsible for ensuring that communications and actions are documented in the recorder's log. The recorder shall brief team members on information obtained in regards to chemical and physical hazards, personal protective equipment, decon etc. Assumes the back – up person role.

- **Suit Person:**

En route the suit person shall assist the recorder in communications and chemical research, determining as soon as possible the proper level and suit materials of protective clothing. Upon arrival the suit person shall remove the proper personal protective and communication equipment and organize it for entry and back – up members.

- **Safety Officer:**

The safety officer will identify and evaluate hazards and provide direction with respect to the safety of operations. **The safety officer shall have the authority to alter, suspend or terminate those activities deemed IDLH condition.** The safety officer shall immediately inform the incident commander of any actions needed to be taken to correct these hazards. The safety officer shall ensure completion of the site safety plan and run the passport accountability system.

ON SCENE MEDICAL MONITORING

- All personnel required to be in chemical protective clothing shall have baseline vitals taken and recorded by EMS personnel before donning PPE. This shall include Entry, Backup and De-Con.

Pre donning baseline shall include:

Blood pressure
Heart Rate
Respiration
Temperature.

- No members shall enter the Hot Zone or De-Con under these circumstances:
Temperature greater than 99.5 F.
Pulse rates greater than 100 beats per minute.
Blood pressure 150/90.
- Each responder shall be assessed between air changes and after work completion.
- Responders making a second entry shall have their work period reduced by 30% under these circumstances:
Temperature of 99.5 F.
Pulse rates greater than 110 beats per minute.
Blood pressure of 150/90.
- Responders should be observed for signs of chemical exposure or heat injury.
- Rest periods shall be a minimum of 15 minutes in shaded or warm areas and are to include the intake of 8 – 16 ounces of fluids.

SELECTION OF PROTECTION LEVELS

Level A protection shall be used when:

- The hazardous substance and the atmospheric conditions require the highest level of protection for skin, eyes, and respiratory system.
- Work functions involve a high potential for splash or immersion of materials that present a skin exposure hazard.

Level A will include:

- Level A fully encapsulating vapor tight suit.
- 60 minute SCBA.
- Radio with communication device.
- Chemical resistant boots
- Latex inner gloves.
- Hard hat (when needed).
- Aluminized over cover (when needed).
- Nomex cover all (when needed).

Level B protection shall be used when:

- The hazardous substance and atmospheric conditions require a high level of respiratory protection but less skin protection. The atmosphere is known not to contain high levels of chemicals harmful to the skin or capable of being absorbed through the intact skin.

Level B shall include:

- Level B covers all or fully encapsulating suit.
- 60 minute SCBA.
- Radio with communication device.
- Chemical resistant boots.
- Latex inner gloves.
- Chemical resistant outer gloves.
- Hard hat (when needed).
- All exposed seams taped as required with chemical resistant tape.
- Nomex cover all (when needed)

OPERATIONS IN CHEMICAL PROTECTIVE CLOTHING

- Chemical protective clothing is to be worn in accordance with the procedures of this section and the manufacture's recommendations.
- All hot zone entries shall be made with two members working in a buddy system.
- Two additional team members shall be suited in the same manner acting as the back up team. The back up team shall stage in the cold zone near the decontamination line.
- No entry shall be made into the hot zone until the de – con line has been established.
- A briefing shall be held before the entry to discuss the objectives of the entry, de – con procedures and any safety concerns.
- Extreme caution shall be used when dealing with cryogenics or pressure liquefied gasses that pose a frostbite injury threat with contact.
- The safety officer shall document entry and exit times from the hot zone.
- The safety officer shall monitor the length of time in the hot zone to ensure entry personnel have sufficient time to exit and be decontaminated.
- All members exiting the hot shall do so via the de – con line and be medically monitored.
- A 15-minute rest period shall be required, along with de- con and the medical evaluation for heat stress or chemical exposure if members are making a second entry.

DECONTAMINATION PROCEDURES

- All personnel and equipment exiting the hot zone shall do so via the de – con line.
- The de – con line shall be established and operational before hot zone entry. The de – con line shall be clearly marked and entry team members briefed on de – con procedures before entry.
- The chemicals present and the amount of contamination anticipated to be brought back from the hot zone by the entry team will determine the proper level of protection of de – con personnel.
- The number of stations and type on decontamination will be based of the chemical, amount of contamination and cold weather conditions.
- All disposable items used in the hot and warm zones shall be bagged and identified. The IDNR shall be contacted for disposal procedures.
- It shall be the potential responsible parties' responsibility to dispose of all materials per the IDNR instructions.
- Any non-disposable items such as tools, monitoring equipment etc. shall be decontaminated per manufacture's instruction.

HANDLING OF CONTAMINATED CIVILIANS

- Civilian decontamination shall use the de – con line established for the team members.
- Rescue of civilians in the hot zone will not begin until the chemical has been identified, proper PPE is donned, and the de – con line has been established.
- Personnel will decontaminate patients by placing them into the waterbed liner. Non ambulatory patients can be placed in a chair stretcher or on a long back board. The patients clothing will be removed and the patient will be washed and rinsed.
- Take all steps to ensure patient privacy.
- Patients shall be fully decontaminated before release to EMS personnel.
- Stretchers and ambulance interior may be covered with plastic if necessary.
- Life saving measures may be administered before de – con only after EMS personnel providing this care are properly protected.

OPERATIONS IN FLAMMABLE ATMOSPHERES

- Under **NO** circumstances are personnel to conduct operations in the following atmospheres at concentrations level of:
 - Greater than 10% of the LEL as measured with a combustible gas indicator.
 - Oxygen enriched atmospheres greater than 23.5% are considered flammable and shall never be operated in.
- Always refer to your LEL correlation factors chart for the specific gas you are attempting to survey.

- Whenever personnel are operating in areas that have the possibility of a flammable atmosphere being present proper protective clothing, including SCBA shall be worn.
- Proper grounding and bonding procedures, along with the elimination of ignition sources shall be used in areas with potential flammable atmospheres.

RESPONSE TO AIR BORN MATERIALS

Incidents involving the release of hazardous materials that due to their chemical and physical properties are likely to become air born and migrate from the release site the following considerations need to be followed:

- Begin to gather information from the scene immediately. Chemical names amount involved, container size, location and size of the breach, area topography and weather conditions.
- Estimate areas at risk using the North American emergency Response Guide (NAERG), ALOHA and Marplot.
- Consider civilian protection options. Rapidly moving releases that leave insufficient time for evacuation or a release of short duration may make sheltering place the best option. Long term, extremely hazardous or flammable releases will require evacuation of vulnerable populations.
- If an evacuation is required, information regarding what the problem is, directions on evacuation routes, gathering locations for evacuees, what actions are being taken and an estimate of incident mitigation. Updated information should be provided on a regular basis.

OPERATIONS ON OR NEAR RAILROAD LINES

- Once it has been determined operations will be conducted on or near rail lines the appropriate railroad shall be notified and ordered to stop all rail traffic in the area. A representative of the railroad should be requested to the scene.
- Vehicles and equipment shall not be left on tracks. Personnel should avoid standing on or congregating on tracks.
- Brakes shall be set and wheels chalked on cars personnel are working on or near.
- When personnel are operating on the tops of cars Fire Department ladders shall be used. Fall protection measures shall be taken when operating on top of rail cars.
- Blocking and cribbing shall be completed on derailed cars that pose a threat of moving or falling.

WINTER OPERATIONS

- Actions requiring gross contamination of personnel may be ruled out in favor of tasks that would involve minimal contact and thus leading to less extensive decontamination.
- The use of water should be minimized due to slipping hazards.
- Chemical protective clothing should be donned in a warm location.
- The back up team shall stage in a warm location.
- If a thorough decontamination is required due to the nature of the chemical involved it may be accomplished at a location where this could be accomplished. This would involve a dry decontamination and suit removal as personnel leave the hot zone. A hard surface type vehicle lined with plastic shall be used to transport personnel to the location for a thorough decontamination.

ILLEGAL DISCARDED/ABANDON MATERIAL INCIDENTS

Materials that have been apparently discarded, released, or abandoned shall be left in the custody of the individual having custody of the material or the property owner on which the incident has occurred. Incidents occurring on city, county or state property may require the city, county or state to take custody if a responsible party cannot be located. As with all incidents documentation is of great importance. Contact shall be made with the NRC and the NRC report number recorded for use in the LGR application.

The decision to leave a material in the custody with an individual as described above shall only be made after an assessment to determine the potential threat to the public, property, and the environment and the IDNR and NRC have been contacted. Factors to be evaluated by the Team Leader and Incident Commander shall be as follows:

- Has the emergency phase been terminated?
- Release areas or containers have been secured and properly marked.
- Individuals with custody or property owners have been notified; an explanation of their obligations and put in contact with IDNR has been accomplished.

RESPONSE TO A RADIOACTIVE MATERIAL INCIDENT

- Approach upwind and survey the scene from a distance.
- Using radiation detection equipment, establish a 2mR/hr hot zone around the incident.
- If you receive no readings at 100 feet from the incident establish the hot zone at this distance.
- Contact the BRH to activate the state's Radiological Response Team.
- All personnel shall wear Personnel Protective Equipment, SCBA, and each individual entering the Hot Zone will wear dose-o-meter.
- Establish warm zone for decontamination.

- Activity in the hot zone shall be limited to rescue operations.
- Restrict entry in the hot zone until Radiological Response Team arrives.
- Use time, distance, and shielding to minimize exposure.

WATER RESCUE AND RECOVERY INCIDENTS

- While en-route the team leader will contact the Incident Commander to find out specific details.
- The team leader will define the operation as “Rescue” or “Recovery.”
- All team members will wear PFDs when working in proximity of water.
- All team members will be briefed on hand and rope signals.
- Safety officer and Recorder positions will be used.
- Medical monitoring will be used.

HIGH and LOW ANGLE INCIDENTS

- While en-route the team leader will contact the Incident Commander to find out specific details.
- All team members working at a height of over 10 feet will use appropriate fall-arrest equipment.
- All team members in the hot or working zone will wear head protection.
- Any equipment used will be thoroughly inspected after use.
- All team members will be briefed on hand and rope signals.
- Safety officer and Recorder positions will be used.
- Medical monitoring will be used.

TRENCH INCIDENTS

- While en-route the team leader will contact the Incident Commander to find out specific details.
- Any members working below grade will wear safety equipment and have radio communication.
- Any below grade work will have continuous air monitoring.
- Any below grade work will not be done until appropriate shoring has taken place.
- All response equipment will be staged a safe distance from the incident.
- Heavy extrication equipment can be requested by the Team Leader to the IC.
- All team members will be briefed on hand and rope signals.
- Safety officer and Recorder positions will be used.
- Medical monitoring will be used.

CONFINED SPACE INCIDENTS

- While en-route the team leader will contact the Incident Commander to find out specific details.
- Confined space permits will be filled out.
- All members working in the hot or operations zone will have radio communication.
- Air quality shall be monitored at all times.
- NO entry into the confined space will be made until appropriate air monitoring has taken place.
- All members working in the hot or operations zone will have the appropriate PPE.
- All team members will be briefed on hand and rope signals.
- Safety officer and Recorder positions will be used.
- Medical monitoring will be used.

WMD INCIDENTS

Because of the extreme danger of WMD incidents, extreme caution will be used when responding. The special operations team shall stage a safe distance from the incident until adequate information has been received. Iowa Emergency Management will be consulted during the planning stage of the incident. The Tri-County Special Operations Team will only enter a hot zone when there is immediate danger to life until the situation has been determined to be safe.

After the situation has been determined safe, the appropriate procedures will be followed (ie: Haz mat, high angle, confined space, etc.)

POST INCIDENT PROCEDURES

Canceling the emergency phase of a special operations incidents shall be a function of the incident commander. The Team Leader will advise the Incident commander when a special operations incident has entered the clean up phase. This decision will be based on the following:

- Advise from responding agencies, support agencies such as IDNR and EPA or technical advisors.
- The containment of hazardous materials in any form, extinguishment of fires and the elimination of chemical reactions.
- When no danger exists to the public or the environment shall be the benchmark in making this decision.
- When victims have been rescued or removed.
- Cleanup operations are not a Fire Department function. However, assuring that the cleanup takes place is a Fire Department function.

- **Post-Incident Brief and Incident Analysis.**
Shall be conducted with all agencies involved and should include the following:
 - Health information on all hazardous materials present.
 - Identify any unsafe conditions or equipment.
 - The Team Leader shall be the contact person for information that may be needed after the incident.

- **Post-Incident Analysis.**
The Safety Officer shall facilitate a briefing of the following:
 - A brief on how the incident occurred and what actions were taken to mitigate the incident.
 - NIMS and scene control.
 - Tactical operations. Entry, back-up, decon, etc.
What went well, what did not?
Each member should make a statement.
 - Resources.
Were the resources adequate?
Any equipment needed?
 - Support services.
Was the support from other services adequate?
 - Recommendations for changes to the SOP.
 - The recorder shall document the Post Incident Analysis in their log.

REPORTS AND DOCUMENTATION

The Team Leader shall complete the following:

- Completion of the NFIRS report, Special Operations report and / or Hazardous Materials Incident Survey.
- Collection of any MSDS, recorders log all photographs, videotape of the incident.

MEDICAL SUEVILLANCE PROGRAM

The medical surveillance program is an ongoing, systematic evaluation of employees at risk of suffering adverse effects of workplace exposure for the purpose of achieving early recognition and prevention of these effects.

Members of the Special Operations Team shall receive physicals at the following times:

- According to their respective department requirements.
- At more frequent intervals if determined necessary by the Physician.

- As soon as possible upon notification by the employee as to the development of signs or symptoms indicating a possible exposure.
- At any time an employee has been exposed to a toxic substance that exceeds the PEL or displays signs or symptoms of exposure an exposure record shall be made. These records will be maintained with the employees medical records for the duration of their participation of the special operations team plus 30 years.

MAINTENANCE OF EQUIPMENT

In order to ensure the special operations equipment is capable of a response and replaced in a timely manner after use the respective entity will maintain accurate inspection schedules.

INSPECTION SCHEDULE:

- Level A suits shall be pressure tested according to manufactures recommendations. These times shall be: Upon receipt, annually, after use of a back up suit used in the Cold Zone.
- Level B suits shall be visually inspected annually.
- Boots shall be visually inspected and leak tested in water, 3” from the top of boot annually.
- The annual PPE testing shall be preformed in the month of January of each year.
- Calibration of monitoring equipment shall be preformed monthly and after each use.
- Check expiration dates on colormetric tubes, test kits etc in January and July.
- Test pumps, weather station, cameras or other specialized equipment in January and July.
- SCBA’s shall be inspected and maintained according to the respective department’s Respiratory Protection Plan.