

ANNEX D

DELAWARE COUNTY HAZARDOUS MATERIALS RESPONSE TEAM

STANDARD OPERATING GUIDELINES



The Delaware County Hazardous Materials Response Team consists of members from Fire Departments throughout Delaware County and covers all areas of expertise.

Delaware County Haz-Mat Coordinators

Nelson Delameter – Director of Emergency Services - Car 1

Carl Fancher – Deputy Coordinator – Car 6

The Hazardous Materials Incident Commander (IC) will have total control of the Haz Mat incident and is responsible for the safety of all personnel at the scene.

Total cooperation from the Fire Chiefs of the departments involved in each incident is vital for this plan to work. This will be understood before any action is taken by the County Haz Mat Team.

TABLE OF CONTENTS

Training Levels.....	5
Haz Mat Team Duties.....	5
Response Plan.....	6
Mutual Aid Haz Mat Setup.....	6
En Route Haz Mat Incident.....	6
On Location.....	7

Haz Mat Areas Responsibilities

A. Town Mobile Command Post.....	7
B. Haz Mat Team Responsibilities.....	8
C. Haz Mat Command Post.....	8
D. Command Post Personnel.....	9
E. Haz Mat Deputy Coordinators/Officers Responsibilities.....	9
F. Haz Mat Staging Officer.....	9
G. Haz Mat Air Officer.....	9
H. Haz Mat Entry Officer.....	9
I. Haz Mat Decon & Strip Down.....	10
J. Haz Mat EMS/Triage Area.....	10
K. Entry Team Responsibilities.....	10
Protective Clothing For Haz Mat.....	10

TABLE OF CONTENTS CONT.

Procedures for Suiting Up All Levels

Entry Level A – All purpose suit.....	10
Entry Level B – All purpose suit.....	11
Entry Level C - Fire fighting Turn Out Gear.....	11
Setup For Decon.....	12
Entrance/First Rinse.....	12
Second Rinse.....	12
Haz Mat Team Strip Down Area.....	13
EMS/Triage.....	13
Haz Mat Command Post/Staging.....	13
Engine Company.....	14
Guidelines for Decontamination.....	14
Decon Solution “A”.....	15
Decon Solution “B”.....	15
Decon Solution “C”.....	15
Decon Solution “D”.....	15
Decon Solution “E”.....	16
EMS/SOG’s for Haz Mat Incidents.....	17

TRAINING LEVELS

Level I - First Responder – Awareness

Level II - First Responder – Operations

Level III - Hazardous Material – Technician

Level IV - Hazardous Material – Specialist

Level V - Hazardous Material – Incident Commander

NOTE: Haz Mat Team members will not work above his/her level of training or expertise.

HAZ MAT TEAM DUTIES

1. Size up scene and identify product(s).
2. Establish Perimeter and Security Zone.
3. Begin initial set-up of scene including staging and decon.

OTHER HAZ MAT TEAM DUTIES

1. Maintain individual training and incident records within your own department.
2. Maintain participation at all county Haz Mat drills and training sessions.
3. Properly maintain all county owned equipment.
4. Maintain a yearly inventory of equipment and it's condition. Forward a copy to the County Director of Emergency Services for budget considerations.
5. Maintain a yearly updated roster of team members for accountability at incidents.

RESPONSE PLAN

The Delaware County Hazardous Materials Response Team will respond to Hazardous Materials Incidents throughout Delaware County.

MUTUAL AID HAZ MAT SETUP

Whenever a mutual aid request is made for the County Haz Mat Team to respond to another Fire Department's Haz Mat incident, the following procedures will be used:

1. Alert all team members from fire control or by phone.
 - A. Arrange for Haz Mat Team member to pick up portable Decon Shelter from O'Connor Hospital in Delhi.
2. All team leaders will report to the Command Post upon arrival and present their accountability list.
3. Team leaders and Coordinators will go directly to the scene to:
 - A. Size up the Haz Mat incident
 - B. Determine if the team can handle the situation
 - C. Determine Level of protection
 - D. Determine weather or not the team will be needed or if entry will be made based on the above information.

ENROUTE TO HAZ MAT INCIDENT

1. Request precise directions up wind or down wind from incident to location of staging areas (if needed) and Command Post Location.
2. Obtain chemical(s) identification and quantity
3. Determine procedures or action already taken by Fire Department at scene.

ON LOCATION

1. Set up Command Post and secure perimeter of Incident.
2. Set up Haz Mat Staging area.
3. Set up Haz Mat Control Area: HOT ZONE – WARM ZONE – COLD ZONE.
4. Set up Decon area.
5. Set up EMS/Triage area.
6. Notify the Fire Chief at the Haz Mat incident if manpower is needed to set up any of the above areas.

HAZ MAT AREAS RESPONSIBILITIES

A. MOBILE COMMAND POST

1. Request map of area (if possible).
2. Evacuation – if needed.
3. Advise how far to evacuate.
4. Civilians or firefighters who are or who may have been contaminated – locate in one area to decontaminate and EMS/Triage evaluation.
5. Ask local Chief for:
 - a. Extra diking material if needed.
 - b. Extra materials for decon solution if needed.
 - c. Absorbent materials – sand, speedi-dry, etc. if needed.
 - d. Contractors for earth moving equipment.
 - e. Refreshments (water, sandwiches, etc.)

6. Were proper agencies notified – Delaware County Director of Emergency Services, EPA, DOT, DEC, Police, OFPC, etc.
7. Check Haz Mat radio communications with all Haz Mat areas on scene.
8. Contact **Chemtrec – 1-800-424-9300, Chem-Tel – 1-800-255-3924** or the **National Response Center – 1-800-424-8802** if needed.

B. HAZ MAT TEAM RESPONSIBILITIES

1. Awareness
2. Response
3. Mitigation
4. Secure Personnel and Equipment
5. Clean-up will be the responsibility of the Carrier/Shipper, Receiver or owner of the product.

C. HAZ MAT COMMAND POST

1. Check Haz Mat radio communications at scene.
2. Chemical(s) and quantities involved, if verified.
3. Advise all leaders of chemical(s) involved and proper level Entry suit to wear.
4. Decon Solution to be used – notify decon area & EMS/Triage area of any changes.
5. SECURE AREA!!!
6. Issue colored armbands or tape for identification.

D. COMMAND POST PERSONNEL

(IC) Incident Commander	Fire Chief	Police Officer
Recording Secretary	EMS Officer	Chief Coordinator
Communications Officer		

Other pertinent personnel as needed.

E. HAZ MAT DEPUTY COORDINATORS & OFFICERS RESPONSIBILITIES

1. **Public Information Officer (PIO)** – Will keep the media informed of the status of the incident based on the Incident Commander’s wishes.
2. **Accountability Officer** – Will compile a list of all members at the scene by collecting each department’s accountability sheets.
3. **Operations Officer** – Implements the action plan as determined by the Incident Commander. Keeps the command post informed as to the progress of the overall operation.
4. **Safety Officer** – Responsible for the overall safety of the incident including fire personnel and civilians.
5. **Logistics Officer** – Responsible for obtaining and coordinating additional supplies and equipment such as food, facilities, construction equipment and any other needs not normally inventoried by the Fire Department.
6. **Staging Officer** – Responsible for setting up staging area and laying out necessary equipment including tarps and chairs. Ensure that the proper level of protective clothing for entry teams is being met.
7. **Air Officer** – Records times, monitors entry teams “on air” status and advises Entry Officer of such. Ensures for adequate air supply and refilling.
8. **Entry Officer** – Notifies command as entry is being made and advises as to the teams findings including chemical names, identification numbers, victims, etc. Ensures that the goals and objectives of the Incident Commander are being met.

- 9. Decon Officer** – Responsible for setting up the decon area and the strip down area. Advises the Command post as to their status. Ensures for the proper “Decon Solution”, equipment, etc. Monitors Decon team “on air” times. Advises EMS/Triage when beginning first decon and when ready to “package” and move the decon team to the EMS/Triage area.
- 10. Triage Officer** – Responsible for setting up the EMS/Triage area, keeps track of all civilian and firefighter victims and documents vitals of all entry and decon personnel prior to and following each entry. (see EMS Entry “Sheet)

PROTECTIVE CLOTHING FOR HAZ MAT

There are (3) Entry levels for protective clothing. They are:

1. Entry Level A – All purpose suit
2. Entry Level B – All purpose suit
3. Entry Level C – Full Fire fighting turnout equipment with SCBA.

PROCEDURES FOR SUITING UP FOR ALL LEVELS

ENTRY LEVEL “A” – All Purpose Suit;

Procedures for donning suits should also include two (2) helpers to insure proper procedures are followed;

1. Remove ALL jewelry, chains, watches and All metal objects.
2. Remove turn out gear if in use.
3. Put SCBA on.
4. Put on portable radio with proper fitting ear piece. Check radio for operation.
5. Put on all purpose suit.
6. Have helpers check to see if suit, SCBA and radio is working properly.

ENTRY LEVEL “B” – All Purpose Suit;

Procedures for donning suits should also include two (2) helpers to insure proper procedures are followed;

1. Remove ALL jewelry, chains, watches and All metal objects.
2. Remove turn out gear if in use.
3. Put SCBA on.
4. Put on portable radio with proper fitting ear piece. Check radio for proper operation.
5. Put on All Purpose suit.
6. Have helpers check to see if suit, SCBA and radio is functioning properly.

ENTRY LEVEL “C” – Firefighting Turnouts w/SCBA

1. Remove All jewelry, chains, watches & ALL metal objects.
2. Put Nomex coat, bunker pants, boots, hood, helmet, gloves and SCBA on.
3. Put duct tape over sleeves & gloves, bunker pants & boots and coat zipper/clips. Tape around waist if possible to secure seal.
4. Portable radios with proper fitting ear piece may be used in certain circumstances.

SET UP FOR DECON AREA

1. Command Post to designate Decon Officer.
2. Command Post & Decon Officer to determine decon site, level of protection, number of stages and decon solution.

3. DECON SETUP (illustration only)

- a. Secure Area.
- b. Place contamination barrels by decon entrance.
- c. Provide area for all used equipment – cocoons, chemical suits, SCBA, etc.
- d. Mark strip down area with pylons or barrels.
- e. Designate entry team egress route with pylons.
- f. Provide warning to others by using barricade tape to secure perimeter. **No unauthorized personnel admitted to decon area once decontamination has begun!!**
- g. Set up portable decon shelter as a final rinse and personal protection strip down area.

ENTRANCE/FIRST DECON RINSE

1. All hand tools go in contamination barrels at decon entrance.
2. Set portable pond up for first rinse.
3. Set up shower, place shower in pool. Make proper hose connection to shower and eductor unit.
4. ONLY MEMBERS OF HAZ MAT TEAM WEARING APPROPRIATE LEVEL OF PROTECTION AND SCBA ARE TO BE IN THIS AREA WHEN DECON BEGINS.
5. After first rinse decontamination of **ALL** personnel is complete, personnel manning the first rinse will decon themselves and go through the 2nd stage, 3rd stage and 4th stage decon as needed.

SECOND DECON RINSE

1. Set up portable pond.

2. Set up shower, place shower in pool. Make proper hose connection to shower, use pre-determined decon solution.
3. ONLY MEMBERS OF HAZ MAT TEAM IN PROPER LEVEL OF PROTECTION WITH SCBA ARE TO BE IN THIS AREA.
4. After second stage decontamination of **ALL** personnel is complete, personnel manning 2nd stage decon will decon themselves then go to the 3rd stage and 4th stage decon as needed. After final stage decon, personnel may then go to the air filling station to wait for air bottle change or to strip down area.

TEAM STRIP DOWN AREA

1. Lay out tarp(s) for arranging ALL gear on.
2. Place decon containers in front of tarp.
3. Set up chairs for All Haz Mat entry personnel to use for strip down
4. Secure water or Gatorade to prevent dehydration.
5. Portable Decon Shelter to be used as personal strip down and protective area.

EMS/TRIAGE

1. Set up area for taking and recording vital signs of members.
2. Ambulances will have communications with the Command Post for EMS/Triage information.

HAZ MAT COMMAND POST

1. Will be located in the COLD ZONE!

2. Communications Officer to monitor all radio communications and maintain radio log.
3. Recording Secretary to record all actions conducted during the Haz Mat incident.

ENGINE COMPANY

1. All personnel to wear full turn outs.
2. Set up water supply to feed 1st stage and 2nd stage rinses with a minimum 1-1/2" line. Minimize the use of water being collected for disposal.
3. Engine company personnel to gather diking material and absorbent material as needed.
4. Position the Engine according to the layout with back of engine facing towards Decontamination area for ease of laying out hose. Always place Engine in the COLD ZONE!

GUIDELINES FOR DECONTAMINATION

CAUTION – The decontamination solutions listed below are recommended for ten general groups of hazardous materials. Always contact expert assistance from manufacturers, poison control centers, medical experts, etc., to determine the best solution to use!!

The following chart should be used as a guideline for selecting degradation chemicals for the type of hazard identified.

1. Inorganic acids, metal processing wastes – **SOLUTION “A”**.
2. Heavy metals; mercury, lead cadmium, etc. – **SOLUTION “B”**.
3. Pesticides, Chlorinated Phenols, Dioxins and PCB’s – **SOLUTION “B”**.

4. Cyanides, Ammonia and other non-acidic inorganic wastes – **SOLUTION “B”**.
5. Solvents and Organic compounds such as Trichloroethylene, Chloroform and Toluene – **SOLUTIONS “C” or “A”**.
6. PBB’s and PCB’s - **SOLUTIONS “C” or “A”**.
7. Oily, greasy unspecified wastes not suspected to be contaminated with pesticides – **SOLUTION “C”**.
8. Inorganic bases, alkali and caustic wastes – **SOLUTION “D”**
9. Radioactive material – **SOLUTION “E”**.
10. Etiological materials – **SOLUTIONS “A” & “B”**.

KNOW WHERE TO FIND THE FOLLOWING INGREDIENTS BEFORE AN EMERGENCY

DECON SOLUTION “A”

SODIUM CARBONATE & TRISODIUM PHOSPHATE – 2 pound mix (1 container) of each to 5 gallons of water; 6 1/2 ounces of each to 1 gallon of water.

DECON SOLUTION “B”

CALCIUM HYPOCHLORITE (HTH) – 4 pound mix (2 containers) to 5 gallons of water; 2 pound mix (1 container) to 2 1/2 gallons of water.

DECON SOLUTION “C”

TRISODIUM PHOSPHATE (SODA ASH) – 2 pound mix (1 container) to 5 gallons of water; 6 1/2 ounce mix to 1 gallon of water.

DECON SOLUTION “D”

MURIATIC ACID (DO NOT INHALE FUMES WHEN MIXING OR POURING!) – 8 ounce mix to 5 gallons of water. 1 1/2 ounce mix to 1 gallon of water.

DECON SOLUTION “E”

CONCENTRATED DETERGENT – 2 gallons of mix to 3 gallons of water to make a 5 gallon mix; 1/2 gallon of mix with 1 gallon of water ; use container to make concentrated paste.

STIR ALL MIXES WITH WOODEN OR PLASTIC STIRRER!!

When Dealing with Unknowns under Emergency Conditions

Decontamination solutions are normally solutions of water and chemical compounds designed to react with and neutralize specific contaminants. The temperature of the liquid and contact time should be given consideration to be certain complete neutralization has taken place. In some cases firefighters may be faced with an unknown hazardous material and will require decontamination after leaving the “Hot Zone.” The following solutions should be used for unknowns since they are effective for a variety of contaminants.

DECON SOLUTION “A” - A solution containing 5% Sodium Carbonate (NA CO) and 5% Trisodium Phosphate (NA PO). Mix four pounds commercial grade NA PO with every ten gallons of water. These chemicals are available in most hardware stores.

DECON SOLUTION “B” – A solution containing 10% Calcium Hypochlorite (Ca[C10]). Mix eight pounds of Ca(C10) with every ten gallons of water. Calcium hypochlorite is commonly known as HTH and is available from swimming pool supply stores. Make sure you purchase HTH in plastic containers or transfer it from cardboard drums into clean plastic buckets marked “oxidizer.”

A general purpose rinse solution for both decon solutions is a 5% solution of Trisodium Phosphate. To prepare the rinse solution mix (?) pounds of NA PO with each ten gallons of water.

Decon Using Degradation Chemicals for Known Materials

Five general purpose decon solutions are available for ten basic Hazard classes. These are;

DECON SOLUTION “A” – A solution containing 5% sodium carbonate (NA CO) and 5% trisodium phosphate(NA PO).

DECON SOLUTION “B” – A solution containing 10% calcium hypochlorite (Ca[C10]).

DECON SOLUTION “C” – A solution containing 5% trisodium phosphate (NA PO). This solution can be used as a general purpose rinse.

DECON SOLUTION “D” – A dilute solution of hydrochloric acid (HCL). Mix one pint of concentrated HCL into 10 gallons of water. Stir with a wooden or plastic stirrer.

DECON SOLUTION “E” – A concentrated solution of detergent and water. Mix into a paste and scrub with a brush. Rinse with water.

EMS STANDARD OPERATING GUIDELINES FOR HAZ MAT INCIDENTS

1. The Haz Mat Incident Commander will determine the extent of any and all rescue attempts for victims in the Hot Zone.
2. Each ambulance and medical crew summoned to the Haz Mat incident for transport of victims shall respond to the designated staging area.

3. When EMS units arrive at the staging area, they will be responsible to the Staging Officer. He/she will then report their arrival to the Command Post and to EMS command, and await further instructions. All communications shall be on F2 (46.22), high band medical frequencies or other non-priority frequency.
4. All victims will be decontaminated prior to entering the EMS/Triage area. All clothing, jewelry, etc., shall be sent with the victim. All first aid equipment, oxygen, splints, etc. that were used on contaminated victims will be left in the strip down area and new equipment re-supplied (if possible) after the decontamination process.
5. All medical treatment performed in the Triage area shall be under the direction of the EMS/Triage Officer.
6. **PRIMARY HOSPITAL NOTIFICATION**
 - a) How many victims?
 - b) Types of injuries?
 - c) Types of chemical(s) involved?
 - d) Does Hospital want victims transported to their facility?
 - e) Transport units shall attach a tag to each victim naming chemicals involved.
7. **FIELD HOSPITAL**
 - a) Designate area
 - b) Stand-by EMS crews will assist in field hospital setup.
 - c) Secure needed supplies from incoming units.
 - e) EMS personnel treating contaminated victims shall wear appropriate personal protective equipment.
8. **HANDLING VICTIMS IN DECON**
 - a) Only lifesaving treatment will be done in the Hot/Warm Zone.
 - b) Each victim shall be decontaminated when entering the first stage rinse. All clothing will be removed and a further decon rinse may be needed.
 - c) All victims valuables shall be placed in a plastic bag and sealed. These personal items shall be sent with the victim.
 - d) All non-life threatening treatment shall be done in the EMS/Triage area.
 - e) All EMS equipment applied in the Hot/Warm Zone shall be

- removed (unless life threatening), when decon is beginning.
- f) No exceptions shall be made with victims going through decon.

9. ADDITIONAL EMS HAZ MAT GUIDELINES

- a) All Ems units and personnel that have not been given instruction by the Incident Commander shall stand by in the staging area.
- b) All EMS personnel shall wear proper protective equipment when working on and/or transporting victims.
- c) All communications related to medical information shall be broadcast on F2 (46.22), high band or other non-priority frequency.
- d) Standby crews shall assist in the Field Hospital, Triage area and evacuation center if needed.
- e) No EMS personnel shall be permitted to enter the Hot/Warm Zone.
- f) Accurate treatment records shall be kept at all times.
- g) Ems personnel coming in contact with contaminated materials or contaminated victims shall have a medical check up.

***Always review, upgrade and exercise this plan yearly.
A Post incident analysis should be conducted after each Haz
Mat Team response.***

WEAPONS OF MASS DESTRUCTION (WMD) **CHEMICAL, BIOLOGICAL OR RADIOACTIVE**

(Including Anthrax)

Whenever the Delaware County Hazardous Materials Response Team is requested to respond to a "Weapons of Mass Destruction" (WMD) threat, the following guidelines will be followed:

1. Establish command and follow other standard operating procedures as outlined in the Delaware County Hazardous Materials Response Team SOG's.
2. Secure scene and begin evacuation (minimum 300' in each direction) if necessary.
3. Establish Hot, warm and cold zones.
4. Prepare for gross decontamination using mild soap & water solution.
5. Determine the extent of contamination. Further evacuation if needed.
6. Control and/or isolate the hazard.
7. Contact the FBI and treat incident as a Federal Hazardous Materials Crime Scene. Notify Erie County M.E.R.S. Control at (716) 898-3696 for dispatch of a Biological Threat Mitigation Strike Team.
8. Protect responders from anthrax spores by using splash protection, gloves and a full-face HEPA air filter (level C) or SCBA (level B) protection.
9. Decontaminate victims or responders with a mild soap and water solution or a 1:10 dilution of household bleach (5.25% sodium hypochlorite solution). This solution should only be used if there is confirmation of the anthrax agent and an inability to remove the material through a soap and water decontamination.

Technical Assistance

Technical assistance can be provided by contacting;

1. Local Health Department
2. National Response Center (800) 424-8802
3. Chemical/Biological help line (800) 368-6498
4. Radiologic Hotline (24 hour) (202) 586-8100
5. NYS SEMO (888) 697-7360

The use or threatened use of a weapon of mass destruction (including anthrax) is a violation of federal law and should be reported to the FBI immediately.

Anthrax Information

Anthrax (*Bacillus anthracis*) is an acute infectious disease caused by spore forming bacteria usually affecting warm blooded animals. The spread of anthrax from direct person to person contact most likely does not occur. Anthrax can be spread in three different ways: by contact with the anthrax spore through a cut or abrasion on the skin, by inhaling the anthrax spores or from consuming contaminated meat. There have never been any reports of individuals contracting anthrax from clothing soiled with anthrax spores. Symptoms of anthrax inhalation can begin as early as 24 hours after breathing the spores. Initial symptoms may include fever and chills, cough, chest soreness, chest pain, noisy breathing, weakness and lethargy. If treated before symptoms become severe, anthrax is treatable with common antibiotics. Therefore, it is very important to observe anyone with possible exposure for any of the above symptoms. The anthrax spore has a very short life span once airborne.