HAZMAT Response Documentation Kit

2019

Location/Area: _____

Wind From the: _____

Evacuation Location: _____

Hazmat Team Assignments

Incident Commander: _____
Safety Officer: _____
Operations Officer: _____
Primary Responder: _____
Primary Responder: _____
Primary Responder: _____
Primary Responder: _____
Back-up Responder: _____
Back-up Responder: _____
Back-up Responder: _____
Back-up Responder: _____
Decon Officer: _____
Decontamination: _____
Decontamination: _____
Decontamination: _____
Decontamination: _____
Staging/Equipment Officer: _____
Equipment: _____
Equipment: _____
Equipment: _____
Equipment: _____
Logger: _____
Communications: _____
First Aid: _____
First Aid: _____
First Aid: _____
Security: _____
Security: _____
Security: _____
Security: _____
Agency Liaison: _____
Press Liaison: _____

HAZMAT Response Documentation

Date: _____ Location**:** _____

_____

Description of Practice: _____

_____

Response Team:

Name	Team positions	Signature

HAZMAT Jump Start Plan™

Evacuate
- ☐ **Check wind direction and determine safe places of refuge**
- ☐ **Evacuate affected people**
- ☐ **Account for people (employees, contractors, visitors, truck drivers, etc)**

Isolate
- ☐ **Control the flow - stop the flow as close to the leak as possible without risking exposure (refer to specific pre-planning information)**
- ☐ **Secure the area - set up security (plant and spill area)**

Evaluate
- ☐ **Determine extent of the hazard (fire, exposure, injury, property, product)**
- ☐ **Assess the risks vs. the benefits**
- ☐ **Refer to specific area pre-planning information:**
  - **Set command post**
  - **Set decontamination**
  - **Set hot, warm and cold zones**

Notification
- ☐ **Response team**
- ☐ **Management**
- ☐ **Federal - National Response Center - 1-800-424-8802**
- ☐ **State**
- ☐ **Local - LEPC, Fire, Police/Sheriff, Municipal water treatment**

Assign the Roles

Review the Pre-Entry Checklists

Conduct entry briefing

Execute plan

Decontaminate/cleanup
- ☐ **Victims**
- ☐ **Responders**
- ☐ **Contaminated area**

Terminate
- ☐ **Restore Hazmat equipment to pre-incident condition**
- ☐ **Critique the response with ALL involved parties**
- ☐ **File necessary reports (Federal, State, Local)**
- ☐ **Complete incident investigation report**

Release Drawing

Sketch of Spill Area (include Hot, Warm and Cold Zones, Command Post Location, Decontamination Location, First Aid Area, Security placement, etc.)

Primary Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Ammonia *(Liquid, suction, hot gas)*		
Other Chemicals:		

Primary Utility Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Utilities *(gas, water, steam, etc.)*		

Secondary Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Ammonia *(Liquid, suction, hot gas)*		
Other Chemicals:		

Secondary Utility Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Utilities *(gas, water, steam, etc.)*		

Third Back-up Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Ammonia ***(Liquid, suction, hot gas)***		
Other Chemicals:		
Third Back-up Utility Cut Offs(from a safe area)		
Description	**Location**	**Identification**
Utilities ***(gas, water, steam, etc.)***		

Ignition Sources	
Type	**Location**

Confinement
Equipment that needs to be shutdown:
Doors (open/close):
Fan placement
Air Make-up Units (on/off):
Damming , Diking and Sealing:
Domestic Sewers/Drains: Storm Water
Other Considerations:

Special Equipment: Drain covers, door keys, pillows, socks, etc.
Location:

Other Hazardous Chemicals in the area			
Chemical	**Location**	**Container Type**	**Chemical Quantity**

Entry & Operational Hazards (spills, trips, hang-ups, limited access, etc)	
Type	**Location**

Setup
HAZMAT Team Assembly Location (Identify, then mark map on page_____)

Command Post Location:

Primary Hot Zone Entrance:
Primary Hot Zone Exit:
Alternate Hot Zone Exit:

Decontamination Location:
Decontamination Methods:
Responders:
Wettable Equipment:
Non-Wettable Equipment:
Victims - Normal:
Victims - Emergency:

Decontamination Water Source:

Decontamination Water Neutralization Method:
Decontamination Water Disposal Method

First-Aid Locations:
HAZMAT Team Vitals:
Victims:
Transportation(ambulance)

Concentration Monitoring Locations:
Facility
Hot Zone
Warm Zone
Cold Zone

Security Locations (Identify then mark map on page____)
Cold Zone:
Warm Zone:
Hot Zone:
Facility:

Media Meeting Location

Outside Agencies Meeting Location
Police/Fire: etc.
Local:

Contaminant Pathway Concerns
How will the chemical get offsite? Air: ☐ Sewer: ☐ Storm Water: ☐ Other: ☐
Who will be affected?

Clean-up Methods
Check appropriate method**:**
Primary
Water - Water source/delivery method:
Ventilation - Ventilation fan placement:
☐ Forced Draft / ☐ Induced Draft
Neutralization - Chemical source/delivery method:
Back-up
Water - Water source/delivery method:
Ventilation - Ventilation fan placement:
☐ Forced Draft / ☐ Induced Draft
Neutralization - Chemical source/delivery method
Trace
Water - Water source/delivery method:
Ventilation - Ventilation fan placement:
☐ Forced Draft / ☐ Induced Draft
Neutralization - Chemical source/delivery method

Equipment that needs to be shutdown/turned on:

Doors (open/close):
Fan placement (sealing doors, etc):
Air Make-up Units (on/off):
Damming , Diking and Sealing:
Domestic Sewers/Drains/Storm Water:
Other Considerations and/or Special Equipment:

Suggested
Emergency Response Equipment List

The following is a list of some of the major items recommended for an emergency response team:

Incident Commander/Safety/Operations

- ☐ Emergency Response Plan
- ☐ Drawings of the facility
- ☐ Piping and Instrument Diagrams (P&IDs)
- ☐ Report forms
- ☐ Checklists
- ☐ 3 clipboards
- ☐ 4 stopwatches (one for each responder)
- ☐ Lots of pens, pencils, pads of paper
- ☐ 2 Orange safety type vests
- ☐ 1 Planning Table
- ☐ 1 radio for IC (additional for Safety Officer if desired)
- ☐ Cell phone
- ☐ Keys or swipe card (Hazmat equipment, Engine room)

Responders

- ☐ 5 Self Contained Breathing Apparatuses (SCBAs)
- ☐ 5 to 10 spare air tanks
- ☐ 5 Totally encapsulated “Level A” suits (appropriate sizes)
- ☐ 5 Emergency escape knives
- ☐ 8 wipe cloths for inside of “Level A” suits
- ☐ 6 Sets of chemical boots (steel toed, steel shanked, sized appropriately)
- ☐ 6 Cool vests for responders and decontamination
- ☐ 6 "Cool Ban" type neck coolers
- ☐ 2 pair of cryogenic gloves (sized to go over responder suit gloves)
- ☐ 5 radios (with 5 sets of ear mikes and push to talk (PTT) interfaces)
- ☐ 5 Hearing protectors (ear muffs)
- ☐ Benches or stools for the responders
- ☐ 5 Training suits (appropriate sizes)
- ☐ 6 Pair of chemical resistant gloves
- ☐ 1 Chemical sampling device low range
- ☐ 1 Chemical sampling device high range
- ☐ 6 Flashlights
- ☐ 4 Hard Hats (optional) with chin straps

Decontamination

"Level B" Station: PPE

- ☐ 4 "Level B" Splash type suits (appropriate sizes)
- ☐ 3 Self Contained Breathing Apparatuses (SCBAs)

"Level C" Station: PPE

- ☐ 4 "Level C" Splash type suits (appropriate sizes)
- ☐ 3 Air purifying respirators
- ☐ 3 Spare canisters or pairs of cartridges

"Levels B and C": General

- ☐ 4 Sets of chemical boots (steel toed, steel shanked, sized appropriately)
- ☐ 2 cool vests
- ☐ 4 "Cool Ban" type neck coolers
- ☐ Decontamination station or two rinse pools
- ☐ Spray wands
- ☐ 4 Five-gallon buckets
  - ☐ 2 for a soap solution
  - ☐ 2 for decontamination of tools
- ☐ Liquid Soap
- ☐ Brushes
- ☐ Water hoses

First Aid

- ☐ 1 “Stokes” type stretcher
- ☐ 1 First aid kit
- ☐ 2 Thermometers (quick response)
- ☐ 2 Heart monitors with finger clips (optional)
- ☐ 1 Blood pressure measurement device (electronic or manual - optional)
- ☐ 1 Water cooler with cups
- ☐ 8 "Cool Ban" type neck coolers
- ☐ List of base vitals
- ☐ Cool packs or ice bags for cool vests (6 vests total)
- ☐ Emergency transportation
- ☐ SDS for chemicals

Equipment

- ☐ 1 Set of orange safety type vests
- ☐ 2 Positive pressure fans
- ☐ 2 Rolls each of barrier tape (hazardous materials) hot, warm, cold zone
- ☐ 4 Barrier tape stands
- ☐ Tarps or easy ups for shade for response team
- ☐ Tool bag
- ☐ Repair tools
- ☐ Plugging, patching and diking materials
- ☐ Plugs/covers for drains
- ☐ Ladders
- ☐ Suit pressure tester
- ☐ Extra chemical sampling pump pull tubes:
    - ☐ Portable chemical detection equipment
    - ☐ Low range tubes

Clean-up /Neutralization supplies

- ☐ Chemical shovels
- ☐ Absorbent materials
- ☐ 2 gallons of vinegar for neutralization
- ☐ pH paper or pH meter
- ☐ Buckets, barrels, etc., for disposal

Other optional equipment

- ☐ Emergency generator (quiet)
- ☐ Emergency lights (telescoping)
- ☐ Canopy tent
- ☐ Electric fans for cooling of personnel
- ☐ Electrical cords
- ☐ Blankets
- ☐ Sump pump for decontamination basin
- ☐ Drain covers/plugs
- ☐ Containment dikes
- ☐ Cart for transporting equipment

Response Team Vitals

(Blood Pressure Limits - 160/100 Temperature limit - 100F)

					Base Line					Pre-Entry							Post Entry					
Responder, Decontamination or other team member name	Boot Size	Suit Size	Mask Size	Spectacle required? Y or N	Pulse	Temp	Blood Pressure	Weight	Date	Max Allowable Pulse (see table)	Pulse	Temp	Blood Pressure	Weight	Time	Date	Pulse	Temp	Blood Pressure	Weight (Body Water Loss)	Time	Date

1. **Heart Rate:** The calculation for the maximum allowable heart (pulse) rate:

Maximum Allowable Heart Rate			
Max Heart Rate = (220-age) X .7 *(Hazardous Materials Response Handbook)*			
Age	**Max Heart Rate**	**Age**	**Max Heart Rate**
18	141	45	123
19	141	46	122
20	140	47	121
21	139	48	120
22	139	49	120
23	138	50	119
24	137	51	118
25	137	52	118
26	136	53	117
27	135	54	116
28	134	55	116
29	134	56	115
30	133	57	114
31	132	58	113
32	132	59	113
33	131	60	112
34	130	61	111
35	130	62	111
36	129	63	110
37	128	64	109
38	127	65	109
39	127	66	108
40	126	67	107
41	125	68	106
42	125	69	106
43	124	70	105
44	123		

2. **Temperature:** Maximum body temperature greater than **100.4 °F.**
   (OSHA Technical Manual Sec III, Ch. 4)

3. **Blood Pressure:** the blood pressure has two components. They are the systolic (higher number) and diastolic (lower number) pressure. The limits for these, as used by several fire departments are:

   Systolic-160 Diastolic-100 *(Please check with your local FD for your state limits)*

4. **Body Water Loss:** Measure the end users weight on a scale accurate to plus or minus 0.25 pounds prior to any response activity. Compare this weight with his/her normal body weight to determine if enough fluids have been consumed to prevent dehydration. Weights should be taken while the end user wears similar clothing. The body water loss should not exceed 1.5% of the total body weight loss from a response. *(OSHA Technical Manual Sec III, Ch. 4)*

Remember: If any of the above parameters are exceeded the responder, decontamination person or other person must not suit up for at least **8 hours!**

LOG OF CONCENTRATION READINGS:

Time	Location	Reading

Outside Support Attendees Log

Federal Agencies

Name	Title	Agency	Arrival Time	Departure Time

Logger- Entry Time Keeping Sheet

Names:

Responder #1_____ Backup #1_____ Decon #1_____

Responder #2_____ Backup #2_____ Decon #2_____

Responder #3_____ Backup #3_____ Decon #3_____

Responder #4_____ Backup #4_____ Decon #4_____

Members Cleared for Entry/decon by first aid (yes, no):

Responder #1_____ Backup #1_____ Decon #1_____

Responder #2_____ Backup #2_____ Decon #2_____

Responder #3_____ Backup #3_____ Decon #3_____

Responder #4_____ Backup #4_____ Decon #4_____

Time Going ON Air:

Responder #1_____ Backup #1_____

Responder #2_____ Backup #2_____

Responder #3_____ Backup #3_____

Responder #4_____ Backup #4_____

Alert the Incident Commander after the first Member has been on air for 5 minutes and then every 5 minutes afterward.

Time Going OFF Air:

Responder #1_____ Backup #1_____

Responder #2_____ Backup #2_____

Responder #3_____ Backup #3_____

Responder #4_____ Backup #4_____

Logger Notes:

Critique of Emergency Response Operations

Date: _____ **Time:** _____

Evacuation and Accountability

Topic		Comments/Changes
Were the plant personnel evacuated and accounted for per the emergency action plan?	☐ ☐ ☐ Y/ N/ NA	
Was the wind direction determined before plant personnel were evacuated?	☐ ☐ ☐ Y/ N/ NA	
Were the safe distances and places of refuge discussed during the evacuation?	☐ ☐ ☐ Y/ N/ NA	
Were the safe distances and places of refuge adequate?	☐ ☐ ☐ Y/ N/ NA	

Notification

Topic		Comments/Changes
Were outside agencies required to be notified?	☐ ☐ ☐ Y/ N/ NA	
Were the outside agencies contacted within the proper time limit?	☐ ☐ ☐ Y/ N/ NA	
Was management notified?	☐ ☐ ☐ Y/ N/ NA	
Were outside agency meeting locations designated?	☐ ☐ ☐ Y/ N/ NA	

PRE-ENTRY MEETING:
Response Team

Topic		Comments/Changes
Were the following items discussed?		
Location of electrical cutoffs?	☐ ☐ ☐ Y/ N/ NA	
Location of isolation valves?	☐ ☐ ☐ Y/ N/ NA	
Location of utility isolation valves?	☐ ☐ ☐ Y/ N/ NA	
Location of the Hot, Warm and Cold Zones?	☐ ☐ ☐ Y/ N/ NA	
Extent of the Hot Zone?	☐ ☐ ☐ Y/ N/ NA	
How to keep the Hot Zone from spreading?	☐ ☐ ☐ Y/ N/ NA	
Location of the Command Post?	☐ ☐ ☐ Y/ N/ NA	
Location of first aid area?	☐ ☐ ☐ Y/ N/ NA	
Ventilation system?	☐ ☐ ☐ Y/ N/ NA	
Containment methods?	☐ ☐ ☐ Y/ N/ NA	
Communication methods?	☐ ☐ ☐ Y/ N/ NA	
Clean-up methods?	☐ ☐ ☐ Y/ N/ NA	
Selection of PPE?	☐ ☐ ☐ Y/ N/ NA	
Radio communication protocol?	☐ ☐ ☐ Y/ N/ NA	

Responders

Topic		Comments/Changes
Were the following items discussed?		
Additional hazardous chemicals in area?	☐ ☐ ☐ Y/ N/ NA	
Physical hazards in area (spills, trips, hang-ups, etc.)?	☐ ☐ ☐ Y/ N/ NA	
Concentration measurement methods?	☐ ☐ ☐ Y/ N/ NA	
Containment methods?	☐ ☐ ☐ Y/ N/ NA	
Maximum allowable concentration requiring exit from area?	☐ ☐ ☐ Y/ N/ NA	
Alternate exits from Hot Zone?	☐ ☐ ☐ Y/ N/ NA	

Decontamination

Topic		Comments/Changes
Were the following items discussed?		
Warm Zone/Decontamination Location?	☐ ☐ ☐ Y/ N/ NA	
Decontamination methods?	☐ ☐ ☐ Y/ N/ NA	
Disposal methods and procedures?	☐ ☐ ☐ Y/ N/ NA	
Communication methods?	☐ ☐ ☐ Y/ N/ NA	

Security

Topic		Comments/Changes
Were the following items discussed?		
Security of spill zone?	☐ ☐ ☐ Y/ N/ NA	
Security of hot, warm and cold zones?	☐ ☐ ☐ Y/ N/ NA	
Outside agency meeting locations/coordination?	☐ ☐ ☐ Y/ N/ NA	
Communication methods?	☐ ☐ ☐ Y/ N/ NA	

EXECUTION / ENTRY

Topic		Comments/Changes
Prior to entry, were the following verified?		
Security was ready?	☐ ☐ ☐ Y/ N/ NA	
Decontamination was set up and ready?	☐ ☐ ☐ Y/ N/ NA	
Personnel had been medically checked and OK'd?	☐ ☐ ☐ Y/ N/ NA	
Primary responders were ready?	☐ ☐ ☐ Y/ N/ NA	
Backup responders had masks on and are ready?	☐ ☐ ☐ Y/ N/ NA	
Backup responders were in the warm zone?	☐ ☐ ☐ Y/ N/ NA	
Final radio check had been made?	☐ ☐ ☐ Y/ N/ NA	

POST MEETING

Topic		Comments/Changes
Did site security perform as designed?	☐ ☐ ☐ Y/ N/ NA	
Was 1/4 of the LEL ever measured?	☐ ☐ ☐ Y/ N/ NA	
Was emergency medical treatment and first aid available **before** and **during** the response?	☐ ☐ ☐ Y/ N/ NA	
Was the PPE adequate for the emergency response operation?	☐ ☐ ☐ Y/ N/ NA	
Was the Command Post correctly located?	☐ ☐ ☐ Y/ N/ NA	
Did the Command Post have to be relocated for any reason?	☐ ☐ ☐ Y/ N/ NA	
Was the Incident Command System implemented correctly?	☐ ☐ ☐ Y/ N/ NA	
Were **pre-entry** and **post-entry**, blood pressures, temperatures and pulse rates taken for each responder and decontamination personnel?	☐ ☐ ☐ Y/ N/ NA	
Were blood pressures, temperatures and pulse rates for each responder and decontamination personnel compared against their **baseline** numbers?	☐ ☐ ☐ Y/ N/ NA	
Did communications function properly?	☐ ☐ ☐ Y/ N/ NA	
Was the "buddy system" employed at all times?	☐ ☐ ☐ Y/ N/ NA	
Were air samples taken at pre-determined locations?	☐ ☐ ☐ Y/ N/ NA	
Did the sampling device perform adequately?	☐ ☐ ☐ Y/ N/ NA	

Items to be replaced/purchased

_____

_____

_____

_____

Actions items/Comments

_____

_____

_____

_____

