



# **Training Manual**

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## History of Training Manual Updates

<b>Date Updated</b>	<b>Page(s) Updated</b>	<b>Update Description</b>
03/14/02	Page 17 (Notes under Question 11)	Added description of what constitutes a school, hospital, and business or other industry.

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# **HSEES Training Manual**

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## **INTRODUCTION**

The Hazardous Substances Emergency Events Surveillance (HSEES) Training manual is designed to provide state coordinators with specific instructions to successfully input data for the HSEES system. This manual provides explanations and instructions for each question in the system. If, however, you are unable to answer a question after consulting this manual, contact your ATSDR technical advisor.

## **RESPONSIBILITIES OF STATE HEALTH DEPARTMENTS**

In conducting activities to achieve the purpose of HSEES, each state is responsible for conducting the activities listed below:

1. Develop a mechanism for state health department notification of events in a timely manner. This includes developing formal or informal agreements with all agencies within the state that are notified of hazardous substances emergencies. These agencies may include, but are not limited to, state police and fire departments, environmental agencies, and various offices of emergency government. The agreements should provide the participating state health departments with notifications of hazardous substances emergencies shortly after the event occurs.
2. Investigate the emergency event by gathering information from various sources. Sources may include, but are not limited to, those agencies mentioned in item 1 and other relevant Federal, state, local, and private agencies in keeping with the surveillance protocol.
3. Establish and maintain an appropriate and timely schedule of gathering and entering information into the web-based system in keeping with the HSEES protocol.

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## DATA COLLECTION

The following two sections provide instructions to complete the data collection form. The first section lists general instructions. The second section discusses the intent and instructions for each question of the data collection form.

### ***General Instructions***

Information may be directly entered into the HSEES system from documentation. Print a copy of the HSEES record and attach it to the documentation for storage. Completing a hardcopy of the data collection form is no longer required.

Always use the version of the data collection form with the current OMB number and expiration date.

See the *HSEES System Quick Reference Guide* for instructions to use the HSEES system.

Complete all applicable questions for the event. In the HSEES system, the fields for Questions 3, 4, 8, and 10 are required fields.

Write down or directly enter information immediately. Do not rely on memory to complete the data entry at a later time.

Verify information (e.g., repeat information back to the notification contact and verify spelling).

Use leading zeros for dates when necessary.

Verify that the answer is within the allowable range for each question.

Leave questions blank when the skip pattern allows you to skip a question or if the answer is unknown.

Use the Other option sparingly and only when none of the available options are appropriate. For questions where the Other option is available, do not repeat or combine any of the response options listed for that question in the Other option. For example, one or two entries are allowed in certain questions. When you select Other, enter descriptive text in the adjacent blank field. The description cannot include terms describing the other available options. Enter the descriptive text using all uppercase letters.

Use the hardcopy and supporting documentation to assist in completing the data entry in the web-based system.

## Question-Specific Instructions

### Event Identification and Notification

**Figure 1: Notification Tab Screen**

#### **Question 1 Record identification.**

**Intent:** Identifies each event in the computer files by a specific code number. This number identifies each unique event and is used to link the records of events from the different data files. Use the event identification number to recall an event in order to view or edit the record.

**Instructions:** The HSEES system automatically generates a 10-character identification code for the event in the Event identifier field (Figure 1) when you save the event. The first two digits of the event identifier equal the state abbreviation where the event occurred. The next four digits equal the year in which the event occurred. The last four digits equal a sequential number.

Write this number into your written documentation.

**Notes:** Never reuse event identification numbers, even if the previous record using that identification number was deleted. If a record is a duplicate, delete it.

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If this is a non-qualifying event, select No for Question 3.

## **Question 2**    **Date that this event was entered in the HSEES system.**

**Intent:**            Indicates the date when the event was entered in the HSEES system.

**Instructions:** The current system date (mm-dd-yyyy format) is automatically entered in the Date entered system field (Figure 1) when the event is entered into the HSEES system. Write this date into your written documentation.

**Notes:** This date is not necessarily the date when the event occurred or the date when you were notified of the event.

Initial entry of events should commence within a day that the state health department is notified. Events may no longer be entered in batches. The first time that you enter data, include, at a minimum:

- whether the event meets the HSEES case definition (Question 3)
- the event date (Question 8)
- the event state (Question 11)
- the event type (Questions 15 & 17)

Change the selection for Question 3 if you later determine that your initial choice was incorrect.

## **Question 3**    **Based on the HSEES protocol, is this event eligible to be entered into the surveillance system?**

An event is a release of any hazardous substance, except petroleum, in an amount that needs to be removed, cleaned up, or neutralized according to Federal, state, or local law. Threatened releases of such substances are also included if the threat led to an action (e.g., evacuation) to protect public health.

**Intent:**            Determines the eligibility of an emergency event in the surveillance system.

**Instructions:** Select the Yes or No option in the Eligible for entrance to surveillance system: field (Figure 1).

If you select the No option, select one of the following reasons that the event is not eligible in the adjacent Why field (Figure 1):

- [1] Hoax
- [2] Petroleum
- [3] Small quantity

- [4] Chronic
- [5] Insufficient information
- [6] Not a hazardous substance
- [7] Controlled/legal/permitted release
- [8] Duplicate

**Note:** A hazardous substance includes, but is not limited to, any element, substance, compound, or mixture including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism either directly from the environment or indirectly by ingestion through the food chain, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malformations including malformations in reproduction, or physical deformation in such organisms or their offspring. The term hazardous substance does not include petroleum such as crude oil or any fraction thereof that is not otherwise specifically listed or designated a hazardous substance. Hazardous substances include chemical, biological, radiological, and medical materials.

## **Inclusion Requirements:**

- Include **acute, emergency releases** (i.e., short-term, sudden, unexpected, uncontrolled, serious events requiring immediate action). For example, include a release of PCBs from a transformer struck by lightning or a car. Use 72 hours as a rule of thumb, an event lasts longer than 72 hours to be chronic.
- If no state or local laws requiring clean up exist, default to Federal laws. As a rule-of-thumb, include events involving a minimum of one gallon or ten pounds of a substance, unless an extremely hazardous substance was released. If an extremely hazardous substance was released, the reportable quantity can be any amount.
- Include **events where the hazardous substance was not removed, cleaned up, or neutralized** because such actions were not possible, yet the substance posed a public health threat and would have been required to be cleaned up if possible (e.g., releases of gases, which cannot be cleaned up, or some releases into water).
- Include **events involving both the release of a case definition substance and a petroleum product** (e.g., a truck carrying hazardous substances rolls and 100 gallons of diesel fuel is spilled along with the other hazardous substances in the truck).
- Include **threatened releases** that meet qualifying criteria.

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- Include **pesticide events** when regulations are not followed or operator error occurs, such as application to the wrong location, in a wrong concentration or quantity, spills, neglecting to make appropriate changes to ventilation system, and inappropriate work practices.
- Include **intentional, illegal, and acute releases** of hazardous substances, such as the release of Sarin by terrorists. Similarly, deliberate exposure of individuals to pepper spray would be an event except when the exposure is controlled, legal, and permitted such as by law enforcement officials.
- Include **fires in private residences** if an unusually large quantity of a hazardous substance or a hazardous substance that is not usually present in private homes was in the house prior to the fire (e.g., fire at a house containing an unusual quantity of old PCB-containing transformers because the PCBs would not normally be present in this quantity; fire in a house where hydrazine [rocket fuel] was present because hydrazine is not normally present in homes).
- Include events at **private homes** if they meet HSEES criteria, even when they involve consumer products such as drain cleaner. For example: (1) children who find and contaminate themselves and other surfaces with elemental mercury, or (2) circulation via the ventilation system in an apartment building of vapors from a spilled household pesticide.
- Include events where a hazardous substance is released from an **overflow and/or containment structure** to the general environment or workers were exposed either during release, chemical recovery, or cleanup. Also include threatened releases from the containment structure if they meet the criteria for a threatened event.
- Include a **small freight package** (e.g., UPS, FedEx) incident if the identity of the hazardous substance is known, and regulations require that the hazardous substance be removed, cleaned up, or neutralized. Using kitty litter or other absorbent material to soak up a hazardous material for removal does qualify as cleanup; hence, small spills of hazardous materials do qualify as events if they are cleaned up in this manner.
- Include releases associated with **illegal drug laboratories** when the HSEES criteria are met. The mere existence of these labs does not qualify them as an event. Include them when a hazardous substance was released within 72 hours of the authorities initiating its investigation, and removal, cleanup, or neutralization was required or if a threatened release occurred. Determining whether or the release occurred within 72 hours can be difficult; however, if there is no apparent evidence of a release, but

responders suffered injuries while entering the premises, this is evidence of a release and should be included. If there is absolutely no evidence of a release of chemicals or a public health action, such as EPA performing a clean-up, then exclude it. If it is not known that a release or a public health action has occurred (and every attempt has been made by the HSEES state to find this out), and no one was injured, then exclude it. If the primary issue is that there was a known release, but you don't know what the chemical was and you have attempted to find out what the specific chemical was, then type in Meth Lab Chemical NOS in the Selected Name field (see Figure 7).

- Include incidents involving **suicide** and attempted suicide only when the method was non-medicinal, persons other than the individual attempting suicide were exposed, and the hazardous substance had to be removed, cleaned up, or neutralized. The chemical must have been released to the environment, not confined to a bottle or other container. Include suicides where other persons who found the body or cleaned up the hazardous material were exposed, or if there was secondary contamination such as to emergency services or medical personnel. Do not include suicide from carbon monoxide gas if no one else is exposed once the source is shut off, and no clean up is required. For example, a suicide by chloroform in an enclosed space where responders were exposed, and the chloroform had to be cleaned up from contaminated surfaces, should be included.
- Include **explosions** that are uncontrolled or illegal, and where the explosion caused a dispersal of hazardous substances.

## Exclusion Requirements:

- Do not include **chronic releases** (e.g., releases occurring over a period of time or releases that do not meet the 72-hour rule for actual and threatened releases). For example, do not include a PCB leak at a transformer that has been occurring for years or PCBs found in a landfill when it is not known how long they have been there. These are chronic, non-emergency situations, and do not qualify as HSEES events. Do not include the **long-term or continuous release** of hazardous substances above permitted quantities (e.g., smokestack or waste water effluent above regulatory amounts). While these may constitute public health problems, they are chronic events, and thus not eligible for HSEES. Acute, unpermitted emissions that are uncontrolled or illegal, cause an emergency situation, and need to be removed, cleaned up, or neutralized could qualify as events.
- Do not include releases where the only substance involved was petroleum (crude oil, kerosene, gasoline, or other petroleum fuels).

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- Do not include events where the **substance cannot be identified or categorized**. However, include events where the substance can be classified into a substance category, such as acid, pesticide, methamphetamine production chemicals, or paint “not otherwise specified” (NOS).
- Do not include **pesticide drift** (i.e., aerial application that drifts beyond the target area) when it is properly applied, but due to unexpected conditions, such as a change in wind conditions, it drifted.
- Exclude **house fires** where no unusually hazardous substance was present before the fire (e.g., a house fire that is unusually difficult to put out due to the presence of polystyrene insulation or styrofoam packaging peanuts, even though the smoke was thick and noxious, firefighters were decontaminated, or neighbors were evacuated, because the polystyrene/styrofoam was not hazardous before the fire).
- Exclude **fires at other locations** if there was no hazardous substance present before the fire (e.g., a fire at a lumberyard because no hazardous substances were present before the fire; a fire where the only substances present before the fire was petroleum; a fire where plastics and rubber had been dumped long before because the substances present before the fire were not hazardous and had been there a long time; tire fires because no hazardous substances were present before the fire).
- Exclude spills contained within a **closed overflow and/or containment system** that is operating as designed and intended, there is no release to the general environment including gases or vapors, and no one was exposed even during any cleanup. These chemicals may need to be recovered and recycled from the containment structure, but this is not considered cleanup if the chemicals remain contained within closed systems.
- Do not include **small freight package** incidents involving stained packages where no apparent spill occurred, unless a hazardous substance leaked and the incident meets the case definition (e.g., an emergency situation requiring removal, clean-up, or neutralization). Stained packages are often over packed for tidiness. This action does not qualify as cleanup, so over packing by itself would not normally qualify an incident as an event.
- Do not include **medical mishaps** including misadministrations of medical treatments or diagnostic tests (e.g., radiation or pharmaceutical treatment to the wrong patient or in excessive doses) or deliberate internal (controlled) **poisonings** (e.g., date-rape drug).

- Do not include **explosions** where essentially no chemical exposure occurred (e.g., the hazard was the physical force of wind velocity). For example, exclude events where the only chemical listed is dynamite. The logic is that exposure to nitroglycerin in an unexploded stick of dynamite is minimal, and the purpose of HSEES is to track exposures to hazardous substances.
- Do not include **hoaxes**. A hoax is a situation where a false claim is made that a hazardous substance is present. For example, a letter is sent containing a message that the envelope contains anthrax bacteria, but is subsequently determined that no anthrax is present. Hoaxes are not events. If you desire to retain hoaxes for state analyses, select the No option for Question 3. Do not code hoaxes as threatened events because no hazardous substances are present.

## **Miscellaneous Issues:**

**Multiple events in a short time period.** If more than one release occurs of the same chemicals from the same source within the same facility on the same day and each release is distinct (e.g., the release started, was controlled and stopped, then happened again), enter each release as a separate event even if the company considers them one incident.

## **Question 4 Were the substances associated with this event**

**Intent:** Determines if:

- all substances were actually released into the environment
- all substances were threatened to be released and no actual release occurred
- some substances were released into the environment and others were threatened to be released

**Instructions:** The correct option is automatically entered after you complete the questions for a substance (Figures 5, 6, and 7).

## **Question 5 Notification contact. (Who first notified the state health department?)**

**Intent:** Identifies the state health department's initial or primary source of information concerning the event.

**Instructions:** Select one of the following in the Notification source field (Figure 1):

[0] Media

[1] On scene commander/incident commander or staff (e.g., fire, police, EPA)

[2] Health agency *other than the state health dept*

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- [3] Medical facility (or poison control center)
- [4] Environmental department or division
- [5] Emergency government/emergency services
- [6] Citizen or citizen's group
- [7] Owner/operator of facility, vehicle, or vessel
- [8] Other
- [A] DOT/HMIS and ERNS
- [B] Other government agency
- [C] Other program within state health department

If you select Other, type the person's affiliation in the adjacent field.

**Notes:** In most cases, the initial source are records kept by another state agency, such as the Environmental Protection Agency designated to receive the first reports of spills. In other cases, someone may call or contact the state HSEES coordinator directly, or there may be a story in the news media.

Include media if you initially learned about the event through the news media.

Include only those responders who are part of the onsite team in On scene commander/incident commander or staff.

Include environmental department databases in Environmental department or division.

Include NRC, 911 operator, and other responders such as fire and police who are not part of the onsite team in Emergency government/emergency services.

Include Department of Transportation, DOT's Hazardous Material Information System, and EPA's Emergency Response Notification System in DOT/HMIS and ERNS.

Include Federal, state, and local agencies such as Labor and Industry and the Department of Agriculture, Trade and Consumer Protection in Other government agency.

## **Question 6 Contact information**

**Intent:** Indicates the full name, agency, address, and telephone number of the person who provided the initial information concerning the event or the person to contact for follow-up.

**Instructions:** Since the Notification Contact field (Figure 1) is encrypted, you may enter whichever is better for your purposes, but try to be consistent. Type or select the appropriate information in the following fields:

Name field - name of the contact person

Agency field- agency name associated with the contact person

Street field- street address (do not use a Post Office box) of the contact person

City field - city in which the street address is located

State field - 2-character state abbreviation in which the city is located

County field - county in which the street address is located

Zip code field - 5-digit ZIP associated with the street address

Phone number field - area code and phone number of the contact person

Notes field - any additional information regarding the contact person

Verify that the information is correct by repeating the information back to the notification contact and verifying the spelling.

## Description of Event

**Figure 2: Description Tab Screen**

**Question 7** What was the date of this event?

**Intent:** Indicates the date when the event started.

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**Instructions:** Select or type the date (mm-dd-yyyy format) the event started in the Date of the event field (Figure 2). This is a required field. You must know the date when the event started.

## **Question 8 On what day of the week did this event occur?**

**Intent:** Indicates the day of the week when the event started.

**Instructions:** The day is automatically entered in the Day of the week the event occurred field (Figure 2) when you enter the date in the Date of the event field (Figure 2).

## **Question 9 What time did the event start?**

**Intent:** Indicates the exact time when the event started.

**Instructions:** Select or type in the exact time (using the 24 hour format (e.g., 15:59)) the event started in the Time of the event field (Figure 2). If the time is unknown, leave the field blank. Remember to enter the time that the event occurred, not the time when you were notified of the event.

The time range is automatically displayed in the adjacent field if you entered a time in the Time of the event field. If you did not enter a time, select one of the following:

- 00:01 am - 06:00 am
- 06:01 am - 12:00 pm
- 12:01 pm - 06:00 pm/12:01 - 18:00
- 06:01 pm - 12:00 am/18:01 - 24:00

**Notes:** Try to get the exact times, but if that is not possible use the range. Try not to leave both the exact time and time range blank.

## **Question 10 Event location**

**Intent:** Indicates the full name, address, and location where the event first occurred and a description of the industry involved.

**Instructions:** The name, street, and longitude/latitude in the Event Location field (Figure 2) are encrypted to ATSDR and can only be viewed by the state. Type or select the appropriate information in the following fields:

Name field - name of the location or the principal responsible party name. For example, (1) if a farmer was responsible for an accident, enter the farm name, or if the farm name is unavailable, enter the farmer's name. (2) if a truck driver was the responsible party, enter the company name of his employer. (3) if barrels were

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dumped in a field and the responsible party is not known, enter unknown-abandoned.

Census Code field - for Division of Health Studies employees only

Type of Industry field- type of industry (see Note below for additional instructions.) If the type is not known, enter unknown.

Street field- street address (do not use a Post Office box) where the event started. If the exact address is unknown, enter other locating information such as cross streets, highway mile marker, railroad crossing, etc.

City field - city in which the street address is located

State field - 2-character state abbreviation in which the city is located

County field - county in which the street address is located

Zip field - 5-digit ZIP associated with the street address

Longitude field - longitude in either degree-minutes-seconds or decimal degree format. The latitude and longitude given in the Toxic Release Inventory (TRI) database for fixed facilities is sometimes incorrect, so double-check these values.

Latitude field - latitude in either degree-minutes-seconds or decimal degree format. The latitude and longitude given in the Toxic Release Inventory (TRI) database for fixed facilities is sometimes incorrect, so double-check these values.

Were multiple locations contaminated during this event field - Yes or No option to indicate whether or not the event contaminated more than one location.

**Notes: Recording industry type.** Record a brief description of the type of industry involved in the event. Industry is defined as the type of activity that is carried out at a person's place of work (e.g., factories, stores, offices, farms, and construction sites). Industries are classified into activities such as manufacturing, distribution, or services. Type the overall type of activity of the facility, not the part of the facility where the event occurred. Use business directories that describe companies within your state to record industry type, if needed.

Enter the Standard Industrial Classification (SIC) if it is readily available from a business directory, the company involved, or another reliable source. Do not attempt to actually code a business yourself. Enter the SIC code, if available, in the first four positions of the industry description.

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Make entries as specific as possible. For chemical manufacturing, identify the specific chemical being manufactured at that facility. If more than one chemical is manufactured, report the primary or major chemical or category of chemicals manufactured at that location. If unable to determine the primary chemical manufactured, use your best judgement. Call the company if necessary to acquire the necessary information. If possible, avoid entering chemical manufacturing as the type of industry because it is too general. Alkalies manufacturing or pharmaceutical manufacturing would be preferable, or even more specifically, sulfa drugs manufacturing.

For transportation events, determine the type of transportation company such as trucking, shipping, air cargo, or railroad. If a company is transporting goods for another company, list the transport company.

Be as specific as possible with agricultural industries because they are coded differently (e.g., crop farm, livestock farm, agriculture-related operation, or service).

Identify the type of industry in which a product is present. For example, distinguish among manufacturing, processing, wholesale sales, and retail sales. It is not sufficient just to record a product such as paper. Be as specific as possible in whether the product is being manufactured, processed, transported, warehoused, sold, etc. because they are coded differently.

Define health care locations and services as specifically as possible (e.g., hospital, laboratory, physician's office).

Be as specific as possible whether an entry for apartment refers to an individual apartment or the apartment complex, because they are coded differently.

Record lawn service company for that type of business. If the event involved a spilled herbicide, add that information second if there is room.

In some cases, it is not immediately obvious which industry to list, and a determination needs to be made before the above instructions on recording industry type can be implemented. In deciding which industry to list, it is still the facility as a whole, not a subactivity, that is coded. For example, bulldozers involved in the installation of a water line uncover and break buried vials of hazardous substances at a fairground, and subsequently learned that this location was formerly a military waste disposal area. Should the industry type be listed as fairgrounds, park, entertainment, waste site, military, or construction? The guiding principle is to code the industry most relevant to the immediate cause of the event. In this case, the immediate cause of the release was the bulldozing, which could be classified as water line construction. It is least relevant how the

land is currently being used (i.e., fairground), and it is less relevant that this ground was formerly a waste site.

Some events involve multiple locations. This could happen for any event that involves secondary contamination at a second location (e.g., hospital emergency room workers exposed to contaminated materials when a victim is brought in). It could also happen when a transportation event takes place over a distance (e.g., a moving truck spills over a number of miles), and different actions (e.g., contamination, injury, evacuation, clean up) occur at different locations. In these instances, describe the location of the original spill, even if it is over a long distance, and select the Yes option in the Were multiple locations contaminated during this event field. You can write a more detailed narrative of the event in the Comments section to reflect what really happened.

**Figure 3: Area/Factors Tab Screen**

**Question 11** Were any of the following within a ¼ mile of the event?

**Intent:** Determines the proximity of the event location in relation to the selected areas.

**Instructions:** Select Yes or No for as many of the following in the Where the following within a ¼ mile radius of the event field (Figure 3) that apply:

- Residence

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- School
- Hospital
- Nursing Home
- Licensed daycare
- Industry or other business
- Recreational area

**Notes:** Look for other resources in your state that may already collect this information. Use first hand account from the interview with the local emergency response person. If unknown, leave blank.

A school includes grades K - 12 only.

A hospital is for a true hospital.

An industry or other business includes post-secondary school (e.g. college, university, or technical school), any medical clinics (other than a hospital), and any other businesses or industries.

A recreational area is where people go as a pastime (e.g. movie theater, park, football stadium, or ice skating rink).

## **Question 12 What is the general land use in the surrounding area?**

**Intent:** Determines the type of area in which the event occurred.

**Instructions:** Select one or two of the following in the General land use in the surrounding area field (Figure 3):

- [0] Undeveloped area
- [1] Industrial area
- [2] Commercial area
- [3] Residential area
- [4] Agricultural area
- [A] Military facility/DOE/DOD
- [C] Recreational area

**Notes:** For all codes, describe the immediate surrounding area of the facility, not the actual facility. For example, if a school is in a residential area, select Residential or if the school is in a commercial area, select Commercial.

Include areas such as an empty lot, cemetery, field, undeveloped land, marsh, swamp, or ocean as Undeveloped.

Include areas such as a civilian airport, office building, hospital, college, or university as Commercial if they are in a commercial type area.

Include areas such as an army base, nuclear reserve, or military airport as Military facility/DOE/DOD.

Include a spill onto a railway, rail yard, or roadway as the general area surrounding the railway, rail yard, or roadway. For example, if a truck carrying hazardous materials turns over and the materials spill on the roadway, select the description of the general area surrounding the roadway.

**Question 13 What were the general weather conditions at the time of the event?**

**Intent:** Determines the weather conditions during the course of the event.

**Instructions:** Select one or two of the following in the General weather conditions field (Figure 3):

- [1] No extreme weather conditions
- [2] Rain
- [3] Snow, ice, sleet
- [4] Fog
- [7] High winds
- [8] Other
- [A] Weather Disasters (hurricane, tornado, flood)
- [B] Extreme heat
- [C] Extreme cold
- [D] Lighting

If you select Other, type descriptive text in the adjacent field.

**Notes:** If you select Other, do not use or combine any of the other listed options. Instead, select the listed option.

Select No extreme weather conditions if none of the other weather conditions were present or it can be reasonably assumed that they were not present.

Extreme heat includes temperatures above 90° F.

Extreme cold includes temperatures below 1° F.

High winds causing damage equivalent to a hurricane or tornado may be classified as a weather disaster.

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**Figure 4: Transportation/Fixed Facility Tab Screen**

## **Question 14** What type of event was this?

**Intent:** Determines if this incident was a transportation event, as opposed to an event at a fixed facility.

**Instructions:** Select one of the following in the What type of event is this field (Figure 4):  
[1] Transportation  
[2] Fixed facility

The system default is Fixed facility. If you select Transportation, proceed to Question 15. If you select Fixed facility, proceed to Question 17.

**Notes:** All events are coded as either transportation or fixed facility.

Transportation events include events involving hazardous materials being transported by ground transportation (e.g., trucks, vans, automobiles), railroad, aircraft, boats, ships, and pipelines outside the boundaries of a fixed facility or in certain circumstances on fixed-facility property. Specifically, if the event occurs on a vehicle that brought a substance to the facility or will carry it away from the facility, it is coded as a transportation event. For example, (1) a spill occurs along the route of a moving vehicle such as a truck or a train, but is not discovered until

the vehicle reaches a destination. (2) a release is discovered in a truck that is stopped at a gas station or other location. If a substance was obviously spilled from a moving vehicle (e.g., the substance covered a large distance on the side of the road or barrels were lying in the road), it should be coded as transportation. During loading and unloading of a vehicle that is carrying substances to or from a fixed facility (e.g., a cargo ship docked at port; a train at a depot, loading station, or railyard; a truck at a loading dock; an airplane at an airport, etc.), an event is transportation if the release occurs before all of the material has been unloaded from the vehicle. The same applies to a small freight carrier, such as UPS or Federal Express. If leakage occurs while the package is on the vehicle, regardless of whether the vehicle is moving or stopped, code it as transportation. While a crop duster may be functioning as a part of the farm machinery when it is spraying the crops, it is transportation because it carried pesticides to the farm and has not totally unloaded its product until it is done. In order to keep it consistent, all crop dusters in the air (not parked) will always be considered transportation.

If an event is not clearly transportation, then code it as a fixed facility. Two examples of events that are fixed facility but might not seem to be are containers of chemicals found dumped in a field or hazardous substances found spilled on the ground. During loading and unloading, (a cargo ship docked at port; a train at a depot, loading station, or railyard; a truck at a loading dock; an airplane at an airport, etc.) an event is fixed facility if the hazardous material was totally unloaded on a loading dock, conveyor belt, forklift, or other location that is part of the fixed facility before the spill occurred. With small freight carriers like UPS, if leakage occurs while the package is off a vehicle that is transporting it to or from the fixed facility whether it is on a loading dock, conveyor belt, or forklift or in temporary storage, code the event as fixed-facility. Events involving vehicles that are part of the operation of the fixed-facility and occur within a fixed-facility are coded as fixed-facility events (e.g., farm tractors, forklifts, and fixed-facility railroads, which are meant to move items within a fixed facility).

Code spills from pipelines that commence and terminate within the same fixed facility as fixed-facility events.

**Question 15 What mode of transportation was involved?**

**Intent:** Determines the type of transportation involved in the event.

**Instructions:** Answer this question only if you selected Transportation for Question 14. Select one or two of the following in the Mode of transportation involved field (Figure 4):

[2] Ground

[3] Rail

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- [4] Water
- [5] Air
- [6] Pipeline

Pick a truck, van, automobile, or bus under Ground.

Pick a flat car, tank car, or box car under Rail.

Pick a container ship, tanker ship, or barge under Water.

Pick a crop duster, cargo plane, passenger plane, or other under Air.

**Notes:** If the particular type of transport is unknown, leave the field blank.

## **Question 16 What phase of transportation was involved?**

**Intent:** Determines the phase of transportation involved in the event.

**Instructions:** Select one of the following in the What phase of transportation involved field (Figure 4):

[1] A release that occurred during loading/unloading of a stationary vehicle or vessel

[2] A release from a moving vehicle or vessel

[3] A release en route that was later discovered at a fixed facility

[8] Other

If you selected A release from a moving vehicle or vessel or Other, proceed to Question 20. If you selected A release that occurred during loading/unloading of a stationary vehicle or vessel or A release en route that was later discovered at a fixed facility, proceed to Question 17.

If you select Other, type descriptive text in the adjacent field.

## **Question 17 What area/equipment of the fixed facility was involved in the event?**

**Intent:** Determines the specific location at the fixed facility where the event occurred and the equipment involved with the event.

**Instructions:** Answer this question only if you selected Fixed Facility for Question 14 or A release en route that was later discovered at a fixed facility for Question 16. Select one or two of the following in the Area/Equipment of the fixed facility was involved field (Figure 4):

[0] Transport within fixed facility

[2] Process vessel

- [3] Piping
- [4] Material handling area (e.g., loading/unloading dock)
- [5] Storage area above ground (e.g., warehouse, tank, storage shed)
- [6] Storage area below ground
- [7] Dump/waste area (e.g., sewer)
- [8] Other
- [A] Ancillary process equipment
- [B] Transformer and capacitor
- [C] Incinerator
- [D] Heating/cooling for building
- [F] Outdoor, farming or industrial areas
- [G] Outdoor, non-farming or non-industrial areas
- [H] Indoor, non-industrial, living (residence) areas
- [I] Indoor, non-industrial, non-living areas
- [J] Laboratory

If you select Other, type descriptive text in the adjacent field.

**Notes:** Do not use or combine any of the response options listed if you select Other. Instead, select the listed option(s).

Include moving hazardous substances within a fixed facility as Transport within fixed facility. For example, moving farm vehicular equipment, the spill of materials due to containers falling off a moving forklift, events occurring on a roadway and railway within a fixed facility, and radiator associated with a vehicle. However, releases that occur on a vehicle carrying chemicals to or away from the fixed facility are excluded from this category.

Process vessel refers to a chemical reaction chamber where chemicals are processed such as a tank, reactor, distillation column, catalytic chamber, vat, or other piece of equipment in which substances are blended to form a mixture or are reacted to convert them to some other product or form. Do not select this option unless the process vessel is involved.

The Ancillary process equipment option is used for other parts of the processing equipment. For example, a blast furnace for steel that acts as the actual vessel is a process vessel. If the furnace has a process vessel inside of it, it should be coded as ancillary process equipment.

Include any type of lines, tubing, and piping as Piping. Also included are coupling joint, expansion joint, valve, flange, nipple, gasket, plugged drain and roof drain.

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Include any material handling that results in a release, such as dropping a container, spilling its contents, or other manual or mechanical manipulation as Material handling area.

Include storage in sheds, warehouses, secondary containment structures, or vessels (e.g., a container, tank, drum, bottle, can, barrel, tank car, cylinder) used to hold a raw or input material, product, or byproduct at ambient conditions or at an elevated or reduced temperature or pressure as Storage area above ground or Storage area below ground, depending on where they are located.

Include locations currently used and recognized as dump/waste areas (e.g., waste sites at industrial facilities, municipal landfills, and sewers where wastewater is dumped) as Dump/waste area. Do not use this code for locations formerly used as dumps that have another use at the time of the event. For example, do not select this option for a former military or industrial hazardous chemical waste site that currently is a park, housing development, fairground, or other type of area. Do not include illegally dumped hazardous materials (e.g., barrels at rest stop).

Include any equipment besides the process vessel and piping that is used in the production of a product as Ancillary process equipment. The following (unless it is to heat or cool the building) is included: boiler, chiller, furnace, air conditioner, fan, evaporator, exchanger, filter, burner, flare, refrigerator, condenser, pollution control device, compressor, pump, non-vehicular radiator, vent, engine, generator, accumulator, instrument, meter, gauge, blower, recycling, and recovery.

Include boiler, furnace, air conditioning, fan, etc. if used to heat or cool the building as Heating/cooling for building.

Include outdoor areas at businesses that are producing goods as Outdoor, farming or industrial area. Examples of places to include in this category are cow pastures, corn fields, or the roof or yard of a factory.

Include outdoor areas of businesses that are not producing goods (e.g., retail, schools) or private property (e.g., homes, apartments buildings) as Outdoor, non-farming or non-industrial areas. Examples of places to include in this category are the parking lot of a shopping mall, the roof, driveway, or yard of a home, and a school yard.

Include places where people temporarily or permanently live as Indoor, non-industrial, living (residence) areas. Examples of places to include in this category are nursing homes, personal residences, motel rooms, and college dorms.

Include places where no production of goods is taking place, but it is not a living area as Indoor, non-industrial, non-living areas. Examples of places to include in this category are hallways, cafeterias, and restrooms.

Include school laboratories, commercial laboratories, but not illegal drug laboratories, as Laboratory.

Include an illegal drug laboratory as the general area surrounding the laboratory. For example, if the laboratory happens in a home, include it as happens in a home, include as Indoor, non-industrial, living (residence) areas.

**Question 18 How many people were working at the facility at the time of the event?**

**Intent:** Determines the number of people (employees and contractors) working at the facility when the event occurred.

**Instructions:** Answer this question only if you selected Fixed Facility for Question 14 or A release en route that was later discovered at a fixed facility for Question 16. Type the total number of full-time and part-time employees, including contractors, who were working at the time of the event in the Number of people working the facility during the event field (Figure 4). The facility includes the grounds that are operated by the company where the event occurred.

**Question 19 How many non-working people were present at the facility at the time of the event?**

**Intent:** Determines the number of people who were not employees or contractors present at the facility when the event occurred.

**Instructions:** Answer this question only if you selected Fixed Facility for Question 14 or A release en route that was later discovered at a fixed facility for Question 16. Type the total number of people who were not employees or contractors, but were at the facility at the time of the event in the Number of people visiting the facility during the event field (Figure 4). For example, people in a store when the release occurred.

**Note:** Includes people in a mall, visitors at a business, prisoners in a prison, patients at a hospital, etc.

**Question 20 Factors contributing to the release.**

**Intent:** Determines the primary and secondary factors that contributed to the release.

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**Instructions:** Select a primary and secondary factor in the Factors field (Figure 3):

Primary:

- [2] Equipment failure
- [3] Human error
- [8] Other
- [G] Intentional or illegal act
- [H] Bad weather conditions/natural disasters

Secondary:

- [1] Improper mixing
- [2] Equipment failure
- [3] Human error
- [4] Improper filling, loading, or packing
- [8] Other
- [A] Performing maintenance
- [B] System/process upset
- [C] System start up and shutdown
- [E] Power failure/electrical problems
- [F] Unauthorized/improper dumping
- [I] Vehicle or vessel collision
- [P] Vehicle or vessel derailment/rollover/capsizing
- [J] Fire
- [K] Explosion
- [L] Overspray/misapplication
- [Q] Illicit drug production related
- [N] No secondary factor
- [O] Loadshift
- [R] Forklift puncture

There must always be a primary factor. If it is unknown, leave the field blank.

There is not necessarily a secondary factor. If there is no secondary factor, select No secondary factor. If it is unknown, leave the field blank.

If you select Other as the primary and/or secondary factor, type descriptive text in the adjacent field(s).

**Notes:** A primary factor is the initial cause of the release (what started it), and a secondary factor is the immediate cause of the release. Think of it as a “chain of events”. In most circumstances, human error will have a secondary factor. In rare situations, there will be no secondary factor.

If you do not know what caused a fire, explosion, or vehicle or vessel derailment/rollover/capsizing, leave the field blank.

Do not use or combine any of the response options listed if you select Other. Instead, select the listed option(s).

Equipment failure is defined as failure of process or storage vessels, valves, pipes, pumps, or other equipment that allows the release of hazardous substances. Safety valves are intended to open to reduce dangerous pressure levels. Do not select Equipment failure if a hazardous substance is released when a safety valve operates as intended.

Human error is defined as a mistake made by a person resulting in a release or threatened release of hazardous substances. Examples include leaving a valve open, failure to respond to process alarms, failure to maintain process variables or conditions at the set point, maintenance failures, inappropriate use of equipment, not following appropriate procedures such as lock-out or tag-out, removal of safety devices, misjudgement of conditions, inappropriate action resulting from faulty perception, mishandling accidents (e.g., dropping a vial), or mistakes such as pushing the wrong button, being distracted, and other similar actions.

Include only maintenance that is not due to human error as Performing maintenance.

Include a vehicle/vessel colliding with another vehicle or object as Vehicle or vessel collision.

Include a vehicle/vessel mishap that does not involve a collision (e.g. derailment, rollover, capsizing) as Vehicle/vessel derailment/rollover/capsizing.

System/process upset means any glitch in the system that upsets the process, such as a chemical related problem or an upset due to a chemical reaction. The upset has to be specific to the facility.

Include severe weather conditions and earthquakes, wild fires, and other non-weather disasters as Bad weather conditions/natural disasters.

Include power outage, power failure, short in equipment, and problems with an electrical device (e.g., circuit breaker) as Power failure/electrical problems.

Include vandalism, prank, terrorism, and arson as Intentional or illegal activity.

Include any event that involves illegally produced drugs (e.g. methane or amphetamines) as Illicit drug production related.

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## **Question 21** Did the release impact:

**Intent:** Determines whether the release impacted inside or outside of a building or other enclosed structure.

**Instructions:** Select one of the following in the Closed structure release impact field (Figure 4):

- [1] Inside a closed structure only
- [2] Outside of a closed structure only
- [3] Both inside and outside of a closed structure

**Notes:** Include for a fixed facility event where the release occurred inside a structure but was vented outside as Outside a closed structure only. For example, if in order to reduce emissions, hazardous gases are routinely burned in boilers located inside a building and the fire goes out which causes a release of hazardous gases to the outside environment through a chimney, ventilation pipe, or other means, select Outside a closed structure only because the release impacted outside the building.

Select Both inside and outside of a closed structure if a large enough quantity got outside of the building and caused, or could have caused, a public health problem. For example, (1) a fire that started inside of a building and moved to the outside. (2) a release starting outside and moved inside is if pesticides were sprayed outside and were sucked inside by a ventilation system.

## Description of Substance(s):

**Figure 5: Substances Tab Screen**

**Question 22** What is the total number of chemicals reported for this event?

**Intent:** Determines the total number of chemicals reported for the event.

**Instructions:** Type the total number of chemicals reported in the Total number of substances reported field (Figure 5).

**Notes:** Count a mixture as one chemical.

When the specific identity of two substances is unknown, but they are both in the same category (e.g., Acid NOS), and are not identical chemicals, count them as one chemical. Enter their combined quantity, and enter one for Question 23.

Reserve mixtures for when you have more than one substance to enter into the substance table, not for single substance mixtures (e.g., Acid NOS).

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When a chemical reaction changes your original chemical into another chemical (e.g., mixing two cleaning products to produce chlorine gas), enter the reactants and products that are known. The cleaning products are the reactants, and the chlorine gas is the product.

## **Question 23 Chemical number.**

**Intent:** Indicates which substance involved in the event is described.

**Instructions:** The number is automatically displayed for each row on the Substances table (Figure 5) created when entering a number in the Total number of substances reported field.

## **Question 24 Chemical or trade name of substance.**

**Intent:** Indicates the complete name of the chemical substance.

**Instructions:** The name is automatically displayed for each row when all the information has been entered on the Substance Makeup Information (Figure 6) and Chemical Information screens (Figure 7).

**Notes:** This information is needed for each substance involved in the incident.

Record substances that do not appear on the standard list in uppercase letters. For single chemicals, use appropriate numbers and hyphens, and abbreviate only if the complete name does not fit. For example, spell out 1,2-dichloroethane; do not use 1,2 DCA.

Exercise consistency and accuracy in spelling chemical names.

List the same chemical only once even though the release involved different concentrations or different forms such as liquid and solid. Enter the combined quantity of the various forms released.

Releases consisting solely of petroleum are excluded from HSEES. Releases of petroleum along with qualifying chemicals are HSEES events, and the petroleum product is reported along with the qualifying chemicals in Questions 23-33.

## Guidance for HSEES Substance Identification:

**Introduction:** Because many substances are often referred to by more than one unique name, identifying substances and deciding on one “standard” name for each substance is a challenge. Standardizing substance names in HSEES is a major goal of the surveillance project since it allows for substance specific queries and analyses of the data. One important tool in the HSEES effort to standardize substance names is the substance picklist that is incorporated into the HSEES Data Entry Software. The purpose behind the substance picklist is to facilitate the standardization of substance names in HSEES. The HSEES Data Entry Software does allow for the direct entry of a substance name, but every effort should be made to locate and pick the substance name or a synonym from the picklist.

The substance names included in the picklist are the result of an effort to standardize all previous substance names entered into HSEES. HSEES standard names have been created by mapping all old substance names to new HSEES standard names. Mixtures of substances were previously strung out and entered into one substance field. The new data entry software allows for each component of a mixture to be selected from the picklist separately. The new system also allows for the reactants and product of chemical reactions to be entered separately. Also the most common synonyms for substances are included on the picklist. If a synonym is picked from the picklist the entry is “mapped” to the appropriate HSEES standard name.

**General Instructions:** When entering a substance for a new event, first identify the substance as thoroughly as you can. Many substances are commonly spilled, easily identified, and quickly found in the picklist. For other, hard to identify substances, get as much information as possible about the substance such as Chemical Abstract Service (CAS) number, Department of Transportation (DOT) or United Nations (UN) number, manufacturer, trade name, components, and uses. Then try to match it up with an entry on the picklist. As a substance name is typed in, if that substance name is on the picklist, then you will “arrive” at that substance name on the list. If the substance name does not match with anything on the picklist, there are other steps to follow. First, try entering your substance name again, double-checking the spelling. Next, try entering a synonym of your substance. Information on substances can be found in many sources, including:

- *Farm Chemicals Handbook* ([www.greenbook.net](http://www.greenbook.net))
- *Hawley’s Chemical Dictionary*
- *Dictionary Of Chemical Names and Synonyms*
- *RTECS*
- *Cross-Reference Index of Hazardous Chemicals, Synonyms, and CAS Registry Numbers*
- *Tox./Occ. Med./Envl. Series of Tomes* (this contains RTECS and other databases)

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Once every effort to find the substance on the picklist is exhausted the substance name must be entered manually. Once again, every effort should be made to find a valid match for the substance on the picklist.

**Mixtures and Chemical Reactions:** For HSEES, a mixture is a combination of substances that are stored together prior to being released. Hence, a mixture is considered one substance when counting the number of substances released at an event. In the past, long “mixture” substance names were created by listing out the components of a mixture with each component name separated by a “/”. The new HSEES Data Entry Software will allow each component of the mixture to be selected separately from the picklist. Question 23 of the HSEES Data Collection Form asks What is the total number substances reported for this event? Once this question is answered a row of data for each substance will be created by the software. For each substance a pop-up screen will appear to capture substance specific information such as type of substance, quantity released, units of measure, and whether the substance is an individual chemical, a mixture, or a chemical reaction. For a mixture, choose “Mixture” and select the individual components of the mixture in alphabetical order from the picklist. An example of a mixture would be a large drum containing Benzene and Toluene that falls off a truck and breaks open. The components are Benzene and Toluene and each of these chemicals would be selected separately from the picklist.

If this is the special case of a chemical reaction then choose “Reaction” and select both the reactants and the products of the chemical reaction from the picklist. The reactants are those substances that were mixed together to create the chemical reaction, and the product is the resulting substance released from the chemical reaction, usually a gas. An example of a chemical reaction would be if sodium hypochlorite is accidentally mixed with hydrochloric acid and chlorine gas is released. Sodium hypochlorite and hydrochloric acid would be the reactants, and chlorine gas would be the product.

**Substance Names Ending in “NOS” on the Picklist:** You will notice that the picklist includes some substance names ending in “NOS.” Use these ONLY when:

- 1) The information you have available suggests the likelihood that another (unnamed) hazardous substance(s) is present. Some common scenarios include (a) a product for a specific purpose such as “lacquer thinner” or “contact cement”, which often contain more than one hazardous chemical, (b) where a substance is associated with words such as waste, wastewater, wash water, residue, leachate, sludge, etc. suggesting a possible waste “stew” of substances, or (c) you have a mixture of a known substance and another substance that is mentioned but can not be positively identified. Some examples:

Acetic Acid (Film Fixer Solution)	==>	Acetic Acid NOS [see (a)]
Acetone (Paint Thinner)	==>	Acetone NOS [see (a)]
Tetrachloroethylene Adhesive	==>	Tetrachloroethylene NOS [see (a)]
Force 1000 (Silicone Product)	==>	Silicone NOS [see (a)]
Acetonitrile Waste	==>	Acetonitrile NOS [see (b)]
Biological Sludge	==>	Biological Agent NOS [see (b)]
Benzene Sludge Residue	==>	Benzene NOS [see (b)]
Cadmium and Other Chemical	==>	Cadmium NOS [see (c)]
Chlorine/9,9,8'-cis-bis-Blort	==>	Chlorine NOS [see (c)]
Isopropyl Acetate (Ink)	==>	Isopropyl Acetate NOS [see (c)]

2) Your information is only sufficient to identify a class of hazardous substance. Examples:

Herbicide 203	==>	Pesticide NOS
Heavy Metals	==>	Metal NOS
Mercaptans	==>	Mercaptan NOS
Organic Compounds	==>	Organic NOS
Varnish	==>	Paint or Coating NOS
Paint Stripper	==>	Solvent NOS
Unknown Insecticide	==>	Pesticide NOS

3) Your information is only sufficient to indicate that you have a compound of a certain element, possibly a specific type of compound (e.g., a sulfate versus a sulfide). Examples:

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Phosphate Fertilizer Solution	==>	Phosphate NOS
Total Reduced Sulfides	==>	Sulfide NOS
Calcium Metal Salts	==>	Calcium NOS
Treated Ammoniated Copper	==>	Copper NOS

A substance name ending in “NOS” should only be selected when you have exhausted all means of trying to positively identify a substance. The use of these terms will be monitored on a state-by-state basis. You will notice that when you go to look for an NOS term, you may find more than one that is appropriate. For example, you can only determine the class of chemical such as vinyl resin. This could be placed in the “Resin NOS” category on the picklist; however, a more specific category, Vinyl Resin NOS, is available. Vinyl Resin NOS is the term that should be selected. Be attentive to this issue, and scan the picklist to ensure that you choose the most specific term.

**Substance Names with a CAS Number on the Picklist:** You will note that some substance names are followed by a CAS number in parentheses. This has been done in the case of those chemicals that are difficult to positively ID by name only. This occurs when a chemical name is a synonym for two different unique chemicals (with unique CAS numbers). Before selecting one of these picklist terms, confirm that both the name and the CAS number match.

**Guidance for Specific Substances:** This list of substances has been developed from guidance given by technical advisors about particular substances. After reading this list, if a particular substance that you are unsure of is not on this list or if the guidance on a particular substance is not clear, you may ask your technical advisor for guidance. This list may be updated periodically if new substance guidance is added or existing guidance is refined. Substances are listed alphabetically.

**Antifreeze (ethylene glycol):** Exclude if spilled in small amounts from a vehicle when there is no legal requirement for cleanup (such as small spills on driveways or on roads after a vehicular accident). These would be included when released in larger quantities from large trucks if there is a state cleanup requirement or if spilled while the chemical is itself being transported.

**Asbestos:** Include acute exposures to friable, respirable asbestos fibers, such as during demolition, renovation, or the explosion of an asbestos-containing steam pipe. Include exposures to items consisting primarily of asbestos, such as

asbestos insulation, when respirable asbestos is suddenly released into the air. Exclude chronic exposures to asbestos. Exclude exposures to asbestos when the asbestos-containing item only partially consists of asbestos (i.e., the asbestos is embedded in other materials and makes up a relatively small proportion of the item), such as asbestos-containing ceiling or floor tile or roofing shingles. Call your technical advisor if unsure whether a particular material qualifies.

**Battery acid:** Exclude if spilled in small amounts from a vehicle when there is no legal requirement for cleanup (such as small spills on driveways or on roads after a vehicular accident). These would be included when released in larger quantities from large trucks if there is a state cleanup requirement or if spilled while the chemical is itself being transported.

**Biological Substances:** Do not include water contaminated with fecal (coliform) bacteria or other microorganisms. Limit biological substances to terrorist events and to sudden, unexpected releases of pathogenic agents from containers during shipment, in laboratories, or in other circumstances.

**Carbon Monoxide (CO):** Include incidents in which there is a failure or malfunction of equipment at a commercial/industrial location or other business including apartment buildings that results in an emergency event meeting the HSEES case definition.

Do not include suicides from CO because once the source is shut off, only the person attempting suicide is exposed, and there is no clean up.

Do not include incidents involving faulty heaters in homes because this was not the intent of CERCLA.

Do not include permitted (legal) releases of CO.

**Creosote:** Include creosote in HSEES.

**Cyclohexane:** A petroleum product that is included in the HSEES database because it is on the EPA's list of hazardous chemicals with reportable quantities.

**Epoxy:** Include in the HSEES database.

**Explosives:** If an explosive, such as dynamite, is only hazardous when it combusts and there is no hazardous product before or after this combustion, it is not included in HSEES. For example a stick of dynamite unearthed during construction would not be included, even if it was exploded to dispose of it, because there was no hazardous substance remaining to clean up.

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**Fats:** These non-hazardous fats should not be included in HSEES: beef tallow, butter, lard.

**Fumes:** Technically, “fumes are small solid particles created by condensation from the gaseous state, generally after volatilization or by chemical reaction such as oxidation; they are usually submicronic in size.” Most fumes are metal oxides (cadmium oxide, lead oxide, iron oxide, zinc oxide, etc.). Include fumes in events that otherwise meet the HSEES case definition (permitted releases of fumes, such as out stacks, or chronic releases would be excluded).

The common usage definition of “fume” is “a smoke, vapor, or gas especially when irritating or offensive (e.g., gas fumes) or an often noxious suspension of particles in a gas, such as air.” Exclude fumes under the common definition unless a case-definition hazardous substance is identified.

**Medical Materials:** Medical waste consisting of hazardous substances or radioactive materials are included when the event meets the HSEES case definition. (The case definition means an acute, emergency, uncontrolled or illegal release—or threatened release—necessitating removal, cleanup, or neutralization). For example, an uncontrolled spill of a small quantity of a radioactive isotope in a clinic which required cleanup would be an event. Other medical waste (such as sharps, blood, gauze) are excluded from HSEES.

**Mercaptan:** A petroleum product that is included in the HSEES database because it is on the EPA’s list of hazardous chemicals with reportable quantities.

**Odors:** Substances only identified as “odors” should not be included in the HSEES database.

**Oils, non-petroleum:** These non-hazardous, non-petroleum oils should not be included in HSEES: coconut, cod liver, corn, cottonseed, linseed, olive, palm kernel, palm, peanut, soybean, tung, safflower and other vegetable oils.

**Paints, Inks, and Dyes:** Since “Paints and Dyes” (which includes inks) is one of the ten HSEES substance categories, select one of the existing paint, ink or dye pick-list selections (or create a new one if necessary) for these substances. Don’t use the listing for a substance within the paint, ink, or dye, such as a solvent (like xylene), because we want to retain the category of Paints and Dyes for these substances.

**Pepper Spray:** Deliberate exposure of individuals to pepper spray would be an event except when the exposure is legal such as by law enforcement officials or when used by an individual against an assailant, regardless of whether the use is legal.

**Pesticides:** Include all types of pesticides (i.e., insecticides, herbicides, fungicides, rodenticides, algicides, miticides, etc.). If you have a pesticide trade name (e.g., Doom/Kill-A-Bug/Sucker Plucker/Drop Dead Fred) then get your *Farm Chemicals Handbook (FCH)*. Look in the "Sine" Index (yellow pages) for the trade mark name. Obtain the "common" name from either Section C (preferred) or Section E of the *FCH*. When using Section C, select a common name adopted by ISO if available (it usually is). Otherwise, choose the ANSI or BSI "common" name, in that order.

**Petroleum Products:** The Petroleum Exclusion clause of the CERCLA legislation excludes any forms of petroleum that have not been refined to the point of becoming single-chemical products such as pure xylene. Examples are:

- Gasoline/Gas (as slang for gasoline)
- Fuel oils/Heating oils. **Note:** A few exotic fuels (not fuel oils) are not petroleum based, such as hydrazine.
- Diesel fuels
- Kerosene/kerosine
- Lubricating oils, common grease, or hydraulic fluids that are petroleum based. Not all are; if in doubt or unknown, include available details (trade name, known components, etc.).
- Mineral oil or Mineral spirits
- Natural gas
- LPG / Liquid propane gas
- Any of the various distillates/cuts/fractions/condensates/bottoms of petroleum, such as "light crude", as long as they have not been refined to the point of being one pure chemical.
- Any of the various naphthas, such as Ligroin (light naphtha)
- Petroleum ether
- Gas oil
- Jet fuels (JP-5, JP-7, etc. These are quite similar to kerosene.)
- Asphalt, petroleum coke, or other heavy or high-carbon petroleum cuts.
- Any other petroleum derivative that has not been refined to the point of being a single substance.
- If a commercial product has been released that is partially petroleum and partially other substances, it should be abstracted into HSEES based on whether the non-petroleum portion is of interest to HSEES.

**Resins:** Include in the HSEES database.

**Sewer gas emissions and sewage spills:** Do not include in HSEES database.

**Sludge releases:** Include in the HSEES database only if when the release is acute, not chronic, contains at least one identified hazardous substance, and meets the case definition.

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**Suicide by chemical:** Include incidents involving suicide and attempted suicide only when the method was chemical; persons other than the individual attempting suicide were exposed; and the hazardous substance had to be removed, cleaned up, or neutralized. The chemical must have been released to the environment (i.e., not confined to a bottle or other container). Include suicides where there was exposure to other persons who found the body or cleaned up the hazardous material, or if there was secondary contamination, such as to emergency services or medical personnel. Do not include suicide from carbon monoxide gas because once the source is shut off, no one else is exposed, and there is no clean-up. Do not include drug overdoses where no one else was exposed and there was no cleanup. An example of an included suicide event is a suicide by chloroform in an enclosed space where responders were exposed, and the chloroform had to be cleaned up from contaminated surfaces.

**Unknown substances:** Do not include substances identified as simply “fuel NOS,” “other NOS,” “other chemical NOS,” or “environmentally hazardous solid NOS.” At a minimum, a chemical category such as acid or pesticide would be needed or possibly an EPA waste code such as F001 or K004.

**Water:** You will almost never record the presence of water. For example, if a compound is listed as a compound solution (e.g., chlorine solution), then look for the compound itself (chlorine) on the picklist. The presence of water will only be entered if it is involved in a water-reactive adverse chemical reaction.

## **Recording trade name products and their ingredients:**

When a trade named product is released, report its trade name, such as Extrazine, not its component ingredients (i.e., cyanazine and atrazine). Count the product as one chemical and report the amount released as the total quantity of the product, not the components. You may enter the major or active ingredients and the manufacturer’s name in the place for manufacturer.

Sometimes a trade name product and its active ingredient are released separately from different containers or vessels in the same event. In this case, you may list them as two separate chemicals. This would also apply to inert ingredients from the product.

Agricultural chemicals are often applied as ad hoc mixtures rather than as a product, such as Extrazine. For HSEES purposes, mixtures consist of chemicals mixed prior to release. For ad hoc mixtures of agricultural chemicals, follow the instructions for mixtures in the HSEES Substance Identification Manual.

When a release occurs during the manufacturing of a product comprised of more than one hazardous chemical, list each substance released separately. Depending on when in the manufacturing process the release occurred, varying amounts of

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the ingredients and the final product may be present. Try to obtain information on whether the component ingredients and/or the final product were released. Do not record the product trade name if only the ingredients were released. For example, if alachlor and trifluralin were released early in the process of manufacturing Freedom, list alachlor and trifluralin separately, and do not list Freedom. List all three if some of the two ingredients and the final product were released.

**Miscellaneous Instructions:**

For spills containing mixtures of PCBs, use the PCB category of the substances on the picklist.

In a qualifying fire, report all substances that were present before the fire.

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Substance Makeup Information: Substance Number 1

Edit

Individual Chemical

Mixture

Reaction

25. Was the substance: [1] Spill (liquid or solid)

29. Type of release: [2] Volatilization/aerosolized (vapor)

[3] Fire

30. Quantity released: [ ]

31. Unit of measure: [ ]

27. Used as pesticide:  Yes  No

Makeup Type	Name
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Ok Cancel

**Figure 6: Substance Makeup Information Screen**

## **Question 25** Was the substance

**Intent:** Determines whether each specific substance involved in the event was actually released into the environment or threatened to be released.

**Instructions:** For each specific substance involved in the event, select one of the following in the Was the substance field (Figure 6):

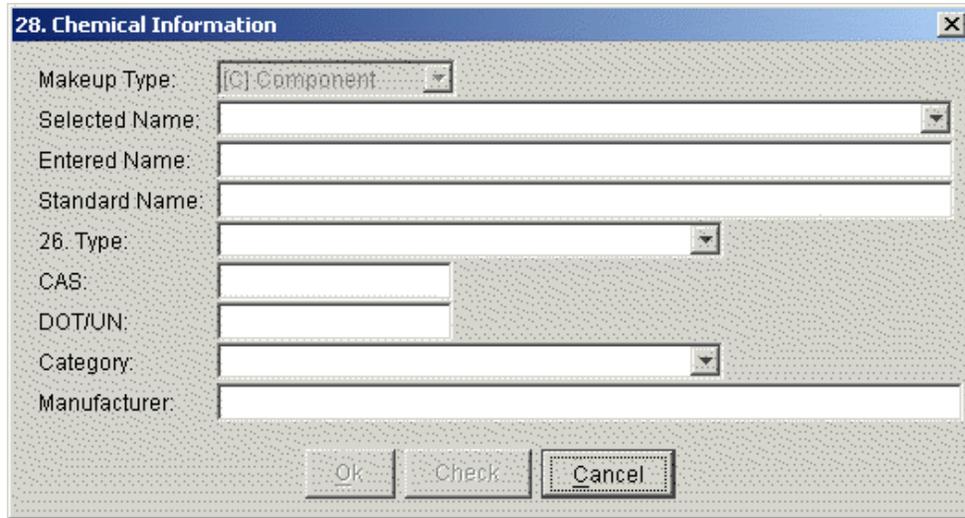
- [1] Actually released into the environment.
- [2] Threatened to be released into the environment.

If you selected Threatened to be released into the environment, Not applicable, threatened release is automatically selected for Question 29.

**Note:** Normally when an event involves the release of a hazardous substance and some of the same chemical is left unspilled, only the amount actually released is reported. However, there is one circumstance that is different. In events where a small amount is spilled and a public health action, such as an evacuation, is prompted by the substantially larger amount threatened to be released and not by

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the amount actually released, then enter both the released and the threatened amounts. Make two chemical entries for this event, one actually released and one threatened, using the picklist in the normal fashion. Enter 2 for the total number of chemicals in Question 22. It is not expected that this situation will arise very often.



**Figure 7: Chemical Information Screen**

## **Question 26** Type of substance.

**Intent:** Determines the general type of the substance.

**Instructions:** Select one of the following in the Type field (Figure 7):

- [1] Chemical
- [2] Radiological
- [3] Medical or biological
- [4] Biological

**Notes:** This field is only available when you enter a name in the Entered Name field (Figure 7) instead of picking from the standard list.

Do not include water contaminated with fecal (coliform) bacteria or other microorganisms.

Medical waste consisting of hazardous substances or radioactive materials are included when the event meets the HSEES case definition. (The case definition means an acute, emergency, uncontrolled, illegal, or threatened release that necessitates removal, cleanup, or neutralization.) For example, an uncontrolled

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spill of a small quantity of a radioactive isotope in a clinic that required cleanup would be an event. Other medical waste such as sharps, blood, or gauze are excluded from HSEES (e.g., medical substances are anesthetic gases and ethylene oxide sterilizing gas).

## **Question 27 Was this substance used as a pesticide?**

**Intent:** Indicates whether or not the substance is used as a pesticide.

**Instructions:** Select Yes or No in the Used as pesticide field (Figure 6).

**Note:** If the chemical is not classified as a pesticide, but was used as such, select Yes.

## **Question 28 Please provide identification information if the chemical name is not on the pick list.**

**Intent:** Determines the standard identification number(s) of the substance(s) involved in this event.

**Instructions:** Type the number in the CAS and/or DOT/UN fields on the Chemical Information screen (Figure 7).

**Notes:** These fields are only available if you entered a name in the Entered Name field (Figure 7) instead of picking from the standard list.

The purpose of the identification numbers is to provide a double-check on the name of the hazardous substance. The CAS number is the most widely used number. Provide these identification numbers only when you are sure about them (i.e., one or more of them were provided on the source data sheets. If an ID number is not provided, the substance could easily be confused with another. If you are at all unsure of the number, do not record an identification number.

## **Question 29 Type of release.**

**Intent:** Determines how the substance was released into the environment.

**Instructions:** Select one or two of the following in the Type of release field (Figure 6):

- [1] Spill (liquid or solid)
- [2] Volatilization/aerosolized (vapor)
- [3] Fire
- [4] Explosion

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[5] Radiation

[7] Not applicable, threatened release

**Notes:** Some chemicals held in the solid or liquid state will quickly vaporize (turn to gas) after being released in a spill. In an event where there was a spill of a solid or a liquid and vaporization occurred, select both Spill and Volatilization/aerosolized. If you are not sure if vaporization occurred, only select Spill. Only select Volatilization/aerosolized by itself for releases of gases with no involvement of solids or liquids.

Include liquids, solids, and spills that originate from containers, drums, vials, batteries, etc. in Spill.

Not applicable, threatened release is automatically selected if you selected Threatened to be released into the environment in the Was the substance field (Figure 6).

## **Question 30 Quantity released.**

**Intent:** Determines the amount of substance released into the environment.

**Instructions:** Type the amount of substance released in the Quantity released field (Figure 6). Do not enter units of measurement or commas. If the amount of the substance released is unknown, leave the field blank. If you enter an amount, the associated approximation is automatically entered in the adjacent field. If you leave the field blank, select one of the following in the adjacent field:

[A] <1

[B] 1-<10

[C] 10-<100

[D] 100-<500

[E] 500-<1000

[F] 1000-<10,000

[G] 10,000 +

**Notes:** It is understood that fires produce smoke and fumes, so this is not an air release. Choosing spill or air release with fire is situation-dependent. For example, spill should be chosen with fire if the spill happened first.

For threatened chemicals, enter the amount threatened to be released.

Record the total amount spilled, regardless of how much was cleaned up.

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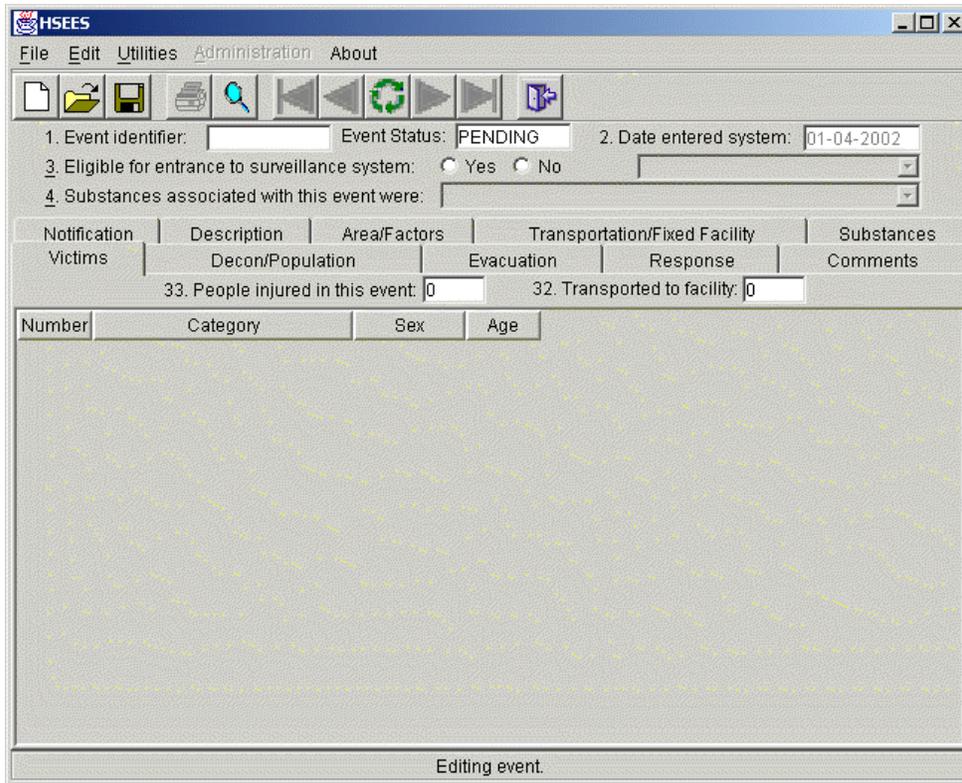
## **Question 31** Unit of measure.

**Intent:** Determines the units in which the amount of substance released is measured. This is to complete the information recorded in Question 30.

**Instructions:** Select one of the following in the Unit of measure field (Figure 6):

- [1] Pounds
- [2] Kilograms
- [3] Gallons
- [4] Liters
- [5] Cubic feet
- [6] Ounces by volume
- [7] Milliliters
- [8] Picocuries
- [A] Tons (metric)
- [B] Ounces by weight

## **Morbidity and Mortality**



**Figure 8: Victims Tab Screen**

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**Question 32** How many people were transported to a medical facility for a check-up or observation, but did not have any symptoms?

**Intent:** Determines the number of people transported to a medical facility for a check-up or observation who did not have symptoms

**Instructions:** Type the number of people transported to a facility in the Transported to facility field (Figure 8).

**Note:** Enter only individuals without symptoms who were observed, not treated, at the health care facility.

**Question 33** How many people were injured in this event (number of victims)?

**Intent:** Determines the number of people injured as a result of the event.

**Instructions:** Type in the number of victims in the People injured in this event field (Figure 8) and press Enter or Tab. The correct number of rows is automatically displayed in the Victims table (Figure 8). If the field is left blank, the system automatically goes to the Total number of uninjured people decontaminated field (Figure 10).

**Notes:** Enter only individuals with symptoms. More information concerning victims is entered in the fields on the Victim Information screen.

It is important to distinguish victims listed in Questions 33 from individuals listed in Question 32. Question 32 is for individuals who do not have symptoms (i.e., not victims). To be counted as a victim, an individual must report symptoms or go to a health care facility within 24 hours of the event for symptoms or injuries possibly associated with the event. The exception to the 24-hour stipulation is to count all victims who died as a result of the event as deaths, even if the death occurred much longer than 24 hours (even weeks) after the event, to the extent this information can be obtained.

Individuals with known injuries from an event who refuse treatment on the scene or at a hospital are also recorded as victims. Individuals meeting this description must have experienced injuries within 24 hours of the event and had their injuries reported by an official (e.g., fire department, EMT, police, poison control center).

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34. Victim #1 Information

Category: [Dropdown]

HazMat: [Dropdown]

Severity: [Dropdown]

Injury Types: [List Box: [A] Trauma, [B] Respiratory irritation, [C] Eye irritation, [D] Gastrointestinal problems]

PPE: [List Box: [1] None, [2] Level "A", [3] Level "B"]

Age: [Spinner: 0] [Dropdown: [A] Less than 12 months old]

Distance: [Dropdown]

Sex: [Dropdown] Decontaminated: [Dropdown]

Ok Cancel

**Figure 9: Victim Information Screen**

## **Question 34** Victims.

**Intent:** Describes the victims associated with an event.

**Instructions:** You can complete Table 1: Victims as a tool to assist in entering victim information in the fields on the Victim Information screen. Each row of the table pertains to one victim. Photocopy the table if you have more than 24 victims. See Questions 34A-I for specific instructions on each area of the Victims data. Perform the following steps to enter the victim information:

1. Select a row on the Victims table (Figure 8) and right-click on the row. A shortcut menu to add, edit, or delete a victim is displayed.
2. Select Edit Victim. The Victim Information screen (Figure 9) is displayed.
3. Select a category on the Category field (Figure 9).

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4. Select an option on the HazMat field (Figure 9) if the victim is a responder.
5. Select an option on the Severity field (Figure 9).
6. Select from one to seven injury types on the Injury Types field (Figure 9). If you select Other, type descriptive text in the adjacent field.
7. Select an option on the PPE field (Figure 9).
8. Select an option on the Sex field (Figure 9).
9. Type the age (between 0 and 120) of the victim in the Age field (Figure 9). If you leave the field blank, select the approximate age in the adjacent field.
10. Select an option on the Distance field (Figure 9).
11. Select where the victim was decontaminated in the Decontaminate field (Figure 9).
12. Click OK. The victim information is saved and you are returned to the Victims tab screen (Figure 8).
13. Repeat steps 1-12 for each row on the Victims table (Figure 8).

## **Question 34A**      **Category of victim.**

**Intent:** To describe the victim by population group.

**Instructions:** Select one of the following in the Category field (Figure 9):

- [1] Employee
- [G] Employee is member of company response team
- [2] Responder (not specified)
- [3] General Public
- [A] Professional Firefighter
- [B] Volunteer Firefighter
- [C] Firefighter (not specified)
- [D] Police Officer
- [E] EMT Personnel
- [F] Hospital Personnel (e.g., doctor, nurse)
- [H] Student (at school)

**Notes:** Select Employee only if the victim is an employee of the company where the event occurred. Count owners as employees.

If it is known that an employee was a member of the company response team, select Employee is member of company response team.

Select General public for any person with known category of victim status who is not an employee of the company where the event happened or a responder or a

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student, except for students in certain circumstances stated below. Select General public for employees of other companies. A member of the general public who is injured while helping contain the spill or assisting an injured person is a victim and a member of the general public. Prisoners are members of the general public, whether or not the event occurred at the prison.

A responder is a person whose job is to bring the release under control, provide medical assistance to victims, or conduct crowd control. Record the responder category when it is known (e.g., professional firefighter, volunteer firefighter, firefighter unknown type, police officer, EMT personnel, hospital personnel, employee is member of company response team).

Any individual who was in the capacity of a student when the event occurred and the event occurred at the school is a Student, which includes children and adults. If students were in their dormitories at the time of the event, select General public.

**Question 34B**      **To be answered if the victim is a responder: Is the victim a certified HazMat technician?**

**Intent:** Determines whether a responder had at least technician level HazMat training.

**Instructions:** Select one of the following in the HazMat field (Figure 9) if you selected Responder for the Category field (Figure 9):

- [1] Yes
- [2] No
- [3] Not a responder

**Notes:** If after asking whether the victim was a certified HazMat technician you are asked to clarify, ask if they were certified at the technician level or above. Below are the OSHA levels of training for reference.

**First responder awareness level** - Individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.

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- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan, including site security and control and the *U.S. Department of Transportation's Emergency Response Guidebook*.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

**First responder operations level** - Individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least 8 hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level and the employer shall so certify:

- Knowledge of the basic hazard and risk assessment techniques.
- Know how to select and use proper personal protective equipment provided to the first responder operational level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

**Hazardous materials technician** - Individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

- Know how to implement the employer's emergency response plan.
- Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.

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- Be able to function within an assigned role in the Incident Command System.
- Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

**Hazardous materials specialist** - Individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas and the employer shall so certify:

- Know how to implement the local emergency response plan.
- Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.
- Know the state emergency response plan.
- Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.
- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and control plan.
- Understand chemical, radiological and toxicological terminology and behavior.

**On scene incident commander** - Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

- Know and be able to implement the employer's incident command system.
- Know how to implement the employer's emergency response plan.

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- Know and understand the hazards and risks associated with employees working in chemical protective clothing.
- Know how to implement the local emergency response plan.
- Know of the state emergency response plan and of the Federal Regional Response Team.
- Know and understand the importance of decontamination procedures.

## **Question 34C**      **Severity and disposition of victim.**

**Intent:** Determines the severity of the victim's injury or injuries, and if and where care was provided.

**Instructions:** Select one of the following in the Severity field (Figure 9):

- [6] Seen by private physician within 24 hours
- [7] Adverse health effects experienced within 24 hours of event and reported by an official (e.g., Fire department, EMT, police, poison control center)
- [2] Treated on scene (first aid)
- [5] Observation at hospital; no treatment
- [8] Treated by mass casualty mobile unit
- [3] Treated at hospital (not admitted)
- [4] Treated at hospital (admitted)
- [A] Death on scene/on arrival at hospital
- [B] Death after arrival at hospital

**Notes:** Select the option that describes the most extensive type of treatment or disposition received by each victim.

Select the victim is transported to a hospital or clinic and treated, but is not admitted for an overnight hospital stay as Treated at hospital (not admitted) option.

Select the victim is transported to a hospital or clinic and treated, and is admitted as a patient for at least one overnight stay as Treated at hospital (admitted).

Select the victim is transported to a hospital or clinic for observation, evaluation, or diagnosis of their condition without receiving treatment for the condition as Observation at hospital; no treatment. For example, monitoring the victim's blood pressure or heart rate without administering treatment. These victims may stay overnight in the emergency room, but not be admitted to the hospital. Please note this refers to injured persons. Do not list persons who had no injuries, but went to the hospital to get examined.

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Select victims who did not go to a hospital or clinic but were seen by a physician within 24 hours as Seen by private physician within 24 hours. Injuries experienced within 24 hours of event and reported by an official (e.g., Fire department, EMT, police, poison control center) is for persons who were observed by an official to experience an injury, but were not treated at the scene or transported to a health care facility. In order to include persons meeting this description, the injuries must be clearly reported and substantiated by an official.

Select specialized teams dispatched to that location or nearby with trained physicians and equipment that can provide emergency care to victims similar to emergency room care as Treated by mass casualty mobile unit.

## **Question 34D Adverse health effects.**

**Intent:** Determines the victim's injury.

**Instructions:** Select from one to seven of the following on the Injury Types field (Figure 9):

- [A] Trauma
- [B] Respiratory system problems
- [C] Eye irritation
- [D] Gastrointestinal problems
- [E] Heat stress
- [F] Burns
- [H] Other
- [I] Skin irritation
- [J] Dizziness or other CNS symptoms
- [L] Headache
- [M] Heart problems
- [N] Shortness of breath (unknown cause)

If you select Other, type descriptive text in the adjacent field.

**Notes:** Select chemical-related, not chemical-related, and not specified for Trauma.

Select chemical-related, not chemical-related, both, and not specified for Burns.

Record all injuries. It is sometimes difficult to distinguish whether an injury, such as headache, was due to chemical exposure or to other factors related to the event (physical trauma, stress, etc.); therefore, the HSEES database records all injuries. If you are reasonably sure that an injury is not related to the chemical, you can provide that information in the comments section at the end.

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Trauma includes wounds and physical injuries. Examples of traumatic injuries include: abrasion, amputation, back pain, broken rib or other bone, fracture, bruise, contusion, cut, dislocation, ear drum puncture, knee injuries, laceration, puncture, musculoskeletal pain, scrapes, sprains, strain, whiplash, etc. If the substance involved caused the trauma, choose chemical-related. If the substance involved had nothing to do with the trauma, select not chemical-related. If it cannot be determined whether the substance involved had anything to do with the trauma, select not specified.

Include breathing problems/difficulties, chemical bronchitis, pneumonitis, chemical pneumonitis, cough, wheezing, sore throat, and throat irritation as Respiratory system problems. Include tightness of chest if it is related to asthma or other respiratory problem, and shortness of breath if it is definitely not cardiac-related.

Include runny eyes, tearing eyes, red eyes, and burning eyes as Eye irritation.

Gastrointestinal problems include nausea, vomiting, abdominal pain, heartburn, cramps, and diarrhea.

Include exposure to high temperatures accompanied by symptoms such as cramps, nausea, dizziness, stroke, muscle fatigue, exhaustion, dehydration, elevated blood pressure, heart palpitation or weakness as Heat stress.

Include exposure to fire, heat radiation, or electricity accompanied by symptoms such as tissue damage or blistering or redness of the skin, throat, eyes, or mouth as Thermal burn.

Include exposure to chemicals accompanied by symptoms such as tissue damage or blistering or redness of the skin, throat, eyes, or mouth as Chemical burn.

If you select Other, record the type of injury experienced by the victim. Do not repeat or combine any of the response options already listed for this question. If the type of burn is not known, record "burn NOS".

Include itchiness, redness, skin rash, stress rash, blister, and contact dermatitis as Skin irritation.

Include dizziness, fainting, passing out, lightheadedness, ataxia, numbness, tingling, and twitching as Dizziness or other CNS symptoms.

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Include perceived internal pain, ache, or soreness originating in any part of the head excluding pain in teeth or ears, and superficial irritation of the skin or scalp as Headache.

Include cardiac arrest, heart attack, palpitation, chest pain/angina, and heart-related tightness of chest as Heart problems.

Shortness of breath is a separate category because it has two major causes: respiratory and cardiac. If the cause is known, then select either respiratory or cardiac, and do not select shortness of breath. If the cause is not known or it is not respiratory or cardiac-related (i.e., anxiety), then select shortness of breath only.

## **Question 34E Personal Protective Equipment (PPE).**

**Intent:** Determines if the victim was wearing personal protective equipment at the time of the event.

**Instructions:** Select one of the following in the PPE field (Figure 9):

- [1] None
- [2] Level “A”
- [3] Level “B”
- [4] Level “C”
- [5] Level “D”
- [6] Firefighter turn-out gear with respiratory protection
- [A] Firefighter turn-out gear without respiratory protection
- [B] Other types of protection

**Notes:** If you selected Other types of protection, enter descriptive text in the adjacent field.

Examples of other types of protection are:

- Gloves
- Eye protection
- Hard hat
- Steel-toed shoes

Level A Protection: (1) NIOSH/MSHA approved supplied-air respirator—pressure-demand, self-contained breathing apparatus (SCBA) or pressure-demand, airline respirator with escape bottle for Immediately Dangerous to Life and health (IDLH) or potential for IDLH atmosphere; (2) fully encapsulating chemical-resistant suit; (3) chemical-resistant inner gloves; and (4) chemical-resistant boots with steel toe and shank. Optional PPE includes coveralls, long cotton underwear, hard hat, disposable gloves and boot covers, cooling unit, and 2-way radio.

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Level B Protection: (1) NIOSH/MSHA approved supplied air respirator—pressure-demand, self-contained breathing apparatus or pressure-demand, airline respirator with escape bottle for IDLH or potential for IDLH atmosphere; (2) chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-pieced chemical-splash suit; disposable chemical-resistant, one-piece suits); (3) chemical-resistant outer and inner gloves; and (4) chemical-resistant outer boots with steel toe and shank. Optional PPE includes long cotton underwear, coveralls, chemical-resistant (disposable) outer boot covers, hard hat with face shield, and intrinsically safe 2-way radio.

Level C Protection: (1) NIOSH/MSHA approved air-purifying, full-face, canister-equipped respirator; (2) chemical-resistant clothing (coveralls; hooded, one- or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls); (2) chemical-resistant outer gloves; (3) chemical-resistant outer boots with steel toe and shank. Optional PPE includes coveralls, long cotton underwear, chemical-resistant inner gloves, chemical-resistant (disposable) outer boot covers, hard hat with face shield, escape mask, and 2-way radio.

Level D Protection: (1) coveralls; (2) leather or chemical-resistant boots or shoes with steel and shank. Optional PPE includes gloves, safety glasses or chemical splash goggles, hard hat with face shield. (While Level D protection is primarily a work uniform, it is not any kind of work uniform. Level D uniforms must include the required PPE.)

In an event where no PPE information is available and you reasonably assume that the person was not wearing PPE or only non-protective clothing such as steel toe shoes, select None. An example of such an event is a truck driver getting in an accident and being pinned, and no information about PPE is available.

## **Question 34F Sex of victim.**

**Intent:** Describes the sex of the victim.

**Instructions:** Select one of the following in the Sex field (Figure 9):

- [1] Male
- [2] Female

## **Question 34G Age of victim.**

**Intent:** Describes the exact or approximate age of the victim.

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**Instructions:** Enter numeric age of victim (between 0 and 120) in the Age field (Figure 9). Leave the field blank if the age is unknown. The age category is automatically displayed in the adjacent field if you entered an age in the Age field (Figure 9). If you did not enter an age in the Age field (Figure 9), select one of the following age categories on the adjacent field:

- [A] less than 12 months
- [B] between 1 and 4 years of age
- [C] between 5 and 14 years of age
- [D] between 15 and 19 years of age
- [E] between 20 and 44 years of age
- [F] between 45 and 64 years of age
- [G] 65 years of age or more

**Question 34H** Describe the physical location of the victim at the time harmed in relation to the point of release.

**Intent:** Describes how far the victim was from the event.

**Instructions:** Select one of the following in the Distance field (Figure 9):

- [1] Immediate area where release occurred (e.g., room, railcar, trailer)/within 10 feet)
- [2] Wing/section of building/11 - 50 feet
- [3] Building(s) (may include internal parking areas and roads)/51 - 100 feet
- [4] The facility/101 - 200 feet
- [5] Between 201 feet - ¼ mile of point of release
- [6] Between ¼ - ½ mile of point of release
- [7] Between ½ - 1 mile of point of release
- [8] Greater than 1 mile of point of release

**Question 34I** Decontamination of injured person

**Intent:** Indicates where the victim was decontaminated

**Instructions:** Select one of the following in the Decontaminated field (Figure 9):

- [1] No
- [2] At the scene
- [3] At a medical facility
- [4] Both

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Table 1: Victims

Victim No.	A. Category	B. HazMat	C. Severity	D. Adverse health effect	E. PPE	F. Sex	G. Age	H. Distance	I. Decon
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

# HSEES Training Manual

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## Decontamination

**Figure 10: Decon/Population Tab Screen**

### **Question 35** Total number of uninjured people decontaminated

**Intent:** Determines the total number of uninjured people that were decontaminated at the scene of the event or at a medical facility.

**Instructions:** Type the total number of uninjured people that were decontaminated in the Total number of uninjured people decontaminated field (Figure 10). If no uninjured individuals were decontaminated, enter 000. If it is unknown whether any uninjured individuals were decontaminated leave the field blank.

**Notes:** Record the number of uninjured individuals (by population type) decontaminated at the scene of the event (Questions 36-39) or at a medical facility (Questions 40-43). These questions do not intend to determine the quality of the decontamination effort, just a count of the people decontaminated. An individual may be counted in both categories if they were decontaminated at both locations, but count them only once in Question 35.

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Decontamination means any cleaning procedure that is not considered routine. Washing hands or clothing is considered routine. Routine standard operating procedures for uncontaminated responders do not count. Irrigation of a wound or eye as part of treatment that does not require the responder to take any special precaution (e.g., put on extra layer gloves, call poison control for neutralization information, etc.) is not counted as decontamination.

If you entered 000 or left the field blank, proceed to Question 44.

**Question 36** How many uninjured employees were decontaminated at the scene?

**Intent:** Determines the number of uninjured employees (including contractors) that were decontaminated at the scene of the event.

**Instructions:** Type the total number of uninjured employees (including contractors) that were decontaminated at the scene in the Decontaminated at scene Uninjured Employees field (Figure 10). If the number is unknown, leave the field blank.

**Question 37** How many uninjured responders were decontaminated at the scene?

**Intent:** Determines the number of uninjured responders that were decontaminated at the scene of the event.

**Instructions:** Type the total number of uninjured responders that were decontaminated at the scene in the Decontaminated at scene Uninjured Responders field (Figure 10). If the number is unknown, leave the field blank.

**Question 38** How many uninjured members of the general population were decontaminated at the scene?

**Intent:** Determines the number of uninjured people in the general population that were decontaminated at the scene of the event.

**Instructions:** Type the total number of uninjured people in the general population that were decontaminated at the scene in the Decontaminated at scene Uninjured General Population field (Figure 10). If the number is unknown, leave the field blank.

**Question 39** How many uninjured students (at school) were decontaminated at the scene?

**Intent:** Determines the number of uninjured students (at school) that were decontaminated at the scene of the event.

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**Instructions:** Type the total number of uninjured students (at school) that were decontaminated at the scene in the Decontaminated at scene Uninjured Students (at school) field (Figure 10). If the number is unknown, leave the field blank.

**Question 40** **How many uninjured employees were decontaminated at a medical or other facility?**

**Intent:** Determines the number of uninjured employees that were decontaminated at a medical or other facility.

**Instructions:** Type the total number of uninjured employees that were decontaminated at a medical or other facility in the Decontaminated at Medical facility Uninjured Employees field (Figure 10). If the number is unknown, leave the field blank.

**Question 41** **How many uninjured responders were decontaminated at a medical or other facility?**

**Intent:** Determines the number of uninjured responders that were decontaminated at a medical or other facility.

**Instructions:** Type the total number of uninjured responders that were decontaminated at a medical or other facility in the Decontaminated at Medical facility Uninjured Responders field (Figure 10). If the number is unknown, leave the field blank.

**Question 42** **How many uninjured members of the general population were decontaminated at a medical or other facility?**

**Intent:** Determines the number of uninjured people in the general population that were decontaminated at a medical or other facility.

**Instructions:** Type the total number of uninjured people in the general population that were decontaminated at a medical or other facility in the Decontaminated at Medical facility Uninjured General Population field (Figure 10). If the number is unknown, leave the field blank.

**Question 43** **How many uninjured students (at school) were decontaminated at a medical or other facility?**

**Intent:** Determines the number of uninjured students (at school) that were decontaminated at a medical or other facility.

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**Instructions:** Type the total number of uninjured students (at school) that were decontaminated at a medical or other facility in the Decontaminated at Medical facility Uninjured Students (at school) field (Figure 10). If the number is unknown, leave the field blank.

## Potential Community Exposure

This section describes and distinguishes between those individuals at risk of being exposed and those individuals who might actually have been exposed. It also explores issues related to evacuation versus in-place sheltering.

### **Question 44** Approximately how many people live within $\frac{1}{4}$ mile radius of the event?

**Intent:** Determines the number of people that live within  $\frac{1}{4}$  mile radius of the site of the event.

**Instructions:** Type the number of people that live within  $\frac{1}{4}$  mile radius of the site of the event in the People Live  $\frac{1}{4}$  mile field (Figure 10). If the number is unknown, leave the field blank.

**Note:** The number in Question 44 must be smaller than the number in Question 45.

### **Question 45** Approximately how many people live within $\frac{1}{2}$ mile radius of the event?

**Intent:** Determines the number of people that live within  $\frac{1}{2}$  mile radius of the site of the event.

**Instructions:** Type the number of people that live within  $\frac{1}{2}$  mile radius of the site of the event in the People Live  $\frac{1}{2}$  mile field (Figure 10). If the number is unknown, leave the field blank.

**Note:** The number in Question 45 must be a smaller number than the number in Question 46.

### **Question 46** Approximately how many people live within 1 mile radius of the event?

**Intent:** Determines the number of people that live within 1 mile radius of the site of the event.

**Instructions:** Type the number of uninjured people that live within 1 mile radius of the site of the event in the People Live 1 mile field (Figure 10). If the number is unknown, leave the field blank.

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**Question 47** Approximately how many people were actually at home within ¼ mile radius at the time of the event?

**Intent:** Determines the number of people that live within ¼ mile radius of the event that were home at the time of the event.

**Instructions:** Type the number of people that live within ¼ mile radius of the event that were home at the time of the event. If the number is unknown, leave the field blank.

**Note:** The number in Question 47 must be smaller than the number in Question 48.

**Question 48** Approximately how many people were actually at home within ½ mile radius at the time of the event?

**Intent:** Determines the number of people that live within ½ mile radius of the event that were home at the time of the event.

**Instructions:** Type the number of people that live within ½ mile radius of the event that were home at the time of the event. If the number is unknown, leave the field blank.

**Note:** The number in Question 48 must be a smaller number than the number in Question 49.

**Question 49** Approximately how many people were actually at home within 1 mile radius at the time of the event?

**Intent:** Determines the number of people that live within 1 mile radius of the event that were home at the time of the event.

**Instructions:** Type the number of people that live within 1 mile radius of the event that were home at the time of the event. If the number is unknown, leave the field blank.

**Question 50** Define the area impacted by the release:

**Intent:** Describes the area that was impacted by the release from the event.

**Instructions:** Select one of the following in the Area Impacted field (Figure 10):  
[1] Immediate area where release occurred (e.g., room, railcar, trailer)/within 10 feet)  
[2] Wing/section of building/11 - 50 feet  
[3] Building(s) (may include internal parking areas and roads)/51 - 100 feet

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- [4] The facility/101 - 200 feet
- [5] Greater than 200 feet - ¼ mile of point of release
- [6] Greater than ¼ - ½ mile of point of release
- [7] Greater than ½ - 1 mile of point of release
- [8] Greater than 1 mile of point of release

**Note:** Impacted means where the plume extended.

**Question 51** Was a hospital or ambulance or other patient transport vehicle contaminated as a result of the event?

**Intent:** Indicates if a hospital or any type of patient transport vehicle was contaminated.

**Instructions:** Select the Yes or No option in the Vehicle contaminated field (Figure 10).

**Note:** A private vehicle is not a patient transport vehicle.

**Question 52** Did the event affect:

**Intent:** Determines if the event affected any type of road system.

**Instructions:** Select all of the following in the Affected Roads field (Figure 10) that apply:

- [1] Interstate/freeway
- [2] Arterial roads
- [3] Local roads
- [4] Waterway
- [8] Other

If you select Other, type descriptive text in the adjacent field.

**Note:** Affected means that the normal flow of traffic was altered.

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## Evacuation and In-Place Sheltering

**Figure 11: Evacuation Tab Screen**

**Question 53** How many people self-evacuated as a result of the event?

**Intent:** Determines the number of people that evacuated their home or workplace due to the event without an order by an official.

**Instructions:** Type the number of people that left without an order by an official in the How many people self-evacuated field (Figure 11). If no one left, enter 0 in the field. If the number is unknown, leave the field blank.

**Notes:** If voluntary evacuations occur first, and later there is an official order, type in the number for both Questions 53 and 54, but answer Questions 55 - 59 with information pertaining only to official evacuations.

It is not evacuation when people are injured and have to leave their home, work, or other location to receive medical attention.

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**Question 54** Did an official order an evacuation? (An official may be the incident commander, a fire marshal, police officer, plant manager, etc.)

**Intent:** Determines whether an official ordered the evacuation of the area surrounding the location of the event.

**Instructions:** Select the Yes or No option in the Evacuation Order field (Figure 11). If you selected Yes, proceed to Question 55. If you selected No, proceed to Question 58.

**Notes:** An evacuation may be ordered by many types of officials. These include on-scene coordinators such as a fire or police chief, a member of a HazMat team, or a police officer. If this person orders an evacuation, then they should be considered official. Similarly, a teacher in a chemistry laboratory may be considered an official if they believe a situation warrants the immediate evacuation of students from the lab. For example, (1) an alarm sounds after a chlorine release at an industrial facility, causing employees to go to a designated safe area (2) fire officials order residents in a neighborhood to go to a distant designated safe area.

When public officials were not contacted about a release, and a company official admits to the release but denies that workers were evacuated, but a member of the public says workers were evacuated, code that there was no evacuation, but make a handwritten note of the citizen's comment in the Comments section (Figure 13).

When an event occurs before school starts for the day or before workers arrive at work, and the students/workers are told to stay home, count them, as appropriate, in Questions 43-51, but do not count them in Question 57. Only workers/students already at work/school who had to evacuate are evacuees. However, for Question 59 you can record that access was restricted to the building.

**Question 55** What criteria was used to define the evacuation area?

**Intent:** Determines the area of evacuation.

**Instructions:** Answer only if you selected Yes for Question 54. Select one of the following in the Area of evacuation criteria field (Figure 11):

- [1] No defined criteria
- [2] Circle/radius
- [3] Downwind/downstream
- [4] The building(s) or the affected part of the building(s)
- [5] Circle and downwind/downstream

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**Note:** Select The building(s) or the affected part of the building(s) option only when some buildings or only the affected parts of a building are evacuated, not all buildings on the compound.

**Question 56** Record the number of people who were officially evacuated as a result of the event.

**Intent:** Determines the total number of people who were evacuated by an official order due to the event.

**Instructions:** Answer only if you selected Yes for Question 54. Type the number of people who were evacuated in the Total Number of people officially evacuated field (Figure 11). If the number is unknown, leave the field blank.

**Note:** Enter the total number of people who were evacuated from their homes, schools, place of business, or other areas as a result of the event. If any person was evacuated more than one time, count them only once.

**Question 57** How many hours was the evacuation order in effect?

**Intent:** Determines the length of time the area was evacuated.

**Instructions:** Answer only if you selected Yes for Question 54. Select or type the number of hours that the evacuation order was in effect in the Total Evacuation hours field (Figure 11). If the time is unknown, leave the field blank.

**Notes:** For evacuations that are less than one hour, use decimal places.

If a school is evacuated and the time at which the evacuation officially ended is known, enter the length of time the evacuation order was in effect even if it ended during non-school hours, so the school was not re-occupied until a later time. If the time at which the school evacuation order ended is not known, calculate the length from the time at which the building was re-occupied.

**Question 58** Did an official order in-place sheltering?

**Intent:** Determines whether people were told to stay indoors to prevent exposures associated with the event.

**Instructions:** Select the Yes or No option in the In-Place sheltering field (Figure 11).

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**Note:** If in-place sheltering is not mentioned in any of the documenting sources and it seems unlikely, select No.

**Question 59** Was access to the area restricted in any way?

**Intent:** Indicates if access to the area was restricted in any way.

**Instructions:** Select all that apply of the following in the Area access restriction field (Figure 11):

- [1] No restriction
- [2] Room
- [3] Wing/section of building
- [4] Building
- [5] Facility
- [6] Parking lot
- [7] Access route/road
- [8] Other adjacent areas

**Notes:** Restricted means that the normal access availability is altered in any way.

If an event occurs before school starts for the day or before workers arrive at work and they are not allowed to enter the building, select Building. If in-place sheltering is not mentioned in any of the documenting sources and it seems unlikely, select No.

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## Response to and Termination of Event

Figure 12: Response Tab Screen

**Question 60** Were actions taken, excluding decontamination, to stop or control the release?

**Intent:** Determines whether actions were taken to control the release of substances during the event.

**Instructions:** Select the Yes or No option in the Action taken, excluding decontamination, to stop or control release field (Figure 12).

**Notes:** Actions could include removing barrels, shutting valves, adsorbing and removing liquids, deploying booms, off-loading of product, extinguishing fires, neutralizing pH, etc. Mitigation includes a means to limit or eliminate additional contamination and exposure, as well as a plan to protect the public health from the effects of exposure to the hazardous substance exclusive of decontamination procedures.

Decontamination procedures are not included here.

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**Question 61** Were follow-up public health activities (as defined in Question 62), initiated as a result of this event?

**Intent:** Determines whether follow-up health activities as listed in Question 62 were initiated to prevent exposures to substances released during the event.

**Instructions:** Select the Yes or No option in the Follow-up public health activities initiated field (Figure 12). If you selected Yes, proceed to Question 62. If you select No, proceed to Question 63.

**Question 62** If you answered Yes to Question 61, what activities were initiated?

**Intent:** Determines the activities initiated to protect the public from exposures to substances released during the event.

**Instructions:** Answer if you selected Yes in question 61. Select one or two of the following in the Activities initiated field (Figure 12):

- [1] Health advisory issued
- [2] Well survey conducted
- [3] Alternate water provided
- [4] Fishing and/or water recreation ban
- [5] Discourage/prohibit consumption of locally grown produce and livestock
- [6] Health investigation epidemiological study, medical monitoring over time, exposure assessment)
- [7] Environmental sampling
- [8] Other
- [9] Shutdown of water intakes

If you select Other, type descriptive text in the adjacent field.

**Note:** The Well survey conducted option refers to both surveys of who has and uses a well and to testing for contamination of well water.

**Question 63** Emergency action terminated.

**Intent:** Indicates the date when the emergency phase of the event terminated.

**Instructions:** Select or type the date (mm-dd-yyyy format) the emergency phase of the event ended in the Emergency action end date field (Figure 12).

**Note:** The emergency phase of an event is over when there is no longer a public health threat, and it is safe to return to the area where the event occurred.

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**Question 64** Enter the time that the emergency phase of the event ended according to the incident commander.

**Intent:** Indicates the time when the emergency phase of the event terminated.

**Instructions:** Select or type in the time (24 hour format (e.g., 15:59)) the emergency phase of the event ended in the Emergency end time field (Figure 12). If the time is unknown, leave the field blank.

**Question 65** Who responded to this incident?

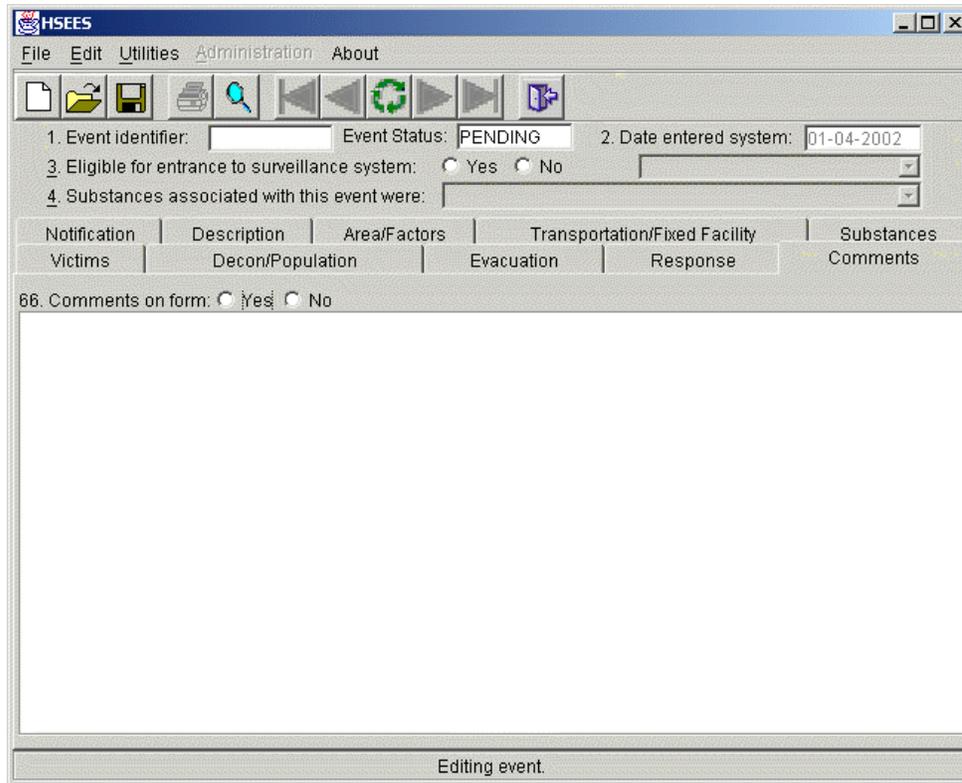
**Intent:** Indicates the personnel that responded to the event.

**Instructions:** Select all of the following in the Responder field (Figure 12) that apply:

- [1] No response
- [2] Certified HazMat team
- [3] Company's response team
- [4] Law enforcement agency
- [5] Fire department
- [6] EMT
- [7] Hospital personnel
- [8] Other
- [A] Health department/health agency
- [B] Environmental agency
- [C] EPA response team

If you select Other, type descriptive text in the adjacent field.

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**Figure 13: Comments Tab Screen**

**Question 66** Are there any comments on the data collection form?

**Intent:** Determines if comments on specific aspects of the data collection form were made.

**Instructions:** Select the Yes or No option in the Comments on form field (Figure 13). If you select Yes, click in the text box and type your comments.

**Note:** It is helpful to enter a brief description of the event. Also include any information that was not entered into the database but may be helpful at a later date. Type the question number that corresponds to your comment first, then type your comment.

### Final Instructions

When you have entered all the information for the event, the record should be saved. If the record contains information for Questions 1-4, 8, 11, 15, 17, 23-26, and 34, a pop-up is displayed to ask if you want to set the record to “Complete”. If you have entered all of the information you can attain for that record, select **Yes**. If you have not entered all of the data or are unsure, select

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**No.** The record's status of "Pending" or "Complete" is displayed in the Event Status field at the top of the screen. This will help you keep track of records that you want to revisit to perform more work. All records, except records marked for deletion, will be editable until April 15<sup>th</sup> of the year following their occurrence. After April 15<sup>th</sup>, you will need to contact your technical advisor to discuss changes to the database.

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## QUALITY CONTROL

For consistency in data collection and ease of analysis, ATSDR has emulated the data collection form in the web-based HSEES application, which is provided to the participating states. As the state health departments are notified of events that meet the case definition, they use the hardcopy of the data collection form to assist in completing the computer emulated form. The preliminary data are entered in the HSEES system on their PC. Additional information is added as it becomes available until data entry for that year is closed.

ATSDR will download data periodically throughout the year and perform cross reference checks. States are also welcome to download their own data and perform quality control checks. States should periodically run the duplicate event report to identify potential duplicates. If a duplicate is found, it should be marked surveillance = "No" - duplicate. Additionally it can be deleted, if desired.

ATSDR is responsible for security and limits access to the SAS data sets to selected ATSDR staff and researchers that have completed a data sharing agreement. Confidentiality of notification contacts and responsible parties is protected since ATSDR encrypts names, street addresses, telephone numbers, and coordinates. Interpretation of the results of the analyses is conducted by ATSDR staff and by the states for their state-specific data.

ATSDR is responsible for assuring that standard quality assurance and quality control procedures are followed. States retain all documenting material for at least three years (i.e., the records for 1998 will be kept through 2001). These records may be kept in a storage facility outside the state health department as long as the location is secure and has limited access. In the event ATSDR staff feels that one or more discrepancies exist in the data set, the states will use documented information to verify whether the event was correctly entered in the computer database.

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## PUBLICATIONS

ATSDR encourages each state to analyze its state data and produce publications and presentations with this information in order to disseminate HSEES information to responders, industry, the public health community, emergency preparedness officials, and other interested parties. Dissemination is a key element for decision-making related to issues of emergency releases of hazardous substances and is the major way that HSEES data can be used for primary and secondary prevention.

ATSDR requires that all publications of data derived from the HSEES system that are released to the public and all presentations receive prior ATSDR approval before release or presentation. This includes quarterly, annual, and cumulative reports that will be released to the public (not just sent to ATSDR); fact sheets, graphs, tables, maps, and other compilations of data; posters, slides, and any written text of oral presentations; articles for publication in state or private newsletters, magazines, or journals; and analyses conducted by third parties, such as universities. If it is necessary to release raw data to an entity outside of the HSEES program, a data sharing agreement should be completed. Instructions on how to do this can be obtained from your technical advisor.

ATSDR will attempt to review these materials as quickly as possible, but each review of a draft may take up to two weeks, and more than one draft may be necessary. Therefore, each state must plan well ahead of their needs and allow a month for the overall review process. Submit the HSEES Data Clearance, Data Request or Publication Request Form with the material to be reviewed.

Use the following funding statement on all publications:

This document was supported by funds from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) trust fund provided to the [official agency name] under Cooperative Agreement [insert cooperative agreement number] from the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services.

**Confidentiality of Company Names:** We strongly encourage the participating states not to release the names of companies involved in HSEES events in their publications and presentations. Since most states have no law requiring companies to release information about events qualifying for HSEES, the program depends on the cooperation of companies, and disclosing company names could jeopardize the system. However, we cannot require nondisclosure, so the decision whether to release company names is up to each state and their legal department.