

Building an Effective Contingency Plan: From Draft to Distribution

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Hazardous Waste and
Liquid Industrial By-Product Inspectors

What is Hazardous Waste?

- A waste is hazardous if it:
 - Exhibits a hazardous characteristic
 - Ignitable
 - Corrosive
 - Reactive
 - Toxic/Severely Toxic
 - Is a listed waste
 - F, K, P, or U listed waste
 - Is a mixture or derived-from waste that remains hazardous under the hazardous waste rules.

Who Generates Hazardous Waste?

- **Regulated community:**

- Businesses
- Municipalities
- Hospitals
- Service industry
- Manufacturing
- Transportation
- And more...

- **Need to know to:**

- Manage hazards posed by all waste streams
- Prevent releases
- Prepare for emergencies

Haz waste regs are written broadly and apply to many

Why Do We Regulate Hazardous Waste?

- Protect human health
- Protect the environment
- Reduce the risk of fires, explosions, releases
- Manage HW from cradle-to-grave
- Maintain compliance with federal and state regulations and avoid enforcement actions
- Encourage waste minimization/recycling

Prevent Situations Like This



Improper storage of LIB (biodiesel)



HW paint accumulation drum



HW drum leaking to the ground

Regulations

- Resource Conservation and Recovery Act of 1976 (RCRA) – Federal solid and hazardous waste regulation
- Public Act 451 of 1994, Michigan Natural Resources and Environmental Protection Act (NREPA):
 - Part 111, Hazardous Waste Management
 - Part 121, Liquid Industrial By-Products (LIB)
- Public Act 138 of 1998, Michigan Hazardous Materials Transportation Act
- U.S. Department of Transportation Act and Rules

Hazardous Waste Generator Status

Less
Regulation



More
Regulation

- **VSQG**

- Generate <100 kg (220 lbs) non-acute monthly
- Never accumulate > 1,000 kg (2,200 lbs)
- ~ ½ drum monthly



- **SQG**

- Generate between 100 kg and 1000 kg (220 to 2,200 lbs) non-acute monthly
- Never accumulate > 6,000 kg (13,200 lbs)
- Up to ~5 drums monthly



- **LQG**

- Generate $\geq$ 1,000 kg (2,200 lbs) non-acute monthly
- > 1 kg (2.2 lbs) acute or severely toxic
- > 100 kg (220 lbs) acute or severely toxic debris from a spill
- > 5 drums monthly



Large Quantity Generator

- Generate 1000 kg (2200 lbs) or more of hazardous waste monthly.
- More than five 55-gallon drums
- 90-day accumulation time limit
- Most regulated generator
- EQP5150 notification required every 2 years
- No max accumulation amount



Contingency Planning Reference

- 40 Code of Federal Regulations (CFR) Part 262, Subpart M
 - Preparedness, Prevention, and Emergency Procedures for Large Quantity Generators (LQGs)
- Part 111 307(1)(c)
 - The large quantity generator complies with the requirements of 40 CFR part 262, subpart M.

Purpose of a Contingency Plan

- Minimize risks to health and environment during emergencies
- Ensure rapid and coordinated response to fires, explosions, or releases
- Provide instructions for employees and emergency responders
- Reduce severity of incidents and limit pollution

Who Needs a Contingency Plan

- Required for all LQGs
- Must be maintained on site and kept up-to-date
- Must be implemented immediately in the event of an emergency

Contingency Planning Reference

- 40 CFR § 262.260(a)-(b)
 - a. A large quantity generator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
 - b. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

Describe Emergency Response Procedures

40 CFR 262.261(a)

- a. The contingency plan must describe the actions facility personnel must take to comply with [§§ 262.260](#) and [262.265](#) in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

Example of 40 CFR 262.261(a)

- Team members take the following actions if a fire or explosion occurs:
 1. Leave the immediate area and evacuate the facility if warranted.
 2. Notify a supervisor and contact the emergency coordinator to notify them of the incident and call 911 if warranted.
 3. If it is safe to do so, locate the nearest fire extinguisher and attempt to extinguish the fire.

May Be Incorporated Into Other Plans

40 CFR 262.261(b)

- b. If the generator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with [part 112 of this chapter](#), or some other emergency or contingency plan, it need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the standards of this part. The generator may develop one contingency plan that meets all regulatory standards. EPA recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance (“One Plan”).

Integrated Contingency Plan Elements

1. Plan Introduction

- a) Purpose and Scope of Plan Coverage
- b) Table of Contents
- c) Current Revision Date
- d) General Facility Identification Information

2. Core Plan Elements

- a) Discovery
- b) Initial Response
- c) Sustained Actions
- d) Termination and Follow-Up Actions

3. Annexes

Coordination with Local Emergency Responders

40 CFR 262.261(c)

- c. The plan must describe arrangements agreed to with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals or, if applicable, the Local Emergency Planning Committee, pursuant to [§ 262.256](#).

Example of 40 CFR 262.261(c)

External Emergency Contact List

Local Protection Agencies

If danger to public health or safety exists, immediately notify the applicable agencies:

- ALL EMERGENCIES: 911
- County Central Dispatch :
- Local Police Department:
- County Sherriff's Office:
- Local Fire Department:
- Local Hospital:

In case of a fire, explosion or spill/release that could threaten human health or the environment, or if the spill has reached surface water or groundwater, then the primary Emergency Coordinator will immediately notify EGLE at the 24-hour Pollution Emergency Alert System (PEAS) number noted below.

- EGLE District Office (8:00 AM – 5:00 PM M-F):
- 24-Hours Pollution Emergency Alert System (PEAS): (800) 292-4706

Transporter / Spill Remediation Contractor

- In the event of a release, the following contractor will be contacted:
- Emergency Response Contractor information:

Emergency Coordinator Information

40 CFR 262.261(d)

- d. The plan must list names and emergency telephone numbers of all persons qualified to act as emergency coordinator (see [§ 262.264](#)), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. In situations where the generator facility has an emergency coordinator continuously on duty because it operates 24 hours per day, every day of the year, the plan may list the staffed position (*e.g.*, operations manager, shift coordinator, shift operations supervisor) as well as an emergency telephone number that can be guaranteed to be answered at all times.

Example of 40 CFR 262.261(d)

Primary Emergency Coordinator

- Name and 24-Hour Contact Phone Number

Secondary Emergency Coordinators

- Names and 24-Hour Contact Phone Numbers

Emergency Equipment List

40 CFR 262.261(e)

- e. The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

Example of 40 CFR 262.261(e)

EMERGENCY RESPONSE EQUIPMENT

A. The following is a list of equipment and materials stored at [REDACTED] for use in spill containment and cleanup operations. [REDACTED]

Quantity In Stock	Description	Storage Locations	Stock Number
3 rolls	Petroleum Sorbent, White, 3M Type 100 Rolls 3 Rolls in Emergency Reserve Roll (36" x 150' x 3/8")	[REDACTED]	[REDACTED]
2 bales	Petroleum Sorbent, White, 3M Type T 126 Bale (17" x 100' x 3/8")	[REDACTED]	[REDACTED]
Sheets	Petroleum Sorbent, White, 3M Type 151 Sheet, 1400 Sheets in Emergency Reserve 200 Sheets per Bale (18" x 18" x 3/16")	[REDACTED]	[REDACTED]
6 bags	Petroleum Sorbent – White, 3M Type 280, Double Boom (5' x 5' x 10'), 4 booms per bag	[REDACTED]	[REDACTED]
5 skids	Granular Absorbent, Tan, Dri-Rite 40 lbs per bag	[REDACTED]	[REDACTED]
Varies	Loose Cellulose Fiber, Brown 10 lbs per sack	[REDACTED]	[REDACTED]
1 roll	Absorbent Wick-It, Gray Brown Rolls 3' x 75'	[REDACTED]	[REDACTED]
250 feet	"OK Corral" containment boom 50' sections with reusable coupling attachments	[REDACTED]	[REDACTED]
5 bales	Absorbent mat, Gray, 17" x 19" pad 100 pads per bale	[REDACTED]	[REDACTED]
6 boxes	Skimmer pillows, 12" x 24" x 1" 16 pillows per box	[REDACTED]	[REDACTED]
1 drum	Over-pak salvage drum	[REDACTED]	[REDACTED]
6 barrels	Ring top barrel – steel, 55-gal	[REDACTED]	[REDACTED]
6 barrels	Bung top barrel – steel, 55-gal	[REDACTED]	[REDACTED]
2 barrels	Ring top barrel – plastic, 55-gal	[REDACTED]	[REDACTED]

The following page gives guidance for cleanup, what each item is used for, and how it is used.

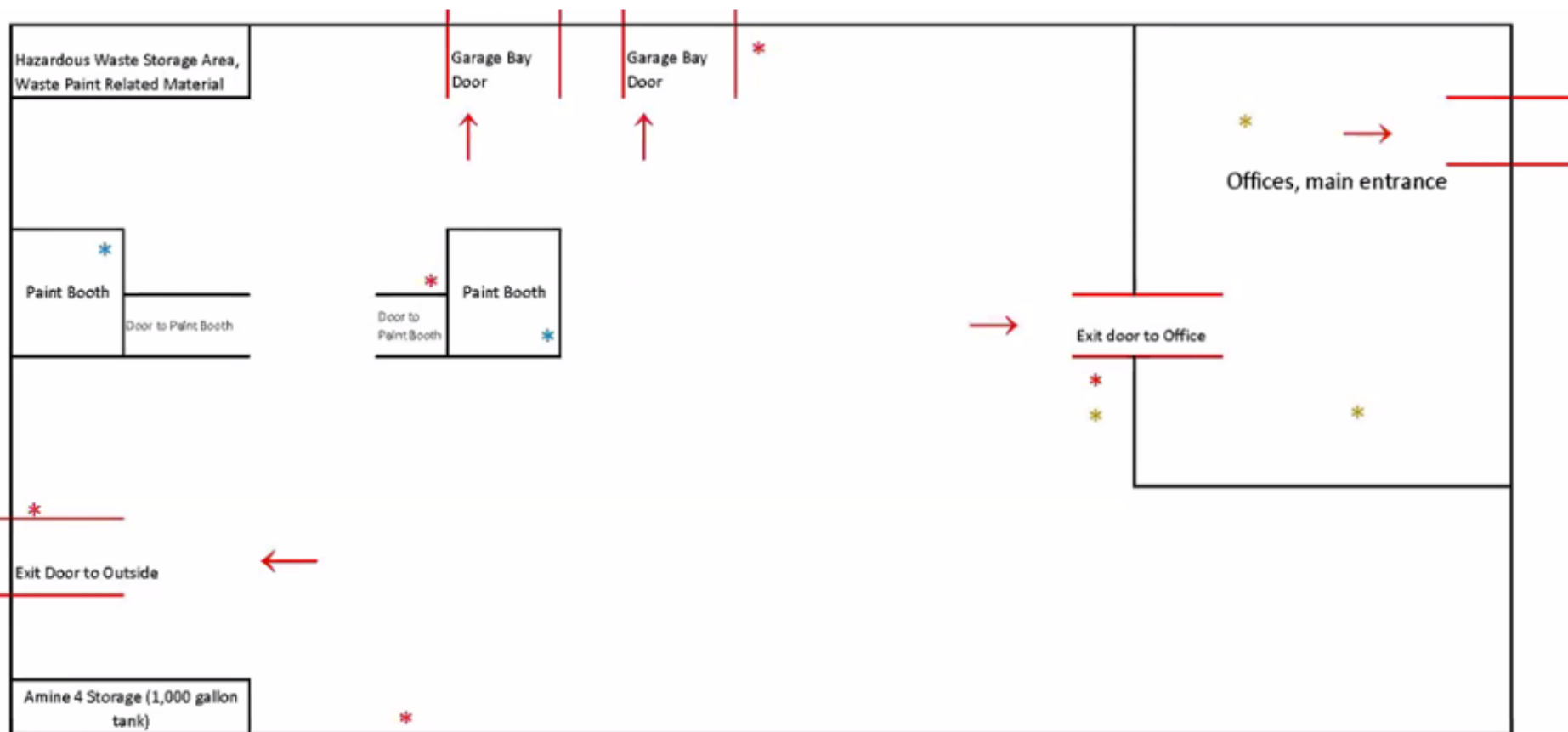
Evacuation Plan and Procedures

40 CFR 262.261(f)

- f. The plan must include an evacuation plan for generator personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

Contingency Planning

40 CFR 262.261(f)



Additional Requirements

40 CFR 262.262(a)

- Submit the CP to local emergency responders
 - Must maintain documentation of submittal
- Maintain a copy of CP at the facility

Quick Reference Guide (QRG)

EPA (Federal Rule): 40 CFR 262.262(b)

- Generator Improvement Rules effective May 30, 2017
- Requires LQGs to develop a QRG upon any CP updates
- New LQGs must submit a CP and QRG to local authorities upon initial notification

EGLE, Michigan: Part 111 Adoption

- Adopted Generator Improvement Rules into Part 111 August 3, 2020
- QRG requirement becomes applicable under Michigan's authorized program

Quick Reference Guide (QRG)

- Provides summary of CP
- Includes
 - Facility layout and location
 - Hazardous waste locations
 - Emergency equipment
 - Emergency contacts
 - Water sources and flow rate

QRG Regulation Reference

40 CFR 262.262(b)

- A large quantity generator that first becomes subject to these provisions after May 30, 2017 or a large quantity generator that is otherwise amending its contingency plan must at that time submit a quick reference guide of the contingency plan to the local emergency responders identified at [paragraph \(a\)](#) of this section or, as appropriate, the Local Emergency Planning Committee.

QRG

40 CFR 262.262(b)(1)

1. The types/names of hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time (*e.g.*, toxic paint wastes, spent ignitable solvent, corrosive acid).

QRG

40 CFR 262.262(b)(1)

HAZARDOUS WASTE INFORMATION:

Name of Waste	Waste Codes/Hazards	Location Accumulated	Maximum Amounts Present	Response Notes	Special Notes to Hospital/Treatment personnel
Paint Related Wastes (liquid)	D001 (ignitability, flash point <140 °F); F003, F005 (Benzene, Methyl Ethyl Ketone, Toluene, Toxicity)	NW corner of Warehouse, hazardous waste storage area	Five, 55-gallon drums (2,065 pounds)	If personnel come into direct contact with material, decontamination at the hospital may be required prior to treatment.	None
Paint Related Wastes (liquid)	D001 (ignitability, flash point <140 °F); F003, F005 (Benzene, Methyl Ethyl Ketone, Toluene, Toxicity)	Two Satellite Accumulation Areas as noted with blue asterisks on the attached map.	One, 55-gallon drum (440 pounds)	If personnel come into direct contact with material, Decontamination at the hospital may be required prior to treatment.	None
Off-specification 2, 4-D, an herbicide, (brand name is Amine 4) (liquid)	D016 (toxicity); Flashpoint 190 °F.	SW corner of warehouse near new product storage of Amine 4.	Off-Spec-1 tank, 1,000 gallons New product - 1 tank (same tank as off-Spec), 1,000 gallons	Use PPE to prevent contact with skin and eyes. Immediately prevent spills from entering drains and waterways. Prevent sources of ignition and open flames.	Contact Chemtrac for emergency medical treatment information at 800-424-9300. If in eyes, wash eyes for several minutes.

QRG
40 CFR 262.262(b)(2)

2. The estimated maximum amount of each hazardous waste that may be present at any one time.

Example of 40 CFR 262.262(b)(2)

HAZARDOUS WASTE INFORMATION:

Name of Waste	Waste Codes/Hazards	Location Accumulated	Maximum Amounts Present	Response Notes	Special Notes to Hospital/Treatment personnel
Paint Related Wastes (liquid)	D001 (ignitability, flash point <140 °F); F003, F005 (Benzene, Methyl Ethyl Ketone, Toluene, Toxicity)	NW corner of Warehouse hazardous waste storage area	Five, 55-gallon drums (2,065 pounds)	If personnel come into direct contact with material, decontamination at the hospital may be required prior to treatment.	None
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QRG

40 CFR 262.262(b)(3)

3. The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff

Example of 40 CFR 262.262(b)(3)

HAZARDOUS WASTE INFORMATION:

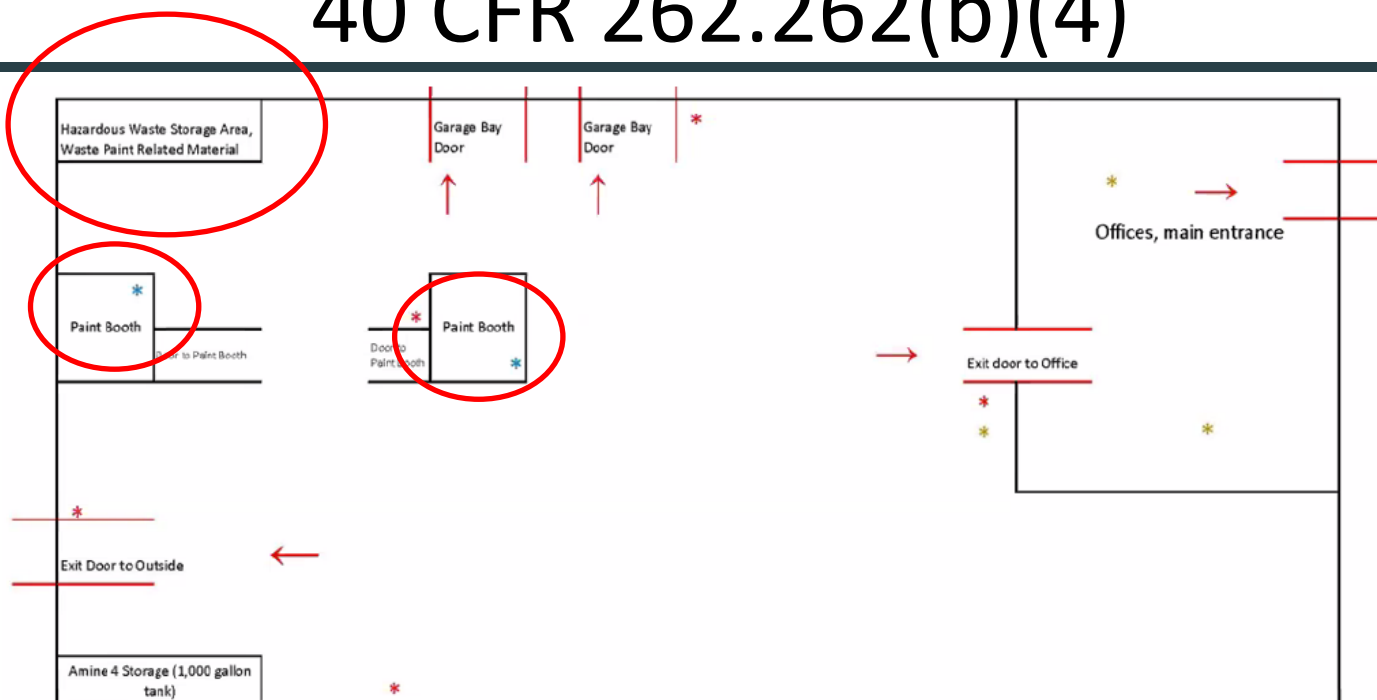
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QRG

40 CFR 262.262(b)(4)

4. A map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes.

Example of 40 CFR 262.262(b)(4)



* Satellite Accumulation Area for Paint Related Waste Material (D001, F003, F005)

* Fire Alarms (ring on-site only, there are no fire alarms that notify off-site personnel)

* Telephone for off-site notification of emergency

→ Indicates evacuation route out of the building.

Note 1: Hazardous waste (paint-related waste) is generated and accumulated inside each of the two paint booths, and is accumulated in the hazardous waste storage area. Amine 4 can be a hazardous waste if it is off-specification. It is generated and accumulated in the SW corner at the Amine 4 tank.

Note 2: Smoke detectors are located throughout the office and main warehouse on the ceiling, in a grid about every 25 feet. Smoke detectors are connected to an automatic sprinkler system.

QRG

40 CFR 262.262(b)(5)

5. A street map of the facility in relation to surrounding businesses, schools and residential areas to understand how best to get to the facility and also evacuate citizens and workers

QRG

40 CFR 262.262(b)(5)



QRG

40 CFR 262.262(b)(6)

6. The locations of water supply (*e.g.*, fire hydrant and its flow rate).

Example of 40 CFR 262.262(b)(6)



QRG

40 CFR 262.262(b)(7)

7. The identification of on-site notification systems (*e.g.*, a fire alarm that rings off site, smoke alarms)

Example of 40 CFR 262.262(b)(7)

* Satellite Accumulation Area for Paint Related Waste Material (D001, F003, F005)

* Fire Alarms (ring on-site only, there are no fire alarms that notify off-site personnel)

* Telephone for off-site notification of emergency

→ Indicates evacuation route out of the building.

Note 1: Hazardous waste (paint-related waste) is generated and accumulated inside each of the two paint booths, and is accumulated in the hazardous waste storage area. Amine 4 can be a hazardous waste if it is off-specification. It is generated and accumulated in the SW corner at the Amine 4 tank.

Note 2: Smoke detectors are located throughout the office and main warehouse on the ceiling, in a grid about every 25 feet. Smoke detectors are connected to an automatic sprinkler system.

QRG

40 CFR 262.262(b)(8)

8. The name of the emergency coordinator(s) and 7/24-hour emergency telephone number(s) or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

Example of 40 CFR 262.262(b)(8)

ABC Facility: 1000 SW Main Street. Anytown, Michigan

Facility Contacts:

Primary Emergency Coordinator: George Washington - Mobile Number (24/7): 515-555-0000

Secondary Emergency Coordinator: Abraham Lincoln - Mobile Number (24/7): 515-555-0001

Tertiary Emergency Coordinator: Martha Washington - Mobile Number (24/7): 515-555-0002

Note: ABC Facility operates 3 shift, 24/7, but the order of contact during an emergency is listed above.

CP vs QRG

Contingency Plan



Full procedural document



Internal use



Detailed response steps



Regulatory requirement

Quick Reference Guide



Emergency snapshot



First responder tool



Visual and location based info



Required supplement for LQGs

Implementing a Contingency Plan

In the event of a fire, explosion, or other release of hazardous waste that could threaten human health or the environment, or if the LQG has knowledge that a spill has reached surface water/groundwater, the LQG is required to immediately notify EGLE by calling the Pollution Emergency Alert System at 800-292-4706 with the following information:

1. The name and phone number of the person who is reporting the incident.
2. The name, address, telephone number, and Site ID of the LQG.
3. The date, time, and type of incident.
4. The name and quantity of material(s) involved and released.
5. The extent of injuries, if any.
6. An estimated quantity and disposition of recovered materials that resulted from the incident, if any.
7. An assessment of actual or potential hazards to human health to the environment.
8. A description of the immediate response action taken.

Implementing a Contingency Plan

Fire



used oil processor

Implementing a Contingency Plan

Release



used oil processor

Implementing a Contingency Plan

Injury

US DOT



OSHA



1. Assess
2. Protect
3. Call 911
4. Secure
5. First Aid
6. Notify
7. Document
8. Follow-up

Release Reporting Requirements

40 CFR § 262.265(i)

Within 15 days of release, prepare and maintain on-site records a written report documenting:

1. Name, address, and telephone number of the generator;
2. Date, time, and type of incident (*e.g.*, fire, explosion);
3. Name and quantity of material(s) involved;
4. The extent of injuries, if any;
5. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
6. Estimated quantity and disposition of recovered material that resulted from the incident.

Training Requirements

- All LQGs must ensure employees are properly trained in hazardous waste management
- **40 CFR 262.17(a)(7)** (RCRA)
- **40 CFR 262 Subpart M** (emergency preparedness)
- **Part 111 Rule 307(1)(f)**

Who Must Be Trained

- All facility personnel involved in hazardous waste management, including:
 - Container handling and labeling staff
 - Accumulation area operators
 - Emergency coordinators and alternates
 - Maintenance staff working in waste areas
- Training must be appropriate to the job duties of the employee

Training Frequency

- Within 6 months of hire
- Annual refresher training required
- Updated training required when:
 - Job duties changes
 - Regulations change
 - Operations change
 - Ex.) Subpart P adoption, HWP no longer managed as UW
 - Waste streams change

Required Training Content

- Contingency Plan implementation
- HW management
 - Waste identification and management
 - Container management
 - Satellite and central accumulation requirements
- Emergency response and use of emergency equipment

Required Training Documentation

- Job title for position
- Name of employee
- Job description
- A written description of the type and amount of training for all personnel
- Records retained on site for all current employees and 3 years for former employees

Common Violations

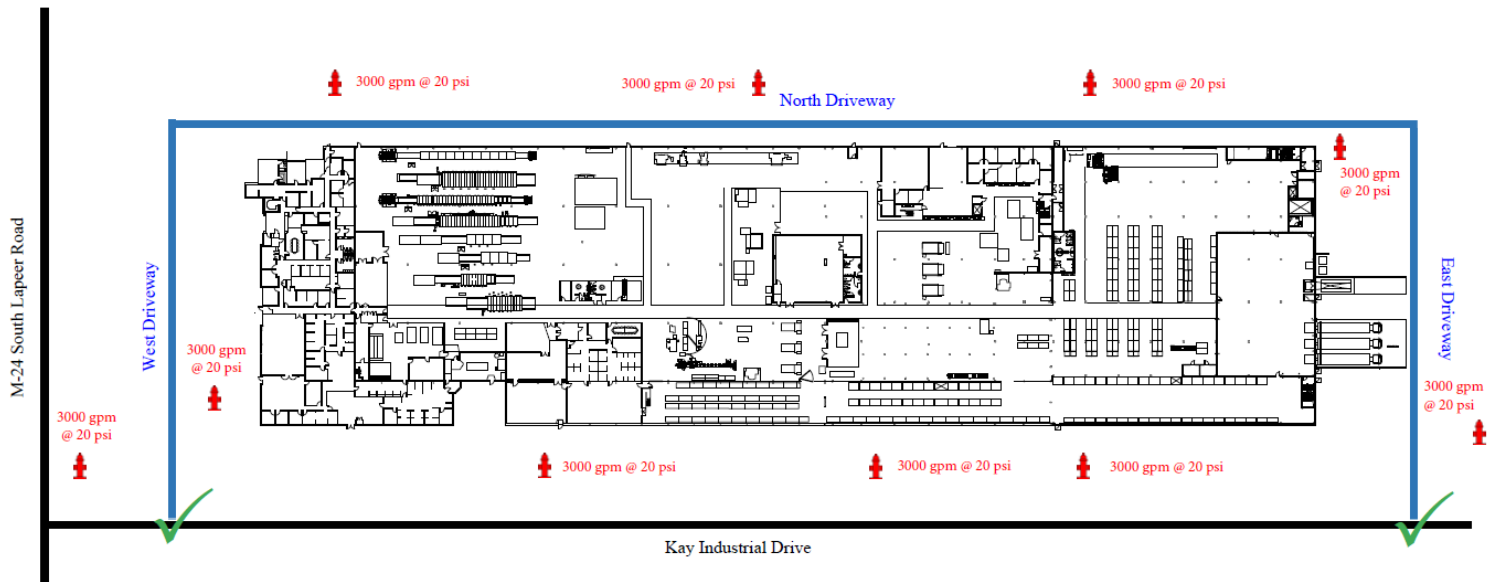
- Emergency Coordinator Information
 - Outdated, employees no longer work there
 - When employees change, CP and QRG needs to be updated
 - Need phone number where the emergency coordinator can be reached 24/7
 - Need backup coordinators in case the primary can not be reached

Common Violations

- Arrangements with first responders
 - There must be documentation that the contingency plan was shared with local response agencies.
 - Email documentation or certified mail receipt.
 - The contingency plan must be shared with local agencies whenever there is an update.

Common Violations

- Missing the flow rate for fire hydrants
 - The map must include the location of all fire hydrants available AND their flow rate



Common Violations

- Missing the emergency equipment list and the descriptions.
 - Must list all emergency equipment
 - Location
 - Purpose
 - Capability/intent of use
 - Ex. Class of fire extinguisher
 - Ex. Type of neutralizer
 - Ex. Type of absorbents

Common Violations

- Evacuation Routes:
 - Need both a primary and an alternate or secondary route
 - Many plans have a primary route but do not include an alternate route (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

Common Violations

- Combining the CP and QRG
 - They are standalone documents
 - CP CAN be combined with other docs

Questions?



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