THIS POLICY DOES NOT HAVE THE FORCE OF LAW

Ohio Environmental Protection Agency

Hazardous Waste Generator Handbook

*****Disclaimer*****

The Ohio Environmental Protection Agency (Ohio EPA) has prepared this handbook to help businesses understand and comply with the requirements that apply to Ohio's hazardous waste regulations and to aid in implementing the requirements. This handbook is not a regulation and should not be treated as a substitute for reading the rules.

Table of Contents

Purpose of Handbook

The Ohio Environmental Protection Agency (Ohio EPA) has prepared this handbook to help generators understand, implement and comply with Ohio's hazardous waste regulations.

Specifically, this handbook includes information about Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program (DERR'S HWP), an explanation of hazardous waste and Ohio EPA's hazardous waste requirements as they apply to generators. Copies of hazardous waste forms and instructions for their completion are included. For additional sources of information, several key terms are hyperlinked to their applicable Web page.

This handbook is not a regulation and should not be treated as a substitute for reading the rules. This handbook has been revised from its previous version created in 1994.

Direct concerns or questions pertaining to DERR'S HWP, the hazardous waste regulations or to this handbook to: Ohio EPA's Hazardous Waste Compliance Assurance Section of the Division of Environmental Response and Revitalization at 614-644-2924.

Introduction to the Ohio Environmental Protection Agency

Everyone deserves clean air to breathe and clean water to drink. Americans want to keep our environment clean, but also want to enjoy modern conveniences. Most modern conveniences affect our air, water and land. Electric plants and automobiles create air pollution; chemical manufacturers and development companies create water pollution; and obsolete electronics and waste from manufactured goods create pollution on the land.

The Ohio Environmental Protection Agency (Ohio EPA) is a state agency whose goal is to protect the environment and public health by ensuring compliance with environmental laws. Those laws and related rules outline Ohio EPA's authority—what we can and can't do, and what things we can consider when making decisions about facility operations.

Ohio EPA was created on October 23, 1972. It combined environmental programs that previously had been scattered throughout several state departments. Ohio EPA's Central Office is located in Columbus, and five district offices manage the Agency's programs throughout the state. You will find a district map and contact information on page viii.

Ohio EPA establishes and enforces standards for air, water, waste management and cleanup of sites contaminated with hazardous substances. We also provide financial assistance to generators, environmental education programs for generator and the public and pollution prevention assistance to help generators minimize waste at the source.

Ohio EPA is divided into six regulatory divisions that play different roles in environmental protection. These regulatory divisions are Air Pollution Control, Drinking and Ground Waters, Environmental Response, Investigation and Enforcement, Materials and Waste Management, Environmental Response and Revitalization, and Surface Water.

There are a few core responsibilities that each division of Ohio EPA must fulfill. These are:

- reviewing permit applications and issuing permits to facilities;
- investigating citizen complaints;
- monitoring to make sure all environmental standards are met (usually accomplished by inspections, collecting samples of air, water or soil and testing them for pollutants in a laboratory, and reviewing sampling and monitoring data submitted by a facility);
- providing technical assistance to help regulated facilities meet environmental laws and permit requirements; and

- taking enforcement action when facilities do not meet environmental laws and permit requirements.

Ohio EPA's district office staff is responsible for writing permits, conducting facility inspections, monitoring, collecting samples, initiating enforcement and other direct contact with the regulated community and citizens.

Contact Us!

There are many ways to contact us with questions or concerns. Visit Ohio EPA on the Web at epa.ohio.gov. District 800-numbers are available for citizens to report potential violations or complaints (below). Please use the regular numbers listed below and on page viii for all other calls.

Non-Emergency Complaints

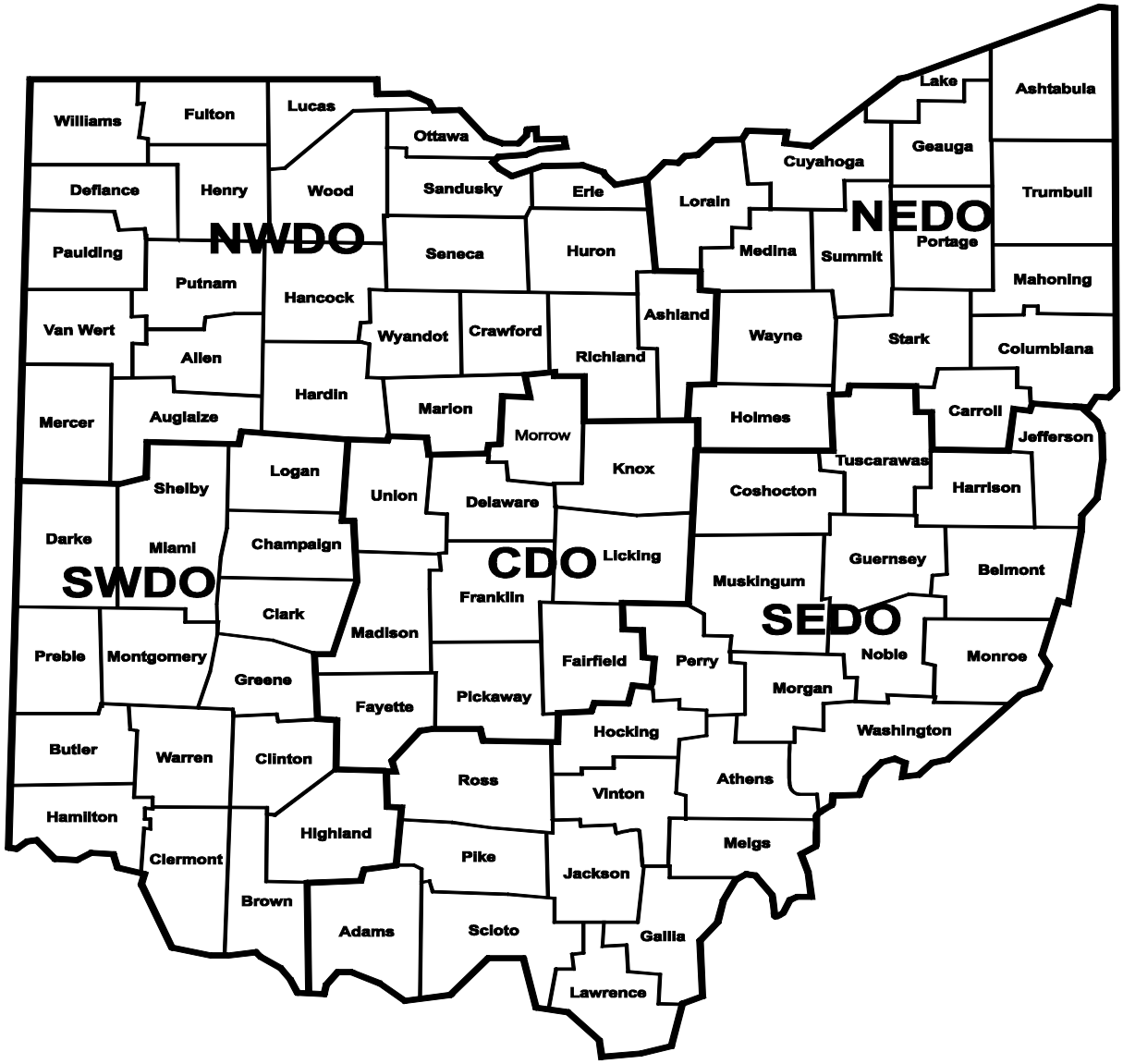
To submit a complaint or report a non-emergency environmental situation, please use the following toll-free numbers to contact the appropriate Ohio EPA district office during business hours (Monday – Friday, 8AM – 5PM).

Central District Office 1-800-686-2330
Northeast District Office 1-800-686-6330
Northwest District Office 1-800-686-6930
Southeast District Office 1-800-686-7330
Southwest District Office 1-800-686-8930

Environmental Emergencies

Ohio EPA's Division of Environmental Response, Investigation and Enforcement operates the Spill Hotline with on-scene coordinators available to respond, investigate and oversee emergency clean-up activities 24 hours a day, 7 days a week.

Spill Hotline: 1-800-282-9378



District Offices and Central Office Location Information

Northwest District Office
347 North Dunbridge Road
Bowling Green, Ohio 43402
Phone: (419) 352-8461
Fax: (419) 352-8468

Central District Office
50 W. Town St. Suite 700
PO Box 1049
Columbus, Ohio 43216-1049
Phone: (614) 728-3778
Fax: (614) 728-3898

Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
Phone: (330) 963-1200
Fax: (330) 487-0769

Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
Phone: (937) 285-6357
Fax: (937) 285-6249

Southeast District Office
2195 Front Street
Logan, Ohio 43138
Phone: (740) 385-8501
Fax: (740) 385-6490

What Does Ohio EPA Do?

Ohio EPA establishes and enforces standards to protect the environment in the following areas:

Air

The Division of Air Pollution Control (DAPC) ensures compliance with the federal Clean Air Act and works to reduce air emission toxins. DAPC issues permits to stationary sources of air pollution such as factories, and monitors emissions from some vehicles.

Drinking Water

The Division of Drinking and Ground Waters (DDAGW) ensures compliance with the federal Safe Drinking Water Act and evaluates potential threats to source waters of Ohio's 1,500 public water systems. DDAGW approves plans for public water systems (not private wells) and regulates underground disposal of certain kinds of liquid waste.

Lakes, Rivers and Streams

The Division of Surface Water (DSW) ensures compliance with the federal Clean Water Act and works to increase the number of water bodies that can safely be used for swimming and fishing. DSW issues permits to wastewater treatment plants and factories, and oversees the management of storm water to reduce the impact of pollutants in runoff. They also develop comprehensive watershed plans aimed at improving polluted streams and sample water, aquatic invertebrates and fish to determine the health of Ohio's streams.

Solid Waste Management

The Division of Materials and Waste Management (DMWM) ensures proper handling of solid waste and encourages people to reduce, reuse or recycle solid waste generated in Ohio. DMWM issues permits to landfills, waste incinerators, transfer facilities, composting facilities, scrap tire facilities, construction and demolition disposal sites, infectious waste disposal sites, and industries that generate infectious wastes, such as hospitals. They also oversee state and local planning for long-term solid waste management.

Hazardous Waste Management

The Division of Environmental Response and Revitalization's Hazardous Waste Program (DERR'S HWP) promotes pollution prevention and the proper management and cleanup of hazardous waste. DERR'S HWP staff inspects facilities to ensure compliance with the hazardous waste rules, investigates complaints, oversees corrective action and issues permits to hazardous waste treatment, storage and disposal facilities. DERR'S HWP also makes sure that companies properly close hazardous waste facilities that are no longer used.

Cleanup

The Division of Environmental Response and Revitalization (DERR) is responsible for the cleanup of contaminated sites and works to prevent the spread of contamination. DERR oversees investigation and cleanup work at contaminated sites and also provides assistance to industries and communities in the event of spills or other environmental emergencies. The programs within DERR include; Remedial Response, Site Assessment, Site Assistance and Brownfield Revitalization, the Voluntary Action Program, Federal Facilities Section, and the Cessation of Regulated Operations (CRO).

What Else Does Ohio EPA Do?

Pollution Prevention and Compliance Assistance

Pollution prevention (P2) looks at what causes waste and pollution and helps determine the best way to prevent creation of waste. The Office of Compliance Assistance and Pollution Prevention (OCAPP) works with Ohio EPA divisions to integrate P2 concepts into Agency policies. The office also develops P2 guidance for business and industry, provides technical assistance to help businesses comply with the regulations and reduce their waste.

Environmental Education

The Office of Environmental Education (OEE) administers the Ohio Environmental Education Fund, which awards up to one million dollars annually in grants to schools, advocacy groups, industry associations, non-profit groups and others for projects that increase awareness and understanding of environmental issues throughout Ohio. The office works closely with partner organizations and other government agencies to coordinate environmental education efforts.

Financial Assistance

The Division of Environmental and Financial Assistance (DEFA) serves as a one-stop shop for customers seeking technical and financial resources to help them achieve compliance and address infrastructure needs. The following resources and services are available through DEFA. They deliver environmental protection assistance by financing water quality improvement projects through a low-interest revolving loan program. Eligible projects include building or renovating drinking water or wastewater plants and sewers, cleaning up abandoned industrial sites (brownfields), and wellhead protection programs.

What Do Other Agencies Do?

With so many state departments and agencies, it can be difficult to determine exactly who handles a particular issue. Ohio EPA often receives comments or questions about environmental issues that we can't address because the laws give authority over those issues to other departments. Here is a list of issues that Ohio EPA does not handle, along with the state department or agency which has jurisdiction.

Department of Agriculture 614-728-6201
- Food safety
- Pesticide application

Department of Commerce 614-466-3636
- Underground petroleum storage tanks

Department of Health 614-466-3543
- Indoor air pollution
- Lead abatement licensing
- Private wells
- Private septic systems
- Radioactive waste
- Radon Licensing
- Septic systems
- Water bacteria levels at local beaches
- West Nile virus (carried by mosquitoes)

Department of Natural Resources 614-265-6565
- Mining permits and reclamation
- State parks
- Well water draw-down

Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program

Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program (DERR'S HWP) monitors the management of hazardous waste from its creation to its final destination, commonly called "cradle to grave" regulation. Cradle to grave regulations apply to hazardous waste generators, transporters and treatment, storage and disposal (TSD) facilities.

DERR'S HWP performs compliance monitoring and enforcement functions, reviews hazardous waste installation and operation permit applications, reviews closure plans relating to cleanup of existing hazardous waste facilities, reviews corrective action plans for permitted facilities and provides regulatory support to industry, consultants and the public.

1. Compliance Monitoring: DERR'S HWP inspects generators for proper handling, labeling and management of hazardous waste; transporters for compliance with manifest and hazardous waste handling requirements; and facilities that treat, store or dispose of hazardous waste.

2. Enforcement Functions: DERR'S HWP investigates persons or facilities that improperly manage hazardous waste and may initiate enforcement action against generators and facilities that do not comply with the hazardous waste rules.

3. Hazardous Waste Permits: DERR'S HWP reviews hazardous waste installation and operation permit applications and modifications for facilities that wish to treat, store or dispose of hazardous waste.

4. Closure Plans: DERR'S HWP reviews closure plans for facilities that no longer manage hazardous waste under a permit or for facilities required to clean up areas where hazardous waste was illegally treated, stored or disposed.

5. Regulatory Assistance: DERR'S HWP provides hazardous waste management regulatory assistance and educational presentations to consultants, government officials, industry, professional groups, university classes and citizens.

Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program Contact Information

For regulatory interpretation or for general hazardous waste questions, contact the Central Office staff.

Central Office Subject Areas…….614-644-2924

- Hazardous Waste Biennial Report
- Emergency Permits
- Enforcement
- U.S. EPA Identification Numbers
- Financial Assurance
- Inspections
- Permitting
- Pollution Prevention
- Compliance Assistance
- Sampling and Data Analysis

For specific questions about a facility, contact the appropriate DERR'S HWP District Office inspector.

DERR'S HWP District Office Inspector Locations

Central District Office 614-728-3778
Northeast District Office 330-963-1200
Northwest District Office.....419-352-8461
Southeast District Office.....740-385-8501
Southwest District Office 937-285-6347

Written Regulatory Interpretations

For written regulatory interpretation, please send your question(s) to us by

Using Answer Place:
You can access it at this link.

By faxing us at:
614-644-3146

By writing to us at:
Ohio EPA
Attn: Division of Environmental Response and Revitalization Hazardous Waste Program
PO BOX 1049
Columbus, Ohio 43216-1049

Useful Websites

State of Ohio Web Page

State Environmental Agencies

Ohio EPA's Home Page

- Guides and Manuals
- Rules and Laws
- Guidance Documents
- Recycling Directory
- Hazardous Waste Generator Requirements

U.S. EPA's Home Page

- RCRA Online
- RCRA Info Web
- Federal Register
- Enforcement Compliance History Online
- Envirofacts Data Warehouse

Acronyms

BDAT	Best Demonstrated Available (or Achievable) Technology
BIFs	Boilers and Industrial Furnaces
BMP	Best Management Practices
BUSTR	State Fire Marshal Bureau of Underground Storage Tank Regulations
C&DD	Construction and Demolition Debris
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
DAPC	Ohio EPA, Division of Air Pollution Control
DERR'S HWP	Ohio EPA, Division of Environmental Response and Revitalization's Hazardous Waste Program
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act
FR	Federal Register
HSWA	Hazardous and Solid Waste Amendments of 1984
LDRs	Land Disposal Restrictions
LQG	Large Quantity Generator
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NTIS	National Technical Information Service
OAC	Ohio Administrative Code
ODH	Ohio Department of Health
ORC	Ohio Revised Code
OSHA	Occupational Safety and Health Administration
OSW	Office of Solid Waste, U.S. EPA
OSWER	Office of Solid Waste and Emergency Response, U.S. EPA
Ohio EPA	Ohio Environmental Protection Agency
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
SQG	Small Quantity Generator
SWDA	Solid Waste Disposal Act
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
TSD	Treatment, Storage and Disposal Facility
U.S. EPA	United States Environmental Protection Agency
UST	Underground Storage Tank
UTS	Universal Treatment Standards
UWR	Universal Waste Rule
VSQG	Very Small Quantity Generator
WAP	Waste Analysis Plan

Chapter 1: Hazardous Waste

Am I a hazardous waste generator?

If you produce a waste that is hazardous, you are a hazardous waste generator. As a business owner, it is important to know whether you generate a hazardous waste. First you must know when a material becomes a waste. Generally, a waste is any discarded material that is not excluded by rule or other legal mechanisms. If you have a material that you can no longer use, it is probably a waste.

If you have a waste, you must determine if that material is a hazardous waste. If it is, you are the generator of a hazardous waste. A generator, as defined in Ohio Administrative Code (OAC) rule 3745-50-10 is "any person, by site, whose act or process produces hazardous waste identified or listed in OAC Chapter 3745-51 or whose act first causes a hazardous waste to become subject to regulation." You may be considered to be the generator of a waste for two reasons: your manufacturing process or the service you provide produces a hazardous waste or causes something to be unusable.

This definition contains four important components. These four components are, "person," "by site," "act," and "process."

"Person" is defined in OAC rule 3745-50-10 and means "an individual, trust, firm, joint-stock company, federal agency, corporation (including a government corporation), partnership, association, the state of Ohio or any state of the United States, municipality, commission, political subdivision of the state or any interstate body."

"By site" refers to the location, usually a specific address, where hazardous waste is generated. Ohio EPA tracks hazardous waste generation on a site-specific basis or by "individual generation site." Individual generation site means the contiguous site at or which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

An "act" or "process" which produces hazardous waste refers to a manufacturing or production process or other activities that generates a waste. For example, an electroplating process generates waste rinse water.

Comparatively, an "act" or "process" which first causes a hazardous waste to become subject to the hazardous waste rules refers to an action/effort that first causes a material to become classified as waste. A contractor may be the person whose act first causes a hazardous waste to become subject to regulation under the hazardous waste rules. For example, the act of the contractor may be removing unwanted materials from product or raw material storage vessels. In this instance, the contractor's act of removing unwanted materials first causes the material to become a waste.

There are instances where there is more than one generator of a waste. For example, if a site owner hires a second party to periodically clean a manufacturing process unit, the owner of the process unit acts to produce the hazardous waste and the person (contractor) who removes the hazardous waste from the unit subjects it to regulation. The two parties have the responsibilities of a generator because both parties contribute to the generation of a hazardous waste. One or both parties can assume and perform the duties of the generator on behalf of both of the parties. If both parties generate the waste, regardless of which party assumed the duties, both parties are jointly liable as generators.

What is a waste?

Waste is not defined in the Ohio Revised Code, but there is a very specific definition of waste in OAC rule 3745-51-02. This rule uses definitions found in OAC rule 3745-51-01 to define a waste as being a discarded material that is not excluded under OAC rule 3745-51-04(A). The rule further defines a discarded material as a material that is:

- abandoned by being disposed of, burned or incinerated, or accumulated, stored or treated (but not recycled) before or instead of being abandoned by being disposed of, burned, or incinerated;
- a listed hazardous waste or any spent material when it is recycled by being reclaimed (except for commercial chemical products); or
- a hazardous waste that is listed because it may contain dioxins or dibenzofurans and other toxic constituents and has hazardous waste codes F020, F021, F022, F023, F026, or F028 when it is recycled in any manner.

What is not a waste?

Wastewater treatment sludges, air pollution control wastes (dusts and sludges) and byproducts such as reclaimed slags that are hazardous only because they exhibit one or more characteristics of hazardous waste are not wastes from the point of generation when reclaimed. Furthermore, any hazardous waste, listed or characteristic, that is used as an ingredient in a manufacturing process to make a product is not a waste unless:

- separate end products are produced from that manufacturing process;
- the hazardous waste is reclaimed before it is used as an ingredient;
- the product is placed on the land in a manner constituting disposal; or
- the product is burned for energy recovery.

Likewise any hazardous waste that is used to substitute for a chemical product to create an effect such as cleaning or flocculation in wastewater treatment is not a waste.

What is a hazardous waste?

A waste is considered hazardous if:

- it is not excluded from regulation as a hazardous waste in OAC rule 3745-51-04(B); and
- it exhibits a characteristic of hazardous waste; or
- it is listed in OAC rules 3745-51-30 to 3745-51-33; or
- it is a mixture of a waste and a hazardous waste.

How do I determine if my waste is a hazardous waste?

If you generate a waste, you must evaluate it to determine if it is a hazardous waste. OAC rule 3745-52-11 and the "Identifying Your Hazardous Waste" fact sheet will provide you with step-by-step instructions on how to properly evaluate your waste. You must ask yourself the following questions in order.

Is my waste excluded from regulation?

One of the criteria for classifying a material as a waste involves determining if it is excluded from the hazardous waste regulations. You can determine if your waste is excluded by comparing your waste to the descriptions found in OAC rule 3745-51-04. This rule provides a list of wastes which are specifically excluded from the hazardous waste regulations. If your waste is excluded, it is not subject to Ohio's hazardous waste regulations.

Is my waste a listed hazardous waste?

If you determine that your waste is not excluded from regulation under OAC rule 3745-51-04, you must then determine if it is a listed hazardous waste. Your waste is considered a listed hazardous waste if it appears on one of three lists in Ohio's hazardous waste regulations. Listed wastes are hazardous regardless of their concentration. Compare your waste to the three lists of hazardous wastes contained in the OAC rules 3745-51-31 to 3745-51-33.

Listed wastes are defined and identified by a specific chemical name or a specific production process name as described below.

Non-specific source wastes

These are generic wastes, commonly produced by many manufacturing and industrial processes. Examples from this list include spent halogenated and non-halogenated solvents used in degreasing, wastewater treatment sludge from electroplating processes, electroplating and heat treating wastes and dioxin-bearing production wastes. These wastes are also known as “F” wastes (waste codes F001 through F039).

Specific source wastes

These are wastes from specifically identified industries such as wood preserving, petroleum refining and organic chemical manufacturing or are production wastes from specific sources including inorganic pigments, organic chemicals, pesticides, explosives, petroleum refining, iron and steel, secondary lead, veterinary pharmaceuticals, ink formulation and coking. These wastes typically include sludges, still bottoms, wastewater, spent catalysts and residues (for example, wastewater treatment sludge from the production of pigments). These wastes are also known as “K” wastes (waste codes K001 through K136).

Commercial chemical products

These are specific commercial chemical products or manufacturing chemical intermediates that are being discarded. These wastes are also known as “P” wastes (waste codes P001 through P123) and “U” wastes (waste codes U001 through U359). P and U wastes are discarded or intended to be discarded toxic commercial chemical products, off-specification species, container residues and spill residues. P wastes are also considered to be “acutely hazardous” or very dangerous in small amounts. Ohio EPA has determined that P wastes, because of their dangerous properties, must be regulated the same way as large amounts of other hazardous wastes.

Examples of P and U wastes include commercial chemical products such as chloroform, creosote, sulfuric acid and hydrochloric acid. In order to be considered a listed waste, these chemicals must be in a pure, unused form. These chemicals are not considered to meet the P and U listings after they have been blended with other materials or if they have been used. In instances where chemicals have been blended or used, these wastes should be evaluated to determine whether they meet another listing criteria (F or K wastes) or possess a hazardous waste characteristic (D waste).

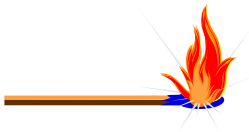
In most instances, if you mix your listed waste with a non-hazardous waste the resulting mixture is still considered a listed hazardous waste. Likewise, any wastes that you generate from the treatment, storage, or disposal of your listed hazardous waste are also listed hazardous wastes. This is commonly referred to as the derived-from rule. Ohio's waste mixture and derived-from rule are located in OAC rule 3745-51-03. Some mixtures of listed wastes and non-hazardous waste are not hazardous waste. Refer to OAC rule 3745-51-03 for specific waste mixture exclusions.

Is my waste a characteristic hazardous waste?

If your waste is not a listed hazardous waste in OAC rules 3745-51-30 to 3745-51-33, it could still be considered a hazardous waste. You must determine if it displays any of the four characteristics of hazardous waste noted below. You can make this determination by either testing the waste or by applying your knowledge. Any waste is considered a characteristic hazardous waste if it exhibits one or more of the four characteristics noted below and as found in OAC rules 3745-51-20 to 3745-51-24.

Characteristic of Ignitability

Ignitable wastes are considered hazardous because they are easily combustible or flammable and could cause fires during transport, storage or disposal. A waste that exhibits any of the following properties is considered a hazardous waste identified by waste code "D001":



Ignitable Waste Examples

paint waste
degreasers
solvents

- a liquid, except aqueous solutions containing less than 24 percent alcohol by volume, that has a flash point less than 60 degrees Celsius (140 degrees Fahrenheit);
- a non-liquid, capable under normal conditions of spontaneous and sustained combustion (see Method 3010 of SW-846);
- an ignitable compressed gas as defined by Department of Transportation (DOT) regulations 49 CFR Section 173.115; or
- an oxidizer as defined by DOT regulations 49 CFR Section 173.127.

Characteristic of Corrosivity:

Corrosive wastes are considered hazardous because they can react dangerously with other wastes, dissolve metal or other materials or burn the skin.

A waste that exhibits either of the following properties is considered a hazardous waste identified by waste code “D002":

- an aqueous material with pH less than or equal to 2 or greater than or equal to 12.5;
- a liquid that corrodes steel at a rate greater than 1/4 inch per year at a temperature of 55 degrees C (130 degrees F).

Corrosive Waste Examples
rust removers
waste acid
alkaline cleaning fluids
waste battery acid

Characteristic of Reactivity

Reactive wastes are considered hazardous because they are unstable or may undergo a rapid or violent chemical reaction with wastes or other materials. A waste that exhibits any of the following properties is considered a hazardous waste identified by the waste code “D003":

- normally unstable and reacts violently without detonating;
- reacts violently with water;
- forms an explosive mixture with water;
- generates toxic gases, vapors or fumes when mixed with water in a quantity sufficient to present a danger to human health or the environment;

- contains cyanide or sulfide and generates gases, vapors or fumes at a pH between 2 and 12.5 in a quantity sufficient to present a danger to human health or the environment;

- readily capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

Reactive Waste Examples
cyanide plating wastes
waste bleaches
other waste oxidizers

- readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or

- it is a forbidden explosive as defined in 49 CFR Section 173.54, or meets the definition of a class/division 1.1, 1.2, or 1.3 explosive as defined by 49 CFR Section 173.50.

Characteristic of Toxicity:

Toxic wastes are considered hazardous due to the presence of toxic constituents in the wastes above established regulatory levels. These constituents (including metals, insecticides, herbicides and other organics) and their current regulatory levels are included in OAC rule 3745-51-24. To determine if a waste displays the toxicity characteristic, a Toxicity Characteristic Leaching Procedure or "TCLP" is performed. If the waste contains any of the toxic constituents above the regulatory levels, it is required to carry the specific hazardous waste "D-code(s)" associated with the constituent(s). The waste codes for toxic wastes range from D004 to D043.

Toxic Waste Examples
electronic equipment
foundry sand
air emission control dust

You can determine if your waste exhibits a characteristic of a hazardous waste by using your knowledge of the hazardous characteristic(s) in light of the process activity at your company and the raw materials used in that process; or by analyzing a representative sample of the waste. The flow diagram located at the end of this chapter may be helpful in understanding hazardous waste determination.

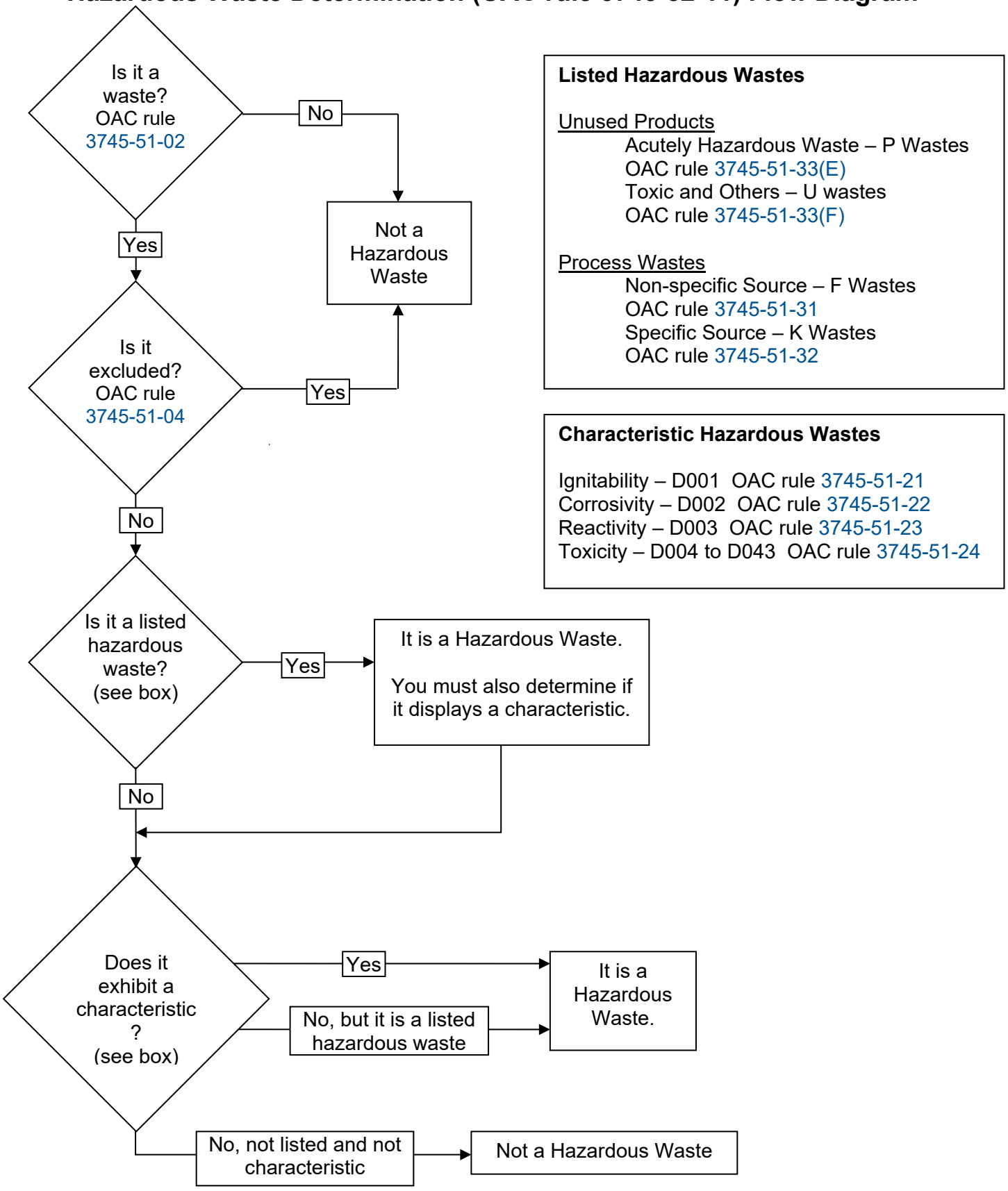
If you contract with a laboratory to analyze the waste, the analysis must be done according to the methods found in OAC rules 3745-51-20 to 3745-51-24. You also have the option of using a combination of your generator knowledge and laboratory analysis. Determine which of the hazardous characteristics you are certain that the waste could not exhibit, then sample and analyze the waste for the hazardous waste characteristics that you suspect could be present. For additional information on selecting an analytical laboratory, see Appendix 4.

Whether you use knowledge or laboratory analysis to evaluate your waste, according to OAC rule 3745-52-11(F), you must maintain documentation to support your evaluation, especially when you claim that the waste is nonhazardous. Examples of documentation to maintain when you use your knowledge can include safety data sheets (SDS) and manufacturer/distributor product information for the process materials that you use.

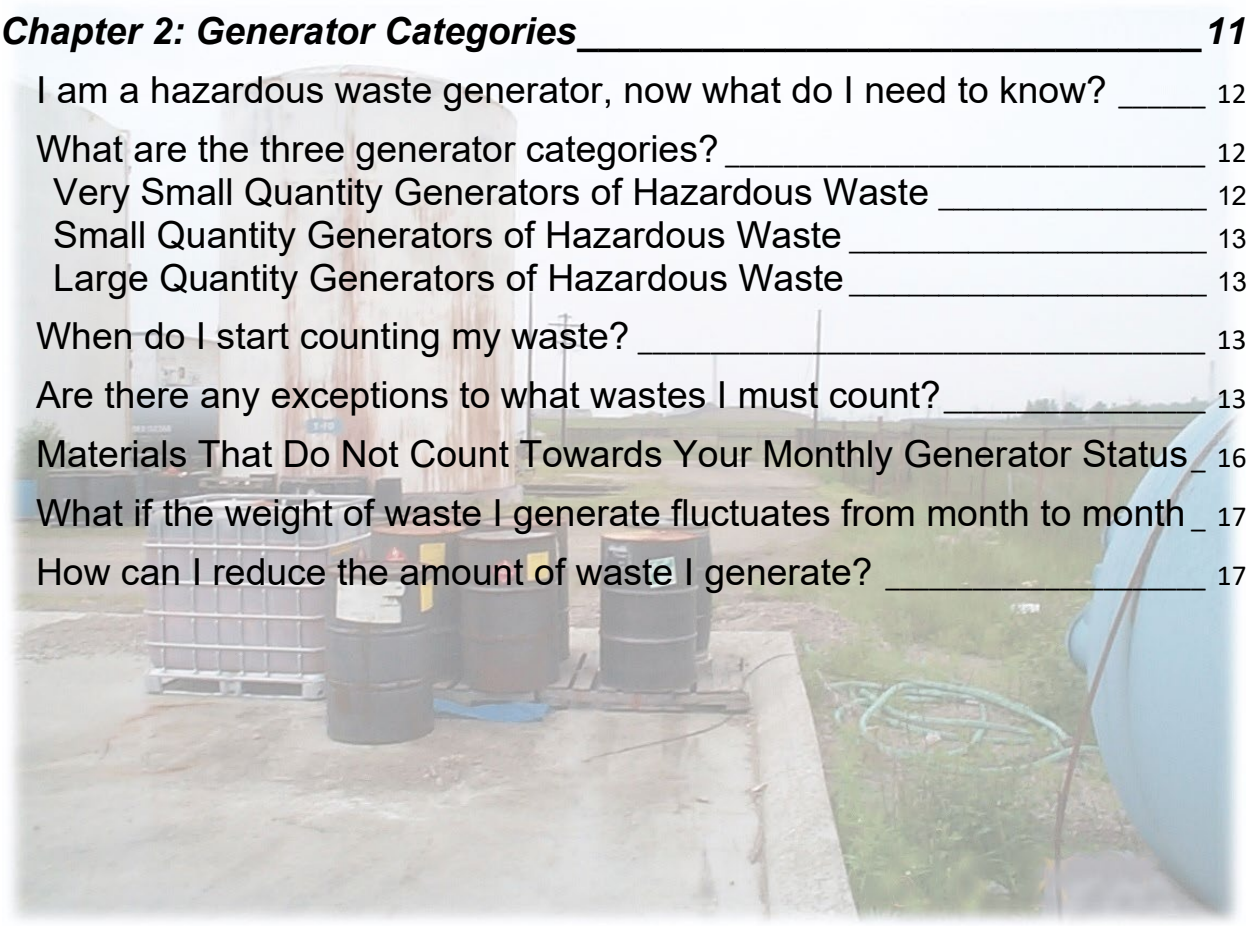
The data developed from laboratory analysis can also be used to meet the land disposal restriction (LDR) requirements found in OAC Chapter 3745-270 and waste analysis plan (WAP) requirements found in OAC rule 3745-270-07(A)(5) for generators treating hazardous waste in tanks and containers.

OAC rule 3745-52-40(A) requires that, for three years from the date you manifest the waste off-site, you maintain records to document the methods and documentation used to evaluate your waste. You may be asked to produce this documentation during a hazardous waste inspection.

Hazardous Waste Determination (OAC rule 3745-52-11) Flow Diagram



Chapter 2: Generator Categories



I am a hazardous waste generator, now what do I need to know?

In order to determine what regulations you must follow, you must determine your generator category. Your hazardous waste generator category [very small quantity generator (VSQG), small quantity generator (SQG) or large quantity generator (LQG)] is determined by the total weight of hazardous waste that you generate (produce) in any given month of the calendar year (for example, hazardous waste you generate between January 1st and January 31st). Generator categories are NOT determined by averaging the weight of waste shipped off-site. For VSQGs and SQGs, your generator category is also determined by the amount of hazardous waste you accumulate on-site.

Hazardous Waste Generator Categories			
	VSQG	SQG	LQG
Generation per Month	≤ 1 kg Acute Hazardous Waste ≤ 100 kg Hazardous Waste	> 100 kg and < 1,000 kg Hazardous Waste	> 1 kg Acute Hazardous Waste ≥ 1,000 kg Hazardous Waste
Total Accumulation On-site	≤ 1 kg Acute Hazardous Waste ≤ 1,000 kg Hazardous Waste	> 1,000 kg and < 6,000 kg Hazardous Waste	> 1 kg Acute Hazardous Waste ≥ 6,000 kg Hazardous Waste
The following estimates will vary according to the density of the waste. 1 kg ≈ 1 qt 100 kg ≈ 27 gal (about ½ of a 55-gallon drum) or 220 lbs 1,000 kg ≈ 270 gal (about five 55-gallon drums) or 2,200 lbs 6,000 kg ≈ 1,620 gallons (about thirty 55-gallon drums) or 13,200 lbs			

What are the three generator categories?

Very Small Quantity Generators of Hazardous Waste

If you generate no more than 100 kilograms (about 220 pounds or 25 gallons) of hazardous waste, and no more than one kilogram (about 2.2 pounds) of acutely hazardous waste in any calendar month AND never accumulate more than 1,000

Note: Many hazardous wastes are liquids and are measured in gallons - not kilograms or pounds. In order to measure your liquid wastes, you must convert from gallons to kilograms. To accurately calculate the number of pounds in a gallon, you must know the density of the liquid.

As a rough guide, using the density of water (8.33 pounds/gallon):

- Half a 55-gallon drum of waste with a density similar to water weighs about 220 pounds or 100 kilograms.
- 300 gallons of a waste with a density similar to water weighs about 2,200 pounds or 1,000 kilograms.

100 kgs ≈ 220 lbs ≈ 27 gals
1,000 kgs ≈ 2,200 lbs ≈ 270 gals
6,000 kgs ≈ 13,200 lbs ≈ 1,620 gals

(2,200 pounds) kilograms (kg) of hazardous waste or more than one kg of acute hazardous waste on your property, you are a very small quantity generator (VSQG). See OAC rule 3745-52-14 and Chapter 3 in this handbook for more information on Ohio's hazardous waste rules for VSQGs.

Small Quantity Generators of Hazardous Waste

If you generate more than 100 and less than 1,000 kilograms (between 220 and 2,200 pounds, or about 25 to less than 300 gallons) of hazardous waste in a calendar month AND never accumulate 6,000 kilograms (13,200 pounds) of hazardous waste on-site at any one time, you are a small quantity generator (SQG). See OAC rule 3745-52-16 and Chapter 3 in this handbook for more information on Ohio's hazardous waste rules for SQGs.

Large Quantity Generators of Hazardous Waste

If you generate 1,000 kilograms (about 2,200 pounds or 300 gallons) or more of hazardous waste in a calendar month you are a large quantity generator (LQG). See OAC rule 3745-52-17, OAC rules 3745-52-250 through 265, and Chapter 3 in this handbook for more information on Ohio's hazardous waste rules for LQGs.

When do I start counting my waste?

Waste is counted when it is first generated (removed from the process that produces it), not after it is determined to be hazardous or after you filled your drum. You should be aware that the waste you must count during a given calendar month is the waste you actually generated in that month. If the material was a product, but it is off-specification (meaning the product no longer meets applicable industry or manufacturing quality standards) and cannot be used, it is considered generated when you determine that it is no longer usable as a product.

Are there any exceptions to what wastes I must count?

The rules stating which hazardous wastes are counted in a generator's monthly quantity determination are found in OAC rules 3745-51-04 and 3745-52-13.

Examples of What to Count

- All quantities of listed and characteristic hazardous wastes that are accumulated on your property for any period of time before treatment, disposal or recycling, except for wastes managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units or totally enclosed treatment facilities. Dry cleaners, for example, must count any hazardous waste residue removed from machines, as well as hazardous spent cartridge filters.

- All quantities of listed and characteristic hazardous wastes that are accumulated and transported away from your business.

- All quantities of listed and characteristic hazardous waste that are placed directly in a regulated treatment container or tank at your facility.

- All quantities of listed and characteristic hazardous wastes that are generated as still bottoms or sludges and removed from product storage tanks, which should be counted only the first time they are generated.

Do NOT Count

- Samples of waste and samples of water, soil or air which are collected to determine if hazardous, according to OAC rule 3745-51-04 (D).

- Generated or collected treatability study samples, according to OAC rule 3745-51-04 (E).

- Samples undergoing treatability studies at laboratories and testing facilities, according to OAC rule 3745-51-04 (F).

- Specific recyclable materials that will be recycled, including scrap metal, according to OAC rule 3745-51-06(A)(3).

- Hazardous waste remaining in either an empty container or an inner liner removed from an empty container according to OAC rule 3745-51-07(A)(1).

- PCB wastes regulated under the Toxic Substance Control Act, according to OAC rule 3745-51-08.

- Wastes that are recycled, without prior storage, only in an on-site recycling process subject to regulation under OAC rule 3745-51-06(C)(2).

- Wastes residues that have not yet exited raw material storage or production unit, unless the hazardous waste remains in the unit more than 90 days after the unit ceases to operate, according to OAC rule 3745-51-04(C).

- Wastes that are managed in an “elementary neutralization unit,” a “totally enclosed treatment facility” or a “wastewater treatment unit,” without being stored in a separate container/tank that is not a part of the wastewater treatment unit, totally enclosed treatment facility or elementary neutralization unit first (see OAC rule 3745-50-10 for definitions of these units).

- Wastes that are discharged directly to publicly owned treatment works (POTWs) without being stored or accumulated first, unless they are stored in a tank connected to the wastewater treatment unit. Discharges to a POTW must comply with the Clean Water Act. POTWs are public utilities, usually owned by the city, special districts or the county, that treat industrial and domestic sewage for disposal.

- Used oil managed under the requirements of OAC Chapter 3745-279.

- Spent lead-acid batteries that will be reclaimed and managed under the requirements of OAC rule 3745-266-80.

- Universal wastes managed under OAC Chapter 3745-273 (for example, batteries, pesticides, thermostats and lamps).

- Hazardous waste pharmacetucals (if you are a healthcare facilty operating under OAC rules 3745-266-500 through 3745-266-510).

To avoid double counting, the following types of wastes do not need to be counted when determining your generator classification. All of these wastes have already been counted when they were initially generated.

- Hazardous wastes that have already been counted once during the calendar month and are treated on-site to render them non-hazardous or reclaimed in some manner (for example, solvent that is distilled on-site).

- Hazardous waste previously counted when produced by on-site treatment (including reclamation).

- Hazardous waste removed from on-site storage.

Materials That Do Not Count Towards Your Monthly Generator Status			
Please contact the appropriate agency personnel for information on material management.			
Waste or Management Unit	**Contact Agency**	**Contact Website**	**Contact Number**
PCBs	US EPA Region 5	https://www.epa.gov/pcbs	312-886-7890
Asbestos	Ohio EPA DAPC, Air Toxics Unit	https://epa.ohio.gov/wps/portal/gov/epa/divisions-and-offices/air-pollution-control/asbestos-abatement-and-demolition	614-644-2270
Freon	US EPA Region 5	https://www.epa.gov/mvac	800-296-1996
Household Hazardous Waste	Ohio EPA DMWM	https://epa.ohio.gov/wps/portal/gov/epa/divisions-and-offices/materials-and-waste-management	614-644-2621
Above Ground Product Tanks (not storing hazardous waste)	Ohio EPA DAPC, Right to Know Program	https://epa.ohio.gov/wps/portal/gov/epa/divisions-and-offices/air-pollution-control/state-emergency-response-commission	614-644-2270
	State Fire Marshal and Local Fire Department	http://www.com.ohio.gov/fire/	614-752-8200
Underground Storage Tanks	Bureau of Underground Storage Tanks	http://www.com.ohio.gov/fire/	614-752-7938
Radioactive Material/ Waste	US EPA	https://www.epa.gov/radiation	202-343-9290
	Ohio EPA	https://ohioepa.custhelp.com/ (Keyword: LLMW)	614-644-2621
	Nuclear Regulatory Commission	http://www.nrc.gov/	800-368-5642
	Ohio Department of Health	https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/radioactive-materials-licensing-inspection https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/radioactive-materials-licensing-inspection/resources/odh-llrw	614-644-2727
	Public Utilities Commission of Ohio	http://www.puco.ohio.gov/	800-686-7826

What if the weight of waste I generate fluctuates from month to month?

If the weight of waste you generate fluctuates between generator categories from month to month, you are an episodic generator. This may be expected, unexpected or as a result of a one-time occurrence. A generator may become an episodic generator due to such things as: lab or tank clean-outs, raw materials or product inventories becoming a waste or changing production levels. An episodic generator can also include someone who only occasionally generates hazardous waste.

The episodic generator provisions located in OAC rules 3745-52-230 through 233 allow you to have one planned event and one unplanned event in a calendar year without requiring you to change generator categories. To qualify for the provisions you will need to submit a notification to Ohio EPA, using Form 9029, 30 days prior to a planned event or notify Ohio EPA within 72 hours of an unplanned event by phone, email, or fax and subsequently submit EPA Form 9029 and Episodic Addendum. More information can be found on the HWP's Notification Webpage.

If you don't qualify for the episodic generator provisions you will need to manage your hazardous waste under the applicable generator requirements. When you change generator categories, you should submit a subsequent notification to Ohio EPA. This will ensure our information correctly reflects your actual generator status. To re-notify, complete and submit the Notification of Regulated Waste Activity form (see Chapter 3, "Do I need a U.S. EPA identification number?").

In many cases, generators that routinely fall into different generator categories at different times choose to satisfy the more stringent requirements to simplify compliance. For additional information on episodic generators, refer to our guidance entitled Hazardous Waste Episodic Generation.

How can I reduce the amount of waste I generate?

There are many opportunities for generators to reduce the amount of hazardous waste they generate and reduce compliance requirements. The easiest and most cost-effective way of managing any waste is to not generate it in the first place. You can decrease the amount of hazardous waste your business generates by developing a few good housekeeping practices or making process changes.

Reducing waste can save your company money and reduce environmental liability and regulatory requirements. To help reduce the amount of waste you generate, try the following practices at your business.

- Do not mix nonhazardous waste with hazardous waste. Once you mix nonhazardous waste with hazardous waste, you may increase the amount of hazardous waste created, as the entire mixture may become hazardous. Mixing waste can also make recycling very difficult, if not impossible. A typical example of mixing wastes would be putting nonhazardous cleaning agents in a container of used hazardous solvents.

- Recycle and reuse manufacturing materials - many companies routinely put useful components back into productive use rather than disposing of them. Items such as used oil, spent solvents, acids and metals are commonly recycled and used again. In addition, some companies have taken waste minimization actions such as using fewer solvents, using solvents that are less toxic or switching to a nontoxic detergent solution.

- Change material, process or both - businesses can save money and increase efficiency by replacing a material or process with another that produces less waste. For example, you could use plastic blast media for paint stripping of metal parts rather than conventional solvent stripping.

- Safely store hazardous products and containers - you can avoid creating more hazardous waste by preventing spills or leaks. Store hazardous product and waste containers in secure areas and inspect them frequently for leaks. When leaks or spills occur, cleanup materials may also become regulated hazardous waste.

Chapter 3: Generator Requirements

What are my generator requirements?

Ohio's hazardous waste management requirements establish a system for managing hazardous waste from the point of generation through final disposal. As a hazardous waste generator, you are required to follow the appropriate hazardous waste management standards (generator rules/requirements) for your generator category. In order to follow the appropriate management standards, you must first determine if you generate hazardous waste. If you generate hazardous waste, you must then determine which generator category applies to you and comply with the appropriate hazardous waste rules. Ohio law prohibits persons from storing, treating or disposing of hazardous waste on-site without a hazardous waste permit; however, if you generate hazardous waste, you can store (accumulate) or treat that waste on-site without an Ohio hazardous waste permit provided you comply with the hazardous waste generator requirements. If you are a very small quantity generator (VSQG), you must follow the hazardous waste generator requirements in Ohio Administrative Code (OAC) rule 3745-52-14. If you are a small quantity generator (SQG) you must follow the hazardous waste generator requirements in OAC rule 3745-52-16. If you are a large quantity generator (LQG), you must follow the hazardous waste generator requirements in OAC rule 3745-52-17. If you intend to dispose of your hazardous waste in or on the land, you also must comply with the land disposal restrictions (LDRs) of OAC Chapter 3745-270.

Hazardous Waste Generator Categories			
	VSQG	SQG	LQG
Generation per Month	≤ 1 kg Acute Hazardous Waste ≤ 100 kg Hazardous Waste	> 100 kg and < 1,000 kg Hazardous Waste	> 1 kg Acute Hazardous Waste ≥ 1,000 kg Hazardous Waste
Total Accumulation On-site	≤ 1 kg Acute Hazardous Waste ≤ 1,000 kg Hazardous Waste	> 1,000 kg and < 6,000 kg Hazardous Waste	> 1 kg Acute Hazardous Waste ≥ 6,000 kg Hazardous Waste
The following estimates will vary according to the density of the waste. 1 kg ≈ 1 qt 100 kg ≈ 27 gal (about ½ of a 55-gallon drum) or 220 lbs 1,000 kg ≈ 270 gal (about five 55-gallon drums) or 2,200 lbs 6,000 kg ≈ 1,620 gallons (about thirty 55-gallon drums) or 13,200 lbs			

This chapter of the handbook summarizes the requirements for each of the three generator categories in two ways: in a table and in a narrative.

Hazardous Waste Generator Requirement Summary Table			
Generator Requirements and OAC reference	**Generator Category**		
	VSQG	**SQG**	**LQG**
Monthly Generation 3745-52-13	≤ 1 kg acute hazardous waste ≤ 100 kg hazardous waste	> 100 kg and < 1,000 kg hazardous waste	> 1 kg acute hazardous waste ≥ 1,000 kg hazardous waste
Total Accumulation On-site 3745-52-14 3745-52-16 3745-52-17	≤ 1 kg acute hazardous waste ≤ 1,000 kg hazardous waste 3745-52-14	> 100 kg and < 6,000 kg hazardous waste 3745-52-16	> 1 kg acute hazardous waste ≥ 6,000 kg hazardous waste 3745-52-17
Hazardous Waste Determination 3745-52-11	Required through process knowledge or analysis	Required through process knowledge or analysis (**documentation required**)	Required through process knowledge or analysis (**documentation required**)
EPA ID Number and Re-Notification 3745-52-18	No applicable requirement	Required Re-notify every 4 years by September 1st beginning in 2021	Required Re-notify by March 1st of even numbered years (can be done as part of the biennial report)
Accumulation Time 3745-52-14 3745-52-16 3745-52-17	None 3745-52-14	180 days or 270 if the TSDF is > 200 miles away (30-day extension also available) 3745-52-16	90 days (30-day extension also available) 3745-52-17
Generator Treatment 3745-52-16 3745-52-17	Permissible on-site but must follow LQG requirements	Can treat hazardous waste on-site for up to 180 days 3745-52-16	Can treat hazardous waste on-site for up to 90 days 3745-52-17
Satellite Accumulation 3745-52-15	No applicable requirement	Up to 55 gallons of non-acute or 1 quart of acutely hazardous waste at or near the point of generation	Up to 55 gallons of non-acute or 1 quart of acutely hazardous waste at or near the point of generation

Hazardous Waste Generator Requirement Summary Table			
Generator Requirements and OAC reference	**Generator Category**		
	VSQG	**SQG**	**LQG**
Labeling and Marking of Containers and Tanks	Only applicable if sending hazardous waste to an LQG for consolidation 3745-52-14(A)(5)(h)(ii)	Mark with the words "Hazardous Waste", an indication of the hazards of the contents, and date upon which each period of accumulation or treatment begins (unless a satellite accumulation area) 3745-52-16(B)(6)	Mark with the words "Hazardous Waste", an indication of the hazards of the contents, and date upon which each period of accumulation or treatment begins (unless a satellite accumulation area) 3745-52-17(A)(5)
Container Management 3745-52-16 3745-52-17 3745-52-255	No applicable requirement	Good condition compatible with waste maintain aisle space and lids conduct weekly inspections 3745-52-16(B)(2)(c) 3745-52-16(B)(8)(e)	Good condition compatible with waste maintain aisle space and lids subparts AA, BB and CC apply (federal requirement) conduct weekly inspections 3745-52-17(A)(1) 3745-52-255
Tank Management 3745-52-16(B)(3) 3745-66-90 to 99	No applicable requirement	Good condition compatible with waste daily inspections 3745-52-16(B)(3)	Good condition compatible with waste daily inspections subparts AA, BB and CC apply (federal requirement) secondary containment is required 3745-66-90 to 99
Hazardous Waste Consolidation 3745-52-14 3745-52-17	May send hazardous waste to a large quantity generator under the control of the same person Must follow labeling requirements 3745-52-14(A)(5)(h)	Not permissible	Notify Ohio EPA 30 days prior to receiving first shipment from VSQG, maintain shipping records for 3 years, and label containers with accumulation start dates 3745-52-17(F)
Pre-Transport Requirements 3745-52-30 to 33	Only applicable when sending hazardous waste for consolidation at a large quantity generator (see above)	Packaging Labeling Marking Placarding	Packaging Labeling Marking Placarding

Hazardous Waste Generator Requirement Summary Table			
Generator Requirements and OAC reference	**Generator Category**		
	VSQG	**SQG**	**LQG**
Personnel Training 3745-52-16 3745-52-17	No applicable requirement	All employees must be thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities 3745-52-16(B)(9)(c)	Required with annual refresher 3745-52-17(A)(7)
Emergency Equipment 3745-52-16 3745-52-252 3745-52-253	No applicable requirement	Internal communication or alarm system Telephone or two-way radio Fire, spill control and decontamination equipment Testing and maintenance of equipment is required 3745-52-16(B)(8)(b)&(c)	Internal communication or alarm system Telephone or two-way radio Fire, spill control and decontamination equipment Testing and maintenance of equipment is required 3745-52-252 3745-52-253
Emergency Procedures & Contingency Plan 3745-52-16 3745-52-250 to 265	No applicable requirement	Written plans are not required. Emergency Coordinator's response required 3745-52-16(B)(8)	Written contingency plan and emergency procedures required 3745-52-250 to 265
Recordkeeping 3745-52-11 3745-52-40 3745-52-16 3745-52-17	Records of waste evaluation	Manifests LDR notification Exception reports Waste evaluation (kept on-site for at least 3 years) Tank inventory logs (readily available for inspection) 3745-52-16(B)(6)(b)(iv)	Manifests LDR notification Exception reports Annual reports Waste evaluation (kept on-site for at least 3 years) Training records 3745-52-17(A)(7)(e) Tank inventory logs (readily available for inspection) 3745-52-17(A)(5)(b)(iv)
Manifesting 3745-52-20 to 23	No applicable requirement	Required	Required

Hazardous Waste Generator Requirement Summary Table			
Generator Requirements and OAC reference	**Generator Category**		
	VSQG	**SQG**	**LQG**
Exception Reports 3745-52-42	No applicable requirement	Notify and send a copy to Ohio EPA within 60 days	Contact the transporter and/or destination facility within 35 days and send report to Ohio EPA within 45 days
Land Disposal Restriction Determination 3745-270-07	No applicable requirement	Determine if waste must be treated before it can be land disposed (or write on manifest that a determination has not been made)	Determine if waste must be treated before it can be land disposed (or write on manifest that a determination has not been made)
Land Disposal Restriction Notification 3745-270-07	No applicable requirement	One-time written notice to each TSDF receiving your hazardous waste	One-time written notice to each TSDF receiving your hazardous waste
Biennial Reports 3745-52-41	No applicable requirement	No applicable requirement	Required by March 1st in even numbered years for previous year

How do I evaluate my waste?

If you generate a waste, you must determine if your waste is a hazardous waste. OAC rule 3745-52-11 provides you with step-by-step procedures to follow when making this determination. The failure to properly evaluate your waste may lead to unsafe management, treatment or disposal of your hazardous waste, so proper waste evaluation is important. If, in light of the raw materials and your manufacturing process, you have sufficient knowledge of the hazardous characteristic(s) of the waste you may be able to evaluate your waste using knowledge. Alternatively, you can use the test methods specified by OAC rule 3745-52-11 to evaluate your waste. You must support your waste determination with appropriate documentation. Failure to properly evaluate waste is one of the more frequently cited violations and may result in enforcement penalties.

See Chapter 1, "What is a Hazardous Waste?" for more information about waste evaluation. You can also read more information about hazardous waste generators on our web page.

Do I need a U.S. EPA Identification Number?

If you generate, transport, treat, store or dispose of hazardous waste or store recyclable materials prior to recycling them, you may be required to notify Ohio EPA of your hazardous waste activity and obtain a U.S. EPA Identification Number. If you are a VSQG, you are not required to obtain a U.S. EPA Identification Number (unless you are opting into the episodic generator provisions or a healthcare facility opting in to the hazardous waste pharmaceutical rules). If you handle used oil, see Chapter 5. If you handle universal waste see Chapter 4. For instructions on how to obtain a U.S. EPA identification number, see Appendix 1 and the Notification of Regulated Waste Activity Website.

How much hazardous waste may I accumulate on-site and for how long?

Ohio law prohibits persons from storing, treating or disposing of hazardous waste on-site without a hazardous waste permit. However, if you generate hazardous waste, you can store (accumulate) or treat that waste on-site without an Ohio hazardous waste permit provided you comply with the hazardous waste generator requirements. The applicable hazardous waste generator requirements, including the amount of time you can have waste on-site, vary according to the amount of hazardous waste that you generate in a calendar month. For more information on generator categories, refer to Chapter 2 or the appropriate hazardous waste rule. VSQG requirements are in OAC rule 3745-52-14, SQG requirements are in OAC rule 3745-52-16 and LQG requirements are in OAC rule 3745-52-17.

Very Small Quantity Generator

If you generate no more than 100 kg of hazardous waste and no more than one kg of acutely hazardous waste in a calendar month, you are a VSQG. You may accumulate hazardous waste which is generated on-site for any length of time; however, if you accumulate more than 1,000 kg of hazardous waste or more than one kg of acute hazardous waste on-site at any time, you become subject to the SQG requirements, including the storage time limit as discussed in the following paragraph.

Small Quantity Generator

If you generate greater than 100 kg and less than 1,000 kg of hazardous waste in a calendar month, you are an SQG. You may only accumulate hazardous waste on-site for up to 180 days. If you are transporting, or offering your hazardous waste for transport a distance of 200 miles or more, you may accumulate the hazardous waste on-site for up to 270 days without a permit. The maximum quantity limit you may accumulate on-site at any one time is 6,000 kg (approximately 13,200 lbs). If you accumulate waste for longer than 180 or 270 days or you accumulate more than 6,000 kg at any one time, you must get a hazardous waste permit.

If you encounter unforeseen, temporary and uncontrollable circumstances in getting hazardous waste shipped off-site before the above deadlines, it is possible to obtain a temporary extension of 30 days to the accumulation provisions from the Director of Ohio EPA, per OAC rule 3745-52-16(D). You can request an extension electronically by filling out the 30-Day Extension Form and submitting it to epaderrweb@epa.ohio.gov. You can also contact the appropriate district office to request an extension. Please note, the request must be received by Ohio EPA prior to the expiration of the hazardous waste accumulation date to be considered for an extension.

Note:
Storage of hazardous waste on-site for greater than the time you are allowed (90/180/270 days) is prohibited by Ohio statute except at facilities holding a permit from the Ohio EPA for such an activity. Storage without a permit may subject you to additional requirements, including completing a formal clean-up (or "closure") of the storage area and payment of possible penalties for such activity.

Large Quantity Generator

If you generate 1,000 kg or more of hazardous waste in a calendar month you are a large quantity generator. There is no quantity limit for accumulation if you are an LQG. You may accumulate hazardous waste which is generated on-site for up to 90 days without a permit. In other words, once a hazardous waste is generated, it may not be kept on-site for more than 90 days. Large quantity generators must maintain strict compliance with the 90-day time frame since exceeding the allowable accumulation period can cause a generator to potentially be classified as an operator of an illegal hazardous waste storage facility. If you encounter unforeseen, temporary and uncontrollable circumstances in getting hazardous waste shipped off-site before the above deadlines, it is possible to obtain a temporary extension of 30 days to the accumulation provisions from the Director of Ohio EPA, per OAC rule 3745-52-17(B). You can request an extension electronically by filling out the 30-Day Extension Form and submitting it to epaderrweb@epa.ohio.gov. You can also contact the appropriate district office to

request an extension. Please note, the request must be received by Ohio EPA prior to the expiration of the hazardous waste accumulation date to be considered for an extension.

May I treat my hazardous waste on-site?

Yes. If you comply with the generator treatment requirements found in OAC rules 3745-52-16 and 3745-52-17, regardless of your generator category, you may treat your hazardous waste on-site. Treatment is defined as any method, technique or process - including neutralization - designed to change the physical, chemical, or biological character or composition of any hazardous waste to:

- neutralize the waste;
- recover energy or material resources from the waste;
- render the waste non-hazardous or less hazardous;
- make the waste safer to transport, store or dispose of;
- make the waste easier to recover or store; or
- reduce the waste volume.

If you are an LQG, you can treat your waste for up to 90 days after generation. If you are an SQG, you can treat your waste for up to 180 days after generation. VSQGs can treat their waste on-site but must comply with the large quantity generator requirements. Treatment must occur in containers, tanks, drip pads (for wood preservers) or containment buildings. If you are treating in another type of unit or if treatment exceeds your applicable time limit (90/180/270 days), you must obtain a hazardous waste installation and operation permit.

If you are treating your hazardous waste to meet LDRs, you must develop and follow a waste analysis plan (WAP). For more information on LDR requirements, see the section titled, "What are the land disposal restrictions standards?" at the end of this chapter. A WAP must:

- include a detailed chemical and physical analysis of a representative sample from the prohibited waste being treated;
- contain all other information used to develop the plan;
- contain selected frequency of testing to demonstrate the waste

- meets the LDRs; and
- be kept in your generator on-site files and made available to inspectors.

What requirements apply to hazardous waste that I accumulate near where it is generated (Satellite Accumulation)?

Hazardous waste that is accumulated where it is first generated is referred to as satellite accumulation. The satellite accumulation requirements, found in OAC rule 3745-52-15, allow generators to accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste in containers at or near each point of generation if those containers are under the control of the operator of the process which generated the waste.

A satellite accumulation area does not have to be permitted, and the generator does not need to comply with the 180/90-day accumulation requirements found in OAC rules 3745-52-16(B) and 3745-52-17(A) (except for the emergency preparedness procedures.) Generators who choose to accumulate hazardous waste at a satellite accumulation area must comply with OAC rule 3745-52-15 which includes marking satellite area containers with the words “Hazardous Waste” and an indication of the hazards of the contents.

If you ever exceed 55 gallons of hazardous waste or one quart of acutely hazardous waste at the satellite area, you must mark the container with the date that the excess accumulation began and you must remove the excess amount within three days of exceeding the limit. You must transfer the excess amount to your 90- or 180-day hazardous waste storage area, or ship the hazardous waste off-site.

Determining a generator’s compliance with the satellite requirements are best left to an inspector’s professional judgment after reviewing site specific information such as processes, waste handling, type of waste, location and level of employee training. For more information, see DERR’S HWP’s Satellite Accumulation guidance document. Direct any questions concerning Ohio EPA’s position on a generator’s site-specific satellite accumulation areas to your Ohio EPA hazardous waste district office inspector.

Note:
The next two sections discuss the *storage* of hazardous waste in containers/tanks. The *treatment* of hazardous waste in containers/tanks is discussed in the OAC rules 3745-52-16(B) and 3745-52-17(A) and earlier in this chapter. For additional information see Ohio EPA's Closed Containers guidance document. For additional information about container washing, see Ohio EPA's Container Washing Operations guidance document.

Container vs Tank

A ***container*** is defined in OAC rule 3745-50-10 as any portable device in which a material is stored, transported, treated, disposed of or otherwise handled. A container is not necessarily a 55-gallon drum; it can also be a tanker truck or a roll-off box. A roll-off box would meet the definition of a container because it is not permanently fixed. If a 55-gallon drum is directly connected to a waste storage unit that is permanently hard piped to that unit, it would be considered a tank; however, if the drum is disconnected and used to ship waste, it is a container.

A ***tank*** is defined in OAC rule 3745-50-10 as a stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of non-earthen materials that provide structural support. A ***tank system*** includes the tank and its associated ancillary equipment and containment system.

What are my container management standards?

If you are an SQG or LQG and you store hazardous waste in containers, you need to comply with the container management requirements found in OACrule 3745-52-16(B)(2) for SQGs or 3745-52-17(A)(1) for LQGs(. The OAC rule 3745-50-10(A) defines a container as a portable device in which a material is stored, transported, treated, disposed of or otherwise handled.

The container management standards, such as the condition of the container you are using to store hazardous waste, the container's compatibility with the hazardous waste and how you handle and manage those containers, are all meant to provide for the safe accumulation of hazardous waste while on-site. You must also ensure the safe on-site storage of hazardous waste by inspecting the area where hazardous waste is stored to

look for leaks or deterioration (see OAC rules 3745-52-16(B)(2)(d) and 3745-52-17(A)(1)(e)).

What are my tank management requirements?

Tanks are widely used for accumulation of hazardous waste because they can accommodate large volumes. Generators who accumulate hazardous waste in tanks must comply with certain sections of OAC rules 3745-52-16 for SQGs or 3745-52-17 and 3745-66-90 through 99 for LQGs.

What are the tank requirements for small quantity generators?

As discussed in Chapter 2, you may accumulate up to 999 kg of hazardous waste in tanks for up to 180/270 days as long as you never accumulate over 6,000 kg on-site at any time. You may accumulate waste in tanks without a hazardous waste permit, provided that you meet the technical standards located in OAC rule 3745-52-16. SQGs that meet all technical standards for hazardous waste accumulation also may treat the waste without obtaining a hazardous waste permit.

Note:
Storage of hazardous waste on-site for greater than the time you are allowed (90/180/270 days) is prohibited by Ohio statute except at facilities holding a permit from the Ohio EPA for such an activity. Storage without a permit may subject you to additional requirements, including completing a formal clean-up (or "closure") of the storage area and payment of possible penalties for such activity.

A small quantity generator using tanks for accumulation of hazardous waste must comply with the following requirements:

- label the tank "Hazardous Waste" according to OAC rule 3745-52-16(B)(6)(b)(i);
- label the tank with an inidication of the hazards of the contents according to OAC rule 3745-52-16(B)(6)(b)(ii);
- have a tracking system to ensure that waste has not been accumulated in the tank for more than 180/270 days according to OAC rule 3745-52-16(B)(6)(b)(iii);
- for ignitable, reactive or incompatible wastes for treatment or storage of hazardous waste [OAC rule 3745-52-16(B)(3)(g)];

- use hazardous waste treatment reagents that do not cause the tank or its inner liner to rupture, leak, corrode or fail before the end of its intended life, according to OAC rule 3745-52-16(B)(3)(b)(ii);

- operate uncovered tanks to ensure at least 60 centimeters of freeboard, unless it is equipped with a containment structure, a drainage control system or a diversion structure, according to OAC rule 3745-52-16(B)(3)(b)(iii);

- equip the tank with means to stop inflow in systems where hazardous waste is continuously fed into a tank, according to OAC rule 3745-52-16(B)(3)(b)(iv);

- inspect the tank system as specified in OAC rule 3745-52-16(B)(3)(c) and (d) (Ohio EPA recommends that you keep an inspection log); and

- upon closure of the facility, hazardous waste must be removed from the tank, as well as from discharge control equipment and from discharge confinement structures, according to OAC rule 3745-52-16(B)(3)(f).

What are the tank requirements for large quantity generators?

As discussed in Chapter 2, as an LQG, you may accumulate hazardous waste in tanks for up to 90 days without a hazardous waste permit, provided that you meet the technical standards located in OAC rules 3745-66-90 through 3745-66-99, except paragraph (C) of rule 3745-66-97. LQGs that meet all technical standards for hazardous waste accumulation also may treat the waste without obtaining a hazardous waste permit.

Since the regulations for large quantity generators storing hazardous waste in tanks are lengthy, listed below is a brief summary of the requirements (please refer to OAC Chapter 3745-66 for the actual requirements). The "Large Quantity Generator Tank System Requirements" guidance document also provides more information.

- label the tank “Hazardous Waste” according to OAC rule 3745-52-17(A)(5)(b)(i);

- label the tank with an indication of the hazards of the contents according to OAC rule 3745-52-17(A)(5)(b)(ii);

- label the tank with the date that accumulation and/or treatment began;

- design and install new tanks in accordance with OAC rule 3745-66-92. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer;
- provide for secondary containment that meets the requirements of OAC rule 3745-66-93;
- construct secondary containment, according to OAC rule 3745-66-93;
- comply with applicable federal hazardous waste air emission standards according to OAC rule 3745-52-17(A)(2);
- provide immediate access to emergency communication device(s), according to OAC rule 3745-52-254;
- provide and maintain appropriate spill control equipment, according to OAC rule 3745-66-94;
- inspect the tank and tank system according to OAC rule 3745-66-95;
- respond to leaks or spills within 24 hours after detection or at the earliest practicable time, according to OAC rule 3745-66-96;
- during closure and post-closure of a tank system, comply with OAC rule 3745-66-97, except paragraph (C);
- comply with requirements for ignitable or reactive wastes in tanks according to OAC rule 3745-66-98;
- comply with the special requirements for incompatible wastes, according to OAC rule 3745-66-99;
- comply with contingency plan requirements according to OAC rules 3745-52-260 through 3745-52-265.

What are my requirements if I accumulate hazardous waste in containment buildings?

SQGs and LQGs may manage hazardous waste in a containment building. OAC rules 3745-52-16(B)(5) and 3745-52-16(A)(4) allow generators to manage hazardous waste in a containment building for no more than 90 days without obtaining a permit or interim status.

If you want to manage your hazardous waste in containment buildings, the unit must meet the design and operating standards found in OAC rule 3745-256-101.

Note:
A containment building is not simply a building where you store containers or tanks holding hazardous waste. To be considered a containment building, you must be storing hazardous waste on the floor in a pile. You may, however, also store containers or tanks in the same building.

All containment buildings being used to manage hazardous waste must meet these design criteria:

- be structurally sound and enclosed with a floor, walls, and a roof to prevent exposure to the elements and to contain wastes; and
- be constructed with a primary barrier to withstand the movement of personnel, waste and handling equipment in the unit during its operating life. This barrier must also be appropriate for the physical and chemical characteristics of the waste to be managed.

If you accumulate and/or treat hazardous wastes containing free liquids or use liquid treatment reagents to treat the hazardous waste in a containment building it must have:

- a primary barrier, such as a geomembrane, covered by a concrete wear surface;
- a liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the unit; and
- a secondary containment system, including a leak detection system, constructed to prevent migration of hazardous constituents into the barrier.

If you manage hazardous waste in containment buildings you must comply with the following operational requirements:

- inspect the area immediately around the containment building for signs of releases and record data gathered from monitoring and leak detection equipment at least once every seven days;
- use controls and practices to ensure containment of the hazardous waste within the unit which will, at a minimum, maintain the primary barrier to be free of cracks, gaps, corrosion or any other deterioration that could cause hazardous waste to be released from the primary barrier;

- prevent the placement of incompatible hazardous waste or treatment reagents in the unit, if they could cause the unit or secondary containment to leak, corrode or fail;

- maintain the level of the stored/treated hazardous waste within the unit so that the height of any containment wall is not exceeded;

- prevent the tracking of hazardous waste from the unit by personnel or equipment used to handle the waste. A decontamination area must be designated and any rinseate collected and properly managed;

- ensure that each waste volume remains in the unit for no more than 90 days as required by OAC rules 3745-52-16(B)(5)(b)for SQGs and 3745-52-17(A)(4)(b) for LQGs. Maintain documentation that procedures are in place and are implemented to ensure compliance; and

- maintain a professional engineer certification on-site, stating that the containment building complies with the design standards specified in OAC rule 3745-256-101.

If you detect a condition which could lead to a release of hazardous waste, you must repair the condition promptly using the following procedures:

- immediately remove from service the portion of the containment building affected by the condition;

- establish a schedule for the clean-up and repair of the containment building to remove any leakage from the secondary collection system; and

- notify the Director within seven days of discovering the condition. Within 14 days, provide a written plan and schedule which describes the steps you will take to repair the unit.

Finally, when you cease using the containment building you must close it in accordance with the requirements in OAC rule 3745-256-102. If you find that you are unable to remove or decontaminate all subsoils, you must close the containment building and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills. For the purposes of closure in this case, you must meet the requirements for landfills found in OAC rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48.

What are my closure requirements?

If you are an LQG storing hazardous waste on-site for 90 days or less (in containers, tanks, or drip pads), on or after the October 5, 2020 effective date of OAC rule 3745-52-17, you are subject to the closure requirements, which includes notification to Ohio EPA. Former LQGs that are no longer LQGs as of October 5, 2020 are still subject to the applicable closure performance standards for the hazardous waste management units which accumulated hazardous waste. Additionally, guidance for generator closure is found in Section 1.10 of the Closure Plan Review Guidance for RCRA Facilities and in the Large Quantity Generator Closure Requirements factsheet.

Can I send my hazardous waste for consolidation at another facility?

VSQGs can send their hazardous waste for consolidation at a LQG that is under the control of the same person, meaning the entity has power to direct policies of the generator. The hazardous waste containers need to be labeled with the words "hazardous waste" and an indication of the hazards of the contents. A VSQG doesn't need to use a manifest or use a hazardous waste transporter to ship the hazardous waste to the LQG; however, Department of Transportation regulations still apply. For more information, see OAC rule 3745-52-14(A)(5)(h).

Can I consolidate hazardous waste from another facility?

LQGs can accumulate and treat on-site hazardous waste that is received from a VSQG that is under the control of the same person, provided certain conditions are met. An LQG who wishes to consolidate waste received from a VSQG must notify Ohio EPA at least 30 days prior to receiving the first shipment and shipment records need to be maintained for three years from the date the hazardous waste was received from the VSQG. Additionally, the LQG needs to comply with the independent requirements identified in OAC rule 3745-52-10(A)(1)(c) and label the hazardous waste containers with the date accumulation started. For more information see OAC rule 3745-52-17(F).

What am I required to do before I ship my hazardous waste off-site?

Small and large quantity generators must prepare a manifest (either an electronic or paper version) before shipping hazardous waste off-site. VSQGs are not required to prepare a manifest. Manifests are multiple-copied tracking documents that accompany

> **Note:** To learn how to select a treatment, storage and disposal facility, see Appendix 5 of this document and the guidance document on Selecting a TSDF to Handle Your Hazardous Wastes.

hazardous waste shipments. The manifest acts as a chain of custody for the waste from the point it leaves your business until it reaches its final destination.

Each person who transports, stores, treats or disposes of waste must sign and retain a copy of the manifest. This provides a traceable link between your business and the designated facility. Once the hazardous waste reaches its final destination, the person receiving your waste returns a signed copy of the manifest to you. If you are using paper copies, be sure to provide enough copies of your manifest so that each transporter has a copy for their records. The designated facility must have two copies, one for their records and one that is to be returned to you. If you are an SQG and do not receive a copy of the manifest signed by the designated facility within 60 days of the date your waste was accepted by the first transporter, you must send a manifest exception report to Ohio EPA (see mailing address in beginning of this handbook).

If you are an LQG and do not receive a copy of the signed manifest within 35 days from the date your waste was accepted by the first transporter, you must contact the transporter and/or the designated facility to determine what happened to your hazardous waste.

> **Note:** Please do not send a copy of your manifest to Ohio EPA unless you are complying with exception report requirements.

LQGs must send a manifest exception report to Ohio EPA if a copy of the signed manifest was not received within 45 days from the date your waste was accepted by the initial transporter. Exception reports must include a readable copy of the manifest for which you do not have confirmation of delivery. If you are an LQG, you must also send a cover letter signed by you or your representative explaining the efforts taken to locate the hazardous waste and the results of those efforts. If you are an SQG, you are not required to send a signed cover letter, but must provide some indication that you have not received confirmation of delivery from the designated facility (this can even be written on a copy of the manifest sent to Ohio EPA).

If you are an SQG and have a tolling agreement with recycling facilities, you do not need to manifest your hazardous waste. However, to meet this exemption, your hazardous waste must be reclaimed under a contractual agreement where the type of waste and frequency of shipments are specified in the agreement and the vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to your facility is owned and operated by the reclaimer of the waste. Additionally, you must keep a copy of the reclamation agreement in your files for a period of at least three years after termination or expiration of the agreement.

Refer to Appendix 2 and DERR'S HWP's Manifest Web page for a copy of the uniform hazardous waste manifest form and completion instructions. In addition to preparing this form for hazardous waste shipment as an SQG or LQG, you must meet the packaging, labeling, marking and placarding (pre-transportation) requirements before transporting or offering your hazardous waste for transport off-site. These hazardous waste generator pre-transportation requirements are found in OAC Chapter 3745-52.

Packaging

Before you ship your hazardous waste off-site, OAC rule 3745-52-30 requires you to package the hazardous waste as required by the U.S. Department of Transportation (DOT) regulations found in 49 Code of Federal Regulations (CFR) Parts 173, 178, and 179.

Labeling

Before you ship your hazardous waste off-site, OAC rule 3745-52-31 requires you to label each package of hazardous waste as required by DOT regulations found under 49 CFR Part 172.

Marking

Before you ship your hazardous waste off-site, OAC rule 3745-52-32 requires you to mark each package of hazardous waste as required by DOT regulations found in 49 CFR Part 172.

Before you transport hazardous waste off-site, you must mark each container of 110 gallons or less with the following information displayed as required by 49 CFR 172.304:

"Hazardous waste-Federal law prohibits improper disposal. If found, contact the nearest police or public safety authority or the United States Environmental Protection Agency."

Generator's name and address _____

Manifest document number _____."

Placarding

Before you transport hazardous waste off-site, you must placard or offer the initial transporter the appropriate placards according to DOT regulations found in 49 CFR Part 172.

Does my business need personnel training?

VSQGs are not required to conduct personnel training.

SQGs must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operation and emergencies, according to OAC rule 3745-52-16(B)(9)(c).

LQGs must conduct classroom instruction or on-the-job personnel training for facility employees and maintain documentation of personnel training in accordance with OAC rule 3745-52-17(A)(7). This requirement applies to facility personnel handling hazardous waste.

Personnel involved with hazardous waste management should have training in proper waste handling and emergency procedures appropriate to the types of waste handled, the management methods used and the hazards presented by the waste type and waste management method.

An LQG must ensure that:

- individuals conducting the training program be trained in hazardous waste management procedures;
- the training program teaches facility personnel hazardous waste management procedures relevant to the positions in which they are employed;
- at a minimum, the training program is designed to ensure that facility personnel are able to respond effectively to emergencies. The outline must include instruction in waste management procedures and implementation of the company's contingency plan;
- facility personnel complete an initial training program and an annual refresher training program;
- personnel training documentation is maintained on file at the facility, including written job titles and descriptions for each position related to hazardous waste management activities;
- personnel training records on current employees be kept until closure of the facility; and
- personnel training records for former employees are kept for at least three years from the date the employee last worked at the facility.

How do I prepare for emergencies?

In order to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil or surface water which could threaten human health or the environment, SQGs and LQGs must maintain emergency equipment on-site. Refer to the emergency equipment requirements in OAC rule 3745-52-16(B)(8)(b) for SQGs or 3745-52-252 for LQGs . You must maintain and operate your facility to minimize the possibility of emergencies (see OAC rule 3745-52-16(B)(8)(a) for SQGs or 3745-52-251 for LQGs).

As an SQG or LQG, you must have the following equipment at your facility, unless none of the hazards posed by the waste that you handle require such equipment:

- internal communications or alarm system;
- a device such as a telephone or two-way radio capable of summoning emergency assistance;
- portable fire control, spill control and decontamination equipment;
- water in adequate volumes and pressures for fire control;
- equipment must be compatible with the waste; and
- facility communications or alarm systems, fire protection equipment, spill control equipment and decontamination equipment, where required, must be tested and maintained as necessary to ensure its proper operation in time of emergency.

For example:
If your stored hazardous waste reacts violently with water, then an overhead water sprinkler system may not be the best emergency equipment for that particular waste.

Note:
It may be helpful to have a copy of the manufacturer's suggested maintenance schedule available when inspected.

You must test and maintain your emergency equipment, as necessary To assure proper operation it is recommended you record the inspections in a log. For example, if the manufacturer of a fire extinguisher requires you to test it once every six months to determine if it is operating correctly, then testing once every six months would meet the requirement of this rule. SQGs and LQGs must provide access to communications or alarm system in accordance with OAC rule 3745-52-16(B)(8)(d) for SQGs or 3745-52-254 for LQGs:

- whenever hazardous waste is being poured, mixed, spread or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under the rule; and

- if there is only one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone or hand-held two-way radio, which is capable of summoning external emergency assistance, unless not required under the rule.

You must maintain adequate aisle space to allow unobstructed movement of personnel and emergency equipment to any area of your facility in the event of an emergency (see OAC rule 3745-52-16(B)(8)(e) for SQGs or 3745-52-255 for LQGs.

OAC rules 3745-52-16(B)(8)(f) for SQGs and 3745-52-256 for LQGs require you to make arrangements with local emergency authorities to familiarize them with the layout of your facility, associated hazards, common personnel locations, entrances to roads inside the facility and possible evacuation routes. Additionally, you must keep documentation to demonstrate arrangements have been made or to show you cannot make arrangements.

When does my business need emergency procedures or a contingency plan?

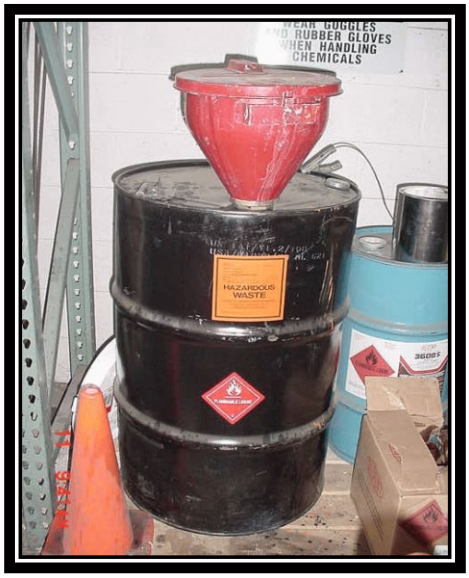
If you are an SQG, you must have at least one employee on the premises or on-call who will respond to all emergencies at the facility.

The appropriate responses are as follows:

- if there is a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

- if there is a spill, contain it and clean it up as soon as practical; and

- if you have a fire, explosion or other release that could threaten people outside of your facility, or if the spill has reached surface water, you must immediately notify the national response center at 1-800-424-8802 and provide them with the information that is required in OAC rule 3745-52-16(B)(9)(d)(iii).



If you are an SQG , you must also post the following information next to telephones or in areas directly involved in the generation and accumulation of hazardous waste:

- The name and emergency telephone number of the emergency coordinator.

- Location of fire extinguishers and spill control material, and, if present, fire alarm.

- The telephone number of the fire department, unless the facility has a direct alarm.

If you are an LQG, you must prepare and maintain a written contingency plan. The 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 and must meet the requirements of OAC rules 3745-52-260 through 3745-52-265. In addition, an LQG must maintain all reports of contingency plan implementation on-file and report these incidents to the director of Ohio EPA in accordance with OAC rule 3745-52-265(H)(2)(a).

As part of the contingency plan, LQGs need to complete a Quick Reference Guide (QRG) to provide emergency responders with easy access to the most critical information when responding to an emergency involving hazardous waste. Generators who become LQGs after October 5, 2020 need to submit this quick reference guide when they submit their plan, but existing LQGs only need to submit it when they submit a revised plan due to other necessary revisions outlined in OAC rules 3745-52-263(B) through (E).

The QRG content, as outlined in OAC rule 3745-52-262(B) includes the following:

1. The types or names of hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time.
2. The estimated maximum amount of each hazardous waste that may be present at any one time.
3. The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff.
4. A map of the facility showing where hazardous wastes are generated, accumulated, and treated and routes for accessing these wastes.
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 how best to evacuate citizens and workers.
6. The locations of water supply (e.g., fire hydrant and the flow rate).
7. The identification of on-site notification systems (e.g., a fire alarm that rings offsite, smoke alarms).
8. The name of the emergency coordinator and seven days a week, twenty-four-hour emergency telephone number or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

A copy of your contingency plan and revisions must be maintained at your facility and submitted to all local emergency responders (i.e., police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services). This document may also be submitted to the local emergency planning committee, as appropriate.. Refer to the Sample Contingency Plan (in Appendix 3) and in our "Contingency Plan Implementation and Incident Reporting" guidance document.

What are my recordkeeping requirements?

All categories of generators must keep a copy of following records for at least three years:

- test results;
- waste evaluations; and/or
- waste determinations.

SQGs must also keep a copy of the following records for at least three years:

- all manifests;
- land disposal restriction notifications, certifications and waste analysis data;

- inventory logs or records to demonstrate tanks have been emptied within 180 days of entering, if applicable.

While not required, it is recommended that SQGs and LQGs record their weekly container inspections and emergency equipment inspections in a log or summary. Example inspection forms can be found on Ohio EPA's website.

LQGs must keep copies of everything mentioned above plus personnel training documents, biennial reports,a daily tank inspection log, closure notifications, and contingency plan. For more information, refer to the following recordkeeping summary table.

Hazardous Waste Generator Recordkeeping Requirements Table			
Recordkeeping Requirements (and OAC references)	**Generator Category**		
	VSQG	**SQG**	**LQG**
Hazardous Waste Determination 3745-52-11(F)	No records specifically required, but must be able to show compliance with 3745-52-11	Required through process knowledge or analysis. Documentation required for at least three years.	Required through process knowledge or analysis. Documentation required for at least three years.
Manifest 3745-52-23	Records not required	Retain a signed copy for at least three years.	Retain a signed copy for at least three years.
Exception Report 3745-52-40(B)	Records not required	Record not required. Place note on manifest.	Retain a copy for at least three years from due date.
LDR Notifications, Certifications and Waste Analysis Data 3745-270-07	Records not required	Retain on-site for at least three years all notices, certifications, waste analysis data and other documentation pursuant to this rule.	Retain on-site for at least three years all notices, certifications, waste analysis data and other documentation pursuant to this rule.
Arrangements with Local Authorities 3745-52-16 3745-52-256	Records not required	Records documenting the arrangements with the local fire department and any other organization necessary to respond to an emergency 3745-52-16(B)(8)(f)(ii)	Records documenting the arrangements with the local fire department and any other organization necessary to respond to an emergency 3745-52-256(B)
Biennial Reports 3745-52-40(B)	Records not required	Records not required	Retain a copy for at least three years from due date.

Hazardous Waste Generator Recordkeeping Requirements Table			
Recordkeeping Requirements (and OAC references)	**Generator Category**		
	VSQG	**SQG**	**LQG**
Personnel Training Documents 3745-52-16 3745-52-17	Records not required	No records specifically required, but generators must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures. 3745-52-16(B)(9)(c)	Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. 3745-52-17(A)(7)(d) 3745-52-17(A)(7)(e)
Tank Inspection Records 3745-52-16 3745-52-17 3745-66-95(G)	Records not required	Must maintain records demonstrating tanks have been emptied within 180 days 3745-52-16(B)(6)(b)(iv)	Must maintain records demonstrating tanks have been emptied within 90 days. 3745-52-17(A)(5)(b)(iv) record tank inspections in an operating log. 3745-66-95(G)
Note: The retention period is automatically extended during the source of any unresolved enforcement action regarding the regulated activity or as requested by the Director.			

What are the land disposal restrictions standards?

U.S. EPA intended the land disposal restriction (LDRs) standards to ensure that toxic constituents present in hazardous waste are properly treated before it is land disposed. Hazardous waste, or some component of it, is often placed into a permitted hazardous waste landfill. The disposal of hazardous waste in a landfill has the potential over a long period of time to threaten human health and/or the environment by leaking hazardous constituents into the ground water even though the landfill has a liner and other safeguards. As a result, most hazardous wastes must be treated to meet specific treatment standards prior to disposal in a permitted hazardous waste landfill.

What are the LDR treatment standards?

> Note: Only SQGs and LQGs are required to comply with the LDRs.

The LDR treatment standards are based on the performance of available treatment technologies that have been found to best minimize the mobility or toxicity of the hazardous constituents. These treatment standards, found in Table 1 of OAC rule 3745-270-40, provide environmental protection by ensuring that your hazardous waste is properly treated to destroy, immobilize or reduce the toxicity of hazardous chemical components before it is land disposed. You must determine the specific treatment standard that applies to your hazardous waste when you first generate the hazardous waste.

How do I determine which treatment standards apply to my hazardous waste?

To determine which treatment standards apply to your hazardous waste, you need to know all applicable waste codes and whether your waste is considered a wastewater or a non-wastewater as defined in the LDR regulations. Waste codes are discussed in Chapter 1 of this handbook. OAC rule 3745-270-02 defines wastewater as wastes that contain less than one percent by weight total organic carbon (TOC) and less than one percent by weight total suspended solids (TSS). Wastes that contain one percent or more by weight of TOC and one percent or more by weight TSS are non-wastewaters. Treatment standards can vary for wastewater or non-wastewater forms of hazardous waste having the same waste codes.

Treatment standards can be expressed as concentration-based treatment standards or as specific treatment technologies. Concentration-based treatment standards appear in the table as numeric values and, depending on the waste, are either concentration in the waste or in a waste extract.

When use of a specific technology is required, the standard is expressed as a five-letter code. These specified technologies are described in OAC rule 3745-270-42.

If your hazardous waste is subject to a numerical standard, it may require treatment prior to land disposal. To determine if your hazardous waste must be treated prior to land disposal, you should determine if your hazardous waste exceeds the concentration levels specified in the “Treatment Standards for Hazardous Waste” table in OAC rule 3745-270-40. This can be done by using your knowledge of the waste, by conducting a total waste analysis or performing a Toxicity Characteristic Leaching Procedure (TCLP) test depending on the treatment standard for that waste. In most cases, you can use knowledge of your process to determine whether a waste exceeds the treatment standard. If your hazardous waste must be treated to a treatment standard by a specified treatment technology, you do not need to determine if your hazardous waste exceeds a concentration level - it simply must be treated by that method prior to land disposal.

What are underlying hazardous constituents and when do I have to test for them?

OAC rule 3745-270-02(A)(9) defines underlying hazardous constituents (UHC) as any constituent listed in the "Universal Treatment Standard" table in OAC rule 3745-270-48. At the point of generation, you must determine if your waste is a listed and/or a characteristic hazardous waste and determine applicable LDR requirements. If you generate a characteristic hazardous waste; other than a D001 non-wastewater treated by combustion (CMBST), recovery of organics (RORGS) or polymerization (POLYM), you must determine the underlying hazardous constituents.

These constituents can pose environmental hazards. The underlying hazardous constituents in your hazardous waste must be treated to meet the constituent-specific levels listed in the universal treatment standards (UTS). Removal of hazardous waste characteristics may not be sufficient for land disposal. Some characteristic hazardous wastes that no longer exhibit a characteristic may require additional treatment to meet additional LDR requirements. Once your characteristic hazardous wastes have been decharacterized and successfully treated for their underlying constituents, they can be disposed of in a non-hazardous waste landfill. If you have decharacterized your hazardous waste but have not identified or treated for the UHCs, you can send that hazardous waste to a non-permitted treatment facility that will test for and treat all UHCs as applicable prior to land disposal.

If you generate a hazardous waste that is both listed and characteristic, the treatment standard for the waste code listed in OAC rules 3745-51-30 to 3745-51-33 will operate in lieu of the treatment standard for the characteristic waste code(s) indicated in OAC rules 3745-51-20 to 3745-51-24.

This only applies if the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to be characteristic. If these conditions aren't met, your hazardous waste must meet the treatment standards for all applicable listed and characteristic waste codes and UHCs [see OAC rule 3745-270-09(B)]. Listed hazardous wastes must be disposed in a permitted hazardous waste landfill.

What if my hazardous waste meets the treatment standard when generated?

If you have a characteristic hazardous waste and it meets the LDR treatment standards as generated, you can dispose of it in a solid waste landfill. However, if you have a listed hazardous waste that meets the LDR treatment standards as generated, it must be disposed of in a permitted hazardous waste landfill. If your hazardous waste meets the treatment standards when generated, you must provide a one-time notification and certification with the initial shipment which states that the waste delivered to the disposal facility meets the treatment standards. Your notification and certification must be signed and must contain the required statement that the certification is true, accurate and

complete. You must keep a copy of your notification and certification on-site for at least three years from the date of the last shipment of the waste.

Can I treat my hazardous waste on-site to meet the LDRs?

You have the option of treating your hazardous waste on-site in containers, tanks or containment buildings or sending it off-site for treatment by a facility permitted to treat hazardous waste. You should be aware that due to the limitations on units used by generators, you may not be able to treat your hazardous waste by using certain specified technologies. As previously stated, characteristic hazardous wastes that meet the LDRs can be sent to a solid waste landfill while listed hazardous wastes that meet the LDRs must be sent to a permitted hazardous waste landfill. If you do treat your restricted hazardous waste to meet the LDR requirements, you must develop and follow a waste analysis plan (WAP) (see OAC rule 3745-270-07). The WAP must include all information necessary to treat the hazardous waste and must be kept on-site. WAPs must:

- contain a detailed chemical and physical analysis of a representative sample of the restricted waste being treated;
- contain all other information used to develop the plan;
- contain selected frequency of testing to demonstrate the waste meets the LDRs; and
- be kept in the generator's on-site files and made available to inspectors.

Do I have to keep any paperwork concerning LDRs?

If you ship your hazardous waste to a TSD facility, you must send a one-time written notice to each TSD facility receiving the waste. You must also keep a copy on-site. This one-time notification must include:

- EPA hazardous waste numbers (waste codes) and manifest number of first shipment;
- a listing of all your hazardous wastes, constituents of concern (F001 to F005, and F039), and underlying hazardous constituents if your waste will be monitored and treated for all constituents by the TSD;
- applicable wastewater/nonwastewater categories and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide);
- waste analysis data (when available);

- for hazardous debris, when treating with an alternative treatment technology - contaminants subject to treatment, as described in OAC rule 3745-270-45(B) and an indication that these contaminants are being treated to comply with that rule; and

- for contaminated soil - the constituents subject to treatment as described in OAC rule 3745-270-49(D) and the following statement: this contaminated soil (does/does not) contain listed hazardous waste and (does/does not) exhibit a characteristic of hazardous waste and (is subject to/complies with) the soil treatment standards as provided by OAC rule 3745-270-49(C) or the universal treatment standards.

If you are treating hazardous waste to remove all of the hazardous waste characteristics, separate notification and certification requirements are identified in OAC rule 3745-270-09(D). These regulations require you to file a one-time notification and certification to the director of Ohio EPA and to keep a copy in your files for at least three years. This notification must be updated on an annual basis if the process or operation generating the waste changes. If such changes occur, however, you must notify the division no later than December 31. Your notification must include the information required by OAC rule 3745-270-09(D)(1).

If your hazardous waste meets the LDRs before it is shipped off-site, you must provide a one-time notification and certification with the initial shipment which states that the waste delivered to the disposal facility meets the treatment standards. Your notification and certification must be signed and must contain the required statement that the certification is true, accurate and complete. You must keep a copy of your notification and certification for at least three years from the date of the last shipment of the waste.

According to OAC rule 3745-270-07(A)(7), if your hazardous waste becomes nonhazardous because of an exclusion from the definition of hazardous waste it is subject to a one-time notification requirement. The one-time notice must be placed in your on-site files, and should include the following information:

- a statement that the hazardous waste was generated;

- a statement that it is excluded from the definition of hazardous waste or waste or exempt from regulation as a hazardous waste; and

- the disposition of the waste.

What is a biennial report?

A biennial report is a document that LQGs are required to submit to Ohio EPA. The report provides Ohio EPA and U.S. EPA with data concerning your facility's hazardous waste generation, management and waste minimization activities. You are required to file a biennial report if your business reached LQG status during an odd numbered calendar year.

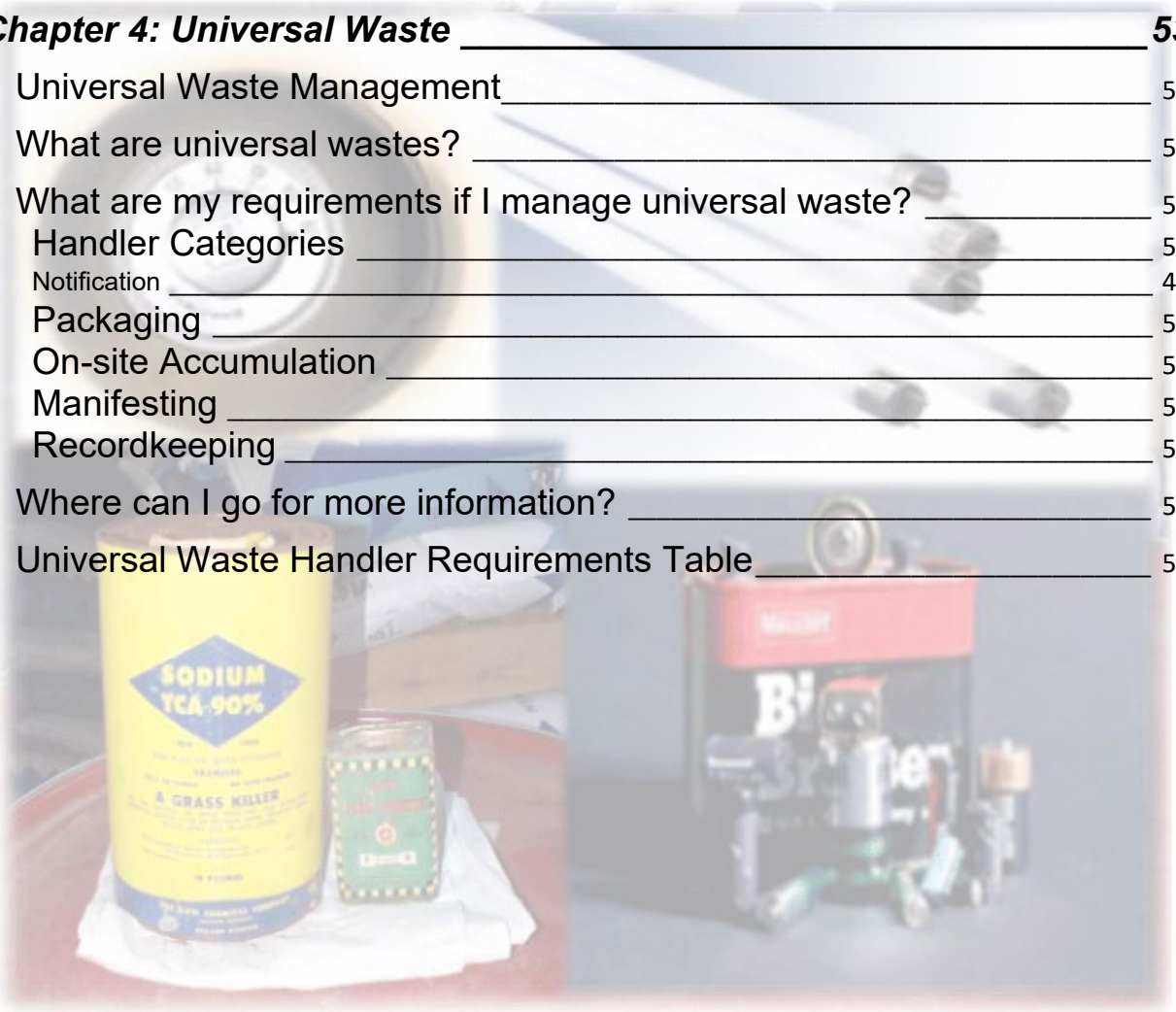
Biennial reports also provide data to be used for public education and compliance assurance efforts. The data you provide in your biennial report will be entered into a computer database and forwarded to U.S. EPA in fulfillment of their biennial report requirement. It is very important, therefore, to complete your required forms carefully.

Ohio EPA's biennial report instructions and forms are available, in addition we have a Website specific to biennial reports.

When do I file a biennial report?

Biennial reports must be received by Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program by March 1st of each even year. Information included in this report is based on the previous calendar year's waste generation. You are required to file a biennial report if your business reached LQG status at any time in an odd numbered calendar year. You should report only the hazardous wastes that counted toward the determination of your generator status. This includes wastes that are generated, accumulated and subsequently managed on-site or shipped off-site. If you are a healthcare facility operating under OAC rules 3745-266-500 through 3745-266-510, you do not include hazardous waste phamaceuticals in your biennial report.

Chapter 4: Universal Waste



Universal Waste Management

Universal wastes are specific hazardous wastes that are managed under requirements that are less complex than the hazardous waste requirements. These wastes are generated by numerous generators, typically in small quantities. The universal waste rules are intended to promote recycling and proper disposal of these hazardous wastes by easing certain regulatory requirements. Ohio's universal waste rules are located in OAC Chapter 3745-273.

What are universal wastes?

Universal waste is a general term used to describe wastes that when discarded are hazardous waste, but are managed under separate requirements. Universal wastes are generated by large, diverse populations such as businesses, government agencies and schools.

In Ohio, there are currently eight categories of universal wastes; lamps, pesticides, mercury-containing equipment, discarded batteries, antifreeze, non-empty aerosol containers, paint and paint related waste. If a lamp, pesticide, mercury-containing equipment or discarded battery is not managed as a universal waste, then the waste must be managed as a hazardous waste under the applicable hazardous waste regulations.

Non-hazardous Lamps: Ohio EPA recommends recycling lamps that do not exhibit hazardous waste characteristics. While these lamps are not hazardous waste and, therefore, not a universal waste; Ohio EPA encourages recycling rather than disposal. Non-hazardous lamps still contain low amounts of heavy metals such as mercury that could potentially harm the environment.

What are my requirements if I manage universal waste?

Compliance requirements are determined by the amount of universal waste you generate at any one time.

Handler Categories

Under the universal waste rules, there are two categories of handlers. If you accumulate less than 5,000 kg (11,000 pounds) of universal waste at any time, you are classified as a small quantity handler. If you accumulate 5,000 kg (11,000 pounds) or more of universal waste at any time, you are classified as a large quantity handler. Your universal waste category is retained until the end of the calendar year that you accumulate 5,000 kg (11,000 pounds) or more of universal waste and has no relationship to your facility's hazardous waste generator status.

> Note: UW should not be counted when making quantity determinations for hazardous waste generator categories (for example, very small quantity generators (VSQGs), small quantity generators (SQGs) and large quantity generators (LQGs)). Universal waste handlers' status levels should not be confused with hazardous waste generator status levels.

Notification

If you are a small quantity handler of universal waste, you are not required to notify Ohio EPA of your activities or to obtain a U.S. EPA identification number. However, if you are a large quantity handler of universal waste you must notify Ohio EPA of your activities and must have or obtain a U.S. EPA identification number.

Packaging

Small and large quantity handlers must manage universal waste in containers that are closed, structurally sound, compatible with the waste and lack evidence of leakage, spillage or damage that could result in a spill.

On-site Accumulation

Both handler categories may accumulate universal waste on-site for up to one year from the date the universal waste is generated. You must know when the universal waste was generated or received on-site in order to demonstrate the length of time it was on-site. If you must accumulate universal waste for a time period longer than one year, you must be able to prove that the accumulation is necessary to facilitate proper recovery, treatment or disposal.

Manifesting

As a universal waste handler, you are not required to manifest your off-site shipments of universal waste. However, you must only ship to and ensure delivery of your universal waste to another universal waste handler or to a permitted destination facility.

Recordkeeping

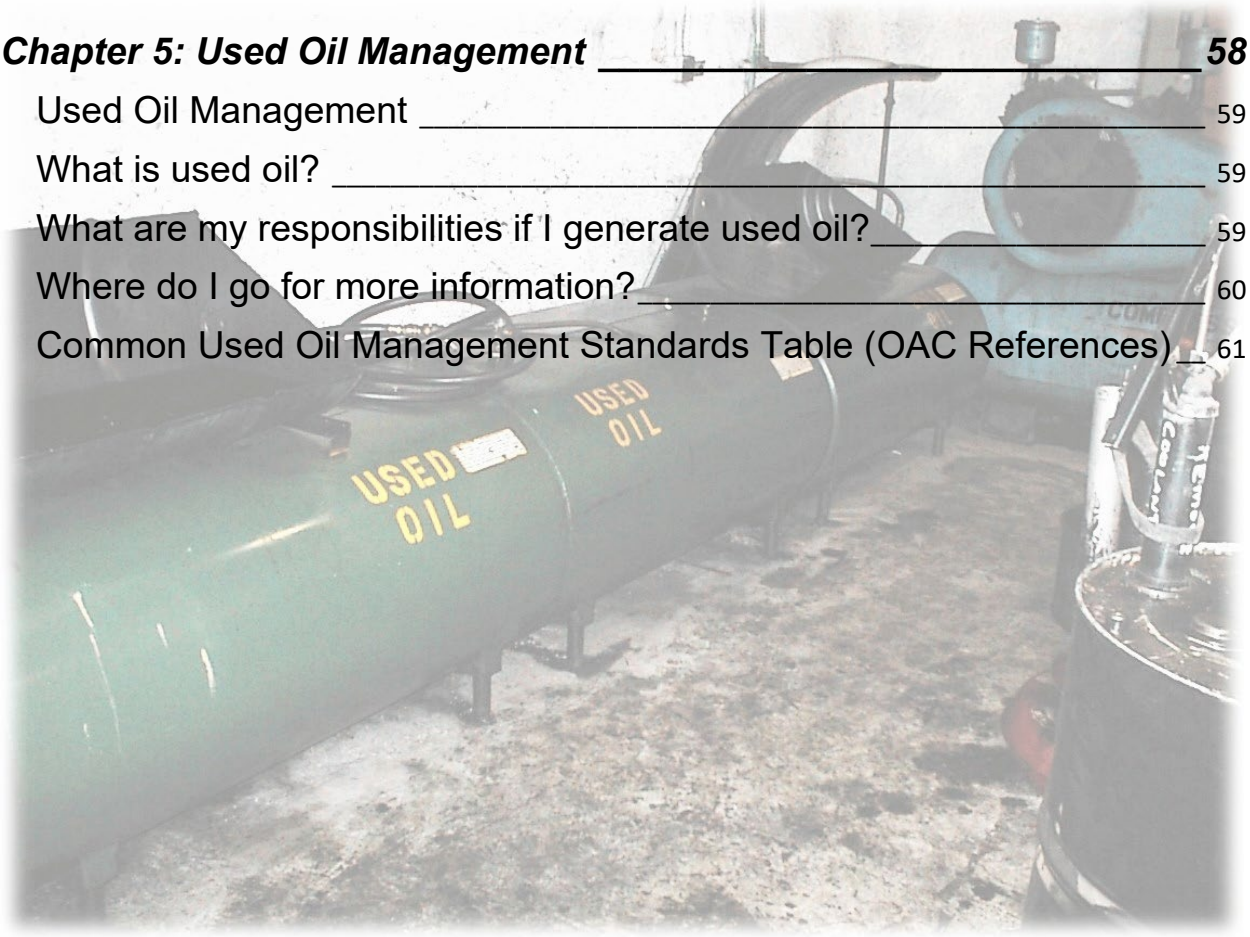
If you are a large quantity handler of universal waste, you must keep records of shipments received on-site and shipments sent off-site for a period of at least three years. Small quantity handlers of universal waste are not required to keep records of shipments.

Where can I go for more information?

Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program produced a universal waste Website to answer your questions and to help manage your universal waste in accordance with the rules. You can view the universal waste guidance documents at the end of this handbook and the following universal waste handler requirements table.

Universal Waste Handler Requirements Table				
Handler Requirements (and OAC reference)	**Universal Waste Handler Categories**			
	Small Quantity Handlers	**Large Quantity Handlers**	**Transporters**	**Destination Facilities**
Notification 3745-273-12 3745-273-32	Not required to notify 3745-273-12	Notify Ohio EPA in writing and obtain a US EPA ID number 3745-273-32	No applicable requirement	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Packaging 3745-273-13 3745-273-33 49 CFR 171 to 180	Containers must meet the requirements in 3745-273-13	Containers must meet the requirements in 3745-273-33	Must comply with all applicable US DOT regulations in 49 CFR 171 to 180	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Labeling/Marking 3745-273-14 3745-273-18 3745-273-34 3745-273-38 49 CFR 171 to 180	Must meet requirements specified in 3745-273-14 and 3745-273-18	Must meet requirements specified in 3745-273-34 and 3745-273-38	Must comply with all applicable US DOT regulations in 49 CFR 171 to 180	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Storage Time Limits 3745-273-15 3745-273-35 3745-273-53 3745-273-60	Up to one year from the date generated or received 3745-273-15	Up to one year from the date generated or received 3745-273-35	10 days or less at universal waste transfer facility 3745-273-53	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Recordkeeping/ Manifesting 3745-273-19 3745-273-39 3745-273-62	Records not required 3745-273-19	Retain receipts of all shipments for at least three years 3745-273-39	No applicable requirement	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Employee Training 3745-273-16 3745-273-36	Training required 3745-273-16	Training required 3745-273-36	No applicable requirement	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Response to Releases 3745-273-17 3745-273-37 3745-273-54	Must comply with 3745-273-17	Must comply with 3745-273-37	Must comply with 3745-273-54	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270
Permitting 3745-273-60	No applicable requirement	No applicable requirement	No applicable requirement	Must comply with all applicable requirements in OAC Chapters 3745-50 through 270

Chapter 5: Used Oil Management



Used Oil Management

If your business generates used oil, it is important that you understand and comply with the used oil rules located in Ohio Administrative Code (OAC) Chapter 3745-279. These rules describe how to properly manage used oil. Because used oil is a reusable resource, the used oil regulations were developed to promote recycling.

What is used oil?

For a material to be considered used oil, it must be oil that is petroleum-based or synthetic and through use has been contaminated with physical or chemical impurities. Some examples of used oil include oils used as lubricant, hydraulic fluid, coolant, cutting fluid or buoyant.

Examples of used oil include:	Used oil does not include:
• engine oils from vehicles and equipment; • lubricating oil; • brake fluid; • transmission fluid; • hydraulic fluid; • insulating oils; • metal cutting fluids; • industrial process oils; and • compressor/refrigerant oils.	• oil products; • cleanup material from oil product spills; • animal or vegetable oils; • antifreeze; • kerosene; or • petroleum distillates used as solvents.

What are my responsibilities if I generate used oil?

Most of the used oil rules relate to good housekeeping practices such as:

- label containers or tanks of used oil with the words “Used Oil;”

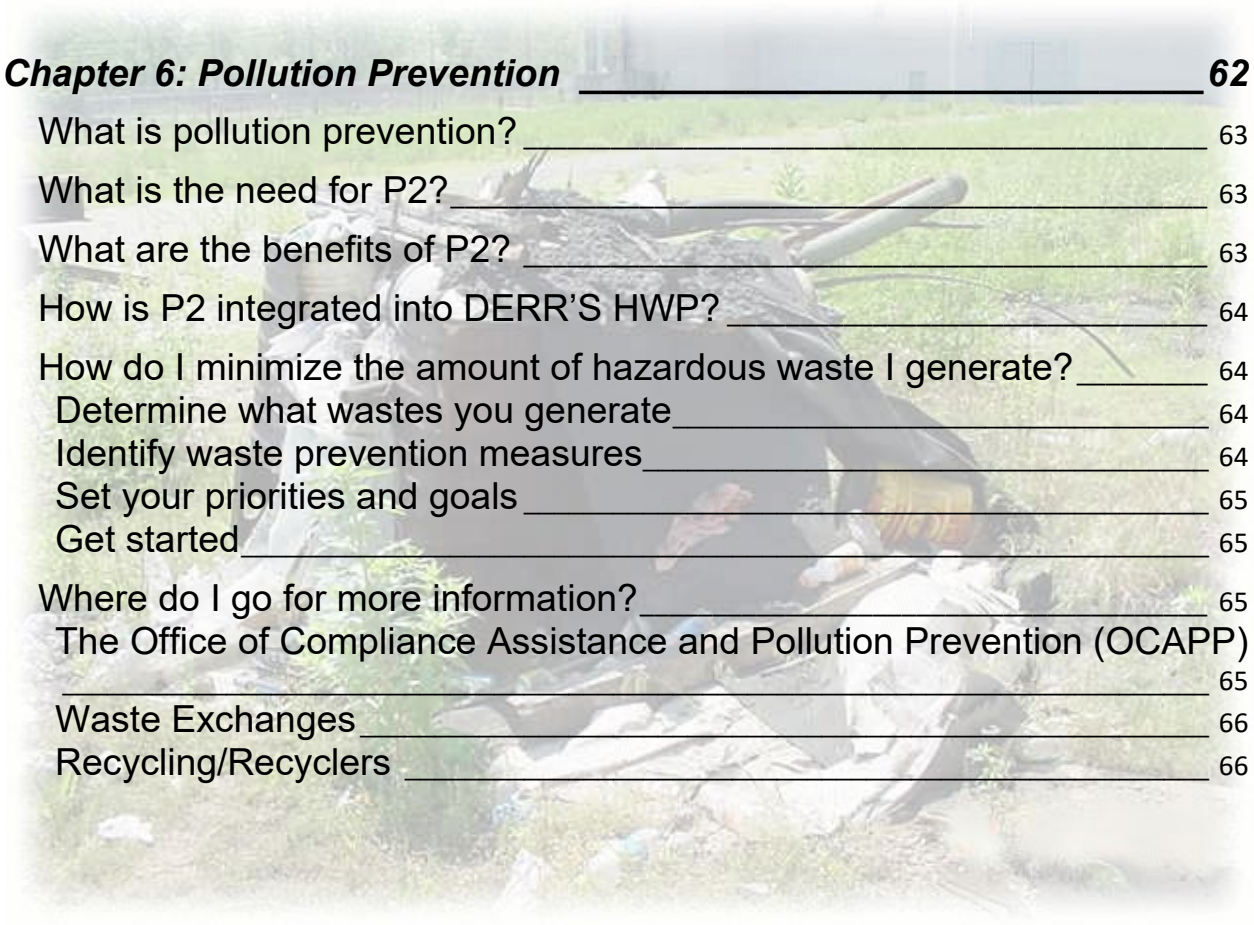
- store used oil in containers or tanks that are in good condition (not rusting or leaking);
- if there is a leak of used oil: stop the leak, contain it, clean it up and properly manage the cleanup materials;
- use a transporter with a U.S. EPA identification number when shipping used oil off-site;
- do not mix used oil with other wastes as this might cause the whole mixture to become a hazardous waste; and
- do not throw used oil on the ground, down the sewer, in a septic tank, down a floor drain or in the trash dumpster.

Where do I go for more information?

Ohio EPA's Division of Environmental Response and Revitalization's Hazardous Waste Program produced several used oil guidance documents to help generators understand and comply with the used oil rules.

Common Used Oil Management Standards Table (OAC References)					
Handler Type / Mgmt Standards	Generator/ Collection Center	Transporter/ Transfer Facility	Off-Specification Burner	Processor/ Re-refiner	Marketer*
Storage	3745-279-22(A)&(B)	3745-279-45(B)&(C)	3745-279-64(A)&(B)	3745-279-54(A)&(B)	N/A
Labels	3745-279-22(C)	3745-279-45(G)	3745-279-64(F)	3745-279-54(F)	N/A
Secondary Containment	No requirements	3745-279-45(D),(E)&(F)	3745-279-64(C),(D)&(E)	3745-279-54(C),(D)&(E)	N/A
Response to Releases	3745-279-22(D)	3745-279-45(H)	3745-279-64(G)	3745-279-54(G)	N/A
Closure	No requirements	No requirements	No requirements	3745-279-54(H)	N/A
Notification/ EPA ID number	No requirements (Non-Do-It-Yourselfer collection centers must register with Ohio EPA)	3745-279-42	3745-279-62	3745-279-51	3745-279-73
Tracking	No requirements	3745-279-46	3745-279-65	3745-279-56	3745-279-74
Notes	* OAC rules 3745-279-70 to 75 apply to used oil marketers. Any person subject to the marketer requirements must also comply with one of the following: • used oil generator requirements; • used oil transporter/transfer facility requirements; • used oil processor and re-refiner requirements; or • used oil burner requirements. Therefore rules concerning storage, labeling, secondary containment, releases to responses, and closure are only applicable to marketers through the other handler requirements.				

Chapter 6: Pollution Prevention



What is pollution prevention?

Pollution Prevention (P2) means source reduction by preventing or reducing waste where it originates. Source reduction is any effort to reduce, at the source, the quantity of waste generated, toxic chemicals used or any release to the environment. Source reduction measures include, but are not limited to, process modifications, purifying feedstock, material substitution, good operating and management practices, increases in the efficiency of machinery and recycling within a waste generating or other production process. P2 avoids cross-media transfers of wastes and/or pollutants and is multimedia in scope. It addresses all types of waste and environmental releases to the air, water and land.

A prevention-based approach to environmental protection saves money and resources by avoiding costly cleanups and the high cost of managing waste after it is generated. More waste often means lower efficiency. Improving operations and enhancing process efficiency usually saves time, reduces costs and improves service delivery. P2 presents a number of opportunities to improve the environment that are not apparent using traditional environmental management techniques.

What is the need for P2?

With approximately 850 large quantity generators (LQGs) and approximately 2,500 small quantity generators, Ohio consistently ranks among the top hazardous waste generating states in the nation.

Consistent with Ohio EPA and U. S. EPA goals for pollution prevention, DERR'S HWP views P2 as integral to its work. DERRrecognizes that future gains in environmental protection will result from P2 strategies. We recognize that DERR'S HWP can play a greater role in promoting P2 practices to the regulated community. Part of our responsibility is to help generators see the usefulness of this information. We also provide P2 technical assistance.

What are the benefits of P2?

Pollution prevention offers several benefits which pollution control strategies cannot match. Most obvious is that generating less waste is simply the best thing for the environment, since the potential for undue harm to human health or the environment is reduced.

For industry, it means raw material inputs are more efficiently incorporated into the final product, which is economically desirable since less money is required to purchase raw materials and pay for waste management. Less waste generally means less potential liability, fewer reporting requirements and, potentially, better community relations.

How is P2 integrated into DERR'S HWP?

DERR'S HWP provides P2 assistance and suggestions during inspections, compliance assistance activities, enforcement, permit renewals, presentations made to industry/trade groups and P2 assessments completed at generator facilities. DERR'S HWP works closely with Ohio EPA's Office of Compliance Assistance and Pollution Prevention (OCAPP) to complete P2 assessments at hazardous waste generator facilities.

How do I minimize the amount of hazardous waste I generate?

You can make waste prevention a routine part of your daily business, just like worker safety and customer satisfaction. A little time and effort can go a long way toward success by following these basic steps:

Determine what wastes you generate

- Examine all of your waste streams, including process wastes, hazardous wastes, nonhazardous wastes, solid wastes and office waste. Look in trash cans and dumpsters to determine what materials are being thrown away and consider what wastes are poured down the drain, such as rinse waters and process waters.

- Examine your energy and waste consumption and look for high and low usage trends in your water and electric bills.

- Characterize each waste stream - determine where the waste comes from, what processes generate it and how much is being discarded.

Identify waste prevention measures

- Evaluate all wastes for possible reduction. Determine how you can reduce each waste, evaluate your purchasing policies and determine what you can reuse.

- Identify potential production changes that would improve efficiency, including process, equipment, piping and layout changes.

- Investigate opportunities for new products or ingredients that prevent waste generation.

- Identify resources that will help you conduct a waste reduction assessment. Trade associations and state and local regulatory agencies might be able to provide technical assistance, and your equipment vendor might have suggestions to reduce wastes. Also, consider hiring a consultant who specializes in identifying potential waste prevention measures.

Set your priorities and goals

- Prioritize waste prevention opportunities by considering cost, ease of implementation, payback and other benefits such as increased employee safety.

- Try focusing on a few opportunities that are easy to implement, having low capital investment, saving you money and reducing large volumes of wastes.

- Set attainable goals, such as reducing office paper use by 25 percent or reducing your waste hauling and disposal costs by $5,000 annually.

Get started

- Teach your employees how to prevent generating excess waste. Describe your waste prevention policies and goals, and provide training to employees who must change how they handle materials.

- Promote your waste prevention activities. Hold a kick-off event to describe your goals and highlight the benefits for your business. Use posters or signs to get the word out to employees and place the signs in areas where waste prevention activities should occur.

- Encourage employee involvement by offering incentives. Prizes or awards can be given for the best ideas or those that result in the most savings. A portion of the savings can also be given to employees or their departments.

Where do I go for more information?

The Office of Compliance Assistance and Pollution Prevention (OCAPP)

The Office of Compliance Assistance and Pollution Prevention (OCAPP) provides free technical assistance to help Ohio businesses reduce pollution and improve Ohio's environment. OCAPP is a non-regulatory office at Ohio EPA and has been helping Ohio generators since 1993. OCAPP can provide assistance through on-site visits, over-the-phone consultations or by e-mail. In addition, OCAPP provides an extensive array of

publications that help companies reduce waste generation and improve competitiveness. Most of these publications are provided free-of-charge and can be accessed through their website.

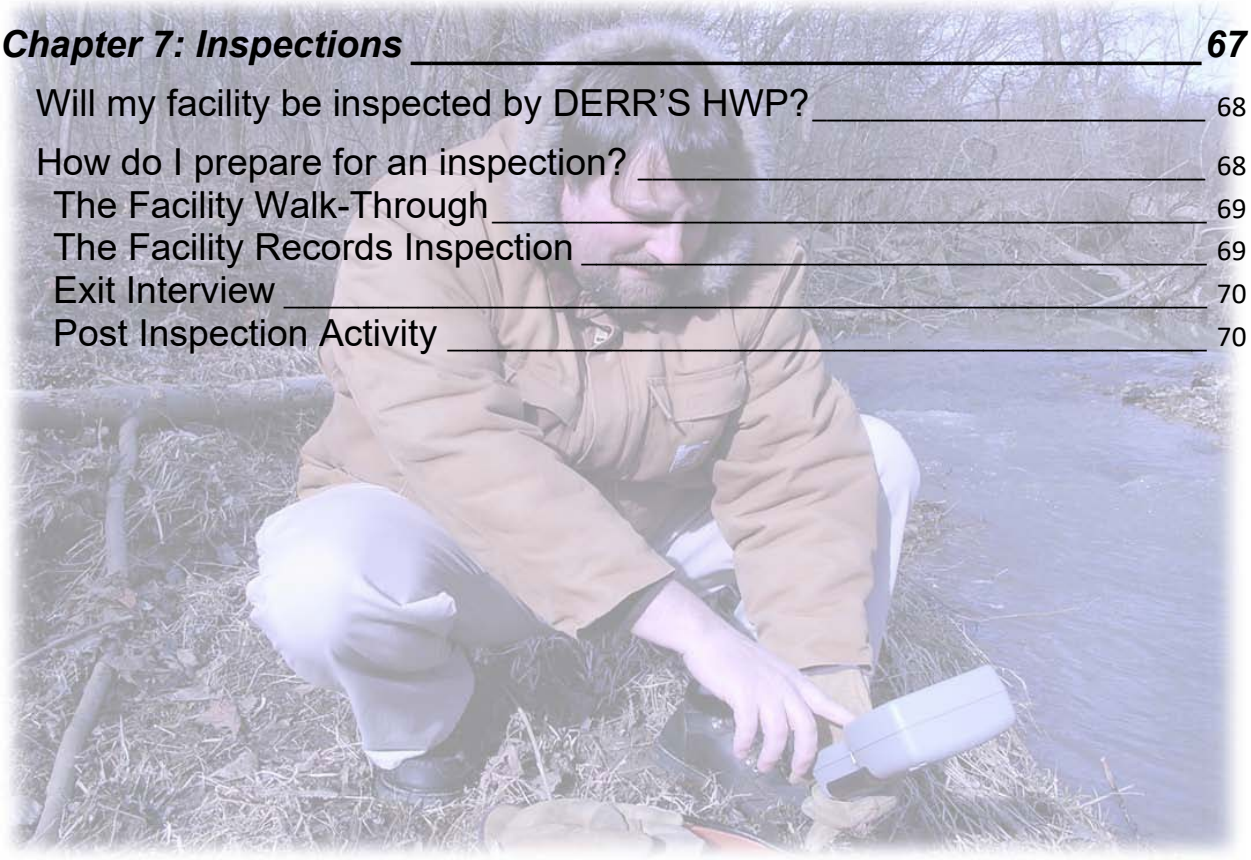
Waste Exchanges

Ohio EPA's Ohio Materials Marketplace is an online network designed to facilitate cross-industry materials reuse among Ohio companies and organizations. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations and entrepreneurs where one organization's hard-to-recycle wastes and by-products become another organization's raw material. In addition to diverting waste from landfills, these recovery activities generate significant cost savings and create new jobs and business opportunities. Participation is open to any company or organization with operations in Ohio.

Recycling/Recyclers

OCAPP's website lists many recyclers for antifreeze, batteries, cardboard, computers and electronic equipment, fluorescent lamps, used oil, wood pallets and plastics and other wastes.

Chapter 7: Inspections



Will my facility be inspected by DERR'S HWP?

DERR'S HWP inspectors inspect all three types of hazardous waste generators plus treatment, storage and disposal facilities in Ohio to determine compliance with Ohio's hazardous waste rules. These rules are located in Ohio Administrative Code (OAC) Chapters 3745-50 through 57, 65 through 69, 205, 256, 266, 270, 273 and 279. Ohio Revised Code (ORC) §3734.07 provides Ohio EPA with the authority to conduct inspections. Inspections can be announced, meaning we call to schedule a time for the inspection, or unannounced. You should always be prepared for an Ohio EPA hazardous waste inspection. In some cases, it might be necessary to complete a portion or all of the inspection through a virtual site visit (VSV). If you are selected for a VSV, the inspector will reach out to discuss the process with you.

How do I prepare for an inspection?

To be prepared for an inspection, you should always ensure that:

- you are managing hazardous wastes properly;
- you have designed and operated each hazardous waste management unit in accordance with Ohio's hazardous waste requirements;
- you are maintaining appropriate emergency response and communication equipment; and
- you are maintaining the appropriate hazardous waste-related documents (for example, manifests, land disposal restriction forms, personnel training records, inspection logs, etc.).

The Entrance Interview

Upon arrival, the DERR'S HWP inspector will explain the purpose of the inspection. The inspector will ask to conduct an entrance interview to ask questions regarding your facility's function. They will ask you to describe the process operations, from raw materials to the final products, that generate waste including the types and amount of hazardous waste generated. The inspector should inform you that they will be taking photographs during the inspection. They will also enquire if there are any safety requirements at the facility for themselves and when taking photographs. They will also provide you with a copy of the Agency's Trade Secret Protection request guidance document if you have any concerns about the information collected during the inspection. The inspection's two main elements include: a facility walk-through and a review of facility records. The inspector will also let you know that the facility inspection will be summarized in an exit interview at the end of the day.

The Facility Walk-Through

The inspector will conduct a complete walk-through of your facility as it relates to the management of hazardous waste. The facility walk-through generally includes:

- an overview and complete tour of the process operations that generate hazardous waste (from the beginning through the end);
- a visual inspection of each hazardous waste accumulation area;
- a visual confirmation of the presence and maintenance of required emergency response and safety equipment;
- a visual inspection of ancillary/support operations (for example, lab, electric shop, paint shop, maintenance area) that may contribute to the generation of hazardous waste; and
- a visual inspection of other plant/facility areas as determined necessary by the inspector (for example, wastewater plant operations, solid waste management areas, etc.).

The Facility Records Inspection

The specifics of the facility records inspection will depend on your facility's generator status. The more hazardous waste you generate in a calendar month, the greater the number of records you are required to maintain. Listed below are the types of records you may be required to maintain on-site:

- waste evaluation information;
- identification number;
- accumulation extension;
- pre-transport requirements;
- manifests;
- manifest exception reports;
- land disposal restriction documents;

- inspection records;
- personnel training documents;
- emergency equipment documentation;
- emergency requirements;
- contingency plan;
- generator annual report; and
- tank system assessment documentation.

Exit Interview

Once the inspector has completed the facility walk-through and reviewed the appropriate records, the inspector will conduct an exit interview. During the exit interview, the inspector will discuss any potential violations found and other concerns or issues. The inspector will also discuss any pollution prevention (P2) opportunities and ask if your company is interested in obtaining more information on P2 (see Chapter 6) or having Ohio EPA conduct a complete P2 assessment.

Post Inspection Activity

After the inspection and collection of any necessary follow-up information, the inspector will summarize his or her findings in an inspection report to you that may arrive as a separate mailing from your compliance letter. This inspection report will document what the inspector observed during the inspection, and include a narrative of the inspection, the appropriate checklists, photographs and a list of any other materials collected or given to you during the inspection at your facility. If no violations were found, you will receive a notice of compliance letter. If violations were found, the inspector will discuss possible remedial actions to resolve the potential violation or violations during the exit interview. These violations will be listed in a Notice of Violation (NOV) letter that will be sent to you. If the inspector determines that some of the areas of concern resulted in a violation after the inspection, they will contact you before you receive your NOV letter. The agency reviews all NOV's to determine whether or not to take escalated enforcement action. Some of the factors that are taken into account for this review depend on the significance of the violations and your company's response to the NOV as well as your previous compliance history.

Appendices


hio
Ohio Environmental
Protection Agency

Appendix 1

How do I obtain a U.S. EPA Identification Number?

To obtain a U.S. EPA Identification Number, you can complete EPA form 9029 electronically using myRCRAid through U.S. EPA's RCRAInfo Industry Application. This is the preferred method for submission. More information on electronic submission can be found on the Division of Environmental Response and Revitalization's webpage.

Alternatively, you could submit a hard copy form. A sample notification form has been included in this Appendix and is also available on the Division of Environmental Response and Revitalization's webpage.

Mail the completed and originally signed form to:

Ohio EPA – DERR
Information Resources Management Section
P. O. Box 1049
Columbus, Ohio 43216-1049

For courier deliveries use:

Ohio EPA – DERR
Information Resources Management Section
50 West Town Street, Suite 700
Columbus, Ohio 43215

U.S. EPA Identification Numbers are site specific so if your company has more than one site that is required to obtain a number, you must complete a form for each site.

Once a U.S. EPA Identification Number has been assigned, a confirmation letter will be mailed to the person you indicate as Site Contact Person. You must include this number on all correspondence, including shipping manifest(s) and reports, as required by Ohio's hazardous waste requirements.

As mentioned above, U.S. EPA Identification Numbers are site specific so if your company moves to another location and will still be required to have a U.S. EPA Identification Number, you must notify Ohio EPA of your new location and submit a new form. You will be assigned a new U.S. EPA Identification Number for the new site. We also request that you submit a letter to deactivate the number at the old site. The U.S.

EPA Identification Number will remain with the old site's address and may be assigned to future occupants.

In order to maintain the most current information about your company in our database, Ohio EPA requests that you re-notify DERR using Form 9029 when there are any changes in your company's information (i.e. company name, ownership or contact information changes.)

MAIL THE COMPLETED FORM TO: Ohio EPA, DERR P.O. Box 1049 Columbus, OH 43216-1049	Ohio Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION FORM**	**For Ohio EPA Use Only**

1. Reason for Submittal	**Reason for Submittal:** ☐Obtaining or updating an EPA ID number for regulated activity ☐As a component of the Hazardous Waste Report for the year _____ ☐Notifying that regulated activity is no longer occurring at this site ☐As a component of a First or Revised RCRA Hazardous Waste Part A Permit Application			
2. Site EPA ID Number				
3. Site Name				
4. Site Location Information	Street Address:			
	City, Town, or Village:			County:
	State:	Country:		Zip:
5. Site Land Type	☐ Private ☐ County ☐ District ☐ Federal ☐Indian ☐ Municipal ☐ State ☐ Other			
6. North American Industry Classification System (NAICS)	A. (Primary)		B.	
	C.		D.	
7. Site Contact Person:	First Name:		MI:	Last Name:
	Title:			
	Street or P.O. Box:			
	City, Town, or Village:			
	State:	Country:		Zip Code:
	E-mail:			
	Phone & Ext.:			Fax:
8. Legal Owner and Operator of the Site Additional Owners and/or Operators should be listed in the Comment Section or on another copy of this form page.	Name of Site's Legal Owner:			Date Became Owner (mm/dd/yyyy):
	Owner Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other			
	Street or P.O. Box:			City:
	State:	Country:		Zip Code:
	Email:			Phone:
	Name of Site's Operator:			Date Became Operator (mm/dd/yyyy):
	Operator Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other			
	Street or P.O. Box:			City:
	State:	Country:		Zip Code:
	Email:			Phone:

9. Type of Regulated Waste Activity (If "Yes" Mark "X" in the appropriate boxes.)

A. Hazardous Waste Activities:

1. Generator of Hazardous Waste
(choose only one of the following three categories or leave blank if not a Generator)

☐ a. **Large Quantity Generator (LQG):**
Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste; or

☐ b. **Small Quantity Generator (SQG):**
100 to 1,000 kg/mo (220-2,200 lbs.) of non-acute hazardous waste; or

☐ c. **Very Small Quantity Generator (VSQG):**
Less than 100 kg/mo of non-acute hazardous waste

If applicable, indicate other generator activities

☐ d. Temporary Generator (generate from a one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments.

☐ e. Episodic Generator (a VSQG or SQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves you to a higher generator category). If yes, you must fill out the Episodic Generator Addendum

2. Biennial Hazardous Waste Report Generator Status
(choose only one if the reason for submittal is the Biennial Hazardous Waste Report)

☐ a. **Large Quantity Generator (LQG):**
Greater than 1,000 kg (2,200 lbs.) of non-acute hazardous waste was generated at the site in any one month; or

☐ b. **Small Quantity Generator (SQG):**
In one or more months, the site generated greater than 100 kg (220 lbs.) but in no month, did it generate more than 1,000 kg (2,200 lbs.) of non-acute hazardous waste; or

☐ c. **Very Small Quantity Generator (VSQG):**
The site generated no more than 100 kg (220 lbs.) of non-acute hazardous waste in any one month; or

☐ d. **Non-Generator:**
The site did not generate any hazardous waste during the calendar year.

3. Transporter of Hazardous Waste
☐ a. Transporter
☐ b. Transfer Facility (at your site)

☐ **4. Treater, Storer or Disposer of Hazardous Waste (at your site)**
Note: A hazardous waste permit is required for this activity.

5. Recycler of Hazardous Waste (at your site)
Note: A hazardous waste permit may be required for this activity.
☐ a. Recycler who stores prior to recycling
☐ b. Recycler who does not store prior to recycling
☐ c. 72-hour Recycler

6. Exempt Boiler and/or Industrial Furnace
☐ a. Small Quantity On-site Burner Exemption
☐ b. Smelting, Melting and Refining Furnace Exemption

☐ **7. Underground Injection Control**

☐ **8. Receives Hazardous Waste from Off-site**

☐ **9. United States Importer of Hazardous Waste**

10. Recognized Trader
☐ a. Importer
☐ b. Exporter

11. Spent Lead Acid Battery
☐ a. Importer
☐ b. Exporter

☐ **12. Electronic Manifest Broker**

☐ **13. LQG Consolidation of VSQG Hazardous Waste** (an LQG notifying of consolidating VSQG hazardous waste under control of the same person pursuant to OAC 3745-52-17). If yes, you must fill out the LQG Consolidation of VSQG Hazardous Waste Addendum

14. Notification of LQG Site Closure for a Central Accumulation Area (CAA) (optional) or Entire Facility (required)
a. ☐ Central Accumulation Area (CAA) or ☐ Entire Facility
b. Expected Closure Date: _____(mm/dd/yyyy)
c. Requesting New Closure Date: _____mm/dd/yyyy)
d. Date Closed: _____(mm/dd/yyyy)
☐ 1. In compliance with the closure performance standards of OAC rule 3745-52-17(A)(8)(c)
☐ 2. Not in compliance with the closure performance standards of OAC rule 3745-52-17(A)(8)(c)

10. Waste codes for Federally Regulated Hazardous Wastes. Please list the codes for the federally regulated hazardous waste handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more space is needed.

11. Universal Waste Activities

1. Handler of Universal Waste (choose only one of the following or leave blank if not a Handler of Universal Waste)

☐ a. Small Quantity Handler of Universal Waste (SQHUW): Accumulates less than 5,000 kg

☐ b. Large Quantity Handler of Universal Waste (LQHUW): Accumulates 5,000 kg or more

	Managed
Batteries	☐
Pesticides	☐
Mercury Containing Equipment	☐
Lamps	☐
Aerosol Cans	☐
Antifreeze	☐
Paint/Paint Related	☐

☐ 2. **Destination Facility for Universal Waste** (Note: A hazardous waste permit is required for this activity.)

12. Used Oil Activities

1. Used Oil Transporter

☐ a. Transporter ☐ b. Transfer Facility (at your site)

2. Used Oil Processor and/or Re-refiner

☐ a. Processor ☐ b. Re-refiner

☐ **3. Off-Specification Used Oil Burner**

4. Used Oil Fuel Marketer

☐ a. Marketer Who Directs Shipments of Off-Specification Used Oil to Off-Specification Used Oil Burner

☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

13. Pharmaceutical Activities- Notification for opting into or withdrawing from the management of hazardous waste pharmaceuticals pursuant to OAC rules 3745-266-500 through 3745-266-510

1. Opting into or currently operating under OAC rules 3745-266-500 through 3745-266-510 for the management of hazardous wastes pharmaceuticals. Mark only one:

☐ a. Healthcare Facility

☐ b. Reverse Distributor

☐ **2. Withdrawing from OAC rules 3745-266-500 through 3745-266-510 for the management of hazardous waste pharmaceuticals**

14. Eligible Academic Entities with Laboratories – Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to OAC rules 3745-52-200 through 3745-52-216

1. Opting into or currently operating under OAC rules 3745-52-200 through 3745-52-216 for the management of hazardous wastes in laboratories. Mark all that apply:

☐ a. College or University

☐ b. Teaching hospital that is owned by or has a formal written affiliation agreement with a college or university

☐ c. Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university

☐ **2. Withdrawing from OAC rules 3745-52-200 through 3745-52-216 for the management of hazardous waste in laboratories**

15. Comments

16. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or person who manage the system, or those persons directly responsible for gathering the information, the information is submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or an authorized representative	Name (type or print)	
Email	Official Title	Date (mm/dd/yyyy)

Appendix 2

Uniform Hazardous Waste Manifests

EPA launched the hazardous waste e-Manifest system nationwide on June 30, 2018. Generators, transporters, and receiving facilities have the option to create and submit manifests electronically. These manifest users may continue to use paper manifests after June 30, 2018; however, use of e-Manifest is highly encouraged by EPA.

For more information on the e-Manifest system, visit:

- U.S. EPA's webpage
- DERR's webpage

The following are instructions and an example of a paper uniform hazardous waste manifest.

https://www.epa.gov/hwgenerators/hazardous-waste-manifest-system

Hazardous Waste Manifest Instructions

What are the instructions for completing the manifest form (EPA Form 8700-22)?

Read all instructions before completing the form.

1. Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to complete this form (EPA Form 8700–22) and, if necessary, the continuation sheet (EPA Form 8700–22A) for both inter- and intrastate transportation of hazardous waste.

2. This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.

3. This form must be purchased from a registered printer (https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifest-registry#how) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed electronically in EPA's e-Manifest system.

I. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve-digit identification number, or the state generator identification number if the generator site does not have an EPA identification number.

Item 2. Page 1 of ___

Enter the total number of pages used to complete the manifest (*i.e.*, the first page (EPA Form 8700-22) plus the number of continuation sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;

2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and

3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (*e.g.*, consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

Item 5. Generator's Mailing Address, Phone Number and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 Company Name, and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a continuation sheet(s) (EPA Form 8700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on the manifest. Also enter the facility's phone number and the U.S. EPA twelve-digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this Item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the continuation sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those Items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

Table I. Types of Containers

BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
CF = Fiber or plastic boxes, cartons, cases.	DW = Wooden drums, barrels, kegs.
CM = Metal boxes, cartons, cases (including roll-offs).	HG = Hopper or gondola cars.
CW = Wooden boxes, cartons, cases.	TC = Tank cars
CY = Cylinders.	TP = Portable tanks.
DF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

Table II. Units of Measure

G = Gallons (liquids only)	N = Cubic Meters
K = Kilograms	P = Pounds
L = Liters (liquids only)	T = Tons (2000 Pounds)
M = Metric Tons (1000 Kilograms)	Y = Cubic Yards

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported in connection with very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.

2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of PCB waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Offeror's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.

2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed.

II. Instructions for International Shipment Block

Item 16. International Shipments

For export shipments, the primary exporter must check the export box, and enter the point of exit (city and state) from the United States. For import shipments, the importer must check the import box and enter the point of entry (city and state) into the United States. For exports, the transporter must sign and date the manifest to indicate the day the shipment left the United States. Transporters of hazardous waste shipments must deliver a copy of the manifest to the U.S. Customs when exporting the waste across U.S. borders.

III. Instructions for Transporters

Item 17. Transporters' Acknowledgments of Receipt

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt. Only one signature per transportation company is required. Signatures are not required to track the movement of wastes in and out of transfer facilities, unless there is a change of custody between transporters.

If applicable, enter the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Note: Transporters carrying imports, who are acting as importers, may have responsibilities to enter information in the International Shipments Block. Transporters carrying exports may also have responsibilities to enter information in the International Shipments Block. See above instructions for Item 16.

This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.

IV. Instructions for Owners and Operators of Receiving Facilities Designated On the Manifest

Item 18. Discrepancy

Item 18a. Discrepancy Indication Space

1. The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any discrepancies between the waste described on the manifest and the waste actually received at the facility. Manifest discrepancies are: significant differences (as defined by §§ 264.72(b) and 265.72(b)) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives, rejected wastes, which may be a full or partial shipment of hazardous waste that the facility cannot accept, or container residues, which are residues that exceed the quantity limits for "empty" containers set forth in 40 CFR 261.7(b).

2. For rejected loads and residues (40 CFR 264.72(d), (e), and (f), or 40 CFR 265.72(d), (e), or (f)), check the appropriate box if the shipment is a rejected load (*i.e.*, rejected by the designated and/or alternate facility and is sent to an alternate facility or returned to the generator) or a regulated residue that cannot be removed from a container. Enter the reason for the rejection or the inability to remove the residue and a description of the waste. Also, reference the manifest tracking number for any additional manifests being used to track the rejected waste or residue shipment on the original manifest. Indicate the original manifest tracking number in Item 14, the Special Handling Block and Additional Information Block of the additional manifests.
3. Owners or operators of facilities located in unauthorized states (*i.e.*, states in which the U.S. EPA administers the hazardous waste management program) who cannot resolve significant differences in quantity or type within 15 days of receiving the waste must submit to their Regional Administrator a letter with a copy of the manifest at issue describing the discrepancy and attempts to reconcile it (40 CFR 264.72(c) and 265.72(c)).

4. Owners or operators of facilities located in authorized states (*i.e.*, those states that have received authorization from the U.S. EPA to administer the hazardous waste management program) should contact their state agency for information on where to report discrepancies involving "significant differences" to state officials.

Item 18b. Alternate Facility (or Generator) for Receipt of Full Load Rejections

Enter the name, address, phone number, and EPA Identification Number of the Alternate Facility which the rejecting facility has designated, after consulting with the generator, to receive a fully rejected waste shipment. In the event that a fully rejected shipment is being returned to the generator, the rejecting facility may enter the generator's site information in this space. This field is not to be used to forward partially rejected loads or residue waste shipments.

Item 18c. Alternate Facility (or Generator) Signature

The authorized representative of the alternate facility (or the generator in the event of a returned shipment) must sign and date this field of the form to acknowledge receipt of the fully rejected wastes or residues identified by the initial facility.

Item 19. Hazardous Waste Report Management Method Codes

Enter the most appropriate Hazardous Waste Report Management Method code for each waste listed in Item 9. The Hazardous Waste Report Management Method code is to be entered by the first facility that receives the waste and is the code that best describes the way in which the waste is to be managed when received by the facility.

Item 20. Designated Facility Owner or Operator Certification of Receipt (Except As Noted in Item 18a)

Enter the name of the person receiving the waste on behalf of the owner or operator of the facility. That person must acknowledge receipt or rejection of the waste described on the

manifest by signing and entering the date of receipt or rejection where indicated. Since the Facility Certification acknowledges receipt of the waste except as noted in the Discrepancy Space in Item 18a, the certification should be signed for both waste receipt and waste rejection, with the rejection being noted and described in the space provided in Item 18a. Fully rejected wastes may be forwarded or returned using Item 18b after consultation with the generator. Enter the name of the person accepting the waste on behalf of the owner or operator of the alternate facility or the original generator. That person must acknowledge receipt or rejection of the waste described on the manifest by signing and entering the date they received or rejected the waste in Item 18c. Partially rejected wastes and residues must be re-shipped under a new manifest, to be initiated and signed by the rejecting facility as offeror of the shipment.

Note: The e-Manifest Act mandates several changes to the federal manifest program. Beginning on June 30, 2018:

- This manifest (Revision 12-17) must be used and all previous editions are prohibited.
- Any facility (e.g., a RCRA-permitted facility, Subtitle D facility) that receives a manifest accompanying a state-only regulated waste must comply with 40 CFR 264.71 or 265.71 (use of the manifest) and 40 CFR 264.72 or 265.72 (manifest discrepancies).
- Any facility that receives a paper manifest accompanying a federally regulated waste or state-only regulated waste must submit the top copy (Page 1) of the manifest and any continuation sheets to the U.S. EPA's e-Manifest system within 30 days. The copies must be submitted in an acceptable format. Submissions must be made at the mailing address or electronic mail/submission address specified at the e-Manifest program website's directory of services (see www.epa.gov/e-manifest)
- The facility will be assessed a fee for each manifest copy submitted.
- Go to www.epa.gov/e-manifest for the directory of services and additional information.

What are the instructions for completing the continuation sheet (EPA Form 8700-22A)?

Read all instructions before completing the form.

Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to use the uniform hazardous waste manifest (EPA Form 8700-22) and, if necessary, this continuation sheet (EPA Form 8700-22A) for both interstate and intrastate transportation. This form must be used as a continuation sheet to U.S. EPA Form 8700-22 if:

- More than two transporters are to be used to transport the waste; or
- More space is required for the U.S. DOT descriptions and related information in Item 9 of U.S. EPA Form 8700-22.

This continuation sheet reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this continuation sheet (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.

This form must be purchased from a registered printer (https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifest-registry#how) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed electronically in EPA's e-Manifest system.

I. Generators

Item 21. Generator's ID Number

Enter the generator's U.S. EPA twelve-digit identification number or, the state generator identification number if the generator site does not have an EPA identification number.

Item 22. Page ___

Enter the page number of the continuation sheet.

Item 23. Manifest Tracking Number

Enter the Manifest Tracking Number from Item 4 of the manifest form to which the continuation sheet is attached.

Item 24. Generator's Name—

Enter the generator's name as it appears in Item 5 on the first page of the manifest.

Item 25. Transporter—Company Name

If additional transporters are used to transport the waste described on the manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 3 Company Name. Also enter the U.S. EPA twelve-digit identification number of the transporter described in Item 25.

Item 26. Transporter—Company Name

If additional transporters are used to transport the waste described on the manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 4 Company Name. Each continuation sheet can record the names of two additional transporters. Also enter the U.S. EPA twelve-digit identification number of the transporter named in Item 26.

Item 27. U.S. D.O.T. Description Including Proper Shipping Name, Hazardous Class, and ID Number (UN/NA)

For each row enter a sequential number under Item 27b that corresponds to the order of waste codes from one continuation sheet to the next, to reflect the total number of wastes being shipped. Refer to instructions for Item 9 of the manifest for the information to be entered.

Item 28. Containers (No. And Type)

Refer to the instructions for Item 10 of the manifest for information to be entered.

Item 29. Total Quantity

Refer to the instructions for Item 11 of the manifest form.

Item 30. Units of Measure (Weight/Volume)

Refer to the instructions for Item 12 of the manifest form.

Item 31. Waste Codes

Refer to the instructions for Item 13 of the manifest form.

Item 32. Special Handling Instructions and Additional Information

Refer to the instructions for Item 14 of the manifest form.

II. Transporters

Item 33. Transporter—Acknowledgment of Receipt of Materials

Enter the same number of the Transporter as identified in Item 25. Enter also the name of the person accepting the waste on behalf of the Transporter (Company Name) identified in Item 25. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Item 34. Transporter—Acknowledgment of Receipt of Materials

Enter the same number of the Transporter as identified in Item 26. Enter also the name of the person accepting the waste on behalf of the Transporter (Company Name) identified in Item 26. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

III. Owner and Operators of Treatment, Storage, or Disposal Facilities

Item 35. Discrepancy Indication Space

Refer to Item 18. This space may be used to more fully describe information on discrepancies identified in Item 18a of the manifest form.

Item 36. Hazardous Waste Report Management Method Codes

For each field in Item 36, enter the sequential number that corresponds to the waste materials described under Item 27, and enter the appropriate process code that describes how the materials will be processed when received. If additional continuation sheets are attached, continue numbering the waste materials and process code fields sequentially, and enter on each sheet the process codes corresponding to the waste materials identified on that sheet.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number

24. Generator's Name

25. Transporter_____Company Name — U.S. EPA ID Number

26. Transporter_____Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

GENERATOR

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter_____Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

34. Transporter_____Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

Appendix 3

SAMPLE
Contingency Plan

ABC FACILITY
HAZARDOUS WASTE CONTINGENCY PLAN

[containers only]

ABC Facility
123 Blank Road
Cleveland, Ohio 44___.

November 2021

NOTE: Ohio EPA has prepared this SAMPLE Contingency Plan for instructional purposes only. Hazardous waste generators should be aware that this sample contingency plan is not intended as a substitute for carefully reading the hazardous waste rules and, if needed, seeking Ohio EPA Division of Environmental Response and Revitalization's interpretations of the rules.

EXAMPLE QUICK REFERENCE GUIDE

This example was created by EPA Region 7 to be used as a guide to assist the regulated community with compliance. It does not substitute for or replace any regulatory requirements.

Contingency plan quick reference guide

ABC FACILITY
1000 SW Main Street
Anytown, Iowa 50000

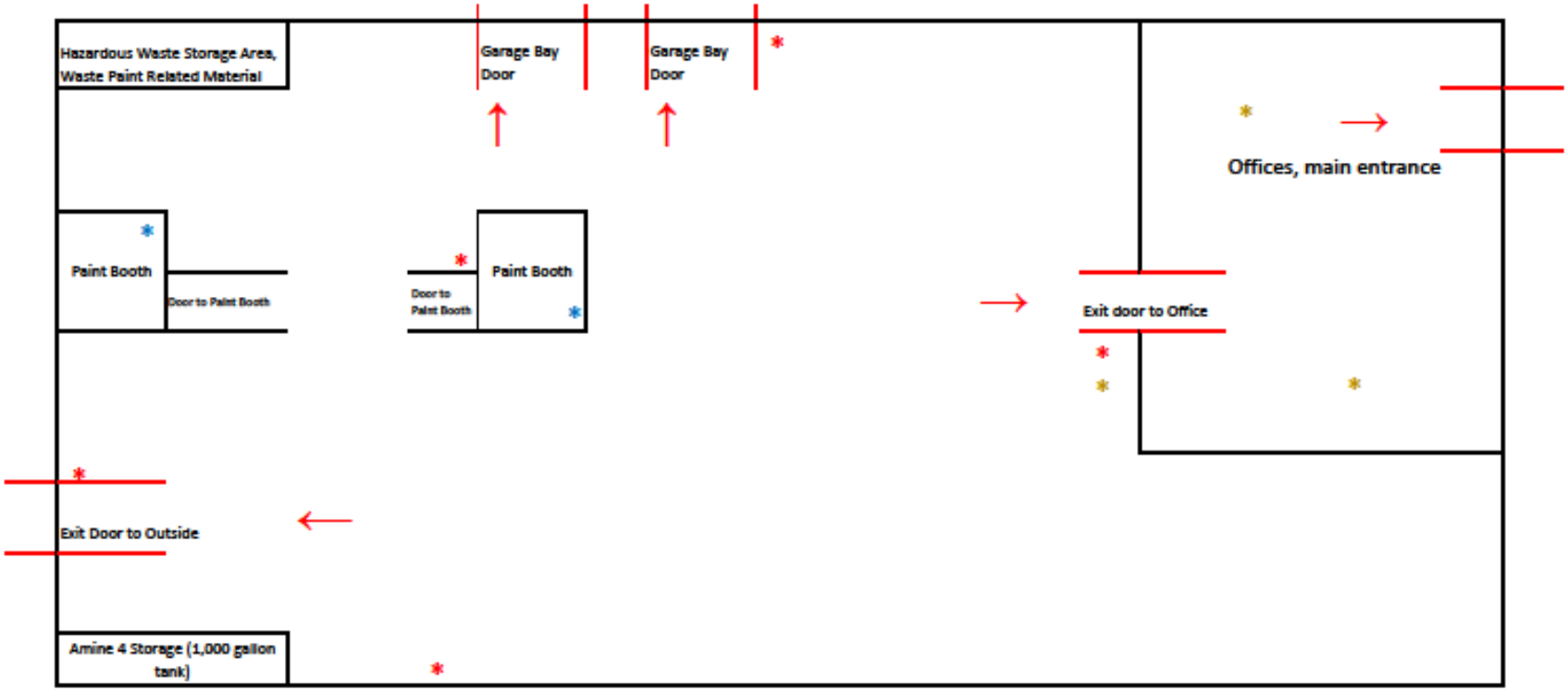
Facility Contacts:

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.

Hazardous Waste Information:

Name of Waste	Waste Codes/Hazards	Location Accumulated	Maximum Amounts Present	Response Notes	Special Notes to Hopsital/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 , a 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 1-800-424-9300. If in eyes, wash eyes for several minutes.



* 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 and 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 automatice sprinkler system.

Street Map

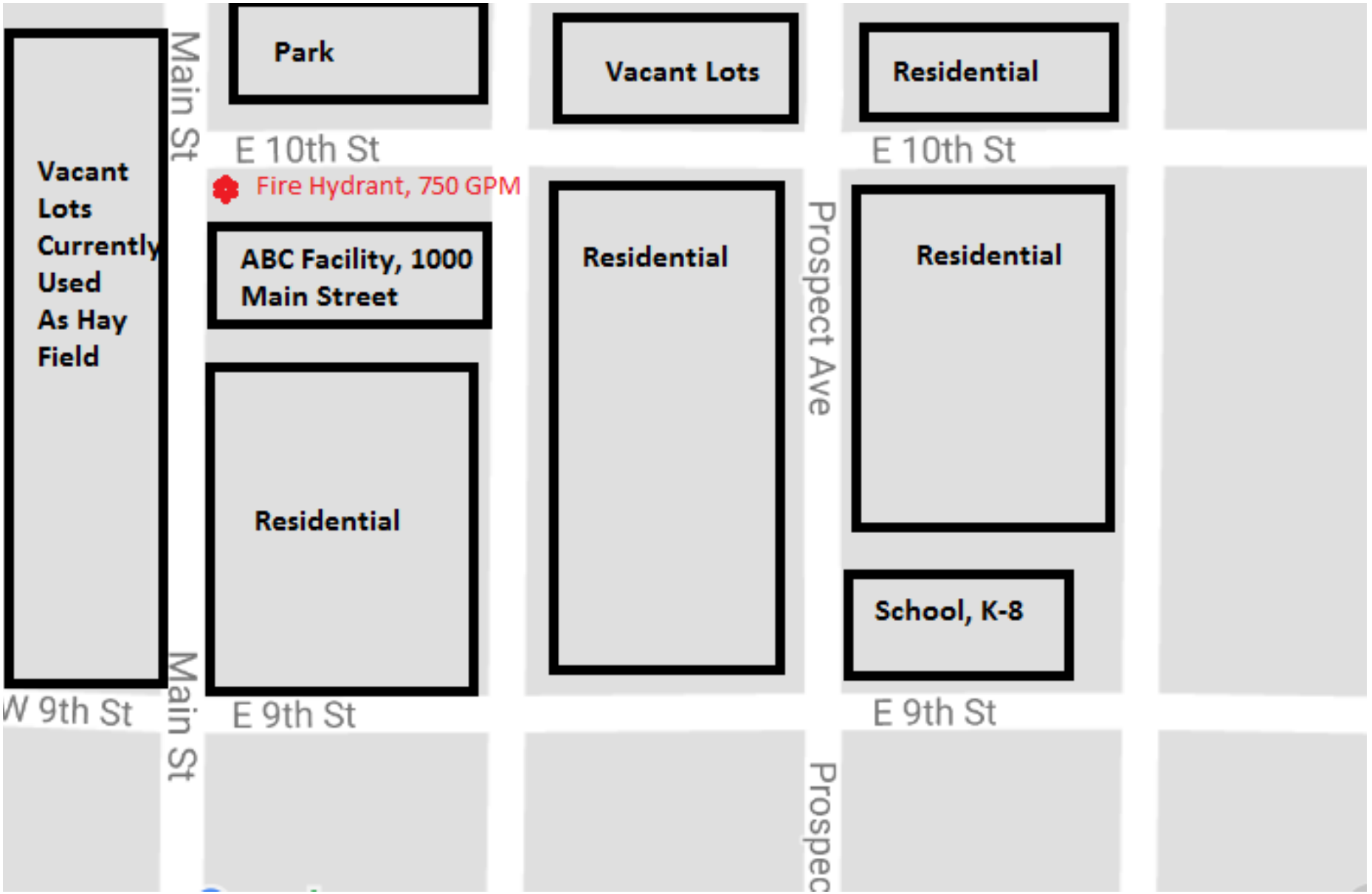

Park
Vacant Lots
Residential
Vacant Lots Currently Used As Hay Field
Main St
E 10th St
E 10th St
Fire Hydrant, 750 GPM
ABC Facility, 1000 Main Street
Residential
Residential
Prospect Ave
Residential
School, K-8
Residential
W 9th St
Main St
E 9th St
E 9th St
Prospec

Table of Contents

ABC FACILITY
HAZARDOUS WASTE CONTINGENCY PLAN

General Facility Information

The scope of this Contingency Plan for the ABC Facility includes a less than 90-day drum accumulation area. The information contained herein is submitted in accordance with OAC rules 3745-52-260 through 3745-52-265.

The address of the ABC Facility is:

ABC Facility
123 Blank Road
Cleveland, Ohio 44___.

The property consists of approximately four acres with two separate buildings (A and B) with approximately 87,000 square feet under roof. Operations at the site started in 1975 and the facility currently employs 50 people. This facility produces sponges for commercial and residential use. **Figure 1** provides the location of the ABC facility.

Manufacturing processes at the ABC Facility, located in Building B, include taking cellulose pulp paper and mixing it with caustic, sodium sulfite and carbon (for bubble texture) to make sponges. Repair operations to the manufacturing equipment occur in the manufacturing areas. Hazardous wastes generated from the manufacturing and repair operations include waste which is hazardous due to ignitability, corrosivity, toxicity and/or it is a listed hazardous waste. **Exhibit 1** provides a detailed list of all hazardous waste generated at the ABC Facility.

Hazardous wastes are collected in drums that, when full, are placed in the less-than-90-day accumulation area. The drum accumulation area is located inside the northwest corner of Building B (**Figure 2**). Several of the waste streams are collected in satellite accumulation areas throughout the manufacturing process and within the main repair operations area. The locations of these satellite areas are noted on **Figure 2** and the specific types of wastes accumulated in each satellite area are noted in **Exhibit 1.**

The ABC Facility is considered a large quantity generator.

Site Contact: **Mr. John Doe**
123 Blank Road
Cleveland, Ohio 44___
216-xxx-xxxx

Intent and Purpose

The following contingency plan has been prepared for the ABC Facility. The purpose of this plan is to protect the safety and welfare of the employees and community in the event of an emergency incident and to comply with federal and state laws pertaining to hazardous waste generators with respect to preparedness and prevention for emergency events.

The contingency plan is intended as a guide of emergency procedures in the event of fire, explosion, spill or release of hazardous waste. This document is also intended as a reference source to familiarize local emergency response agencies, fire and police departments and area hospitals on operations relating to hazardous materials/wastes and emergency response at the ABC Facility.

Internal Emergency Notification Process

In the event of an emergency involving hazardous waste or hazardous constituents at the ABC Facility, the employee first identifying the incident will sound the facility emergency alarm and contact the emergency coordinator listed in **Exhibit 2**. The primary emergency coordinator will be contacted first. If he is not available, an alternate emergency coordinator should be called in the order listed.

Note: If the facility is using a communication device, which does not directly contact the emergency coordinator, then facility employees must be trained to notify the emergency coordinator immediately if the specific alarm is sounded.

The emergency coordinators have been selected based on their familiarity with the ABC Facility, the contingency plan, operation and activities at the facility, the location and characteristics of the wastes handled, the location of records within the facility, and the facility layout. Emergency coordinators have been supplied a pager, two-way radio, and/or portable cellular phone for notification purposes.

All emergency coordinators have authority to commit any and all necessary resources of the company to carry out the contingency plan in the event of an emergency. **Exhibit 3**, "Emergency Telephone List," provides telephone numbers for organizations (police, fire, etc.) that may be contacted by the emergency coordinator in the event of an emergency.

Identification of Hazardous Materials

The hazardous waste being stored is hazardous due to ignitability, corrosivity, toxicity and/or it is a listed hazardous waste. **Exhibit 1** provides a detailed list of all hazardous wastes generated at the ABC Facility. In the event of a fire/explosion and/or spill, the source will be identified visually to determine:

- the character of the released material;
- the exact source of the released material; and
- the amount of the released material.

If needed, the emergency coordinator will also refer to facility records and employee reports.

Once the material is identified, control measures will be implemented.

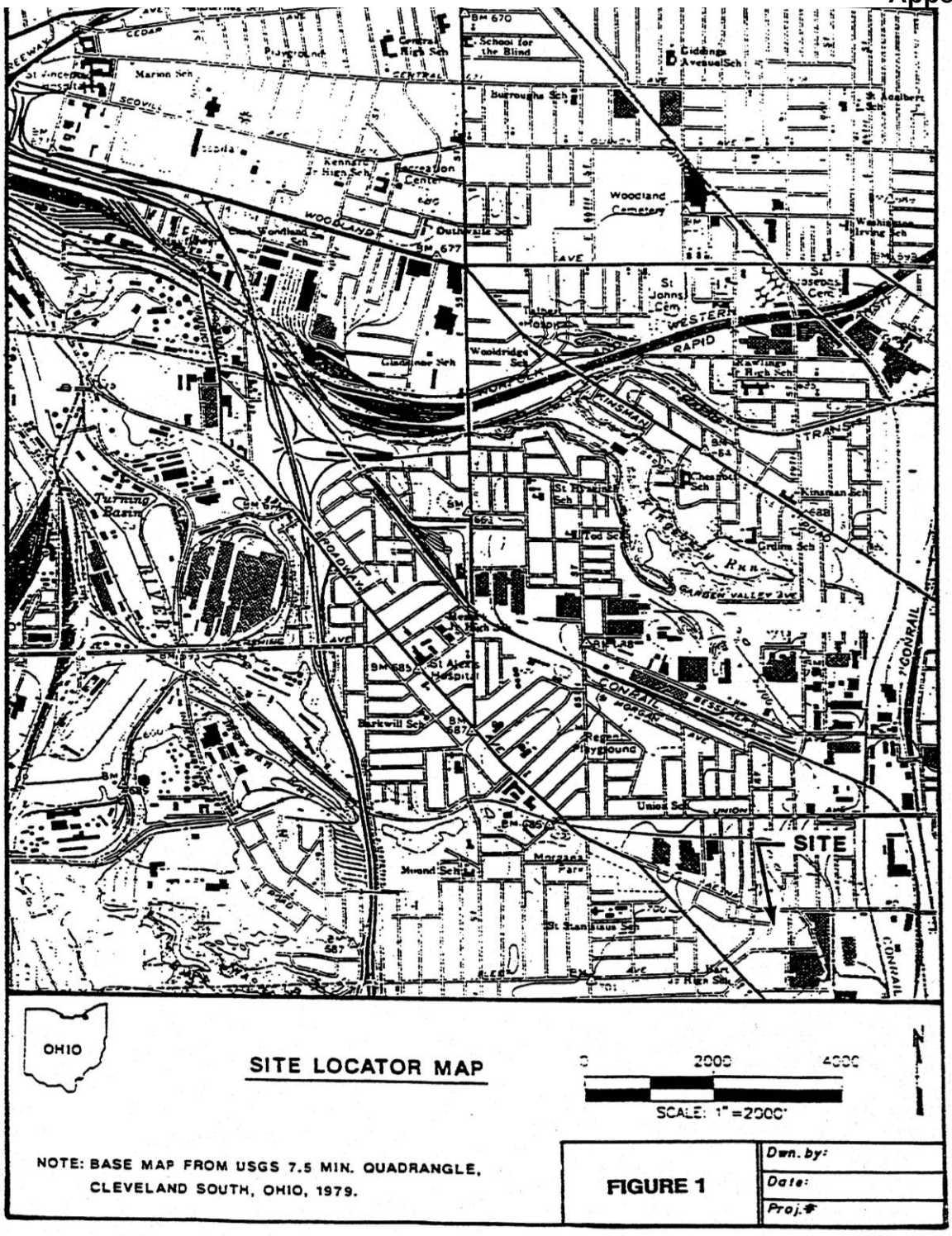


Figure 1: Site Location Map

FIGURE 2

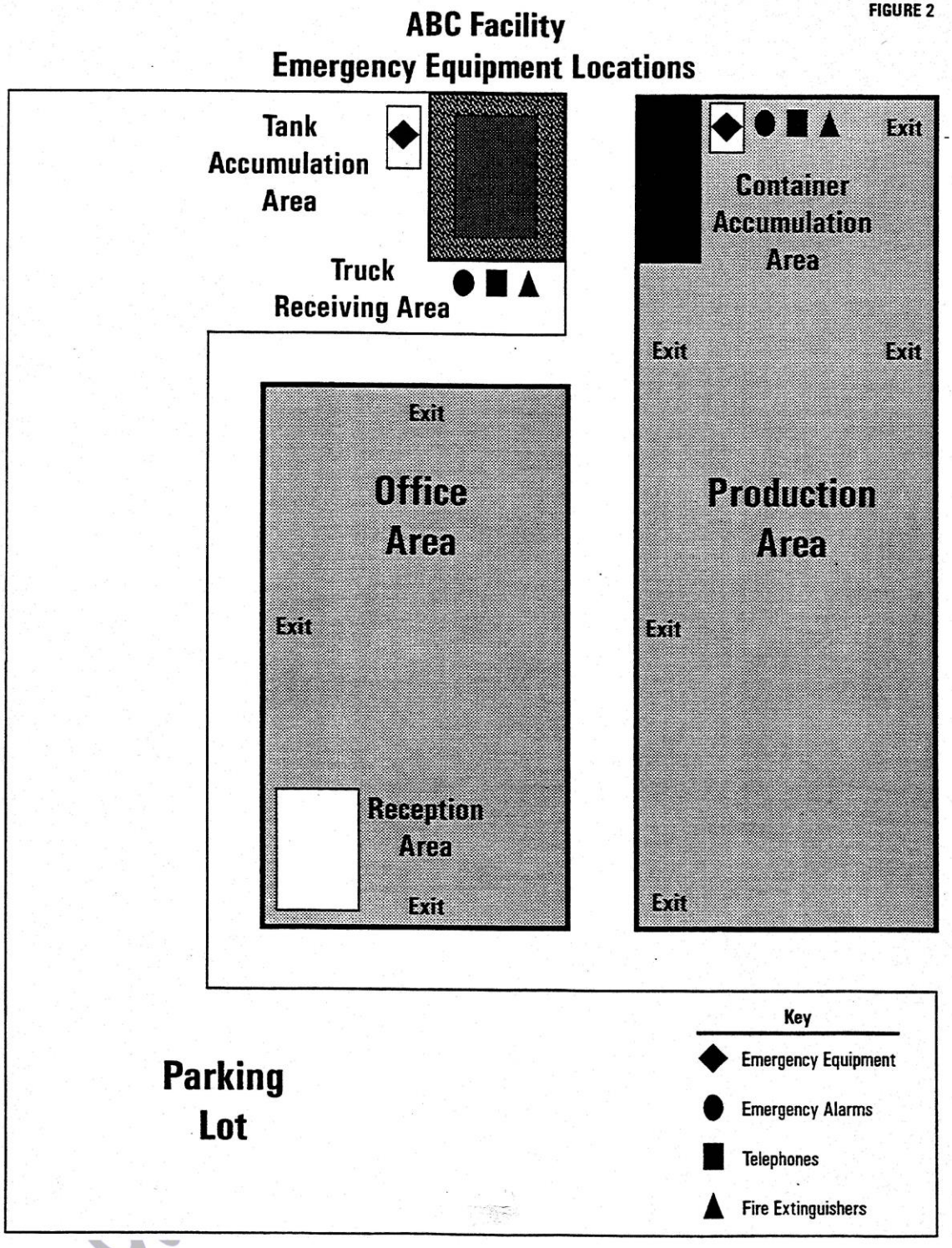


Figure 2: Facility Emergency Equipment Locations

Control Procedures [OAC rule 3745-52-261]

This contingency plan will be implemented in the event of a spill of hazardous waste, fire, any explosion, or a combination of these. Additionally, the contingency plan will be implemented if the emergency coordinator determines that a threat to human health or the environment exists. Implementation of this contingency plan is intended to mitigate or protect the facility and neighboring community from injury; contamination of storm sewers with hazardous materials; damage to equipment; damage to the environment; or a combination of these.

This section of the contingency plan addresses control procedures relative to hazardous waste emergency episodes within the container accumulation area:

> **Container Accumulation Area**: The hazardous waste container accumulation area is located within the Northwest corner of Building B. Due to the accumulation of ignitable hazardous waste, the area is located greater than 50 feet from the property line. The area can potentially store 1,500 gallons. The largest container is 55 gallons. This area consists of a concrete pad with a three-inch berm for secondary containment, and a collection sump.
>
> The concrete has been sealed with a chemically resistant sealer which is reapplied per the manufacturer's specifications. Documentation of this maintenance is kept on file at the facility.
>
> Drums of each waste stream are placed in separate designated aisles in the accumulation area on wooden pallets. Drummed materials may be stacked two high, if necessary. A minimum of two (2) feet is maintained as aisle space between the pallets. All drums are placed on the pallets so that the hazardous waste labels can be seen. The emergency equipment is located in a cabinet that is secured with a tear-away tag. The contents and capabilities of the equipment in the cabinet are noted in **Exhibit 6.** The location of the cabinet as well as the communication device and fire extinguishers are noted on **Figure 2**.

Control Procedures: Fire/Explosion [OAC rule 3745-52-261]

The following actions will be taken if the container accumulation area is affected by fire or explosion:

1. The facility emergency alarm is sounded either from pull boxes located in the container accumulation area, or by telephone or internal communication to the main office. Work in all areas will be shut down until the area is safely restored.

2. The emergency coordinator will be contacted.

   In the event of a fire:

   a. If the employee has had the appropriate training, the employee may use nearby fire fighting equipment to provide early containment of the fire to significantly reduce the total damage. HOWEVER, FIRE FIGHTING ACTIVITIES THAT MAY CAUSE INJURY TO THE PERSONS INVOLVED SHOULD NOT BE PERFORMED.

   b. If ABC personnel cannot safely and effectively perform corrective action in the event of a fire and/or explosion, the emergency coordinator must:

      i. Assess possible hazards to human health and the environment that may result from the fire and/or explosion. This includes:

         A. Person(s) injured and seriousness of injury.

         B. Location of any spill or leak, material involved, and source.

         C. Type of material that has spilled, is leaking and/or is involved in the fire/explosion.

         D. The approximate amount of material spilled, an estimate of the liquid discharge rate and the direction of the liquid flow.

      ii. Contact the local fire department and other emergency response organizations as listed under **Exhibit 3**.

3. Operating equipment will be shut down as necessary and practical.

4. If the emergency coordinator determines that an area or site evacuation is required, the appropriate person must be notified to sound the proper alarm. The evacuation plans are shown on **Figure 3**.

5. All injured persons will be removed and medical treatment will be administered by trained personnel.

6. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur, or spread to other hazardous material/waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing and isolating applicable containers.

7. The emergency coordinator must evaluate the facility's emergency equipment to determine if ABC personnel can handle the corrective action and clean-up. A list of the emergency equipment is found under **Exhibit 6**.

8. If ABC personnel can safely and effectively perform corrective action and clean-up, the following steps are to be taken under the authorization of the emergency coordinator (ONLY AFTER THE RESPONSE PERSONNEL PUT ON THE APPROPRIATE PROTECTIVE CLOTHING):

    a. Eliminate all possible sources of ignition.

    b. Clean up the released/affected media from the fire or explosion per the spill control procedures listed on page x.

9. For fires and explosions, the emergency coordinator must make the necessary reports as outlined in **Exhibits 4 and 5.**

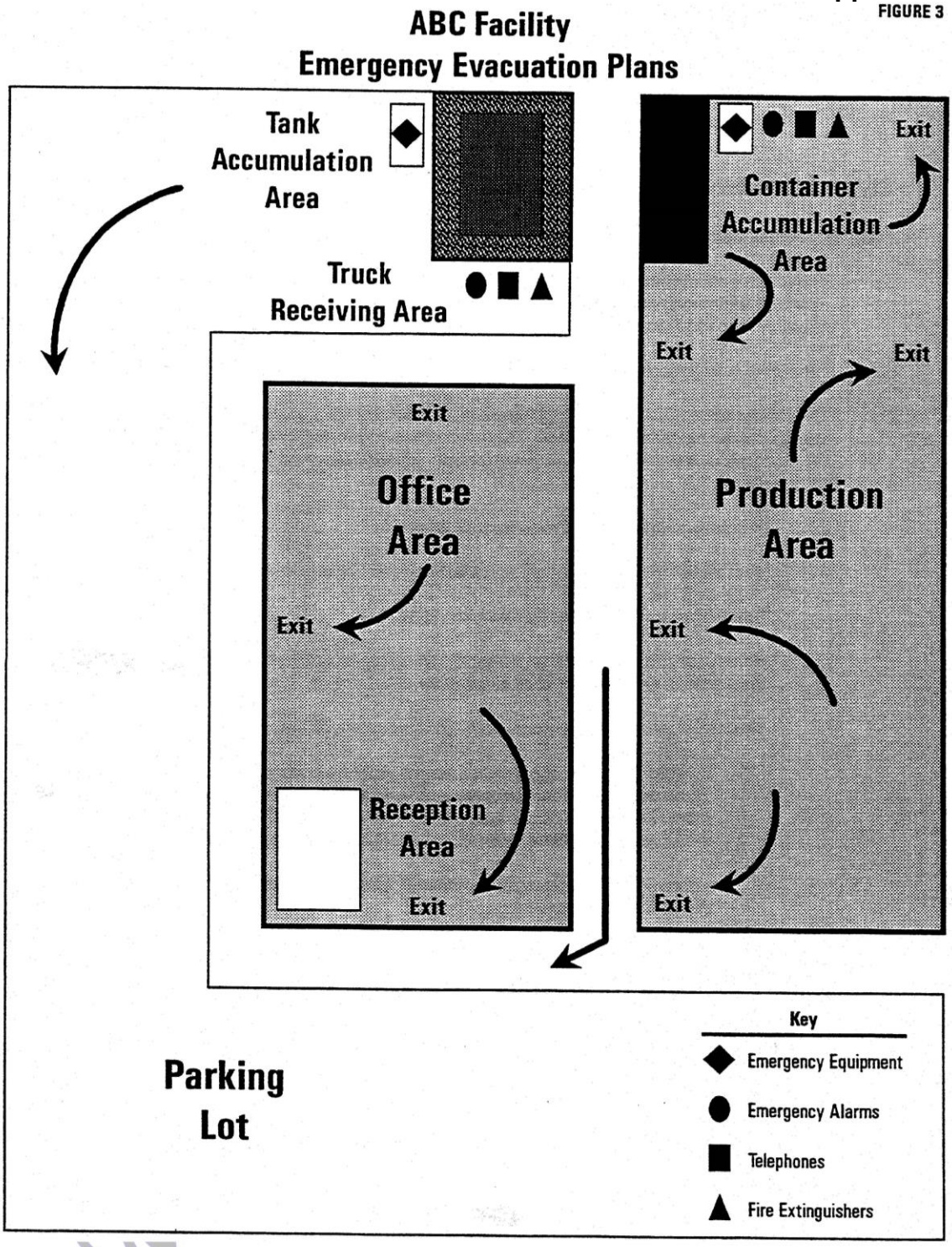


Figure 3: Facility Evacuation Plan

Control Procedures: Spills [OAC rule 3745-52-261]

The following actions will be taken in response to a spill of hazardous material:

1. The facility emergency alarm is sounded either from pull boxes, or by telephone or internal communication to the main office. Work in all areas will be shut down until the area is safely restored.

2. The emergency coordinator will be contacted.

3. The emergency coordinator must immediately identify the character, exact source, and extent of any released materials. This information must be obtained without entering the contaminated area. The Emergency Coordinator will obtain the following information:

    a. Person(s) injured and seriousness of injury.

    b. Location of the spill or leak, material involved, and source.

    c. Type of material that has spilled or is leaking.

    d. The approximate amount of material spilled, an estimate of the liquid discharge rate and the direction of the liquid flow.

4. Emergency response employees will only respond to chemical incidents where proper chemical identification and concentrations can be determined.

5. The emergency coordinator must evaluate the facility's emergency response equipment to determine if ABC personnel can handle the corrective action and clean up. A list of the emergency response equipment is found under **Exhibit 6**.

6. For small spills: If ABC personnel can safely and effectively perform corrective action and clean up, the following steps are to be taken under the authorization of the emergency coordinator (ONLY AFTER THE RESPONSE PERSONNEL PUT ON THE APPROPRIATE PROTECTIVE CLOTHING):

    a. Immediately set up a barrier to alert unauthorized personnel to keep out, if evacuation has not occurred.

    b. Eliminate all possible sources of ignition and leakage.

    c. Immediately begin containment by placing absorbent material on the spill within the secondary containment.

    d. Set up decontamination zone to ensure proper decontamination procedures.

e. Use shovels and/or heavy equipment available at the facility to place contaminated absorbent into open top D.O.T. approved drums.

f. Any drummed cleanup materials are to be managed as hazardous waste until proper analysis has shown otherwise.

g. Drums of cleanup material are to be properly labeled.

h. Assigned personnel are to continue to cleanup and remove all residue until all contamination hazards are eliminated.

7. For large spills: If ABC personnel cannot safely and effectively perform corrective action in the event of a spill, the emergency coordinator must:

   a. Assess possible hazards to human health and the environment that may result from the spill.

   b. Contact the local fire department and other emergency response organizations as listed under **Exhibit 3**.

8. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires and explosions and releases do not occur, recur, or spread to other hazardous material waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing and isolating containers.

9. For small or large spills, the emergency coordinator must make the necessary reports as outlined in **Exhibits 4 and 5**.

10. After cleanup has occurred, the emergency coordinator must ensure that, in the affected area of the facility:

    a. No waste may be incompatible with the released material stored.

    b. All emergency equipment listed in the emergency response contingency plan is cleaned and fit for its intended use before resuming operations.

    c. All disposable equipment used during the incident is replaced with new equipment in the appropriate area.

Post-Emergency Equipment Maintenance [OAC rule 3745-52-265]

Immediately after an emergency event requiring the implementation of the contingency plan, all emergency equipment utilized will be inspected for proper function, completeness and condition. The equipment used for spill clean-up will be documented on the emergency report form (**see Exhibit 5**). The equipment will be evaluated for hazardous characteristics, decontaminated, or properly disposed of in containers. Decontamination procedures include a pressurized water rinse, scrubbing equipment with brushes and water-compatible solvent cleaning solutions or steam cleaning. If the equipment remains contaminated, additional decontamination efforts will be completed. Contamination will be determined through visual observation and sampling, if necessary (**see Exhibit 5**).

Rinseates from equipment decontamination will be collected in containers. The rinseates which contacted hazardous waste and resulting residue will be managed as hazardous waste unless laboratory results indicate otherwise. Other rinseates will be managed in accordance with all applicable laws.

Processes which generate hazardous wastes that were affected must not be resumed until the equipment has been properly decontaminated and has been checked for proper operation.

Coordination Agreements [OAC rule 3745-52-261]

The contingency plan promotes routine contact with the area police and fire departments and hospitals. **Exhibit 7** provides a list of contacts for the contingency plan distribution. **Exhibit 8** provides a sample distribution letter that accompanies the Contingency Plan distribution.

NOTE: **Copies of all letters and the certified mail receipts should be kept in the contingency plan as an attachment to document that the facility attempted to comply with the regulatory requirement.**

The [local] fire station is the responding authority in the event of a fire at the ABC facility. The fire department makes periodic inspections of the ABC facility and is apprised of facility arrangements. The fire department has full authority as soon as they arrive at the site. The ABC facility utilizes the [local] hospital whenever medical emergencies occur.

The ABC facility has submitted under SARA Title III, emergency and hazardous chemical inventory forms to the local, county and state agencies.

The [local] police department is the responding authority should their services be needed at the ABC facility. In addition, the State of Ohio Highway Patrol is aware of the associated activities at the ABC facility.

Contingency Plan Revisions/Amendments [OAC rule 3745-52-263]

This plan must be reviewed and immediately amended, if necessary whenever:

1. applicable rules are changed;

2. the plan fails in an emergency;

3. facility changes in DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE PRACTICES or OTHER CIRCUMSTANCES in a way that increases the potential for fires, explosions or releases of hazardous wastes or hazardous constituents or changes the response necessary in an emergency;

4. the emergency coordinator list changes; or

5. the emergency equipment list changes.

Exhibit 1

ABC Facility
Contingency Plan

Hazardous Waste Table

Waste	EPA Codes	Satellite Location	Description
Sulfuric acid	D002	A	Process waste
Sodium hydroxide	D002	B	Process waste
Carbon disulfide	D002	C	Process waste
Sodium hypochlorite	D002	D	Process waste
Chromium	D007	E	Process waste
Xylene	F003, D001	not applicable	Maintenance waste
Methyl ethyl ketone	F003, D035, D001	not applicable	Maintenance waste

Other wastes accumulated in the less than 90 day area:

Universal Waste - Batteries in closed 5-gallon plastic buckets

Used oil in 55-gallon steel drums

Spent fluorescent bulbs in the cardboard containers supplied by the recycler

Universal Waste - thermostats in closed 5-gallon plastic buckets

Exhibit 2

ABC Facility
Emergency Response Contingency Plan

Emergency Response Coordinators

Emergency Coordinator		**Telephone Numbers**	
PRIMARY			
(1)	John Doe	Business:	216-xxx-xxxx ext-zzzz
		Residence:	440-xxx-xxxx
		Pager:	440-xxx-xxxx
SECONDARY			
(2)	Joe Doe	Business:	216-xxx-xxxx ext-zzzz
		Residence:	440-xxx-xxxx
		Pager:	216-xxx-xxxx
(3)	Jane Doe	Business:	216-xxx-xxxx ext-zzzz
		Residence:	440-xxx-xxxx
		Pager:	440-xxx-xxxx

Exhibit 3

ABC Facility
Emergency Response Contingency Plan

Emergency Telephone List

Police Department

Cleveland Police	911 or xxx-xxx-xxxx
Cuyahoga County Sheriff	xxx-xxx-xxxx
Ohio State Highway Patrol	xxx-xxx-xxxx

Fire Department

Cleveland Fire Department	911 or xxx-xxx-xxxx

Hospitals

Local Hospital	xxx-xxx-xxxx
Emergency Room	xxx-xxx-xxxx

Other Emergency Services

Ambulance Service	xxx-xxx-xxx
U.S. Coast Guard (Cleveland)	xxx-xxx-xxxx
U.S. Coast Guard (National Response Center)	xxx-xxx-xxxx
Ohio EPA (Emergency Response)	1-800-282-9378
Ohio EPA (District Office)	xxx-xxx-xxxx
County Health Dept	xxx-xxx-xxxx
Local Sewer District	xxx-xxx-xxxx
Electric Company	xxx-xxx-xxxx
Gas Company	xxx-xxx-xxxx

Exhibit 4

ABC Facility
Emergency Response Contingency Plan

Reporting Form for Emergency Events

Name, address, and telephone number of owner or operator

Name, address, and telephone number of facility

Date, time, and type of incident (e.g. fire, explosion, etc.)

Name and quantity of material(s) involved

Extent of injuries (if any)

Assessment of actual or potential hazards to human health or the environment (if applicable)

Estimated quantity and dispositions of material recovered from the incident

Send To:

1. Name: _____
   U.S. EPA, Region V
   Regional Administrator (EPA)
   Chicago, IL 60604

2. Chief
   Environmental Emergency Branch
   U.S. EPA, Region V

3. Director
   Ohio EPA
   Lazarus Government Building
   P.O. Box 1049
   Columbus, OH 43216-1049

Exhibit 5

ABC Facility
Emergency Response Contingency Plan

Emergency Report Incident No. _____

1. Type of emergency: Fire _____, Spill _____, Other _____

2. Alarm: Date _____, Time _____, Shift _____

3. Alarm sounded: □ Yes □ No, By _____

4. Location of emergency _____

5. Description of emergency and property involved _____

_____

6. Materials involved and their hazards _____

_____

7. Cause of emergency _____

8. If fire, source of ignition _____

9. Narrative account of fire/spill control measures _____

_____

10. Extinguishing agents used (itemize) _____

11. List other equipment used _____

_____

12. All clear announced by _____

13. Alarm station reset _____

14. Emergency equipment restored to operating condition _____

15. Recommendations and remarks _____

16. Report Submitted By _____, Title _____

Exhibit 6

ABC Facility
Emergency Response Contingency Plan

Emergency Equipment

Personnel Protective Equipment	Capabilities of Equipment
Disposable coveralls	***
Gloves (inner & outer)	***
Goggles	***
Face shields	***
Hard Hats	***
Ear protection	***
Duct tape	***
Air purifying respirators	***
Disposable air purifying respirator cartridges	***
SCBA (includes full oxygen tank)	***
Boots	***
Fire blanket	***
Assorted first aid supplies	***
Safety showers and eye washes	***
Fire Response Equipment	
Sprinkler system (A local alarm will sound when the sprinklers activate; alarms will also sound in the Fire Station and the ABC Facility offices).	***
Fire extinguishers	***
Spill Response Equipment	
Sorbent booms, pads & pillows	***
Squeegees, brooms, buckets, mops	***
Spark-proof shovels	***
Sorbent sand	***
Speedi-dry	***
Acid neutralizing materials	***
Base neutralizing materials	***
Empty 55-gallon open head drums	***
85-gallon disposable (over pack) drums	***
Drum repair kit	***
1.5" diameter, 35 gpm stainless steal air pump	***

Communication Equipment

Telephones	***
Alarm Pull Boxes Connected to Alarm System	***
2-way radios	***
Pagers	***

***** Facility should consult the manufacturer's specifications for capabilities and limitations. The facility should also be aware that several items listed above require specialized training prior to use. This training should be documented. The specific capabilities must be noted in the plan to comply with OAC rule 3745-52-261(E)**

Exhibit 7

ABC Facility
Emergency Response Contingency Plan

Emergency Response Contingency Plan Distribution

- On-site Personnel
- Local Fire Department
- Local Police Department
- Local Sheriff Department
- Local Hospitals
- Ohio EPA, Emergency Response
- Local Sewer District

Exhibit 8

ABC Facility
Hazardous Waste Contingency Plan

Distribution Letter

ABC Facility
123 Blank Road
Cleveland, OH 44___ July 7, 2014

Certified Mail
Return Receipt Requested

Chief James Doe
Cleveland Police Department
Cleveland, OH 44___

Dear Chief Doe:

The ABC Facility is a local sponge specialty company that supplies sponges for commercial and residential use. ABC Facility performs its operations in Cleveland, Ohio. As part of these operations, the ABC Facility generates and manages hazardous wastes. The ABC Facility requests your agreement to respond to hazardous waste emergencies at the ABC Facility, as is appropriate for your function, upon request by ABC Facility personnel.

Enclosed for your information is a copy of the ABC Facility's Contingency Plan which can be used to familiarize your emergency response personnel with the layout of the ABC Facility, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.

Please respond to this request in writing. A self-addressed stamped envelope is also enclosed for your use.

If you should have any questions, please call me at 216-xxx-xxxx.

Sincerely,

The ABC Facility
Mr. John Doe
Primary Emergency Coordinator

Print /Type Name _____ Signature _____

Title _____ Date _____

Appendix 4

Example Personnel Training Documents

Job Titles and Descriptions
Per Ohio Administrative Code Chapter 3745-52-17(A)(7)
(Hazardous Waste Management Responsibilities Only)

XYZ CORPORATION

Revised October 2021

NOTE: Ohio EPA has prepared this Example Personnel Training Documents for instructional purposes only. Hazardous waste generators should be aware that this sample personnel training plan is not intended as a substitute for carefully reading the hazardous waste rules and, if needed, seeking Ohio EPA Division of Environmental Response and Revitalization's interpretations of the rules.

Appendix 4

JOB TITLE

FORK LIFT OPERATOR

MINIMUM QUALIFICATIONS

High School Diploma or GED

TRAINING REQUIRED

On hiring: Introduction to hazardous waste management and XYZ's contingency plan
Annual thereafter: Hazardous waste management annual refresher training

DUTIES AND RESPONSIBILITIES RELATED TO HAZARDOUS WASTE MANAGEMENT

- responsible for picking up drums of hazardous waste from satellite accumulation area near Geezenstack Line and transferring them to accumulation shed in the back
- responsible for loading drums onto Waste Recycle Services truck
- responsible for immediately contacting Emergency Coordinator in the event of discovering or causing a leak or a spill

Appendix 4

JOB TITLE

ENVIRONMENTAL COMPLIANCE MANAGER

MINIMUM QUALIFICATIONS

Bachelor's Degree in science or engineering
Certified Hazardous Materials Manager
Four years minimum related experience
OSHA 40 hour training

TRAINING REQUIRED

Annual OSHA 8 hour refresher training
Minimum 40 hours course work or seminars annually in related field

DUTIES AND RESPONSIBILITIES RELATED TO HAZARDOUS WASTE MANAGEMENT

- responsible for ensuring personnel managing hazardous waste are properly trained upon hiring, and receive refresher training at least annually
- responsible for maintaining personnel training records
- responsible for liaison with regulatory authorities, and regulatory compliance with hazardous waste laws and regulations
- responsible for ensuring hazardous waste containers are properly labeled, covered and staged
- responsible for ensuring satellite and accumulation area accumulation time limits and volume limits are not exceeded
- responsible for weekly inspections of hazardous waste accumulation areas and emergency equipment and for keeping the inspection logs
- responsible for coordinating pickups by Waste Recycle Services within 90 day period, ensuring wastes are packaged/labeled/marked/placarded in accordance with DOT regulations, tracking shipments, and ensuring safe arrival at TSD
- responsible for preparing and routinely updating the contingency plan

ENVIRONMENTAL COMPLIANCE MANAGER, CONTINUED

- responsible for preparing and signing manifests and LDRs, tracking them, and preserving them in master file
- responsible for preparing manifest exception reports, when required
- responsible for filing required annual reports with regulatory authorities
- responsible for evaluating wastes, sampling them and arranging for laboratory analyses, and retaining records of the evaluations in an orderly fashion
- responsible for ensuring that an Emergency Coordinator is available at all times
- responsible for coordinating implementation of contingency plan, if required
- responsible for contacting regulatory authorities if required in the event of a spill

Appendix 4

As of June 19, 2014:

FORK LIFT OPERATOR: Thomas J. Basel

ENVIRONMENTAL COMPLIANCE MANAGER: John Q. Princeton

On June 19, 2013, I received annual refresher training in hazardous waste management, and the XYZ Corporation's contingency plan and emergency procedures.

_____

DATE:_____

TITLE: FORK LIFT OPERATOR

A copy of the quiz is attached.

NOTE: ***This is intended to be a guide in the preparation of personnel related documentation. Actual documents will have to be tailored to site-specific needs, and the documents will have to be carefully reviewed to ensure they meet regulatory requirements.***

Appendix 5

How do I select an analytical laboratory?

When you use analytical data to evaluate your waste you should consider the validity of that data. Data validation assesses whether the accuracy and precision of the analytical data are sufficient to assure the usability of the data. The basic principles of data validation and the methods that Ohio EPA uses to assess data can be found on our on-line Publications Catalog (key word: data validation). When comparing laboratories, you should ask laboratory management staff questions to help evaluate their expertise, education and experience. Some questions you might ask are listed below.

- Does the lab maintain a detailed summary of the relevant experience of the analysts, supervisor and managers?
- Are the managers, supervisors, or chemists recognized experts at the analysis you need?
- Are these individuals published in peer-reviewed periodicals?
- Have the chemists provided expert testimony at trial on their work?
- Who has the authority to approve/review data?
- Does the lab have a quality assurance (QA) plan and quality control (QC) activities?
- Ask for a copy of the QA plan and QC charts of the analysis of interest.
- Ask for the QC charts for the particular analysis performed on your sample that day.

A listing of analytical laboratories can be found on-line.

Appendix 6

How do I select a treatment, storage and disposal facility?

As stated at the beginning of this handbook, you are responsible for your hazardous waste from "cradle to grave." This means that your business will be held responsible for cleanup or pursued in an enforcement action if your hazardous waste is mismanaged by another company, even after it leaves your property. Therefore, it is very important for you to select a qualified recycler or treatment, storage and disposal (TSD) facility to accept your company's hazardous waste.

Any facility in Ohio that accepts hazardous waste for treatment, storage or disposal must have an Ohio EPA permit for these activities. The permit outlines the operating conditions and recordkeeping procedures that must be followed to ensure that wastes will be handled properly. Ohio EPA inspects TSD facilities in Ohio frequently.

You can obtain compliance and permitting information on a TSD facility in Ohio by contacting the appropriate Ohio EPA district office. To locate the Ohio EPA district that oversees the county where the TSD facility is located, refer to the map and contact numbers in the beginning of this handbook. Then, contact the district office and ask to speak with the DMWM inspector responsible for inspecting the facility. If you are considering using a TSD facility outside Ohio, that state's environmental protection agency should have compliance and permitting information available. Ohio EPA's DERR staff or OCAPP can help you locate a contact person from other state's environmental agencies.

The Selecting a Treatment/Storage/Disposal Facility (TSDF) to Handle Your Hazardous Wastes guidance document will also help you.

Regardless of where your TSD is located, ask the permitting agency the following questions.

- Does the TSD facility have a hazardous waste permit?
- What types of hazardous waste treatment, storage and/or disposal activities are authorized by the permit?
- Is the TSD facility permitted to handle the specific wastes that your business will be sending to them?
- When was the TSD facility last inspected by Ohio EPA?

- What types of problems or violations were found?
- If problems or violations were found during past inspection, has the TSD facility corrected these?
- Has the TSD facility been operating in compliance with its permit conditions?
- Are there any current enforcement actions against the facility for violations?
- Has the facility recently been penalized for violations?
- Does the TSD facility have up-do-date financial assurance in accordance with the regulations – to ensure that it can properly close or clean up its hazardous waste units (for example, tanks, storage areas)?

To ensure your hazardous waste will be managed properly, it is important to know how the waste will be handled once it gets to the TSD facility. Your waste may be handled by more than one facility. For example, your waste may be treated at one location and then shipped off to another site for disposal. If so, the compliance and operating status of both sites should be evaluated. Ask the facility the following questions.

- Can the TSD facility accept the waste you are sending (by hazardous waste code)?
- How will the waste be transported to the TSD facility? If this will be arranged by the TSD facility, is a licensed hazardous waste transporter used?
- How will the hazardous waste be managed once it gets on-site? Will it be stored, treated, fuel blended, incinerated or landfilled?
- Will hazardous wastes be handled only in those areas authorized under the TSD facility's permit?
- If wastes are treated, how will any residues from the treatment (for example, incinerator ash, still bottoms, etc.) be handled?
- Will the waste or treatment residues be shipped off to another facility for handling and disposal? If so, how are these wastes managed by the second facility?
- What kind of paperwork will be completed? How will you be notified of final disposal of the waste? Will you get something in writing?
- How much time will it take from when the wastes are received at the TSD facility until final disposal?

- Does the TSD facility have an environmental compliance manager or an internal auditing program to help monitor its compliance with the regulations?

> NOTE: In accordance with Ohio Administrative Code (OAC) rule 3745-54-12(B), TSDs are required to inform you in writing that they have the appropriate permit(s) for the waste you are shipping them.

Selecting the right TSD facility is an important decision and one that should be made only after a thorough evaluation of the facility. Carefully selecting a TSD facility can help protect your business from future enforcement liability and protect the environment through RCRA's objective of safe waste management from "cradle to grave."

A list of commercial facilities in Ohio that accept hazardous waste is available on our Web site. You are encouraged to contact your Ohio EPA district office and ask about the compliance history of the TSD you are considering.

Appendix 7

Guidance Documents, Fact Sheets & Recyclers Lists

Cessation of Regulated Operations:
Cessation of Regulated Operations Guidance

Closure:
Closure Plan Review Guidance
Large Quantity Generator Closure Requirements

Containers:
Container Washing Operations Guidance

Contaminated Soil:
Generic Risk Based Clean Up Numbers
Assessing Petroleum Hydrocarbons in Soil

Contingency Plans:
Contingency Plan Implementation and Incident Reporting Guidance

Electronic Waste Management:
Electronic Waste from Businesses Guidance
Electronic Recyclers List

Episodic Generation:
Hazardous Waste Episodic Generation

Gas Cylinders:
Gas Cylinder Recycler List

Generator Requirements:
Generator Requirements Summary Table
Hazardous Waste Evaluation and the Use of Generator Knowledge

Generator Treatment:
Generator Treatment Guidance
Waste Analysis Plan Guidance

Hazardous Waste:
Hazardous Waste Consolidation Guidance
Identifying Your Hazardous Waste Fact Sheet
Mixture/Derived From Rules

Laboratories:
Managing Hazardous Waste from Laboratories Guidance
List of Analytical Laboratories

Land Disposal Restrictions:
Land Disposal Restrictions Guidance

Lead Paint:
Lead-bearing Paint Waste from Households Guidance
Paints and Coatings Recyclers List

Lead Shot:
Lead Shot Recyclers List

Mercury:
Mercury Recyclers List

Pharmaceuticals:
Management of Hazardous Waste Pharmaceuticals from Healthcare Facilities
Flushing of Hazardous Waste Pharmaceuticals is Prohibited!
Disposal of Hazardous Waste Pharmaceuticals FAQs

Product Return Systems:
Product Return Systems Guidance

Risk Assessments:
Ecological Risk Assessment Guidance
Generic Risk Based Clean Up Numbers

Satellite Accumulation:
Satellite Accumulation Guidance

Solvents:
The Management of Solvent-Contaminated Wipes and Other Textiles Laundered for Reuse
Solvent Recycling Equipment Vendors List

Tank Management:
Tank System Requirements Advisory Guidance

Universal Waste:

Battery Recyclers List
Computer and Fluorescent Lamp and Ballast Recyclers List
Managing Fluorescent Lamps
Universal Waste Guidance
Universal Waste Handler Requirements
Ohio-Specific Universal Waste
Questions & Answers, Ohio-Specific Universal Wastes

Used Oil:

Registered used Oil Collection Centers
Burning Used Oil in a Space Heater – For Businesses
Burning Used Oil in a Space Heater – For Homeowners
Used Oil Burners new Guidance for Rebuttable Presumption
Used Oil Filter Recyclers List
Used Oil Generator Guidance
Used Oil Processors and Rerefiners
Used Oil Transporter and Transfer Facilities Guidance
Used Oil Recyclers List

Waste Analysis Plans:

Waste Analysis Plan Guidance

Wastewater Treatment Units:

Wastewater Treatment Unit Exemption Guidance

Appendix 8
Glossary

Acute hazardous waste

Any hazardous waste with a U.S. EPA Hazardous Waste Code beginning with the letter P or any of the following F codes: F020 – F023, F026 or F027.

Biennial Report

A document that a site is required to submit if they are an LQG in one or more calendar months of an odd-numbered year. The report provides Ohio EPA and U.S. EPA with data concerning facility's hazardous waste generation, management and waste minimization activities in Ohio.

By-product

Materials that are not one of the intended products of a production process. This includes most wastes that are not spent materials or sludges.

Characteristic waste

Waste that is considered hazardous under RCRA because it exhibits any of four different properties: ignitability, corrosivity, reactivity and toxicity.

Code of Federal Regulations (CFR)

The detailed regulations, written by federal agencies, to implement the provisions of laws passed by congress.

The CFR is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government. It is divided into 50 titles that represent broad areas subject to federal regulation. Each volume of the CFR is updated once each calendar year and is issued on a quarterly basis.

Delisted waste

Site-specific wastes that are excluded from reporting under 40 CFR 260.20 and 260.22. A waste at a particular generator site may be excluded or delisted from the lists of hazardous waste in Subpart D of Part 261 by petitioning the U.S. EPA administrator for a regulatory amendment.

Disposal

The discharge, deposit, injection, dumping, spilling, leaking or placing of any hazardous waste into or on any land or water or air so that this hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water, except where such activity constitutes “storage” or “treatment” as defined in OAC Rule 3745-50-10.

U.S. EPA identification number (EPA ID)

A 12- character number assigned by either U.S. EPA or the authorized state to each generator, transporter and treatment, storage or disposal facility. The first two characters are alphabetical and stand for the state in which the site is located. The third character may be either alphabetical or numeric. The remaining nine characters are always numeric.

Excluded wastes

Wastes excluded from regulation under OAC rule 3745-51-04 and 3745-51-03(C)(2)(b).

Facility

All contiguous land and structures, other appurtenances and improvements on the land used for treating, storing or disposing of hazardous waste.

Generator

Any person, by site, whose act or process produces hazardous waste identified or listed in OAC Chapter 3745-51 or whose act first causes a hazardous waste to become subject to the hazardous waste rules.

Large quantity generator

Any person who produces 1000 kg or more of hazardous waste or 2.2 kg of acute hazardous waste in any month. This generator may accumulate hazardous waste on-site for no more than 90 days.

Listed wastes

Wastes detailed in OAC Chapter 3745-51. OAC Chapter 3745-51 lists these wastes as hazardous, but they have not been subjected to the toxic characteristics listing process because the dangers they present are considered self-evident. They bear U.S. EPA hazardous waste codes beginning with the letters F, P, U or K.

Ohio Administrative Code (OAC)

Ohio's hazardous waste rules can be found in chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-270, 3745-273, 3745-279 and 3745-352. These rules are similar to their federal counterpart found in 40 CFR.

RCRA

Resource Conservation and Recovery Act – Federal legislation requiring that hazardous waste be tracked from "cradle" (generation) to "grave" (disposal).

Reclamation

The processing or regeneration of a material to recover a usable product. Certain materials must still be managed as hazardous wastes when reclaimed. This process involves the separation of materials into separate end products. Some of these end products may be wastes.

Recycling

The use or reuse of waste as an effective substitute for a commercial product, or as an ingredient or feedstock in an industrial process. The material does not need to be managed as a waste after recycling if the processing satisfies the conditions for "use" or "reuse." Recycling may also involve reclamation as described in the previous definition.

Reuse or use

Use or reuse of the material does not generate any separate end product(s). A material is used or reused if it is either:

- Used as an ingredient (including use as an intermediate) in an industrial process to make a product.
- Used in a particular function or application as an effective substitute for a commercial product.

Sludge

Any solid, semi-solid or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

Small quantity generator

Any person who produces greater than 100 kg or less than 1000 kg of hazardous waste in a calendar month. This person may accumulate hazardous waste on-site for up to 180 days.

Transporter

A person engaged in the off-site transportation of hazardous waste by air, rail, road or water. Transporters who store manifested shipments of hazardous waste in containers meeting the requirements of 40 CFR 262.30 for 10 days or less are not subject to regulation.

A person engaged in the off-site transportation of hazardous waste by air, rail, road or water. Transporters who store manifested shipments of hazardous waste in containers meeting the requirements of 40 CFR 262.30 for 10 days or less are not subject to regulation.

Universal waste

Any of the following hazardous wastes that are managed under the universal waste requirements of OAC Chapter 3745-273: batteries, pesticides, thermostats and hazardous waste lamps. Additionally, paint and paint-related waste, antifreeze and aerosol containers are Ohio Specific universal wastes.

Very small quantity generator (VSQG)

Any person who produces no more than 100 kg of hazardous waste in a month. This person does not have a time limit for accumulating waste on-site. However, this generator may accumulate no more than 1,000 kg of hazardous waste on-site at any given time.