

NORTH DAKOTA HAZARDOUS WASTE COMPLIANCE GUIDE



 North Dakota Department of Health
Division of Waste Management

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NORTH DAKOTA
HAZARDOUS WASTE COMPLIANCE
GUIDE



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TABLE OF CONTENTS

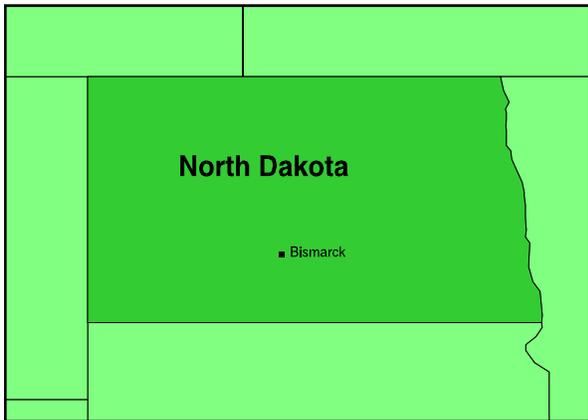
<u>Introduction</u>	1
<u>Section One: Compliance in Ten Steps</u>	2
Step 1: Identify Waste Streams and Generator Status	2
A. Evaluate Waste Streams	2
1. Exempt Wastes	2
2. Listed Hazardous Wastes	4
3. Characteristic Hazardous Wastes	5
4. Other Regulated Wastes	5
5. Land Disposal Restrictions	7
B. Calculating Generator Status	7
Step 2: Obtain a State/EPA ID Number	10
A. Form Completion	10
B. Renotification	10
C. Multiple State/EPA ID Numbers	10
Step 3: Containers, Labels and Markings, and Placards	10
A. Containers	10
B. Container Labels and Markings	11
1. Marking for Storage	11
2. Marking for Transportation	11
C. Placards	12
Step 4: Storage and Accumulation	12
A. General Storage Requirements	12
B. Containment Standards	13
C. Storage: Quantity and Time Limits	13
D. Storage Time Limit Extensions	13
E. Satellite Accumulation	13
Step 5: Transportation and Disposal	14
A. Select a Transporter	15
B. Select a Treatment, Storage, and Disposal Facility	16
C. Disposal of CESQG Wastes	17
D. Household Hazardous Waste Collection Programs	17
Step 6: Manifests	17
A. Why Are Manifests Required	17
B. Which Manifest to Use	18
C. Complete the Manifest	18
D. Distribution of Manifest Copies	18
E. Exception Reports	18
F. Land Disposal Restrictions	19

Step 7: Emergency Planning and Response	19
A. CESQG Requirements	19
B. SQG Requirements	19
C. LQG Requirements	20
Step 8: Personnel Training	21
A. CESQG Requirements	21
B. SQG Requirements	21
C. LQG Requirements	21
D. HAZWOPER Training	22
Step 9: Reporting Requirements	22
A. Biennial Reports	22
B. Intent to Import or Export	22
C. One-Time Disposal	22
D. Right to Know, SARA Title III, & EPCRA Reporting	22
Step 10: Records	23
A. CESQG Requirements	23
B. SQG Requirements	23
C. LQG Requirements	23
<u>Section Two: Selected Topics</u>	25
1. Sewering Wastes	25
2. Small Quantity Inventory	25
3. Used Oil, Filters & Antifreeze	25
4. Used Lead-Acid Batteries	26
5. Pesticides	26
6. Universal Wastes and the Universal Waste Rule	27
7. Polychlorinated Biphenyls	28
8. Pollution Prevention & Waste Minimization	28
9. Environmental Services	29
10. Information Services	31
11. Container Inspection Logsheet	32
12. Acronyms and Equivalents Chart	33

13. Emergency Information Worksheets 34
14. Notes 35

LIST OF TABLES

Table 1 – Typical Hazardous Wastes Generated by Small Businesses 3
Table 2 – Hazardous Contaminant Levels for Toxicity Characteristic 6
Table 3 – Categories of Generator Status 8
Table 4 – Countable/Noncountable Wastes 8
Table 5 – Quick Reference 9
Table 6 – Quantity and Time Limits 14



Introduction

One of the by-products of our industrial society is waste, some of which is hazardous to human health or the environment. In response to public concern over the result of improper handling and disposal of chemical wastes, the U.S. Congress enacted the Resource Conservation and Recovery Act (RCRA) in 1976. In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). In November 1984, the Hazardous Waste and Solid Waste Amendments (HSWA) to RCRA were signed into law. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986.

Under these laws, the U.S. Environmental Protection Agency (EPA) was authorized to develop and oversee a nationwide program to regulate hazardous waste management. In 1981, the State of North Dakota enacted the Hazardous Waste Management Law under Chapter 23-20.3 of the North Dakota Century Code and under authority of this law promulgated the State Hazardous Waste Management Rules under Article 33-24 of the North Dakota Administrative Code. These regulations provide:

- A definition of hazardous waste, including lists of hazardous chemical wastes;

- Handling requirements for generators and transporters of hazardous waste;
- A manifest system to track hazardous waste from generation point to final disposal (“cradle to grave”);
- Permit requirements for facilities that treat, store, and/or dispose of hazardous waste; and,
- Requirements for State hazardous waste programs.

EPA delegated authority to many states to operate their own hazardous waste regulatory programs. To be authorized, individual State programs must be at least as stringent as the Federal program. After receiving authorization, State programs operate in place of the Federal program. North Dakota has received final authorization to regulate hazardous waste management. The program is administered by the North Dakota Department of Health (the Department) Hazardous Waste Program.

In order to retain its authorization, the Department regularly updates its rules to incorporate changes made in the Federal regulations. As the Federal hazardous waste program is revised, there may be Federal regulations which have not yet been included in the North Dakota Hazardous Waste Management Rules. During this time generators, transporters, and treatment, storage, or disposal facilities must comply with the requirements of all applicable State rules and any Federal rules not yet incorporated.

Compliance with Federal, State, and local regulations can sometimes be costly. However, the environmental and financial consequences of noncompliance are much more expensive. Because these regulations are complex, the Department developed this manual to assist North Dakota’s generators of hazardous waste in complying with the North Dakota Hazardous Waste Management Rules.

Section One: Compliance in Ten Steps

The Department developed a systematic approach to hazardous waste management called “Compliance in Ten Steps.” The ten steps are as follows:

1. IDENTIFY WASTE STREAMS AND GENERATOR STATUS
2. OBTAIN A STATE/EPA ID NUMBER
3. CONTAINERS, LABELS AND MARKINGS, AND PLACARDS
4. STORAGE AND ACCUMULATION
5. TRANSPORTATION AND DISPOSAL
6. MANIFESTS
7. EMERGENCY PLANNING AND RESPONSE
8. PERSONNEL TRAINING
9. REPORTING REQUIREMENTS
10. RECORDS



STEP 1. Identify Waste Streams and Generator Status.

North Dakota Hazardous Waste Management Rules require that “a person who generates a solid waste must determine if it is a hazardous waste.” This evaluation determines whether the waste is hazardous or nonhazardous.

Table 1, Typical Hazardous Wastes Generated by Small Businesses, will give you an idea of which waste streams may be hazardous.

A. Evaluate Waste Streams.

Listed below are three procedures to be used to evaluate a given waste:

First, determine if the waste is not regulated under Section 33-24-02-04 NDAC.

1. Exempt Wastes.
 - a. Some wastes are exempted from regulation as hazardous waste. Examples of exempted waste include:
 - Household refuse
 - Irrigation return flows
 - Sewage
 - Mining overburden
 - Used oil
 - Fly and bottom ash
 - Scrap metal
 - Oilfield wastes
 - Nuclear materials
 - NDPDES-permitted discharges

TABLE 1

Typical Hazardous Wastes Generated by Small Businesses			
Business Type	Generation Processes	Waste Types	Waste Codes
Drycleaning and Laundry Facilities	Commercial dry cleaning processes	Still residues from solvent distillation, spent filter cartridges, cooked powder residues	D001, D039, F002
Construction	Painting prep and operations, carpentry and floor work, specialty contracting, heavy construction, wrecking and demolition, vehicle and equipment maintenance	Ignitable wastes, toxic wastes, solvent wastes, paint wastes, used oil, acids/bases	D001, D002, D003, F001-F005
Vehicle Maintenance	Degreasing, rust removal, painting prep and operations, spray booth, spray guns, brush cleaning, paint removal, tank cleanout, lead/acid batteries	Acids/bases, solvent wastes, ignitable wastes, toxic wastes, paint wastes, used batteries, used oil	D001, D002, D006, D007, D008, D018, F001-F005
Printing and Allied Industry	Plate prep, stencil prep for screen printing, photoprocessing, printing, cleaning	Acids/bases, heavy metal wastes, solvent wastes, toxic wastes, used ink	D002, D006, D007, D008, F001-F005
Equipment Repair	Degreasing, rust removal, painting prep and operations, spray booth, spray guns, brush cleaning, paint removal	Acids/bases, solvent wastes, ignitable wastes, toxic wastes, paint wastes, used batteries, used oil	D001, D002, D006, D007, D008, D018, F001-F005
Educational and Vocational Shops	Auto engine and body repair, metalworking, graphic arts-plate prep, woodworking	Ignitable wastes, solvent wastes, acids/bases, paint wastes	D001, D002, F001-F005

This is not a complete listing of the exemptions. Contact the Department's Hazardous Waste Program for further information.

b. Empty containers and liners used to hold a hazardous material (except a compressed gas or acutely hazardous (P or U) waste) are exempt if all the removable products or wastes have been removed from the container using common practices and one of the following conditions is met:

- No more than one inch of residue remains on the bottom;
- No more than 3 percent by weight of the waste remains inside of a container having a total capacity of 110 gallons or less; or
- No more than three tenths of 1 percent by weight of the waste remains inside of a container having a total capacity greater than 110 gallons.

If a container held compressed gas, it is considered empty when internal pressure approaches atmospheric pressure.

If a container held an acutely hazardous (P or U) waste, contact the Department's Hazardous Waste Program for information.

Second, determine if the waste is a listed hazardous waste in Sections 33-24-02-15, 33-24-02-16, or 33-24-06-17 NDAC, which references the non-specific source (F), specific source (K), and commercial chemical product wastes (P and U); and,

2. Listed Hazardous Wastes.

Wastes listed in the North Dakota Hazardous Waste Management Rules are included because they meet one or more of the following criteria: the waste exhibits any of the characteristics (ignitability, corrosivity, reactivity, or toxicity), the waste has been found to be fatal to humans in low doses or significantly contributing to an

increase in illness, or the waste contains any toxic constituent that if the waste is improperly managed is capable of posing a hazard to human health or the environment.

Listed hazardous wastes are split into the following three categories:

a. Non-specific sources (F wastes).

Wastes that are generated but are not distinct to any certain manufacturing process are listed as F wastes. Examples are:

- Waste solvents and distillation bottoms from solvent recovery;
- Electroplating wastes (e.g., sludges, bath solutions, etc); and,
- Other non-specific sources.

b. Specific sources (K wastes).

Wastes produced during the manufacturing process are listed as K wastes, such as from the manufacture of:

- Pesticides
- Inorganic chemicals
- Explosives
- Wood preservatives
- Inks and inorganic pigments
- Petroleum refining
- Organic chemicals
- Iron and steel

c. Discarded products, off-spec products, spill residues, and acute hazardous waste (P or U wastes).

Wastes such as commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products or manufacturing chemical intermediates, mixtures of the chemicals listed and spill residues may be classified as P- or U-listed wastes.

Some listed hazardous wastes are subject to additional regulation as “acute hazardous waste.” If you suspect that you have or generate an acute hazardous waste, contact the Department’s Hazardous Waste Program to confirm if the waste is acute and to discuss additional management procedures.

Third, for the purposes of compliance, the generator must determine whether the waste is identified as a characteristic hazardous waste (D) in Sections 33-24-02-10 through 33-24-02-14 by:

- Testing the waste in accordance with the methods in Chapter 33-24-02 NDAC, or by other Department approved equivalent methods; or
- Applying knowledge of the hazardous characteristic of the waste in light of the materials or processes used.

3. Characteristic Hazardous Wastes (D wastes).

There are four categories of characteristic hazardous waste.

a. **Ignitability.** A liquid waste is considered ignitable if it has a flashpoint of 140°F or less. Gases are considered to be ignitable if classified as ignitable compressed gases or oxidizers. A solid is ignitable if it can spontaneously catch fire and burns so vigorously that it creates a hazard. Many solvents are ignitable. Ignitable hazardous wastes have the waste code D001.



b. **Corrosivity.** Any aqueous (water-based) waste having a pH of 2.0 or less or 12.5 or greater is considered corrosive. A liquid able to corrode steel at a rate of ¼ inch per year is also



corrosive. Strong acids and bases are examples of corrosive materials. Corrosive hazardous wastes have the waste code D002.

c. **Reactivity.** Wastes that are unstable or explosive, that react violently with water or air, that form potentially explosive mixtures with water or air, and that can release toxic gases (such as hydrogen cyanide or hydrogen sulfide) are considered reactive. Reactive hazardous wastes have the waste code D003.

d. **Toxicity characteristic.** A waste exhibits the characteristic of toxicity if, using the toxicity characteristic leaching procedure (TCLP), the waste or an extract of the waste contains any contaminants at concentrations equal to or greater than those listed in Table 2. The Department maintains a list of laboratories that perform TCLP testing.

Some waste streams that may exhibit a toxicity characteristic include:

- Paints
- Sludges
- Inks
- Solvents
- Greases
- Pesticides
- Adhesives
- Metals

If you generate any listed or characteristic wastes as described in parts 2 and 3, **you are a generator of hazardous waste.** You must manage that waste in accordance with the North Dakota Hazardous Waste Management Rules. If you are uncertain about your waste determination, contact the Department’s Hazardous Waste Program.

4. Other Regulated Wastes.

a. Asbestos abatement generates two regulated wastes: the asbestos contaminated materials and airborne particulate materials. Asbestos contaminated materials may be disposed in permitted landfills upon approval of the landfill authority. Asbestos particulate emissions are regulated under Section 33-15-13-02 NDAC by the Division of Air Quality.

TABLE 2

HAZARDOUS CONTAMINANT LEVELS FOR TOXICITY CHARACTERISTIC

EPA HW #	Contaminant	Regulatory Level (mg/l)
D004	Arsenic	5.0
D005	Barium	100.0
D018	Benzene	0.5
D006	Cadmium	1.0
D019	Carbon Tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D007	Chromium	5.0
D023	o-Cresol	200.0 ^a
D024	m-Cresol	200.0 ^a
D025	p-Cresol	200.0 ^a
D026	Cresol	200.0 ^a
D016	2,4-D	10.0
D027	1,4-Dichlorobenzene	7.5
D028	1,2-Dichloroethane	0.5
D029	1,1-Dichloroethylene	0.7
D030	2,4-Dinitrotoluene	0.13 ^b
D012	Endrin	0.02
D031	Heptachlor (& its epoxide)	0.008
D032	Hexachlorobenzene	0.13 ^b
D033	Hexachlorobutadiene	0.5
D034	Hexachloroethane	3.0
D008	Lead	5.0
D013	Lindane	0.4
D009	Mercury	0.2
D014	Methoxychlor	10.0
D035	Methyl Ethyl Ketone	200.0
D036	Nitrobenzene	2.0
D037	Pentachlorophenol	100.0
D038	Pyridine	5.0 ^b
D010	Selenium	1.0
D011	Silver	5.0
D039	Tetrachloroethylene	0.7
D015	Toxaphene	0.5
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400.0
D042	2,4,6-Trichlorophenol	2.0
D017	2,4,5-TP (Silvex)	1.0
D043	Vinyl Chloride	0.2

^a If o-, m-, and p-cresol cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

^b Quantification limit is greater than the calculated regulatory level. The quantification limit therefore becomes the regulatory level.

b. Radioactive wastes are not regulated by the North Dakota Hazardous Waste Management Rules. These wastes are regulated under Article 33-10 NDAC, Radiological Health Rules. Wastes which contain sealed radioactive sources should be managed by returning to the original manufacturer. For other disposal methods of radioactive wastes, please contact the Division of Air Quality.

c. Wastes containing polychlorinated biphenyls (PCBs) are not regulated under the North Dakota Hazardous Waste Management Rules, but are regulated under 40 CFR 761 (TSCA), CERCLA (Superfund) and the Clean Water Act (CWA). Under Section 33-24-02-04.7 NDAC, PCBs should not be included in hazardous waste biennial reporting. If you suspect you have PCBs, contact the Department's Hazardous Waste Program for proper management and disposal procedures. Additional information about PCBs is contained in Section 2, Topic 7.

d. Many chlorofluorocarbons (CFCs) are not regulated under the Hazardous Waste Management Rules but are regulated under the Air Pollution Control Rules. However, some CFCs are regulated under both. Many CFCs may not be released to the atmosphere because of the impacts CFCs have on the ozone. An example of an ozone-depleting CFC is Freon 12, a refrigerant normally found in refrigerators and automobile air conditioners. Questions regarding the disposal of CFCs may be addressed to either the Hazardous Waste Program or the Division of Air Quality.

e. Universal Wastes are wastes which are hazardous wastes but may be managed in a less restrictive manner than proscribed by full RCRA regulation. These wastes include batteries, pesticides, lamps and mercury-containing devices. For more information, see Section 2 Topic 6.

5. Land Disposal Restrictions.

All Small Quantity Generators (SQGs) and Large Quantity Generators (LQGs) must comply with Land Disposal Restriction (LDR) rules which prohibit the disposal of many hazardous waste on the land unless the waste meets specific treatment standards. Conditionally Exempt Small Quantity Generators (CESQGs) are not required to comply with LDR rules. Treatment, storage or disposal facilities (TSDFs) may have policies for accepting CESQG wastes.

When SQGs and LQGs evaluate their wastes to determine if the wastes are hazardous, they must also determine if the wastes are subject to LDR rules. This must be determined by waste analysis or knowledge of the waste. Generators are responsible for determining all applicable waste codes for each LDR waste.

B. Calculating Generator Status.

The level of regulation which a generator must follow is determined by the amount of hazardous waste generated. The generator status is based on the total amount of all hazardous wastes generated during the month on an annual average. Be careful to add pounds to pounds and kilograms to kilograms. If your waste production changes seasonally, your generator status may change. It is recommended that you manage your hazardous waste based on your routine highest monthly generation status.

Tables 3 and 4 describe the three categories of generators and which hazardous wastes must be counted in order to determine your generator status.

Table 3		
Categories of Generator Status		
Conditionally Exempt Small Quantity Generator	≤220 pounds(100 kg) per month	Approximately ½ drum
Small Quantity Generator	≥220 pounds(100 kg) to ≤2200 pounds(1000 kg) per month	Approximately ½ to 5 drums
Large Quantity Generator	≥2200 pounds(1000 kg) per month	More than 5 drums

Table 4	
Countable/Noncountable Wastes	
Countable wastes. A generator must count all LISTED and CHARACTERISTIC wastes as previously defined that:	Noncountable waste. A generator does not have to count wastes that:
<ul style="list-style-type: none"> - Accumulates on-site for any period of time prior to subsequent management. - Are packaged and then transported off-site. - Are placed directly in a regulated on-site treatment or disposal unit. - Are generated as still bottoms or sludges and removed from product storage containers or tanks. - Are placed into satellite accumulation containers. - Are universal wastes which are managed as hazardous wastes. 	<ul style="list-style-type: none"> - Are specifically exempted from counting. - Are left as residue in conventionally emptied containers or in the bottom of product storage tanks. - Are reclaimed continuously without storing prior to being reclaimed. - Are managed in an elementary neutralization unit, totally enclosed treatment unit, or a wastewater treatment unit. - Are discharged directly to a POTW without being stored or accumulated first. - Are already counted once in a calendar month, treated on-site or reclaimed, and reused. - Are managed as universal wastes.

The next nine steps outline requirements hazardous waste generators must follow to be in compliance with the North Dakota Hazardous Waste Management Rules. Generators may use Table 5 below to see what requirements they may have. The Department advises all generators to be aware of the applicable regulations, and to read each step of this guide closely.

**Table 5
Quick Reference**

	CESGQ	SQG	LQG
Hazardous waste determination	✓	✓	✓
State/EPA ID number		✓	✓
Storage quantity and/or time limits	✓	✓	✓
Storage standards		✓	✓
Acceptable facilities for off-site management of wastes specified	✓	✓	✓
Manifest		✓	✓
Biennial Report	*	✓	✓
Training, contingency plan and emergency procedures	**	✓	✓
DOT requirements		✓	✓
Land disposal restrictions		✓	✓
Universal waste requirements	***	✓	✓
Used Oil Requirements	✓	✓	✓

- * CESQGs are not required to complete biennial reports, however, the Department occasionally sends out reporting forms to CESQGs in order to maintain our database.
- ** Although CESQGs are not required by the North Dakota Hazardous Waste Management Rules to train their employees and have a contingency plan, it is in their best interests to discuss these issues with their employees.
- *** CESQGs have the option of managing their universal wastes as either a universal waste or as a hazardous waste. The Department cautions those CESQGs who manage these wastes as hazardous waste to ensure that they still meet the exemption criteria of less than 220 pounds per month of total hazardous wastes generated.

STEP 2. Obtain a State/EPA ID Number.

Businesses that generate hazardous wastes in regulated quantities (220 pounds per month or more) are required to obtain a site identification number. You may obtain a State/EPA ID number by filing a North Dakota Hazardous Waste Site ID Form, Form SFN 53681.

A. How to Complete the Form.

If you are a SQG or a LQG, you must obtain a State/EPA ID number. Many TSDFs require that CESQGs also have a site ID number. The notification form and instructions are available on the Department's webpage. The information requirements for form completion include the mailing and location address, facility contact, ownership information, and a description of the regulated activity.

If further assistance is needed, contact the Department's Hazardous Waste Program. When completed, mail the form to:

North Dakota Department of Health
Division of Waste Management
PO Box 5520
Bismarck, ND 58506-5520

B. Renotification.

The responsibility of notification lies with the generator. The Department requires that a generator renotify when the company name or ownership changes. Since a State/EPA ID number is site-specific, it will not change for that location. A Form SFN 53681 will need to be filed with the Department showing the changes.

If a company relocates or starts a branch at another location, the Department must be notified of the relocation or new location if this location generates hazardous waste. A Form SFN 53681 will need to be completed and filed

with the Department, and a State/EPA ID number issued for that location.

If your generator status changes, the Department only requires renotification if the facility generator status increases. If generator status decreases, it may be in the best interests of the facility to renotify.

C. Multiple State/EPA ID Numbers.

Large companies may be composed of several separate buildings. If these buildings are on contiguous property (not divided by **public roads or other property**), then the facility may use a single State/EPA ID number. If a company operates several sites which are **not** on common property, then separate State/EPA ID numbers may be required for each site depending on generator status.

A State/EPA ID number is unique to a site. The number is used to identify the facility on manifests, reports, container labels, and other required documents.

STEP 3. Containers, Labels and Markings, and Placards.

A. Containers.

Hazardous waste must be stored safely in appropriate containers. The type of container to be used depends on the type of waste to be stored. If you are uncertain of what container to use, contact the TSDF, the Department of Transportation, or the Hazardous Waste Program for recommendations.

Requirements for hazardous waste containers include:

- ▶ Containers must be made of sturdy, leak-proof materials and must meet DOT specifications for materials and construction. Typically, DOT 1A1 and 1A2 drums are used for hazardous liquid wastes and hazardous solid wastes.

- ▶ The container must be made of, or lined with, materials which will not react with the hazardous waste stored inside. For example, use a plastic container for corrosive wastes, since corrosives will react with steel.
- ▶ All containers holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

B. Container Labels and Markings.

The generator is responsible to ensure that all containers are correctly labeled. There are separate requirements for container labels and markings for storage and for transportation. Containers must be marked with the words “hazardous waste” or other words which describe the containers contents.

Using commercial preprinted hazardous waste labels is one way to meet most requirements for container labeling. When using a preprinted label, some suggestions for filling them out are:

- Complete as much information as possible before attaching to the container;
- Use an all-purpose, indelible felt-tip pen for marking on the label;
- Protect the label from spills by placing the label away from the bung or covering the label with clear plastic tape; and,
- Keep a photocopy of a properly filled out label for each hazardous waste stream generated for reference.

1. Marking for Storage.

- ▶ Mark with the words “Hazardous Waste.”
- ▶ Each container must be clearly marked with an “accumulation start date.” The accumulation start date is either the date

that waste is first placed (accumulated) in the container or the date the container is filled and placed in storage if the container meets the requirements of a “satellite accumulation container,” see Step 4.E.

- ▶ Each container must be marked with the appropriate waste code (D001, F005, etc.).



2. Marking for Transportation.

49 CFR Part 172 dictates how to properly mark and label containers for transportation. Each hazardous waste container must be labeled and clearly marked with the following information:

- ▶ Proper shipping name and UN/NA number (found in 49 CFR 172.101).
- ▶ Generator name and address.
- ▶ Manifest document number.
- ▶ Hazardous Waste Warning. This warning states, “Hazardous Waste Federal Law Prohibits Improper Disposal. If found, contact the nearest police, public safety authority, or the U.S. EPA.”

- ▶ Hazard labels. Hazard labels are 4" by 4" labels stating information such as FLAMMABLE, CORROSIVE, or OXIDIZER.

C. Placards.

Placards are large labels that are placed on transport vehicles. It is the generators responsibility to provide the transporter with correct placards. However, most transporters carry an assortment of vehicle placards. The placarding information can also be found in 49 CFR Part 172.

STEP 4. Storage and Accumulation.

Once a waste is generated at a facility it must be safely accumulated and properly stored. Storage and accumulation of waste are a primary concern. Proper accumulation and storage of hazardous waste ensures that the wastes are not mismanaged or accidentally or intentionally disposed. All generators are required to properly manage and handle storage containers to ensure that there are no leaks to the environment.

All storage containers must be properly identified, as stated in Step 3. Employees must be familiar with proper waste management of the wastes they generate, and should know what to do when the container is full.

A. General Storage Requirements.

1. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
2. Containers, whether in storage or satellite accumulation, must be properly marked and labeled. See Step 3 for label and marking requirements.
3. Containers must not be stored or handled in any manner that may cause them to rupture, leak, corrode, or otherwise fail.
4. The storage area must maintain sufficient aisle space to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility operation in an emergency.
5. SQGs and LQGs that have containers of hazardous waste in storage must inspect those containers **weekly**, and an inspection log must be kept. The containers must be visually inspected for leaks, structural integrity, container deterioration, and deterioration of the containment system. Containers must be elevated above floor level to allow inspection of the bottom. An example of a container inspection logsheet is located in the back of this booklet.
6. Incompatible wastes, or incompatible wastes and materials must not be placed in the same container. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste. Storage of incompatible wastes must be separated by dikes, berms, walls, or other devices.
7. Ignitable and/or reactive wastes generated by LQGs must be stored at least 50 feet away from the facility property line. The Department recommends that all facilities store ignitable and/or reactive wastes at least 50 feet from property lines, if possible.
8. Wastes may only be stored on-site in limited quantities for a limited time dependent on your generator status. Table 6 illustrates time and accumulation limits for each generator status.
9. Different regulations apply if you store your hazardous waste in tanks. Contact the Department for information and regulatory requirements.

B. Containment Standards.

1. A container storage area must be designed and operated in accordance with the following items:

- ◆ The underlying base must be free of cracks and gaps, and be sufficiently impervious to contain leaks, spills, and accumulated precipitation.
- ◆ The base must be sloped or designed and operated to drain and remove leaks, spills, and precipitation to a collection system.
- ◆ The containment system must be designed to have a capacity of 10 percent of the total volume of containers or the total volume of the largest container stored within that system, whichever is greater.
- ◆ The system must be designed to prevent run-on.
- ◆ Accumulated material must be removed from the collection system in a timely manner to prevent overflow.

2. Storage areas holding containers with no free liquids are not required to have secondary containment systems provided that (1) the storage area is sloped or otherwise designed and operated to remove precipitation; or (2) the containers are elevated or otherwise protected from contact with accumulated liquid.

C. Storage: Quantity and Time Limits.

The quantities of wastes that may be accumulated on-site by generators varies with the generator status and the distance to the TSDF facility. If total accumulations exceed 1000 kg for CESQGs, the generator is automatically regulated at the next higher level. If total accumulations exceed 6000 kg for SGQs, the generator is operating an unpermitted storage facility, and subject to enforcement actions. Table 6 gives a brief explanation of the quantity

and time limits.

D. Storage Time Limit Extensions.

If your hazardous waste cannot be shipped off-site within the specified time limit, you may request a storage time extension. If you need to request an extension, the request must be in letter form, addressed to the Director, Division of Waste Management.

The letter must explain why the extension is needed, detail the types and quantity of waste the extension is requested for, and describe the anticipated schedule for shipping of the waste. The extension's approval is based on the adequacy of the reasons presented in the extension request. Obtaining the extension is very important. Companies storing wastes in excess of the time and accumulation limits are operating an unpermitted storage facility, and as such are subject to enforcement actions.

E. Satellite Accumulation.

Many generators produce one or more waste streams which accumulate very slowly. In these cases, compliance with the 90-day or 180-day accumulation storage time may economically be very difficult, since the containers may not be full when the time limit is up. The Department allows for longer accumulation times under what is called "satellite accumulation."

Containers used in satellite accumulation of hazardous waste must meet the following criteria to qualify as satellite accumulation points:

1. The container is stored at or near the point of generation where the wastes initially accumulate and is under the control of the operator of the process generating the waste;
2. No more than 55 gallons of hazardous waste or one quart of acutely hazardous waste per waste stream may be accumulated at the site;

Table 6 - Quantity and Time Limits

Generator Category	Storage Limit	Shipping Schedule
CESQG	1000 kg (2200 lbs); if exceeded, generator is regulated at next higher category.	Less than 1000 kg may be stored indefinitely. Once 1000 kg is accumulated, the waste must be shipped off-site within 180 days, or 270 days if TSDF is located more than 200 miles distant.
SQG	6000 kg (13200 lbs); if exceeded, generator is operating an unpermitted storage facility.	All accumulated wastes must be shipped off-site within 180 days of the storage date, or 270 days if the TSDF is located more than 200 miles distant.
LQG	No limit.	All accumulate wastes must be shipped within 90 days of the storage date.

3. The container is marked with the words “Hazardous Waste” or other words that identify the contents of the container;
4. The container is in good condition and is compatible with the accumulated waste;
5. The container is kept closed, except when it is necessary to add or remove waste; and,
6. An accumulation start date must be clearly marked on the container when it is full and placed in storage.

A generator may have more than one satellite accumulation site throughout the facility if hazardous waste is generated from more than one process. A satellite accumulation point **may** contain more than one 55-gallon waste container if distinct waste streams are being separately accumulated.

STEP 5. Transportation and Disposal.

The generator has a “cradle to grave” responsibility for their hazardous waste, and this includes during transportation and after disposal. Selecting a hazardous waste transporter and treatment, storage, disposal or recycling facility is an important aspect of your waste management program.

Hazardous waste regulations dictate that a generator may not offer their hazardous waste for transport to a transporter who does not have an EPA/State identification number and a current North Dakota waste hauler permit. Though self-transportation is not prohibited, it demands careful consideration.

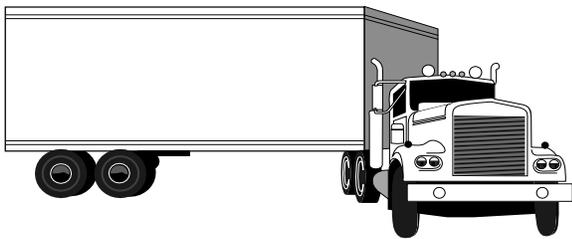
Many treatment, storage, disposal or recycling facilities (TSDF) offer a full management program where the TSDF prepares a manifest and contracts the transportation. The generator

must still review the manifest and ensure that the transporter is properly permitted to operate in North Dakota.

A. Selecting a Transporter.

1. Assess your needs. To assist in choosing a transporter, the Department has compiled a list of hazardous waste haulers. The list should only be a starting point. By providing the list, the Department does not suggest or imply that any listed transporters are reputable or are in compliance with applicable State and Federal laws. Before contacting a transporter, consider:

- Wastes. Inventory the types and amounts of wastes generated. Note whether they are solid, liquid, or sludge;
- Containers. Check the size, type, and condition. If a container appears to be in poor condition, a transporter may want you to repackage the waste; and,
- Frequency of shipments. Check the frequency you need to have your waste removed. The location of your chosen TSDF may allow you more storage time.



2. Narrow the selection. Ask these questions:

- Can the transporter take the quantity of waste I generate to my chosen TSDF as often as I need it done?;
- What costs are involved?;
- Does the transporter charge layover time?;

- How long has the transporter handled hazardous wastes?;
- Which parts of the manifesting process will the transporter handle? Remember, as a generator, you are ultimately responsible for an accurately filled out manifest;
- Does the transporter have local customers? Contact them to find out what kind of job the transporter is doing; and,
- Contact local trade associations, the Better Business Bureau, and the Chamber of Commerce. See if anyone has registered a complaint against the hauler.

3. Research the transporter. To lessen the chance of waste mismanagement, you want to hire a reputable and responsible transporter who has a working knowledge of the rules. You may ask your potential transporter these questions:

a. What permits or licenses does the transporter have or need?

- **ALL** transporters must have a State/EPA ID number.

- Transporters who pickup from or deliver waste to facilities located in North Dakota must have a current North Dakota Waste Haulers Permit.

b. Are the transporter's drivers qualified according to the Federal Motor Carrier Safety Act (FMCSA)? The FMCSA requires drivers to have successfully completed road testing and a written examination.

c. Are drivers trained for safe hazardous waste handling?

- Emergency response procedures?;

- Written contingency plan?;

- Do they carry a copy of the Hazardous Waste Material Response Guidebook?;

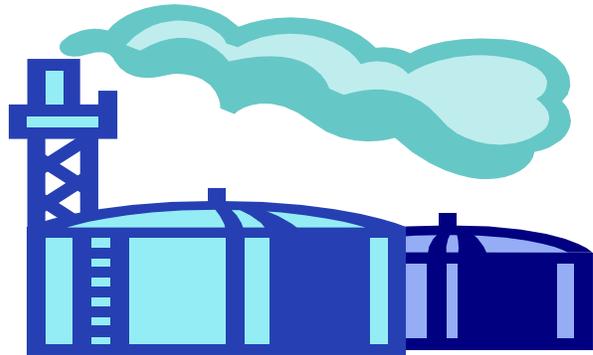
- Do they know proper DOT shipping names, UN/NA numbers, hazard classes, shipping numbers, etc.?
- Do they know how to properly mark and label containers of hazardous waste?
- Are they familiar with proper loading procedures, including:
 - * Hazardous waste loading charts;
 - * Segregate incompatible wastes;
 - * Follow bulk loading procedures; and,
 - * Inspect each individual container as it is loaded.
- Do they correctly placard the transportation vehicle?
- Do they pre-inspect emergency equipment prior to each trip (fire extinguisher, road flares, reflective triangles)?
- Are they trained in manifesting, including:
 - * Knowing which manifest to use;
 - * Familiar with filling a manifest out; and,
 - * Getting correct State/EPA ID numbers.

B. Select a Treatment, Storage, and Disposal Facility.

Because the **generator is ultimately responsible**, selecting a TSDF is another important part of your waste management program. Proper management of wastes will protect your company from liability for environmental damages resulting from mismanagement.

Ideally, a company representative visiting the TSDF is the best way to assess how your waste will be managed. It is not always possible to do this. Contacting the regulatory agency in the

state where the TSDF is located is one way to check on a TSDF's current regulatory status. Here is some guidance on choosing a TSDF.



Ask the TSDF representative:

- Is the facility the final TSDF or a broker? If a broker, ask who is the final facility and how will the final facility treat, store, or dispose of the waste?
- Who are some of the facilities local customers? Check with them on the facilities reputation.
- How will waste be transported to the facility, does the facility have their own vehicles or use a common/contract carrier?
- Can the facility handle your wastes?
- Is there a minimum shipment or minimum shipment charge?
- Is a sample required? If so, what fee is assessed for this sample? If your waste has already been analyzed, is that analysis acceptable? Can waste streams be mixed to reduce costs?
- How long will it take to complete arrangements for a shipment?
- What happens to the waste: is it treated? incinerated? fuel blended? recycled? landfilled? etc.

Contact the environmental officials in the state where the TSDF is located. Ask the official who inspects that facility:

- Is the facility currently in compliance with State and Federal regulations? If not, ask what ways are they not in compliance.
- Is the facility under orders to correct some past deficiencies or violations?
- Has the facility been fined in the past?
- How often is the facility inspected?
- Is the facility listed on the Superfund cleanup list?

Before arranging to ship hazardous waste to your chosen TSDF:

- Ask for a copy of their certificate of insurance. Ask to be listed on a separate certificate of insurance in case the facility goes bankrupt.
- Obtain a contract with the facility for their services. **Know where your waste is going, how it is managed, and the disposition of residues, ash, and empty containers.** Scrutinize the contract for hidden costs, such as per diem charges, safety equipment, miscellaneous testing, extra materials, etc.

C. Disposal of CESQG Wastes.

Many conditionally exempt small quantity generators dispose of their hazardous wastes at a permitted TSDF and ship wastes using permitted hazardous waste transporter. However, a CESQG may transport their hazardous waste off-site to either a permitted hazardous waste treatment, storage, or disposal facility or to a permitted municipal waste or industrial waste landfill contingent upon approval by both the Division of Waste Management and the local landfill authority.

Many permitted municipal waste and industrial waste landfills are no longer accepting these hazardous wastes or are refusing to accept conditionally exempt quantities of hazardous waste.

D. Household Hazardous Waste Collection Programs.

Household hazardous wastes are excluded from the hazardous waste regulations. However, your community may offer a Household Hazardous Waste (HHW) collection program to dispose of household hazardous waste. These programs can be sponsored by a business or group of businesses, the city or county. Costs for these programs are sometimes deferred, but this is not always the case. Many programs are specific as to the type, form, and quantity of waste accepted, disposal charges, pre-registration requirements, operation times, etc.

Some of these sponsored activities include exchanges of household waste paints, solvents, certain pesticides, cleaning and automotive products, and other materials. Contact the city, Chamber of Commerce, county, or the Department for information concerning these programs.

STEP 6. Manifests.

A manifest is a multi-copy form used for shipping hazardous waste off-site. This form details information concerning the generator, transporter, TSDF, and the amount and type of waste. It may also be used to ship nonhazardous waste.

A. Why Are Manifests Required.

Generators of hazardous waste are considered forever responsible (and liable) for the proper handling and disposal of their waste. They are responsible from the time the waste is generated, “the cradle,” to the time it is delivered to the final treatment, storage, or

disposal site, “the grave.” The manifest is a way to track hazardous waste after it leaves the generation site. This tracking provides protection from mismanagement.

In North Dakota, a “generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal must prepare a uniform hazardous waste manifest” before transporting the waste off-site. This means **the generator is responsible for the proper completion of the manifest.**

B. Which Manifest to Use.

One manifest per generator must accompany each shipment of hazardous waste. North Dakota generators must use either the Federal Uniform Hazardous Waste Manifest or another state’s manifest that is required by that state, following these rules:

1. North Dakota generators, who ship waste to a final treatment, storage, or disposal facility located in another state, must contact that state’s regulatory agency or the TSDf to determine which manifest to use. If the destination state requires use of their manifest, use their manifest. These manifests can be obtained from that agency, the TSDf, or the transporter.

2. North Dakota generators, who ship waste to a final treatment, storage, or disposal facility located within North Dakota, may use the Federal Uniform Hazardous Waste Manifest, EPA Form 8700-22 or any manifest obtained from any source.

C. Complete the Manifest.

Instructions for completing the manifest are found in Appendix I of Chapter 33-24-03 NDAC. Each section is labeled with the information required for completing that section. Be careful to:

Type or firmly print all required information. You are making at least six copies.

- ◆ Enter accurate information for the generator, transporter, and destination facility.
- ◆ Enter the appropriate DOT shipping name(s).
- ◆ Enter correct quantities and weights.
- ◆ Enter a telephone number for emergency 24-hour contact. Many facilities use CHEMTREC as a 24-hour emergency contact, non-emergency telephone number (800) 262-8200.

D. Distribution of Manifest Copies.

By law, only LQGs are required to send manifest copies to the Department. Other generators may also submit manifest copies to the Department. When using the Federal manifest, you must:

- ◆ Give copies 1-4 to the transporter;
- ◆ Retain copy 5 in your records for a minimum of three years;
- ◆ If you are an LQG, within 21 days of shipment send a legible copy of the manifest to the Department; and,
- ◆ If you are an LQG, within 21 days of receipt send a legible copy of the returned, facility signed manifest to the Department.

E. Exception Reports.

Small quantity generators that do not receive a copy of the designated facility-signed manifest within 60 days of shipment are required to submit to the Department a legible copy of the manifest and indicate that the generator has not received confirmation of delivery.

If a large quantity generator does not receive a copy of the manifest back from the TSDf within 35 days of shipment, they must contact the

transporter, the TSDf, or both, to check on the status of the hazardous waste. If they still do not receive a copy of the manifest within 45 days of shipment, the large quantity generator is required to notify the Department in writing within 60 days of shipment that they have not received a copy of the manifest. This letter must include a legible copy of the manifest for which the generator does not have confirmation of delivery and should state the steps taken to resolve the situation.

F. Land Disposal Restrictions.

The North Dakota Hazardous Waste Management Rules Sections 33-24-05-250 through 33-24-05-300 NDAC pertain to land disposal restrictions. These restrictions regard the placing of hazardous wastes in or on the ground, specific prohibitions, and treatment standards.

Dilution of a restricted hazardous waste is prohibited as a substitute for adequate treatment to achieve compliance. Dilution of characteristic hazardous wastes in a treatment system which discharges to waters of the United States is also prohibited.

Generators must determine if their waste is subject to LDR at the point of generation. If the waste is subject to LDR and does not meet applicable treatment standards, the generator must prepare a one-time notice to accompany the initial waste shipment. A new notice is only required if any changes were made to the process which generates the waste, the character or composition of the waste, or the receiving facility. Copies of the LDRs must be retained in your files for at least three years from the date the waste was sent to the treatment, storage or disposal facility with the notification.

If the waste meets the applicable treatment standards, then the generator must send a one-time notification and certification statement with the initial waste shipment. The notification and certification statements must be retained for three years from the date the waste was sent to

the treatment, storage or disposal facility with the notification and certification statements.

STEP 7. Emergency Planning and Response.

Generators of hazardous waste must carefully manage their wastes in order to minimize the risk of an accident and complete emergency planning requirements which describe what to do in response to an emergency. Emergency planning requirements are based on your generator status and may be similar to what other laws require.

OSHA also has requirements for emergency action planning. Minimum requirements that may satisfy emergency plans include, but are not limited to posting an evacuation plan, conducting fire extinguisher training, floor plans of buildings, maps of emergency escape routes, employees who are to remain to shutdown critical operations, designated emergency evacuation meeting points, accounting procedures for employees in an emergency evacuation, specific medical or rescue duties for designated employees, company-specific reporting methods for fires or other emergencies, and names and telephone numbers of persons familiar with the plan who may be contacted for general information.

A. CESQG Requirements.

CESQGs are not required by the North Dakota Hazardous Waste Management Rules to have any contingency planning. Such planning may be required by the city or county, or by insurance carriers. Some parts of contingency planning are common safety practices. If a CESQG becomes a SQG during the year, contingency planning is required.

B. SQG Requirements.

SQGs are required to:

1. Designate at least one employee either on-site or on call at all times to act as emergency coordinator.

2. Post the following information next to the telephone:

- ◆ Name and phone number of the emergency coordinator(s).
- ◆ Location of fire extinguishers, spill control equipment, and, if present, fire alarm.
- ◆ Telephone number of the fire department, unless the facility has a direct alarm.

3. Ensure all employees are familiar with proper hazardous waste handling procedures, relevant to their responsibilities.

4. Designate responses the emergency coordinator(s) need to fulfill in case of emergency. Such responses are:

- ◆ In the event of a fire, call the fire department or attempt to extinguish the fire with a fire extinguisher.
- ◆ In the event of a spill, stop the spill, contain the flow, and as soon as practicable, cleanup the spilled material and contaminated debris.
- ◆ In the event of a fire, explosion, or other release which may threaten human health outside the facility, or when the generator has knowledge that a spill has reached surface water, the emergency coordinator will notify the national response center at 1-800-424-8802. The report must include the following:
 - ◆ The name, address, and site ID number of the facility;
 - ◆ Date, time, and type of occurrence (e.g., spill or fire);

- ◆ Quantity and type of hazardous waste involved;

- ◆ Extent of injuries, if any; and,

- ◆ Estimated quantity and disposition of recovered materials, if any.

C. LQG Requirements.

LQG requirements include all SQG requirements plus a required written contingency plan. The contingency plan must include the following:

1. A description of actions (emergency procedures) facility personnel must take to respond to fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste to air, soil, or surface water;

2. A description of arrangements with local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services;

3. A list naming all qualified personnel who can act as emergency coordinator, including their priority of assumption, work and home telephone numbers, and addresses;

4. A list of all emergency equipment available at the facility including fire extinguishing systems, alarm systems, spill control equipment, communications equipment, and decontamination equipment; and,

5. An evacuation plan for all areas of the facility, particularly those pertaining to the treatment, storage, and disposal areas of the facility.

Copies of the contingency plan must be kept at the facility and be submitted to the local authorities. Amendments and updates can be submitted at any time to maintain current, up-to-date information. Updates must be submitted to

all recipients of the original contingency plan. Commonly, updates are submitted in the form of substitution pages containing the corrected information.

STEP 8. Personnel Training.

Education and training ensure that proper procedures for handling hazardous waste or responses to emergency situations are known by all personnel. The Department recommends that all facilities that generate hazardous waste have some form of employee training, and that this training be documented.

Ideas for training include brief safety meetings, video tapes and outside contractor-supplied training. However, you can make up fun things, such as crossword puzzles or word searches using safety terms to be used as a form of training. Records should include the type and description of the training, the date the training was held, and which employees attended.

Training issues are related to other regulatory agencies other than the Department of Health. The Occupational Safety and Health Administration also has training requirements. A program may be developed which addresses both of these programs training objectives.



A. CESQG Requirements.

There are no training requirements for CESQGs. It is recommended that personnel receive proper

guidance on hazardous waste handling procedures and emergency procedures.

B. SQG Requirements.

Training for SQGs consists of familiarizing employees with proper hazardous waste handling and emergency procedures. There are no formal training record requirements.

C. LQG Requirements.

LQGs are subject to a formal personnel training program. Requirements for the programs are:

1. Classroom or on-the-job training provided the training is site-specific and teaches facility personnel proper hazardous waste handling procedures including contingency plan implementation and emergency response procedures.
2. Must be directed by a person trained in hazardous waste management procedures.
3. New personnel must complete initial training within six months of employment. Employees may not work unsupervised until completion of this training.
4. All personnel shall have an annual training review.
5. Documents and records must be maintained that contain:
 - Job title and description for each position related to hazardous waste management, including name of employee;
 - Written documentation describing the type and amount of introductory and continuing training for each person filling a job position; and,

- Training records on current personnel must be kept until facility closure. Former employee records must be kept for a minimum of three years after the employee leaves employment with the facility.

D. HAZWOPER Training.

The Department of Labor under the Occupational Safety and Health Administration (OSHA) enacted training requirements for employees involved with certain hazardous waste operations. Persons requiring this training include those involved in: cleanup at uncontrolled waste dump sites; working at permitted hazardous waste TSDFs; and designated for responding to emergencies involving hazardous materials. The requirements also apply to firefighters, police officers, ambulance crews, and hazardous materials personnel who respond to hazardous waste spills.

The HAZWOPER training required by OSHA is different than the training required for hazardous waste management outlined above. For more information, contact OSHA at (701) 250-4521.

STEP 9. Reporting Requirements.

A. Biennial Reports.

The Department sends all SQGs and LQGs biennial hazardous waste reporting forms to be received on or about January 1 of every other calendar year. The SQGs and LQGs are required to complete the biennial hazardous waste report and return the completed report to the Department by March 1 of every other calendar year.

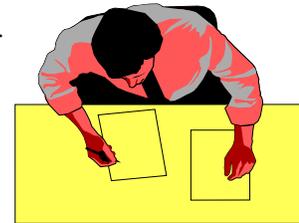
The biennial report records information on hazardous waste generation, transportation and disposal for the previous calendar year only. This means that generators do not need to track two years worth of data for reporting purposes.

CESQGs are not required to file biennial reports. However, the Department periodically sends a hazardous waste reporting form to CESQGs in order to maintain correct information in our database.

B. Intent to Import or Export.

The Department requires that facilities that intend to import from or export to another country notify the Department. The Department requires that the notification include the date of shipment, quantity shipped/received, frequency of shipment, and descriptions of the waste material, how it is to be treated, stored, and/or disposed, and how it is to be transported.

If you plan to or are importing or exporting hazardous wastes into the United States, you must contact the Department for further detailed information on reporting requirements.



C. One-Time Disposal.

On occasion, a company may need to dispose of hazardous wastes that are not generated on a regular basis. Examples include cleaning out a laboratory or a warehouse, products no longer fit for use, expired products, etc. If you generate waste as a one-time disposal, you may be required to notify the Department and obtain a State/EPA ID number (See Step 2).

D. Right to Know, SARA Title III, and EPCRA Reporting.

Communities and employees have the right to know about the amounts, location, and potential effects of hazardous chemicals being used or stored in designated quantities. These right to know laws are also known as SARA Title III and Emergency Planning and Community Right-to-know Act (EPCRA). Facilities are required

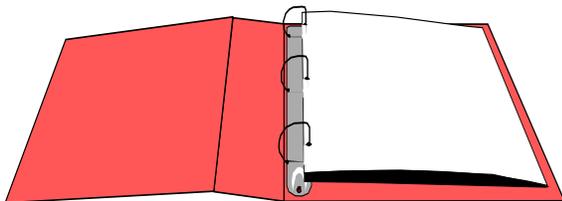
to submit Material Safety Data Sheets (MSDS) on OSHA “hazardous” chemicals to the North Dakota Division of Emergency Management and to Local Emergency Planning Committees (LEPCs).

An annual report is required to be submitted to the State Emergency Response Commission (SERC), LEPCs, and fire departments. This report is to include the names of chemicals, their quantities, and associated physical and health hazards. This report is due every March 1 of each year for the preceding calendar year.

Employers are required to make MSDS on hazardous materials used by the company available to their employees. Employees must be trained in the proper handling of hazardous materials. MSDS must be kept for thirty years. For further information concerning Right to Know, contact OSHA or the SARA Title III coordinator.

STEP 10. Records.

Tracking of hazardous wastes is done using manifests. Biennial reporting of hazardous waste generated is completed using these manifests. To facilitate ease in reporting quantities generated, proper record keeping practices should be followed by generators. In all cases, the periods for record retention are automatically extended during the course of any unresolved enforcement action regarding the regulated activity or at the request of the Department.



A. CESQG Requirements.

There are very limited record keeping requirements for CESQGs. It is recommended that if hazardous waste shipments are manifested off-site, and land disposal restriction forms are completed, that these documents be retained for the same time frames as listed below. Contractual agreements for the recycling of hazardous wastes must be maintained on-site.

B. SQG Requirements.

Records required for SQGs include:

1. Signed manifests from the designated facility for three years from the date of shipment.
2. Land disposal restriction forms for three years from date of shipment.
3. Copies of biennial reports and exception reports for the last three years.
4. Records of waste analysis for at least three years from the date the waste was shipped to an off-site TSDF.
5. Contractual agreements for the recycling of hazardous wastes must be maintained on-site.

C. LQG Requirements.

LQGs must follow the records requirements for SQGs, and the following:

1. Training records for all employees handling hazardous waste for three years. For employees that are no longer employed, training records must be kept for at least three years after their employment has ceased.
2. Plans and designs of all buildings and facilities used to treat, store, or dispose hazardous waste.

3. Manifest discrepancy reports, to include unmanifested waste reports.
4. Operating records, to include all provisions of Section 33-24-05-40 NDAC.
5. Documentation from updating and revising the contingency plan.

Section Two: Selected Topics

Topic 1: Sewering Wastes.

Certain wastes may be managed by sewerage. Acids and bases that have been neutralized and diluted may be discharged to a publicly owned treatment works (POTW) with permission. Some wastes may be discharged to lagoon systems with permission from the treatment works. At no time should wastes be sewerage to either septic systems or storm drains.

You should always notify the local treatment works prior to sewerage any chemicals. All treatment works have pre-treatment influent requirements that they must comply with. For more information, contact your local POTW or the Department's Division of Municipal Facilities.

Topic 2: Small Quantity Inventory.

Small quantity inventory disposal occurs when school laboratories or other laboratory facilities clean out laboratory chemicals and remove them from inventory. Some of the chemicals are relatively nonhazardous, and may be landfilled, sewerage, or diluted, neutralized and sewerage.

The Department requests that you send a letter listing all obsolete stock and quantities that require disposal. The Department will review the list of chemicals and determine which chemicals can be landfilled, sewerage, or diluted, neutralized, and sewerage. Chemicals which may be diluted and sewerage may cause problems with the POTW (see Topic 1). Some chemicals may not be appropriate for these treatment techniques. These chemicals will require handling as hazardous wastes.

Topic 3: Used Oil, Filters & Antifreeze.

Used oil is defined as any oil that has been refined from crude oil or any synthetic oil, which has been used, and as a result of such use

are contaminated by physical or chemical impurities. This definition includes vehicle crankcase, lubricating, hydraulic, some cutting, and many other oils. Used oil is exempt from hazardous waste regulation if it: 1) does not exhibit the characteristic of ignitability, and/or 2) does not contain a listed hazardous waste, or 3) is recycled.



The used oil rules apply to all generators equally. This means there are no different rules for conditionally exempt, small or large quantity generators to follow.

Containers or tanks used to store used oil must be clearly labeled with the words "used oil." This includes fill pipes for underground storage tanks.

Burning of used oil for energy recovery is an approved management method. Used oil-fired heaters must be designed to burn used oil as a fuel, have a heating capacity of 500,000 Btus or less, be vented to the outside atmosphere and burners may burn only used oil they generate themselves or accept from household do-it-yourselfers. There is no limit on the number of used oil-fired heaters a facility may use, however storage of used oil as a fuel may be regulated by other programs.

Underground storage tanks storing used oil for consumptive heating use are not regulated underground storage tanks. An underground

storage tank that is used to store used oil for heating purposes but also pumped when the used oil is not being burned is a regulated underground storage tank and must meet the requirements of the Underground Storage Tank regulations. If you have any questions regarding these regulations, contact the Department's Underground Storage Tank Program at (701) 328-5166.

It is illegal to dispose of used oil in solid waste landfills, on the ground, and in surface waters. Road oiling for dust suppression is also illegal. Some environmentally safe management methods for used oil include recycling, re-refining, and burning for energy recovery. The Department encourages recycling used oil whenever possible.

Used oil filters are not generally considered a hazardous waste. However, the used oil they contain will eventually end up in the leachate generated in the final disposal site, normally a landfill.

Used oil filters must be hot-drained (temperature above 60°F) of all free flowing oil for twelve hours before being considered drained. The Department recommends the following hot-draining methods: punctured and hot-drained, dismantling and hot-drained, or crushed and hot-drained. Used oil filters that have been hot-drained may be recycled as scrap metal or disposed in a permitted municipal waste or industrial waste landfill.

Ethylene glycol or propylene glycol (the main ingredients in antifreeze) are sweet tasting and can be toxic to animals and children in small amounts. The Department recommends that used antifreeze be recycled.

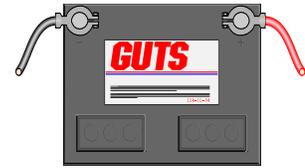
Waste antifreeze or used antifreeze may be disposed by sewerage to a POTW. However, you must contact the POTW for approval prior to disposal. At no time is antifreeze to be discharged to septic systems, storm sewers, streams, or dumped on the ground. Any spilled

antifreeze should be liberally diluted with large amounts of water.

The Department has developed lists of used oil jobbers and antifreeze recyclers. The Department does not endorse any jobber or recycler, but provides the lists as a service to the regulated community.

Topic 4: Used Lead-Acid Batteries.

It is illegal to dispose of used lead-acid batteries in municipal waste landfills or in the municipal waste stream. Lead-acid



batteries must be accepted by vendors of new batteries as trade-ins. Storage requirements for lead-acid batteries include a leakproof structure and that batteries be elevated above the floor to detect leakage. If you plan to store lead-acid batteries for reclamation or operate a reclamation facility, contact the Department's Hazardous Waste Program for further requirements.

Under the Universal Waste rules (See Topic 6), any battery may be managed in accordance with the universal waste regulations. This includes, but is not limited to, sealed cell lead-acid batteries, nickel-cadmium batteries, mercury batteries, and lithium batteries.

Topic 5: Pesticides.

Farmers using pesticides are exempt from most RCRA provisions. Pesticide wastes range from rinsate and empty containers to unused or unusable mixtures to pesticide contaminated soils.

Here are some guidelines for disposing and handling of pesticides:

1. Triple rinse or pressure rinse pesticide containers. Use rinsate for the required dilution of concentrated pesticides.

2. Use only the amount of pesticide required for your needs, and apply the pesticide in accordance with the label directions.
3. Purchase only the amount of pesticide required to accomplish the job.
4. Store pesticides away from food or feed and in a manner that protects humans, animals, and the environment. All pesticides must be kept in their original containers.

Some pesticides, when disposed, are considered a hazardous waste. Pesticides may become hazardous waste when they are suspended, canceled, or restricted. Pesticides that were commonly used only a few years ago are now considered hazardous wastes such as Dinoseb, Chlordane, and Toxaphene. Some current pesticides are hazardous waste when disposed, such as 2,4-D.

If you have any questions about old pesticides or pesticide collection programs, contact your local Ag Extension Office, the North Dakota Department of Agriculture Pesticide Director, or the Department's Hazardous Waste Program. Article 4-35 NDCC, the Pesticide Act, is available from the North Dakota Department of Agriculture.

The Department of Agriculture has operated a program named Project Safe Send. Project Safe Send collects and then subsequently manages the collected pesticides in accordance with applicable regulations. The program is paid for by pesticide registration fees, and is offered at no cost to the participants. For more information, contact your local Ag Extension office or the Department of Agriculture.

Topic 6: Universal Wastes and the Universal Waste Rule.

The universal waste rule is designed to reduce the amount of hazardous waste items in the municipal solid waste stream (MSW), encourage recycling and proper disposal of

certain common hazardous wastes and reduce the regulatory burden on businesses that generate these wastes. This protects the environment while encouraging effective and efficient waste management.

In North Dakota, the universal wastes include:

Batteries: such as nickel-cadmium, lithium- or mercury-containing batteries, which are found in many common items in business and home settings. Lead-acid batteries, such as automotive batteries, may be covered by the universal waste rule.

Pesticides: such as those pesticides which have been recalled or banned from use, obsolete pesticides, damaged pesticides and those pesticides which are no longer needed.

Mercury-containing devices: which include, but are not limited to, thermostats, switches, and other items in which mercury is contained in a capsule or other container and the mercury is used to transmit pressure, temperature or electricity. Mercury spill kits are not covered by the universal waste rule.

Lamps: which include, but are not limited to, fluorescent tubes, high intensity discharge lamps, neon, mercury vapor, high pressure sodium, and metal halide lamps.

Handlers of universal wastes, which includes generators, are required to notify the Division of Waste Management of their universal waste management activities and keep records of those activities for a period of three years. Records which meet the requirements need to show the originator of the waste, the type and quantity of waste, the transporter and the destination facility. The rule does not require any specific forms which need to be used as long as this information is covered. Hazardous waste generators do not need to re-notify for universal waste management activities.

Conditionally exempt small quantity generators may opt to manage their wastes under either the universal waste rule or continue to manage their wastes under the conditional exemption found in Section 33-24-02-05 NDAC.

Topic 7: Polychlorinated Biphenyls.

Polychlorinated biphenyls (PCBs) are manmade chemicals. PCBs were primarily used as a fire retardant in the cooling liquids of electrical transformers and capacitors. PCBs have been banned from manufacture since 1979 because of careless use or disposal of PCBs causing damage to human health and the environment. Once released, PCB's stable nature allows them to persist in the environment for a very long period of time.

Studies done relating to PCB exposure have shown both short- and long-term probable health effects. Concerns are for PCB's toxicity to the liver, adverse reproductive effects, carcinogenic risk upon exposure, and irritation to eyes, nose, throat, and skin. Laboratory data demonstrate that PCBs have caused cancer in animals. PCBs are categorized as a possible human carcinogen.

Concentrations of PCBs over 49 ppm are regulated by the Toxic Substance Control Act (TSCA) under 40 CFR 761 and covers PCB use, record keeping, storage, leak or spill cleanup and disposal. PCBs are a TSCA waste and should not be included in hazardous wastes biennial reports. One pound of "pure" PCBs (10 PCB fluorescent light ballasts) is the reportable quantity when disposing in a landfill under CERCLA. North Dakota's air and water quality requirements regulate concentrations of PCBs under 50 ppm.

Topic 8: Pollution Prevention & Waste Minimization.

Pollution prevention is avoiding the creation of hazardous waste. This is a national goal. Pollution prevention, or P2 as it is sometimes called, actually prevents wastes from being generated in

the first place. While this is not always possible, it is a good place to start when looking at reducing your potential for waste generation.

While P2 prevents waste generation, waste minimization reduces the amount or toxicity of wastes generated. Waste minimization is important for conserving the environment, but it can also save your company time and money. North Dakota regulations require LQGs to make a concerted effort to reduce the amount of hazardous waste generated.

Pollution prevention and waste minimization go hand in hand, and can be accomplished in many ways. Here are a few examples.

1. *Improved housekeeping.* Sloppy housekeeping can result in more waste being generated than is necessary. To reduce excess waste production:

- ▶ Buy only the amount of materials needed. Buying in quantity saves money initially, but leaves you with excess material which may exceed shelf life and require expensive disposal.
- ▶ Use only as much material as is needed so that little or no excess is generated. This is one time where using more is definitely not better.
- ▶ Use materials in correct proportions so that little or no excess is generated by making defective products or formulations.
- ▶ Ensure that equipment is working and maintained properly. Check for faulty valves or loose pipes and fittings to make sure that products are not lost or unintentionally contaminated.
- ▶ Inventory all wastes produced, clearly mark and label, and properly store these wastes. Inadequate labeling may make it difficult to identify wastes later on.

Improper storage can result in accidental contamination of nonhazardous waste.

2. Material substitution. Substituting nonhazardous or less hazardous products for hazardous materials that are presently used can reduce or eliminate some hazardous waste streams. Examples are switching citrus-based cleaners and degreasers for hazardous solvents, or nonmetallic, water-based paint for solvent, metallic pigmented paint, switching from solvent-based inks to non-petroleum, vegetable-based inks, or using a natural sorbent material (e.g., ground corn husks or nut shells) for oil spills which may then be burned for energy recovery.

3. Waste concentration. Some hazardous wastes contain large volumes of water making transportation, treatment, and disposal very costly. Commercially available equipment such as sludge dryers or filter presses remove the water content of a pretreatment sludge, thus reducing the volume of hazardous waste and disposal costs.

Other nonhazardous wastes, such as used oil filters or empty paint cans, may be crushed for volume reduction. This process saves volume in both the receptacle and the landfill if the crushed filters or paint cans are not able to be recycled. Many scrap metal dealers will accept used oil filters, both crushed and uncrushed.

4. Process redesign/modernization. Replacing existing equipment with newer, more efficient equipment for the same operation can significantly reduce waste generation, such as use of high volume low pressure (HVLP) paint spray guns or powder coating equipment.

5. Recycle/reuse. Closer evaluation of the way wastes are handled can sometimes result in opportunities for recycling. For example, waste solvent may be clean enough for another application in a different process. Use of distillation equipment to remove suspended materials in solvents can result in decreased waste volume and the reduced need for virgin solvents.

6. Waste exchange. Unused products, excess inventory, off-specification materials, and hazardous wastes may be exchanged as a management technique. A company utilizing a waste exchange lists a “product” in a waste exchange newsletter, allowing interested companies to contact for an exchange of the waste product. Assistance for waste minimization can be obtained from either the Hazardous Waste or the Solid Waste Program.

Topic 9: Environmental Services.

Environmental services available from the Department of Health include technical assistance, training, regulatory interpretations, and a variety of other services. Technical assistance reviews are on-site visits where the facility management practices are audited for compliance with applicable environmental or occupational safety regulations. Services are available from the following sources:

1. Aboveground Storage Tanks.

Registration:

Petroleum Tank Compensation Fund
701-328-9600

Installation plan review:

Office of Attorney General State Fire
Marshall's Office
PO Box 1054, Bismarck, ND 58502-1054
701-328-5555

Other information:

Division of Waste Management
Underground Storage Tank Program
701-328-5166

2. Air Quality Technical Assistance.

Department of Health
Division of Air Quality
701-328-5188

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| <p>3. Hazardous Waste Technical Assistance.</p> <p style="padding-left: 40px;">Division of Waste Management
Hazardous Waste Program
701-328-5166</p> | <p>10. Special Wastes. (Used Oil, Medical Wastes, etc.)</p> <p style="padding-left: 40px;">Division of Waste Management
Hazardous Waste Program
701-328-5166</p> |
| <p>4. Non-regulatory Technical Assistance.</p> <p style="padding-left: 40px;">Department of Health
Division of Waste Management
701-328-5166</p> | <p>11. Spills.</p> <p style="padding-left: 40px;">Division of Emergency Management
PO Box 5511, Bismarck, ND 58506
Spill Coordinator
701-328-8100
After Hours: 1-800-472-2121</p> |
| <p>5. Occupational Safety and Health Assistance.</p> <p style="padding-left: 40px;">Occupational Safety and Health Administration
1640 E Capitol Ave., Bismarck 58501
701-250-4521</p> | <p>12. Toxic Release SARA Title III, "Community Right to Know."</p> <p style="padding-left: 40px;">Division of Emergency Management
SARA Title III Coordinator
701-328-8112</p> |
| <p>6. Pesticides.</p> <p style="padding-left: 40px;">Department of Agriculture
600 E Blvd, 6th Floor, Bismarck 58505
Pesticide Director
701-328-4756
1-800-242-7535</p> | <p>13. Transportation Requirements.</p> <p style="padding-left: 40px;">Department of Transportation
608 E. Blvd, Bismarck, ND 58505
Motor Vehicle
701-328-2725</p> <p style="padding-left: 40px;">Department of Transportation Federal Motor Carrier Safety
1471 Interstate Loop, Bismarck 58503
701-250-4346</p> |
| <p>7. Sewering.</p> <p style="padding-left: 40px;">Local Publicly Owned Treatment Works (POTW)</p> <p style="padding-left: 40px;">Department of Health
Division of Water Quality
701-328-5210</p> | <p>14. Underground Storage Tanks.</p> <p style="padding-left: 40px;">Division of Waste Management
Underground Storage Tank Program
701-328-5166</p> |
| <p>8. Small Business Assistance Hotline.</p> <p style="padding-left: 40px;">Small Business Assistance Hotline
1-800-755-1625</p> | <p>15. Water Quality Technical Assistance.</p> <p style="padding-left: 40px;">Division of Water Quality
701-328-5210</p> |
| <p>9. Solid Waste Technical Assistance.</p> <p style="padding-left: 40px;">Division of Waste Management
Solid Waste Program
701-328-5166</p> | |

16. Environmental Health Section Fax Line.

On your fax, identify the recipient and division.

701-328-5200

17. Environmental Health Section East

The Department started a branch office located in Fargo, ND.

701-476-4121

701-241-8109 (fax)

The Department maintains policy letters, management outlines, lists, and other documents which are for public distribution. These documents are available on the Department's webpage. The Department updates these materials as often as necessary. If you have a document that is a few months or years old, contact the Department to see if the document has been updated. These items are available upon request in small quantities. Requests can be by letter, fax, telephone call, or e-mail to the Department, requesting the documents and the desired quantity.

Topic 10: Information Services.

This is the thirteenth edition of this document. Comments on the content and readability of the document are encouraged. Please send comments and inquiries to the Hazardous Waste Program.

If you have a need for additional information that is not found in this guidebook or on the internet home page, please call the Department at (701) 328-5166 to request the specific information you require.

The Department has developed an internet home page which generators may find useful information regarding many aspects of hazardous waste management. The page also links to other environmental home pages, such as EPA's home page.

The universal resource locator (URL) direct link to the Division of Waste Management Home Page is <http://www.health.state.nd.us/ndhd/environ/wm/index.htm>. Access may also be gained from DiscoverND.com. At the bottom of this page, click on Health and Safety then click on Environmental Services.

You may link to the Division's three programs: Hazardous Waste, Solid Waste, and Underground Storage Tanks. Or you may link to the Health Department's Home Page and access other Divisions within the Environmental Health Section, Administrative Services Section, Health Resources Section, and the Preventive Health Section.

ACRONYMS & EQUIVALENTS CHART

CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFC	Chlorofluorocarbon
CWA	Clean Water Act
DOT	Department of Transportation
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-know Act
HAZWOPER	Hazardous Waste Operator training
HHW	Household Hazardous Waste
HSWA	Hazardous and Solid Waste Amendments
LDR	Land Disposal Restriction
LEPC	Local Emergency Planning Committee
LQG	Large Quantity Generator
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDH	North Dakota Department of Health
NDPDES	North Dakota Pollution Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PPB	Parts Per Billion
PPM	Parts Per Million
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SWDA	Solid Waste Disposal Act
SERC	State Emergency Response Commission
SQG	Small Quantity Generator
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage, or Disposal Facility
TSDR	Treatment, Storage, Disposal or Recycling facility

Measurement Comparisons		
Unit	1 ppm (µg/g, mg/l, mg/kg)	1 ppb (µg/kg, µg/l)
Cash	1 cent/\$10,000	1 cent/\$10 million
Time	1 minute/2 years	1 minute/2,000 years
Weight	1 pound/500 tons	1 pound/500,000 tons
Length	1 inch/16 miles	1 inch/16,000 miles
Volume	1 12-oz. can/42,000 cases	1 can/42 million cases

Fill in and post this information near telephones. This information is required by Section 33-24-03-12.4 NDAC.

EMERGENCY RESPONSE INFORMATION

Emergency Coordinator

Name: _____

Spill Control Materials

Location(s): _____

Telephone Number: (Work) _____

Fire Alarm Location:

(Home) _____

Fire Extinguisher Location(s): _____

Fire Department: _____

Police Department: _____

Fill in and post this information near telephones. This information is required by Section 33-24-03-12.4 NDAC. Make sure all employees are familiar with the information and how to implement it in an emergency.

EMERGENCY RESPONSE PROCEDURES

Spills: Stop flow and contain the spill to the extent possible, as soon as possible. Cleanup spill with the appropriate material and dispose as necessary.

Company Name: _____

Address: _____

Site Identification Number: _____

Fire: Alert fire department, and if safe, attempt to control the fire with fire extinguisher.

Date of incident: _____

Time of incident: _____

Fire, explosion or other release which could threaten human health outside the facility, or if spill has reached surface water: Call Emergency Management at (800) 472-2121 with the following information.

Type of incident(spill, fire, etc): _____

Quantity of hazardous waste involved: _____

Extent of injuries, if any: _____

Estimated quantity and disposition of recovered materials, if any: _____

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