CHAPTER 7: Reporting, Environmental Planning, and Release Response

There are numerous regulations that are related to preventing and controlling releases to protect the environment and public health and to inform the public about regulated materials in their area. These regulations require release reporting, notifications, inspections, recordkeeping, response and cleanup activities, and other requirements if facilities meet certain conditions and are referenced in the following sections. The various regulations define regulated materials differently so it is important to know if the material on-site is included under a particular regulation. A material may have requirements under more than one regulation. If that is the case, meet the strictest requirements. If you think there is a conflict of requirements, discuss those with the regulating agencies.

This chapter will provide a summary of state and federal environmental requirements for materials usually found at printing facilities that are not addressed in the other chapters and will refer you to applicable chapters when appropriate. This chapter does not contain requirements included in all permits a facility may have, or requirements overseen by the Michigan Department of Consumer and Industry Services (CIS) (see Section Two) or local construction and fire codes (see Section Three). In addition, it does not cover local ordinances and requirements by insurance companies that need to be followed. Each printer will need to review the regulations and facility permits for specific requirements for the materials they have on-site and discuss questions with the regulating agency. Contact your local building official, zoning office, fire department, waste water treatment plant, insurance company, etc. for local requirements. Also see Chapter 5 regarding sites of environmental contamination, property transfers, and liability issues.

7.1 Environmental Release Prevention and Response Planning

Printers may be involved with one or more of the following environmental related plans, and related reporting and notifications, depending on the type and amount of materials at the printing facility, where it is stored, and how many employees are at the company. Each plan has specific information that must be included, but the facility may combine the plans into one as long as that integrated plan addresses all of the individual regulatory requirements. Even if not required to have a written plan, each facility should know how employees will respond to an emergency.

In This Chapter . . .

7.1 Environmental Release Prevention and Response Planning
7.2 Release Reporting Requirements
7.3 Release Response and Cleanup
7.4 Where To Go For Help

- **7.1.1 SARA Title III – Emergency Planning & Community Right-to-Know Act** if have regulated amounts of materials and meet regulated conditions.

- **7.1.2 Pollution Incident Prevention Plan (PIPP)** if have regulated amounts of oils, salts, and chemicals listed in **R 324.2009**.

- **7.1.3 Spill Prevention Control and Countermeasure (SPCC) Plan** if have regulated amounts of oil storage capacity and a release could potentially reach navigable waters.

- **7.1.4 Hazardous Waste Contingency Plan** if have regulated amounts of hazardous waste.

- **7.1.5 Storm Water Pollution Prevention Plan (SWPPP)** if have a storm water discharge permit.

- **7.1.6 Integrated Contingency Plan (ICP)** if the printing facility chooses to prepare one plan that covers multiple regulatory requirements instead of developing individual plans under each regulation.

Besides the plans discussed in this chapter, facilities may have other planning requirements in permits issued to the facility and may be subject to worker safety and health related planning requirements. You should give your local fire department information about the hazardous materials kept on-site and invite them to tour your facility so they can be adequately trained and have the necessary equipment available to respond to an emergency at your facility. One practice that is recommended in some areas to help emergency responders is to have a closed box or emergency tube available somewhere outside of the facility building(s) that can protect its contents of facility emergency contacts, basic facility information, facility maps, and either Material Safety Data Sheets (MSDS) or a list of potentially harmful materials on-site including their CAS numbers. Talk to your fire department about this practice. They can provide recommendations as to what they want to have immediately available if called to the site and where they would like to have the information located. However, due to terrorism concerns be cautious about the placement in regard to potential sabotage. Do not submit copies of your plans to the regulating agencies unless it has been requested.

It is recommended that you consider what needs to be done in case of an emergency and prepare a response plan to protect yourself and the environment. Consider the following in case emergency responders are called to the facility:

- The fire department's response is based on the information you give them. Provide as much detail as possible when calling for help. Have your emergency information readily available and let them know what hazardous materials are involved, how much if known, the location of the spill, if people are inside the facility or taking some response actions, wind direction, etc.;

- Have a key contact person (who is knowledgeable about the whole facility and the incident) meet the responders;

- Make sure everyone is accounted for. That includes both employees and visitors at the facility;

- Keep everyone upwind of the situation and if necessary have people move to a different location;

- Have a knowledgeable public relations person from the facility available to address media if they arrive at the scene; and

- Follow the emergency responders' directions.

Other emergency planning resources include:

- The Michigan State Police (MSP), Emergency Management Division, has several publications that help companies and communities prepare for a hazardous materials incident, including the *"Site Emergency Planning Workbook"* and the *"Warning, Evacuation, and In-Place Protection Handbook."* Printed copies are available by calling 517-333-5034 or on the Michigan State Police Internet site at **www.michigan.gov/msp** for electronic copies;

- The Federal Emergency Management Agency at **www.fema.gov** for prevention and preparation information;

- The Center for Disease Control at **www.cdc.gov** for public health emergency preparedness such as anthrax or other bioterrorism threats;

- National Response Center at **www.nrc.uscg.mil/index.html** for information about transportation accidents, oil spills, chemical releases, and more; and

- Numerous links to chemical databases, MSDS databases, and chemical fact sheets developed by ATSDR highlighting toxicity, exposure information, and more is at **response.restoration.noaa.gov/cameo/links.html**.

7.1.1 SARA Title III - Emergency Planning & Community Right-to-Know Act

The ***Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*** was enacted by Congress in 1980 to clean up the nation's hazardous waste sites and to provide for emergency response to releases of hazardous substances into the environment. ***CERCLA*** is also called Superfund, and the hazardous waste sites are known as Superfund sites. In response to continuing community concern regarding hazardous materials and chemical release tragedies, a reauthorization and expansion of Superfund was signed into law in 1986. It is known as the ***Superfund Amendments and Reauthorization Act (SARA)***. ***Title III of SARA ("SARA Title III")*** is the ***Emergency Planning and Community Right-To-Know Act (EPCRA)***.

SARA Title III establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The ***Community Right-to-Know*** provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.

SARA Title III is a federal act that is implemented in Michigan under an Executive Order from the Governor. In accordance with the act, the Governor established a State Emergency Response Commission (SERC). The SERC has 17 commissioners appointed by the Governor and is chaired by a representative of the MSP. The MSP Emergency Management Division oversees the emergency planning requirements in ***SARA Title III***. The vice chair is a representative of the Michigan Department of Environmental Quality (MDEQ). The MDEQ Environmental Science and Services Division (ESSD), SARA Title III Program, handles the reporting requirements in ***SARA Title III***. The MDEQ SARA Title III Program receives all reports on behalf of the SERC.

The U.S. Environmental Protection Agency (USEPA) enforces ***SARA Title III***. The regulations implementing ***SARA Title III*** are codified in ***Title 40 of the Code of Federal Regulations, Parts 350*** through ***372***.

SARA Title III requires that the SERC establish Local Emergency Planning Committees (LEPCs). There are 89 LEPCs in Michigan – one for each of the 83 counties, as well as LEPCs for the cities of Ann Arbor, Detroit, Grand Rapids, Livonia, Romulus, and Wayne.

What does SARA Title III cover?
SARA Title III has four major components:
- Emergency planning (Sections 302 and 303);
- Emergency release notification (Section 304);
- Hazardous chemical inventory (Sections 311 and 312); and
- Toxic chemical release inventory (Section 313).

The chemicals covered by each of the sections are different, as are the quantities that trigger reporting. Each of these components is discussed below.

7.1.1.a Emergency Planning (Sections 302 and 303)

Off-site emergency response plans contain information that community officials can use at the time of a chemical accident. These plans are developed by LEPCs and address the off-site response to emergency releases of “extremely hazardous substances” from certain facilities in their planning districts. On-site emergency response plans are the responsibility of the facilities and are not addressed in ***SARA Title III*** (see the following facility plans for those requirements).

There are 356 extremely hazardous substances (EHSs) listed by USEPA. If your facility has any of the listed chemicals at or above its associated threshold planning quantity (TPQ), you must notify the SERC and your LEPC that your facility is subject to ***SARA Title III Emergency Planning*** requirements. This one-time notification must be made within 60 days after you first receive a shipment that causes your facility to meet or exceed the threshold planning quantity for that substance. Your LEPC must then write an off-site emergency response plan for your facility.

The EHSs at printing facilities are most commonly contained in mixtures. To determine if your facility is subject to Emergency Planning requirements, you will need to calculate the total

amount of the pure EHS that is contained in all products – but only if the EHS makes up at least 1 percent of the product. For example, formaldehyde is an EHS with a TPQ of 500 pounds. The concentration of formaldehyde in resins is typically less than 1 percent, so it is not included in the total. On the other hand, the concentration of formaldehyde in film stabilizers is normally about 5 percent, so that formaldehyde would be included in the calculation of the total amount of formaldehyde on site. If the total amount of formaldehyde on site is 500 pounds or more, then the facility is subject to Emergency Planning requirements.

Do not overlook batteries. Batteries contain battery acid, a mixture of approximately two thirds water and one third sulfuric acid. Sulfuric acid is an EHS with a TPQ of 1,000 pounds. In general, the weight of pure sulfuric acid is one ninth of the total weight of the battery. Using this general rule, a 3,000-pound forklift battery contains approximately 335 pounds of pure sulfuric acid.

You may use the *"SARA Title III – Section 302 Emergency Planning Notification"* to notify the SERC and your LEPC that your facility is subject to the emergency planning provisions of ***SARA Title III***. The SARA Title III Program in the MDEQ accepts these notifications on behalf of the SERC.

The *"Section 302 Emergency Planning Notification"* and the complete list of EHSs with associated TPQs can be obtained by contacting the MDEQ SARA Title III Program or your LEPC, or by going to the SARA Title III Program web site. LEPC contact information is available from the SARA Title III Program or their website.

SARA TITLE III – SECTION 302
EMERGENCY PLANNING NOTIFICATION

Facility ID No. (if one has been assigned by the SARA Title III Program): _____

Facility Name: _____

Facility Address: _____

_____

City: _____ Zip Code: _____

County: _____

Facility Emergency Coordinator: _____
(who will participate in the local emergency planning process as a facility emergency response coordinator)

Emergency Coordinator Telephone: _____

Emergency Coordinator Address (if different from facility address): _____

_____

CHECK ONE:

❑ I have determined that the above facility ***does not*** have on-site an Extremely Hazardous Substance as defined by SARA Title III above the threshold planning quantity and, therefore, ***is not*** subject to section 302 of the law.

❑ I have determined that the above facility ***does*** have on-site an Extremely Hazardous Substance as defined by SARA Title III, _____,
(chemical name(s))
above the threshold planning quantity, and therefore ***is*** subject to section 302 of the law. In accordance with the law, the owner or operator of this facility shall: (1) inform the Local Emergency Planning Committee (LEPC) of any changes occurring at this facility that might be relevant to emergency planning; and (2) upon request of the LEPC, promptly provide to the LEPC any information necessary for development or implementation of the local emergency plan.

_____ _____ _____
Signature Title Date

Please return to:
SARA Title III Program
Department of Environmental Quality
Environmental Science and Services Division
P.O. Box 30457
Lansing, Michigan 48909-7957
517-373-8481
and
Your LEPC

7.1.1.b Emergency Release Notification (Section 304)

If there is a release of a hazardous substance from your facility into the environment that is equal to or exceeds the minimum reportable quantity set in the regulations, you must immediately (within 15 minutes of discovery) notify the U.S. Coast Guard National Response Center, the SERC by calling the MDEQ Pollution Emergency Alerting System, and your LEPC. This requirement covers the 356 extremely hazardous substances as well as more than 700 listed hazardous substances subject to the emergency release notification requirements under ***CERCLA Section 130(a)(40 CFR 302.4)***. Some chemicals are common to both EHS and ***CERCLA*** lists. Initial notification can be made by telephone, radio, or in person.

A written follow-up notice must be submitted to the SERC and LEPC as soon as practicable (within two weeks) after the release. The follow-up notice must update information included in

the initial notice and provide information on the actual response actions taken and advice regarding medical attention necessary for citizens exposed to the released chemical.

See Chapter 7.2 for more release reporting information.

7.1.1.c Hazardous Chemical Inventory (Sections 311 & 312)

Hazardous chemical inventory reporting applies to any facility that is required to maintain an MSDS in accordance with the Occupational Safety and Health Administration (OSHA) regulations. More than 6,000 facilities in Michigan submit hazardous chemical inventories to the SERC, LEPCs, and local fire departments. These inventories provide valuable information regarding hazard potential to the first responders in the event of a chemical release emergency.

7.1.1.c.(1) What Chemicals Are Included

Under OSHA regulations, employers must maintain an MSDS for any hazardous chemical or substance stored or used in the work place. Approximately 500,000 products have MSDSs required by OSHA. These are referred to here as “OSHA hazardous chemicals.” There is *no list* of these OSHA hazardous chemicals.

Sections 311 and 312 of SARA Title III require that facilities submit initial and annual reports of the OSHA hazardous chemicals if they exceed certain thresholds. The thresholds refer to the total amount of chemical on site, in storage and in process, at any one given time. The thresholds for reporting under ***Sections 311*** and ***312*** follow:

- EHS = 500 pounds or the TPQ, whichever is less.
- All other OSHA hazardous chemicals (except as stated below) = 10,000 pounds.
- The threshold for reporting in response to a request from the SERC, LEPC, or local fire department = zero. Regardless of the amount of chemical on site, you must submit a report if you are asked to do so by one of these agencies.

The thresholds are in pounds. So what do you do if your substance is in liquid form and you only know the number of gallons? To convert gallons to pounds, multiply the specific gravity (also called the relative density) of the substance by the weight of water to get the pounds per gallon of the substance. The specific gravity can be found on the MSDS. If the MSDS gives a range of specific gravities, use the highest value. The weight of water is 8.33 pounds per gallon.

For example, the MSDS for a certain fountain solution lists a specific gravity of 1.07. To calculate the weight of that fountain solution, multiply 1.07 by 8.33 pounds per gallon water to get 8.9 pounds per gallon fountain solution. If you have over 1,123 gallons (10,000 pounds) of fountain solution at any one time, then it would be subject to reporting under this part of the regulation.

If your facility has no chemicals on site that meet these thresholds, then a report is not required.

7.1.1.c.(2) Initial Report of Hazardous Chemicals

It is especially important for the safety of facility personnel, the community, and the first responders, that the first responders (usually the local fire department) know what hazardous chemicals are in your facility. ***Section 311*** requires that facilities submit an initial report of OSHA hazardous chemicals on site in amounts greater than the thresholds to the SERC, LEPC, and local fire department. This report must be submitted within three months after the chemical threshold is exceeded.

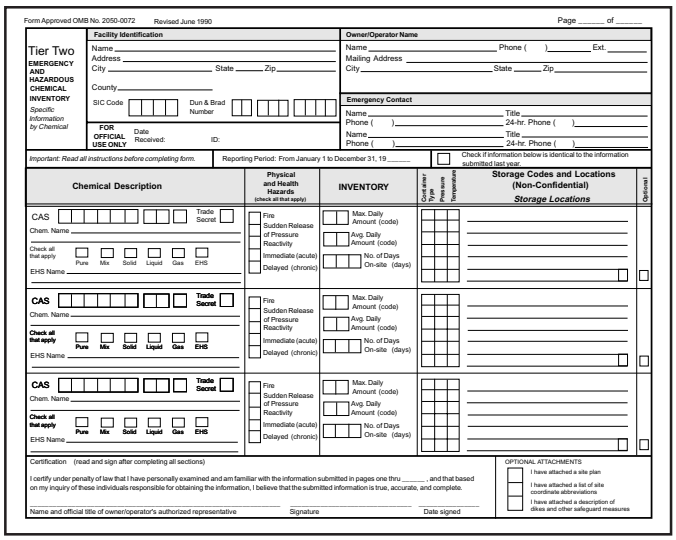
The initial report consists of either copies of the MSDSs or a list of the OSHA hazardous chemicals. If the facility owner or operator chooses to submit a list, then the list must include the chemical or common name of each substance and must identify the applicable hazard categories. These hazard categories are:

- Immediate (acute) health hazard;
- Delayed (chronic) health hazard;
- Fire hazard;
- Sudden release of pressure hazard; and
- Reactive hazard.

7.1.1.c.(3) Annual Report of Hazardous Chemicals

Section 312 requires that facilities submit annually an Emergency and Hazardous Chemical Inventory to the SERC, LEPC, and local fire department. The inventory is submitted on a Tier Two report form by March 1 of every year. The Tier Two report includes information about the amount and storage of all OSHA hazardous chemicals that exceeded the applicable thresholds during the previous calendar year.

Your Tier Two report can be submitted electronically to the MDEQ SARA Title III Program as an email attachment to deq-ead-tier2@michigan.gov. Remember that the SARA Title III Program receives all reports on behalf of the SERC. To get a copy of Michigan's Tier Two reporting software, contact the MDEQ SARA Title III Program or visit their web site. Do not use USEPA's software to report electronically in Michigan.


Form Approved OMB No. 2050-0072 Revised June 1990 Page _____ of _____

Tier Two
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information by Chemical

Facility Identification
Name
Address
City State Zip
County
SIC Code Dun & Brad Number
FOR OFFICIAL USE ONLY Date Received: ID:

Owner/Operator Name
Name Phone ( ) Ext.
Mailing Address
City State Zip

Emergency Contact
Name Title
Phone ( ) 24-hr. Phone ( )
Name Title
Phone ( ) 24-hr. Phone ( )

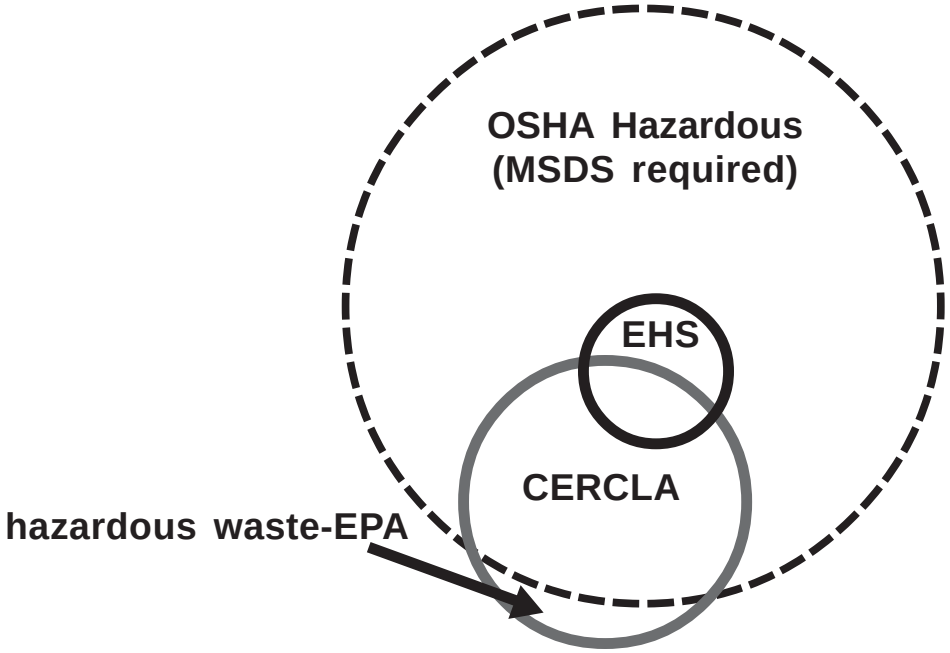
Important: Read all instructions before completing form.
Reporting Period: From January 1 to December 31, 19_____
Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (check all that apply)	INVENTORY	Codes & Amer/ Pressure Temperatures	Storage Codes and Locations (Non-Confidential) *Storage Locations*	(Optional)
CAS Trade Secret; Chem. Name; Check all that apply: Pure Mix Solid Liquid Gas EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	Max. Daily Amount (code); Avg. Daily Amount (code); No. of Days On-site (days)			
CAS Trade Secret; Chem. Name; Check all that apply: Pure Mix Solid Liquid Gas EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	Max. Daily Amount (code); Avg. Daily Amount (code); No. of Days On-site (days)			
CAS Trade Secret; Chem. Name; Check all that apply: Pure Mix Solid Liquid Gas EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	Max. Daily Amount (code); Avg. Daily Amount (code); No. of Days On-site (days)			

Certification (read and sign after completing all sections)
I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages one thru _____, and that based on my inquiry of these individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.
Name and official title of owner/operator's authorized representative Signature Date signed

OPTIONAL ATTACHMENTS
I have attached a site plan
I have attached a list of site coordinate abbreviations
I have attached a description of dikes and other safeguard measures

Summary of Hazardous Chemicals Covered by SARA Title III Requirements



On the above diagram, the large circle outlined with the dashed line represents the universe of OSHA hazardous chemicals. These chemicals are subject to Tier Two Emergency and Hazardous Chemical Inventory reporting. The line is dashed because there is no list of these chemicals.

The extremely hazardous substances (EHS on the diagram) are listed, so the circle is outlined with a solid line. Each EHS has an associated threshold planning quantity for emergency planning, and a reportable quantity for release reporting. The EHSs are also subject to Tier Two Emergency and Hazardous Chemical Inventory reporting.

The ***CERCLA*** hazardous substances are listed and have associated reportable quantities for release reporting. Part of the ***CERLCA*** group falls outside of the OSHA group. OSHA does not require that you maintain an MSDS for hazardous waste that is subject to ***Resource Conservation and Recovery Act (RCRA)*** regulations, so ***RCRA*** hazardous waste is not reportable on the Tier Two report. However, if there is a release of the ***RCRA*** hazardous waste that is above the listed reportable quantity, that release must be reported.

7.1.1.d Toxic Chemical Release Inventory (Section 313)

Section 313, commonly referred to as the Toxic Chemical Release Inventory or TRI, requires certain facilities to complete a report annually for specified chemicals. The report must be submitted to both USEPA and the SERC by July 1 and covers releases and other waste management of toxic chemicals during the preceding calendar year. Facilities also must report information on source reduction, recycling, and treatment under the ***Pollution Prevention Act of 1990***. One purpose of this reporting is to inform the public and communities surrounding

covered facilities about toxic chemicals at individual facilities, their uses, and releases into the environment. The USEPA maintains the information in a national TRI database that is available to the public. The State of Michigan also makes the information available to the public. TRI data are available on the Internet and in published reports.

7.1.1.d.(1) Subject Facilities

The TRI reporting requirement applies to printing, publishing, and allied industries that are in the manufacturing SIC Major Group 27; are facilities that have ten or more full-time employees (or the equivalent of 20,000 hours per year); and use, manufacture (including import), or process a listed toxic chemical above threshold quantities.

This group includes newspaper, periodical, book publishing and printing, and commercial printing operations. Facilities that produce envelopes, stationary, and greeting cards; and bookbinding, typesetting, and platemaking operations also may perform printing.

7.1.1.d.(2) Toxic Chemicals and Reporting Thresholds

There are about 650 toxic chemicals and chemical categories covered by ***Section 313***. These chemicals are listed in ***40 CFR 372.65***. Special chemicals of concern that have lower thresholds are listed in ***40 CFR 372.28***. The List of Lists mentioned earlier identifies the ***Section 313*** chemicals.

A facility must report if it manufactures (including imports) or processes 25,000 pounds or more or otherwise uses 10,000 pounds or more of a listed toxic chemical during the calendar year. Lower thresholds were established beginning in 2000 and 2001 for special chemicals of concern. These chemicals are persistent, bioaccumulative and toxic (PBT); the thresholds are specified in ***40 CFR 372.28***.

The USEPA can add, remove, or modify the list of toxic chemicals that must be reported. Facilities should check each year for any changes to the ***Section 313*** chemicals and chemical categories.

The following table 7.1 lists the ***Section 313*** chemicals and chemical categories most frequently reported for printing operations.

7.1.1.d.(3) Toxic Chemical Release Inventory Report

If you meet the above criteria, you need to submit the *"Form R - Toxic Chemical Release Inventory Reporting Form"* by July 1 to USEPA and the SERC. Remember, the MDEQ SARA Title III Program receives these reports on behalf of the SERC. Each year, the USEPA mails the reporting packet (form, instructions and software) to companies that submitted reports the previous year. Facilities must use the most current report form. Facilities that have not previously reported should contact the SARA Title III Program for reporting information.

Table 7.1: EPCRA Section 313 Chemicals and Chemical Categories Commonly Encountered in Printing Operations

Process	Chemical
Ink solvent cleaning	Toluene, MEK, Methanol, Xylene, Ethylbenzene
Fountain solution cleaning	Certain Glycol Ethers
Cleaning	Xylene (mixed), MIBK
Acrylic coatings, gravure inks	Zinc Compounds
Copper plating	Copper
Red ink pigments	Barium Compounds
Green ink pigment	Copper Compounds
Adhesive solvent	n-Hexane
Ink solvent	n-Butyl Alcohol
Fountain solution cleaning	Ethylene Glycol
Plasticizer	Dibutyl Phthalate
Cleaning solvent	Ethylbenzene, 1,2,4-Trimethylbenzene, Hexane
Water-based inks & coatings	Ammonia
Cleaning & etching	Nitric Acid

Source: "EPCRA Section 313 Reporting Guidance for the Printing, Publishing, and Packaging Industry," pp. 2-9, U.S. EPA Office of Environmental Information, EPA 745-B-00-005, May 2000

7.1.2 Pollution Incident Prevention Plan (PIPP)

Under ***Part 31 (Water Resource Protection) of Act 451 Administrative Part 5 rules***, printers are required to have a PIPP if the facility:

- Meets the definition of an oil storage facility or on-land facility, **and**
- Does not meet any of the listed conditional exemptions, **and**
- Has **polluting materials** that meet or exceed the listed threshold management quantities, **or**
- The MDEQ determines a release from the facility could cause substantial harm to the surface or groundwaters of the state.

Polluting materials and their threshold planning quantities include:

Salt: Solid form - 5 tons
Liquid form - 1,000 gallons

Oil-DEQ: 660 gallon tank storage capacity or
1,320 gallon total above ground storage capacity

Other **polluting materials** listed in ***R 324.2009*** in discrete use or storage areas:

Outdoors - 440 pounds
Indoors - 2,200 pounds

Polluting materials also include mixtures of the above materials if they contain one percent or more by weight, of the above substances.

The conditional exemptions include the following:

- Containers that do not individually exceed ten gallons or 100 pounds in size and are stored indoors with adequate safeguards to prevent releases to drains, groundwater, and surface waters;
- Printer is in compliance with the following regulations that covers the polluting materials on-site:
  - ✔ SPCC (see section 7.1.3);
  - ✔ Aboveground tank requirements;
  - ✔ Underground tank requirements; and
  - ✔ Hazardous waste management rules.

The main components of the PIPP include the following:

- Facility information including emergency contacts;
- Emergency notification procedures;
- Spill control and cleanup procedures;
- Inventory of polluting materials exceeding threshold management quantities;
- Site plan;
- Description of outdoor secondary containment for liquid polluting materials;
- Other spill control measures; and
- General facility physical security methods.

Facilities subject to these rules must have a PIPP prepared or updated by August 31, 2003. Plans must be reviewed every three years or after any release that required implementation of the plan.

Notification that a PIPP was prepared must be sent to the following:

- The local emergency planning committee;
- The local health department;
- The MDEQ, Water Division (WD) district office. A certification stating the facility is in compliance with all the Part 5 rules must also be submitted to the MDEQ. If a PIPP was updated, you only have to renotify and recertify compliance with the MDEQ.

There is not a specific form required to be used when submitting the notification or certification. It is recommended you identify what polluting materials are on-site in your notification. This may help determine if any of these entities would want to request a copy of the facility PIPP. A facility must submit a copy of the plan within 30 days of receiving the request.

PIPPs may be combined with other plans as long as the information required to be in the PIPP is in the ICP. A PIPP and ***Part 5 Rules*** Informational Packet is available at **www.michigan.gov/deq** to help meet the ***Part 5 Rule*** requirements.

7.1.3 Spill Prevention Control and Countermeasure (SPCC) Plan

It is unlikely that the majority of lithographic printers will be required to prepare a SPCC Plan. The regulation, contained in ***40 CFR 112***, originated in the ***Federal Water Pollution Act of 1972*** (later renamed the ***Clean Water Act***). In this section oil means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, mineral oil, animal oil, vegetable oil, oil refuse, and oil mixed with wastes.

You may be subject to SPCC regulation if the storage capability for oil at your facility has a total aboveground storage capacity exceeding 1,320 gallons.

Note that the applicability of SPCC regulations is based on the capacity of the facility to store oil and not upon the actual amount of oil stored. Containers less than 55 gallons in capacity are not counted when calculating aboveground storage capacity.

A facility may be exempt from the regulation if, due to its location, it could not reasonably be expected to discharge oil into or upon the navigable waters of the United States. The exemption determination is based on consideration of such geographical aspects of the facility as proximity to navigable waters, land contour or topography, drainage, soil conditions, etc. If any oil could reach a sewer line, drainage ditch, intermittent stream bed, or equivalent that either directly or indirectly discharges into navigable waters, and the facility has met the minimum storage capacity, then the facility is subject to SPCC regulations.

The SPCC Plan should not be sent to the USEPA or MDEQ unless specifically requested. It must be kept on-site. The ***Clean Water Act*** authorizes the USEPA to conduct inspections, announced or unannounced, to determine a facility's compliance with the SPCC regulation.

If you are required to prepare an SPCC Plan or are unsure if this applies to your facility or business, contact the USEPA Region 5, Oil Planning and Response Section, at 312-353-7479 or visit the web site www.epa.gov/oilspill. They can answer your questions and provide you with a packet outlining the information you will need to develop a plan. For general questions about the program or to receive the SPCC packet, you may also call the national SPCC Information Hotline at 202-260-2342.

7.1.4 Contingency Plans for Hazardous Waste Generators

The hazardous waste regulations require Large Quantity (LQG) and Small Quantity Generators (SQG) to be prepared in case of a fire, explosion, or release of hazardous waste, and to maintain and operate their businesses in a way that minimizes these risks. Conditionally Exempt Small Quantity Generators (CESQG) are highly encouraged to also be prepared. See Chapter 2.3.4 for an explanation of the generator status levels.

Basically, generators of hazardous waste are required to comply with the following:

1. Have proper emergency equipment available:

    - Communication devices (phones, radios, intercom, etc.);
    - Portable fire extinguishers;
    - Spill control equipment (absorbents, containers, kits);
    - Water for fire control in sufficient volumes;
    - Test and maintain equipment as necessary;
    - Have immediate access to an internal alarm system. (This means personnel can activate an alarm within seconds, not minutes); and
    - Provide and maintain sufficient aisle space in the hazardous waste handling areas to ensure access of emergency equipment and emergency personnel.

2. LQGs and SQGs must identify one employee who is on site or on call and has the responsibility to coordinate all emergency response activities. It is recommended that you identify alternative coordinators to cover when the primary person is on vacation or otherwise not available. SQGs must post the following next to their telephones:

    - Name and telephone number(s) of the emergency coordinator and alternates;
    - Locations of fire extinguishers, alarms, and spill control material; and
    - Location of fire alarms if direct to fire department, or the telephone number of the local fire department.

The MDEQ, Waste and Hazardous Materials Division (WHMD), has a *"Hazardous Waste Emergency Information" (EQP3472)* form you can use to post the required information next to telephones. You are not required to use this particular form; however, failure to have the information posted is a common violation found during hazardous waste-DEQ inspections. There are other requirements outlined on the back of the self sticking form and in WHMD's *"Small Quantity Generator Requirements"* fact sheet.

Have arrangements in place with authorities that respond to the types of emergencies regarding the waste handled at your business. Invite police, fire departments, and emergency response teams to tour your business. Furthermore, keep documentation of any visits by emergency response people, agreements, etc.
LQGs must provide copies of their contingency plans (see following description) to the fire department, police, hospitals, and local emergency response teams. SQGs must send a

HAZARDOUS WASTE EMERGENCY INFORMATION

EMERGENCY COORDINATOR	NAME _____	Map of facility with emergency equipment, spill equipment, exit routes, and alarm locations.
	PHONE _____	
ALTERNATE	NAME _____	
	PHONE _____	
FIRE DEPT.	PHONE _____	
HOSPITAL	PHONE _____	
POLICE	PHONE _____	

Fire alarm is located: _____

_____

Spill control equipment is located: _____

_____

_____

Fire extinguishers are located: _____

_____

_____

N W E S

National Response Center: 1-800-424-8802
Michigan Pollution Emergency: 1-800-292-4706

Provided by: The Environmental Science and Services Division and the Waste & Hazardous Materials Division of the Michigan Department of Environmental Quality--Environmental Assistance Center 1-800-662-9278

Other hazardous waste requirements may apply.

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diagram or discuss the layout of their facility, access roads, and evacuation routes with the response agencies. LQGs and SQGs must also submit to local hospitals a listing of possible injuries or illnesses that might result from the hazardous waste at their businesses. It is recommended that CESQGs also submit this information. If local or state authorities decline your arrangement, you must have written documentation of that refusal. If you use outside contractors to respond to emergencies, you must make arrangements with emergency response contractors and suppliers.

LQGs are required to have a written contingency plan. This plan describes what staff will do in case of a fire, explosion, or release of hazardous waste. You must keep a copy of the plan at the facility. You must also provide evidence that the plan was distributed to local police and fire departments, hospitals, emergency response teams, and any emergency response contractors and suppliers you may have hired. A written cover letter can be proof of that distribution. In the letter briefly explain why a copy of the plan is being sent, identify a contact person who answers questions, and outline any emergency response you expect from the recipient of the letter. DO NOT SUBMIT A COPY OF THE HAZARDOUS WASTE CONTINGENCY PLAN TO MDEQ OR TO THE SERC UNLESS REQUESTED. At the time of publication Michigan does not have a state emergency response team.

Distribute the contingency plan to your employees and keep documentation of an annual review. The plan must be updated whenever emergency coordinators or equipment change, or when the plan fails during an emergency. In addition, updates must be made if the facility makes any changes to its design, construction, operations, etc., that increase the potential for fires, explosions, or releases of hazardous waste, or that change the necessary response actions.

The contingency plan must include:

- Name, telephone number, and address (both home and work) for your primary and secondary emergency coordinators. These coordinators must either be on the premises or on call and able to reach the facility within a short amount of time;

- Written procedures to follow in the event of a hazardous waste release. These procedures must relate to the type of wastes kept on-site. It needs to include spill and fire response and monitoring actions and reporting sequence to emergency response organizations;

- A list of emergency equipment at the facility, where it is located, physical description, and brief outline of its capabilities. It is recommended that you develop a floor plan and make it available to staff. The map should show location of fire extinguishing equipment (fire extinguishers, sprinklers, hoses, fire hydrants); communication or alarm systems (alarm boxes or phones, etc.); and spill control equipment (absorbents, spill kits, shovels) using easy-to-understand symbols;

- A written evacuation plan that includes a diagram of the layout of your business, access roads, and primary and alternative evacuation routes. The plan must also describe the signals to be used to begin evacuation. These routes can be shown on the same floor plan as the emergency response equipment. It is recommended that routes include two outside areas where employees should assemble (using the one upwind of the facility).

If you are required to prepare another release prevention and response plan, you only need to add the hazardous waste management provisions necessary to make your existing plan comply with these additional requirements. You do not need separate plans to meet the requirements described in ***Part 111 (Hazardous Waste Management) of Public Act 451 of 1994, as amended (Act 451)***.

Not all of the specific requirements have been outlined above; therefore, you should contact your local district office (see Appendix B for phone numbers) or refer to the regulations for more details. See the MDEQ's *"Contingency Plan and Emergency Procedures"* fact sheet designed to help LQGs meet these requirements.

7.1.5 Storm Water Pollution Prevention Plan (SWPPP)

If your facility is required to have a permit for the discharge of storm water associated with a manufacturing activity (see Chapter 3.2.3), you need to prepare a SWPPP.

The WD has a checklist and *"SWPP Sample Plans"* to help you meet this planning requirement. These can be obtained at **www.michigan.gov/deq** (click on "water," "surface water," then "storm water") or from the WD district office (see Appendix C for phone numbers). Plans must be signed by the certified storm water operator and either the permittee or an authorized agent. Plans must be kept on-site, and a notification that the plan was completed must be sent to the WD district office. The plan must be reviewed annually and records kept of that review. It is necessary to update or amend the SWPPP whenever there are changes or releases at the facility that may have the potential to increase the risk of material exposure to storm water.

7.1.6 Integrated Contingency Plan (ICP)

Usually it is not necessary to develop separate plans for state and federal environmental regulations if you are liable under both. Instead you may combine all the required components into one plan called an ICP, except for meeting nuclear planning requirements. Follow the guidance as published in the June 5, 1996, *"Federal Register"* (Volume 61, Number 109, pages 28641-28664) and corrections published in the June 19, 1996, *"Federal Register"* (Volume 61, Number 119, pages 31103-31104) to meet the various federal emergency planning requirements. You may use the federal ICP format to meet state requirements if it includes the information required in the state regulations you are subject to. A summary table that relates state regulations to the federal ICP elements is available. ICP guidance is available at **www.michigan.gov/deq** (click on "Environmental Reporting," "Emergency Planning").Contact the Michigan SARA Title III Program at 517-373-8481 for more information about ICPs.

There are three main sections of an ICP which include, but are not limited to, the following:

Introductory section:

- Statement of purpose and scope of plan
- Table of contents
- Revision date of plan
- General facility information
- Key contacts responsible for plan development and approval

Core plan section:
- Concise essential response guidance and procedures
- Basic headings provide comprehensive list of elements
- Reference to annexes which provide more detailed information

Supporting annexes section:
- Detailed description of response procedures
- Facility maps, drawings
- Issues related to post accident investigation, written follow-up reports, plan critique and modification process, etc.

7.2 Release Reporting Requirements

Numerous state and federal regulations require release reporting to different local, state, and federal entities if the released amount meets or exceeds a threshold reportable quantity (RQ) or it meets specific conditions. For example, releases of hazardous waste must be reported under ***Part 111 of Act 451*** under the following conditions:

- If a fire, explosion, or release of hazardous waste occurs that could threaten human health or the environment; or
- If the hazardous waste or constituents release reached surface waters or groundwater.

A release of hazardous waste could also be reportable under the federal ***CERCLA*** and state ***Part 201*** if it meets the respective RQ amount for that particular waste code.

Facility permits, licenses, registrations, or local ordinances may also require release reporting which are not discussed in this chapter. RQs for a material can be different under the various requirements. The various regulations also define what is considered a release differently. Generally, a “release” means spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing. There are reporting exceptions under some regulations if the release is contained and no environmental impact has occurred. The common environmental regulations that require printers to report releases include ***Parts 31, 111, 121, 201, 211, 213 of Act 451***, the ***flammable and combustible liquids regulations***, ***SARA Title III***, ***Oil Pollution Act***, and ***CERCLA***. The summary table “Release Notification Requirements in Michigan” is a tool to identify potential reporting requirements. It includes a list of federal and state regulations that require release notifications and a descriptive summary of what releases must be reported, when they must be reported, and to whom they must be reported; but it will be necessary to review the regulations for the specified RQ. Go to the most current summary table, regulations and support documents containing RQs, and report forms on the Internet at **www.michigan.gov/deq** under the “Assistance and Support Services,” “Environmental Reporting”, and then “Spill/Release Reporting” links. Contact the local wastewater treatment plant and fire department for local reporting requirements.

Printers should identify the minimal amount of release that would require reporting for all the regulated materials on-site BEFORE a release occurs. Usually this is done when developing emergency plan(s) and that information is included in the plans discussed in Chapter 7.1.

Because printers have different regulated materials and some regulations are under revision, it is not possible to identify all the possibly RQs in this publication. It will be necessary to review the regulations and referenced lists of regulated materials to identify reporting requirements.

Table 7.2 can be used as a beginning point when determining RQs from compounds sometimes found in lithographic printing facilities. Use your inventory list of materials and ingredients identified on the MSDSs and compare those materials to the lists of compounds referenced in the regulations to determine if there are regulated materials on-site. If there is a mixture, it will be necessary to calculate the amount of the regulated compounds in the mixture that would require reporting if released. Sample calculations are provided in the *Pollution Prevention Plan (PIPP) & Part 5 Rules Informational Packet* referenced in Chapter 7.1.2 and in Chapter 7.1.1.c.(1). Identify the RQs for those materials, when (e.g., immediately [within 15 minutes], within 24 hours, etc.) and how it is reportable (e.g., initial phone call, using a required form, and if there is a written follow-up report), and what entity is contacted. If a specific form is required, it is suggested to either include a current version of that form or identify how to quickly obtain a copy if needed. If the regulation requiring reporting does not require a specific form, a printer may choose to use the generic *"Spill or Release Report" (EQP 3465)* form. Most forms are now available on the above internet site.

If in doubt whether or not a release should be reported, go ahead and report it to the state Pollution Emergency Alerting System (PEAS) at 800-292-4706 (or if calling from out-of-state, dial 517-373-7660) and to the National Response Center at 800-424-8802.

If a confirmed or suspected release is from a regulated underground storage tank, call 800-MICH-UST (or if calling from out-of-state, dial 517-335-7190) within 24 hours. If the underground tank release is an emergency, report it immediately to the PEAS at 800-292-4706 (or if calling from out-of-state, dial 517-373-7660).

Table 7.2
Reportable Quantities (RQ) for Spills/Releases of Compounds[1]
Sometimes Used in Lithographic Printing Facilities

COMPOUND	CAS #	SOURCE	RQ under Part 201[2] CERCLA[3], or SARA Title III[4] in pounds (Kg)	RQ under Part 5 rules[5] in pounds (Kg)
(The RQs listed are only for the amount of compound, not the amount of source or product.)				
Acetic acid	64197	Film fixer, fountain solution	5000 (2270)	**500** (227)
Acetone	67641	Cleaners	5000 (2270)	**500** (227)
Ammonium hydroxide	1336216	Cleaners, glues	1000 (454)	**100** (45.4)
Cadmium	7440439	Inks	10 (4.54)	10 (4.54)
Carbon tetrachloride	56235	Cleaners	10 (4.54)	10 (4.54)
Chromium	7440473	Inks	5000 (2270)	**500** (227)
Copper	7440508	Inks	5000 (2270)	**500** (227)
Cumene	98828	Blanket conditioner, wash	5000 (2270)	**500** (227)
2-Ethoxy-ethanol (also known as butyl glycol)	110805	Fountain solution	1000 (454)	**100** (45.4)
Ethylene glycol	107211	Plate developer, fountain solution	5000 (2270)	**500** (227)
Ethylbenzene	100414	Wash solvent, cleaners	1000 (454)	**100** (45.4)
Formaldehyde	50000	Film stabilizer ~5%, resins coating paper ~< 1%	100 (45.4) [4]	**10** (4.54)
Hydroquinone	123319	Developer	100(45.4) [4]	**10** (4.54)
Lead	7439921	Inks	10 (4.54)	10 (4.54)
Mercury	7439976	Inks	1.0 (0.454)	1.0 (0.454)
Methanol	67561	Cleaners	5000 (2270)	**500** (227)
Methylene chloride	75092	Cleaners, wash solvents	1000 (454)	**100** (45.4)
Methyl ethyl ketone (MEK)	78933	Cleaners	5000 (2270)	**500** (227)
Perchloroethylene	127184	Cleaners	100 (45.4)	**10** (4.54)
Potassium hydroxide	1310583	Developer	1000 (454)	**100** (45.4)
Silver nitrate	7761888	Fixer, wash water	1.0 (0.454)	**1** (0.454)
Sodium bisulfite	7631905	Developer, plate finisher	5000 (2270)	**500** (227)
Sodium hydroxide (caustic soda)	1310732	Fountain solution	1000 (454)	**100** (45.4)
Sulfuric acid	7664939	Batteries	1000 (454)	**100** (45.4)
Tetrachloroethylene	127184	Cleaners	100 (45.4)	**10** (4.54)
Toluene	108883	Cleaners, glues	1000 (45.4)	**100** (45.4)
1,1,1-Trichloroethane	71556	Cleaners, blanket wash	1000 (45.4)	**100** (45.4)
Trichloroethylene	79016	Cleaners	100 (45.4)	**10** (4.54)
Xylene (mixed isomers)	1330207	Cleaners	100 (45.4)	**10** (4.54)
Zinc	7440666	Inks	1000 (454)	**100** (45.4)

1. All spills that reach surface water or groundwater in any amount, and all spills and leaks from regulated underground storage tank systems must be reported to DEQ. This table is NOT a complete list of all compounds requiring reporting if released. Report releases/spills under the most stringent RQ.
2. Part 201 of Act 451 of 1994, as amended, administrative rules now references the CERCLA RQs published in the July 1, 2001, *"Federal Register."* Discuss requirements with the Remediation and Redevelopment Division District Office.
3. CERCLA Section 103 requires reporting when the release amount reaches or exceeds the RQ.
4. The SARA Title III RQ under Section 304 are only reported when the RQ amount or more is released AND there is potential for off-site exposure. Not all compounds listed in table have RQs under SARA Title III Section 304. Formaldehyde, hydroquinone and sulfuric acid are extremely hazardous substances under SARA Title III.
5. The Part 5 rule RQs are from Part 31 of Act 451 of 1994, as amended, administrative rule R 324.2009. Releases are reportable if they meet the definition of release as stated in R 324.2002(b) and reaches or exceeds the RQs. See R 324.2002(g) for salt and oil RQs. The bolded Part 5 RQs are lower amounts than those listed under CERCLA or SARA Title III.

7.3 Release Response and Cleanup

Responding to and cleaning up a spill can be very costly and detrimental to the health of your employees and environment. Make it a priority to integrate pollution prevention activities into all aspects of your operations, including the prevention of spills .

In addition to the release reporting requirements described in Chapter 7.2, you must be ready to immediately respond whenever a release occurs. Whether you are legally required to prepare an environmental release prevention and response plan (described in Chapter 7.1) or voluntarily decide to prepare one, it needs to be in effect with personnel who are adequately trained to implement it. This helps to ensure that when a release occurs, appropriate response is taken without delay. At least one person trained in release control and cleanup procedures, equipment use, and disposal methods of recovered materials should be on duty or on call at all times. It is important to remember that you are obligated to respond and clean up all contamination; and failure to do so may result in escalated enforcement, including but not limited to the imposition of civil penalties. If your release involves a regulated underground storage tank, see Chapter 4.2 for information on how to respond and clean up the release. Some excellent Internet resource links for environmental emergency operations and response are the Computer Aided Management of Emergency Operations (CAMEO) link at **http://response.restoration.noaa.gov/cameo/links.html** and the National Institute for Occupational Safety and Health (NIOSH) pocket guide link at **http://hazmat.dot.gov/gydebook.htm**.

All response actions to releases of materials should encompass the following concerns:

Immediately assess the type of release and take appropriate response measures to protect the health and safety of those in the affected area, when and where possible.

Quickly contain the release to prevent the spread of contamination. For example, cover floor drains to prevent the release from reaching the sewer and dike the release with absorbents such as spill pillows or cat litter and dirt, if necessary, to prevent it from spreading. Staff responding to the release must be trained and wearing the appropriate personal safety equipment. Most facilities managing materials are required to have an environmental release prevention and response plan in the event of a release. These plans need to be practical, efficient, and provide useful instructions to facility personnel that can be easily followed to clean up a release.

Clean up the contamination to prevent further damage(s) to human health and the environment. Release prevention, planning, rapid containment, response, and cleanup may minimize the environmental impact(s) as well as decrease your overall cost of cleanup. This can be as simple as sweeping up an absorbent used to contain a release, or as complex as purging and treating groundwater for years under an approved state remedial action plan or state/federal enforcement order. Waste generated from a cleanup must be properly characterized, managed, and disposed of in accordance with the applicable state and federal requirements. Most importantly, communicate with the environmental regulatory agencies in your area. MDEQ staff can provide additional guidance to help assure your response is appropriate and cost-effective.

Some released substances and cleanup materials may pose a health threat to personnel. Have appropriate personal protection equipment (PPE) available and personnel trained in its proper use. Depending on the hazardous nature of the release, PPE may include the appropriate chemical resistant suits, gloves, boots, respirators, self-contained breathing apparatus, and eye protection such as goggles or face shields. MSDSs or the NIOSH Pocket Guide to Chemical Hazards' web sites at **www.cdc.gov/niosh/homepage.html** and **http://hazmat.dot.gov/gydebook.htm** contain valuable information for selecting the appropriate PPE. Persons responding to hazardous releases must be trained in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) procedures (see Section Two for more information). Another option is to have previously procured professional assistance by looking under the headings "Environmental and Ecological Services," "Spill Control Service," or "Waste Reduction, Disposal, and Recycling Service" in the yellow pages of your telephone directory for companies offering environmental cleanup services in your area.

Commercial spill kits are available to help contain releases, or you may assemble equipment specific to your company's needs based on release planning. Many products are used to contain and clean up released materials. Absorbent pads, booms, or portable dikes are often used for large liquid releases. Commercially available absorbent powders and granular clay (like cat litter) are examples of items used to absorb and contain small amounts of released liquids.

Be very careful not to mix incompatible or reactive wastes together (see MSDSs or NIOSH at **http://hazard.com/msds2** and **http://hazmat.dot.gov/gydebook.htm** for help). Containers used to store spent cleanup materials must be kept closed and labeled. Remember that the container must be resistant to the absorbed chemicals. If the container is not compatible with the released liquid, the container could dissolve, which could result in a bigger cleanup problem. Once contained, the used cleanup materials must be properly disposed of, based on the hazardous characteristics of your waste. Make sure there is no free liquid present with the spent absorbent material, if the used materials are going to a sanitary landfill. If liquid is present, the absorbent material cannot be sent to a sanitary landfill for disposal. If the materials are characterized as hazardous waste, handle the waste in accordance with Chapter 2.3. For information about hazardous or solid waste characterization, please see Chapter 2 or contact the Waste and Hazardous Materials Division (WHMD) district office. For information about transporting requirements for hazardous materials including oils, gas, etc., please refer to the MSP web site **www.michigan.gov/msp** and Chapter 4.5.

If a release cannot be cleaned up by your trained personnel, you should seriously consider hiring an experienced environmental cleanup contractor. A contractor may provide cost effective response solutions in a more efficient and effective manner. Environmental contractors who work on leaking underground storage tank facilities regulated by the Remediation and Redevelopment Division (RRD) must be qualified per ***Part 213 (Leaking Underground Storage Tanks)*** and ***Part 215 (Underground Storage Tank Financial Assurance) of Act 451***. For more information about response procedures, contact your nearest MDEQ district office (see Appendix C). MDEQ district office staff can verify that your state reporting obligation(s) has been satisfied and that your cleanup is being conducted properly.

7.3.1 Surface Water Cleanup

Cleanup procedures will vary with the material spilled and the surface water involved. It is recommended you know the route of your storm sewer system and appropriate areas (such as the last storm water catch basin on your site) to catch and contain releases. It might be difficult, if not impossible, to completely clean up surface water contamination. Small spills may mix and travel downstream before any response can adequately contain them. Many substances cannot be contained at all because they mix immediately with the water and travel downstream. Large spills requiring the use of floating booms, skimmers, etc., will most likely require you to hire a spill response contractor. The longer the spilled substance remains on the water, even if contained by booms, the more the contamination mixes with the surface water and threatens the environment. Talk with an environmental response consultant or the WD (517-373-1949) about what containment and cleanup methods would be best for your business. To research environmental innovative treatment technology options, go to **www.epa.gov/tio/reachit.html**. A major response concern for spills to the surface water is the impact to any downstream water supply intake. Other immediate and long-term concerns include impacts to the aquatic life, wildlife, and human health. That is why it is so important for you to have a plan in place and be ready to take immediate action to prevent substances from reaching surface waters.

7.3.2 Groundwater Cleanup

If the groundwater becomes contaminated by a spill, overfill, leaking underground storage tank, etc., you are required to clean up the contamination. It is likely you will need to hire a professional firm to do this work. Discuss the available treatment options and the short- and long-term expenses of each method with your environmental consultant to assure that the best option is being used for your situation.

Best available treatment (BAT) is required by the WD for remediations of groundwater being pumped, treated, and discharged to the surface water. Groundwater remediation discharges to groundwater are regulated by the ***Part 22 Rules of Part 31 of Act 451***, which is also administered by the WD. Currently, two of the main methods for treatment of groundwater contaminated with petroleum products (which can come from inks and cleaning solvents) are air stripping and multi-stage activated carbon treatment. These two methods are considered BAT and can be designed to be equally effective at removing contamination. BATs may change as technologies improve. The best method to use will depend on conditions at the site. For low levels of contamination, multi-stage (water passes through more than one tank in series) granular activated carbon may be the most cost-effective protection method for treating contaminated groundwater. In some cases where there are high levels of contamination, it is more cost effective to use more than one treatment method in a series. Air stripping followed by carbon treatment and biological treatment followed by carbon treatment are two examples of systems being used to treat contaminated groundwater in Michigan.

Permits may be required for discharges from the cleanup site. If treated groundwater is discharged back to the groundwater, it will require a State Permit or an exemption (refer to Chapter 3). In some areas, the water will not seep back into the ground fast enough to make groundwater discharge a feasible option. If treated groundwater is discharged to a surface water,

it will require a National Pollutant Discharge Elimination System (NPDES) Permit (refer to Chapter 3). If you use air stripping, you are subject to air quality regulations and may need to obtain a Permit to Install from the Air Quality Division (AQD) of the MDEQ. Contact your local AQD district office (Appendix C) for more information. Each permit will have requirements for operation and maintenance of the system and for testing and reporting on the discharge.

7.3.3 Ground Spill Cleanup

Ground spill does not just refer to spills onto the dirt or land surface. It also includes spills onto your flooring or paved outdoor surfaces. Even if the spill is not large enough to require reporting, the area must still be cleaned up. Quick response to a spill is important. Use an inert absorbent material, such as clay-based absorbents (like cat litter), or specially formulated pads or powders, to soak up the liquid.

If the release is directly onto the ground, you must determine if the affected soil is a hazardous or solid waste. In either instance, it should be removed, properly transported, and treated, stored, or disposed at the appropriate licensed landfill. A soil contamination problem can be handled in several ways depending on the substance or waste that was released, as well as the volume, concentration, and if it is classified as a hazardous waste. If it is a hazardous waste, you will need to meet the generator requirements discussed in Chapter 2.3. For small volumes of contaminated soil or waste, the easiest cleanup method is to dig up the soil and place it on at least a 40-mil liner with a cover, or more preferably, containers (i.e., roll-off boxes, drums, etc.) with a cover to prevent drainage, infiltration, and leaching; or flushing of precipitation through the waste onto the ground. Once contaminated soils are properly characterized and approved for disposal by the proper waste facility, it can be disposed of off-site. For larger volumes of contaminated soil, it may be cheaper to either treat the soil in place or dig it up for treatment on-site. As previously mentioned, care should be taken to prevent drainage or precipitation from infiltrating the cover and leaching or washing contaminants through waste onto the ground. There are regulatory restrictions on the movement of contaminated soils and persons dealing with such materials during cleanup activities at sites of environmental contamination. Please contact your nearest MDEQ district office (see Appendix C) for more information.

7.4 Where To Go For Help

SUBJECT	**SARA Title III Hazardous Chemical Release Reporting and Toxic Chemical Release Inventory**
CONTACT	DEQ, Environmental Science and Services Division, SARA TITLE III Program
TELEPHONE	(517) 373-8481 or (800) 424-9346 EPCRA Call Center
WEB SITE	www.michigan.gov/deq "Assistance & Support Services" "Environmental Reporting"
PUBLICATIONS	1. List of Lists 2. SARA Title III Fact Sheet 3. Toxic Chemical Release Inventory Reporting Form (Form R)
SUBJECT	**Environmental investigation guidance, Remedial Action Plans (RAP), site cleanup requirements, and release reporting**
CONTACT	DEQ, Remediation and Redevelopment Division
TELEPHONE	(517) 373-9837
WEB SITE	www.michigan.gov/deq "Land" "Land Cleanup"
PUBLICATIONS	1. Environmental Response Division Operational Memorandum #17 – Instructions for Obtaining Determinations on Mixing Zone-Based Groundwater Surface Water Interface Criteria for Inclusion in Remedial Action Plans and Monitoring Compliance with Criteria for Discharges of Groundwater Contaminants to Surface Water (September 1998) 2. Notice of Migration of Contamination (EQP 4482) 3. Notice Regarding Discarded or Abandoned Containers (EQP 4476) 4. Spill or Release Report (EQP 3465) 5. Verification of Soil Remediation
SUBJECT	**Waste characterization, disposal information, and contingency plan**
CONTACT	DEQ, Waste and Hazardous Materials Division, District Office
TELEPHONE	See Appendix B for phone numbers
WEB SITE	www.michigan.gov/deq "Waste" "Hazardous Waste" "Hazardous Waste Management"
PUBLICATIONS	1. Hazardous Waste Emergency Information (EQP 3472) (posting for Small Quantity Generators) 2. Contingency Plan and Emergency Procedures (for Large Quantity Generators) 3. Small Quantity Generator Requirements
SUBJECT	**Risk Management Plans**
CONTACT	DEQ, Environmental Science and Services Division, Clean Air Assistance Program
WEB SITE	www.michigan.gov/deq "Assistance & Support Services" "Environmental Reporting"
SUBJECT	**Storm water pollution prevention plans (SWPPP) and surface water cleanup**
CONTACT	DEQ, Water Division
TELEPHONE	(517) 373-1949
WEB SITE	www.michigan.gov/deq "Water" "Surface Water" "Storm Water"
PUBLICATIONS	1. SWPP Sample Plans

SUBJECT	**Releases from leaking underground storage tanks**
CONTACT	DEQ, Remediation and Redevelopment Division District Office
WEB SITE	www.michigan.gov/deq "Land" "Storage Tank" "Underground Storage Tank"
PUBLICATIONS	1. Release Report (EQP 3826) 2. Leaking Underground Storage Tank Initial Assessment Report (EQP 3841) 3. Leaking Underground Storage Tank Final Assessment Report (EQP 3842) 4. Leaking Underground Storage Tank Closure Report (EQP 3843) 5. Free Product Transmittal Form (EQP 3800) 6. Permanent Qualified Underground Storage Tank Consultant (QC) List 7. Storage Tank Division Operational Memoranda
SUBJECT	**Emergency response planning**
CONTACT	Michigan State Police, Emergency Management Division
TELEPHONE	(517) 336-6198
WEB SITE	www.michigan.gov/msp "Services to Governmental Agencies" "Emergency Management Division"
PUBLICATIONS	1. Site Emergency Planning Workbook 2. Warning, Evacuation, and In-Place Protection Handbook
SUBJECT	**Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements**
CONTACT	Department of Consumer and Industry Services, Bureau of Safety and Regulation
TELEPHONE	(517) 322-1608
WEB SITE	www.michigan.gov/cis
PUBLICATIONS	See Chapter 17 for more information
SUBJECT	**Federal environmental investigation guidance**
CONTACT	U.S. Environmental Protection Agency (USEPA)
WEB SITE	http://clu-in.org
SUBJECT	**Integrated Contingency Plan guidance**
CONTACT	U.S. EPA, Chemical Emergency Preparedness and Prevention Office (CEPPO) for federal Michigan Sara Title III Program for state
TELEPHONE	517-373-8481
WEB SITE	www.michigan.gov/deq "Assistance & Support Services," "Environmental Reporting," "Emergency Planning"
SUBJECT	**Oil spill planning and response and Spill Prevention, Control, and Countermeasures (SPCC) Plans**
CONTACT	USEPA, Office of Solid Waste and Emergency Response (OSWER)
TELEPHONE	(800) 424-9346 (SPCC Information Hotline) or Region 5: (312) 353-8200
WEB SITE	www.epa.gov/oilspill/

SUBJECT	**Pollution Incident Prevention Plans (PIPP)**
CONTACT	DEQ, Water Division, District Office
WEB SITE	www.michigan.gov/deq “Assistance & Support Services “ “Environmental Reporting” “Emergency Planning”
PUBLICATIONS	1. Pollution Incident Prevention Plan (PIPP) and Part 5 Rules Informational Packet
SUBJECT	**Release of hazardous materials during transportation**
CONTACT	U.S. Department of Transportation
TELEPHONE	(800) 467-4922
WEB SITE	hazmat.dot.gov
PUBLICATIONS	1. Department of Transportation Hazardous Materials Incident Report (DOT F4800.1)
SUBJECT	**Risk Management Plans**
TELEPHONE	(800) 424-9346 (RCRA, Superfund, and EPCRA Hotline)
WEB SITE	www.epa.gov/swercepp
SUBJECT	**Chemical abstract information**
WEB SITE	www.chemfinder.com/
SUBJECT	**Federal environmental investigation guidance including information about Phase I and II environmental site assessments (ESAs)**
CONTACT	American Society for Testing and Materials (ASTM)
WEB SITE	www.epa.gov/swercepp and www.astm.org
SUBJECT	**Material Safety Data Sheet (MSDS)**
WEB SITE	www.reade.com/MSDS_Links.html
SUBJECT	**Chemical emergency preparedness & Prevention**
CONTACT	EPA Chemical Emergency Preparedness Prevention Office
WEBSITE	www.epa.gov/ceppo