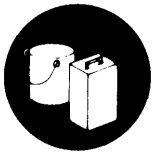
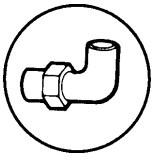
Small Quantity Generator Management Practices

Avoiding Hazardous Waste Leaks and Spills

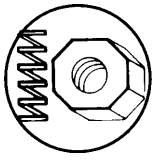


'PAINT/SOLVENT USERS

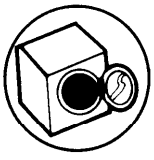
FURNITURE MAKERS



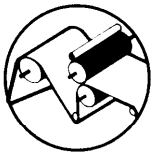
PLASTICS PRODUCERS



METAL MANUFACTURERS



DRY CLEANERS



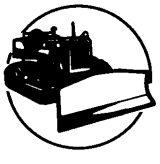
PRINTERS

PESTICIDE USERS

VEHICLE MAINTENANCE

CHEMICAL PRODUCERS

LABORATORIES



HEAVY CONSTRUCTION

HOSPITALS

Why Be Concerned?

Small quantity regulations

Under both federal and Michigan law, you are a small quantity generator if you produce in one month:

from 100 kg. to less than 1000 kg. of hazardous waste (i.e. from 220 lb. to less than 2200 lb.)
and
you never accumulate 6000 kg. or more.

Hazardous waste can be a waste generated as part of a production process, material which has been used for its intended purpose or a commercial chemical product that is off-specification or past its shelf life.

If you ship your hazardous waste to an off-site hazardous waste facility, you must use the Uniform Hazardous Waste Manifest as the shipping paper. If the off-site hazardous waste facility is in Michigan, use a Michigan Uniform Hazardous Waste Manifest. If the off-site hazardous waste facility is not in Michigan, use the manifest from the state the hazardous waste facility is located in. If that state does not have their own Uniform Hazardous Waste Manifest use a Michigan Uniform Hazardous Waste Manifest. Licensed hazardous waste transporters may also provide useful information about disposal options and manifest requirements.

Copies of the Michigan Uniform Hazardous Waste Manifest can be obtained by contacting the Manifest Unit at 517-373-1217 if your hazardous waste hauler does not provide the forms. Currently, there are minimum numbers which must be ordered at a time and there are costs for the manifest forms.

Recycling of hazardous waste is always recommended to save costs, meet legal requirements for pollution prevention, and conserve resources. However, some types of hazardous wastes cannot be economically recycled and disposal is the only option.

Hazardous waste produced by small quantity generators may not be disposed of in sanitary landfills used for solid waste. This hazardous waste must be stored, treated or disposed at a properly licensed facility.

Michigan Department of Environmental Quality
Waste Management Division • May 1996

Hazardous substances can become **hazardous wastes**

When hazardous substances spill or leak from tanks and drums, they can become hazardous waste. The substance as well as the soil, water, or other receiving material may be subject to hazardous waste regulations.

The following types of substances are often hazardous and should be handled, stored, and disposed of with care:

solvents	*lab chemicals*	*inks*
cleaning fluids	*metallic compounds*	*acids*
degreasers	*plating solutions*	*caustics*
paints	*lead-acid batteries*	*pesticides*
thinners	*cyanides*	*oil*

Hazardous substances that are ignitable, corrosive, reactive, and/or toxic, based on their chemical characteristics and physical properties often become hazardous waste when disposed.

Legal liability

Legal liability for your hazardous waste extends from "cradle to grave." As the generator, you are responsible for the safe transport and disposal of your hazardous waste. Select your hazardous waste transporter and off-site hazardous waste facility with care. The least expensive services may end up being the most expensive to you in the long run if leaks or spills occur after the waste leaves your business.

Administration of regulations

The MDEQ is administering both the state and federal small quantity generator requirements in Michigan. You can contact the MDEQ for assistance regarding the regulations, how to come into compliance or how to clean up leaks and spills. MDEQ staff will answer telephone inquiries, even if you wish to remain anonymous. You can contact either a WMD District Office, WMD Lansing Office or the Environmental Assistance Division for assistance.

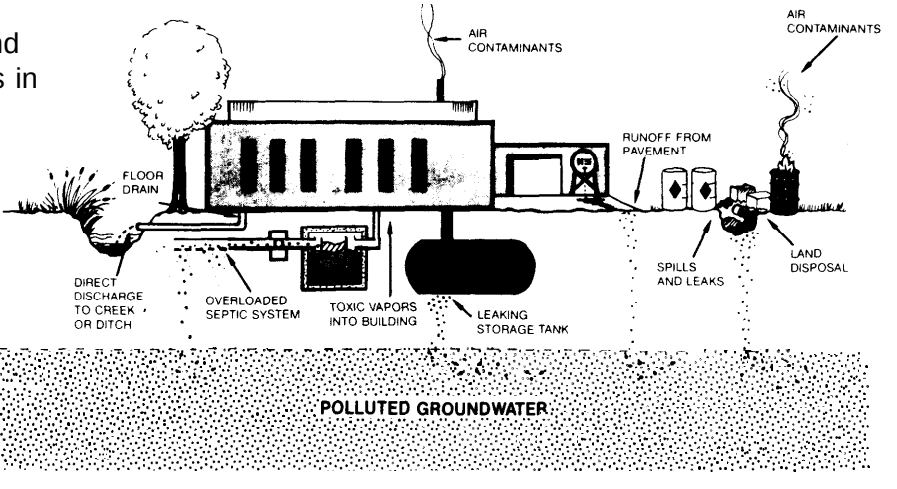
Enforcement

Compliance inspections of small quantity generators are conducted by MDEQ District Office staff on a spot-check basis. If non-compliance is observed, the MDEQ will generally try to help the generator understand how to come into compliance and will continue to work with the generator until compliance is achieved. If enforcement is deemed necessary, the law provides for fines up to $25,000 per day and imprisonment for up to one year. Examples where enforcement may be deemed necessary include repeat violators, not cleaning up leaks and spills, and situations where the facility's actions could substantially threaten human health and the environment.

Pathways to the environment

Hazardous waste can pollute groundwater, lakes, streams, soil and air resources. Pathways to the environment are varied, and may include underground storage tanks, on-site septic systems, smokestacks and vents, open burning, surface runoff from pavement, discharge from floor drains, and others.

Take time to evaluate your present practices and business site; then take steps to minimize the risk of contamination. Your common sense and knowledge of your own facility will go a long way toward avoiding legal liability and costly cleanups.



Drawing of Pathways to the Environment: Selected Examples

How to Prevent Spills and Leaks

.abels

**Label hazardous waste containers so that the type of waste and associated hazards are clear. If waste is hazardous, it must be labeled as hazardous waste.*

•Make sure that labels will not be destroyed by weather conditions out-of-doors.

Storage indoors

•If solvents, oils, or other liquid wastes are being accumulated in containers for future use, recycling, or disposal, maintain an accurate waste log. The type and quantity of any materials added should be noted on the log.

• Provide different containers to segregate different types of waste. When waste containers are full, move them to a separate storage area away from the active work area of the facility

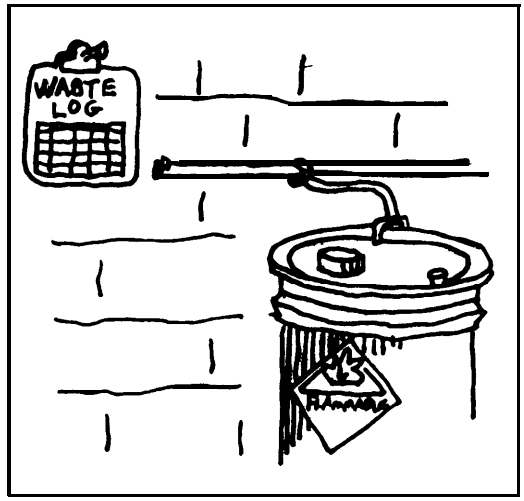
• Keep bungs on the tops of drums in place to prevent spills if the drums are tipped over.

● For tanks and containers, invest in a containment berm or dike (secondary containment) which is large enough to hold the contents of the tank or a container if a leak occurs. (May be required under Pollution Incident and Prevention Plan or under hazardous waste regulations). An overcoating of epoxy on the surface may be needed.

● Contact your local fire marshal concerning storage requirements for flammable and combustible materials.

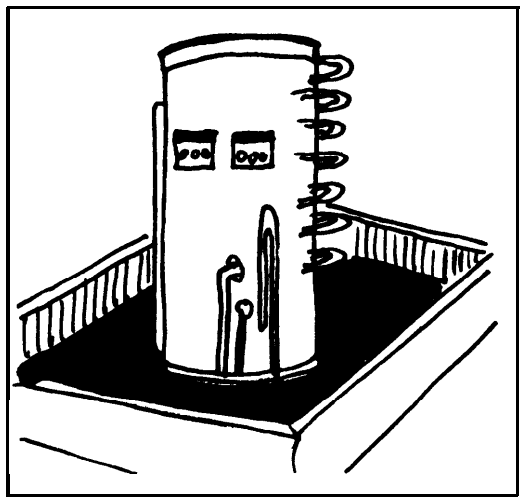
•Flammable liquids stored in metal tanks or containers should be grounded to avoid fire hazards. Use of a bonding strip and ground clamps is a common method. Contact your local fire marshal for information and assistance.

•Use drip pans under spigots of chemical and oil containers. Make sure that the drip pans are routinely emptied into appropriate waste containers.

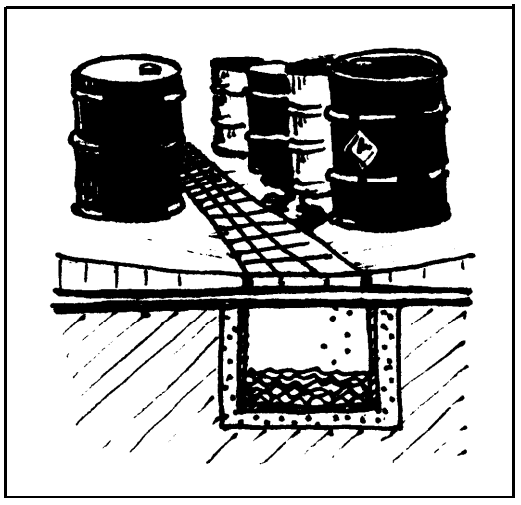


Labels and recordkeeping

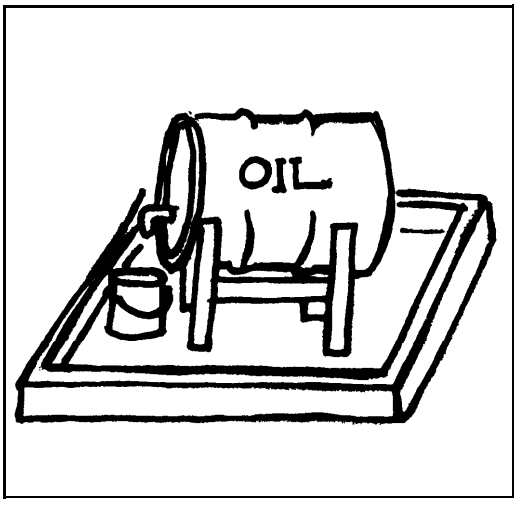
Clearly marked storage area



Diked storage tank for spill protection



Floor sump to catch spills and contaminated washwater



Diked area for catching spills and leaks from oil drums

Diked loading/unloading area

Storage out-of-doors

- *Keep bungs on the tops of drums in place to prevent the entry of rainwater, and to prevent spills if the drums are tipped over.*
- *Avoid overfilling containers - especially if stored out-of-doors. Fifty-five gallons of some hazardous liquids can expand to sixty gallons or more when exposed to the heat of the sun and will overflow.*
- *When planning your outdoor storage area, check with local building and fire officials, as well as with your MDEQ District Office, to assure compliance with all regulations.*
- *construct outdoor storage areas with berms and dikes to retain spills. Always store hazardous substances on an impervious surface such as concrete. An overcoating of epoxy on the surface may be needed. Check with your MDEQ District Office for advice.*
- *Before pumping rainwater for disposal down the sanitary sewer make sure that it has not been contaminated with spilled material. Pump out hazardous liquids for disposal as hazardous waste. Check with your sewer authority for approval for disposal of* **any** *liquids.*

**Construct a pole shed or other permanent covering for outdoor storage areas whenever possible. Kits may be purchased at local stores or sheds may be built by hand.*

- *Plug manholes or drain covers when loading or unloading chemicals to prevent spilled materials from entering the sewer or drain. The plug can be removed to allow drainage of rainwater or non-hazardous washwater.*

Underground tank storage

- *Leaks are often undetected when hazardous chemicals and wastes are stored underground. Avoid underground storage unless no other options are practical. (Tanks have specific requirements under the hazardous waste regulations).*
- *Inventory the contents of underground tanks on a periodic basis - daily or weekly Use approved inventory methods appropriate to the type of tank.*

**Pinhole leaks are difficult to detect through routine inventory procedures. Tank testing is the only option. Contact your local MDEQ District Office for advice concerning the type of leak-detection test and whether your tank requires registration.*

Laboratory storage of hazardous substances

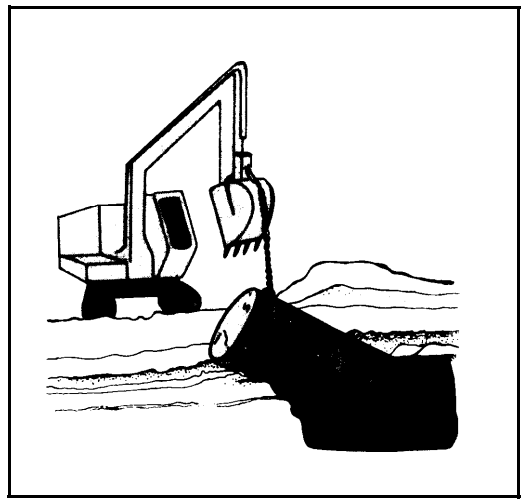
**Maintain an accurate, up-to-date inventory of all hazardous substances. Insure proper labels and safe storage.*

- *Minimize quantities purchased, so as to minimize disposal costs.*
- *Periodically inventory small quantities of chemicals. If materials have not been used for their original purpose, pass them on to others before their shelf life is expired. Unused chemicals in small quantities may require expensive lab packs for disposal.*
- *Avoid glass containers which easily break.*
- *Store small quantities of chemical wastes in a locked cabinet to await disposal. Keep a log of the contents of the cabinet. Dispose of out-of-date or unused chemicals on a periodic basis.*

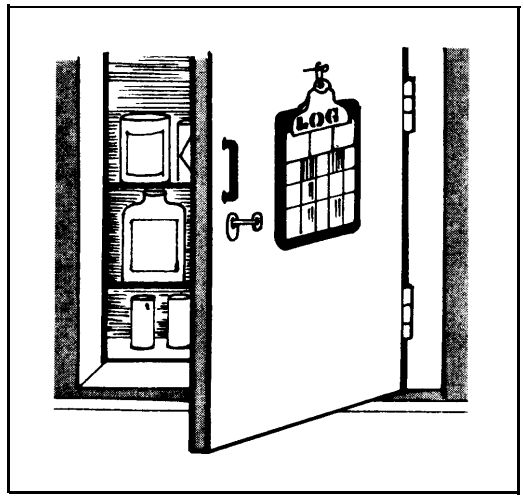
Pole shed with poured cement dike and coated floor for outdoor storage

Spills

- *When spills of hazardous substances occur, keep the spill confined to the smallest possible area and clean it up immediately Keep absorbent material (such as kitty litter or oil dry) on hand for use in emergency spill cleanups. A shovel, rubber gloves, and boots are also useful parts of a cleanup kit. Dispose of the contaminated absorbent materials as hazardous waste, if applicable.*
- *If washwater from the floor contains hazardous substances, trap the wastewater in a "blind" floor sump. Then pump out the sump and make arrangements to dispose of the waste. Avoid sumps which are connected to underground holding tanks or sanitary sewers.*
- *Do not wash spilled substances down the sanitary sewer (leading to a wastewater treatment plant) without approval from the treatment plant superintendent.*
- *Never wash the spilled material down a storm sewer line. The material will end up in a body of surface water and will require extensive and costly clean-up.*
- *Never wash spilled material into a drain leading to an on-site septic system. Septic systems are not designed to treat hazardous substances, and you may contaminate your own drinking water if hazardous chemicals leak in to groundwa ter.*
- *Designate a lead person and alternate to supervise spill cleanups. Make sure that all employees are familiar with hazards from spilled waste and understand their responsibilities in an emergency situation.*



Removal of underground storage tank to reduce leaks



Locked storage of waste chemicals

Guide to Office Locations
Michigan Department of Environmental Quality

For information about regulations that may apply to your business, first contact the Michigan Department of Environmental Quality (MDEQ) District Office closest to you or call the MDEQ Environmental Assistance Center at I-800-662-9278. You do not need to leave your name to obtain information.

The following divisions are part of the MDEQ and share offices in several locations around the state:

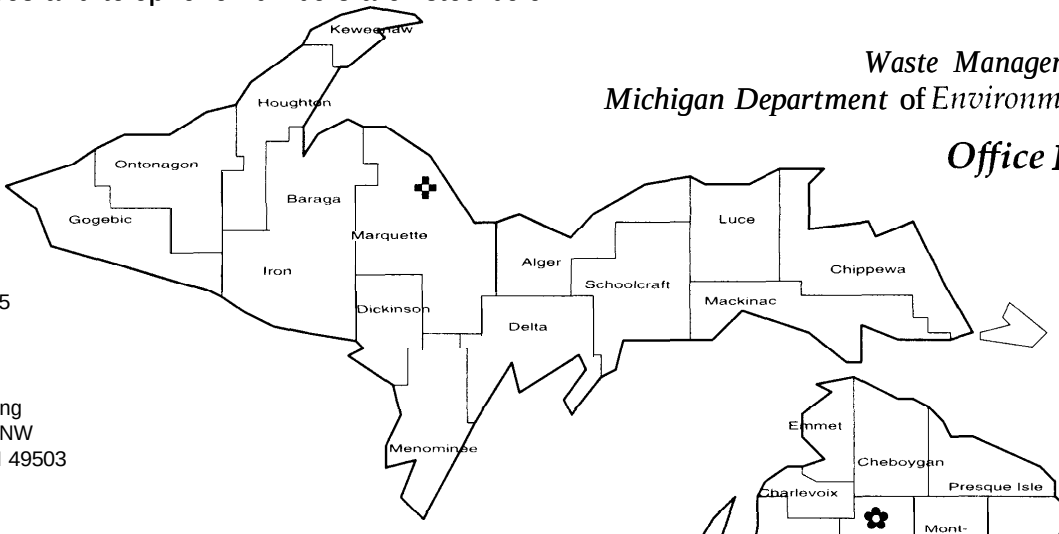
Air Quality Division (AQD)
Drinking Water and Radiological Protection Division
Surface Water Quality Division (S WQD)
Waste Management Division (WMD)
Environmental Assistance Division (EAD) located in Lansing only
Environmental Response Division (ERD)
Underground Storage Tank Division (USTD)

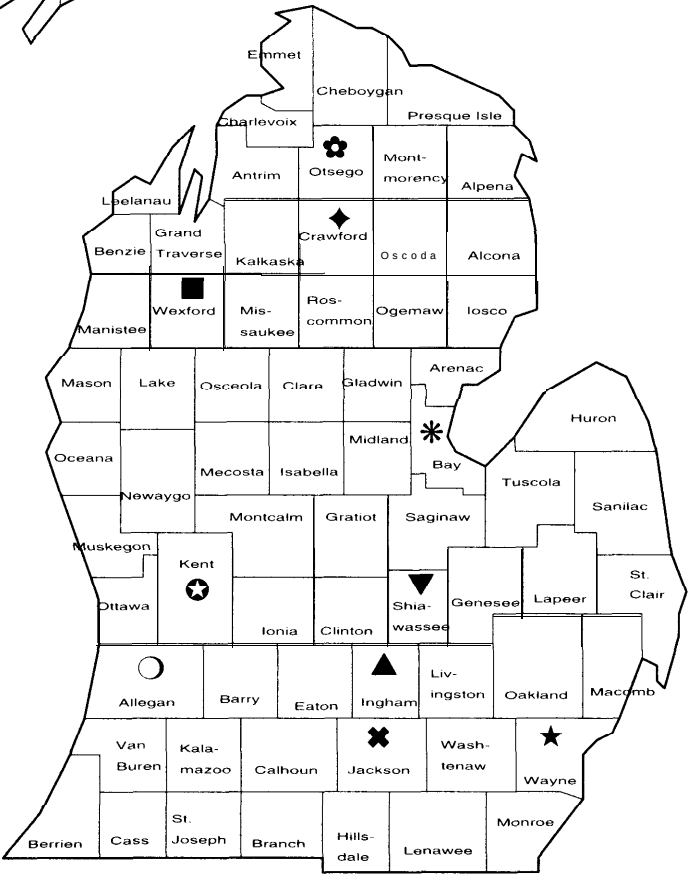
District addresses and telephone numbers are listed below.

DEQ

Waste Management Division
Michigan Department of *Environmental Quality*

***Office Locations** **





GAYLORD
P.O. Box 667
1732 W. M-32
Gaylord, MI 49735
517-732-3541

GRAND RAPIDS
State Office Building
350 Ottawa Ave., NW
Grand Rapids, MI 49503
616-456-5071

JACKSON
State Office Building
301 E. Louis Glick Highway
Jackson, MI 49201
517-780-7924

SHIAWASSEE
10650 S. Bennett Drive
Morrice, MI 48857
517-625-4629

S.E. MICH. DIST. HEADQUARTERS
38980 Seven Mile Road
Livonia, MI 48152
313-953-I 448

PLAINWELL
621 W. 10th Street
P.O. Box 355
Plainwell, MI 49080
616-685-0039

LANSING
608 W. Allegan
John Hannah Bldg., 1 st Floor
Lansing, MI 48933
517-373-2730

MARQUETTE
1990 U.S. 41 South
P.O. Box 190
Marquette, MI 49855
906-228-6561

CADILLAC
Route 1
8015 S. Mackinaw Trail
Cadillac, MI 49601
616-775-9727 ext. 6902

GRAYLING
Route 3
1955 North I-75 BL
Grayling, MI 49738
517-348-6371 ext. 7207

SAGINAW BAY
503 North Euclid
Bay City, MI 48706
517-684-9141 ext. 8906

The location and telephone numbers of these offices may change. If you are unable to reach WMD offices at these locations/telephone numbers, please call either the Lansing WMD office or the Environmental Assistance Center at I-800-662-9278 for further information.

MDEQ HOME PAGE: http://www.deq.state.mi.us

Guide to State and Local Government Agencies

Federal, state and local laws and regulations may apply to the storage, handling and disposal of hazardous materials and wastes at your business. ***Please contact the appropriate agency for specific information about requirements.***

TOPIC	AGENCY AND TELEPHONE NUMBER
Small quantity hazardous waste management, including hazardous waste stored in tanks	Waste Management Division, MDEQ (517) 373-9875 in Lansing, or District Office
Liquid industrial waste disposal (hazardous and non-hazardous)	Waste Management Division, MDEQ (517) 373-9875 in Lansing, or District Office
Disposal of waste into municipal sanitary sewers	Contact the superintendent of your wastewater treatment plant for permission
Discharges to surface water such as through a drain pipe or wastewater discharge	Surface Water Quality Division, MDEQ (517) 373-8088 in Lansing or District Office
Discharges to groundwater, including septic systems	Waste Management Division, MDEQ (517) 373-8148 in Lansing or District Office County Health Departments (if less than 10,000 gallons/day for septic systems only)
Pollution Incident Prevention Plans (PIPP Plans)	Waste Management Division, MDEQ District Off ice
Hazard Communication Standard (for chemicals in the workplace)	Drinking Water and Radiological Protection Division, MDEQ (517) 335-8250
Burning of waste oil and other discharges to the air	Air Quality Division, MDEQ District Office except in Wayne County call the County Department of Environment (313) 832-5000
Registration of underground petroleum storage tanks	Underground Storage Tank Division, MDEQ (517) 373-8168 in Lansing or District Office
Local fire prevention regulations and codes	Fire Marshal Division, Department of State Police (for flammable and combustible liquids) (517) 322-l 924
Building and outdoor storage requirements (including setbacks)	Local government building or zoning officer and Waste Management Division, MDEQ (517) 373-9875 in Lansing or District Office

FOR ENVIRONMENTAL EMERGENCIES CALL THE POLLUTION EMERGENCY ALERTING SYSTEM (PEAS) 1-800-292-4706

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DEQ

ENVIRONMENTALASSISTANCE DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30457
LANSING MI 48909-7957

Hazardous Waste Publications Request

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone No.: _____

Please check the publication(s) that you wish to receive:

- ____ Manifest Tracking Log
- _____ PCBs in Fluorescent Light Fixtures (08/05/94)
- _____ Personnel Training Requirements for Generators of Hazardous Waste (02/14/95)
- _____ Required Weekly Hazardous Waste Maintenance Checklist
- _____ Small Quantity Generator Requirements (02/95)
- _____ The Contingency Plan and Emergency Procedures (03/29/95)
- _____ The Management of Spent Electric Lamps Containing Mercury (12/07/94)
- _____ Waste Evaluation: Regulatory Status of Fluorescent Lamps and Other Lighting (12/14/94)
- _____ Waste Minimization Information Sheet (02/09/95)
- _____ Waste Oil Filter Management (06/14/95)
- Environmental Assistance Center (EAC) Publication List (for additional materials)

Other publications such as "Secondary Containment" are being developed. The above publications and additional topics such as waste minimization are available through the Michigan Department of Environmental Quality, Environmental Assistance Center (EAC). Call l-800-662-9278, fax your request to the EAC at (517) 335-4729, or mail in this request to:

ENVIRONMENTALASSISTANCE DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30457
LANSING MI 48909-7957

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