Olmsted County
Industrial Solid Waste Management Plan

Serving the Counties of Olmsted and Dodge

Revised, Submitted June 2016
Amended December 2016

COUNTY OF Olmsted
DEPARTMENT OF
ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

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Olmsted County Industrial Solid Waste Management Plan (2016 Update)
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PART I
GENERATOR GUIDE TO INDUSTRIAL SOLID WASTE MANAGEMENT

1.0 INTRODUCTION

This Plan is an update to the 2012 approved Industrial Solid Waste Management Plan (referred to hereafter as the ISWMP or the Plan) which was developed to address industrial solid wastes that will be considered for management at the following Olmsted County solid waste management facilities: the Olmsted Waste-to-Energy Facility (OWEF), the Olmsted County Kalmar Landfill, and the Olmsted County Recycling Center Plus (OCRC). This ISWMP was developed in accordance with the provisions of Minnesota Administrative Rules, parts 7001.3300, 7011.1250, subpart 3, and 7035.2535, subpart 5 (see Appendix A). Furthermore, this Plan update is consistent with the conditions set forth in the OWEF Air Emission Permit.

Businesses that utilize manufacturing or industrial processes, or that are service or commercial establishments, are likely generating industrial solid waste. This is a special classification of non-hazardous, non-household waste that requires, by law, special evaluation to determine its proper disposal. Generators of industrial solid waste are responsible for evaluating the waste and demonstrating that it is non-hazardous, either by documentation of the waste's characteristics or by analytical testing. Since waste generators hold long-term environmental liability for their waste, it is important that businesses retain accurate, complete documentation of the waste's characteristics and ensure its proper disposal at appropriately permitted and properly managed disposal facilities.

Definition

Industrial solid waste is defined by Minnesota Rule Part 7035.0300, Subpart 45 as all solid waste generated from an industrial or manufacturing process and solid waste generated from non-manufacturing activities such as service and commercial establishments. Industrial solid waste does not include office materials, restaurant and food preparation waste, discarded machinery, demolition debris, municipal solid waste combustor ash, or household refuse.

All solid waste that meets the definition of an industrial solid waste must be adequately evaluated to verify its non-hazardous nature and determine the proper method of disposal.

As an owner and operator of permitted solid waste disposal facilities, Olmsted County is required by Minnesota Administrative Rules and its operating permits to prepare and implement an Industrial Solid Waste Management Plan (ISWMP). This Plan fulfills the following: 1) establishes procedures for notifying industrial solid waste generators of the facilities operating requirements and restrictions, including the requirements imposed on haulers serving the facilities, the steps required of generators submitting a request for waste management, and the measures to be taken to inform haulers and generators of the requirements of each facility; 2) provides requirements for evaluating waste characteristics, including the specific analyses that may be required for specific wastes, and the criteria used to determine when analyses are necessary, the frequency of testing, and the analytical methods to be used; 3) procedures for managing waste and for identifying any special management requirements, and the rationale for accepting or denying a waste; 4) establishes procedures for inspecting loads and the rationale for accepting or requiring further information and review of previously approved and unapproved waste; 5) acts as an operational guide for facility staff; and 6) acts as a guidance document assisting industrial solid waste generators in properly evaluating their waste and disposal considerations. Part I of the Plan is a generator's guide to industrial solid waste management and includes specific management procedures for each identified industrial solid waste category. Part II addresses the State of Minnesota rule requirements for industrial solid waste and the operational standards of each disposal facility.

The purpose of the ISWMP is to outline procedures to more accurately identify, document, and dispose of non-hazardous industrial solid wastes from Olmsted and Dodge Counties. This ISWMP is specific to the following Olmsted County facilities: the OWEF, the Olmsted County Kalmar Landfill, and the OCRC.

Early on in the development of the ISWMP, an industrial solid waste survey was conducted to more accurately characterize the potential industrial solid waste streams in the County. The information obtained from the survey was used, in part, to develop Olmsted County's first ISWMP. Olmsted County currently evaluates industrial solid waste streams when disposal requests are made by new businesses or for new or altered waste types. Appropriate management methods are determined at that time, on a case-by-case basis. At the request of businesses, Olmsted County staff is able to arrange individual site visits to assist with evaluating businesses' waste streams, along with providing non-regulatory, technical assistance to improve their waste management methods. Industrial solid wastes identified as a result of this program will be managed in accordance to the procedures outlined in the ISWMP.

All industrial solid waste must be managed to protect human health and the environment. This Plan enables Olmsted County to meet this objective by properly identifying, evaluating, and documenting the industrial solid wastes received and disposed of at Olmsted County's solid waste management facilities. Furthermore, it will also ensure that all industrial solid waste received at the facilities is managed in accordance with acceptable standards of care for employee safety and in accordance with equipment capabilities.

Olmsted County makes the decision as to how to manage various industrial solid wastes based on the potential public health, worker safety, and environmental risks associated with the wastes, as well as to conform to each solid waste facility's applicable permit restrictions. Olmsted County is fortunate to have both land disposal and waste combustion facilities available as environmentally sound, non-hazardous waste disposal options. It is Olmsted County's intent to provide generators with economical and environmentally prudent waste management services. As such, the following general policies have been established with regard to industrial solid waste management in the County:

- Waste generators are responsible for obtaining the necessary laboratory services. Olmsted County will require the submission of adequate, reliable data from applicants. Olmsted County reserves the right to sample and analyze industrial solid waste independently, when appropriate, at the expense of the generator.

- Olmsted County will deal responsibly with each generator. Olmsted County staff will evaluate the potential health, safety, and environmental impacts of each waste as quickly and prudently as possible. Since each disposal request must be reviewed and approved prior to waste delivery, timely submittal of waste characterization data by the generator will be necessary to expedite waste disposal. Therefore, at a minimum, all relevant paperwork must be submitted to County staff within twenty-four (24) hours prior to the waste being accepted for disposal at a County owned and operated facility. Olmsted County approval is required before any waste can be delivered to a solid waste management facility. Due to the ever increasing complexity of some wastes, a decision on the acceptance of the material may take up to a couple of weeks. Industrial solid waste arriving at a facility scale house without pre-approval will be rejected. Also, facility access outside of established operational hours is not allowed unless special arrangements have been made prior to waste delivery.

- Olmsted County recognizes that the ISWMP will require modifications as new information, best management practices, and analytical techniques become available. Olmsted County intends to make this Plan as flexible and dynamic as possible, amending the Plan on an "as- needed" basis to assure consistency with all applicable federal, state, and local laws and regulations. As regulations change,

Olmsted County may have to reject wastes that have been approved for disposal in the past.

- Disposal costs will be held to the lowest cost possible. The purpose for implementing this Industrial Solid Waste Management Plan is not for revenue enhancement, but rather, for proper disposal leading to the protection of human health and the environment. Unless a waste exhibits one or more characteristics (e.g., size, physical state, chemical composition, etc.) such that special handling is required, the disposal rate should be equivalent to the County's municipal solid waste disposal rate. If, in the past, generators have been conservative in managing industrial solid wastes as hazardous waste and an evaluation allows waste to be documented as being non-hazardous, customers may realize a significant cost savings managing it as industrial solid waste.

2.0 RELATED ASSISTANCE PROGRAMS

Other state and local programs related to proper industrial solid waste management and cost containment through waste reduction may also be useful. Olmsted County participates in materials exchange programs through the Southeastern Minnesota Recyclers Exchange (SEMREX) and Minnesota Technical Assistance Program (MnTAP).

MnTAP provides information about, and assistance with, waste reduction and management. Moreover, it also provides waste referral services that may enable a generator to find other entities that can utilize their waste material, thereby saving or avoiding disposal costs altogether. MnTAP can be reached at 1-800-247-0015 or via their website at http://www.mntap.umn.edu/.

SEMREX links organizations possessing usable, unwanted materials with those who are able to use the materials through an Internet database. For more information, or to list or find materials, log onto http://www.mnexchange.org/ or contact the Regional Programs Manager at 507-328-7022.

Very Small Quantity Generators (VSQGs) of hazardous waste may also utilize an economical fee-for-service program at the County's Hazardous Waste Facility (HWF). To learn more, contact the Waste Abatement Manager at 507-328-7023.

3.0 APPLICATION AND EVALUATION PROCESS

Step 1: To participate in the County's ISW Program**,** a generator must determine that their waste is non-hazardous. The information in Appendix B can help generators identify hazardous wastes, determine what tests can be used to analyze wastes, and locate analytical laboratories who are certified through the Minnesota Department of Health (MDH) to conduct the analyses.

Step 2: The generator should review the regulatory definition of industrial solid waste (see Section 1.0 and Appendix A) to determine if their waste must be managed as such. If this is the case, the generator should determine if their waste falls into any of the pre-existing categories of industrial solid waste listed in Section 5.0 of this Plan. If it does, review the applicable management procedures for a general overview of the management of the waste. Next, complete an Industrial Solid Waste Evaluation Form and submit an original, signed copy to the Olmsted County Department of Environmental Resources Regulatory Compliance Unit. If Material Safety Data Sheets (MSDSs) and/or analytical data are already available to characterize the waste, submit this information with the Industrial Solid Waste Evaluation Form. The industrial solid waste generator is solely responsible for providing analytical data requested by Olmsted County. Olmsted County reserves the right to request that the generator supply additional information from the analytical firm regarding its quality assurance and quality control (QA/QC) practices. The industrial solid waste generator is responsible for providing Olmsted County with all the

information necessary to appropriately and accurately evaluate the waste material. *Occasionally, businesses may generate industrial solid wastes not covered by a pre-existing category in this Plan. In these instances, Olmsted County should be contacted well in advance of requiring waste disposal to discuss disposal options. Generators of non-categorized industrial solid wastes will still need to perform an industrial solid waste evaluation and adhere to all acceptance procedures.*

Step 3: Olmsted County will review the application for industrial solid waste disposal. This will include a review of all physical and chemical information that is provided by the industrial solid waste generator. Once Olmsted County has received any and all documentation (e.g., analytical test results, MSDSs, etc.) pertaining to the physical and chemical characteristics of the industrial solid waste, the results will be compared to the information summarized in Appendix C. If any of the federal or state hazardous waste limits are exceeded, or if the material is a state or federal listed waste, the material cannot be accepted. If the waste is hazardous, the generator must disclose that information to the Minnesota Pollution Control Agency (MPCA) in accordance with federal and state laws. The disclosure information should also be made available to Olmsted County to prevent the possibility of improper disposal of hazardous waste at a County owned and operated solid waste management facility. For compounds listed in Appendix C that do not have hazardous waste limits, a determination of acceptance will be made on a case-by-case basis. Olmsted County may request additional information at any time and will not make a final determination of acceptance until sufficient information is available. Olmsted County reserves the right to sample and analyze waste, when appropriate, at the expense of the generator. Olmsted County reserves the right to, at its discretion, reject wastes that meet all the acceptance criteria. For a detailed description of the evaluation process, please review Section 3.2 of Part II of this ISWMP.

4.0 UNACCEPTABLE WASTES, PROBLEM MATERIALS, AND SPECIAL WASTES

Olmsted County has also developed an integrated Solid Waste Management Plan (SWMP) to assure delivery of waste to the most appropriate solid waste management facility. Table 1 provides a summary of waste management methods currently employed by Olmsted County. The acceptability of a solid waste at any particular Olmsted County solid waste management facility is determined by a multitude of factors, including federal, state, and local regulations and policies, facility operational considerations, source of the waste, and the Olmsted County's own internal policies. Due to the fact that Olmsted County residents enjoy the advantage of an integrated system of multiple waste management facilities, there are local management options for almost every type of solid waste and few wastes are categorically unacceptable. Table 2 lists the facilities where a specific solid waste can be accepted as well as the wastes that are unacceptable. Any unknown or unacceptable waste delivered for disposal will be rejected at the facility's scale house. Rejected wastes are returned to the generator or hauler for proper identification.

5.0 SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

This section was developed to assist the generators and Olmsted County in evaluating specific, non-hazardous industrial solid wastes received at Olmsted County solid waste management facilities. Additional industrial solid wastes that are not specifically listed will require an independent evaluation consistent with the procedures outlined in Section 3.0 of this Plan. Olmsted County recognizes the fact that wastes' characteristics, analytical methods used to determine wastes' characteristics, and federal, state, and local laws and regulations pertaining to the management of wastes may be altered. As such, to accommodate future changes, this Plan will be revised to maintain consistency with Olmsted County's needs and regulatory requirements. Please note that this document is consistent with the regulatory requirements set forth at the time the Plan update was prepared. Currently, the following specific categories are addressed in this Plan:

Category 1	Empty Chemical Containers
Category 2	Asbestos-Containing Materials (ACM)
Category 3	PCB-Contaminated Wastes
Category 4	Spilled Non-Hazardous Materials
Category 5	Rendering and Slaughterhouse Wastes
Category 6	Spontaneously Combustible or Ignitable Wastes
Category 7	Foundry-Related Wastes
Category 8	Ashes
Category 9	Paint-Related Wastes
Category 10	Sludges
Category 11	Epoxy, Fiberglass, Urethane, and Polyurethane Resins
Category 12	Spent Activated Carbon Filters
Category 13	Contaminated Soils
Category 14	Ink Sludges, Solvents, and Clean-Up Materials
Category 15	Infectious Wastes
Category 16	Chemically-Treated Wood
Category 17	Machining Wastes
Category 18	Confidential Documents
Category 19	Electronic Wastes
Category 20	Currently Not Used
Category 21	Oil-Contaminated Wastes
Category 22	Non-Recyclable Glass
Category 23	Tires
Category 24	Industrial Non-Recyclable Plastics
Category 25	Food Wastes
Category 26	Animal Remains and Carcasses
Category 27	Non-Combustible Inert Wastes
Category 28	Mercury-Containing Wastes
Category 29	Decontaminated Infectious Wastes
Category 30	Deer and Elk Carcasses
Category 31	Street-Related Wastes
Category 32	Cosmetics Wastes
Category 33	Bulky Combustible Wastes

1. EMPTY CHEMICAL CONTAINERS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - Empty containers of metal or plastic composition
   - Occasionally contained in paper or plastic bags

2. Background - Title 40 CFR Part 260.10 defines a container as any portable device in which a substance is stored, transported, treated, disposed of, or otherwise managed. Prior to disposing of a container, the waste generator must evaluate the material that was or, potentially, still remains in the container. Containers of materials that would be considered non-hazardous waste when discarded (i.e., become a waste) may, in most cases, be managed as industrial solid waste (i.e., reused, recycled, or disposed of as non-hazardous solid waste). Generators of containers of materials that would be considered hazardous waste when discarded must consider the amount and type of residue remaining in the container in order to determine if the container is regulated as hazardous waste. Containers of materials that would be considered hazardous waste when discarded that do not meet the definition of "empty" (as defined by 40 CFR 261.7) must be managed as hazardous waste. Conversely, containers of materials that would be considered hazardous waste when discarded that meet the definition of "empty" (as defined by 40 CFR 261.7) may be disposed of as non-hazardous industrial solid waste.

   Containers that previously held a material that when discarded would be classified as acute hazardous waste are considered empty only after the containers have been triple-rinsed (using a solvent that is capable of removing all remaining residue) or the inner liners have been removed. The rinsate generated from the triple-rinsing must be used as a product or managed as acute hazardous waste. Containers that previously held acute hazardous waste that are NOT triple-rinsed must be managed as acute hazardous waste. To ensure waste containers are properly managed, the acceptance of containers is evaluated on a case-by-case basis, since different chemicals will have different health and environmental concerns.

3. Disposal - Reusing, recycling, or salvaging empty containers is the preferred manner by which to manage empty containers. If the containers cannot be reused, recycled, or salvaged, the Olmsted Waste-to-Energy Facility (OWEF) is the preferred management facility. Containers larger than 2 feet x 2 feet x 2 feet are unable to be processed at the OWEF but may, in most cases, be disposed at the Olmsted County Kalmar Landfill. The Minnesota Department of Agriculture (MDA) sponsors an Empty Pesticide Container Collection and Recycling Program; to learn more about the program and any restrictions that may apply, please contact the MDA Pesticide and Fertilizer Management division at 651-201-6121 or visit http://www.mda.state.mn.us/chemicals/pesticides/emptycontainer.aspx.

4. Testing Requirements - In most cases, analytical testing is not required; however, to ensure the waste material is not a regulated hazardous waste and is acceptable for disposal at an Olmsted County solid waste management facility, analytical testing of the container and/or its previous contents may, under certain circumstances, be required. If available, Material Safety Data Sheets (MSDSs) of the container's previous contents may be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form (see Appendix D) must be on file with the Olmsted County Environmental Resources Department. At the time of delivery, the hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form, a completed, signed Empty Chemical Container Certification of Non-Hazardous Waste Status Form, and, if applicable, a completed, signed Certification of Triple Rinsing Form (see Appendix D).

6. Gate and Inspection Activities - Inspect the waste load to ensure no free product remains and that the containers have been rendered useless. Containers that do not meet these criteria shall be rejected. Since some chemicals are extremely toxic and may present a risk to human health and the environment, care must be taken when inspecting incoming waste containers. **Always adhere to the personal protection equipment procedures listed in part G of the Generator section of the Non-Hazardous Industrial Solid Waste Tracking Form. Always avoid contact with the waste material. Always wear gloves and goggles and avoid contact with skin and eyes.** Review the Non-Hazardous Industrial Solid Waste Tracking Form for completeness and complete the *Facility* section of the form. Review the Empty Chemical Container Certification of Non-Hazardous Waste Status Form and, if applicable, the Certification of Triple Rinsing Form for accuracy and completeness. Record the appropriate delivery information on the scale house industrial solid waste operations log.

7. Facility Operational Requirements - No special requirements apply. Containers approved for disposal at the OWEF can be incinerated with the regular waste stream, effectively destroying any potential chemical residue in the containers. Containers approved for disposal at the Kalmar Landfill will be mixed with incoming waste loads.

8. Special Generator Procedures - Prior to delivery, containers that previously held hazardous waste, acute hazardous waste, or pesticides must be triple-rinsed with a suitable cleansing agent as described in the accompanying MPCA fact sheet "Managing Empty Containers." Containers must not contain any free liquids; must be rendered useless by cutting holes in the top, bottom, and two rows of three holes each on the sides; must have the lids or caps removed; and must have any hazard or warning labels removed or blocked out once the containers have been readied for disposal. Containers larger than five gallons must be trisected.

   Empty compressed-gas containers must be vented by puncturing, or other suitable means, to render them incapable of pressurization upon heating. Special care must be exercised when puncturing compressed-gas containers to prevent personal injury from escaping high-velocity gas. Direct penetration, debris entrainment (eye injury), or possible ignition may result. If a valve is present, it is preferable to remove or open it. Containers that previously held compressed-gas are considered empty when the pressure inside the container approaches atmospheric pressure.

9. Additional Information - See MPCA fact sheets "Managing Empty Containers" and "Managing Waste Aerosols."

Containers That Held Hazardous Wastes or Products

Why are containers that held hazardous wastes or products regulated?

Residues that remain in a container that held hazardous waste, or that held chemical products that would be hazardous wastes when disposed, can still present health and safety risks to your employees, the public, and the environment. The Minnesota Pollution Control Agency (MPCA) and the Metropolitan Counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) regulate the management of container residues under the hazardous waste requirements.

What are containers?

Containers are portable devices used to store products and wastes. They range from pharmaceutical vials to railroad cars. Containers also include removable inner packaging that contacts a product or waste, such as foil wrappers and supersack liners. Containers do not include permanently-mounted tanks, contaminated personal protective equipment such as suits and gloves, or equipment used just to convey a product or waste, such as a spoon or conveyor belt.

When is a container empty?

Most containers that held hazardous waste, or products that would be hazardous waste when disposed, are considered *empty* for hazardous waste purposes, also known as being *RCRA-empty*, when **both**:

1. All material that can be removed by the method commonly used for that type of container has been removed. For example, if material is normally removed from a container by pouring, the container must be able to be overturned completely with no dripping.
2. The container also meets the applicable requirement below:
   - If the container is 119 gallons or smaller, no more than 3% of the capacity by weight remains.
   - If the container is larger than 119 gallons, no more than 0.3% of the capacity by weight remains.
   - If the only residue is a tar or other extremely viscous material, no more than one inch remains.

However, additional requirements apply to containers that held:

- Acute hazardous waste or products that would be acute hazardous wastes when disposed.
- Aerosols.
- Compressed gases that would be hazardous waste when disposed.
- Pesticides.

Acute hazardous waste containers

Containers that held acute hazardous wastes or products that would be acute hazardous wastes when disposed, such as nicotine or warfarin, are considered empty only if they are triple-rinsed with a solvent capable of dissolving the waste or product. You may use water if it will fully dissolve the waste or product.

Manage the resulting *rinsate* from triple-rinsing as an acute hazardous waste. Wastewater rinsate may be able to be discharged to a sanitary sewer for disposal, if the receiving sewage treatment plant does not prohibit it, you notify them first, and you comply with any conditions they specify. Remember to count acute hazardous waste rinsate when determining your site's generator size. See MPCA fact sheet #w-hw1-02, Determine Generator Size, at https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf.

To identify acute hazardous wastes and products that would be acute hazardous wastes when disposed, see MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf.

Aerosol containers

Aerosol containers are considered empty when **both**:

1. If the aerosol propellant would be an ignitable hazardous waste, such as propane, butane, or dimethyl ether (DME), the container meets the compressed gas cylinders conditions below.
2. If the product in the aerosol container would be a hazardous waste when discarded, such as paint or solvent, the container meets the empty container standard on page 1.

Because showing that an aerosol container meets these standards can be impractical, the MPCA will allow you to assume that an aerosol container with a working spray valve is empty when **both**:

1. No release of propellant or product is heard or seen when the valve is activated and the container rotated through all directions.
2. No liquid is felt or heard when the container is shaken by hand.

Hazardous waste aerosol containers that are not empty may be managed equivalent to universal wastes in Minnesota. See MPCA fact sheet #w-hw4-00, Waste Aerosols and Compressed Gas Cylinders, at https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf.

Do not puncture hazardous waste aerosol containers to empty them after January 1, 2017, even if the puncturing device includes a filter. Such filters do not capture the hazardous waste compressed gases.

Compressed gas cylinders

Cylinders of hazardous waste compressed gas and compressed gaseous products that would be hazardous waste when disposed, such as propane and acetylene, may be considered empty only when the pressure in the container approaches atmospheric pressure.

Do not vent hazardous waste compressed gas cylinders to the atmosphere. Do not puncture them for venting after January 1, 2017, even if the puncturing device includes a filter. Such filters do not capture the hazardous waste compressed gases.

Instead of emptying the cylinders, if the remaining contents can be evacuated and used for their intended use or to fill other cylinders for use, they may be considered products exempt from the hazardous waste requirements.

Hazardous waste compressed gas cylinders that cannot be emptied or evacuated may be managed equivalent to universal wastes in Minnesota. See MPCA fact sheet #w-hw4-00, Waste Aerosols and Compressed Gas Cylinders, at https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf.

Pesticide containers

Farmers and other pesticide end users may consider used pesticide containers empty if they:

1. Triple-rinse the pesticide container with an appropriate diluent or solvent.
2. Manage the resulting rinsate from triple-rinsing either by:
   - Use for the pesticide's intended use according to the pesticide label use instructions.
   - Disposal on the farm according to the pesticide label disposal instructions.

Triple-rinsed pesticide containers may be disposed as solid waste if allowed by the pesticide label instructions. The MPCA encourages pesticide container recycling if available. Contact the Minnesota Department of Agriculture for locations. See More Information on page 4.

Pharmaceutical containers

While no additional requirements apply to pharmaceutical containers, it can be difficult for them to meet the empty container requirements. For example, vials of injectable medications cannot be considered empty if any drops of liquid that could be removed with a syringe remain in the vial. Healthcare providers may choose to simply manage all unevaluated and hazardous waste pharmaceutical containers as not empty.

Residue and rinsate removed from a container before it is empty

Any residue removed from a container before it meets the empty container standard is regulated the same way the original contents would have been.

Washing or rinsing a container creates used rinsing solvent or wastewater, called *rinsate*.

- Rinsate from listed hazardous waste or toxicity characteristic hazardous waste is hazardous waste.
- Rinsate from reactivity, ignitability, oxidizers, lethality, or corrosivity characteristic hazardous waste is hazardous waste unless you evaluate that it is not characteristic. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.

Do not attempt to make the rinsate non-hazardous by using excessive amounts of rinsing solvent or water. Deliberate dilution of hazardous waste is considered treatment and is prohibited.

Residue and rinsate removed from a container after it is empty

Sometimes, waste may still be released or removed from a container after it has already met the empty container standard, such as residue from crushing an empty container for recycling or rinsate from washing an empty container for reuse.

After-empty waste is hazardous waste unless you evaluate that it is not characteristic. Listings from former contents of the container do not carry over to after-empty waste. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.

Note: Empty containers left standing outside can collect rainwater and snowmelt, even if the tops are closed. The water can pick up enough residues from the container to create a hazardous mixture. Prevent this by storing empty containers on their sides or under a roof.

Non-empty containers received back for reuse

Generators occasionally may receive containers that do not meet the empty container standard back from a hazardous waste disposal facility.

If the facility rejects your hazardous waste shipment, it may return the waste to you, accompanied by a hazardous waste manifest. This is called a rejected load and is allowed. See MPCA fact sheet #w-hw1-06, Treat or Dispose Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf for guidance in handling rejected loads.

However, sometimes the facility may inadequately clean your or another generator's shipped container before sending it back to you for reuse. This results in an illegal shipment of hazardous waste without a manifest. If you receive a hazardous waste container from your facility that does not meet the empty container standard when you receive it, document the occurrence and report it to the MPCA or Metro County. See More information on page 4. Do not use the container. Though such incidents are rare, the MPCA recommends you always check hazardous waste containers received from your facility before using them.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045. To review Minnesota Rules, visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs.

For information about waste minimization, contact the Minnesota Technical Assistance Program (MnTAP). The MPCA's Small Business Environmental Assistance Program can offer free, confidential compliance assistance. Immediately report all hazardous waste spills that reach the environment to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka 763-422-7093
..... https://www.anokacounty.us/
Carver 952-361-1800
..... http://www.co.carver.mn.us/
Dakota 952-891-7557
..... https://www.co.dakota.mn.us/
Hennepin 612-348-3777
..... http://www.hennepin.us/
Ramsey 651-266-1199
..... https://www.ramseycounty.us/
Scott 952-496-8475
..... http://www.scottcountymn.gov/
Washington 651-430-6655
..... https://www.co.washington.mn.us/

Minnesota Department of Agriculture

Toll free 1-800-967-2474
All offices 651-201-6000
..... https://www.mda.state.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
All offices 651-296-6300
..... https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free 1-800-422-0798
Metro 651-649-5451

Small Business Environmental Assistance Program

Toll free 1-800-657-3938
Metro 651-282-6143
..... https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
..... http://www.mntap.umn.edu

Waste Aerosols and Compressed Gas Cylinders

Guidance for generators and collection sites

What are waste aerosols?

Aerosols are chemical products, such as paint, solvent, or cleaner, released as a spray or stream from a pressurized container. A waste aerosol is an aerosol container that will no longer be used for its intended purpose. Defective aerosols that are not used but instead returned new to the manufacturer or distributor are not considered wastes in Minnesota. The Minnesota Pollution Control Agency (MPCA) regulates accumulation and disposal of waste aerosols and compressed gas cylinders.

Many waste aerosols and compressed gas cylinders contain unused chemical product and excess propellant even if they seem 'empty'. Examples may include aerosols that will no longer spray evenly or fuel cylinders that will not support a usable flame. Waste aerosols and gas cylinders may be hazardous because the:

- Liquid product is hazardous
- Gas propellant or product is hazardous, usually for ignitability

Assume all waste aerosols and compressed gas cylinders are hazardous until you have evaluated and documented that they are non-hazardous or meet the strict definition of an empty container.

How do I evaluate waste aerosols as non-hazardous?

For detailed guidance on evaluating your waste aerosols, see MPCA fact sheet #w-hw1-01, Evaluate Waste; Determine Generator Size, at http://www.pca.state.mn.us/publications/w-hw1-01.pdf.

Using less toxic chemical aerosol products, aerosols with non-ignitable propellants, or refillable containers can significantly reduce the amount of hazardous waste aerosols and gas cylinders you generate. Contact the Minnesota Technical Assistance Program (MnTAP) in the More Information section on page three for assistance.

How do I show waste aerosols and gas cylinders are actually empty?

Some waste aerosols and gas cylinders may meet the strict definition of an empty container. To be classified as empty, they must meet these three criteria:

1. Contain no compressed ignitable gas propellant or product (i.e. will not release pressure through an open, working valve or the propellant is not ignitable);
2. All liquid product that can be dispensed through the valve has been (i.e. will not spray product through an open, working valve); and
3. Less than 3% of the product capacity of the container remains.

Waste aerosols and gas cylinders that meet these standards are sometimes referred to as "RCRA-empty" (RCRA stands for the *Resource Conservation and Recovery Act* – the federal hazardous waste law). Empty containers are exempt from hazardous waste requirements. However, many solid waste haulers choose not to accept them. Check with your solid waste hauler.

Because documenting that an aerosol container or gas cylinder meets this standard can be impractical, the MPCA will allow you to assume that an aerosol container is empty when **both** the following conditions are met:

- No liquid is felt or heard when the container is shaken by hand; and
- No gas or liquid is released when the spray/discharge valve is activated and the container rotated through all directions, as long as the valve is not observably or known to be clogged.

How do I store and dispose hazardous waste aerosols and gas cylinders?

You may now manage hazardous waste aerosols and gas cylinders that are not empty equivalent to universal wastes in Minnesota.

Accumulate hazardous waste aerosols and gas cylinders in closed containers labeled with one of these phrases:

- Universal Waste Aerosols/Gas Cylinders (whichever is appropriate)
- Waste Aerosols/Gas Cylinders
- Used Aerosols/Gas Cylinders

Accumulate hazardous waste aerosols/gas cylinders for no more than one year from the date you generated them or received them at your site. Mark the aerosols/gas cylinders or their containers with the generated or received date or keep records to verify how long you have accumulated them.

You may ship hazardous waste aerosols/gas cylinders without a hazardous waste manifest to any site that has agreed to accept and properly manage them. Hazardous waste aerosols/gas cylinders may not be placed into normal solid waste. Though shipment or disposal receipts are not required, the MPCA strongly recommends you obtain these, as you are responsible for proper management of your waste. Most hazardous waste disposal facilities will reclaim the scrap metal from hazardous waste aerosols/gas cylinders after their contents are properly treated.

For more information about universal waste requirements, see MPCA fact sheet #w-hw4-62, Universal Wastes, at http://www.pca.state.mn.us/publications/w-hw4-62.pdf.

Can I puncture or vent waste aerosols or gas cylinders?

You may puncture waste aerosols or gas cylinders that have been shown to be empty or that have been evaluated as non-hazardous, as long as any unavoidable liquid residuals are collected and properly managed. See How do I show waste aerosols and gas cylinders are actually empty? on page one for specific directions on how to show your containers are empty.

Hazardous waste aerosols and gas cylinders may no longer be punctured or vented in Minnesota after January 1, 2017, unless all hazardous waste propellant gases, product gases, and liquids are captured and properly disposed. Charcoal and activated carbon filters do not capture hazardous waste propellants or gases for proper disposal. Remember, this restriction applies only to hazardous waste aerosols and gas cylinders.

The deliberate release of hazardous waste propellant or compressed gas to the atmosphere is prohibited by the Hazardous Waste Rules, but for many years the MPCA chose not to enforce this prohibition. This allowed generators and collection sites to puncture hazardous waste aerosols and dispose of ignitable hazardous waste to the atmosphere. However, improved recycling opportunities and more restrictive air quality goals mean that allowance is no longer sustainable.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045, and incorporate regulatory interpretation decisions made by the MPCA on April 4, 2014, June 10, 2015, August 9, 2015, and November 24, 2015. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review Minnesota Rules.

Contact your Metropolitan County or the MPCA with your questions. The MPCA's Small Business Environmental Assistance Program (SBEAP) can also provide free, confidential regulatory compliance assistance.

Metro County Hazardous Waste Offices

Anoka 763-422-7093
Carver 952-361-1800
Dakota 952-891-7557
Hennepin 612-348-3777
Ramsey 651-266-1199
Scott 952-496-8475
Washington 651-430-6655
Websites..... http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
Website ..... http://www.mntap.umn.edu

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
Brainerd 218-828-2492
Detroit Lakes..... 218-847-1519
Duluth 218-723-4660
Mankato 507-389-5977
Marshall 507-537-7146
Rochester..... 507-285-7343
St. Paul 651-296-6300
Willmar 320-214-3786
Website ..... http://www.pca.state.mn.us

Small Business Environmental Assistance

Toll free..... 1-800-657-3938
Metro 651-282-6143
Website http://www.pca.state.mn.us/sbeap/

2. ASBESTOS-CONTAINING MATERIALS (ACM)
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types

- asbestos doors	- plastic-lined drums	- double-lined plastic bags
- asbestos insulation	- brake shoes	- siding, shingles, and tile
- scrap asbestos boards	- fire-proofed clothing	

2. Background - Asbestos was generally used in building construction for fire-proofing purposes. The primary concern associated with handling asbestos wastes is exposure to airborne asbestos fibers. These fibers, if inhaled, can increase the risk of lung damage or cancer. Ordinarily, even a very small quantity of inhaled asbestos fibers may cause long term respiratory side effects. **There is no known safe level of exposure to ACM.** Federal regulations (40 CFR Part 61) require labeling, manifesting, and disposing of ACM in landfills. The regulations describe two classes of ACM (friable and non-friable), one of which is not subject to the regulations. **Olmsted County manages all ACM as regulated material.**

3. Disposal - All ACM will be disposed in the Olmsted County Kalmar Landfill MSW disposal area.

4. Testing Requirements - In general, no analytical testing is required; however, contaminated ACM will require material-dependent testing. Brake linings must be evaluated using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters that can reasonably be expected to be present (i.e., cadmium, chromium, and lead). Additional analytical tests besides TCLP extraction may, under certain circumstances, be required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility.

5. Documentation - **All haulers of ACM must present a completed, approved Asbestos-Containing Material Transport and Disposal Manifest (see Appendix D) at the time of delivery.** If appropriate County personnel are present at the time of delivery, the Asbestos-Containing Material Transport and Disposal Manifest form can be completed at the disposal location. **Waste loads that do not have proper documentation will be rejected.**

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Verify that the ACM load is properly sealed in leak-tight containers (i.e., plastic drums or bags), is adequately wet, has no holes, and has no visible emissions. Ensure that each container, usually consisting of a plastic bag or marked drum, has a warning label attached. Vehicles carrying ACM must have warning signs visible during unloading. If containers are inadequate and/or have no warning labels, the load must immediately be rejected. **Do not repackage any ACM; this is the sole responsibility of the waste generator.** Review the Asbestos-Containing Material Transport and Disposal Manifest Form for accuracy and completeness, and complete the *Disposal Site* section of the form. Note on the manifest form any discrepancies between the description of the waste and the actual waste received. The Minnesota Pollution Control Agency (MPCA) must be notified in writing of violations in packaging by the next business day, and of unresolved discrepancies in quantities within 15 days.

7. Facility Operational Procedures - All ACM must be disposed of in a separate area within the MSW disposal area. Typically, a site location is designated daily, depending on the expected incoming volume of ACM. The location of the point of disposal must be surveyed by the facility operator and recorded on the Facility Industrial Waste Disposal Log. Olmsted County exercises extreme care to place all ACM-containing containers in the disposal area in a manner such that the individual

containers or bags are not damaged during handling. It is the hauler's responsibility to handle and unload all ACM from the delivery vehicle and to assure that their personnel are appropriately health and safety-trained. In the event that a package is breached, Olmsted County will contact the hauler or generator to repackage the material according to requirements. **Under no circumstances will Olmsted County staff handle damaged ACM containers or repackage ACM.** When wind velocities exceed ten miles per hour, no management of ACM shall take place. Federal regulations require that the deposited ACM be covered with six (6) inches of clean daily cover at the end of each operating day. The application of daily cover is to be done in a manner that minimizes damage to the containers, thereby preventing dispersal of airborne ACM. Federal regulations further prohibit any visible emissions from any area where ACM has been deposited.

8. Special Generator Requirements - **Please note that under no circumstances will loose ACM be accepted by Olmsted County.** All ACM accepted at the disposal site must be packaged in drums or in one six-ply or two three-ply plastic bags, totaling no less than six (6) millimeters in thickness. Any friable asbestos should be adequately wetted/dampened using a low pressure, fine water spray to prevent the dispersion of ACM during management. All containers of ACM must be closed, without holes, rips, or tears, and have no visible emissions emanating. Each container must have a warning label attached stating the following:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Furthermore, vehicles carrying ACM must have warning signs visible during the unloading process. Olmsted County staff will inspect the waste containers at the disposal facility. If containers are not intact and appropriately labeled, they will be rejected. **The load must only contain ACM and cannot be mixed with other waste materials.**

Transporters of ACM waste loads must contact the Kalmar Landfill at least 24 hours prior to the anticipated time of delivery. Olmsted County's policy, based solely on operational capacity, is to restrict the total daily volume of ACM accepted to 120 cubic yards. This quantity may only be exceeded if previous special arrangements have been made with Olmsted County. ACM will only be handled from 8:00 a.m. to 11:00 a.m., on Monday and Wednesday, unless other prior arrangements are made. To make the necessary arrangements, please contact the Kalmar Landfill at 507-285-8515.

9. Emergency Situation Activities - If Kalmar Landfill staff discovers that an ACM waste load is improperly packaged and/or labeled, is inadequately wetted, or identify any other hazard associated with the ACM waste load, Kalmar Landfill staff will reject the ACM load, contact a licensed asbestos-abatement/emergency-response contractor to safely, adequately contain the material, and notify the MPCA of the situation. Any and all ACM-abatement activities that result from the action(s) or inaction(s) of the company or party delivering ACM to the landfill will be the financial responsibility of said party(ies). **Under no circumstances will Olmsted County staff handle damaged ACM containers or repackage any ACM.**

10. Unacceptable Demolition Debris Loads Mixed With ACM - Occasionally, commercial and household loads of demolition debris are unloaded in the demolition debris cell before the site operator is able to determine that the waste load contains ACM. When ACM cannot be segregated from non-ACM in a dumped load, the waste must be buried in place within the demolition debris cell. The waste must be immediately covered with soil and/or waste, and a survey of the location must be completed and recorded by the site operator.

11. Additional Information - See MPCA fact sheets “Guidance for the Removal, Transport, and Disposal of Category I Asbestos-Containing Materials,” “Guidance for the Removal, Transport, and Disposal of Category II Asbestos-Containing Materials,” “Guidance for Handling Asbestos-Containing Material at Active Waste Disposal Sites,” and Olmsted County’s ACM fact sheet.

Guidance for handling asbestos-containing waste material at active waste disposal sites

This document offers guidance about handling asbestos-containing waste (ACWM) at active waste-disposal sites in accordance with asbestos National Emission Standards for Hazardous Air Pollutants (asbestos NESHAP), Title 40 Code of Federal Regulations (CFR) pt. 61 subp. M as incorporated into Minnesota Rules, Chapter 7011.9920.

This guidance document is not intended to replace reading the rules and regulations to determine their applicability to your specific situation.

What is asbestos-containing waste material?

Asbestos-containing waste material (ACWM) includes any waste that contains commercial asbestos *and* is generated by a source or activity subject to the asbestos NESHAP. Asbestos-containing waste material includes all regulated asbestos-containing material (RACM) waste and any materials contaminated with asbestos – including equipment and clothing.

An active waste disposal site (a.k.a. landfill) is an activity subject to the asbestos NESHAP, therefore all ACM handled at a landfill is considered RACM/ACWM. A landfill typically receives the majority of its ACWM from asbestos abatement projects being performed by licensed asbestos abatement contractors. Some examples of ACWM include pipe insulation, boiler insulation, ceiling tiles, fire-proofing materials, textured ceiling spray, cement asbestos board (Transite), flooring materials, roofing materials, and equipment containment with asbestos.

NESHAP regulations for handling asbestos-containing waste material

The work-practice and record-keeping requirements for handling ACWM at waste disposal sites are found in the asbestos NESHAP 40 CFR § 61.154 (Standard for Active Waste Disposal Sites). This guidance document focuses on work-practice regulations. Additional guidance about the reporting and record-keeping requirements for ACWM can be obtained by calling the Minnesota Pollution Control Agency's (MPCA) Asbestos Program.

The work-practice requirements for ACWM disposal at active waste disposal sites include:

- no visible emissions from any area where ACWM has been deposited
- covering ACWM with six inches of non-ACWM material at the end of each operating day or, for sites operating continuously, within 24 hours of receiving the material. The facility's Industrial Solid Waste Management Plan (ISWMP) maybe more stringent. The MPCA recommends to immediately cover the area after placement; or
- utilizing a resinous or petroleum-based dust suppression agent or other U.S. Environmental Protection Agency-approved, visible-emission control method to achieve dust control at sites where the no-visible emission standard is followed

Everyday application of work-practice requirements

These activities are suggested to help ensure compliance during the disposal of ACWM:

1. **Prepare a disposal location** – The landfill operator should plan in advance where to deposit the ACWM. Some landfills dispose of ACWM in specific trenches or cells, while others utilize the base of the working face. In any case, the operator should ensure that the location is easily accessible to unload and cover the ACWM without excessive handling of the material. If excavation is required, the operator shallcheck landfill records for past deposits of ACWM. This will prevent the disturbance of previously-buried ACWM.
2. **Inspect the load** – Most shipments of ACWM arrive at the landfill in a roll-off container or are brought in directly by the customer. The landfill operator should inspect each load to ensure that the ACWM is properly sealed in leak-tight containers, appears to be wet and is properly labeled and manifested. If the ACWM is not properly wetted and sealed, the landfill should not accept the load. In addition, if the description of the load on the Waste Shipment Record is not consistent with the observations of the operator, the operator should reject the load.
3. **Carefully unload the ACWM** – The landfill operator should ensure that all containers of ACWM are carefully unloaded in the disposal area to ensure that containers are not damaged in this process.
4. **Cover the ACWM** – The landfill operator must cover the ACWM with at least six inches of non-asbestos cover by the end of each working day, or, if the site is continuously operated, within 24 hours of receipt of the waste. Deposit the ACWM in a location that does not require additional handling of the containers and can be easily covered. Typically, a landfill's ISWMP requires loads of ACWM to be covered immediately upon deposition. Apply cover in a manner that does not damage the containers and disturb the ACWM.
5. **Compact** – Make sure all ACWM in the ACWM-disposal area has been sufficiently covered before attempting to compact. This practice will help prevent exposure of the ACWM.
6. **Record location** – Maintain, until closure, records of the location, depth and area, and quantity in cubic yards of ACWM within the disposal site on a map or diagram of disposal location.

Managing problem situations

In certain instances, the landfill operator may discover that problems have arisen during the disposal of ACWM. The following situations outline the steps necessary to correct problems. ***NOTE: If some of these situations occur at an active waste-disposal site, they may be considered violations of the asbestos NESHAP. This is not an exhaustive listing of problems and handling methods.***

Disturbance of previously-buried asbestos-containing waste material

Careful planning should prevent disturbance from occurring at a landfill; however, if ACWM is disturbed or excavated, the landfill operator should:

- immediately isolate the disturbed area from employees or landfill patrons
- immediately cover the affected area with at least six inches of non-asbestos-containing cover
- document steps taken by the operator to correct the situation
- call the MPCA's Asbestos Program and the regional Solid Waste Compliance and Enforcement staff member
- if intentionally disturbing or excavating areas with deposited ACWM/RACM, the landfill shall notify the MPCA in writing at least 45 days prior and in accordance with the requirements of 40 CFR 61.154(j)

Arrival of improperly packaged or wetted ACWM

If a landfill receives a load of ACWM that is improperly wetted or sealed, the landfill operator should reject the load and require the generator to correct the situation. The landfill should inform the generator that they must remove and repackage the ACWM; it should also notify the MPCA of the situation. Repackaging will need to be completed by a licensed asbestos abatement contractor. Under no circumstances should landfill personnel handle, repackage or disturb any ACWM.

Disturbance of the ACWM during unloading and disposal

Careful handling should prevent this problem from ever occurring**. *If the ACWM is disturbed during the unloading, covering or compacting of the material, the landfill operator should:***

- immediately isolate the disturbed area from employees and landfill patrons
- immediately and carefully cover the affected area with six inches of non-asbestos-containing cover
- document steps taken by the landfill operator to correct the situation
- call the MPCA's Asbestos Program

Accepting residential asbestos waste

Many landfills choose to accept asbestos-containing materials from citizens who remove ACM from their homes. The most common materials a landfill is likely to encounter from home owners are, cementitious asbestos board (slate) siding and flooring materials. All landfills must follow the procedures listed in their ISWMP for all ACWM – from both commercial and residential sources. Follow the work-practice guidelines for all ACWM.

For more information

For more information about residential asbestos removal, landfill ACWM work-practice requirements or asbestos rules and regulations, call MPCA's Asbestos Program at 651-296-6300 or 800-657-3864.

Guidance for the removal, transport, and disposal of Category I Asbestos-Containing Materials

Asbestos Program/Solid Waste

This document offers guidance on the removal, transport, and disposal of Category I Asbestos-Containing Materials (ACM) as defined by the asbestos National Emission Standards for Hazardous Air Pollutants (asbestos NESHAP), 40 Code of Federal Regulations (CFR) pt. 61, subp. M, which has been incorporated into Minn. R. 7011.9920.

What is Category I Asbestos-Containing Materials?

Category I ACM consists of asbestos-containing gaskets, resilient floor coverings, and asphalt roofing products that contain greater than one percent asbestos using the method described in Appendix A, subpart F, 40 CFR Part 763, section 1, Polarized Light Microscopy.

When does the asbestos NESHAP apply?

Category I ACM is regulated by the asbestos NESHAP if it is or will become friable or rendered regulated. Friable ACM is defined that, when dry, can be crushed, crumbled, pulverized, or reduced to powder by hand pressure. In addition, Category I ACM that will be or has been subjected to sanding, cutting, grinding, abrading, or intentional burning will render it in to Regulated ACM (RACM).

Category I ACM that has or will become friable or rendered into RACM must be abated by a Minnesota Department of Health (MDH) licensed asbestos abatement contractors.

If any of the demolition materials are to be recycled it is necessary to remove any Category I ACM that may be present. The recycling process could result in previously nonfriable Category I ACM becoming RACM. If the Category I ACM is not removed prior to demolition then the building materials containing, mixed in with, or coated with Category I ACM may not be used for recycling.

Removal of Category I Asbestos-Containing Materials

First, you must determine what materials contain asbestos. In Minnesota, only a MDH licensed asbestos inspector can perform an asbestos inspection. You do have an option to assume materials contain asbestos and handle the materials as such. Once you have identified a Category I ACM in your renovation or demolition project, the next consideration is the method of removal. If the removal involves quantities greater than 160 square feet, 260 linear feet, or 35 cubic feet RACM, then the following procedures must be followed:

1. Friable ACM must be removed by MDH licensed asbestos abatement contractors. Category I ACM that is able to be crushed or crumbled by hand pressure is friable. This determination must be made prior to any other regarding the removal of the Category I ACM. The Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency maintain that in most cases the asbestos-containing paper backing of a linoleum product is considered to be friable material. If you elect to remove nonfriable Category I ACM the removal must be done in such a manner that it does not cause the Category I ACM to be crushed, crumbled, pulverized, or reduced to powder or subject the ACM to any sanding, cutting, grinding, or abrading rendering the Category I ACM to become RACM. Examples of removal methods that would render the Category I ACM to RACM are shot blasting, mechanical chipping, intentional burning, or specific grinding, sanding, cutting, or abrading.

2. Nonfriable Category I ACM that is removed by hand tools and not subject to more then de minimis breakage may be removed by unlicensed contractors. The removal must be careful to keep the Category I ACM as intact as possible. For example, the use of solvents, heat machines, or dry ice to loosen Category I ACM nonfriable floor tiles are examples of removal methods that are not likely to cause the Category I ACM to become RACM.
3. The MPCA reminds you that asbestos removal projects may be subject to other applicable rules and regulations regarding asbestos removal and disposal. Removal of asbestos is also governed by:
   - 29 CFR Parts 1910 et. al., Occupational Safety and Health Administration (OSHA) laws; and
   - Minn. R. 4620.3000 - 4620.3700, Asbestos Abatement Rules, administered by the MDH. For more info call 651-215-0900.
4. The determination of who is allowed to remove Category I ACM is dependent on the removal method used and the quantity of ACM involved. Proceeding with an incorrect understanding of applicable rules, regulations, or standards could lead you to be out of compliance and subject you to an enforcement action that could potentially include monetary penalties.

Packaging and transport of Category I Asbestos-Containing Materials

1. All RACM/Asbestos-Containing Waste Material (ACWM) must be adequately wet, packaged in leak-tight containers, and appropriately labeled with asbestos warning signs and waste generator labels.
2. The MPCA recommends that all Category I ACM be packaged and transported in the same manner as RACM and reminds you that approved landfills will only accept ACWM that has been properly wetted, packaged, and manifested.
3. Some types of Category I ACM may have sharp edges and will need to be packaged to avoid any further breakage of the ACWM or puncturing or tearing of the containers.
4. Asbestos is considered a hazardous air pollutant and a class 9 hazardous waste. Proper labeling and transportation of ACWM includes identification of it as a class 9 hazardous waste and proper placards placed on the vehicle or dumpster. Asbestos warning signs must be placed on the vehicle or dumpster during the loading and unloading of RACM in accordance with 40CFR 61.150(c).

Disposal of Asbestos-Containing Material

1. All ACM must be disposed of at a site approved by the U.S. Environmental Protection Agency which is operated in accordance with 40 CFR § 61.154. If the landfill is operated in the State of Minnesota, ensure it is a MPCA approved solid waste facility permitted to accept the waste.
2. For a complete listing of landfills currently approved to receive ACWM in Minnesota, please contact the MPCA Asbestos Program or your regional solid waste compliance and enforcement staff.

Category I Asbestos-Containing Material in demolition projects

Category I nonfriable ACM may remain in place during demolition as long as it is nonfriable, in good condition, and will not specifically be subjected to sanding, cutting, grinding, abrading, or intentional burning. As a reminder, if Category I ACM is left in place, all demolition debris needs to be handled as asbestos containing and disposed of at an approved landfill.

If you have any questions regarding the classification, removal, transport, disposal, or any questions regarding asbestos rules, regulations, or standards, please feel free to contact the MPCA Asbestos Program at 651-296-6300 or 800-657-3864.

This guidance document is not intended as a substitute for reading the rules or regulations and making your own independent determination of its applicability to your asbestos removal or demolition project. Examples in the guidance document do not represent an exhaustive listing of projects or removal methods to which the regulation might apply. Visit the Minnesota Pollution Control Agency at http://www.pca.state.mn.us.

Guidance for the removal, transport, and disposal of Category II Asbestos-Containing Materials

Asbestos/Solid Waste Program

This document offers guidance on the removal, transport, and disposal of Category II Asbestos-Containing Materials (ACM) as defined by the asbestos National Emission Standards for Hazardous Air Pollutants (asbestos NESHAP), 40 Code of Federal Regulations (CFR) pt. 61, subp. M, which has been incorporated into Minn. R. 7011.9920.

What is Category II Asbestos-Containing Materials?

Category II ACM consists of any material, excluding Category I nonfriable ACM (i.e. floor tile, gaskets, asphalt roofing products), containing more than one percent asbestos as determined using the methods specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized or reduced to a powder by hand pressure.

The most common form of Category II ACM is cementitious asbestos board, which is often referred to by its trade name “Transiteâ .” Other possible Category II ACM includes but is not limited to, Transiteâ shingles and siding, conduits, pliable adhesives, and asbestos cement piping.

When does the asbestos NESHAP apply?

Category II ACM is regulated (therefore Regulated Asbestos Containing Material [RACM]) by the asbestos NESHAP if it is or will become friable, subject to intentional burning, and/or crushed, crumbled and reduced to a powder, due to the forces expected to act on the ACM during a renovation or demolition project. Friable ACM is any ACM that can be crushed, crumbled, pulverized, or reduced to powder by hand pressure when dry.

Removal of Category II Asbestos-Containing Materials

First, you must determine what materials contain asbestos. In Minnesota, only a Minnesota Department of Health (MDH) licensed asbestos inspector can perform an asbestos inspection. You do have an option to assume materials contain asbestos and handle the materials as such. Once you have identified a Category II ACM in your renovation or demolition project, the next considerations are the quantity of ACM and the methods of removal. If the removal involves quantities greater than 160 square feet, 260 linear feet, or 35 cubic feet of RACM then the following procedures must be followed:

1. RACM must be removed by licensed asbestos removal contractors. Category II ACM that is able to be crushed or crumbled by hand pressure is friable. The determination of friability must be made prior to the removal of the Category II ACM. If you elect to remove nonfriable Category II ACM, the removal must be done in such a manner that does not cause the Category II ACM to be crushed, crumbled, pulverized, or reduced to powder which would cause the Category II ACM to become RACM. Examples of removal methods that would render the Category II ACM to RACM are smashing it, dropping it to the ground, intentional burning, subjecting it to crushing by heavy machinery, or specific grinding, sanding, cutting, or abrading.
2. Nonfriable Category II ACM that is carefully removed by hand tools and not subject to more than de minimis breakage may be removed by unlicensed contractors. During the removal, care must be

taken to keep the Category II ACM as intact as possible. For example, in removal of Category II ACM panels, the bolts or nails holding the panels in place can be removed first allowing for the panel to be removed intact which is not likely to cause the Category II ACM to become RACM.

3. The Minnesota Pollution Control Agency (MPCA) reminds you that asbestos removal projects may be subject to other applicable rules and regulations regarding asbestos removal and disposal. Removal of asbestos is also governed by:
   - 29 CFR Parts 1910 et. al., Occupational Safety & Health Administration (OSHA) laws; and
   - Minn. R. 4620.3000 - 4620.3700, Asbestos Abatement Rules, administered by the MDH. For more information call 651-215-0900
4. The determination of who is allowed to remove Category II ACM is dependent on the removal method used and the quantity of ACM involved. Proceeding with an incorrect understanding of applicable rules, regulations, or standards could lead you to be out of compliance and subject you to an enforcement action that could potentially include monetary penalties.

Packaging and transport of Category II Asbestos-Containing Materials

1. All RACM must be adequately wet, packaged in leak-tight containers, and appropriately labeled with asbestos warning signs and waste generator labels.
2. All Category II ACM must be packaged and transported in the same manner as RACM. In addition, landfills will only accept RACM that has been properly wetted, packaged, and manifested.
3. Some types of Category II ACM may have sharp edges and will need to be packaged to avoid any further breakage of the RACM or puncturing or tearing of the containers.
4. Asbestos is considered a hazardous air pollutant and a class 9 hazardous waste. Proper labeling and transportation of ACWM includes identification of it as a class 9 hazardous waste and proper placards placed on the vehicle or dumpster. Asbestos warning signs must be placed on the vehicle or dumpster during the loading and unloading of RACM in accordance with 40CFR 61.150(c).

Disposal of Asbestos-Containing Material

1. All ACM must be disposed of at a site approved by the U.S. Environmental Protection Agency which is operated in accordance with 40 CFR § 61.154. If the landfill is operated in the State of Minnesota, ensure it is a MPCA approved solid waste facility permitted to accept the waste.
2. For a complete listing of landfills currently approved to receive RACM in Minnesota, please contact the MPCA Asbestos Program or your regional solid waste compliance and enforcement staff.

Category II Asbestos-Containing Material in demolition projects

The MPCA believes that in most cases the typical forces expected in a demolition project will cause Category II ACM to be crushed, pulverized, crumbled, and/or reduced to a powder. Therefore, the MPCA recommends that all Category II ACM be removed prior to the commencement of demolition.

If you have any questions regarding the classification, removal, transport, disposal, or any questions regarding asbestos rules, regulations, or standards, please feel free to contact the MPCA Asbestos Program at 651-296-6300 or 800-657-3864. If you intend to remove Category II ACM on your own please call for instructions specific to your situation.

This guidance document is not intended as a substitute for reading the rules or regulations and making your own independent determination of their applicability to your asbestos removal or demolition project. Examples in this guidance document do not represent an exhaustive listing of projects or removal methods to which the regulation might apply. Visit the Minnesota Pollution Control Agency at http://www.pca.state.mn.us.

3. PCB-CONTAMINATED WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - electrical ballasts or contaminated substrates like wood and concrete

2. Background - Polychlorinated Biphenyls (PCBs) consist of 209 chlorinated hydrocarbons that, due to their toxicity (and potential to be a human carcinogen), were banned from manufacture in 1979. Due to their electrical insulating, non-flammability, and chemical stability properties, PCBs were prevalently used in many industrial applications. In Minnesota, PCBs are regulated by the Minnesota Hazardous Waste Regulations and the Federal Regulations established pursuant to the passage of the Toxic Substance Control Act (TSCA) in 1976. **Waste materials contaminated with PCBs at concentrations equal to or greater than 50 parts per million (ppm) are regulated by the Toxic Substances Control Act (TSCA).** Waste materials containing less than 50 ppm total PCBs (classified as non-PCB in Minnesota) can be accepted at the Olmsted Waste-to-Energy Facility (OWEF) or the Olmsted County Kalmar Landfill. In addition, the Olmsted County Hazardous Waste Facility (HWF) can accept encased fluorescent light ballasts and small capacitors that are not regulated under TSCA. PCB wastes that cannot be managed by Olmsted County facilities should be handled by a hazardous waste disposal vendor. To obtain a current list of hazardous waste disposal contractors, contact the Olmsted County Environmental Resources Department at 507-328-7070, and ask to speak with the Waste Abatement Manager.

3. Disposal - Approved PCB-contaminated wastes that contain less than 50 ppm total PCBs may be accepted at the Kalmar Landfill or the OWEF, depending on the combustion characteristics of the material.

4. Testing Requirements - Waste materials may be documented as being non-PCB using one or more of the following three documenting methodologies:

   I. Analysis for PCBs (generally using analytical method SW-846 8080).

   II. When the waste material consists of equipment, a name plate or other permanent marking from the manufacturer of equipment stating that the equipment is non-PCB.

   III. Equipment manufacture date after July 2, 1979 (date of purchase is not sufficient).

Additional analytical testing may, under certain circumstances, be required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Resources Department. At the time of delivery, the hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form for completeness and complete the *Facility* section of the form.

7. Facility Operational Requirements - No special requirements.

8. Special Generator Procedures - None.

9. Additional Information - See Minnesota Pollution Control Agency fact sheets “Identifying, Using and Managing PCBs,” “Manifest and Dispose of PCBs,” and “Managing PCBs in Ballasts and Small Capacitors.”

Identifying, Using and Managing PCBs

Waste/Hazardous Waste #4.48a • September 2010

Minnesota Pollution Control Agency

Contents

What are PCBs?

Polychlorinated biphenyls (PCBs) are not a single chemical, but a class of 209 synthetic chemicals, often used as insulators in electrical equipment, including transformers, capacitors and ballasts. PCBs also were used as plasticizers in caulking and thermal stabilizers in hydraulic and lubricating fluids.

Regulating PCBs

In Minnesota, PCBs are subject to

- Federal Toxic Substance Control Act (TSCA) Regulations administered by the U.S Environmental Protection Agency (EPA)
- Minnesota Hazardous Waste Rules administered by the Minnesota Pollution Control Agency (MPCA)

Classifying PCBs

Materials—products, equipment, wastes—are classified in Minnesota as:

- **Non-PCB** – contains less than 50 parts per million (ppm) PCBs
- **PCB-Contaminated** – contains PCBs at a concentration of 50 ppm or more, but less than 500 ppm
- **PCB –** contains PCBs at a concentration of 500 ppm or more
- **MN03 listed hazardous waste** – waste that is PCB-Contaminated or PCB

PCB assumptions

If you are not able to document that materials are Non-PCB, you must assume that:

- Mineral oil-filled electrical equipment, including transformers, is **PCB-contaminated**
- Transformers filled with any fluid other than mineral oil are **PCB**
- Capacitors are **PCB**
- Any waste, including electrical equipment, lighting ballasts, caulking, shredder residue, and spill debris, which may reasonably contain PCBs, is **MN03 listed hazardous waste**

Documenting as Non-PCB

You may document that materials are Non-PCB through one of these three methods:

1. Analytical test results
2. Nameplate, other permanent marking or equivalent marking from the manufacturer or remanufacturer of equipment stating the equipment is Non-PCB
3. An equipment manufacture date after July 2, 1979 (date of purchase is not sufficient)

You may not rely solely on other markings, including the commonly used blue-with-white-lettering "Certified" label. You must have documentation using one of the three methods above showing the basis for the markings.

To access hazardous waste documents on the Minnesota Pollution Control Agency Web site, www.pca.state.mn.us,

1. Click on Waste on the menu bar.
2. On the pop-up submenu, click on Publications.
3. On the Waste-related Publications page, click on Hazardous Waste Publications.

PCB documents are located in the Specific Wastes section.

Minnesota Pollution Control Agency • 520 Lafayette Rd. N., St. Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

Note: Oil-filled equipment for disposal that has been verified through testing to be PCB-Contaminated or less and from which all fluid has been drained may be managed equivalent to Non-PCB items. The MPCA considers such drained equipment to be non-hazardous. Manage the fluid as a regulated PCB-Contaminated waste.

Testing for PCBs

Analyze equipment or wastes for PCBs on a dry weight basis in ppm using the gas chromatography methods or an alternate method approved by the EPA. There is no specific Federal or Minnesota accreditation or licensure needed by the laboratory, although the Minnesota Department of Health (MDH) administers a voluntary laboratory certification program. If you would like assistance finding an MDH-certified laboratory, please contact the MDH or MPCA. You may not use field test kits characterize potentially PCB-containing materials for disposal.

If characterizing equipment with non-porous surfaces only for disposal, you may instead use wipe sample results, with the following equivalents:

- £10µg/100 cm^2 is Non-PCB
- >10µg/100 cm^2 and <100µg/100 cm^2 is PCB-Contaminated
- ≥100µg/100 cm^2 is PCB

Continued use of PCBs

You may continue to use electrical equipment that you assume or know contains PCBs for the remainder of its useful life provided:

1. All equipment is maintained in serviceable condition
2. All equipment meets the requirements either for use or for storage for reuse.

The MPCA encourages testing and phase-out of potentially PCB-containing equipment. Eliminating this equipment can reduce your risk of spills and overall system costs. For more information about PCB phase-outs in Minnesota, see MPCA Hazardous Waste fact sheet #4.48h, Minnesota Changes in PCB Management, at www.pca.state.mn.us/waste/pubs/business.html.

Requirements for use

Electrical equipment is considered 'in use' when it is connected to an electrical distribution system and energized. Electrical equipment that is not 'in use' is considered either

- stored for reuse or
- stored for disposal

Ensure that all 'in use' electrical and other equipment that has not been documented to be Non-PCB meets these requirements:

- **PCBs are being used in a totally enclosed system** Electrical, hydraulic, or heat-transfer equipment cannot be leaking, weeping, or seeping. Immediately remove from service all equipment that is releasing any amount of oil; do not return it to service until it is repaired.
  Note: The MPCA interprets this prohibition strictly. Signs of unusual dust or dirt adhering to electrical equipment are considered signs of oil leakage until proven otherwise.
- **PCB transformers** are registered with the EPA and meet the requirements listed in the 'PCB transformer conditions' section.
- **PCB electromagnets** are not used or stored for reuse in a location where there is risk of human food or animal feed being exposed to them.
- **PCB voltage regulators** meet all the requirements applicable to PCB transformers listed in the 'PCB transformer conditions' section, except for registration with EPA and building owners.
- **Railroad locomotive transformers** are documented as containing PCBs at a concentration of 1000 ppm or less.
- **Mining equipment, heat transfer equipment, and hydraulic systems** are Non-PCB.

Requirements for storage for reuse

Electrical equipment that is not connected to an electrical distribution system and energized is considered 'stored.' If you want to store working electrical equipment that is in good condition for later use, but you cannot document it as Non-PCB, you must meet the TSCA Storage for Reuse requirements. For more information about PCB storage requirements, see MPCA Hazardous Waste fact sheet #4.48c, Storing PCBs, at www.pca.state.mn.us/waste/pubs/business.html.

Note: Equipment removed from service for PCB testing to determine disposition must meet either the Storage for Reuse requirements or the Storage for Disposal

requirements. Neither the TSCA Regulations nor the Hazardous Waste Rules allow any interim unregulated status period.

PCB transformer conditions

All transformers known or assumed to be PCB Transformers must meet these conditions, whether they are in use or in storage for reuse:

- They are registered with the EPA using EPA Form 7720-12. You may obtain this form on the EPA Web site www.epa.gov. You must keep a copy of the registration
  Note: When you dispose of or reclassify a PCB Transformer registered by you or a previous owner, the MPCA recommends that you contact the MPCA to request removal of the registration from the EPA registry. Do not submit a new registration form to the EPA listing '0' PCB transformers or leaving the number blank.
- They are not used at any location or for any use that might pose an exposure risk to human food or animal feed
- They are not used or stored for reuse in or near commercial buildings if the secondary voltage is 480 volts (V) or more
- They are registered with the owners of record if used or stored for reuse in or within 30 meters (about 98 feet) of commercial buildings and the secondary voltage is less than 480V
- They are labeled with the PCB M_L mark. For an example of the PCB M_L mark and more information on labeling of PCBs, see MPCA Hazardous Waste fact sheet #4.48b, Marking and Labeling PCBs, available from the MPCA hazardous waste publications Web page.
- Access ways to the PCB Transformer are labeled with the PCB M_L mark.
- No combustible material, such as paint, plastics, or wood are stored in the transformer vault or within 5 meters (about 16 feet) of the transformer vault or enclosure or, if unenclosed, of the transformer itself.
- If involved in a fire, it is reported immediately to the National Response Center and the Minnesota Duty Officer. For more information on reporting incidents involving PCBs, see MPCA Hazardous Waste fact sheet #4.48g, PCB Spill Cleanup Policy, available on the MPCA's hazardous waste publications Web page.
- If they have not been tested or if they are known to contain 60,000 ppm PCBs or more, they are inspected every three months with at least 30 days between inspections. Inspections are documented.
- If they are known to contain less than 60,000 ppm PCBs or if they have secondary containment able to hold at least the total volume of all the equipment in the containment area, they are inspected every 12 months. Inspections are documented.
- The coil is not removed during servicing or rebuilding

Reclassifying electrical equipment

To reclassify electrical equipment do the following:

1. Test it to determine its exact concentration of PCBs. If you do not test, assume it contains 1,000 ppm PCBs or more.
2. Drain the dielectric fluid. Store and dispose of the drained fluid as waste PCBs.
3. Refill the equipment with Non-PCB fluid.
4. Wait at least 90 days. If the original concentration of the equipment was known or assumed to be 1,000 ppm PCBs or more, you must operate the equipment under electrical load during this time period.
5. Retest the equipment. The equipment is now regulated under the retested concentration of PCBs.
6. Maintain documentation for each step of reclassification.

Note: If the testing in step 1 classifies the equipment as PCB-Contaminated and you use only 'clean' fluid (less than 2 ppm PCBs) to refill it, then you may skip steps 4 and 5.

More information

The MPCA and EPA have staff available to answer your PCB management questions. For more information, contact MPCA or EPA Region 5 PCB staff.

Minnesota Pollution Control Agency

Toll free (all offices)..... 1-800-657-3864
St. Paul..... 651-296-6300
Web site ..... www.pca.state.mn.us

U.S. Environmental Protection Agency, Region 5

Toll free (from Minnesota) 1-800-621-8431
Web site www.epa.gov/region5/

U.S. Environmental Protection Agency, Headquarters

TSCA Hotline 202-554-1404
Web site ..... www.epa.gov

Manifest and Dispose of PCBs

What are PCBs?

Polychlorinated biphenyls (PCBs) are a class of 209 toxic man-made chemicals that persist in the environment and bioaccumulate in animals and humans. PCBs were used extensively in many industrial products from the 1950's through 1978, including electrical equipment, hydraulic fluids, paints, and caulking. Exposure to PCBs can cause a range of human health effects and environmental impacts. For more information on other potentially PCB-containing materials, PCB terminology, and how to test for PCBs, visit the Minnesota Pollution Control Agency (MPCA) at http://www.pca.state.mn.us/publications/w-hw4-48a.pdf to view hazardous waste fact sheet #w-hw4-48a, Identifying, Using, and Managing PCBs.

How are PCBs regulated?

In Minnesota, PCBs are subject to two sets of regulations:

1. Federal Toxic Substances Control Act (TSCA) Regulations administered by the U.S. Environmental Protection Agency (EPA)
2. Minnesota Hazardous Waste Rules administered by the MPCA

This fact sheet will provide guidance regarding transport for disposal of PCBs under these requirements.

When must PCBs be shipped off site for disposal?

Within one year of the date removed from service*, you must ensure your PCBs achieve final disposition – meaning they are actually incinerated, detoxified or otherwise disposed. Include the time needed for your PCB wastes to be transported to and held at the treatment or disposal facility in this time limit. Remember that transport and holding of your PCB wastes may take several months.

*The *date removed from service* is the day electrical equipment was de-energized or disconnected from the electrical distribution system, or the day other PCB wastes were removed from actual use, such as when hydraulic pistons are replaced. The *date removed from service* is *not* the day you received test results, unless you had already met the PCB *storage for reuse* requirements. For more information regarding storing PCBs for reuse or disposal, see MPCA hazardous waste fact sheet #w-hw4-48, Storing PCBs, at http://www.pca.state.mn.us/publications/w-hw4-48c.pdf.

Where may PCBs be shipped for disposal?

PCBs must be disposed of in a facility permitted by the EPA or an authorized state for hazardous waste or PCB treatment or disposal. Methods commonly used to treat PCBs include incineration, land disposal and detoxification. Each method results in different waste products and liabilities for you, the generator.

Who may transport PCBs?

You may consolidate PCBs using your own vehicle to transport them between sites you own. In this case you do not need a hazardous waste manifest. If the volume of PCBs or the type of material contaminated with PCBs would meet the definition of a *hazardous material* under the Federal Hazardous Materials Regulations (HMR) administered by the U.S. Department of Transportation (DOT),

ensure that the packaging and labeling of the PCBs, and the training, insurance, and placarding of the transporter all comply with the HMR.

Mark vehicles with the PCB M_L mark on each side of the vehicle when they are loaded with one or more PCB transformers or 45 kilograms* or more of liquid containing PCBs. For more information on PCB marking, see MPCA hazardous waste fact sheet #w-hw4-48b, Marking and Labeling PCBs, at http://www.pca.state.mn.us/publications/w-hw4-48b.pdf.

*45 kilograms is approximately 8 gallons of high-density dielectric fluid or 12 gallons of mineral oil.

Ensure that any transporter you use has obtained a Hazardous Waste Identification Number (HWID).

General manifest requirements for PCBs

Prepare a Uniform Hazardous Waste Manifest (EPA Form 8700-22) for all shipments of PCBs from your site or your system, except for shipments between your own sites, or shipments in which the PCBs are being transported for reuse. Obtain manifests through most hazardous waste transporters or from printers authorized by the EPA. Complete the manifest according to the directions printed on it and the specific information below in this fact sheet. For more guidance regarding manifests, see MPCA hazardous waste fact sheet #w-hw1-07, Manifest Shipments of Hazardous Waste, at http://www.pca.state.mn.us/publications/w-hw1-07.pdf.

Note: You are still responsible for preparing a manifest, even if you contract with an unrelated business to manage and maintain your equipment. For example, if you are a municipal electrical utility that has contracted with a regional electrical cooperative to maintain your distribution system, you are responsible for preparing the manifest.

If your site does not have a Permanent PCB Storage Area, you may use the phrase “40 CFR PART 761” in place of your HWID in Item 1 on the manifest. However, the MPCA discourages this practice since it can make reconciling your PCB records more difficult.

Ensure that the actual location from which you are shipping your PCBs, such as the site of your Temporary or Permanent PCB Storage Area, is identified on the manifest in Item 5 as the Generator’s Site Address. Do not use the location of your administrative offices, such as ‘city hall’ for municipal electrical utilities.

The designated facility you are required to enter onto the manifest may be one of the following:

- permitted TSCA disposal facility
- permitted hazardous waste disposal facility
- commercial storer of PCB waste

If you are only disposing of fully-drained electrical equipment that contained PCB-contaminated oil (50-499 parts per million PCBs verified by testing), you may manage the drained equipment equivalent to Non-PCB items. No manifest is required for transport and the drained equipment is considered non-hazardous. Manage the drained oil as a PCB waste.

Specific manifest information for PCB wastes

For all PCB wastes, in Item 13, enter the Minnesota-specific “MN03” hazardous waste code for each line item on the manifest.

For bulk loads of PCB waste, such as oil in a tanker truck, in Item 14 or on an attachment enter:

- the type of PCB waste, such as oil, contaminated soil, or paper
- the earliest date removed from service of any PCBs added to the bulk load
- the weight in kilograms of any PCB waste added to the bulk load

For PCB containers, such as oil in drums or over-packed articles, in Item 14 or on an attachment enter:

- a unique identification number for each container;
- the type of PCB waste in each container, such as oil or leaking equipment;
- the earliest date removed from service of the PCBs in each container; and
- the weight in kilograms of the PCB waste in the container.

For PCB articles, such as individual transformers, in Item 14 or on an attachment enter all of the following:

- the serial number or another unique identification number for each article
- the date removed from service of the article
- the weight in kilograms of the PCB waste in the article, or the total weight of the article if the specific weight of the PCB waste is not known

Remember, the date removed from service is the day electrical equipment was de-energized or disconnected from the electrical distribution system, and other equipment was removed from actual use, not the day you received test results or shipped the equipment off-site, unless you had already met the PCB storage for reuse requirements.

Post-shipment requirements for PCBs

Retain a copy of the manifest signed by your representative and the transporter until you receive the copy signed by the designated facility. Keep the facility-signed copy for at least three years. Generators subject to Annual Document Log requirements may be required to retain the copy longer. For more information on Annual Document Logs and PCB recordkeeping, see MPCA hazardous waste fact sheet #w-hw4-48e, Recordkeeping for PCBs, at http://www.pca.state.mn.us/publications/w-hw4-48e.pdf.

If you do not receive a copy of the manifest signed by the designated facility within 35 days of the waste shipment, contact the transporter, the designated facility, and the MPCA or EPA for assistance locating the waste. If you do not receive the facility-signed copy within 10 more days, submit an exception report (a letter describing your efforts to obtain the signed copy) to the EPA Region 5 Administrator.

You may receive a Certificate of Disposal from the designated facility or a subsequent facility documenting the disposal of your PCB waste. If you do, keep it with your manifest copies.

When shipping only PCBs, you do not need to send a copy of the hazardous waste manifest to the MPCA or Metropolitan County hazardous waste programs.

More information

Guidance and requirements in this fact sheet were compiled from the Code of Federal Regulations, Chapter 40, Part 761, and Minnesota Rules, Chapter 7045. Visit the U.S. Government Printing Office at http://www.gpo.gov/fdsys/ to review the Code of Federal Regulations directly. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review the Minnesota Rules.

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
Brainerd 218-828-2492
Detroit Lakes 218-847-1519
Duluth 218-723-4660
Mankato 507-389-5977
Marshall 507-537-7146
Rochester 507-285-7343
St. Paul 651-296-6300
Willmar 320-214-3786
Website ..... http://www.pca.state.mn.us

U.S. Environmental Protection Agency

Toll free (Region 5) 1-800-621-8431
TSCA Hotline 202-554-1404
Website ..... http://www.epa.gov

Minnesota Pollution Control Agency

Managing PCBs in Ballasts and Small Capacitors

Waste/Hazardous Waste #4.48f, October 2005

Contents:

What are "PCBs"?

Polychlorinated biphenyls (PCBs) are a class of 209 man-made chemicals with varying toxicity, often used as an insulator in electrical equipment. PCB products range from thin, light-colored oils to yellow, viscous resins.

What are PCB Ballasts and Small Capacitors?

Before 1979, PCBs were commonly used as insulators in electrical equipment, including fluorescent lamp ballasts and motor start capacitors. Although these ballasts and small capacitors may contain only relatively small amounts of PCBs, the PCBs are commonly in extremely high concentrations. PCB ballasts and small capacitors may be found in:

- fluorescent lamps
- mercury vapor lamps
- home appliances
- industrial equipment

How Can I Tell If My Ballasts and Small Capacitors Contain PCBs?

Manufacture of PCB-containing equipment was prohibited in 1979. You should assume that all ballasts and small capacitors contain PCBs unless:

- labeled "No PCBs" or
- known manufactured after 1979

How are PCBs Regulated?

The use, storage, and disposal of equipment containing PCBs are regulated by both state and federal requirements. The U.S. Environmental Protection Agency (EPA) regulates the use, storage, and disposal of PCBs with concentrations of 50 parts per million or more (≥50ppm) under the Toxic Substances Control Act (TSCA) regulations. The Minnesota Pollution Control Agency (MPCA) regulates the storage and disposal of PCBs of ≥50ppm under the Hazardous Waste Rules when they become waste.

What Should I Do If Ballasts or Small Capacitors Leak?

Assume that all leaking ballasts or small capacitors contain PCBs until proven otherwise. Leaking PCB items must be manifested and disposed of under TSCA requirements. TSCA spill cleanup requirements must also be met. For TSCA spill cleanup requirements, see MPCA hazardous waste fact sheet #4.48g, *PCB Spill Cleanup Policy,* available on the Web at http://www.pca.state.mn.us/waste/pubs/4_48g.pdf

Minnesota Pollution Control Agency, 520 Lafayette Rd. N., St. Paul, MN 55155-4194
(651) 296-6300, toll-free (800) 657-3864, TTY (651) 282-5332 or (800) 657-3864

Management Requirements for PCB Ballasts and Small Capacitors in Minnesota:

• Disposal

Generators of intact PCB Ballasts and Small Capacitors must ensure that the PCB wastes in these items are disposed of at a permitted TSCA or Hazardous Waste disposal facility or may ship these items to PCB Commercial Storers for consolidation and subsequent shipment to a disposal facility. Leaking PCB Ballasts and Small Capacitors must be disposed of directly at a permitted TSCA or Hazardous Waste disposal facility.

• Transportation

All shipments of PCB Ballasts and Small Capacitors must be accompanied by a hazardous waste manifest. Required manifest information is listed in MPCA hazardous waste fact sheet #4.48e, *Manifest Requirements for Shipping PCB Wastes,* available on the Web at http://www.pca.state.mn.us/waste/pubs/4_48e.pdf Generators may transport PCB Ballasts and Small Capacitors in their own vehicles or use a commercial transporter. All transportation must also comply with DOT packaging and vehicle requirements.

• Storage and Labeling

PCB Ballasts and Small Capacitors must be stored in compliance with TSCA requirements. These requirements are listed in MPCA hazardous waste fact sheet #4.48c, *Storage and Disposal of PCB-Contaminated Equipment and Wastes,* available on the Web at http://www.pca.state.mn.us/publications/w-hw4-48c.pdf

• Reporting/Licensing

All generators of >100 pounds/year of total hazardous waste, including intact or leaking PCB Ballasts and Small Capacitors, must report their hazardous waste generation to the MPCA and obtain a Hazardous Waste Generator License. Generators not currently licensed should report their generation using MPCA hazardous waste form #7.09, *Notification of Regulated Waste Activity*, available on the Web at http://www.pca.state.mn.us/publications/w-hw7-09.pdf

Generators in the Seven-county Minneapolis/St. Paul Metropolitan Area

Generators of intact PCB Ballasts and Small Capacitors in Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties should check with their county's hazardous waste staff to determine whether additional management requirements apply within their county.

More Information

The MPCA and each Metropolitan County has staff available to answer waste management questions.

Metropolitan County Hazardous Waste Offices

Anoka County	(763) 422-7093
Carver County	(952) 361-1800
Dakota County	(952) 891-7020
Hennepin County	(612) 348-8100
Ramsey County	(651) 773-4466
Scott County	(952) 496-8177
Washington County	(651) 430-6655
Websites	http://www.co.[county name].mn.us

Minnesota Pollution Control Agency

Main Office (St. Paul)	(651) 296-6300
Toll free (all offices)	1(800)-657-3864
Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Mankato	(507) 389-5977
Marshall	(507) 537-7146
Rochester	(507) 285-7343
Willmar	(320) 214-3786
Website	http://www.pca.state.mn.us

4. SPILLED NON-HAZARDOUS MATERIALS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bulk - bagged
   - drums

2. Background - Olmsted County will accept non-hazardous materials from spill sites, such as train derailments, truck accidents, industrial sites, etc. Due to the fact that waste materials generated at spill sites may be composed of a variety of constituents and exist in various forms, it is important that waste generators provide sufficient information to allow for accurate waste characterization. Spilled non-hazardous materials with a liquid consistency are often recovered through the use of sorbents, making use of the mechanism of absorption, adsorption, or both to pick up and retain the spilled material. Non-combustible sorbent materials (usually generated as a result of cleanup conducted at traffic accident sites) may be accepted at the Olmsted County Kalmar Landfill. Approved non-combustible absorbent materials that contain volatile organic compounds (VOCs) will be thin-spread in the MSW disposal area to allow volatilization to occur. Approved combustible absorbents will be accepted for disposal at the Olmsted Waste-to-Energy Facility (OWEF). Spilled waste materials containing free liquids will not be accepted at the Kalmar Landfill or the OWEF.

3. Disposal - Approved waste materials will be directed to the Kalmar Landfill or the OWEF, depending on the combustion characteristics of the waste material.

4. Testing Requirements - Spilled non-hazardous materials are variable, and no single, standard set of analytical tests would completely account for all possible waste materials that may be generated as a result of a spill. **The waste generator must provide accurate, complete information to allow Olmsted County staff to fully characterize the waste material and ensure that it is non-hazardous.** If available, the MPCA-assigned spill ID number must be provided. Minnesota Administrative Rules, part 7045.0120, subpart 1A, allows "sorbents, soil, and debris contaminated with petroleum fuel from spills and emergencies that are contained and reported in accordance with Minnesota Statutes, section 115.061, except for used oil spills and emergencies" exemption from regulation under the Minnesota Hazardous Waste Rules.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. When inspecting the waste load, ensure that free liquids and obvious odors are absent. Immediately seek the assistance of a supervisor if odorous loads are encountered. Review the Non-Hazardous Industrial Solid Waste Tracking Form for completeness and complete the *Facility* section of the form. Pay particular attention to any delivery restrictions in place.

7. Facility Operational Procedures - If necessary, any additional procedures will be determined on a case-by-case basis.

8. Special Generator Requirements - Minnesota Statutes, section 115.061, describes the notification requirements to the Minnesota Pollution Control Agency (MPCA) when spills and leaks occur. State officials may require additional notifications to other departments and /or agencies depending on the circumstances and size of spill or leak.

9. Additional Information - See MPCA fact sheets “Reporting Spills and Leaks,” “Spill Debris Disposal Options,” and “Spill Prevention and Planning.”

Reporting spills and leaks

Minnesota Pollution Control Agency

Cleanup fact sheet #1.01 • February 2009

Reportable spills should be directed to the Minnesota Duty Officer by calling (651) 649-5451 or (800) 422-0798. The duty officer will record all pertinent information and then make the appropriate notifications to the state agencies.

Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the Minnesota Pollution Control Agency (MPCA) when spills and leaks occur:

115.061 — Duty to Notify and Avoid Water Pollution

(a) Except as provided in paragraph (b), it is the duty of every person to notify the agency immediately of the discharge, accidental or otherwise, of any substance or material under its control which, if not recovered, may cause pollution of waters of the state, and the responsible person shall recover as rapidly and thoroughly as possible such substance or material and take immediately such other action as may be reasonably possible to minimize or abate pollution of waters of the state caused thereby.

(b) Notification is not required under paragraph (a) for a discharge of five gallons or less of petroleum, as defined in section 115C.02, subdivision 10. This paragraph does not affect the other requirements of paragraph (a).

The law provides penalties of up to $10,000 per day for violations.

The Minnesota Department of Public Safety, Bureau of Criminal Apprehension, operates a 24-hour service, establishing a one-call system for all state reporting requirements.

Reportable spills should be directed to the Minnesota Duty Officer by calling (651) 649-5451 or (800) 422-0798. The duty officer will record all pertinent information and then make the appropriate notifications to the state agencies.

Spills that must be reported

Report spills that may cause pollution, such as spills of toxic, flammable, corrosive and dangerous industrial chemicals. Also report spills of environmentally damaging materials, including milk, coal, animal parts, batteries, etc.

Reportable quantities

Minnesota has a reporting threshold of greater than five-gallons for petroleum spills. Spills of any quantity of all other chemicals or materials should be reported. If in doubt, report.

Anyone who spills is required to report.

EVERY person who has "any substance or material under its control" must report spills and leaks. This includes:

- property owners who discover contamination;
- individuals, partnerships, companies and corporations;
- governmental subdivisions, including officers of these entities;
- owners of substances being stored or transported by another company; and
- contractors who are in physical control of a discharged substance.

Sometimes a fire department, police agency or other local or state agency that responds to a spill or leak chooses

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to report the incident to the MPCA. In some circumstances, the entity may be required to report the spill. However, in no case does a report from someone else stand in lieu of your responsibility to report to the MPCA by calling the Minnesota Duty Officer if a substance is under your control.

Be aware that there may be other reporting requirements imposed by local ordinances, state or federal law, or permits. Understanding all reporting requirements is the responsibility of those who handle substances which can pollute.

It is the responsibility of the spiller to ensure an effective cleanup and proper management of all wastes generated. With the exception of used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules. Waste from used oil spills must be sent to a facility for energy recovery.

For more information

For more information on spill prevention, cleanup or disposal, call the MPCA at (651) 296-6300 or (800) 657-3864 and ask for a member of the Emergency Response Team or go to www.pca.state.mn.us/cleanup/pubs/ertpubs.html on the Internet.

Also, visit the U.S. Environmental Protection Agency site at www.epa.gov/oilspill/ for more information.

Minnesota Pollution Control Agency

Spill prevention and planning

Cleanup/Emergency Response 1-02 • October 2006

Contents

In Minnesota, handlers of oil and hazardous substances are required to be prepared and prevent spills from occurring to protect land, waters or air of the state and to protect the public's safety or health. Check Minnesota Statute 115E (often called the "Spill Bill") for details on required spill prevention and planning.

Knowing your facility and training company personnel are basic planning strategies to prepare a company for a response. Below are some areas each company should concentrate on improving.

Maps

Have current maps for the facility available for reference. Locate on the map building locations, oil and chemical storage locations, process or transfer areas, drainage of the land, storm and sanitary sewer inlets, lines, outlets, and surface waters.

Planning

Have current and useful emergency plans. Is your facility required to have a spill prevention, control and countermeasures plan (SPCC plan); a prevention and response plan to fulfill the Minnesota Spill Bill; or a response plan to fulfill the federal Oil Pollution Act? Consolidate your emergency plans into an all-hazard plan. Plan your responses to potential environmental emergencies. Plan how to utilize your staff and hired contractors effectively and efficiently. Assess the resources of your company needs and make the necessary provisions and agreements beforehand, not at the time of an incident.

Material management and storage

Review how your company stores and handles its chemicals. Inspect the dispensing equipment and containment construction. Make improvements as problem areas are identified. Understand the characteristics, behaviors and safety precautions associated with material stored at your facility. If a spill of one or more of these materials occurs, know the best containment and cleanup strategies to use.

Train and conduct exercises

Train your company staff on hazard recognition, response plan implementation, safety, cleanup procedures, and reporting. Once staff are trained, conduct exercises to practice their training. Conduct table-top exercises and field exercises. Invite local and state responders to practice with your staff. After an exercise, evaluate your company's response and make improvements. This will result in

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a more effective and efficient response when the next one occurs — real or staged.

If a spill occurs...

If a spill occurs, follow these basic steps:

1. **Observe** the safety precautions associated with the spilled material.

   Stop the source of the spill, if you can do so safely.
2. **Call** 911 if fire or public safety hazards are created.
3. **Contain** the spilled material. Dirt, sand, or any semi-impermeable material may be used to create a containment structure to prevent the material from flowing.
4. **Report** the spill to the Minnesota Duty Officer at (651) 649-5451 or (800) 422-0798 any time, day or night.
5. **Clean up** the spilled material and dispose of the wastes properly. With the exception of used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules. Waste generated from used oil spills must be sent to a facility for energy recovery.

For more information

For more information on spill prevention, cleanup and disposal, call the MPCA at (651) 296-6300 or (800) 657-3864 and ask for a member of the Emergency Response Team or go to www.pca.state.mn.us/cleanup/pubs/ertpubs.html on the Internet.

Minnesota Pollution Control Agency

Spill debris disposal options

Cleanup/Emergency Response 4-03 • October 2009

Material	Reuse	Thermal treat *	Incinerate	Land apply	WWTP**	Compost
Floor Dry, kitty litter, sand or other inorganic materials	X	X	X	X		X
Corn cobs, peat moss or other organic materials	X		X	X		X
Synthetic sorbents (booms, pads, etc.)	X		X			
Oil-water mixtures	X				X	
Recovered oil	X		X			

* Thermal treat = thermal treatment at permitted asphalt plants

** WWTP = wastewater-treatment plant

This fact sheet outlines the many disposal options that exist for petroleum-contaminated debris or waste after a spill.

It is the responsibility of the spiller to ensure an effective cleanup and proper management of all wastes generated. With the exception of used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules.

Waste from used oil spills must be sent to a facility for energy recovery.

Reuse

Many used sorbent materials can be dried and reused on future spills. If the sorbent material was not saturated and the quantity is manageable, store the sorbent in a tight container, such as a drum or covered trash can, for future reuse. Large quantities of saturated sorbent cannot be reused. Oil and oil-water mixtures can be separated and recycled by an oil-recycling company.

Thermal treatment

The Minnesota Pollution Control Agency (MPCA) permits asphalt

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Permitted Municipal Waste Combustors		
Alexandria Peter Olmscheid Pope-Douglas Solid Waste 2110 S. Jefferson Alexandria, MN 56308 (320) 762-2381 ext. 213	**Fosston** Bill Wilson, Solid Waste Officer Polk County P.O. Box 27 Crookston, MN 56716 (218) 281-6445	**Minneapolis** John Sigmond Covanta Hennepin Energy Resource Corp. 505 65th Ave. N. Minneapolis, MN 55405 (612) 332-9423
Perham Brian Schmidt Perham Resource Recovery Facility 201 6th Ave., NE Perham, MN 56573 (218) 346-4404	**Red Wing** Jeff Hoppert City of Red Wing P.O. Box 34 Red Wing, MN 55066 (651) 388-6734	**Rochester** Olmsted County Public Works 2122 Campus Dr., SE Rochester, MN 55904 (507) 285-8231 www.co.olmsted.mn.us/health/industrial_waste.asp

plants and similar facilities to treat petroleum-contaminated soils. These facilities use high temperatures to treat the soil and then use it for construction projects. For a listing of thermal treatment facilities in Minnesota, see the *Thermal treatment of petroleum-contaminated soil* fact sheet.

Incineration

This method of disposal totally destroys wastes. In Minnesota, there are several permitted municipal waste combusters (see table above). Some of these facilities may incinerate oil-soaked sorbent or similar organic materials. Some incinerators cannot burn used, oil-soaked sorbent. Contact the plant operators for more information.

Land application

The MPCA allows application of petroleum-contaminated soils to native soils for biodegradation treatment. The MPCA staff has guidance for thin-spreading of small quantities, 10 cubic yards or less. There are rules for the land treatment of up to 1,500 cubic yards of contaminated soil. For land-treatment of larger quantities of soil, a permit must be obtained from the MPCA. For guidance, request the following MPCA fact sheets:

- *Thin-spreading small quantities of petroleum-contaminated soils*
- *Land Treatment of Petroleum Contaminated Soil: Land Treatment Sites*
- *Permit Application for a Land Treatment Facility*

Wastewater-treatment plant (WWTP)

Some wastewater-treatment plants are able to effectively treat petroleum-contaminated water. If a one-time discharge is desired, contact your local WWTP operator after consulting with the MPCA Emergency Response Team staff. In the Twin Cities metropolitan area, call Metropolitan Council Environmental Services at (651) 602-4702.

Landfill

Some municipal and industrial solid waste landfills can accept petroleum-contaminated soil and/or sorbents for disposal. Call your local facility for approval and protocols.

Composting

Composting is the controlled microbial degradation of petroleum-contaminated soil. This is optimized by constructing the pile in a manner that promotes the vigorous growth of bacteria and fungi. For specific guidance, see the *Composting of petroleum-contaminated soil* fact sheet.

For more information on spill reporting, prevention, cleanup and disposal, call the MPCA at (651) 296-6300 or (800) 657-3864 and ask for a member of the Emergency Response Team or see the publications on the Internet at www.pca.state.mn.us/cleanup/pubs/ertpubs.html. More information is also available at the U.S. Environmental Protection Agency Web site at www.epa.gov/oilspill/.

5. RENDERING AND SLAUGHTERHOUSE WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

Rendering and slaughterhouse wastes will not be accepted at any Olmsted County solid waste management facility. Generators of rendering and slaughterhouse wastes should locate another waste management organization that will accept or utilize these wastes.

Dead animal carcasses are accepted under certain, specific circumstances as outlined in category 26 and category 30 of this Plan.

6. SPONTANEOUSLY COMBUSTIBLE OR IGNITABLE WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

Wastes that could spontaneously combust or that could ignite other wastes because of their high temperature or chemical instability will not be accepted at any Olmsted County solid waste management facility.

Spontaneously combustible and ignitable wastes should be handled by a hazardous waste disposal contractor. To learn more about Olmsted County's Very Small Quantity Generator Program, or to obtain a current list of hazardous waste disposal contractors, please contact the Olmsted County Environmental Resources Department at 507-328-7070, and ask to speak with the Waste Abatement Manager.

7. FOUNDRY-RELATED WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - sand cores and molds
   - loose foundry sands
   - powders and dry vermiculite

2. Background - Foundries are manufacturing facilities that fabricate metal castings using molten metals that are poured into pre-formed molds, most often consisting of sand. Once the metal has solidified, the cast is separated from the sand in a shake-out process, revealing the cast product. Sand cast molds used for casting ferrous metals are most often of the green sand type, consisting of high-quality silica sand, bentonite clay, sea coal, and a minute amount of water. Other chemically-bonded sand cast systems (utilized primarily for non-ferrous castings and constructing cores) involve the use of organic binding agents and chemical catalysts. More often than not, these organic constituents are non-hazardous in nature. Although foundry sand can often be reclaimed and reused in the casting process, heat and mechanical abrasion will eventually render the sand unsuitable for further use in the casting process. The preferred manner by which to manage foundry wastes is to find an alternative beneficial use for the waste material, such as aggregate and raw material replacement in the manufacture of hot asphalt mix and Portland cement, respectively; as road base material; and as Alternative Daily Cover (ADC) at landfills. The Olmsted County Kalmar Landfill may, on a case-by-case basis, accept foundry wastes as ADC for the active portion of the MSW disposal area. Other industrial solid wastes that closely resemble the characteristics of foundry wastes, such as fire-extinguisher powders, may be accepted in this category.

3. Disposal - Approved foundry wastes that cannot be recycled or reused will be directed to the Kalmar Landfill MSW disposal area.

4. Testing Requirements - Due to the fact that foundry wastes may have high metals concentrations, all foundry wastes must undergo evaluation for metals using a Toxicity Characteristics Leaching Procedure (TCLP). Core and molding sands that incorporate binding agents must undergo TCLP analysis for any potential volatile/semi-volatile compounds. Additional analytical tests may, under certain circumstances, be required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDSs) must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. The delivery of foundry wastes that are suitable as ADC must be accompanied by an approved Non-Hazardous Industrial Solid Waste Tracking Form that attests to its suitability as ADC (usually noted as a delivery restriction in the *Admin* section of the form).

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form for completeness and accuracy and complete the *Facility* section of the form. Foundry wastes intended for reuse as ADC must be inspected thoroughly to verify general suitability as ADC.

7. Facility Operational Procedures - Foundry wastes will be disposed of in an area separate from the active working face. Site operators must remain cautious of the potential for inhalation of fugitive dust particles. If extremely dry and dusty conditions prevail, equipment operators should wear a fiber

mask (or other similar protective device) to mitigate dust and particle inhalation. Foundry wastes suitable as ADC will be stockpiled in the MSW disposal area and utilized as ADC, as necessary.

8. Special Generator Requirements - Waste transporters must minimize the potential for generation of fugitive dust and airborne particulates during unloading. To qualify for the ADC rate, prior to dumping, the waste hauler must inform the scale house operator that the foundry waste is suitable as ADC.

8. ASHES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - roll-off containers - other bulk containers
   - dump trucks

2. Background - Ash waste that is generated as a result of the combustion of municipal solid waste (MSW); hospital, medical, and infectious waste; coal; and other conventional fuels for the purposes of generating thermal and electrical power is accepted under this category. Two types of ash waste are typically generated. Bottom ash waste is a coarse, dense material that forms in the furnace of boilers. Fly ash waste is a finer, less dense material removed from the flue gas in the heat transfer and air pollution control equipment. MSW combustor ash from the Olmsted Waste-to-Energy Facility (OWEF), coal ash from Rochester Public Utilities (RPU), and ash from the Mayo Medical Waste Incinerator Facility are not considered industrial ash wastes, and are exempt from the documentation and gate and inspection requirements listed in this category.

3. Disposal Facility - Approved waste materials will be directed to the Olmsted County Kalmar Landfill ash monofill disposal area. The Kalmar Landfill Solid Waste Management Facility Permit (No. SW-355) allows for disposal of ash from incinerators, resource recovery facilities, and power plants to be deposited in the ash monofill disposal area.

4. Testing Requirements - Testing will mirror the requirements outlined in Minnesota Administrative Rules, part 7035.2910, as prescribed by the internal Olmsted County ash cell disposal requirements. This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. Ash waste generated from boilers and incinerators using only untreated, uncontaminated wood as a fuel will not require any analytical testing.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Ash waste will be disposed of only in the ash monofill disposal area. The active face of the ash disposal area does not require daily cover if additional ash waste is deposited within 48 hours. The top and side slopes of each lift will be covered within 48 hours of reaching their final elevation.

8. Special Generator Requirements - To minimize airborne releases, the ash waste must be adequately wetted (i.e., wetted with enough water to minimize fugitive emissions but without generating free liquids) with non-contaminated water prior to arriving at Kalmar Landfill. All ash waste loads must be delivered in covered containers.

9. PAINT-RELATED WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - filters
   - paint containers
   - paint dust
   - overspray paint
   - paint-contaminated cloth
   - paint-contaminated blasting materials

2. Background - Businesses may produce many different types of paint waste in their manufacturing processes or as a result of the services they provide. Some paint wastes may contain metals or volatile organic compounds (VOCs) at or above regulatory limits. **The Minnesota Pollution Control Agency (MPCA) considers all paint-related waste to be hazardous until properly evaluated and verified to be non-hazardous.** Lead was banned from consumer paints in 1978, and consumer paints manufactured after 1992 contain no added mercury. Always verify the chemical composition carefully. The State of Minnesota allows the Olmsted County Hazardous Waste Facility (HWF) to perform on-site latex treatment prior to disposal. The MPCA considers the treated latex paint waste generated at the HWF to be non-hazardous. The treated latex paint waste is delivered directly to the Olmsted Waste-to-Energy Facility (OWEF) for the purpose of energy recovery.

   The MPCA defines residential lead paint waste as "lead paint that has been abated, rehabilitated, renovated and remodeled from residential structures and that does not contain any chemical paint stripper or free liquids." This definition does not include any lead paint waste generated from businesses or non-residential structures. Minnesota Statutes, section 116.875, states that the responsibility for proper disposal of the residential lead paint waste belongs to the persons who generated the waste (i.e., removed the residential lead paint material from the residence). If a contractor removes lead paint waste from a residence (as defined by Minnesota Statutes, section 116.87) and the property owner has completed and signed the Residential Lead Abatement Notification Form, no analytical testing is required. If the residential lead paint waste is still attached to debris, walls, or woodwork, it can be disposed in the Olmsted County Kalmar Landfill demolition disposal area. If the lead paint waste has been removed from a hard surface, is free of chemical paint stripper, and does not contain free liquids, it must be disposed in the Kalmar Landfill MSW disposal area. If the residential lead paint waste contains chemical paint stripper or other potentially hazardous constituents, it must be evaluated using the Toxicity Characteristic Leaching Procedure (TCLP) for those constituents that can reasonably be expected to be present.

3. Disposal - The waste material will be directed to the Kalmar Landfill or OWEF, depending on the characteristics of the waste material. Incineration of residential lead paint waste at a mixed municipal solid waste incinerator is prohibited (Minnesota Statutes, section 116.88).

4. Testing Requirements - Evaluating paint wastes to determine whether or not they are hazardous can be performed two ways:

   I. Through 'knowledge of the waste'; or
   II. Testing for hazardous characteristics (i.e., ignitability, corrosivity, reactivity, lethality, and toxicity.)

   Using 'knowledge of the waste' to demonstrate that the paint waste is non-hazardous is acceptable provided there is sufficient documentation to support the evaluation. For example, a written statement or certification from the manufacturer stating that any RCRA metals present in the raw paint material are below regulatory limits is adequate documentation to establish that the paint waste is not hazardous due to RCRA metal toxicity. Unless complete documentation exists to characterize completely the waste material (through knowledge of the waste and its characteristics), waste

generators must evaluate the waste using a Toxicity Characteristics Leaching Procedure (TCLP) for those parameters (i.e., metals and volatile and semi-volatile organic constituents) that can reasonably be expected to be present. Waste generators may also be required to determine the waste material's flash point (to determine ignitability) and pH (to determine corrosivity). Generators of paint-related wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test." To ensure the waste material is non-hazardous and acceptable, Olmsted County may, under certain circumstances, require that analytical tests besides those mentioned be performed. Any available Material Safety Data Sheets (MSDSs) must also be provided. Please note that MSDSs are only required to list ingredients that make up more than one percent of the product. Regulated chemicals in lesser amounts could still render the paint waste hazardous. Pure discarded paint is not listed; however, it may display a hazardous characteristic.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. Residential lead paint waste loads must be accompanied by a signed, completed copy of the Residential Lead Abatement Notification Form and presented at the time of delivery. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. When inspecting the waste load, ensure that no free liquids are present among the waste load's paint residues, filters, or rags. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. Residential lead paint waste loads must be accompanied by a signed, completed copy of the Residential Lead Abatement Notification Form (see Appendix D). If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin* section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery.

7. Facility Operational Procedures - Special care must be taken to ensure the waste load does not contain lead, cadmium, and mercury at concentrations that could potentially affect air emissions, ash quality, and/or ground water quality. If the waste is destined for disposal at the OWEF, facility operators will mix the waste materials with other daily incoming wastes. Wastes destined for disposal at the Kalmar Landfill will be disposed of with other incoming wastes, unless other procedures are warranted. Any specific management procedures and/or restrictions will be noted on the Non-Hazardous Industrial Solid Waste Tracking Form.

8. Special Generator Requirements - If the paint waste is in a powder form, it must be dampened and sealed in plastic bags prior to delivery. Olmsted County reserves the right to reject powder paint wastes if the wind speed at the landfill exceeds 10 miles per hour. Generators of residential lead paint waste must have the property owner complete the Residential Lead Abatement Notification Form.

9. Additional Information - See attached MPCA fact sheets "Managing Paint Booth filters," "Evaluating Paint and Ink Wastes," "Lead Paint Disposal" and "Residential Lead Paint Waste Disposal."

Minnesota Pollution Control Agency

Evaluating Paint and Ink Wastes

Waste/Hazardous Waste #4.40, May 2004

This fact sheet is intended for businesses using paints or inks.

Contents

Environmental Concerns

Businesses may produce many different types of paint and ink waste in their manufacturing processes or as a result of the services they provide. Some may contain toxic metals at or above regulatory limits. Solvents are generally used during cleanup that may be hazardous wastes as well as air pollutants. Wastes improperly managed can harm human health and the environment.

Evaluate

Minnesota state law requires any company or business producing a waste to evaluate the waste to determine whether it is hazardous. Waste may be hazardous because it is specifically listed in the law by name or because it displays a hazardous characteristic. **The Minnesota Pollution Control Agency (MPCA) considers paint and ink wastes to be hazardous until properly evaluated and shown to be nonhazardous.**

Examples of paint and ink wastes which are frequently hazardous include:

- unusable liquid paints, stains, or inks;
- paint-thinner wastes of all types;
- paint spray-booth filters and arrestors;
- scrapings from paint booth walls and floors;
- paint-stripping waste;
- rags containing paint, ink, and/or solvent;
- sludge from distilling paint-thinner waste; and
- blanket and fountain washes and other cleanup materials.

(Dry masking tape and paper from spray painting operations are not regulated as hazardous waste at this time. See page 3 for requirements for plastic paint cup liners.)

To determine whether your paint or ink waste is hazardous, answer these two questions:

1. Is the waste listed?

Check the Material Safety Data Sheet (MSDS) to see if your paint thinners, strippers or wash-up materials contain any of the solvents that appear on the F list of hazardous wastes. (See Table 1.)

Table 1: Common F-listed Solvents

F001:	tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane and carbon tetrachloride used as degreasers;
F002:	spent solvents listed above that are *not* used as degreasers; 1,1,2-trichloro-1,2,2,-trifluoroethane and chlorobenzene;
F003:	xylene (xylol), acetone, methanol and methyl isobutyl ketone *(MIK)*;
F004:	cresols, cresylic acid and nitrobenzene;
F005:	toluene *(toluol),* methyl ethyl ketone *(MEK)*, carbon disulfide and benzene; and
	Spent solvent mixtures/blends containing 10 percent of F001, F002, F004 and/or F005 before use.

- If the MSDS states that the product contains 10 percent or more F002 and/or F005 solvents in any combination, waste resulting from its use is listed.

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- If the product is either a pure solvent with an F003 waste code, or if it is an F003 solvent in combination with 10 percent or more of another solvent or combination of solvents on the F list, waste resulting from its use is listed.
- If *unused* discarded thinners, washes, strippers, etc., appear on the P or U lists of hazardous wastes, they are listed. *(P and U lists are found on MPCA hazardous waste fact sheets #2.02 and #2.03.)*
- Rags containing listed wastes are generally listed themselves. *(For more information on managing solvent soaked rags, see MPCA hazardous waste fact sheet #4.61, Towels, Wipes and Sorbents.)*
- If spray guns are cleaned by spraying a solvent from Table 1 into paint booth filters or arrestors, the filters or arrestors are listed.
- If other hazardous or nonhazardous wastes are mixed with wastes resulting from using solvents or solvent mixtures listed in Table 1, the entire mixture becomes listed.
- If your used or unused thinners, washes or strippers are not on one of these lists, they may display a hazardous characteristic. *(See question #2.)*
- Pure, discarded paint or ink is not listed; it may, however, display a hazardous characteristic.

2. Does the waste display a hazardous characteristic?

Paint and ink wastes often display one of three hazardous characteristics ignitability, corrosivity, or Toxicity Characteristic (T.C.) Toxicity. Each are discussed below.

Ignitability

- A paint or ink waste is ignitable if it has a flashpoint below 140° Fahrenheit. Oil- or solvent-based paint or ink wastes are usually ignitable. Some latex (water-based) paints can also be ignitable because of the drying agents they contain. To determine the flashpoint of your paint, ink, stain, thinner or solvent, check your MSDS, Section 3 - *Fire and Explosion Hazard Data.*
- A solid waste is ignitable if it can cause fire through friction, absorption of moisture, or spontaneous chemical changes, and when ignited, burns so persistently and vigorously that it creates a hazard.

Solid paint wastes (filters, scrapings, etc.) resulting from the use of oil- or solvent-based paints, inks and thinners may be ignitable. Manage solid oil- and solvent-based paint and ink wastes as hazardous waste unless you determine they are nonhazardous. Solid, dry latex-paint wastes are not generally ignitable. *(They may, however, be T.C. Toxic. See below.)*

NOTE: Air drying ignitable or other hazardous waste is **not** allowed.

Corrosivity

A waste is corrosive if it has a pH of 2.0 or less, or 12.5 or more. Typically, corrosive wastes are produced from paint-stripping processes that use a highly caustic (pH 12.5 or more) liquid stripper. To help determine the pH of a waste, check the MSDS to find the pH of the stripper used *(Section 2 - Physical/Chemical Characteristics)*, use a pH indicator, or have a laboratory perform the test for you.

T.C. Toxicity

Toxicity Characteristic (T.C.) Toxic wastes are wastes which, when tested with the Toxicity Characteristic Leaching Procedure (TCLP), allow certain constituents (contaminants) to leach (dissolve and wash) out of a test solution at levels greater than the maximum allowable concentrations *(see Table 2)*.

Table 2: Common T.C. Toxic Constituents and Maximum Allowable Concentrations in mg/l

Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0
Methyl ethyl ketone	200.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5

Paint and ink wastes are assumed to be T.C. Toxic unless proven otherwise using one of the following options:

- **Certification —** Ask the manufacturer or supplier of the paints or inks you use to certify in writing that none of the products leach any T.C. Toxic constituents at levels greater than the maximum allowable concentrations. If the manufacturer or supplier is unwilling or unable to give this type of written certification, use the testing option outlined below.
- **Testing —** Have a representative sample of your paint or ink waste tested by an environmental testing

laboratory using the TCLP. There are several parts to the TCLP – metals, volatile organics and pesticides. Test for metals (one or all, depending upon what you know about the waste). You may also need to test for organics. The waste is not T.C. Toxic if the tested levels fall below the maximum allowable concentrations.

If you have determined your paint or ink waste to be **listed or characteristic for ignitability, corrosivity or T.C. toxicity, it is hazardous.** Put the waste in a leakproof container and mark and store it according to the Minnesota Hazardous Waste Rules *(for help, see MPCA fact sheet #1.04/1.05, Mark and Store Hazardous Waste Correctly)*. Contact a licensed hazardous waste transporter to arrange for disposal of the waste. If you are a very small quantity generator, you may also participate in a Very Small Quantity Generator Collection Program. For more information about participating in a collection program, see MPCA fact sheet #2.51, *VSQG Collection Program Requirements for Generators*.

If you have determined your waste is not listed and does not display any hazardous characteristics, it is not hazardous. Keep copies of all supporting documents and certification in your records.

If you begin using different materials, you will need to evaluate the waste again.

Air Quality Concerns

Even though a paint, ink or solvent may not be hazardous, it may still pose a concern because it contains volatile organic compounds.

Paints, inks, and solvents typically contain volatile organic compounds (VOCs). VOCs react in the sunlight with nitrogen oxides to form ground level ozone which is a main component of smog. Some VOCs contain hazardous air pollutants (HAPs), which are toxic.

You will need to determine whether your facility is required to obtain an air emissions permit. To do this you will need to consider **all** significant sources of emission at your facility. You will need to include any emissions of VOCs and HAPs when you are making this determination. The fact sheet, *Air Quality Permit Rules*, AQ Doc. #4.03, provides information on air permit requirements. It is located on the Minnesota Pollution Control Agency's (MPCA's) Web site at http://www.pca.state.mn.us/air/pubs/4-03.pdf .

If your paints or inks contain any HAPs, you will also need to determine whether your operation is affected by any National Emission Standards for Hazardous Air Pollutants (NESHAP). For NESHAP information, go to the Environmental Protection Agency's (EPA's) Web site at http://www.epa.gov/ttn/atw/eparules.html .

Businesses that are independently owned and operated and have less than 100 employees can contact MPCA's Small Business Assistance Program (SBAP) for help in making these determinations.

Managing Plastic Paint Cup Liners

When using paint cups with plastic disposable liners, after use the liners must be empty to be eligible for disposal as an industrial solid waste. Evaluate containers that are not empty according to the guidance in this fact sheet.

To prevent waste, mix only what you need and use the right size liner for the job. Use all the paint, until the liner collapses. When you remove the air gun, a small amount of residue from the gun will flow back into the liner. By hand, pour and squeeze that excess liquid paint into your hazardous waste container. If you are using catalyzed paint, after the left-over paint has cured, just pop out the hardened residue. The liner is then an empty container that may be managed as an industrial solid waste. Talk to your waste hauler about industrial solid waste management requirements for this waste.

If you mix up too much paint and want to store it temporarily until you are completely finished with a project, close the paint liner container tightly, then mark it with information that will help you identify the job it was used on and other important information. Since, at this point, you still intend to use it, this paint is not waste.

Each landfill and industrial burner must have an industrial solid waste management plan that specifies the solid wastes it can accept. The plan further specifies how each waste will be evaluated, profiled, delivered (using a non-hazardous manifest or bill of lading) and managed when the waste reaches the facility.

These requirements help ensure wastes are managed in a way that will not harm human health or the environment.

Work closely with your hauler and disposal facility to ensure proper disposal – which will reduce your long-term liability.

Should you determine you do not need the extra paint, **do not throw the paint liner container with the excess paint in the trash. Do not open the paint liner container and dry out the paint.** By hand, pour and squeeze the excess paint into

your hazardous waste paint container. The liner is then an empty container that may be managed as an industrial solid waste. Talk to your waste hauler about industrial solid waste management requirements for this waste.

More Information

Your metropolitan county and the Minnesota Pollution Control Agency have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or the MPCA office closest to your county. For information about air quality requirements, contact MPCA's Small Business Assistance Program (SBAP). For information and help finding ways to reduce the amount of waste you generate, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka County	(763) 422-7093
Carver County	(952) 361-1800
Dakota County	(952) 891-7557
Hennepin County	(612) 348-3777
Ramsey County	(651) 773-4466
Scott County	(952) 496-8177
Washington County	(651) 430-6655

Web Site
http://www.co.[county name].mn.us

Minnesota Pollution Control Agency

Toll free (all locations)	(800) 657-3864
Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Mankato	(507) 389-5977
Marshall	(507) 537-7146
Rochester	(507) 285-7343
St. Paul	(651) 297-2274
Willmar	(320) 214-3786
Small Business Assistance	(651) 282-6143
SBAP toll-free	(800) 657-3938

Web Site ..... *http://www.pca.state.mn.us*

Minnesota Technical Assistance Program (MnTAP)

Toll free	(800) 247-0015
Minneapolis	(612) 624-1300

Web Site ..... *http://www.mntap.umn.edu*

Lead Paint Disposal

Environmental concerns related to lead paint

Before 1978, lead was commonly used as a base and pigment in many consumer and commercial paints. Lead is a toxic "heavy" metal that, if released into the environment, can cause harmful human health and ecological effects. Waste from painting, renovating, repairing, abating, or demolishing structures that may have lead paint requires special management. This fact sheet provides guidance from the Minnesota Pollution Control Agency (MPCA) about requirements for disposal of debris and whole structures that may have lead paint.

In addition to disposal requirements, contractors and building owners performing work on structures that might have lead paint may also be subject to the following programs designed to protect the public during lead paint-related work:

- Federal requirements under the U.S. Environmental Protection Agency's (EPA) Renovation, Repair, and Painting Rule (RRP). For more information, visit the EPA at http://www.epa.gov.
- State requirements under the Minnesota Department of Health's (MDH) Lead Poisoning Prevention statutes and Residential Lead Abatement rules. For more information, visit the MDH at http://www.health.state.mn.us
- State requirements under the MPCA's Lead Paint Removal rules. For more information, see MPCA hazardous waste fact sheets #w-hw4-39a, Sandblasting and Other Air-based Blasting, at http://www.pca.state.mn.us/publications/w-hw4-39a.pdf, and #w-hw4-39b, Powerwashing and Other Water-based Blasting, at http://www.pca.state.mn.us/publications/w-hw4-39b.pdf.

What is lead paint?

Two different standards determine when paint is regulated as "lead paint":

1. Paint is regulated under the programs listed above when it contains 0.5% or 5000 parts per million (ppm) total lead or more, or one milligram or more lead per square centimeter of surface area (mg/cm^2). You may use 'swab'-type tests based on chemical reactions to test paint for these programs.
2. MPCA waste disposal requirements, intended to protect public health and the environment after lead paint-related work is complete, are more stringent. Paint waste is regulated under this program when it leaches 5 milligrams per liter (mg/L) or more during a simulated landfill test. Assume that paint-related waste from any structure built before 1978 is regulated unless you test the paint or related waste and can document that it meets one of these standards:
   - leaches lead less than 5 mg/L
   - contains less than 100 ppm total lead
   - contains less than 0.02 mg/cm^2 lead per surface area

   Use only acid extraction, also known as total metals, the Toxicity Characteristic Leaching Procedure (TCLP), or X-ray Fluorescence (XRF) to test paint and related wastes for disposal.

How to dispose of lead paint-related wastes in Minnesota

Type of waste	Management method
Lead paint abatement waste from a residence generated by a contractor	Dispose of in a permitted industrial or mixed solid waste landfill if the landfill operator is notified and does not prohibit it or, transport to the contractor's base of operations and manage as a hazardous waste. Testing is not required. Caution: Mist the abatement waste only enough to control dust under RRP requirements. Over-wetting may result in free liquid in the waste and rejection by the landfill operator. For more guidance about contractor-generated wastes, see MPCA hazardous waste fact sheet #w-hw3-11, Managing Hazardous Waste Generated by Construction and Service Contractors, at http://www.pca.state.mn.us/publications/w-hw3-11.pdf.
Lead paint abatement waste from a residence generated solely by the resident	Dispose of as a household hazardous waste. To find your local collection site, visit the MPCA's *Find your HHW Collection Site* webpage at http://www.pca.state.mn.us/udgx572.
Loose paint chips or flakes, blasting debris, and other lead remediation waste not from a residence	Manage as a hazardous waste or test. For more discussion of blasting debris, see MPCA hazardous waste fact sheet #w-hw4-39a, Sandblasting and Other Air-based Blasting, at http://www.pca.state.mn.us/publications/w-hw4-39a.pdf.
Painted portions of a structure with the paint attached	Dispose of in a permitted solid waste landfill, including a demolition, industrial, or mixed solid waste landfill, if the landfill operator is notified and does not prohibit it. Testing is not required; peeling paint need not be encapsulated. Painted scrap metal may be managed as a hazardous scrap metal if recycled. See MPCA hazardous waste fact sheet #w-hw4-27, Hazardous Scrap Metal, at http://www.pca.state.mn.us/publications/w-hw4-27.pdf.
Demolition debris from any demolition method, including heavy machinery and implosion	Dispose of in a permitted solid waste landfill, including a demolition, industrial, or mixed solid waste landfill, if the landfill does not prohibit it. Testing is not required.
Wastewater from paint-removal blasting	Collect and manage as a hazardous waste or test. For more discussion of blasting wastewater, see MPCA hazardous waste fact sheet #w-hw4-39b, Powerwashing and Other Water-based Blasting, at http://www.pca.state.mn.us/publications/w-hw4-39b.pdf.
Wastewater from cleanup of lead abatement equipment	Collect and manage as a hazardous waste or test.
Wastewater from demolition dust control sprays	Filter for solids and allow infiltration on site, if possible. If on-site infiltration is not possible, filter and discharge to a stormwater collection system if the system operator is notified and does not prohibit it. Dispose of solids as solid waste.
Ash from legitimate* firefighter training burn *Note: Burning a structure for other than legitimate firefighter training is prohibited.*	Dispose of ash in a permitted solid waste landfill, including a demolition, industrial, or mixed solid waste landfill. Testing the ash is not required; paint need not be tested or removed before the burn. Before the burn, remove all other problem materials and wastes as identified in MPCA solid waste fact sheet #w-sw4-07, Pre-Renovation or Demolition Requirements, at http://www.pca.state.mn.us/publications/w-sw4-07.pdf. *At a minimum, a legitimate firefighter training burn must include a prepared curriculum, specific training objectives, and post-training assessment.
Wastewater from legitimate firefighter training burn	Filter for solids and allow infiltration on site, if possible. Dispose of solids as solid waste.

Reuse of painted wastes

Untested painted concrete from structures built before 1978 may not be used as fill or aggregate without obtaining a case-specific beneficial use determination from the MPCA.

Painted wood may not be burned, except during a legitimate firefighter training burn or in a permitted solid waste incinerator. The MPCA strongly discourages the reuse of untested painted lumber.

Other requirements

Other requirements may apply when renovating, repairing, abating, or demolishing structures:

- Asbestos requirements – see the MPCA Asbestos Program webpage at http://www.pca.state.mn.us/asbestos/.
- Polychlorinated biphenyls (PCBs) in caulking – see MPCA hazardous waste fact sheet #w-hw4-48k, Managing Sealants and Coatings Containing PCBs, at http://www.pca.state.mn.us/publications/w-hw4-48k.pdf.

More information

Guidance and requirements in this fact sheet were compiled from Minn. R. Chapters 7035 and 7045, and incorporate regulatory interpretation decisions made by the MPCA on July 3, 2013. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review the Minnesota Rules directly.

Your metropolitan county and the MPCA have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional staff. For information about blasting waste and toxicity reduction and alternatives to air-based blasting, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka 763-422-7093
Carver 952-361-1800
Dakota 952-891-7557
Hennepin 612-348-3777
Ramsey 651-266-1199
Scott 952-496-8475
Washington..... 651-430-6655
Websites.... http://www.co.[county].mn.us

Minnesota Department of Health

Statewide 651-201-5200
Website .... http://www.health.state.mn.us

Minnesota Technical Assistance Program

Toll free..... 1-800-247-0015
Metro 612-624-1300
Website ..... http://www.mntap.umn.edu

Minnesota Pollution Control Agency

Toll free (all offices)..... 1-800-657-3864
Brainerd..... 218-828-2492
Detroit Lakes..... 218-847-1519
Duluth 218-723-4660
Mankato 507-389-5977
Marshall 507-537-7146
Rochester..... 507-285-7343
St. Paul 651-296-6300
Willmar 320-214-3786
Website ..... http://www.pca.state.mn.us

Small Business Environmental Assistance

Toll free 1-800-657-3938
Metro 651-282-6143
Website http://www.pca.state.mn.us/sbeap/

U.S. Environmental Protection Agency

RRP Program..... 1-800-424-LEAD [5323]
Website ..... http://www.epa.gov

10. SLUDGES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - grease trap waste in pumper trucks
   - paper processing sludge in dump trucks
   - commercial laundry filterings in dump trucks
   - dehydrated fiberglass processing settling pond sludge
   - sewage sludge (NOT ACCEPTED)
   - septic tank pumpings (NOT ACCEPTED)

2. Background - Sludges are the by-products of a variety of wastewater treatment processes or commercial operations, such as the production of paper or lime, or the milling of lumber. In their original form, they are usually liquids. Federal and state regulations prohibit the disposal of liquids in landfills. Therefore, sludges are usually dewatered, or "thickened," prior to disposal. Olmsted County does not, and cannot, accept sludge waste containing infectious agents, such as sewage and septic tank sludge. Ink sludges and related wastes are separately addressed in category 14.

3. Disposal - Waste material will be directed to the Olmsted County Kalmar Landfill or the Olmsted Waste-to-Energy Facility (OWEF), depending on the combustion characteristics of the waste material.

4. Testing Requirements - Unless complete documentation exists to characterize completely the sludge waste material (through knowledge of the waste and its characteristics), sludge waste generators must evaluate the sludge waste using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters that can reasonably be expected to be present. Given the fact that sludge wastes have a high potential of containing free liquids (as defined by Minnesota Administrative Rules), generators of sludge wastes must complete the Absence of Free Liquids Certification Form (see Appendix D) and may be required to analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test." Additional analytical tests may, under certain circumstances, be required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDSs) must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form and a completed, signed Absence of Free Liquids Certification Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. When inspecting the waste load, ensure that no free liquids are present. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. Review the Absence of Free Liquids Certification Form and ensure that it is completed and signed at the time of delivery.

7. Facility Operational Procedures - Sludge waste material that is suitable for disposal at the Kalmar Landfill will be unloaded in an area separate from, but near to, the active working face. The sludge waste will be worked into the working face in an appropriate manner. Sludge waste loads destined for disposal at the Kalmar Landfill that are highly odorous must be buried in the waste mass and immediately covered. If the sludge waste is combustible, it will be mixed with other incoming municipal solid waste loads at the OWEF.

8. Special Generator Requirements - Large waste quantities should be scheduled at least one business day prior to delivery.

11. EPOXY, FIBERGLASS, URETHANE, AND POLYURETHANE RESINS SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - roll-off boxes
   - small dumpsters

2. Background - Waste materials in this category must be fully cured and hardened in order to be approved for disposal at an Olmsted County solid waste management facility. Fully cured wastes are not odorous, warm, or sticky to the touch. Inhalation of fiberglass dust can be hazardous to human health, in particular to the respiratory system; therefore, waste materials that are not fully cured or hardened, or contain dust encapsulated inside a container, will not be accepted at the any Olmsted County solid waste management facilities in order to protect employee health. Waste materials in this category include products comprised of cured resins such as utility poles, containers, etc.

3. Disposal - Waste materials in this category will be directed to the Olmsted Waste-to-Energy Facility (OWEF) for disposal, unless the waste materials consist principally of fiberglass. To prevent a build-up of slag on OWEF's grates, waste materials that consist principally of fiberglass will be directed to the Olmsted County Kalmar Landfill for disposal. Generators are encouraged to explore the possibility of reusing or recovering energy from waste materials in this category.

4. Testing Requirements - Unless complete documentation exists to characterize completely the waste material (through knowledge of the waste and its characteristics), waste generators must evaluate the waste using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters (i.e., volatile and semi-volatile organic constituents) that can reasonably be expected to be present. Additional analytical tests may, under certain circumstances, be required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDSs) must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. When inspecting the waste load, ensure that the waste material is fully cured, that all containers have removable lids or are hole-punched, and that no free liquids are present.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - Waste materials that are odorous, contain free liquids, or are warm or sticky cannot be accepted. Generators must cure and harden fully all resins. Any fiberglass dust must be containerized adequately. Empty containers must be punctured or possess removable lids.

12. SPENT ACTIVATED CARBON FILTERS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - large filters on flatbed trucks
   - small filters in roll-off boxes or dump trucks

2. Background - Granulated activated carbon consists of carbonaceous source materials (such as coconut-shells, coal, wood, and peat) that have undergone a physical and/or chemical activation process. Due to their exceptional ability to absorb and adsorb contaminants in various media, activated carbon filters are frequently used to treat drinking water or contaminated groundwater and can be effective at removing vapors and particulates from other media adsorption processes. Spent activated carbon filters are many times able to be re-activated for reuse or may be recycled.

3. Disposal - If the waste material is unable to be reused or recycled, it will be directed to the Olmsted Waste-to-Energy-Facility (OWEF) for disposal. If the waste material is non-combustible, it will be directed to the Olmsted County Kalmar Landfill.

4. Testing Requirements - Unless complete documentation exists to characterize the waste material (through knowledge of the waste and its characteristics), waste generators must evaluate the waste using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters (e.g., metals and volatile and semi-volatile organic constituents) that can reasonably be expected to be present. This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. **Generators must ensure that the waste material is not considered to be a solid ignitable waste.** If available, Material Safety Data Sheets (MSDSs) must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. When inspecting the waste load, ensure that no free liquids are present.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

13. CONTAMINATED SOILS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - dump trucks - truck and semi-loads
   - roll-off boxes - small dumpsters

2. Background - Contaminated soils may originate from various sources. A source may have areas contaminated with different products or combinations of products. Typically, these contaminated areas would be excavated from around a storage tank. The contaminants in question are most often those associated with gasoline, oils, and fuel oils, typically encountered near tank removal sites at locations such as filling stations, refineries, or other petroleum-related industries.

   Caution must be exercised to fully evaluate contaminants contained in the loads. **Contaminants besides oil, gasoline, fuel oils, and other petroleum products are not acceptable for land spreading or disposal.** No PCB-contaminated wastes will be accepted.

3. Disposal - Wastes mixed with inorganic materials (e.g., sand, soil, etc.) will be directed to the Olmsted County Kalmar Landfill. If combustible sorbents have been used, they may be directed to the Olmsted Waste-to-Energy Facility (OWEF).

4. Testing Requirements - Petroleum-contaminated soils must be evaluated using a Toxicity Characteristics Leaching Procedure (TCLP) for lead, unless it is a small one-time volume that is < 5 cubic yards. Testing must include, at a minimum, the following parameters: benzene, toluene, ethyl benzene, xylene, (BTEX), and total petroleum hydrocarbons (TPH) – also, testing shall include gasoline range organics (GRO) for gasoline-contaminated sites, and diesel range organics (DRO) for oil-contaminated sites. The analyses and laboratory procedures outlined by the MPCA's Petroleum Remediation Program will be utilized. To be accepted at the landfill, the material must meet the hazardous waste limits for lead and benzene, and the TPH concentration must be below 20,000 parts per million (ppm). This Plan also has secondary limits for benzene, toluene, and ethyl benzene (see Appendix C for the established parameter limits). If the leachate or groundwater concentrations for these parameters are already elevated for the secondary limits at the landfill, Olmsted County may consider restricting or eliminating wastes containing these compounds. For other types of contaminants, Olmsted County may require additional testing based on the possible contaminants involved. If available, Material Safety Data Sheets (MSDSs) of the contaminants present in the soil must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. The delivery of contaminated soils that are suitable as Alternative Daily Cover (ADC) must be accompanied by a current, approved Non-Hazardous Industrial Solid Waste Tracking Form that attests to its suitability as ADC (usually noted as a delivery restriction in the *Admin* section of the form).

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. Ensure that free liquids are absent and that no obvious odors are present, even for loads < 5 cubic yards. Seek assistance from a supervisor if odorous loads are discovered during the waste load inspection.

7. Facility Operational Requirements - Contaminated soils will be thin-spread (to a thickness of approximately six inches) over the intermediate cover on inactive areas of the MSW disposal area to encourage the evaporation of volatile organic constituents. A certified operator must be present to direct the unloading and complete the spreading immediately upon delivery. After the evaporation of volatiles has concluded, the soil may be stockpiled in the MSW disposal area and utilized as ADC.

8. Special Generator Procedures - To qualify for the ADC rate, prior to dumping, the waste hauler must inform the scale house operator that the contaminated soil is suitable as ADC.

9. Additional Information - See attached MPCA fact sheets "Soil Sample Collection and Analysis Procedures" and "Thin-Spreading Small Quantities of Petroleum-Contaminated Soils."

Thin-spreading small quantities of petroleum-contaminated soils

Cleanup/Emergency Response 4-04 • September 2007

Minnesota Pollution Control Agency

Contents

This guidance is for small quantities — 10 cubic yards or less — of soil or other organic materials from a petroleum spill that has been approved by Minnesota Pollution Control Agency (MPCA) staff. The MPCA has rules for sites that accept volumes up to 1,500 cubic yards of petroleum-contaminated soil, and the agency requires a permit for the ongoing land treatment of large quantities.

The following conditions must be met to thin-spread petroleum-contaminated soils or other MPCA staff-approved materials. If these conditions are not met, approval is automatically revoked. Approval is given verbally by the MPCA Emergency Response Team member. It is the responsibility of the spiller to ensure an adequate cleanup and disposal has occurred.

Storage

Material stored prior to thin-spreading should be placed in barrels or on an impervious surface and covered with plastics.

Permission from landowner

Permission to thin-spread the contaminated soil must be obtained from the property owner.

Local and county ordinances

Check with the local units of government whether there are any ordinances pertaining to thin-spreading. Observe all applicable ordinances.

Township notification/approval

If soil will be thin-spread in a different township than where it originated, the receiving township must be given 60 days to review the application or request and provide a recommendation to the MPCA staff. This applies to organized and unorganized townships receiving petroleum-contaminated soil generated outside their borders. It does not apply to cities or thin-spreading within the same township where the material was generated.

Site conditions

The application site must be in a relatively isolated area with setback distances of 200 feet from surface waters, drinking water wells, and sewers. The soil should have moderate-to-high fertility and the land slope should be less than 6 percent.

Timing

Application of material can only occur between April 1 and November 1.

Application

The material must be applied at a maximum thickness of two inches. After

Minnesota Pollution Control Agency • 520 Lafayette Rd. N., Saint Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

application, the material must be worked into the native soil by disking, raking, blading or equivalent methods.

The application site must be observed for visual contamination for a minimum of one year or until biodegradation has occurred.

Except for used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules.

For more information

For more information on spill reporting, prevention, cleanup and disposal, call the MPCA at (651) 296-6300 or (800) 657-3864 and ask for a member of the Emergency Response Team or go to www.pca.state.mn.us/cleanup/pubs/ertpubs.html on the internet.

More information is also available on the Web site of the U.S. Environmental Protection Agency at www.epa.gov/oilspill/.

14. INK SLUDGES, SOLVENTS, AND CLEAN-UP MATERIALS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - ink sludges
   - ink-related solvents
   - ink-contaminated cloth and paper
   - ink-contaminated scrapings and sweepings

2. Background - Businesses may produce many different types of ink waste in their manufacturing processes or as a result of the services they provide. Ink-related wastes must be thoroughly evaluated since they may contain metals or volatile organic compounds (VOCs) at or above regulatory limits. Solvent-containing wastes in the liquid form are not accepted at the Olmsted County Kalmar Landfill or the Olmsted Waste-to-Energy Facility (OWEF). Solvent-containing wastes can only be accepted when absorbed into a combustible material. Ink waste in sludge form must be in a solid or semi-solid form.

3. Disposal - The site of final disposition is contingent on the waste's combustion characteristics and what, if any, contaminants are present. In general, combustible ink wastes will be directed to the OWEF, while non-combustible ink waste will be disposed at the Kalmar Landfill.

4. Testing Requirements - Unless complete documentation exists to characterize completely the waste material (through knowledge of the waste and its characteristics), waste generators must evaluate the waste using a Toxicity Characteristics Leaching Procedure (TCLP) analysis for those parameters (i.e., metals and volatile and semi-volatile organic constituents) that can reasonably be expected to be present. Waste generators may also be required to determine the waste material's flash point and pH to determine the characteristics of ignitability and corrosivity. Generators of ink or solvent-related wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test." This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. Any available Material Safety Data Sheets (MSDSs) must also be provided. Please note that MSDSs are only required to list ingredients that make up more than one percent of the product. Regulated chemicals in lesser amounts could still render the waste hazardous.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. When inspecting the waste load, ensure that no free liquids are present. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin* section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

9. Additional Information - See attached MPCA fact sheets “Evaluating Paint and Ink Waste” and “Managing Towels, Wipes, and Sorbents.”

Minnesota Pollution Control Agency

Evaluating Paint and Ink Wastes

Waste/Hazardous Waste #4.40, May 2004

This fact sheet is intended for businesses using paints or inks.

Contents

Environmental Concerns

Businesses may produce many different types of paint and ink waste in their manufacturing processes or as a result of the services they provide. Some may contain toxic metals at or above regulatory limits. Solvents are generally used during cleanup that may be hazardous wastes as well as air pollutants. Wastes improperly managed can harm human health and the environment.

Evaluate

Minnesota state law requires any company or business producing a waste to evaluate the waste to determine whether it is hazardous. Waste may be hazardous because it is specifically listed in the law by name or because it displays a hazardous characteristic. **The Minnesota Pollution Control Agency (MPCA) considers paint and ink wastes to be hazardous until properly evaluated and shown to be nonhazardous.**

Examples of paint and ink wastes which are frequently hazardous include:

- unusable liquid paints, stains, or inks;
- paint-thinner wastes of all types;
- paint spray-booth filters and arrestors;
- scrapings from paint booth walls and floors;
- paint-stripping waste;
- rags containing paint, ink, and/or solvent;
- sludge from distilling paint-thinner waste; and
- blanket and fountain washes and other cleanup materials.

(Dry masking tape and paper from spray painting operations are not regulated as hazardous waste at this time. See page 3 for requirements for plastic paint cup liners.)

To determine whether your paint or ink waste is hazardous, answer these two questions:

1. Is the waste listed?

Check the Material Safety Data Sheet (MSDS) to see if your paint thinners, strippers or wash-up materials contain any of the solvents that appear on the F list of hazardous wastes. (See Table 1.)

Table 1: Common F-listed Solvents

F001:	tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane and carbon tetrachloride used as degreasers;
F002:	spent solvents listed above that are *not* used as degreasers; 1,1,2-trichloro-1,2,2,-trifluoroethane and chlorobenzene;
F003:	xylene (xylol), acetone, methanol and methyl isobutyl ketone *(MIK)*;
F004:	cresols, cresylic acid and nitrobenzene;
F005:	toluene *(toluol),* methyl ethyl ketone *(MEK)*, carbon disulfide and benzene; and
	Spent solvent mixtures/blends containing 10 percent of F001, F002, F004 and/or F005 before use.

- If the MSDS states that the product contains 10 percent or more F002 and/or F005 solvents in any combination, waste resulting from its use is listed.

Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194
(651) 296-6300. toll-free (800) 657-3864, TDD (651) 282-5332 or (800) 657-3864

- If the product is either a pure solvent with an F003 waste code, or if it is an F003 solvent in combination with 10 percent or more of another solvent or combination of solvents on the F list, waste resulting from its use is listed.
- If *unused* discarded thinners, washes, strippers, etc., appear on the P or U lists of hazardous wastes, they are listed. *(P and U lists are found on MPCA hazardous waste fact sheets #2.02 and #2.03.)*
- Rags containing listed wastes are generally listed themselves. *(For more information on managing solvent soaked rags, see MPCA hazardous waste fact sheet #4.61, Towels, Wipes and Sorbents.)*
- If spray guns are cleaned by spraying a solvent from Table 1 into paint booth filters or arrestors, the filters or arrestors are listed.
- If other hazardous or nonhazardous wastes are mixed with wastes resulting from using solvents or solvent mixtures listed in Table 1, the entire mixture becomes listed.
- If your used or unused thinners, washes or strippers are not on one of these lists, they may display a hazardous characteristic. *(See question #2.)*
- Pure, discarded paint or ink is not listed; it may, however, display a hazardous characteristic.

2. Does the waste display a hazardous characteristic?

Paint and ink wastes often display one of three hazardous characteristics ignitability, corrosivity, or Toxicity Characteristic (T.C.) Toxicity. Each are discussed below.

Ignitability

- A paint or ink waste is ignitable if it has a flashpoint below 140° Fahrenheit. Oil- or solvent-based paint or ink wastes are usually ignitable. Some latex (water-based) paints can also be ignitable because of the drying agents they contain. To determine the flashpoint of your paint, ink, stain, thinner or solvent, check your MSDS, Section 3 - *Fire and Explosion Hazard Data.*
- A solid waste is ignitable if it can cause fire through friction, absorption of moisture, or spontaneous chemical changes, and when ignited, burns so persistently and vigorously that it creates a hazard.

Solid paint wastes (filters, scrapings, etc.) resulting from the use of oil- or solvent-based paints, inks and thinners may be ignitable. Manage solid oil- and solvent-based paint and ink wastes as hazardous waste unless you determine they are nonhazardous. Solid, dry latex-paint wastes are not generally ignitable. *(They may, however, be T.C. Toxic. See below.)*

NOTE: Air drying ignitable or other hazardous waste is **not** allowed.

Corrosivity

A waste is corrosive if it has a pH of 2.0 or less, or 12.5 or more. Typically, corrosive wastes are produced from paint-stripping processes that use a highly caustic (pH 12.5 or more) liquid stripper. To help determine the pH of a waste, check the MSDS to find the pH of the stripper used *(Section 2 - Physical/Chemical Characteristics)*, use a pH indicator, or have a laboratory perform the test for you.

T.C. Toxicity

Toxicity Characteristic (T.C.) Toxic wastes are wastes which, when tested with the Toxicity Characteristic Leaching Procedure (TCLP), allow certain constituents (contaminants) to leach (dissolve and wash) out of a test solution at levels greater than the maximum allowable concentrations *(see Table 2)*.

Table 2: Common T.C. Toxic Constituents and Maximum Allowable Concentrations in mg/l

Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0
Methyl ethyl ketone	200.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5

Paint and ink wastes are assumed to be T.C. Toxic unless proven otherwise using one of the following options:

- **Certification —** Ask the manufacturer or supplier of the paints or inks you use to certify in writing that none of the products leach any T.C. Toxic constituents at levels greater than the maximum allowable concentrations. If the manufacturer or supplier is unwilling or unable to give this type of written certification, use the testing option outlined below.
- **Testing —** Have a representative sample of your paint or ink waste tested by an environmental testing

laboratory using the TCLP. There are several parts to the TCLP – metals, volatile organics and pesticides. Test for metals (one or all, depending upon what you know about the waste). You may also need to test for organics. The waste is not T.C. Toxic if the tested levels fall below the maximum allowable concentrations.

If you have determined your paint or ink waste to be **listed or characteristic for ignitability, corrosivity or T.C. toxicity, it is hazardous.** Put the waste in a leakproof container and mark and store it according to the Minnesota Hazardous Waste Rules *(for help, see MPCA fact sheet #1.04/1.05, Mark and Store Hazardous Waste Correctly)*. Contact a licensed hazardous waste transporter to arrange for disposal of the waste. If you are a very small quantity generator, you may also participate in a Very Small Quantity Generator Collection Program. For more information about participating in a collection program, see MPCA fact sheet #2.51, *VSQG Collection Program Requirements for Generators*.

If you have determined your waste is not listed and does not display any hazardous characteristics, it is not hazardous. Keep copies of all supporting documents and certification in your records.

If you begin using different materials, you will need to evaluate the waste again.

Air Quality Concerns

Even though a paint, ink or solvent may not be hazardous, it may still pose a concern because it contains volatile organic compounds.

Paints, inks, and solvents typically contain volatile organic compounds (VOCs). VOCs react in the sunlight with nitrogen oxides to form ground level ozone which is a main component of smog. Some VOCs contain hazardous air pollutants (HAPs), which are toxic.

You will need to determine whether your facility is required to obtain an air emissions permit. To do this you will need to consider **all** significant sources of emission at your facility. You will need to include any emissions of VOCs and HAPs when you are making this determination. The fact sheet, *Air Quality Permit Rules*, AQ Doc. #4.03, provides information on air permit requirements. It is located on the Minnesota Pollution Control Agency's (MPCA's) Web site at http://www.pca.state.mn.us/air/pubs/4-03.pdf .

If your paints or inks contain any HAPs, you will also need to determine whether your operation is affected by any National Emission Standards for Hazardous Air Pollutants (NESHAP). For NESHAP information, go to the Environmental Protection Agency's (EPA's) Web site at http://www.epa.gov/ttn/atw/eparules.html .

Businesses that are independently owned and operated and have less than 100 employees can contact MPCA's Small Business Assistance Program (SBAP) for help in making these determinations.

Managing Plastic Paint Cup Liners

When using paint cups with plastic disposable liners, after use the liners must be empty to be eligible for disposal as an industrial solid waste. Evaluate containers that are not empty according to the guidance in this fact sheet.

To prevent waste, mix only what you need and use the right size liner for the job. Use all the paint, until the liner collapses. When you remove the air gun, a small amount of residue from the gun will flow back into the liner. By hand, pour and squeeze that excess liquid paint into your hazardous waste container. If you are using catalyzed paint, after the left-over paint has cured, just pop out the hardened residue. The liner is then an empty container that may be managed as an industrial solid waste. Talk to your waste hauler about industrial solid waste management requirements for this waste.

If you mix up too much paint and want to store it temporarily until you are completely finished with a project, close the paint liner container tightly, then mark it with information that will help you identify the job it was used on and other important information. Since, at this point, you still intend to use it, this paint is not waste.

Each landfill and industrial burner must have an industrial solid waste management plan that specifies the solid wastes it can accept. The plan further specifies how each waste will be evaluated, profiled, delivered (using a non-hazardous manifest or bill of lading) and managed when the waste reaches the facility.

These requirements help ensure wastes are managed in a way that will not harm human health or the environment.

Work closely with your hauler and disposal facility to ensure proper disposal – which will reduce your long-term liability.

Should you determine you do not need the extra paint, **do not throw the paint liner container with the excess paint in the trash. Do not open the paint liner container and dry out the paint.** By hand, pour and squeeze the excess paint into

your hazardous waste paint container. The liner is then an empty container that may be managed as an industrial solid waste. Talk to your waste hauler about industrial solid waste management requirements for this waste.

More Information

Your metropolitan county and the Minnesota Pollution Control Agency have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or the MPCA office closest to your county. For information about air quality requirements, contact MPCA's Small Business Assistance Program (SBAP). For information and help finding ways to reduce the amount of waste you generate, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka County	(763) 422-7093
Carver County	(952) 361-1800
Dakota County	(952) 891-7557
Hennepin County	(612) 348-3777
Ramsey County	(651) 773-4466
Scott County	(952) 496-8177
Washington County	(651) 430-6655

Web Site
http://www.co.[county name].mn.us

Minnesota Pollution Control Agency

Toll free (all locations)	(800) 657-3864
Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Mankato	(507) 389-5977
Marshall	(507) 537-7146
Rochester	(507) 285-7343
St. Paul	(651) 297-2274
Willmar	(320) 214-3786
Small Business Assistance	(651) 282-6143
SBAP toll-free	(800) 657-3938

Web Site ..... *http://www.pca.state.mn.us*

Minnesota Technical Assistance Program (MnTAP)

Toll free	(800) 247-0015
Minneapolis	(612) 624-1300

Web Site ..... *http://www.mntap.umn.edu*

Managing Sorbents: Towels, Wipes, and Rags

Many businesses and government agencies use towels, wipes, rags, swabs, or similar launderable or disposable materials, collectively referred to as *sorbents*. Used sorbents may become hazardous wastes if they are dampened with solvents or cleaners, or if they collect contaminants during use. This fact sheet provides guidance from the Minnesota Pollution Control Agency (MPCA) to businesses and other hazardous waste generators to properly manage their used sorbents.

Generators located in the Minneapolis-St. Paul Metropolitan Area counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) may be subject to more strict local requirements of their Metro County. Contact your Metro County; see *More information* on page 3.

The Minnesota Technical Assistance Program (MnTAP) may be able to help you reduce the toxicity of the solvents or cleaners you use and reduce your hazardous waste risks and costs. See More information.

Are my used sorbents hazardous waste?

If you use sorbents with a solvent or cleaner, or to clean items that could transfer toxic contaminants such as lead or chromium to the sorbent, you must assume your used sorbents are hazardous wastes unless you test or otherwise show they are not hazardous. The process to demonstrate that your sorbents are actually not hazardous is called evaluation. See MPCA fact sheet #w-hw1-01, Evaluate Waste; Determine Generator Size at http://www.pca.state.mn.us/publications/w-hw1-01.pdf for detailed guidance on evaluation.

How do I manage my hazardous waste sorbents?

You may either launder and reuse or dispose of your hazardous waste sorbents. Because Minnesota already allowed this laundering and reuse of some sorbents, and solid waste disposal of others, the MPCA and Metro Counties did not adopt the 2013 Federal Final 'Rags' Rule.

Table 1 on the next page presents common management options for hazardous waste sorbents in Minnesota.

Many of the management options require that the sorbents contain no *free liquids* when they leave your site. This condition is also known as being 'RCRA-dry'. Assume that your sorbents contain free liquids unless you:

- Mechanically or manually compress them with a pressure of at least ten pounds per square inch (10 psi) until no further liquid is released. This is slightly less than a hard hand squeeze by an average person.
- Centrifuge them with a force of at least 100 times normal gravity until no further liquid is released. This is slightly less than the fast spin cycle on a common home or commercial washing machine. Or,
- Show that your sorbents already do not contain free liquids after use or through another method. For example, a sorbent used with a minimal amount of a highly volatile solvent such as ethyl acetate or acetone often already contains no free liquids after normal use. **Do not air-dry hazardous waste sorbents.**

Collect liquids removed from your sorbents and manage the recovered liquids as hazardous waste.

***Caution: Sorbents contaminated with a wide variety of solvents may present a fire risk or spontaneously combust regardless of whether all free liquids have been removed or not. Always handle contaminated sorbents in accordance with the Minnesota State Fire Code and the directions of your local fire marshal.**

Table 1. Management options in Minnesota for hazardous waste sorbents

Sorbents that are contaminated with:	**If the sorbents will be laundered, first remove all free liquid before they leave your site, then:**	**If the sorbents will be disposed:**
'Ignitable-only' solvents: including only D001 and F003 For an explanation of D001 solvents, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf For an explanation of F003 solvents, see MPCA fact sheet #w-hw2-00, F-List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-00.pdf	Non-hazardous after they contain no free liquid.* Non-hazardous sorbents may be laundered on-site or transported without a hazardous waste manifest to a commercial laundry.* Count only the recovered liquids toward your hazardous waste generator size.	Non-hazardous after they contain no free liquid.* If you remove free liquids prior to disposal, count only the recovered liquid towards your hazardous waste generator size. You may dispose of the now non-hazardous sorbents as solid waste.* If you do not remove free liquids prior to disposal, dispose of these sorbents as fully regulated hazardous waste and count the full weight towards your generator size.
Toxic solvents: including F-Listed solvents F001, F002, F004, and F005; and Toxicity Characteristic solvents such as methyl ethyl ketone (MEK), trichloroethylene (TCE), and perchloroethylene; For an explanation of these F-Listed solvents, see MPCA fact sheet #w-hw2-00, F-List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-00.pdf For an explanation of Toxicity Characteristic solvents, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf	These sorbents remain hazardous wastes. May be laundered on-site or transported without a hazardous waste manifest to a commercial laundry.* If laundering on-site, ensure that the sewage treatment plant that your site discharges to will accept laundry wastewater containing the toxic solvents. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.	Dispose of these sorbents as fully regulated hazardous waste whether or not free liquid is removed. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.
Any other hazardous waste or hazardous waste spill cleanup debris, including Toxicity Characteristic metals, such as cadmium, chromium, and lead; or crude oil For an explanation of Toxicity Characteristic metals, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf	These sorbents remain hazardous wastes. May be laundered on-site.* If transported to a commercial laundry, a hazardous waste manifest must be used. If laundering on-site, ensure that the sewage treatment plant that your site discharges to will accept laundry wastewater containing the toxic contaminants. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.	Dispose of these sorbents as fully regulated hazardous waste whether or not free liquid is removed. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.
Used oil, such as crankcase lubricant, hydraulic fluid, and thermal oil	Manage as a used oil-related waste. See MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes at http://www.pca.state.mn.us/publications/w-hw4-30.pdf.	
Refined fuels	Manage as a fuel-related waste. See MPCA fact sheet #w-hw4-19, Managing Fuel Wastes at http://www.pca.state.mn.us/publications/w-hw4-19.pdf.	

***Caution: Sorbents contaminated with a wide variety of solvents may present a fire risk or spontaneously combust regardless of whether all free liquids have been removed or not. Always handle contaminated sorbents in accordance with the Minnesota State Fire Code and the directions of your local fire marshal.**

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045 and incorporate regulatory interpretation decisions made by the MPCA on October 9, 2013, and November 11, 2013.To review Minnesota Statutes and Rules, visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs.

The MPCA and your Metro County have staff available to answer waste management and requirement questions. The MPCA's Small Business Environmental Assistance Program (SBEAP) can provide free and confidential regulatory compliance assistance. The Minnesota Technical Assistance Program (MnTAP) can help you reduce your waste generation and risk. All hazardous waste incidents, such as spills, must be reported immediately to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka	763-422-7093
Carver	952-361-1800
Dakota	952-891-7557
Hennepin	612-348-3777
Ramsey	651-266-1199
Scott	952-496-8475
Washington	651-430-6655
Websites	http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free	1-800-247-0015
Metro	612-624-1300
Website	http://www.mntap.umn.edu

Small Business Environmental Assistance

Toll free	1-800-657-3938
Metro	651-282-6143
Website	http://www.pca.state.mn.us/sbeap/

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
Brainerd	218-828-2492
Detroit Lakes	218-847-1519
Duluth	218-723-4660
Mankato	507-389-5977
Marshall	507-537-7146
Rochester	507-285-7343
St. Paul	651-296-6300
Willmar	320-214-3786
Website	http://www.pca.state.mn.us

Minnesota Duty Officer

Toll free	1-800-422-0798
Metro	651-649-5451
Website	https://dps.mn.gov/

15. INFECTIOUS WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - "red bag" waste in plastic containers, including sharps

2. Background - The Olmsted Waste to Energy Facility (OWEF) receives small quantities of infectious waste from several generators in Olmsted County. The OWEF is the alternative disposal facility for the Mayo Clinic Hospital/Medical/Infectious Waste Incinerator (HMIWI) and periodically receives non-hazardous infectious waste from Mayo Clinic facilities. The OWEF has an approved Infectious Waste Management Plan in effect, and operators are trained in the proper management of infectious waste. No storage of infectious waste occurs at the OWEF. Decontaminated infectious waste is addressed in category 29 of this Plan.

3. Disposal - Although the Mayo Clinic HMIWI, which may be reached via telephone at 507-284-9400, is the preferred disposal option for infectious waste in Olmsted and Dodge Counties, the OWEF will accept small quantities of infectious waste when the facility is not experiencing an outage. Although the Olmsted County Kalmar Landfill does not manage infectious waste, category 27 of this Plan allows, on a case-by-case basis, the Kalmar Landfill to accept inert, bulky items (>3 ft. x 3ft. x 3 ft.), such as mattresses, beds, and couches that may have been exposed to blood, body fluids, or other infectious materials, and that are unable to be processed at the OWEF. The Kalmar Landfill will accept only inert, bulky items that, when compressed, do not release blood, body fluids, or other infectious materials.

4. Testing Requirements - In general, no testing of the waste material is required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, analytical testing may, under certain circumstances, is required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Infectious Solid Waste Tracking Form (see Appendix D) at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Infectious Solid Waste Tracking Form and complete the *Facility* section of the form. When inspecting the waste load, ensure that no free liquids are present. Notify OWEF control room staff of the arrival of the waste. Direct the delivery vehicle to a separate area for unloading.

7. Facility Operational Procedures - **Waste generators (or haulers) are responsible for providing notification to OWEF control room staff (507-328-7039) at least one-half hour prior to the anticipated delivery of the waste**. **At no time shall OWEF personnel handle infectious waste. Infectious waste shall never be unloaded into the storage pit.** Delivery personnel must unload the containers and carry them to the top of the feed hopper. The level of waste in the feed hopper will be allowed to drop to a level where the containers can be placed inside without damage and to allow for the most complete combustion possible to occur. An OWEF operator will direct the placement of the waste containers.

8. Special Generator Requirements - **Waste generators (or haulers) are responsible for providing notification to OWEF control room staff (507-328-7039) at least one-half hour prior to the**

anticipated delivery of the waste. The waste generator is responsible for adhering to all applicable provisions of Minnesota Administrative Rules, part 7035.9120, and all other federal, state, and local laws and regulations that pertain to the management of infectious waste. Infectious waste must be placed inside two thick disposable plastic bags. The disposable bags must be impervious to moisture and of sufficient strength to preclude ripping, tearing, or bursting under normal conditions of usage and handling. The outer bag must be red to indicate that it contains infectious waste. The red bags are then to be placed into a rigid container, typically a 30-gallon garbage pail, and be labeled appropriately. Upon delivery to the OWEF, the red bags must be deposited directly into the feed hopper by delivery personnel. OWEF staff will be available to escort the delivery personnel to the feed hopper. The delivery personnel must, at all times, possess an adequate spill kit that would allow them to clean-up any spills that may occur. The spill kit must, at a minimum, include sorbent materials; one (1) gallon of hospital-grade disinfectant; red bags labeled "infectious waste" and marked with the universal biohazard symbol; a scoop shovel; a push broom; a plastic bucket; latex gloves; disposable coveralls; surgical face masks; and goggles.

9. Additional Information - See attached MPCA fact sheets "Managing Waste from Healthcare Providers," "Infectious Waste: Management Guidance for Transporters," and "Infectious Waste: Management Guidance for Storage, Decontamination, and Disposal Facilities."

Infectious Waste

Management guidance for storage and decontamination facilities

What is infectious waste?

Infectious waste is waste that poses an environmental danger due to its *biological* risk. **Pathological** waste also poses a *biological* risk and is regulated the same as infectious waste in Minnesota. Both are different from **hazardous** waste, which poses an environmental danger due to its *chemical* risk. All three types of waste are regulated by the Minnesota Pollution Control Agency (MPCA).

For a detailed discussion of exactly what is and isn't regulated as infectious waste in Minnesota, see MPCA fact sheet #w-sw4-30, Infectious Waste – Management guidance for generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf.

Who else regulates infectious waste?

This document is intended to provide guidance only on MPCA requirements under Minnesota Infectious Waste Statutes and Rules found at Minnesota Statutes, § Chapter 116, and Minnesota Rules Chapter 7035. Infectious waste may also be regulated as:

- Regulated waste, also known as *biohazardous waste*, under the Federal Bloodborne Pathogens Standard (BBP) found at 29 CFR 1910.1030 and administered by the Minnesota Department of Labor and Industry, Occupational Safety & Health Division (MNOSHA).
- Regulated Medical Waste (RMW) under the Federal Hazardous Materials Regulations (HMR) found at 49 CFR 173.134, administered by the U.S. Department of Transportation (DOT).

What is a regulated infectious waste facility in Minnesota?

Regulated infectious waste facilities include business or government sites that store or decontaminate regulated infectious waste generated by another party. Regulated infectious waste facilities in Minnesota must obtain MPCA certification of their infectious waste management plan before beginning operations.

- **Storage:** Holding regulated infectious waste for more than 48 hours (72 hours if over a weekend) at a site not operated by the original generator of the waste.
- **Decontamination:** Treating regulated infectious waste to render it safe to manage as an industrial solid waste. Contaminated sharps, however, remain regulated until disposed unless rendered incapable of penetrating human skin.

MPCA fact sheet #w-sw4-34, Infectious Waste – Approved waste management vendors and systems, at http://www.pca.state.mn.us/publications/w-sw4-34.pdf provides a list of certified infectious waste facilities.

What is not a regulated infectious waste facility in Minnesota?

The following sites are not regulated infectious waste facilities in Minnesota:

- Infectious waste generators storing or decontaminating only their own regulated infectious waste at a site they operate. MPCA fact sheet #w-sw4-30, Infectious Waste – Management guidance for generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf provides guidance on generator requirements.
- Household sharps and household infectious waste collection, storage, or decontamination sites.

- Wastewater treatment facilities that treat wastewater containing liquid infectious waste under a National Pollutant Discharge Elimination System (NPDES) permit issued by the MPCA.

How is an infectious waste management plan certified?

Submit a copy of the facility's infectious waste management plan to the MPCA for certification. The MPCA no longer provides a standardized application form. Plans may be in hard copy or electronic format. If submitted electronically, include an image of the designated responsible individual's signature. Contact the MPCA to identify the current infectious waste review staff. The MPCA is currently waiving certification fees.

All information in a submitted plan is considered public data unless the facility does all of the following:

- Requests that specific information in the plan remain nonpublic.
- Identifies the particular statutory grounds allowing the specified information to remain nonpublic.
- Demonstrates how the specified information meets the eligibility criteria of the statutory grounds.

Plan certifications are valid until revoked by the MPCA. However, you must submit a revised plan whenever there is a substantive change to the previously certified plan, or upon request of the MPCA or county authority.

What must a facility's infectious waste management plan include?

All facilities:

- Corporate identity of the facility owner registered with the Minnesota Secretary of State to do business in Minnesota. If the facility operator is different than the owner, the same information for the operator.
- Facility street and mailing address.
- Types of infectious waste intended to be handled.
- Method of receiving waste that ensures infectious wastes are properly identified and packaged and not comingled with other wastes, such as hazardous waste. For example, list waste acceptance criteria for customers and reference contract terms requiring compliance with those criteria.
- Description of how infectious waste will be packaged and labeled at the facility.
- BBP exposure control plan, or the steps taken to minimize potential employee exposure during handling.
- Methods used to disinfect reusable containers and facility equipment.
- Systems to prevent putrefaction of infectious waste.
- Employee training.
- Spill response procedures and equipment, including how the facility will notify the MPCA immediately after any fire or explosion at the facility or release of infectious waste to the environment.
- Identity, location, and contact staff for all infectious waste storage, decontamination, and infectious or solid waste disposal facilities to be used.
- Name of the designated individual responsible for implementing the management plan.
- Authorized signature of the designated individual or the facility operator's chief executive officer.
- Date of the version of the plan submitted.
- Maximum length of time that infectious waste may be held at the facility before being decontaminated or shipped off-site. If this time could be more than 48 hours (72 hours over a weekend), then the additional information in the *Storage facilities* section below must also be included.

Storage facilities. In addition to the information in the *All facilities* section above:

- Maximum volume of infectious waste that may be stored at the facility.
- Estimated closure cost of the facility. Include a per-unit cost for transport, decontamination, and disposal by another vendor of the maximum volume of infectious waste that may be stored. Identify the potential vendor(s) and the market rate for this management.

- One of the following financial assurance instruments in an amount equal or greater than the estimated closure cost:
  - Currency or acceptable securities deposited with the State of Minnesota for this purpose.
  - Surety bond from an accepted surety company.
  - Letter of credit from a federally-regulated or Minnesota-regulated institution.

  Surety bond and letter of credit language must conform to Minn. R. 7035.9150.

  Government-owned and operated storage facilities that will store less than 100 pounds of regulated infectious waste do not need to estimate closure cost or provide financial assurance.

Decontamination facilities. In addition to the information in the *All facilities* section above:

- Decontamination method used to treat the infectious waste. Autoclave treatment must consist of at least one-hour exposure of the waste at 250° Fahrenheit and 15 pounds per square inch gauge pressure or its equivalent. All other methods must demonstrate verified decontamination.

  Decontamination must be verified by standard biological indicators, such as Geobacillus stearothermophilus and Bacillus atrophaeus spores. Enclosing an infectious waste within a container or binding it into a matrix is not decontamination.
- Contingency plan of alternate decontamination off-site facilities or on-site methods to be used during an unplanned shutdown of the primary decontamination process.

Are other permits required?

Certified infectious waste storage and decontamination facilities do not need to obtain a solid waste permit or permit-by-rule from the MPCA for their infectious waste operations.

All facilities are subject to any normal air quality permits for emissions from heating, autoclave, or incineration activities.

Municipal waste combustors (MWCs), including waste-to-energy incineration facilities (WTEs), with a capacity smaller than 250 tons per day may also be subject to additional emission or permit requirements as Hospital/Medical/Infectious Waste Incinerators (HMIWI) if more than 10% of their feed consists of regulated infectious waste from any business or of any other waste from an inpatient hospital. MWCs and WTEs larger than 250 tons per day are not subject to the HMIWI limits or requirements.

Counties, townships, and municipalities may also require specific zoning, conditional use permits, or operating licenses separate from the MPCA.

What are facility operating requirements?

Comply with the certified plan.

Submit a revised plan whenever there is a substantive change to the previously certified plan. Keep a log of the volume of regulated infectious waste handled at the facility in the preceding two years.

Do not treat hazardous waste.

In the event of an emergency involving infectious waste at a facility:

- Take all reasonable measures to ensure that fires, explosions, and releases do not occur, recur, or spread.
- Contain, recover, and treat liquids that come in contact with infectious waste during an emergency.
- Submit a written report to the MPCA within two weeks of the emergency. Include any revisions to the plan to minimize the potential for recurrence of the emergency.

Do not dispose of waste from an emergency until it has been decontaminated or you receive prior MPCA approval.

Are there additional facility requirements for Ebola-contaminated waste?

The MPCA will allow Ebola-contaminated waste to be stored or decontaminated at certified facilities equivalent to other regulated infectious wastes without additional requirements.

Additional requirements from the DOT may apply to transport of Ebola-contaminated waste to a certified facility. See MPCA fact sheet #w-sw4-31, Infectious Waste – Management guidance for transporters, at http://www.pca.state.mn.us/publications/w-sw4-31.pdf for more information.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Statutes, Chapter § 116, and Minnesota Rules, Chapter 7035, and incorporates regulatory interpretation decisions made by the MPCA on May 21, 2010; September 20, 2010; April 15, 2011; May 3, 2011; March 8, 2012; February 5, 2015; and February 10, 2015. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review statutes and rules.

For more information on hazardous and dual waste, see the MPCA hazardous waste publications website at http://www.pca.state.mn.us/waste/pubs/business.html.

Address questions regarding the BBP to MNOSHA. Address questions regarding the Federal HMR to the U.S. DOT or Minnesota DOT. Free, confidential, non-enforcement compliance assistance is also available from the MPCA's Small Business Environmental Assistance Program (SBEAP).

Immediately report all releases of infectious waste to the environment to the Minnesota Duty Officer.

Minnesota Pollution Control Agency

Toll free (outstate only)..... 1-800-657-3864
Metro..... 651-296-6300
Website..... http://www.pca.state.mn.us

Minnesota Technical Assistance Program

Toll free (outstate only)..... 1-800-247-0015
Metro..... 612-624-1300
Website.....http://www.mntap.umn.edu/

Small Business Environmental Assistance Program

Toll free..... 1-800-657-3938
Metro..... 651-282-6143
Website.....http://www.pca.state.mn.us/sbeap/

Minnesota Duty Officer

Toll free (statewide) 1-800-422-0798
Metro..... 651-649-5451

Minnesota OSHA

Toll free (statewide)..... 1-800-342-5354
Metro 612-284-5005
Website.. http://www.dli.mn.gov/mnosha.asp

Minnesota Department of Transportation

Hazardous materials 651-215-6330
Website..... http://www.dot.state.mn.us/cvo/

U.S. Department of Transportation

Hazardous materials 1-800-467-4922
Website.. http://www.phmsa.dot.gov/hazmat

Infectious Waste

Management guidance for transporters

What is infectious waste?

Infectious waste is waste that poses an environmental danger due to its *biological* risk. **Pathological** waste also poses a *biological* risk and is regulated the same as infectious waste in Minnesota. Both are different from **hazardous** waste, which poses an environmental danger due to its *chemical* risk. All three types of waste are regulated by the Minnesota Pollution Control Agency (MPCA).

For a detailed discussion of exactly what is and isn't regulated as infectious waste in Minnesota, see MPCA fact sheet #w-sw4-30, Infectious Waste – Management guidance for generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf.

Who is a regulated infectious waste transporter?

Table 1: Regulated infectious waste transporters in Minnesota

Commercial infectious waste transporters

Businesses or government agencies that transport, for profit, regulated infectious waste that they did not generate, unless exempted. Commercial infectious waste transporters must register with the MPCA.

MPCA fact sheet #w-sw4-34, Infectious Waste – Approved waste management vendors and systems, at http://www.pca.state.mn.us/publications/w-sw4-34.pdf provides a list of registered commercial infectious waste transporters.

Exempt infectious waste transporters*

The following infectious waste transporters are not subject to the MPCA's commercial infectious waste transporter requirements if they comply with the exemption conditions noted:

- U.S Postal Service
- Infectious waste generators transporting their own waste. This category includes businesses that generate infectious waste at off-site locations, such as ambulances, home health agencies and trauma clean-up services.
- Any party transporting regulated infectious waste only at-cost or less, though the MPCA still recommends such parties register with the MPCA to reduce confusion among generators.
- Any party transporting only household infectious waste. For more information about what qualifies as household infectious waste, see MPCA fact sheet #w-sw4-30, Infectious Waste – Management guidance for generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf.

*Though exempt from the MPCA's requirements, any of these parties may still be regulated by MNOSHA under the BBP or by the DOT under the HMR.

Who else regulates infectious waste?

This document is intended to provide guidance only on requirements under Minnesota Infectious Waste Statutes and Rules found at Minnesota Statutes, § Chapter 116, and Minnesota Rules Chapter 7035, administered by the MPCA. Infectious waste may also be regulated as:

- Regulated waste, also known as *biohazardous waste*, under the Federal Bloodborne Pathogens Standard (BBP) found at 29 CFR 1910.1030 and administered by the Minnesota Department of Labor and Industry, Occupational Safety and Health Division (MNOSHA).

- Regulated Medical Waste (RMW) under the Federal Hazardous Materials Regulations (HMR) found at 49 CFR 173.134, administered by the U.S. Department of Transportation (DOT).

How do I register as a commercial infectious waste transporter?

All commercial infectious waste transporters must register with the MPCA before transporting regulated infectious waste in Minnesota. To register, prepare and submit an **Infectious Waste Management Plan** to the MPCA. The plan must include the:

- Corporate identity of the transporter that is registered with the Minnesota Secretary of State to do business in Minnesota.
- Addresses of the principal place(s) of business from which the transport in Minnesota will operate. These addresses are where the trucks operating in Minnesota will be based, such as transfer facilities or garages. These sites do not need to be located in Minnesota.
- Types of infectious waste intended to be transported.
- Method of receiving waste that ensures that infectious wastes are properly identified and packaged and not comingled with other wastes, including hazardous waste. For example, waste acceptance criteria for customers and contract terms requiring compliance with those criteria.
- Description of how infectious waste will be packaged and labeled in transport.
- BBP exposure control plan, or the steps taken to minimize potential employee exposure during loading and unloading.
- Methods used to disinfect reusable containers.
- Systems to prevent putrefaction of infectious waste.
- Employee training in the Infectious Waste Management Plan and relevant elements of the HMR.
- Spill response procedures and equipment.
- Procedures to ensure the transporter does not hold infectious waste at any site for more than 48 hours (72 hours over a weekend) except in the course of transportation. If infectious waste will be held for longer not in transport, then a concurrent application for certification of the Infectious Waste Management Plan for an off-site infectious waste storage facility must be included.

  For more information on certification as an off-site storage facility, see MPCA fact sheet #w-sw4-32, Infectious Waste – Management guidance for storage, decontamination and disposal facilities, at http://www.pca.state.mn.us/publications/w-sw4-32.pdf.
- Identity, location, and contact staff for all infectious waste storage, decontamination, and disposal facilities to be used.
- Name of the designated individual responsible for implementing the management plan.
- Authorized signature of the designated individual or the transporter's chief executive officer.
- Date of the version of the plan submitted.

The MPCA no longer requires or provides an application form. You may submit management plans to the MPCA in hard copy form or via fax or e-mail. If submitted electronically, include an image of the required signature. Contact the MPCA to find out who the current staff person to applications to is. The MPCA is currently waiving commercial transporter registration fees.

Keep a printed or electronic copy of the plan and the registration issued by the MPCA at your principal place of business.

Currently, the MPCA issues commercial transporter registrations which are valid until revoked by the MPCA. However, you must submit a revised management plan whenever there is a substantive change to the previously submitted plan, or upon request of the MPCA or county authority. Comply with your registered plan.

What are a registered transporter's requirements during transport?

All transportation of RMW in commerce by any party must comply with any applicable packaging, labeling, shipping paper, or other requirements of the HMR. Transporting RMW in containers or bulk outer packages that do not meet the requirements of the HMR, as referenced in 49 CFR 173.197, including closure, is prohibited.

Immediately respond to and report any release of RMW from its packaging during transport to the Minnesota Duty Officer at 651-649-5451. In addition, submit a written report to the DOT within 30 days of the discovery of the incident.

The MPCA no longer requires external marking of infectious waste transport vehicles nor assigns individual vehicle numbers. Transporters must continue to comply with any applicable DOT vehicle markings required under the HMR.

Are there additional requirements for Ebola-contaminated waste?

The MPCA will allow Ebola-contaminated waste to be transported equivalent to other regulated infectious wastes without additional requirements.

However, the DOT has interpreted that wastes that may reasonably be contaminated with the Ebola virus are Category A Infectious Substances under the HMR and not RMW. Transporters of Category A Infectious Substances must meet one of the following:

- Comply with the full packaging requirements specified in the HMR for Category A Infectious Substances.
- Obtain party status to Special Permit #16279 from the DOT and comply with the conditions of the Special Permit.
- Follow any other requirements issued by the DOT in place of these options.

Where can regulated infectious waste be transported?

Regulated infectious waste may only be transferred to:

- Infectious waste storage, decontamination, or disposal facilities in Minnesota certified by the MPCA.
- Infectious waste storage, decontamination, or disposal facilities in another state approved by that state's state regulatory agency.
- Other sites owned or operated by the original waste generator.
- Other transporters registered with the MPCA, if the transfer will result in subsequent transportation of infectious waste within Minnesota.
- (only if the generator is an eligible partially exempt regulated infectious waste generator)
  A licensed Minnesota hospital. For more information on partially exempt regulated infectious waste generators, see MPCA fact sheet #w-sw4-30, Infectious Waste – Management guidance for generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf.

Note: The Minnesota Department of Health no longer issues management plan-acknowledgment cards to infectious waste generators. This means that registered infectious waste transporters may now accept properly packaged and labeled infectious waste from any generator.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Statutes, Chapter § 116, and Minnesota Rules, Chapter 7035, and incorporates regulatory interpretation decisions made by the MPCA on May 21, 2010; September 20, 2010; April 15, 2011; May 3, 2011; March 8, 2012; February 5, 2015; and February 10, 2015. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review statutes and rules.

For more information on hazardous and dual waste, see the MPCA hazardous waste publications website at http://www.pca.state.mn.us/waste/pubs/business.html.

Address questions regarding the BBP to MNOSHA. Address questions regarding the Federal HMR to the U.S. DOT or Minnesota DOT. Free, confidential, non-enforcement compliance assistance is also available from the MPCA's Small Business Environmental Assistance Program (SBEAP).

Immediately report all releases of infectious waste during transport to the Minnesota Duty Officer.

Minnesota Pollution Control Agency

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Managing Waste from Health Care Providers

Waste/Hazardous Waste #3.34 • October 2003

This fact sheet is intended for health care providers.

Contents

Who is a *health care provider*?

The Minnesota Pollution Control Agency (MPCA) defines the term "health care provider" broadly to include a school or plant nurse's office, a physicians' office, a dental office, a medical clinic or center, an assisted-care or long-term care facility, a hospital, a veterinary clinic or animal hospital and those personnel providing health care or operating such facilities.

In addition to physicians, physicians' assistants, nurses and other personnel found at these sites, dentists, podiatrists, veterinarians and similar providers are also included in this definition. If you or your business fits the definition of 'health care provider', this information applies to you.

What are the environmental concerns?

Health care providers generate several types of regulated wastes which, if mismanaged, can harm human health and the environment. Regulated wastes include hazardous wastes, industrial solid wastes, infectious (red bag) wastes, pharmaceutical wastes, some sewered wastes and radioactive wastes. Drugs used to treat patients can be hazardous waste when disposed of.

Facilities with boilers or generators may need an Air Quality Permit from the (MPCA). For more information about air quality requirements, see the fact sheet entitled *Air Emission Control Requirements for Health Care Facilities* available on the MPCA Web site at www.pca.state.mn.us/publications/aq1-26.pdf.

- dental
- dialysis
- environmental services/ housekeeping/maintenance
- laboratory and pathology
- oncology
- pharmacy
- nuclear medicine
- nursing
- radiology
- sterile processing
- surgery

For examples of the different types of waste generated by each department, see the Excel table entitled *Table of Common Regulated Wastes in the Health Care Industry* available on the MPCA Web site at www.pca.state.mn.us/publications/w-hw3-34a.pdf.

What wastes are regulated?

For health care facilities, regulated wastes include hazardous, industrial solid, infectious, pharmaceutical, radioactive and sewerable wastes. Each of these is discussed in detail below.

Hazardous wastes are wastes that have been classified as hazardous by the federal U.S. Environmental Protection Agency (EPA) or the MPCA. A waste is hazardous if it appears on one of four lists of known hazardous wastes (F, P, K or U lists), if it displays a hazardous characteristic or if it

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contains 50 parts per million or more Polychorinated Biphenols (PCBs). A 'characteristic' hazardous waste is one that meets the definition in the Minnesota Rules for ignitability, oxidizer, corrosively, reactivity, lethality or toxicity.

Examples of wastes on the F list include xylene and acetone. Chemotherapy drug waste may be on the P or U lists or display the characteristic of Minnesota lethality. Alcohols may be ignitable. Mercury-bearing wastes are generally toxic. Strong acids and bases are corrosive. Aerosols generally are ignitable and/or take the characteristic of the waste they contain.

Hazardous Waste – Reduced Requirements, some hazardous and potentially hazardous wastes are common to many types of businesses. Examples include fluorescent lamps, batteries, electronic equipment, used oil and lead-acid batteries. The EPA and/or MPCA have provided specific management guidance for each waste which, if followed, usually reduces management requirements yet ensures the waste is managed safely.

For more information, see fact sheets on the MPCA Web site at www.pca.state.mn.us/waste/pubs/business.html#hazardous or the Minnesota Hazardous Waste Rules at www.pca.state.mn.us/waste/hw_mnrules.html.

Industrial solid waste is all solid waste generated from an industrial or manufacturing process, non-manufacturing activities such as service and commercial establishments, construction debris and asbestos. Health care wastes that are not liquids, not gases, not hazardous, not infectious, not pharmaceuticals or radioactive, and not office materials or food preparation waste are industrial solid waste. For health care facilities doing renovations, demolition debris and discarded machinery that do not fall into another category are also industrial solid waste. Industrial solid waste cannot be discarded or mixed with "normal trash."

For more information, see Minnesota Solid Waste Rules at www.pca.state.mn.us/waste/sw_mnrules.html.

Infectious waste is waste that has the potential to transmit disease – regulated body fluids (blood and blood products and amniotic, cerebrospinal, pericardial, peritoneal, pleural and synovial fluids) and items dripping with those fluids, laboratory waste (waste cultures and stocks), infected research animal waste, sharps and pathology waste. Infectious waste is also sometimes called biohazardous, red bag or regulated medical waste. Infectious waste is **not** the same as hazardous waste.

For more information, see the Minnesota Infectious Waste Rules at www.revisor.leg.state.mn.us/arule/7035/9110.html.

Pharmaceutical waste includes expired drugs, medications left behind when a patient expires or leaves a health care facility, waste materials containing chemotherapy drug residues (syringes, IV bags, tubing, etc.) and drugs that are intended to be discarded. You must evaluate each of these wastes to see whether they are hazardous and dispose of them accordingly. For more information on chemotherapy-related waste, see fact sheet *Managing Antineoplastic (Chemotherapy) Waste* available on the MPCA Web site at www.pca.state.mn.us/publications/w-hw4-03.pdf.

Radioactive wastes contain radioactive materials. Radioactive materials are used in, and wastes generated by, several areas of a health care facility including nuclear medicine, nuclear cardiology, radiation oncology, blood bank, clinical laboratories, and research laboratories. Although X-rays are a form of radiation, they do not "contaminate" items and therefore, are not a source of radioactive wastes. When the X-ray machine is "off", no radiation is being produced. Radioactive wastes may be solids, liquids, or gases. Occasionally, "mixed waste" will be generated. "Mixed waste" is waste that contains both hazardous waste and radioactive material; it must be managed in accordance with both U.S. Nuclear Regulatory Commission (USNRC) and EPA rules.

The USNRC is responsible for establishing and enforcing Federal regulations for the use and disposal of source, by-product, and special nuclear materials. The Federal regulations for using radioactive materials and managing their wastes are found in 10 CFR 20 and 10 CFR 35. Not all radioactive materials are regulated by the USNRC; naturally-occurring and accelerator-produced radioactive materials are regulated by individual states.

Minnesota rules regulating radioactive materials are currently found in Minn. R. Ch. 4730; however, Minnesota is currently in the process of becoming an *Agreement State* and is promulgating the rules to make that happen. When it does, all the state rules will be located in Minn. R. Ch. 4731.

Sewerable waste is liquid waste that is usually regulated by the generator's wastewater treatment plant authority

or, in some cases, the MPCA. Most of the metropolitan areas and many of the larger cities within Minnesota have local rules regulating the discharge of wastewater into the sanitary sewer. While rules may vary for different cities, limits are usually set for metals and pH. Some wastes may be prohibited, such as flammables, oils, solids, corrosives, hazardous, ground up solids and infectious wastes. Wastewaters, such as non-contact cooling and storm water, may also be prohibited from the sanitary sewer.

If part of an approved infectious waste management plan, blood and body fluids may be allowed to be discharged to the sanitary sewer. Check with your wastewater treatment plant authority. Certain wastes may be discharged after they have been treated, such as acids or caustics after adjusting the pH or x-ray fixer after treating to remove silver. Check with your local wastewater treatment plant operator or sewer authority to determine which wastes can be safely discharged. In the Twin Cities metropolitan area, the sewer authority is Metropolitan Council Environmental Services (MCES). In Greater Minnesota, the sewer authority is your delegated program or the MPCA. For more information, see the fact sheets on the MPCA Web site entitled *Sewering Liquid Waste and the Sewered Waste Notification Form* at www.pca.state.mn.us/waste/pubs/business.html.

Keep records of even small amounts of hazardous waste and treated hazardous waste discharged to a sanitary sewer. You will be asked to report those quantities on your hazardous waste license application and annual report.

How must I manage regulated waste?

Managing Hazardous Waste

Hazardous waste is usually a small percentage of the waste generated by health care providers; however, all hazardous waste must be managed appropriately. First, you need to identify which waste is hazardous and why. This is called 'evaluating the waste.' For help, see MPCA's hazardous waste fact sheet 1.01 entitled *Evaluate Waste; Determine Generator Size* available on the Web at www.pca.state.mn.us/publications/w-hw1-01.pdf.

The amount of hazardous waste a facility generates per month determines its generator size, the number of rules it must follow and the length of time it can accumulate waste on site:

- **Minimal Quantity Generator** (MQG) – generates 100 pounds or less of non-acute hazardous waste per year (some Twin Cities metropolitan counties do not separate MQGs from Very Small Quantity Generators; check to see whether yours does);
- **Very Small Quantity Generator** (VSQG) – generates 220 pounds or less per month non-acute hazardous waste *and* less than 2.2 pounds per month acute hazardous waste;
- **Small Quantity Generator** (SQG) – generates less than 2200 pounds per month non-acute hazardous waste *and* less than 2.2 pounds per month acute hazardous waste;
- **Large Quantity Generator** (LQG) – generates 2200 pounds per month or more non-acute hazardous waste *or* 2.2 pounds per month or more acute hazardous waste.

Store hazardous waste in containers that are in good condition and marked with the words "Hazardous Waste," a clear description of the waste (e.g. *Waste Xylene*) and the date waste was first placed in the container – the 'accumulation start date.'

Close containers and place them on an impermeable surface (no cracks or floor drains). Leave enough space around them to allow you to thoroughly inspect each container weekly; keep records of inspections. If containers are leaking, unmarked, or there are other problems, correct the problem(s) and write the corrections in the inspection records.

Wastes that appear on the P list (some drugs are on the P list) are *acutely* hazardous (pose severe risk to human health and the environment) and have more stringent requirements.

Keep incompatible hazardous wastes segregated. Because some materials become unstable or explosive when they are obsolete or outdated, dispose of items promptly or arrange for reverse distribution.

If waste is being accumulated in small amounts at or near the point where it is generated and the waste is under the control of the employees who generate it, you may be able to follow 'satellite accumulation' requirements. Under these requirements, you do not need weekly inspections. For more information, see MPCA fact sheet 1.04, *Mark and Store Waste Correctly* on the Web at www.pca.state.mn.us/waste/pubs/1-041-05.pdf.

You must ship most hazardous waste off site using a hazardous waste manifest and a hazardous waste

transporter registered with the Minnesota Department of Transportation (MNDOT), to a hazardous waste disposal facility. Ship those wastes that can be recycled, such as dental amalgam, to the appropriate recycling facility.

Certain hazardous wastes can be managed under reduced requirements described in the next section. Some wastes, in small amounts or after treatment, can be discharged to a sanitary sewer – but never to a septic system/drainfield. Before discharging any waste* to a sanitary sewer, you must notify and receive permission from your local wastewater treatment plant operator or sewer authority. Facilities having medical waste incinerators should not incinerate hazardous wastes because incineration does not destroy the hazardous element. Rather, incineration simply causes that element to become airborne where it can travel great distances and affect air and water quality.

*Water from normal hand washing and flushing toilets can be discharged without notification.

For more information, see MPCA hazardous waste fact sheets 1.04/1.05, *Mark and Store Waste Correctly* (www.pca.state.mn.us/waste/pubs/1-041-05.pdf) and 1.06, *Transport and Dispose of Waste Correctly* (www.pca.state.mn.us/waste/pubs/1-06.pdf).

Detailed information that will help you comply with Minnesota's Hazardous Waste Rules is available on the MPCA's Web site at www.pca.state.mn.us/waste/pubs/business.html. It includes topics such as obtaining an EPA or Generator identification number, obtaining a license, if needed, training personnel, planning for emergencies, reporting, and keeping records.

Managing Hazardous Wastes Having Reduced Requirements

Certain hazardous wastes, such as mercury-containing equipment, fluorescent bulbs, used oil and used electronics, generally have specific management requirements. If these requirements are followed, the generator does not have to evaluate the waste. Other generator requirements may also be reduced or waived. For more information on managing these or other specific wastes, see the MPCA Web site at www.pca.state.mn.us/waste/pubs/business.html#specific.

Managing Industrial Solid Wastes

Industrial solid waste needs to go to a landfill or industrial burner that can accept it. Not all landfills or burners can accept industrial solid waste. Some can accept only certain types of industrial waste. The type of waste a landfill or burner can accept is dictated by its Industrial Solid Waste Management Plan which lists in detail how each waste will be evaluated, profiled, delivered and managed when it reaches the facility. These requirements help ensure wastes are managed in a way that will not harm human health or the environment.

Work closely with your waste hauler and disposal facility to determine how to evaluate, profile and deliver each industrial solid waste.

Managing Infectious Wastes

Infectious waste is not the same as hazardous waste – although some wastes can be both hazardous and infectious.

> **Manage wastes that are both hazardous and infectious as hazardous waste. (Example: blood from used lab samples that have been mixed with a reagent that contains mercury.)**

Infectious waste, also called biohazardous or red bag waste, cannot be placed in the normal trash for disposal at a landfill or industrial burner. Infectious waste must be segregated and go through a decontamination process before it is considered safe for routine handling as a solid waste. For this reason, infectious waste is routinely collected in special containers, sharps containers and red bags, for example, to indicate the need for decontamination before disposal. After decontamination, the waste can be handled by haulers, storage, treatment and disposal facilities that have submitted solid waste management plans to the MPCA according to Minnesota Solid Waste Rules. The management plans address packaging and labeling, handling and segregation, storage, transportation, spill response, treatment and disposal.

Decontaminating infectious waste adds cost to waste disposal. Keep costs down by ensuring only infectious wastes are added to the infectious waste collection containers. Infectious wastes include all of the following that have not been decontaminated:

- **laboratory waste** – waste cultures and stocks of agents that are generated from a laboratory and are infectious to humans; discarded contaminated items used to inoculate, transfer, or otherwise manipulate

cultures or stocks of agents that are infectious to humans; wastes from the production of biological agents that are infectious to humans; and discarded live or attenuated vaccines that are infectious to humans;

- **blood** – waste human blood and blood products in containers, or solid waste saturated and dripping human blood or blood products (including serum, plasma, and other blood components);
- **regulated body fluids** – cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid that are in containers or that drip freely from body fluid soaked solid waste items;
- **sharps** – discarded items that can induce subdermal inoculation of infectious agents, including needles, scalpel blades, pipettes, and other items derived from human or animal patient care, blood banks, laboratories, mortuaries, research facilities, and industrial operations; and discarded glass or rigid plastic vials containing infectious agents; and
- **research animal waste** – carcasses, body parts, and blood derived from animals knowingly and intentionally exposed to agents that are infectious to humans for the purpose of research, production of biologicals, or testing of pharmaceuticals.

Check with your wastewater treatment plant authority to determine whether blood and blood-related liquid products or body fluids may be discharged to the sanitary sewer.

Managing Radioactive Wastes

For radioactive wastes generated by health care facilities, there are four primary management options:

- decay in storage
- discharge to a sanitary sewer
- shipment to a radioactive waste disposal facility; and
- return to vendor

Each management option has pros and cons discussed below.

Decay in Storage: 10 CFR 35.92 specifically authorizes decay in storage for byproduct material with a physical half-life of less than 120 days. To accomplish this, the waste generator should store the waste in a secure location for a period of time necessary to reduce the levels of radioactivity to background, as measured with an appropriate survey instrument. The amount of time is generally ten times the half-life. For example, if you were to hold Tc-99m (half-life = 6 hrs) for decay in storage, you should hold it for 60 hours and then survey it. Many waste generators find it convenient to group together radioactive wastes with similar half-lives. For example, collecting together radioactive wastes with a half-life of up to three days allows the waste to be surveyed at around 30 days and, if no radioactivity above background is detected, disposed of without regard to it ever having been radioactive. Any labels indicating radioactivity must be removed or obliterated.

Discharge to a Sanitary Sewer: An option for certain radioactive wastes is to discharge to the sanitary sewer. The Code of Federal Regulations (CFR) contains the strict requirements you must follow in 10 CFR 20.2003.

Sometimes decay in storage may be combined with discharge to the sanitary sewer. By holding isotopes with relatively short half-lives for a period of time, you can reduce the amount of radioactive material discharged to the sanitary sewer. This procedure may help you to comply more easily with 10 CFR 20.2003 (a)(2) and (3).

Shipment to a Radioactive Waste Disposal Facility

If there is no other way for you to dispose of radioactive waste, you may ship it to a licensed disposal facility. To make a shipment, you, as the generator, must prepare the material in accordance with:

- all USDOT rules for transport
- all USNRC rules
- any applicable State rules; and
- any conditions required by the receiving facility

This form of disposal is very expensive and time consuming.

Return to Vendor: Certain sealed sources that are obtained from commercial sources may be returned to the vendor after the source's useful life is complete. You must first obtain authorization from the vendor. Most commonly, sources used for brachytherapy, teletherapy, blood irradiation or as markers are returned to the vendor. Returning sources to the vendor is much less expensive than sending them to a disposal facility, but in both cases, all U.S. Department of Transportation (USDOT) rules apply. For more information, see the Nuclear Regulatory Commission Web site at www.nrc.gov or contact the Minnesota Department of Health.

Managing Sewerable Wastes

Different cities or metropolitan areas within Minnesota operate different programs that administer wastewater disposal rules. Before discharging waste to the sewer, contact your wastewater treatment plant operator. Hospitals and clinics in smaller cities should contact the MPCA. Ask for a copy of the rules; find out whether a wastewater discharge permit is necessary. The appropriate wastewater regulatory authority for your facility will tell you which wastes are prohibited and which wastes may be treated and discharged. (An example of a treated wastewater would be x-ray/photo fixer that has been treated for silver or acids/caustics that have been pH adjusted.) Hazardous wastes which are discharged with or without treatment must be covered under a hazardous waste generator license and approved by the local sewer authority.

Non-regulated liquid wastes that cannot be discharged to a sanitary sewer should be placed in a closed, marked container and shipped with a waste hauler as a non-regulated waste. Never place liquids in the industrial solid waste or normal trash.

Managing Pharmaceuticals

Pharmaceutical wastes, including antineoplastic/cytotoxic drugs, should not be sewered, disposed of in solid waste, incinerated or disposed of with infectious (red bag) waste. (For more information see *Managing Antineoplastic (Chemotherapy) Waste* on the MPCA Web site at http://www.pca.state.mn.us/publications/w-hw4-03.pdf .) Because of drug residues passing through the body and previous practices of sewering pharmaceuticals, many drugs are now showing up in measurable amounts in surface water that some communities use for drinking water.

Some pharmaceuticals, such as outdated samples in their original packaging and unusable drugs, may be returned to the manufacturer through a reverse distribution process. Open containers and partially-used liquid drugs do not qualify for reverse distribution; evaluate them to determine the correct disposal method. Most will need to be disposed of as a hazardous waste. Usable pharmaceuticals returned to the manufacturer or through the reverse distribution process as product are not considered "waste."

Syringes, IV bags and tubing, etc. that are *empty* (all material has been removed that can be removed by normal means and less than three percent of material, by weight, remains) and that do not contain P-listed drug residues may be disposed of as infectious waste (sharps) or industrial solid waste (bags and tubing). Check with your infectious waste hauler – you may be required to segregate waste, for example, place it in yellow bags. (Using yellow bags is the best management method for this waste.) See definitions for what is included in each type of waste.

Manage containers that held P-listed drugs such as, epinephrine, greater than 0.3 percent warfarin, and some chemotherapy drugs as hazardous waste. If rinsed three times, containers that held P-listed wastes are considered *empty* and do not require management as hazardous waste. (The rinseate, however, is hazardous.) Since drug "containers" in the health care setting are often sharps, tubing or bags that pose risk to the handler or extreme difficulty to rinse, the entire container plus any contents or residual is managed as a hazardous waste.

Some pharmaceuticals, such as barbiturates, may be regulated as a hazardous waste *and* as a Drug Enforcement Agency (DEA) controlled substance. Manage these drugs in a way that meets both sets of requirements. When shipping off site, use a transporter that is licensed by the USDOT as a hazardous waste transporter *and* licensed by the DEA to transport controlled substances. For more information about DEA controlled substances, see http://www.dea.gov.

Do not discharge a controlled substance to a sanitary sewer system unless you have first contacted your local sewer authority and received permission to discharge.

More Information

Waste Management – The MPCA and your metropolitan county have hazardous and solid waste staff available to assist you with waste management questions. Contact your metropolitan county or the MPCA office nearest you for help. (See page 7.)

Sewering – If you reside in the Twin Cities metropolitan area, direct questions regarding sewering to Metropolitan Council Environmental Services (MCES), Industrial Waste Section. If you reside in Greater Minnesota, direct questions regarding sewering to your local wastewater treatment plant operator or the MPCA. (See page 7.)

Reducing Waste – The Minnesota Technical Assistance Program (MNTAP) has case studies of successful waste reduction at health care facilities and staff available to help you identify ways to reduce waste. (See page 7.)

Metro County Hazardous Waste Offices

Anoka	763-422-7093
Carver	952-361-1800
Dakota	952-891-7557
Hennepin	612-348-3777
Ramsey	651-266-1199
Scott County	952-496-8475
Washington County	651-430-6655
Web sites	www.co.[county].mn.us

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
Brainerd	218-828-2492
Detroit Lakes	218-847-1519
Duluth	218-723-4660
Mankato	507-389-5977
Marshall	507-537-7146
Rochester	507-285-7343
St. Paul	651-296-6300
Willmar	320-214-3786
Web site	www.pca.state.mn.us

Minnesota Technical Assistance Program

Toll-free	1-800-247-0015
Minneapolis	612-624-1300
Web site	www.mntap.umn.edu

Metropolitan Council Environmental Services

St. Paul	651-602-1000
Web site	www.metrocouncil.org

Fact Sheets – The following fact sheets provide detailed information about hazardous waste requirements. Find them and other hazardous waste-related fact sheets at www.pca.state.mn.us/waste/pubs/business.html#general.

- Evaluate Waste; Determine Generator Size [1.01]
- Get a Generator Identification Number [1.02]
- Get a License; Pay a Fee [1.03]
- Mark and Store Hazardous Waste Correctly [1.04/1.05]
- Transport and Dispose of Waste Correctly [1.06]
- Manifest Waste [1.07]
- Plan for Emergencies [1.08a-b-c]
- Train Employees1.09 [b-c]
- Keep Hazardous Waste Records [1.10]

Web Links – Find Web links and more information for the health care provider on the MPCA Web site at www.pca.state.mn.us/waste/index.html.

This fact sheet prepared by the Minnesota Pollution Control Agency in partnership with

- The Minnesota Technical Assistance Program (MnTAP)
- Metropolitan Council Environmental Services (MCES)
- The Metropolitan Counties Solid Waste Management Coordination Board (SWMCB) and
- Health care environmental management staff from Park Nicollet, HealthEast, HealthPartners and Mayo Clinic Rochester

Infectious Waste

Approved waste management vendors and systems in Minnesota

What is infectious waste?

Infectious waste poses an environmental danger due to its *biological* risk. **Pathological** waste also poses a *biological* risk and is regulated the same as infectious waste. Both are different from **hazardous** waste, which poses an environmental danger due to its *chemical* risk.

For more detailed discussion regarding identifying infectious and non-infectious wastes in Minnesota, see Minnesota Pollution Control Agency (MPCA) fact sheet #w-sw4-30, Infectious Waste: Management Guidance for Generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf.

Approved infectious waste destination facilities

Infectious waste must either be treated on the site where it is generated or transported to a storage, decontamination, or disposal facility in Minnesota certified by the MPCA or to a facility in another state authorized by its state of location. See Table 3, Approved on-site infectious waste treatment systems on page three and Table 2, Approved infectious waste transporters on page two.

Certain infectious waste generators, including public and private schools, ambulance services, and public health services, may instead transport their waste to a licensed Minnesota hospital in lieu of an MPCA-certified facility. See MPCA fact sheet #w-sw4-30, Infectious Waste: Management Guidance for Generators, at http://www.pca.state.mn.us/publications/w-sw4-30.pdf for more information.

Table 1. Certified Minnesota infectious waste storage, decontamination, and disposal facilities

Certification #	Facility	Address	Telephone
IW-701	Mayo Clinic Incinerator	7123 LC Dr SW, Rochester	507-284-9400
IW-702	Stericycle, Inc. – Winona	4640 Service Dr, Winona	888-938-4351
IW-703	Stericycle, Inc. – St Paul	742 Vandalia St, St. Paul	888-938-4351
IW-708	Advanced Biological Industries	15622 135th St, Foreston	320-294-5335
IW-709	Prairie Land of Minnesota	20323 St Francis Blvd, Anoka	763-753-5511
IW-710	Cardinal Health – Roseville *Radioactive/infectious waste only	1045 Westgate Dr, Ste 100, Roseville	614-757-5651
IW-711	Cardinal Health – Moorhead *Radioactive/infectious waste only	1610 30th Ave S, Moorhead	614-757-5651
IW-714	WLSSD Western Lake Superior Sanitary District	2626 Courtland St, Duluth	218-722-3336
IW-717	Daniels Sharpsmart, Inc.	1087 Park Pl, Shakopee	888-952-5580
IW-719	Stericycle, Inc. – Hermantown	5819 Highway 2, Hermantown	888-938-4351

For more information on certified infectious waste facilities and the certification process, see MPCA fact sheet #w-sw4-32, Infectious Waste: Management Guidance for Storage, Decontamination and Disposal Facilities, at http://www.pca.state.mn.us/publications/w-sw4-32.pdf.

Approved infectious waste transporters

Generators of infectious waste may transport their own infectious waste to another site they own or to an MPCA-certified storage, decontamination, or disposal facility. Certain generators, including only public and private schools, ambulance services, and public health services, may also transport their infectious waste to a licensed Minnesota hospital.

Generators or groups of generators may also transport other generators' infectious waste at-cost or without charge to these same facilities. All other transportation of infectious waste in Minnesota must only be performed by a commercial infectious waste transporter registered with the MPCA.

Table 2. Registered Minnesota commercial infectious waste transporters

Registration #	Transporter	Telephone
IW-003	Health Care Environmental Services Inc.	701-282-7374
IW-005	GRP and Associates	641-357-2566
IW-005	Choice Medical	888-858-1629
IW-010	Veolia ES Technical Solutions LLC	973-691-7321
IW-101	Stericycle	888-938-4351
IW-105	Cardinal Health *Radioactive/infectious waste only	614-757-5651
IW-115	Citicare, LLC	651-674-3100
IW-152	LB Medwaste Services	715-842-2048
IW-158	Prairie Land of Minnesota	763-753-5511
IW-159	Street Fleet	612-623-9999
IW-160	Advanced Biological Industries	320-294-5335
IW-163	Clean Harbors	800-444-4244
IW-166	Daniels Sharpsmart, Inc.	312-515-8912
IW-206	Medical Disposal Systems	952-445-7440
IW-306	Medical Waste Transport, Inc.	605-332-8718
IW-403	Veolia ES Solid Waste Midwest LLC	507-281-5850
IW-502	Northern Lights Medical Transport	218-729-5841
Exempt	U.S. Postal Service	800-275-8777

Reminder: Courier services and common carriers are not registered commercial infectious waste transporters in Minnesota and may not be used to transport infectious waste from businesses or government agencies, including prepaid 'return-shipping' collection containers.

Note: Transporters of infectious waste potentially contaminated with the Ebola virus may also be required to obtain party status to a special transport permit from the U.S. Department of Transportation (DOT).

For more information on registered infectious waste transporters and the registration process, including Ebola-related information, see MPCA fact sheet #w-sw4-31, Infectious Waste: Management Guidance for Transporters, at http://www.pca.state.mn.us/publications/w-sw4-31.pdf.

Approved on-site infectious waste treatment systems

Infectious waste generators may decontaminate infectious waste at their own sites. If the infectious waste does not contain sharps or any unevaluated or hazardous pharmaceuticals or laboratory wastes, no MPCA review or approval of the treatment system is needed; however, the generator remains responsible for verifying that the waste has been decontaminated before disposal.

If the waste contains sharps, generators may only use a treatment system that has been approved by the MPCA and must follow all the conditions of that approval. Obtain a copy of the system's MPCA approval and conditions from the distributor of the system.

If the waste contains unevaluated or hazardous pharmaceuticals or laboratory wastes, contact your Metropolitan County hazardous waste regulator or the MPCA.

Table 3. Approved Minnesota on-site infectious waste treatment systems for sharps

Approval #	System	Distributor
IW-801	Ozonator NG-1000	Ozonator Industries
IW-802	Demolizer II	BioMedical Technology Solutions
IW-803	Clean Waste Systems OMW-1000	Clean Waste Systems

For more information on on-site infectious waste treatment systems and the approval process, see MPCA fact sheet #w-sw4-33, Infectious Waste: Management Guidance for On-site Treatment, at http://www.pca.state.mn.us/publications/w-sw4-33.pdf.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Statutes, Chapter § 116, and Minnesota Rules, Chapter 7035. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review the Minnesota Statutes and Rules.

For more information on hazardous waste, see the MPCA hazardous waste publications website at http://www.pca.state.mn.us/waste/pubs/business.html.

Address questions regarding the Bloodborne Pathogens standard (BBP) to Minnesota Occupational Safety and Health Administration (MNOSHA).

Address questions regarding the Federal Hazardous Materials Regulations (HMR) to the DOT or Minnesota Department of Transportation

Minnesota Pollution Control Agency

Toll free (outstate only) 1-800-657-3864
Metro 651-296-6300
Website ..... http://www.pca.state.mn.us

Minnesota Technical Assistance Program

Toll free (outstate only) 1-800-247-0015
Metro 612-624-1300
Website ..... http://www.mntap.umn.edu/

Minnesota OSHA

Toll free (statewide) 1-800-342-5354
Metro.....612-284-5005
Website .....http://www.dli.mn.gov/mnosha.asp

Minnesota Department of Transportation

Hazardous materials.....651-215-6330
Website .....http://www.dot.state.mn.us/

U.S. Department of Transportation

Hazardous materials.....1-800-467-4922
Website ..... http://www.phmsa.dot.gov/hazmat

16. CHEMICALLY-TREATED WOOD
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - flat bed trailers
   - roll-off boxes

2. Background - Treated wood contains chemical preservatives (i.e., pesticides) to inhibit decay and extend the life of wood products. While treating wood lengthens its useful life up to 20 or 30 times longer than untreated wood in outdoor environments, some of the chemicals used in treating wood are hazardous to human health and the environment. To reduce the potential for treated wood products to have an adverse impact on human health and the environment, it is absolutely necessary to select, use, and dispose of treated wood products safely and appropriately. The most common type of wood treatment involves saturating wood under high pressure in one of the following four chemical compounds: pentachlorophenol (PCP), typically used for utility poles; creosote, a tar-like substance used for railroad ties and construction pilings; copper chromium arsenic (CCA) or other arsenical preservatives containing arsenic and heavy metals; and other copper-containing treatments, such as ammoniacal copper quaternary (ACQ), copper azole, or ammoniacal copper citrate, which are formulated with less-toxic materials. As of December 31, 2003, the pressure-treated wood industry discontinued the use of CCA as the primary wood preservative used for most general consumer construction purposes. Minnesota Statutes, section 88.171, prohibits the open burning of chemically-treated wood products.

3. Disposal - The waste material will be directed to the Olmsted County Kalmar Landfill or the Olmsted Waste-to-Energy Facility (OWEF). Disposal of treated wood waste in demolition landfills is prohibited, since an unlined demolition landfill provides insufficient protection of ground water resources.

4. Testing Requirements - Businesses generating treated wood waste must evaluate the waste to determine if it is to be managed as hazardous waste. Treated wood originating from demolished structures is exempt from the hazardous waste requirements. Generators may not, however, mix the treated wood waste with other demolition waste. Treated wood waste, other than wood from demolished structures, must be evaluated for toxicity using the Toxicity Characteristic Leaching Procedure (TCLP). This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDS) must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. Olmsted County does, however, exempt generators of less than 10 cubic yards of treated wood waste from the aforementioned documentation requirements.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Requirements - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Procedures - If necessary, special generator requirements will be determined on a

case-by-case basis.

9. Additional Information - See attached MPCA fact sheet “Treated Wood: Use, Disposal, and Alternatives for Businesses.”

17. MACHINING WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bulk - drums
   - bagged

2. Background - Machining operations conducted at machine shops, metal stamping facilities, and other metalworking operations typically generate various types of waste. Waste material generated from machining processes is a prime candidate for recycling if the waste is not co-mingled with other metals or otherwise contaminated.

3. Disposal - If the waste material cannot be re-used, recycled, or managed in another more beneficial manner, it will be directed to the Olmsted County Kalmar Landfill for final disposition.

4. Testing Requirements - Due to the fact that many machining operations (e.g., milling, turning, threading, filing, and grinding) require the use of solvents, coolants, degreasers, cutting fluids, and lubricants, it is essential that generators thoroughly evaluate their waste to determine if it is to be managed as a hazardous waste. Unless complete documentation exists to characterize completely the waste material (using knowledge of the process that generates the waste and the raw materials that are used in the process), waste generators must evaluate the waste material using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters that can reasonably be expected to be present. This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDSs) for any contaminants present must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. Ensure that no free liquids are present.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - Remove any free liquids from the machining wastes and hole-punch waste containers. Additional requirements are to be determined on a case-by-case basis.

18. CONFIDENTIAL DOCUMENTS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - boxes -drums
   - bags

2. Background - Some businesses, such as hospitals and clinics, generate confidential documents that require proof of destruction. In such cases, Olmsted County is able to provide waste generators with a manifest, in the form of a Non-Hazardous Industrial Solid Waste Tracking Form, that authenticates that an Olmsted County solid waste management facility received the confidential documents for disposal.

3. Disposal - It is Olmsted County's policy to first refer generators of confidential paper documents to a private document destruction company. If the confidential documents do not consist of paper, or if there are circumstances that warrant or require witnessed disposal, then the confidential documents will be directed to the Olmsted Waste-to-Energy Facility (OWEF).

4. Testing Requirements - In almost all most cases, analytical testing is not required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, additional analytical tests may, under certain circumstances, be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - The following procedures will apply:

   1) Access to the tipping floor will only be allowed by licensed haulers, those registered with tipping floor access, and trained by Olmsted County Environmental Resources Department staff.

   2) If the business/customer is not registered with tipping floor access, they must make arrangements with a licensed hauler to deliver the material.

   3) If the business/customer has hired a hauler to deliver the material, the hauler notifies the Scale House Operator that they have a "Priority Load." The Scale House Operator notifies OWEF staff, who will meet the generator at the front door and escort them to the control room to witness the truck dumping the material into the pit.

   4) The current "Priority Disposal" Fee as set by ordinance shall apply to anyone using this service.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

19. ELECTRONIC WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bulk - drums
   - boxed - bagged

2. Background - Electronic waste is any waste that has a circuit board or a cathode-ray tube (CRT), including, but not limited to, answering machines, camcorders, cameras, central processing units (CPUs), compact disc (CD) players, computers (including their peripherals), CRTs, digital video disc (DVD) players, electronic storage devices, game systems, fax machines, radios, satellite receivers, scanners, stereos (including receivers and speakers), telephones (rotary and cordless), televisions (including flat screens), typewriters, video cassette recorders (VCRs), video display devices (projectors), video game systems, and video equipment. CRTs and circuit boards within electronic devices may contain lead, cadmium, or mercury at levels that are harmful to human health and the environment. CRTs are considered the largest single source of lead in Minnesota's municipal waste, containing 5-8 pounds of lead per unit. Lead makes up approximately 20 percent of each CRT.

3. Disposal - Minnesota Statutes, section 115A.9565, prohibits the disposal of electronic products containing CRTs in municipal solid waste. Minnesota Statutes, section 115A.1310 established the Minnesota Electronics Recycling Act. This law requires “covered electronic devices" such as computers, peripherals, facsimile machines, DVD players, video cassette recorders, and video display devices to be recycled. The Olmsted County Recycling Center Plus (OCRC) is a MPCA registered collection site for electronic waste. If a device is not covered under Minnesota Statutes, sections 115A.9565 or 115A.1310, the waste material may be directed to the Olmsted County Kalmar Landfill or the Olmsted Waste-to-Energy Facility (OWEF), depending on the waste material’s combustion properties and the concentration(s) of any contaminant(s) present.

4. Testing Requirements - Unless complete documentation exists to characterize completely the waste material (using knowledge of the process that generates the waste and the raw materials that are used in the process), waste generators must evaluate the waste material using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters that can reasonably be expected to be present. This testing is required to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility. If available, Material Safety Data Sheets (MSDSs) for any contaminants present must be provided.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

9. Additional Information - See attached MPCA fact sheet “Managing Electronic Wastes, Guidance for generators, collectors, and recyclers.”

Managing Electronic Wastes

Guidance for generators, collectors, and recyclers

What is electronic waste?

Electronic waste, or E-waste, includes any tool, equipment or appliance containing a printed circuit board or a cathode ray tube (CRT). E-waste includes computers and peripherals, such as keyboards, monitors, and mice. It also includes many common business items like telephones, cameras, scanners, manufacturing control equipment, and medical devices.

Indicators that tools or equipment likely contain a circuit board include the presence of a keypad, touch screen, any type of video or digital display, or common electronic ports or connectors, such as serial, parallel, RJ45 ('network') or USB plugs. Consider equipment having any of these items to be E-waste until you have proven otherwise.

Regulation of E-waste

In Minnesota, the Minnesota Pollution Control Agency (MPCA) regulates E-wastes under the Hazardous Waste Rules. E-waste is hazardous because of its potential to release toxic heavy metals – lead, cadmium, mercury – into the environment if not managed and disposed of properly. Assume all E-waste to be hazardous waste unless you evaluate and can document that it is non-hazardous.

This fact sheet discusses requirements applicable to businesses and government agencies that generate E-waste as well as to those that collect or recycle E-waste.

Note: Guidance contained in this fact sheet discusses hazardous waste requirements for E-waste as applied by the MPCA. Generators and handlers of E-waste in the Twin Cities metropolitan area may be subject to additional county-specific requirements. If you are located in a metropolitan county, contact your county regulatory program (see *More information*, page five).

Reduce waste

Minimizing the amount of E-waste you generate can lower not only your regulatory requirements, but also your costs. Working and usable electronic equipment that is of use to another party may be sold or donated rather than disposed of. For more information about selling or donating usable electronic equipment, visit the MPCA at http://www.pca.state.mn.us/publications/w-hw3-36a.pdf to view MPCA hazardous waste fact sheet #3.36a, Reverse Distribution of General Merchandise.

The Minnesota Technical Assistance Program (MnTAP) can help you reduce the amount of E-waste you generate and identify available reuse or recycling options. For more information, contact MnTAP (see *More information*, page four).

Regulatory requirements for E-waste generators

The MPCA allows businesses and government agencies that generate hazardous E-wastes to manage them either as fully-regulated hazardous waste or under the reduced requirements described below.

1. **Accumulation and storage**
   Generators may accumulate any amount of E-waste, as long as at least 75% of the weight of the E-waste you generate each year is shipped off site for recycling. Ensure you keep records verifying this. Protect E-waste from precipitation by storing it indoors or in impervious containers. Store any E-waste that might release hazardous constituents, such as cracked monitors or crushed components, in a closed container that is impermeable to the waste. Label or mark the container with the words Electronics for Recycling or E-waste.

   The MPCA does not require that E-waste be counted towards hazardous waste generator size or reported. If you generate only E-waste, or E-waste and wastes that are also exempt from reporting, such as Universal Wastes and used oil, you do not need to obtain a Hazardous Waste Identification (HWID) number. Metropolitan county regulations may differ for counting, reporting and obtaining a HWID.

   If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste.

2. **Transporting**
   You or any transporter may carry your E-waste to a collector for recycling. The collector must have a HWID from the MPCA (if located in Minnesota) or be properly authorized by the state in which it is located. Only use a uniform hazardous waste manifest for E-waste shipments if you are managing them as fully regulated hazardous waste.

3. **Recordkeeping**
   Keep records showing that you ship off site at least 75% of the E-waste you generate each year. Keep these records for at least three years. The MPCA also strongly recommends you obtain shipping receipts from your transporter for each shipment.

Regulatory requirements for E-waste collectors

You are a *collector* if you receive E-waste for recycling from businesses, government agencies, or households, and then send that E-waste to a recycling facility. The MPCA allows collectors and recyclers to manage E-waste under the reduced requirements described in this fact sheet in lieu of obtaining a Hazardous Waste Storage Permit from the MPCA.

1. **Accumulation and storage**
   You may accumulate any amount of E-waste, as long as you ship at least 75% of the weight you receive each year off site for recycling. Protect E-waste from precipitation by storing it indoors or in impervious containers. Store any E-waste that might release hazardous constituents, such as cracked monitors or crushed components, in a closed container that is impermeable to the waste. Label or mark the container with the words *Electronics for Recycling* or *E-waste*.

   If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste.

2. **Recordkeeping and reporting**
   If you do not already have an HWID, obtain one by visiting the MPCA at http://www.pca.state.mn.us/publications/w-hw7-09.pdf to complete MPCA hazardous waste form #7.09, Notification of Regulated Waste Activity. Affirm that you are still an active collector by submitting a Hazardous Waste License Generator Application every three years or whenever you receive one from the MPCA. Keep a record of all shipments of E-waste from your site for three years.

3. **Additional requirements for collectors of household E-waste**
   If you collect E-waste from households, register with the MPCA using the Collector Registration Form at http://www.pca.state.mn.us/index.php/view-document.html?gid=4833. Annually report the weight in pounds of household electronic devices. Household E-waste includes computers and peripherals, such as keyboards, mice, and monitors; televisions; eBook readers; digital picture frames; DVD players; VCRs; and fax machines. It does not include appliances, cellular telephones and personal data assistants, or strictly audio equipment. Report using the Collector Reporting Form at http://www.pca.state.mn.us/publications/w-gen2-60.xls.

Regulatory requirements for E-waste recyclers

You are an E-waste *recycler* if you do any of the following:

- Recover usable materials from E-waste
- Reuse E-waste constituents in a manufacturing process
- Prepare E-waste for either material recovery or manufacturing reuse
- De-manufacture or disassemble E-waste components
- Shred or crush E-waste components

You are *not* an E-waste recycler if you only:

- Disassemble electronic equipment for repair (see instead *Regulatory requirements for generators* in this fact sheet)
- Remove E-waste components from other equipment or wastes, such as extracting E-wastes from appliances, vehicles, or commercial or industrial equipment. If you disassemble appliances, see the requirements for appliance recyclers in MPCA hazardous waste fact sheet #3.02, Appliance Recycling, at http://www.pca.state.mn.us/publications/w-hw3-02.pdf.

If you are an E-waste recycler, you must comply with the following requirements:

1. **Storage**
   Protect the E-waste from precipitation by storing it indoors or in impervious containers. Before processing, store any E-waste that might release hazardous constituents – such as cracked monitors or crushed components – in a closed container that is impermeable to the waste. Label or mark the container with the words *Electronics for Recycling* or *E-waste*.

   If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste. Also assume all wastes generated from your recycling process are hazardous wastes until you have evaluated and documented them to be non-hazardous.

2. Recordkeeping and reporting

If you do not already have an HWID, obtain one by visiting the MPCA at http://www.pca.state.mn.us/publications/w-hw7-09.pdf to complete MPCA hazardous waste form #7.09, Notification of Regulated Waste Activity. Annually submit a Hazardous Waste Generator License Application.

Submit an E-waste Management Plan to the MPCA that describes your recycling process, the environmental and health safeguards you use in your process, the methods you use to evaluate the wastes or other materials your recycling process generates, and how you or another facility will dispose or reuse all of the wastes and other materials generated from your recycling process. Submit an updated plan to the MPCA whenever you change your E-waste recycling process.

Keep records of all shipments of E-waste to and from your recycling facility for the past three years. Also, obtain and keep records of the final recycling or disposal of all E-waste and other wastes sent from your site for the past three years. Ensure that all sites to which you ship E-waste and other waste are authorized by the state in which they are located and compliant with local requirements.

3. Liability insurance

Obtain and maintain liability insurance of at least $1,000,000 (one million) dollars coverage for environmental releases, accidents, and emergencies. Ensure that all sites to which you ship E-waste and other wastes have equivalent coverage.

4. Partial exemptions for recyclers of only business-generated circuit boards

If the only E-wastes you recycle are circuit boards generated by businesses, you need not comply with the management plan or the insurance requirements discussed above. If all mercury switches, relays, and batteries have already been removed from the circuit boards, you are further exempted from the HWID and record keeping requirements above.

5. Additional requirements for recyclers of household E-waste

If you recycle E-waste from households, register with the MPCA using the Recycler Registration Form at http://www.pca.state.mn.us/index.php/view-document.html?gid=4835.

Annually report the weight in pounds of household electronic devices. Household E-waste includes computers and peripherals such as keyboards, mice, and monitors; televisions; eBook readers; digital picture frames; DVD players; VCRs; and fax machines. It does not include appliances, cellular telephones and personal data assistants, or strictly audio equipment. Report using the Recycler Reporting Form at http://www.pca.state.mn.us/publications/w-gen2-61.xls.

You, and any downstream recyclers to whom you send E-wastes, are prohibited from using prison labor to recycle household video display devices (monitors, televisions, eBook readers, digital picture frames, and cellular telephones with screens larger than 9 inches diagonally).

More information

Guidance and requirements in this fact sheet were compiled from multiple Minnesota Statutes and Rules, including Minn. Stat. §115A and Minn. R. Chapters 7001 and 7045, and incorporates regulatory interpretation decisions made by the MPCA on June 21, 2011. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review the Minnesota Statutes and Rules directly.

Your metropolitan county and the MPCA have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional staff. For information about E-waste reduction and alternatives, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka 763-422-7093
Carver 952-361-1800
Dakota 952-891-7557
Hennepin 612-348-3777
Ramsey 651-266-1199
Scott.....952-496-8475
Washington.....651-430-6655
Websites ..... http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free..... 1-800-247-0015
Metro 612-624-1300
Website .....http://www.mntap.umn.edu

Minnesota Pollution Control Agency

Toll free (all offices).....1-800-657-3864
Brainerd.....218-828-2492
Detroit Lakes.....218-847-1519
Duluth 218-723-4660
Mankato 507-389-5977
Marshall 507-537-7146
Rochester.....507-285-7343
St. Paul 651-296-6300
Willmar 320-214-3786
Website ..... http://www.pca.state.mn.us

Small Business Environmental Assistance

Toll free.....1-800-657-3938
Metro 651-282-6143
Website http://www.pca.state.mn.us/sbeap/

21. OIL-CONTAMINATED WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bags - drums
   - lined boxes - other

2. Background - Oil-contaminated wastes are waste materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material. Some common examples of oil-contaminated wastes include: spent rags containing used oil, spill sorbents (e.g., polypropylene pads, sawdust, corn cob grit, wood chips, and granular clay), and filter media from oil filters. Oil-contaminated wastes may contain hazardous contaminants such as toxic petroleum-based organic compounds and heavy metals, which, if not disposed of properly, may pollute surface waters, ground waters, and kill vegetation and wildlife.

   Emergency spills involving oil-contaminated materials are managed in category 4 of this Plan. Combustion of oil-contaminated waste is allowed under federal regulation 40 CFR Part 266. The Olmsted Waste-to-Energy Facility (OWEF) is registered with the U.S. Environmental Protection Agency (EPA) to process both "On Specification" and "Off Specification" used oil. Since "On Specification" and "Off Specification" materials may, in some isolated cases, be contaminated with PCBs or halogens, care must be taken to ensure the source of the oil-contaminated waste is verified. Currently, the OWEF only processes used oil generated from within the facility. In the future, the OWEF may accept used oil from other generators, if capacity at the facility allows.

3. Disposal - The oil-contaminated wastes will be directed to the OWEF or the Olmsted County Kalmar Landfill, depending on the wastes' combustion characteristics. If the waste materials are combustible (i.e., consisting primarily of polypropylene pads, rags, sawdust, corn cob grit, etc.), the wastes will be directed to the OWEF. If the oil contaminated waste materials are non-combustible and documented to be non-hazardous, they will be directed to the Kalmar Landfill and handled in the same manner as contaminated soils (see Category 13 in this Plan).

4. Testing Requirements - Testing will not be required of combustible used oil-contaminated sorbents (with a heating value of at least 5,000 BTUs/pound) that are burned for energy recovery at the OWEF. **A complete analysis using the Toxicity Characteristics Leaching Procedure (TCLP) will be required for any non-combustible used oil-contaminated wastes.** This testing is required to determine if the waste is non-hazardous since the primary disposal location of this type of material is the Kalmar Landfill. Materials that are determined to be hazardous, or for which the documentation is inconclusive, will not be accepted. The Olmsted County Environmental Resources Department reserves the right to require additional testing of any oil-contaminated wastes since the processing of such wastes can, on occasion, create operational problems and/or pose environmental concerns at Olmsted County's various solid waste management facilities.

5. Documentation - All generators of used oil-contaminated waste materials must have a current, approved Waste Evaluation Form on file with the Olmsted County Environmental Resources Department. The non-hazardous nature of the used oil-contaminated waste must be certified by the waste generator using Olmsted County's Oil Generator Certification Form (see Appendix D). An approved Oil Generator Certification Form must accompany each load and each specific oil-contaminated waste material must be declared on the form.

   Since the OWEF is registered with the EPA to burn oil-contaminated waste and used oil for energy

recovery, a Waste Oil Burner Certification will be provided to each waste generator along with a copy of the approved Industrial Solid Waste Evaluation Form.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Oil Generator Certification Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Combustible used oil-contaminated sorbent waste material delivered to the OWEF will be deposited in the storage pit where it will be mixed with other municipal solid waste prior to feeding to the furnaces. Non-combustible, non-hazardous used oil-contaminated wastes disposed of at the Kalmar Landfill will be thin-spread in a six-inch layer over the intermediate cover.

8. Special Generator Requirements - Generators must store used oil-contaminated waste materials in covered, leak-proof containers labeled "Oil-Contaminated Waste" and must ensure that no free liquids are present. Haulers that deliver used oil-contaminated wastes must have an EPA identification number and must notify EPA of these hauling activities. Oil-contaminated combustible wastes delivered to the OWEF must be deposited in the refuse storage pit in a loose, non-containerized form

9. Additional Information - See attached MPCA fact sheet "Managing Towel, Wipes and Sorbents" and "Managing Used Oil and Related Wastes."

Managing Sorbents: Towels, Wipes, and Rags

Many businesses and government agencies use towels, wipes, rags, swabs, or similar launderable or disposable materials, collectively referred to as *sorbents*. Used sorbents may become hazardous wastes if they are dampened with solvents or cleaners, or if they collect contaminants during use. This fact sheet provides guidance from the Minnesota Pollution Control Agency (MPCA) to businesses and other hazardous waste generators to properly manage their used sorbents.

Generators located in the Minneapolis-St. Paul Metropolitan Area counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) may be subject to more strict local requirements of their Metro County. Contact your Metro County; see *More information* on page 3.

The Minnesota Technical Assistance Program (MnTAP) may be able to help you reduce the toxicity of the solvents or cleaners you use and reduce your hazardous waste risks and costs. See More information.

Are my used sorbents hazardous waste?

If you use sorbents with a solvent or cleaner, or to clean items that could transfer toxic contaminants such as lead or chromium to the sorbent, you must assume your used sorbents are hazardous wastes unless you test or otherwise show they are not hazardous. The process to demonstrate that your sorbents are actually not hazardous is called evaluation. See MPCA fact sheet #w-hw1-01, Evaluate Waste; Determine Generator Size at http://www.pca.state.mn.us/publications/w-hw1-01.pdf for detailed guidance on evaluation.

How do I manage my hazardous waste sorbents?

You may either launder and reuse or dispose of your hazardous waste sorbents. Because Minnesota already allowed this laundering and reuse of some sorbents, and solid waste disposal of others, the MPCA and Metro Counties did not adopt the 2013 Federal Final 'Rags' Rule.

Table 1 on the next page presents common management options for hazardous waste sorbents in Minnesota.

Many of the management options require that the sorbents contain no *free liquids* when they leave your site. This condition is also known as being 'RCRA-dry'. Assume that your sorbents contain free liquids unless you:

- Mechanically or manually compress them with a pressure of at least ten pounds per square inch (10 psi) until no further liquid is released. This is slightly less than a hard hand squeeze by an average person.
- Centrifuge them with a force of at least 100 times normal gravity until no further liquid is released. This is slightly less than the fast spin cycle on a common home or commercial washing machine. Or,
- Show that your sorbents already do not contain free liquids after use or through another method. For example, a sorbent used with a minimal amount of a highly volatile solvent such as ethyl acetate or acetone often already contains no free liquids after normal use. **Do not air-dry hazardous waste sorbents.**

Collect liquids removed from your sorbents and manage the recovered liquids as hazardous waste.

***Caution: Sorbents contaminated with a wide variety of solvents may present a fire risk or spontaneously combust regardless of whether all free liquids have been removed or not. Always handle contaminated sorbents in accordance with the Minnesota State Fire Code and the directions of your local fire marshal.**

Table 1. Management options in Minnesota for hazardous waste sorbents

Sorbents that are contaminated with:	**If the sorbents will be laundered, first remove all free liquid before they leave your site, then:**	**If the sorbents will be disposed:**
'Ignitable-only' solvents: including only D001 and F003 For an explanation of D001 solvents, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf For an explanation of F003 solvents, see MPCA fact sheet #w-hw2-00, F-List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-00.pdf	Non-hazardous after they contain no free liquid.* Non-hazardous sorbents may be laundered on-site or transported without a hazardous waste manifest to a commercial laundry.* Count only the recovered liquids toward your hazardous waste generator size.	Non-hazardous after they contain no free liquid.* If you remove free liquids prior to disposal, count only the recovered liquid towards your hazardous waste generator size. You may dispose of the now non-hazardous sorbents as solid waste.* If you do not remove free liquids prior to disposal, dispose of these sorbents as fully regulated hazardous waste and count the full weight towards your generator size.
Toxic solvents: including F-Listed solvents F001, F002, F004, and F005; and Toxicity Characteristic solvents such as methyl ethyl ketone (MEK), trichloroethylene (TCE), and perchloroethylene; For an explanation of these F-Listed solvents, see MPCA fact sheet #w-hw2-00, F-List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-00.pdf For an explanation of Toxicity Characteristic solvents, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf	These sorbents remain hazardous wastes. May be laundered on-site or transported without a hazardous waste manifest to a commercial laundry.* If laundering on-site, ensure that the sewage treatment plant that your site discharges to will accept laundry wastewater containing the toxic solvents. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.	Dispose of these sorbents as fully regulated hazardous waste whether or not free liquid is removed. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.
Any other hazardous waste or hazardous waste spill cleanup debris, including Toxicity Characteristic metals, such as cadmium, chromium, and lead; or crude oil For an explanation of Toxicity Characteristic metals, see MPCA fact sheet #w-hw2-04, Characteristic Wastes at http://www.pca.state.mn.us/publications/w-hw2-04.pdf	These sorbents remain hazardous wastes. May be laundered on-site.* If transported to a commercial laundry, a hazardous waste manifest must be used. If laundering on-site, ensure that the sewage treatment plant that your site discharges to will accept laundry wastewater containing the toxic contaminants. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.	Dispose of these sorbents as fully regulated hazardous waste whether or not free liquid is removed. Count both the sorbents and any recovered liquids towards your hazardous waste generator size.
Used oil, such as crankcase lubricant, hydraulic fluid, and thermal oil	Manage as a used oil-related waste. See MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes at http://www.pca.state.mn.us/publications/w-hw4-30.pdf.	
Refined fuels	Manage as a fuel-related waste. See MPCA fact sheet #w-hw4-19, Managing Fuel Wastes at http://www.pca.state.mn.us/publications/w-hw4-19.pdf.	

***Caution: Sorbents contaminated with a wide variety of solvents may present a fire risk or spontaneously combust regardless of whether all free liquids have been removed or not. Always handle contaminated sorbents in accordance with the Minnesota State Fire Code and the directions of your local fire marshal.**

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045 and incorporate regulatory interpretation decisions made by the MPCA on October 9, 2013, and November 11, 2013.To review Minnesota Statutes and Rules, visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs.

The MPCA and your Metro County have staff available to answer waste management and requirement questions. The MPCA's Small Business Environmental Assistance Program (SBEAP) can provide free and confidential regulatory compliance assistance. The Minnesota Technical Assistance Program (MnTAP) can help you reduce your waste generation and risk. All hazardous waste incidents, such as spills, must be reported immediately to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka	763-422-7093
Carver	952-361-1800
Dakota	952-891-7557
Hennepin	612-348-3777
Ramsey	651-266-1199
Scott	952-496-8475
Washington	651-430-6655
Websites	http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free	1-800-247-0015
Metro	612-624-1300
Website	http://www.mntap.umn.edu

Small Business Environmental Assistance

Toll free	1-800-657-3938
Metro	651-282-6143
Website	http://www.pca.state.mn.us/sbeap/

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
Brainerd	218-828-2492
Detroit Lakes	218-847-1519
Duluth	218-723-4660
Mankato	507-389-5977
Marshall	507-537-7146
Rochester	507-285-7343
St. Paul	651-296-6300
Willmar	320-214-3786
Website	http://www.pca.state.mn.us

Minnesota Duty Officer

Toll free	1-800-422-0798
Metro	651-649-5451
Website	https://dps.mn.gov/

Used Oil and Related Wastes

Management guidance for generators

Used oil includes petroleum-based or synthetic-based oils which have been used as lubricants, hydraulic fluids, heat transfer fluids, or for similar uses. Used oil related wastes include any other waste or debris contaminated with used oil. Table 1 lists examples of wastes regulated as used oil in Minnesota.

Table 1: Examples of used oils, related wastes and wastes that are not used oil

Used oil	Used oil related wastes	Wastes that are not used oil
Motor oil	Used oil filters	Fuel oil and other fuels
Transmission fluid	Used floor dry	Crude oil
Hydraulic fluid	Contaminated sawdust	Vegetable oil
Brake fluid	Oily wipes and sorbents	Tallow and animal greases
Compressor oil	Used oil spill debris	Vehicle antifreeze coolant
Refrigerant oil		Fuel tank sludge
Cutting oil		Solvents and oils used as solvent
Quenching oil		Parts washer sludge
Oil-water separator skim		Floor drain sludge
Non-PCB transformer oil		PCB hazardous waste oil
Petroleum-based grease		Mixtures of oil and other wastes

Environmental concerns

Used oil and related wastes that are improperly managed may release toxic contaminants or heavy metals into the environment. Groundwater and drinking water sources are particularly at risk for pollution from improperly managed used oil. The Minnesota Pollution Control Agency (MPCA) regulates the accumulation, transportation, and disposal of used oil. This fact sheet will discuss the management requirements for generators of used oil and related wastes in Minnesota. The county hazardous waste programs of the Minneapolis-St. Paul metropolitan area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington, [Metro Counties]) may have requirements that are more stringent. Contact your Metro County for local requirements.

Generating and accepting used oil and related wastes

You do not need to obtain a hazardous waste license from the MPCA to generate used oil and related wastes or to voluntarily accept used oil and related wastes from farmers or households. Though you are not required to, the MPCA recommends that you maintain records of the farmers and households from which you accept used oil and related wastes. Requiring farmers and households to identify themselves and keeping a log lowers your risk of receiving contaminated used oil. If you do receive contaminated used oil, you will need the log to apply for reimbursement from the MPCA for cleanup costs. You cannot charge farmers and households if you want to remain eligible for reimbursement of cleanup costs.

You may accept used oil and related wastes from another business so long as you provide the business with a receipt. Do not burn that used oil until it has been tested. See *'Burning used oil at your site'* on page three. You may charge businesses a reasonable fee to accept their used oil and related wastes.

Storing used oil and related wastes

You may accumulate any amount of used oil and related wastes on your site for an indefinite time as long as you store them properly.

- Accumulate used oil and related wastes only in leak-proof containers or tanks. Containers must be able to fully contain their contents, even if the container is overturned.
- Close the containers at all times except when used oil or related wastes are being added or removed. *Closed* means bungs and caps are fully screwed in or on, open-head containers have lids secured by fully-bolted retaining rings or 'snapped' spring-loaded rings, and bucket snap-lids are fully engaged. If your container has a funnel, it must be screwed into the bung and have a lid that securely latches. Open funnels and lids that shut by gravity alone do not meet these requirements. There are two exceptions:
  - Containers that receive used oil directly from an oil-water separator or oil filter crusher.
  - Containers into which used oil filters are drained (drain filters up to 24 hours).
- Used oil filters may be punctured and crushed on site provided the used oil is recovered. Crushed used oil filters may be recycled as scrap metal; however, you must ensure no used oil is spilled from the crushed filters at your site or in transit. If any used oil is spilled, see the '*Responding to used oil spills*' section on page four of this fact sheet.
- Store containers of used oil and related wastes on a surface reasonably impervious to used oil, such as concrete. Asphalt is generally not considered impervious to used oil. Although there is an exception to this requirement for used oil filter containers, the MPCA recommends that they be stored on the same type of surface as all other used oil and related waste containers.
- Clearly label the containers, aboveground storage tanks (ASTs), and fill pipes for underground storage tanks (USTs) with the words 'Used Oil' or 'Used Oil (type of waste).'
- If storing used oil in tanks, ensure you meet all applicable AST or UST requirements for those tanks.

  For more information on AST requirements, see MPCA fact sheet #t-a1-02, General Requirements for Aboveground Storage Tanks at http://www.pca.state.mn.us/publications/t-a1-02.pdf.

  For more information on UST requirements, see MPCA webpage, Underground Storage Tank Systems at http://www.pca.state.mn.us/enzq88e.
- Ensure that all used oil and related waste storage, both in containers and tanks, meets applicable state and local fire code standards. Contact your local fire marshal for specific requirements.

Reusing used oil at your site or another site

You may reuse your used oil at your site or another site without approval from the MPCA if you:

- Use it as a lubricant, hydraulic fluid, heat transfer fluid, or for a similar use.
- Use it as a fuel in your own diesel vehicle or equipment.
- Use only the amount of used oil reasonable for the task. A reasonable amount of used oil for a task is no more than the same amount of new oil you would use for the same task.
- Do not process or reclaim the used oil beyond normal filtering.
- Store the used oil according to the directions in this fact sheet.

Do not use used oil to suppress dust on roads. For allowed dust suppressants, see MPCA fact sheet #aq1-15, Dust Control Treatments for Roads and Surfaces at http://www.pca.state.mn.us/publications/aq1-15.pdf.

Used oil assumptions and testing

Used oil is considered *off-specification* until it is tested and shown to meet the levels in Table 2. Used oil that meets these requirements is considered *on-specification*. You need only test most used oil once per site, unless your business operations change.

If you generate used oil from electrical transformers or other electrical equipment, or from natural gas pipeline equipment such as scrubbers or drip legs, assume the used oil contains 50 parts per million (ppm) or more polychlorinated biphenyls (PCBs) until you can test it or otherwise document that it contains less than 2 ppm PCBs. Test used oil from electrical and natural gas pipeline equipment each time you drain a piece of equipment. Do not mix the oil from several pieces of equipment and batch test the mixture.

Table 2: Used oil specifications

Criterion	Specification
Flash point	100° Fahrenheit or higher
Arsenic	5 ppm or less
Cadmium	2 ppm or less
Chromium	10 ppm or less
Lead	100 ppm or less
PCBs	2 ppm or less
Halogens	1000 ppm/4000 ppm* maximum

*Used oil containing more than 1000 ppm total halogens is a fully regulated hazardous waste unless you can document that it does not contain more than 100 ppm of any individual halogen, in which case you may consider it on-specification used oil if it contains less than 4000 ppm total halogens.

Manage used oil known or assumed to contain 50 ppm or more PCBs as a PCB hazardous waste. For more information regarding PCB hazardous wastes, see MPCA fact sheet #w-hw4-48a, Identifying and Using PCBs, at http://www.pca.state.mn.us/publications/w-hw4-48a.pdf.

Burning used oil at your site or selling it to another site for burning

If you want to burn used oil you generate or receive from other businesses without any conditions, first test it and document that it meets the used oil specifications in Table 2, then register with the MPCA as a *Used Oil Marketer*. Visit the MPCA at http://www.pca.state.mn.us/publications/w-hw4-34.pdf to view fact sheet #w-hw4-34, Used Oil and Related Wastes: Management Guidance for Marketers for more information. You may sell or give tested on-specification used oil to other businesses for burning only after you register as a used oil marketer.

You may burn untested or off-specification used oil for heat only if you meet these conditions:

- Burn only used oil you generated or received from households and farmers. Do not burn used oil you receive from another business without testing it. However, if your site generates 220 pounds of hazardous waste per month or less, making it a Very Small Quantity Generator (VSQG), and mixes eligible hazardous waste solvents into your used oil under the allowance discussed on page four, you may still burn that mixture.
- Burn in a furnace specifically designed to burn used oil and that is compliant with the Minnesota State Fire Code. Check the manufacturer's specifications. Many fuel oil space heaters sold today are designed to burn used oil.
- Burn in a furnace that is rated at less than 500,000 British Thermal Units (BTUs) per hour and that is vented to the outdoors.
- Operate the furnace in compliance with all state and local fire code requirements. Contact your local fire marshal to determine specific requirements.

Most wood-burning stoves and furnaces are not designed to burn used oil or used oil related wastes. Burning used oil or used oil related wastes in a furnace not designed for such materials is not only prohibited, but will likely void the furnace's warranty.

Reminder: Keep records of the amount of used oil you burn on-site under this allowance. You may be required to annually report this amount to the MPCA on your hazardous waste license application.

Transporting or shipping used oil from your site

You may transport your own used oil and related wastes in amounts up to 55 gallons, or any amount of used oil filters to:

- another site you own
- another business that has agreed to accept your used oil and will test it before burning it
- a VSQG Collection Program that has agreed to accept your used oil

Ship used oil to any other destination in any amount with a *Used Oil Transporter* registered with the MPCA. Ensure the transporter, receiving business, or collection program provides you with a receipt for the used oil or related wastes. Do not give your used oil to employees to burn at their home.

You may send your oily rags and sorbents to a commercial laundry without using a used oil transporter, or, if your laundry equipment discharges to a publicly owned treatment works (sanitary sewer), you may also launder them on site for reuse. Do not launder them on site if you discharge to a septic system. Only launder them on site if you can safely do so. Under certain conditions, oily rags may spontaneously combust during or even after normal laundering. For more information on managing rags and sorbents, see MPCA fact sheet #w-hw4-61, Managing Towels, Wipes and Sorbents, at http://www.pca.state.mn.us/publications/w-hw4-61.pdf.

Note: You do not need to establish the thermal value of your used oil-contaminated sorbents, including used floor dry, if you document that they were properly recycled or burned for energy recovery. Do not dispose of used floor dry or similar wastes in your solid waste or on the ground.

Reporting and recordkeeping for used oil and related wastes

If your site is located outside of the seven metropolitan counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington, do not report your used oil or related wastes on your annual hazardous waste license application. If your site is located within one of the metropolitan counties listed above, contact your county regulator to find out what you should report.

Keep used oil and related waste shipment receipts for at least three years from the shipment date. Keep testing records for at least three years after you burn, sell, or dispose of your used oil.

Responding to used oil spills

All used oil spills must be cleaned up immediately. Manage contaminated cleanup materials as a used oil-related waste. Do not apply used oil-contaminated soil or debris to the land. Immediately report all used oil spills of five gallons or more to the Minnesota Duty Officer at 651-649-5451 or 800-422-0798.

Mixing other wastes with used oil

In general, you are not allowed to mix any other wastes, including waste fuels or paints, with your used oil. Even mixing wastes that are not hazardous wastes, such as contaminated water or used antifreeze, with your used oil may render it difficult to recycle or reuse and significantly increase your disposal cost. There are two exceptions where mixing other wastes with your used oil may be allowed:

Exception #1: You may manage used fuel filters from vehicles or fuel distribution or dispensing systems with your used oil filters.

Exception #2: If your site generates 220 pounds of hazardous waste per month or less, making it a VSQG, you may mix certain petroleum-based waste solvents into your used oil before burning it on site or shipping it off site as used oil. To do so, you must meet certain conditions.

To mix your waste solvent into your used oil, ensure your VSQG site meets all the following conditions:

- Your waste solvent is:
  - ***not*** gasoline or a gasoline/solvent mixture
  - ***not*** contaminated with a chlorinated solvent (such as perchloroethylene, trichloroethylene (TCE), or methylene chloride)
  - ***not*** a paint-related waste that contains a hazardous metal pigment (such as lead, cadmium, or chromium) above the Toxicity Characteristic Leaching Procedure (TCLP) limits
- The final mixture contains a maximum of 10% solvent waste to 90% used oil.
- Only your own employees mix your waste in your containers or tanks. Transport or disposal vendors may not mix your hazardous waste into used oil on their vehicles or at their site.
- Keep records of each mixing event for at least three years from the mixing date. Count the amount of solvent you mix into your used oil towards your hazardous waste generator size and report it to the MPCA or Metro County.

If you follow all of the above conditions, you do not need to test your waste solvent for its flashpoint or for toxic contaminants.

Note: While you may mix non-chlorinated F-listed solvents (such as toluene or methyl ethyl ketone [MEK]) into your used oil under this exception, doing so may make the resulting mixture difficult to recycle or reuse and may significantly increase off-site disposal cost.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045, and Minnesota Statute Chapter 115A, and incorporates regulatory interpretation decisions made by the MPCA on October 11, 2007; April 11, 2008; April 13, 2011; January 9, 2013; and October 8, 2014. To review Minnesota Rules, visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs.

Your metropolitan county and the MPCA have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional staff. For information about reducing your generation of used oil and related wastes, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka 763-422-7093
Carver 952-361-1800
Dakota 952-891-7557
Hennepin 612-348-3777
Ramsey 651-266-1199
Scott 952-496-8475
Washington 651-430-6655
Websites ..... http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
Website ..... http://www.mntap.umn.edu

Small Business Environmental Assistance

Toll free 1-800-657-3938
Metro 651-282-6143
Website .. http://www.pca.state.mn.us/sbeap/

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
Brainerd 218-828-2492
Detroit Lakes 218-847-1519
Duluth 218-723-4660
Mankato 507-389-5977
Marshall 507-537-7146
Rochester 507-285-7343
St. Paul 651-296-6300
Willmar 320-214-3786
Website ..... http://www.pca.state.mn.us

Minnesota Duty Officer

Toll free 1-800-422-0798
Metro 651-649-5451

22. NON-RECYCLABLE GLASS
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - porcelain fixtures
   - laminated windshields
   - laminated windows
   - glassware and china

2. Background - Various types of glass and glass-like products (e.g., porcelain, china, and ceramics) are not recyclable at this time. If recycling or re-use outlets for these materials cannot be located, they must be disposed in a landfill since they are not well suited to incineration (due to the slagging effects created as they melt).

3. Disposal - The waste material will be directed to the Olmsted County Kalmar Landfill.

4. Testing Requirements - In most cases, analytical testing is not required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, additional analytical tests may, under certain circumstances, be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Waste materials in this category are to be mixed with incoming municipal solid waste.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

23. TIRES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bulk
   - shredded

2. Background - Waste tires come from daily automotive activities, predominantly from retail tire dealers, auto repair shops, auto dealers, discount stores and trucking operations. Note: Aircraft and bicycle tires, and tires used on stationary equipment such as conveyor belts or amusement rides, and previously recycled products (i.e., rubber mulch) are also included in this category. Waste tires have been a major management and disposal problem in Minnesota for decades. Improperly managed waste tires can create significant environmental concerns, including fires and breeding habitat for mosquitoes when dumped or stored in large piles, and damage to landfills when land disposed. Tires can be accepted at the Solid Waste Processing Area (SWPA) at the Olmsted County Kalmar Landfill. Tires in the SWPA will be processed as tire-derived fuel (TDF) and used for energy recovery purposes. The U.S. Environmental Protection Agency and Minnesota Pollution Control Agency support the highest and best practical use of scrap tires in accordance with the waste management hierarchy, in order of preference: reduce, reuse, recycle, waste-to-energy, and disposal in an appropriate facility.

3. Disposal - Accepted at the Olmsted County Kalmar Landfill SWPA, and processed as TDF. The TDF will be comingled with other processable wastes prior to delivery to the OWEF.

4. Testing Requirements - In most cases, analytical testing is not required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, additional analytical tests may, under certain circumstances, be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - The co-mingled TDF material delivered to the OWEF will be deposited in the storage pit where it will be mixed with other municipal solid waste prior to feeding to the furnaces.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

24. INDUSTRIAL NON-RECYCLABLE PLASTICS
SPECIFIC INDUSTRIAL SOLD WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - roll-off boxes
   - drums and bags

2. Background - Occasionally, commercial and industrial businesses will generate plastic waste materials that are unacceptable to recycling brokers. For example, used plastic products which cannot be adequately or economically cleaned would be rejected, as would plastics with incompatible resin content or those for which a recycling process has not yet been formulated. Typically, these materials have high energy content and are, in most instances, suitable for energy recovery. Olmsted County will accept only cured plastic waste materials.

3. Disposal - If the waste material cannot be reused or recycled, it will be directed to the Olmsted County Kalmar Landfill or the Olmsted County Waste-to-Energy Facility (OWEF) for final disposition, depending on the waste material's combustion properties.

4. Testing Requirements - In general, no analytical testing of the waste material is required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, additional analytical tests may, under certain circumstances, be required. For example, if the plastic waste materials have once contained or been used to filter other materials, an assessment of all pertinent materials will be made, including reviewing the Material Safety Data Sheets (MSDSs) for all pertinent chemical substances. As a result of the initial assessment, analytical testing may be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. If, at any time, the plastic material was used in an application that could result in it being potentially considered infectious waste, a letter must be on file with the Olmsted County Environmental Resources Department which certifies that any such material(s) will be rendered non-infectious prior to delivery for disposal and specifying the method(s) used to accomplish this. Plastic waste materials that were previously considered infectious waste and have been decontaminated may be accepted in category 29 of this Plan.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Ensure that only cured plastics are present in the waste load. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Waste materials in this category will be mixed with incoming municipal solid waste.

8. Special Generator Requirements - If, at any time, the plastic material was used in an application that could result in it being potentially considered infectious waste, a letter must be on file with the Olmsted County Environmental Resources Department which certifies that any such material(s) will be rendered non-infectious prior to delivery for disposal and specifying the method(s) used to accomplish this.

25. FOOD WASTES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bags - semi-loads
   - drums

2. Background - Periodically, local food manufacturers possess food ingredients and products that cannot be utilized in their manufacturing process because they do not meet production specifications or become out-of-date. When possible, these wastes will be directed to other food waste processing outlets, if they are available. Co-composting with yard waste will not be allowed because of potential vermin attraction. Sometimes, however, off-specification or out-of-date food wastes are not suitable for use at any outlet, or they cannot be directed to other outlets because of time constraints. In such instances, food wastes shall be processed or disposed in accordance with the procedures outlined in this category.

3. Disposal - The waste material will be directed to the Olmsted Waste-to-Energy Facility (OWEF) or the Olmsted County Kalmar Landfill, depending on the physical and chemical characteristics of the waste material.

4. Testing Requirements - In general, no analytical testing is required; however, generators of food wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test."

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. When inspecting the waste load, ensure that no free liquids are present. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin* section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery.

7. Facility Operational Procedures - Dry, combustible powdered food waste is not accepted at the OWEF. Food waste approved for disposal at the Kalmar Landfill that has some potential for air dispersion will be mixed with other wastes and/or covered as soon as possible.

8. Special Generator Requirements - Ensure the waste does not contain free liquids. This includes the removal of all liquids from cans, bottles, and other containers.

26. ANIMAL REMAINS AND CARCASSES
SPECIFIC INDUSTRIAL SOLID WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - carcasses and large animal parts

2. Background - Dead animals do not fit the definition of industrial solid waste; however, since the proper disposal of dead animals has generally been a point of confusion, this Specific Operating Procedure has been prepared and will be included, for convenience, in the Industrial Solid Waste Management Plan.

3. Disposal -
   A. Pets: The preferred method for handling pet remains is to have the animal cremated. Contact a small animal veterinarian for guidance. Within the City of Rochester, the Rochester Animal Control Department (507-328-6960) is responsible for the disposition of stray animals.

   B. Farm Animals/ Livestock: If the animal meat is fresh (i.e., deceased for less than two days and/or without the distinct odor of decay), the owner should first try to contact a local rendering company to accept and/or collect the animal. If rendering is not an option, disposition of carcasses is covered by Minnesota Administrative Rules, chapter 1719, which states that the animal may be burned or buried according to Minnesota Pollution Control Agency rules. If farm livestock is found in water (in a creek, stream, or lake) or if on-site burial is not an option, the Minnesota Board of Animal Health must be contacted for assistance (651-296-2942).

   C. Wildlife & Road Kills: Disposal of wildlife remains is complicated by the existence of federal and state laws that apply to game and non-game wildlife in addition to jurisdictional issues.
      a. *Furbearers* (raccoon, fox, opossum, badger, muskrat, beaver, otter, mink, etc.) must be tagged with a possession permit from the Department of Natural Resources (even if found dead). If the person possessing the animal does not wish to obtain a permit, the animal must be buried at the Olmsted County Kalmar Landfill (which operates Monday through Friday, 8:00 a.m. to 3:30 p.m. and may be contacted at 507-285-8515). **NO salvaging of the animal will be allowed without a DNR permit.**
      b. *Federally protected birds* are illegal to possess (even if found dead) and require proper disposal to a licensed facility. This includes raptors like eagles, falcons, hawks, and owls.
      c. *Deer and any other wildlife/road kill* are handled differently depending on whether their meat is fresh and salvageable or decayed. (Deer killed by a motor vehicle on a public road must be removed by the road authority - that is, whoever maintains the road.)
         i. FRESH: If the animal meat is fresh, land disposal of the animal can usually be avoided. Road-killed deer may be collected by any interested person after obtaining a permit, at no charge, from the Minnesota Department of Natural Resources, the Olmsted County Law Enforcement Center, or the Minnesota State Patrol office. Any other person responsible for the disposition of any road kill should contact the Olmsted County Oxbow Park (507-775-2451). If this facility is unable to accept the carcass, it may be taken directly to the Kalmar Landfill.
         ii. DECAYED: If the dead animal is beyond salvaging, is small and found within the City of Rochester, contact the Rochester Animal Control Department (507-328-6960). If it is a large dead animal beyond salvaging, or a small, non-salvageable animal found outside the City of Rochester, the carcass may be taken directly to the Kalmar Landfill.

   D. Wild Game: Hunters should dress large wild game animals in the field. Only a small amount of animal parts, including remains from home butchering, may be added to municipal solid waste

from any household. Large carcasses or large amounts of body parts should be rendered. If this is impossible, they may be delivered directly to the Kalmar Landfill as described above or may be accepted under category 30, "Deer and Elk Carcasses."

4. Testing Requirements - None.

5. Documentation - None.

6. Gate and Inspection Activities - None.

7. Facility Operational Procedures - Carcasses that are not salvageable must be delivered to the Kalmar Landfill and covered with sufficient municipal solid waste and/or cover material to prevent scavenging from wild animals.

8. Special Generator Requirements - Deliver the carcass to the appropriate facility, as outlined above, only after obtaining necessary permits (if any), gaining appropriate approvals, and making facility-specific delivery arrangements.

9. Additional Information - See attached flow chart (Animal Remains and Carcasses - Disposal Options) for appropriate management options.

27. NON-COMBUSTIBLE INERT WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - truck and semi-loads - bulk transport
   - individual pieces

2. Background - For the purposes of this category, non-combustible inert wastes are non-hazardous, non-combustible, non-biodegradable, and chemically-inert solid wastes that are not likely to decompose significantly. These wastes tend to have a negligible potential to generate leachate, and are likely to retain their physical and chemical structure during the land disposal process. For the purpose of this Plan, non-combustible inert wastes include, but are not limited to: uncontaminated sand, soil, concrete, rubble, masonry, glass, pottery, ceramics, brick, tile, and remnants of metal from a manufacturing process or from non-manufacturing activities such as service and commercial establishments.

   Although the Olmsted County Kalmar Landfill does not accept infectious waste for disposal, the Kalmar Landfill will accept, for land disposal, generally chemically-inert bulky items (larger than 3 feet x 3 feet x 3 feet), such as mattresses and couches, that may have been exposed to blood, body fluids, or other infectious materials, and that are unable to be processed at either the Mayo Clinic Hospital/Medical/Infectious Waste Incinerator (HMIWI) or Olmsted Waste-to-Energy Facility (OWEF). The Kalmar Landfill will accept only inert, bulky items that do not release blood, body fluids, or other infectious materials when compressed.

   When possible, non-combustible inert wastes are directed to other retail or reuse outlets, if they are available. In cases where no other outlet is available, these wastes will be disposed of in accordance with the procedures outlined in this category.

3. Disposal - The waste material will be directed to the Kalmar Landfill.

4. Testing Requirements - In general, no analytical testing of the waste material is required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, analytical tests may, under certain circumstances, be required. Furthermore, generators of non-combustible inert wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test."

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. Unless other arrangements have been made, the waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. **Waste haulers of inert, bulky items that may have been exposed to blood, body fluids, or other potentially infectious materials must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.** If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Ensure that waste loads that may

have potentially been exposed to blood, body fluids, or other potentially infectious materials do not contain free liquids. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin* section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery. Generators (or haulers) of inert, bulky items that may have been exposed to blood, body fluids, or other infectious materials must notify Kalmar Landfill staff at least 24 hours prior to delivery, and all deliveries must occur prior to 12:00 p.m. **Always adhere to the personal protection equipment procedures listed in part G of the Generator section of the Non-Hazardous Industrial Solid Waste Tracking Form. Always avoid contact with the waste material(s). Always wear gloves and goggles and avoid contact with skin and eyes.**

7. Facility Operational Procedures - All waste loads containing inert, bulky, non-combustible waste that may have potentially been exposed to blood, body fluids, or other potentially infectious materials must be buried at the toe of the working face and covered (with municipal solid waste and/or other approved cover material) prior to compaction to prevent contact with equipment and personnel.

8. Special Generator Requirements - Generators of inert, bulky, and non-combustible waste that may have potentially been exposed to blood, body fluids, or other potentially infectious materials must ensure that no free liquids are present and that the waste material does not release blood, body fluids, or other infectious materials when compressed. **Haulers of said waste materials must contact the Kalmar Landfill (507-285-8515) at least 24 hours prior to delivery, and all deliveries must occur prior to 12:00 p.m.**

28. MERCURY-CONTAINING WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

Minnesota Statutes, section 115A.932, prohibits the placement of mercury in solid waste. **Waste materials that contain mercury will not be accepted at any Olmsted County solid waste management facility.** Olmsted County has adopted a Mercury Control Plan and supports mercury management programs for certain types of mercury-containing wastes.

The Olmsted County Hazardous Waste Facility may be able to assist with the disposal of mercury or mercury-containing wastes. Very Small Quantity Generators of hazardous waste may utilize an economical fee-for-service program at the Olmsted County Hazardous Waste Facility. To learn more, please contact the Olmsted County Environmental Resources Department at 507-328-7070, and ask to speak with the Waste Abatement Manager.

29. DECONTAMINATED INFECTIOUS WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types

   - roll-off boxes
   - packer trucks
   - drums and bags
   - other

2. Background - Healthcare facilities (hospitals, skilled nursing facilities, veterinary clinics, etc.) routinely utilize steam sterilization (autoclaving) processes to effectively decontaminate infectious materials. Autoclaves use saturated steam under high pressure to decontaminate infectious materials (i.e. cultures, cells, contaminated medical equipment, etc.) and to sterilize media, lab ware, and other items. Used properly, autoclaving technology renders infectious waste, or potentially infectious waste, safe for routine handling as a solid waste.

3. Disposal - The waste material will be directed to the Olmsted Waste-to-Energy Facility (OWEF) or the Olmsted County Kalmar Landfill, depending on the physical and chemical characteristics of the waste material.

4. Testing Requirements - In general, no testing is required. However, generators of decontaminated infectious wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test."

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. Unless other arrangements have been made, the waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. In addition, a signed Certification of Autoclave Treatment Form (see Appendix D), which certifies that any previously infectious material has been rendered non-infectious prior to delivery for disposal, must be presented at the time of delivery. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Ensure that the waste load does not contain free liquids. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the Facility section of the form. Review the Certification of Autoclave Treatment Form for completeness. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the Admin section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery. Always adhere to the personal protection equipment procedures listed in part G of the Generator section of the Non-Hazardous Industrial Solid Waste Tracking Form. Always avoid contact with the waste material. Always wear gloves and goggles and avoid contact with skin and eyes.

7. Facility Operational Procedures – For waste approved for disposal at the Kalmar Landfill, a separate hole will be dug at the toe of the working face for deposit of the waste, which will subsequently be covered (with municipal solid waste and/or cover material) prior to compaction to prevent contact

with equipment and personnel. Material delivered to the OWEF will be deposited in the storage pit where it will be mixed with other municipal solid waste in the feed hopper for combustion.

8. Special Generator Requirements - Generators of decontaminated infectious waste must ensure that no free liquids are present. Generators of decontaminated waste must ensure that a signed Certification of Autoclave Treatment Form (see Appendix D), which certifies that any such material has been rendered non-infectious prior to delivery for disposal, is presented at the time of delivery.

30. DEER AND ELK CARCASSES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - roll-off boxes - packer trucks
   - drums and bags - other

2. Background - Deer and elk carcasses, as well as ash waste generated from the incineration of deer and elk carcasses, are considered an industrial solid waste if generated from any commercial processing operation or by a Minnesota Department of Natural Resources deer culling operation. Isolated carcass waste which is placed into the residential Mixed Municipal Solid Waste (MMSW) stream by hunters is considered to be household waste and is exempt from management by this Plan.

   Any deer and elk carcasses or carcass waste confirmed with chronic wasting disease (CWD) will not be accepted at any Olmsted County solid waste management facility. Olmsted County solid waste management facilities will not accept: 1) deer and elk carcasses potentially infected with CWD; 2) ash waste generated from the incineration of deer and elk carcasses potentially infected with CWD; or 3) any other waste that is potentially infected or contaminated with CWD. Recent research suggests that the most effective methods for disposing of CWD-infected waste include high temperature air curtain burners and chemical tissue digesters. At present, Olmsted County is not able to offer these preferred disposal options for CWD-infected or contaminated wastes. It is recommended that generators of CWD-infected or contaminated waste contact the University of Minnesota Veterinary Diagnostic Laboratory (UMVDL) and/or the Minnesota Pollution Control Agency (MPCA) to discuss disposal options. The UMVDL may be contacted at 612-625-8787 or via e-mail at vdl@umn.edu. MPCA staff may be reached at 651-296-6300.

3. Disposal - Approved deer and elk carcass wastes will be directed to the Olmsted County Kalmar Landfill.

4. Testing Requirements - None

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Record the appropriate delivery information on the scale house operations log and review the documentation for accuracy and completeness. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - Upon delivery of the waste, a separate hole will be dug at the toe of the working face for deposit of the waste. The waste will be immediately covered with other waste prior to compaction to prevent contact with equipment and personnel. The cover will consist of a minimum of one foot of compacted MSW. Deliveries to Kalmar Landfill must occur prior to 12:00 p.m. Carcass ash waste will not be allowed for disposal if wind speeds exceed ten (10) miles per hour at the time of disposal. If the operator must manually manage any portion of the waste, they must adhere to all applicable provisions of the Kalmar Landfill Health and Safety Plan, including at a minimum, wearing rubber gloves, a dust mask, safety glasses, and a coverall.

8. Special Generator Requirements - Ensure that all free liquids are absent at the time of delivery for disposal. Deliveries must occur prior to 12:00 p.m.

31. STREET-RELATED WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - trucks and semi-loads
   - bulk transport
   - roll-off boxes
   - vactor trucks

2. Background - Businesses and local government units may generate street wastes in the ordinary, customary maintenance of highways, city streets, parking lots, and sidewalks. Street wastes generally include street sweepings, catch basin cleanings, and road-side ditch cleanup soils. Other industrial solid wastes that are closely related to this category's waste streams, and resemble the consistency of typical street-related wastes, such as car wash-related wastes, may be accepted in this category. The preferred manner by which to manage street wastes that are obviously not contaminated is to find another beneficial use for the waste material. **Prior to reuse**, all trash, leaves, and other debris shall be effectively removed from the street wastes. In general, this is most often accomplished through screening, but other prudent removal methods may be implemented. When screening street wastes for the purpose of reuse, a maximum mesh size of three-quarter (¾) inches is recommended to ensure all larger debris is removed prior to reuse. The Olmsted County Kalmar Landfill will accept the soil/sand portion of screened street wastes as Alternative Daily Cover (ADC) for the active portion of the MSW disposal area.

3. Disposal - Approved street wastes that cannot be reused will be directed to the Kalmar Landfill.

4. Testing Requirements - Generators of street wastes must perform an initial screening of the waste, consisting of a visual and olfactory examination and, if deemed necessary, proceeded by analytical testing. Since analytical tests have demonstrated that street wastes generated from ordinary street maintenance operations are, in general, not a Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste, no analytical testing will be required of street wastes that are obviously not contaminated with petroleum hydrocarbons, wastewater, animal wastes, or other potentially hazardous contaminants. **Street wastes that are obviously contaminated must be fully evaluated to determine if they meet the regulatory definition of a RCRA Subtitle C hazardous waste, and if so, regulated as such.** Generators of street-related wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test."

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form upon delivery. The delivery of street wastes that are suitable as ADC must be accompanied by a current, approved Non-Hazardous Industrial Solid Waste Tracking Form that attests to its suitability as ADC (usually noted as a delivery restriction in the *Admin* section of the form). If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin*

section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery. Bulk loads of the screened soil/sand portion of street wastes intended for reuse as ADC must be inspected thoroughly to verify general suitability as ADC.

7. Facility Operational Procedures - Street wastes unsuitable as ADC will be mixed with other incoming wastes. Screened street wastes suitable as ADC will be stockpiled in the MSW disposal area and utilized as ADC, as necessary.

8. Special Generator Requirements - To qualify for the ADC rate, prior to dumping, the waste hauler must inform the scale house operator that the street waste has been screened and is suitable as ADC. Ensure that the waste does not contain free liquids.

9. Additional Information - See attached Olmsted County fact sheet "Management and Disposal of Street Wastes" and MPCA fact sheet "Managing Street Sweepings."

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Management and Disposal of Street Wastes

This fact sheet describes the Olmsted County Environmental Resources Department's policy for managing street sweepings, road-side ditch cleanup soils, and catch basin cleanings, hereafter collectively referred to as street wastes. This fact sheet addresses the reuse or disposal of street wastes that are generated as a result of the routine maintenance of city streets, parking lots, and sidewalks, with the goal of preventing these materials from entering storm sewers and surface waters, to mitigate airborne pollution, and improve the appearance of roadways. In Olmsted County, all acceptable street wastes will be disposed of in the Municipal Solid Waste (MSW) disposal area at the Olmsted County Kalmar Landfill.

INITIAL SCREENING

Street wastes are not wastes generated as a result of the cleanup of petroleum, oil, or hazardous material spills. Generators of street wastes must perform an initial screening of the waste, consisting of a visual and olfactory examination and, if necessary, proceeded by analytical testing. Since analytical testing has demonstrated that street wastes generated from ordinary street maintenance operations are, in general, not a Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste, no analytical testing will be required of street wastes that are obviously not contaminated with petroleum hydrocarbons, wastewater, animal wastes, or other potentially hazardous contaminants. Street wastes that are obviously contaminated must be fully evaluated to determine if they meet the regulatory definition of a RCRA Subtitle C hazardous waste. Ultimately, it is the generator's responsibility to determine whether the waste is hazardous, and, as such, the waste generator is liable for its proper management and disposal.

REUSE

Street wastes that are obviously not contaminated with petroleum hydrocarbons, wastewater, animal wastes, or other potentially hazardous contaminants may be acceptable for reuse in many areas. **Prior to reuse**, all trash, leaves, and other debris shall be effectively removed from the street wastes. In general, this is most often accomplished through screening, but other removal methods may be utilized. When screening street wastes for reuse, a maximum mesh size of three-quarter (¾) inches is recommended to ensure that all larger debris is removed prior to reuse. Manage the resulting screenings (rejects) by recycling (aluminum cans, glass jars, etc.), composting (leaves, grass clippings, etc.), or disposal in a permitted MSW landfill (see disposal), as described in Minnesota Pollution Control Agency fact sheet Managing Street Sweepings (w-sw4-54, June 2010).

Provided that all solid waste has been removed through the screening process, the screened material (soil/sand portion) may be reused in any of the following ways:

1. Mix the screened material with a virgin sand/salt mixture for winter application to streets, parking lots, or sidewalks.

2. The Kalmar Landfill may accept the soil/sand portion of screened street wastes as Alternative Daily Cover (ADC) for the active portion of the MSW disposal area. The screened material will be placed on the surface of the active face of the MSW cell at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. To qualify for the ADC rate, prior to dumping, the generator must obtain approval from the County and the waste hauler must inform the scale house operator that the street wastes have been screened and are suitable as ADC.

3. Use the screened material as fill material in commercial and industrial development projects, road construction, or natural park lands.

   Please note that screened street wastes **are not to be reused** in any of the following areas:

   - Playgrounds;
   - Residential yards;
   - Areas where human contact occurs on a continuous basis;
   - Areas near drinking water supply wells and wellhead protection areas for public drinking water supplies;
   - Sites with karst topography, typically exemplified by subterranean drainage and sink holes; and
   - In or in close proximity to wetlands and surface waters.

DISPOSAL

Street wastes that are not screened for trash and debris are considered to be an industrial solid waste and may not be reused. Instead, unscreened street wastes must be disposed of at a permitted solid waste facility.

Contaminated Street Wastes

- Street wastes that **are** obviously contaminated with wastewater, oil, gasoline, or any other potentially hazardous contaminants must be evaluated to determine if they meet the definition of a RCRA Subtitle C hazardous waste or, in the alternative, generators must assume the wastes are hazardous and manage them accordingly. (MN Rules, Chapter 7045.0214, Subp. 1).

Non-contaminated Street Wastes

- Street wastes that **are not** obviously contaminated with wastewater, oil, gasoline, or other potentially hazardous contaminants are accepted for disposal at the Kalmar Landfill in the MSW disposal area at the standard solid waste rates.

- Street wastes that **are not** obviously contaminated and are co-mingled with MSW, construction and demolition debris, or other acceptable non-hazardous solid wastes are accepted for disposal at the Kalmar Landfill in the MSW disposal area at the standard solid waste rates.

- Oversize screening rejects (pieces of plastic, metal, paper, etc.) generated from the screening of street wastes that **are not** obviously contaminated are accepted for disposal at the Kalmar Landfill in the MSW disposal area at the standard solid waste rates.

Prior to disposal, generators, service providers, or haulers of street wastes must complete an Industrial Solid Waste Evaluation Form and submit it to the Olmsted County Environmental Resources Department for review and approval. Each individual waste load must be accompanied by an approved Non-Hazardous Industrial Solid Waste Tracking Form (manifest) and presented to the scale house operator for a receipt signature. Evaluation forms are available at the Olmsted County Environmental Resources Department, or may be downloaded and viewed at the following internet address:
http://www.co.olmsted.mn.us/environmentalresources/garbagerecycling/industrialwaste/Documents/iswhform.pdf

CONTACT

For additional guidance on managing street wastes or to learn more about the County's Industrial Solid Waste Program, please contact the Olmsted County Environmental Resources Department at 507-328-7070.

Managing Street Sweepings

Minnesota Pollution Control Agency

w-sw4-54 • June 2010

Local requirements
This fact sheet outlines management options for reuse of street sweepings. Individual cities and counties may have additional requirements such as testing and approval. For more information on local requirements, contact your city authorities or your county solid-waste officer.

Street sweepings are materials such as sand, salt, leaves and debris removed from city streets, parking lots and sidewalks to prevent these materials from being washed into storm sewers and surface waters, and to improve the appearance of public roadways.

Street sweepings are not potentially contaminated materials removed from spill sites, hazardous waste cleanup sites or other contaminated areas. Materials from these sources, whether removed by sweeping or other process, must be tested to determine if they are hazardous. If hazardous, they must be managed according to hazardous waste requirements. If you are working at a spill or cleanup site, contact the Minnesota Pollution Control Agency (MPCA) coordinator assigned to that site for more information.

Reusing Street Sweepings

Test results have shown street sweepings from normal sweeping operations are safe and acceptable for reuse in many areas; however, the following areas **cannot be used** for street sweeping disposal:

- Playgrounds;
- Children's play areas;
- Residential yards;
- Areas where human contact occurs on a continuous basis;
- Areas near drinking water wells;
- Wellhead protection areas for public drinking-water supplies; and
- Sites with karst features, including sinkholes, disappearing streams and caves.

In addition, do not dispose of street sweepings in or near wetlands or surface water.

Prior to reuse, trash, leaves and other debris must be removed from the sweepings. This removal is often accomplished by screening, but other methods may also be used. Dispose of trash and debris removed from the sweepings by:

- Recycling, such as aluminum cans;
- Composting, such as leaves; or
- Sending to a Municipal Solid Waste Landfill (MSW) immediately after being screened.

Street sweepings that are **not screened** for trash and debris are considered **industrial solid waste** and must be disposed of at a permitted solid waste facility that can accept the waste. Unscreened street sweepings must also be stored in accordance with solid waste storage standards (Minn. R. 7035.2855).

If street sweepings are screened prior to being stockpiled, they are exempt from Minnesota solid waste storage standards. Prior to reuse, screened sweepings must be managed in accordance with Best Management Practices outlined in the site's Industrial Stormwater Permit (if applicable).

Street sweepings can be reused in any of the following ways without MPCA approval, provided that all solid waste has been screened from the sweepings:

1. Mix with new salt/sand mixture for winter application to roads, parking lots or sidewalks. When screening sweepings for reuse in this way, use a smaller mesh like a ¾-inch screen, for the final

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screening to ensure all of the debris has been removed.

2. Use as daily cover material at a permitted solid waste landfill, provided that the landfill is approved to use street sweepings as Alternate Daily Cover (ADC). Contact the permitted landfill prior to transportation to ensure that it can be accepted for disposal, or used as ADC.

3. Use as material in commercial and industrial development projects, road restoration or construction projects. When reusing sweepings as fill, ensure the separation distances given in Table 1 are maintained. Also, check to see if local regulations limit the depth of the fill that may be applied. It is the MPCA's intention that the fill will be used for an engineered purpose. Otherwise this use would be considered disposal of a solid waste without a permit. To prevent erosion, seed the area with a grass mixture and/or cover with mulch or other cover material within the time frames given in Table 2.

For More Information

A report entitled, "Best Practices: Street Sweepings," which provides information on efficient and economical ways to conduct sweeping operations, is available from the Metropolitan Council. To request a copy, call the Metropolitan Council Datacenter at 651-602-1140 or send an email to data.center@metc.state.mn.us.

The U.S. Environmental Protection Agency also offers information on Best Management Practices at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=99. You may also go to www.epa.gov/npdes, click on "stormwater," then on "National Menu of BMPs," and search for "Parking Lot and Street Cleaning."

In addition, the Ramsey-Washington Metro Watershed District Report includes information on street sweeping policies and using street sweeping as a tool to improve water quality. (Street Sweeping Report from Ramsey-Washington Metro Watershed District)

If you have questions about management issues, call the appropriate number listed in Table 3.

This fact sheet has been prepared in cooperation with:

- Metropolitan County Hazardous Waste Staff
- Minnesota Technical Assistance Program
- MPCA Industrial/Municipal Division

Table 1: Separation Distances for Using Sweepings as Fill

Sweepings Applied Near:	Must be Applied No Closer Than:
Lakes, rivers, streams, wetlands, intermittent streams, tile inlets, and karst features	200 feet
Groundwater	3 feet
Fractured bedrock	3 feet
Potable water wells	50 feet

Table 2: Requirements for Cover Material

Slope (Horizontal to Vertical)	Seed/Cover within:
Steeper than 3:1	7 days
Between 10 :1 and 3:1	14 days
Flatter than 10:1	21 days

Table 3: Telephone Contacts in the Metro Area

Anoka County	(763) 323-5730
Carver County	(952) 361-1500
Dakota County	(952) 891-7000
Hennepin County	(612) 348-3000
Ramsey County	(651) 266-8500
Scott County	(952) 445-7750
Washington County	(612) 430-6000

Table 4: MPCA Regional Offices

Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Mankato	(507) 389-5977
Marshall	(507) 537-7146
Rochester	(507) 285-7343
St. Paul	(651) 296-6300
Willmar	(320) 214-3786

32. COSMETICS WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - bags - semi-loads
   - drums - roll-off boxes

2. Background - Periodically, manufacturers and distributors of cosmetics will possess cosmetics (or cosmetic-related raw materials) that cannot be utilized in a manufacturing process or be marketed because they do not meet production specifications or become out-of-date.

   The Federal Food, Drug, and Cosmetic Act (FD&C Act) defines cosmetics as "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body, or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance" [FD&C Act, sec. 201(i)]. Examples of cosmetics include hair colors, tooth pastes, deodorants, fingernail polishes, perfumes, moisturizers, shampoos, and other cleansing agents, etc. The FD&C Act defines drugs, in part, as "articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease" and "articles (other than food) intended to affect the structure or any function of the body of man or other animals" [FD&C Act, sec. 201(g)(1)]. **Certain products that meet the definition of a cosmetic may also meet the definition of a drug (i.e., pharmaceutical). For the purposes of this Plan, when a waste meets the definition of a cosmetic and a drug, the waste is to be managed as a pharmaceutical per the specific industrial waste management procedures in category 35.**

3. Disposal - The waste material will be directed to the Olmsted Waste-to-Energy Facility (OWEF) or the Olmsted County Kalmar Landfill, depending on the physical and chemical characteristics of the waste.

4. Testing Requirements - Unless complete documentation exists to characterize completely the waste material (through knowledge of the waste and its characteristics), waste generators must evaluate the waste using the Toxicity Characteristics Leaching Procedure (TCLP) for those parameters (i.e., metals and volatile and semi-volatile organic constituents) that can reasonably be expected to be present. Additional analytical tests may, under certain circumstances, be required. If available, Material Safety Data Sheets (MSDSs) must be provided. Generators of cosmetics wastes that have a potential of containing free liquids (as defined by Minnesota Administrative Rules) must complete the Absence of Free Liquids Certification Form (see Appendix D) and/or analyze a representative sample of the waste using analytical method SW-846 9095B, known as the "paint filter test."

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. The waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form and Industrial Solid Waste Evaluation Form, the generator must complete and sign said certification form prior to the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form. If completing and signing an Absence of Free Liquids Certification Form is listed as a requirement in the Non-Hazardous Industrial Solid Waste Tracking Form (usually noted as a delivery restriction in the *Admin*

section of the tracking form), ensure that the waste hauler presents a completed, signed copy of said certification form at the time of delivery.

7. Facility Operational Procedures - Dry, combustible powdered cosmetics waste is not accepted at the OWEF. Cosmetics waste approved for disposal at the Kalmar Landfill that has some potential for air dispersion will be mixed with other wastes and/or covered as soon as possible.

8. Special Generator Requirements - Ensure the waste does not contain free liquids. This includes the removal of liquids from cans, bottles, and other containers.

33. BULKY COMBUSTIBLE WASTES
SPECIFIC INDUSTRIAL WASTE MANAGEMENT PROCEDURES

1. Typical Delivery Types
   - truck and semi-loads - bulk transport
   - individual pieces

2. Background - For the purposes of this category, bulky combustible wastes are non-hazardous, combustible, and generally chemically-inert solid wastes that include but are not limited to: mattresses, hot tubs, boat hulls, furniture (except for office materials), and remnants of fabric, wood, or plastic from a manufacturing process or from non-manufacturing activities such as service and commercial establishments.

   Bulky combustible wastes may be accepted at the Solid Waste Processing Area (SWPA) at the Olmsted County Kalmar Landfill, where they will be processed and later used for resource recovery at the Olmsted Waste-to-Energy Facility (OWEF). The U.S. Environmental Protection Agency (U.S. EPA) and Minnesota Pollution Control Agency (MPCA) support the highest and best practical use of wastes in accordance with the waste management hierarchy, in order of preference: 1) reduce and reuse, 2) recycle, 3) energy recovery (waste-to-energy), and 4) disposal (landfilling) in an appropriate facility.

3. Disposal - The bulky combustible waste material will be directed to the Kalmar Landfill SWPA, where it will be processed. The processed waste material will be co-mingled with other processable wastes prior to delivery to the OWEF.

4. Testing Requirements - In most cases, analytical testing is not required; however, to ensure 1) the waste material is not a regulated hazardous waste and 2) the waste material is acceptable for disposal at an Olmsted County solid waste management facility, additional analytical tests may, under certain circumstances, be required.

5. Documentation - A current, approved Industrial Solid Waste Evaluation Form must be on file with the Olmsted County Environmental Resources Department. Unless other arrangements have been made, the waste hauler must present a current, approved Non-Hazardous Industrial Solid Waste Tracking Form at the time of delivery.

6. Gate and Inspection Activities - Inspect the waste load and record the appropriate delivery information on the scale house industrial solid waste operations log. Review the Non-Hazardous Industrial Solid Waste Tracking Form and complete the *Facility* section of the form.

7. Facility Operational Procedures - The co-mingled processed waste material delivered to the OWEF will be deposited in the storage pit where it will be mixed with other municipal solid waste prior to being fed into a combustion chamber.

8. Special Generator Requirements - If necessary, special generator requirements will be determined on a case-by-case basis.

PART II

INDUSTRIAL SOLID WASTE MANAGEMENT PLAN FOR FACILITY OPERATORS AND REGULATORS

PART II
INDUSTRIAL SOLID WASTE MANAGEMENT PLAN
FOR FACILITY OPERATORS & REGULATORS

1.0 INTRODUCTION

This Industrial Solid Waste Management Plan (referred to hereafter as the ISWMP or Plan) Update has been prepared to conform to Minnesota Administrative Rules, parts 7001.3300, 7011.1250, 7035.0300, and 7035.2535, subpart 5. The Plan provides a framework specifically for Olmsted County to properly evaluate, document, and manage various industrial solid wastes proposed for receipt at its solid waste management facilities. The facilities governed by this plan include the Olmsted Waste-to-Energy Facility (OWEF), Olmsted County Kalmar Landfill, and Olmsted County Recycling Center Plus (OCRC).

Olmsted County has a joint powers agreement with Dodge County, under which municipal solid waste (MSW) from Dodge County is accepted at Olmsted County solid waste management facilities. Accordingly, Olmsted County accepts approved industrial solid wastes from generators located in Dodge County. Olmsted County will also accept industrial solid wastes from generators located outside of the two county service area on a case-by-case basis.

Because long-term environmental liability for the waste rests with the waste generator, it is the waste generator's responsibility to evaluate and characterize its waste to prove its non-hazardous nature. The permittee of a landfill or other solid waste management facility is responsible for managing industrial solid waste in accordance to the Minnesota Administrative Rules cited above. As the owner, operator, and permittee for the Kalmar Landfill and the OWEF, Olmsted County maintains responsibility for the contents and implementation of this Plan. Olmsted County's decisions on how to manage various wastes are based on the potential public health, worker safety, and environmental risks associated with the wastes, as well as on permit-imposed restrictions for each solid waste management facility. Olmsted County has made significant investments in its integrated solid waste management programming in order to comply with the Minnesota Solid Waste Hierarchy as established in the Waste Management Act (WMA). Minnesota Statute 115A.02b establishes the following hierarchy of preferred solid waste management practices: (1) waste reduction and reuse; (2) waste recycling; (3) composting of yard waste and food waste; (4) resource recovery through mixed municipal solid waste composting or incineration; (5) land disposal which produces no measurable methane gas or which involves the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale; and (6) land disposal which produces measurable methane and which does not involve the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale. This Plan supports the WMA hierarchy goals of: improving public health; conserving energy and natural resources; reducing pollution and greenhouse gas emissions; and reducing the State of Minnesota's reliance on landfills.

2.0 CURRENT PRACTICES

2.1. Description of the Olmsted Waste-to-Energy Facility (OWEF)

The OWEF is a mass-burn municipal waste combustor (MWC) located in Rochester which began operations in March of 1987. The OWEF produces renewable energy in the form of steam, electricity, and other utility services which are provided to 35 buildings in Rochester. The OWEF consists of two 100 ton-per-day and one 200 ton-per-day (TPD) municipal solid waste (MSW) combustor-boiler units; three steam turbine-generators; municipal solid waste receiving area; ash handling systems; air pollution control equipment; necessary auxiliary installations; the medium-

voltage work necessary to connect with the utility grid; and a natural gas fired backup boiler.

The OWEF currently operates under a Minnesota Pollution Control Agency (MPCA) issued Part 70 Air Emissions Permit. The MPCA permit imposes strict air emission limits, outlining specific monitoring and testing requirements for the facility. The OWEF is a state-of-the-art facility that is designed and operated to minimize air emissions. The facility operates in accordance with United States Environmental Protection Agency (U.S. EPA)-defined "Good Combustion Practices" to control emissions through sound operational techniques and routine maintenance activities. All three MWC units utilize similar pollution control measures which consist of the following: spray dry absorbers, powdered activated carbon (PAC) injector systems, and pulse jet fabric filter baghouses. Unit 3 also utilizes selective non-catalytic reduction (SNCR) for nitrogen oxide (NOx) control.

Facility operations are optimized via continuous emissions monitors (CEMs). These monitors continuously sample the exhaust gas and provide information to operating personnel. Using this information, adjustments can be made which result in emissions being maintained at the lowest possible level. The CEMS measure oxygen, carbon monoxide, carbon dioxide, sulfur dioxide, opacity, and stack gas flow rate at the OWEF on a continuous basis.

Combustor ash generated as a result of OWEF operations is deposited in a double-composite lined monofill at the Olmsted County Kalmar Landfill. The combustor ash is a more stable, inert medium than the waste, and virtually all the volatile organic constituents are destroyed as a result of the combustion process.

When the OWEF is not operating at full capacity due to maintenance being performed, MSW is bypassed from the OWEF to the Kalmar Landfill, where it is disposed in a single-composite lined MSW cell. This excess waste is known as "bypass waste." In addition, non-processible bulky wastes, which due to their size or physical characteristics are difficult or impossible to process at the OWEF, are disposed in the MSW cell. If the non-processible bulky waste is combustible, the material is directed to the landfill's Solid Waste Processing Area (SWPA) where it is mechanically refined, and subsequently transported to the OWEF for further processing.

In order to help ensure the safe and environmentally-protective processing of industrial solid wastes, several safeguards are incorporated into facility operational procedures. Careful evaluation of potential industrial solid waste streams is a critical step. The MPCA must review and approve all industrial solid waste management procedures. In addition, air emissions, combustor ash quality, and wastewater are frequently monitored to determine the actual environmental impacts. Having site-specific permits, submitting quarterly reports, and undergoing periodic MPCA inspections also aid in proper management of industrial solid waste at the facility.

The OWEF has received authorization to burn limited amounts of infectious waste. The OWEF is the alternative infectious waste disposal facility for the Mayo Clinic Hospital/Medical/Infectious Waste Incinerator (HMIWI) and periodically receives non-hazardous infectious waste from Mayo Clinic facilities. The OWEF has an approved Infectious Waste Management Plan in effect, and operators are trained in the proper management of infectious waste. No storage of infectious waste occurs at the OWEF. (Infectious waste management methods are addressed in category 15, Section 5.0 of Part I of this Plan)

2.2. Description of the Olmsted County Kalmar Landfill

Olmsted County operates a landfill under MPCA Solid Waste Management Permit No. SW-355 in Kalmar Township. The facility is comprised of separate disposal areas for combustor ash, MSW, and construction and demolition debris. The Olmsted County Solid Waste Management Plan (SWMP) and this Plan govern which wastes are accepted in each disposal area. Landfill operators are trained to recognize unacceptable wastes and to deny disposal as necessary. Approved industrial solid waste is deposited in the MSW cell, with the exception of combustor ash which is disposed in the combustor ash monofill. As mentioned previously, the landfill accepts bulky wastes that are difficult or impossible to process at the OWEF, including bulky combustible wastes (per the specific industrial waste management procedures in category 33), which are processed in the SWPA prior to resource recovery at the OWEF, and non-combustible inert wastes, which are accepted per the specific industrial waste management procedures in category 27 of this Plan.

The Olmsted County Kalmar Landfill site was chosen to minimize the environmental risks associated with waste disposal. Hydrogeologic conditions and an Environmental Monitoring System (EMS) enable adequate monitoring of the site should a release occur. Additionally, the site has 60 to 100 feet of dense clay underlying it, which should attenuate the impacts of any potential leachate release. A Contingency Action Plan (CAP), describing actions to be taken in the event of contaminant releases or other events requiring remedial action, has been developed for the site. The feasibility of corrective actions has also been evaluated as part of the CAP.

The MSW cells are designed with a single-composite liner (4 feet of clay, 60 mil thickness of high density polyethylene [HDPE], and 1 foot of sand) and a leachate collection system. Operations of the MSW disposal area began in July of 1991. The combustor ash cells are designed with a double-composite liner (at least 2 feet of clay, 60 mil HDPE, drainage geonet, 2.5 feet of clay, 60 mil of HDPE, and 1 foot of sand), a secondary collection system, and a leachate collection system. Operations in the ash disposal area began in October 1992. Leachate collected from the combustor ash and MSW cells is treated at the Rochester Water Reclamation Plant (RWRP).

The demolition and construction debris cells do not have an engineered liner above the natural clays. Landfill operators carefully inspect each waste load to ensure only inert, non-hazardous debris are accepted. Operations of the demolition and construction debris cells began in October of 1990. Industrial solid waste is not accepted in the demolition and construction debris disposal area.

The hydrogeologic setting, the ability to thoroughly monitor the site, the liner designs, the CAP, and this ISWMP together combine to minimize the risks associated with solid waste disposal operations at the landfill, including the acceptance of industrial solid waste.

2.3. Description of the Olmsted County Recycling Center (OCRC)

The OCRC is designed to process, sort, transfer and store solid waste, recyclables, and demolition debris. The facility is located on the same campus as the OWEF on the east side of Rochester. The OCRC accepts processable industrial solid waste loads for the OWEF from small businesses that self-haul their waste, and for loads that require a loading dock for unloading their waste material. The facility transports and disposes the processable industrial solid waste directly to the OWEF.

2.4. Acceptable and Unacceptable Wastes

Olmsted County has developed an Integrated SWMP to assure delivery of waste to the most appropriate solid waste management facility. Table 1 provides a summary of the solid waste management methods currently employed by Olmsted County. A summary of unacceptable wastes, problem materials, special wastes, and their preferred disposal options is provided in Table 2. This list is a compilation of state-mandated waste disposal prohibitions and facility-specific limitations needed for operational considerations. This list is updated on an as-needed basis to incorporate federal, state, and local regulatory changes. Any unknown waste delivered for disposal that is not appropriately characterized will be rejected at the scale house. These unknown wastes are returned to the generator or transporter for proper identification and management.

2.5. Operator Training

Olmsted County's landfill operators and OWEF shift supervisors are MPCA-certified within their respective job duties. At least one staff person holding the appropriate certification is on-site at all times. Additionally, all facility operators are trained to identify unacceptable wastes and conduct on-site inspections. Periodic site inspections and operator re-certification are required by state regulations and the facilities' operational permits.

3.0 INDUSTRIAL SOLID WASTE MANAGEMENT PROCESS

3.1. Notification Procedure

3.1.1. Transporter/Generator Notification

Licensed solid waste transporters and certain generators who have historically disposed of industrial solid waste at an Olmsted County solid waste management facility will be notified of ISWMP updates. If significant changes specific to a certain industry are made, notices will be provided directly to those affected parties.

In addition, as part of the application process for licensees and registrants, licensed solid waste transporters are required to sign a declaration stating that they understand all the appropriate ISWMP requirements and will not deliver unacceptable wastes to any County owned or operated solid waste management facility.

If requested, generators and transporters of industrial solid waste may receive one hard copy of the ISWMP at no cost. Additional copies will be available at the standard per page cost. The ISWMP will also be available online at www.olmstedwaste.com under the "Industrial Solid Waste" subcategory.

3.1.2. Liaison with Other Governmental Entities

Affected governmental entities, particularly the Olmsted-Dodge County Joint Powers Board and the Dodge County Environmental Quality Department staff, will be kept informed of significant ISWMP changes to assure consistency with their mutual interests.

3.2. Industrial Solid Waste Evaluation Process

Olmsted County evaluates each industrial solid waste proposed for disposal. The request for disposal will be reviewed as quickly as possible by County personnel. The goals of the ISWMP are to: 1) ensure industrial solid wastes proposed for disposal at an Olmsted County solid waste management facility are non-hazardous; 2) are managed in accordance with federal and state laws, rules, regulations and guidelines; and 3) are managed at the most appropriate County solid waste management facility. The evaluation process is presented in Figure 1 and follows the five steps described below. Information submitted to Olmsted County under this program will be treated as non-public data.

3.2.1. Step 1 – Application

A waste generator typically makes an initial request for disposal by way of correspondence by mail, email or by phone. Initial requests can be made by calling the Olmsted County Environmental Resources Department at 507-328-7070 and asking for the Environmental Analyst or by submitting a request to:

Olmsted County Environmental Resources Department
Attn: Environmental Analyst
2122 Campus Drive SE - Suite 200
Rochester, MN 55904-4744

Once the initial contact has been made, the industrial solid waste generator will be required to submit a complete, signed Industrial Solid Waste Evaluation Form. Additionally, if applicable, Material Safety Data Sheets (MSDSs) appropriate to each waste type should be submitted to Olmsted County, along with any analytical data confirming the physical and chemical characteristics of the waste. When all appropriate waste information has been submitted, it is reviewed by Olmsted County staff for completeness and accuracy. Any incomplete forms will be returned to the generator, and requests for additional information will be made as necessary.

3.2.2. Step 2 - Physical Evaluation

When sufficient information on the waste type is available, the physical characteristics of the waste are evaluated to determine if the physical state of the material is compatible with facility operations. If it is not, the waste will be rejected. During this evaluation, Olmsted County will determine the following:

- which facility is most suitable to receive the waste. In general, combustible wastes are managed at the OWEF. Non-combustible wastes and asbestos-containing materials (due to the special requirements for asbestos) are managed at the Kalmar Landfill.
- whether the waste requires any special handling, such as changes in packaging or frequency or size of delivery loads, and;
- if sufficient space or equipment is available to safely manage the waste load.

3.2.3. Step 3 - Initial Chemical Evaluation

If the chemical information provided by the generator is adequate, the chemical characteristics of the waste will be evaluated according to the criteria listed in Section 3.5 and reviewed to identify chemicals or properties of concern. More information may be requested of the generator if the information provided is deemed to be insufficient.

3.2.4. Step 4 - Analytical Data Review

If chemicals or properties of concern are present and more detailed analyses are necessary, additional analytical procedures may be required of the generator. The amount, frequency, and type of testing necessary for each waste type will vary. For waste types covered in Section 5.0 of Part I, the testing requirements listed must be followed, at a minimum. If a generator (rather than Olmsted County) makes the predetermination of which analytical methods and parameters are adequate, the analytical results must be submitted with an explanation justifying why specific analytical methods and parameters were chosen over other methods and parameters.

A generator that alone performs the collection of samples must document the sampling methods used to assure the collection of a sample that is representative of the industrial solid waste in question. The generator will be required to certify that representative samples were collected. (See the Industrial Solid Waste Evaluation Form, located in Appendix D of this Plan.) In some cases, the generator may be required to have Olmsted County staff witness the sample collection process. Additionally, Olmsted County may require that the generator provide certification by the laboratory personnel regarding the analytical method used and the results of the quality assurance and quality control (QA/QC) measures.

Once all necessary sampling and analysis information is obtained, the results will be compared to the information summarized in Appendix C. **If any of the federal or state hazardous waste limits are exceeded, or if the material is a state or federal listed waste, the waste cannot be accepted.** If the waste is hazardous, the generator must disclose that information to the MPCA in accordance with federal and state laws. The disclosure information should also be made available to Olmsted County to prevent the possibility of improper hazardous waste disposal. In accordance with Chapter 7045 of the Minnesota Administrative Rules, MPCA Hazardous Waste Division staff must be consulted if hazardous waste is generated. (See the "Basic Requirements for Businesses that Generate a Hazardous Waste" fact sheet presented in Appendix E.) Disposal is not always the only management option available for hazardous wastes; some hazardous wastes have recycling outlets while others may be treated to make them non-hazardous. Contact the regional MPCA office for more assistance. (See the "Hazardous Waste-related Contacts" fact sheet presented in Appendix E.)

For compounds listed in Appendix C that do not have hazardous waste limits, determination of acceptance will be made on a case-by-case basis, based on the criteria described in Section 3.4.

Olmsted County may request additional information at any time and will not make a final determination of acceptance until sufficient information is available. As stated earlier, Olmsted County reserves the right to sample and analyze waste, when appropriate, at the expense of the generator. Olmsted County also has the discretion to reject wastes that meet all the acceptance criteria.

3.2.5. Step 5 - Determine Management Method

If wastes listed in Section 5.0 of Part I of this Plan are accepted for disposal, the predetermined handling methods and disposal sites will be adhered to at all times. For wastes not listed in Section 5.0 of Part I, handling and disposal methods will be determined on a case-by-case basis. (If the material is a waste not identifiable as one of the categories

listed in Section 5.0 of Part I, Olmsted County will obtain approval of its proposed management method from the MPCA prior to managing the waste.)

Once an industrial solid waste is accepted for disposal at an Olmsted County solid waste management facility, the "Waste Approval" section of the Waste Evaluation Form will be completed by Olmsted County staff, and an approval number will be assigned to the waste. The approval number will be a 14-digit number consisting of the month and year the approval expires, the four-digit facility code for the selected disposal facility, the waste category code for the approved waste, and a unique generator ID number. A copy of the approved Waste Evaluation Form will be returned to the waste generator. When special handling and delivery are required, such as when multiple loads of the same approved waste material are expected to be disposed over an extended time period, an official letter describing the specific delivery requirements will also be provided. Specific delivery requirements may pertain to prior notification, delivery times, waste packaging, or other requirements to ensure the waste is managed safely and in an environmentally protective manner.

Generators of accepted industrial solid wastes will be provided with the appropriate number of Non-Hazardous Industrial Solid Waste Tracking Forms (or Non-Hazardous Infectious Solid Waste Tracking Forms for infectious wastes), which serve as manifests. Typically, Olmsted County Regulatory Compliance staff will approve the tracking form - that is, complete and sign the "Administration" section of the tracking form - and mail it to the generator. The generator is responsible for completing the "Generator" section of the tracking form prior to submitting the Olmsted County-approved tracking form to their contracted waste transporter, who must complete the "Transporter" section of the tracking form. The tracking form, must accompany the waste to the designated Olmsted County solid waste management facility. The scale house staff will verify the contents of the waste load against the information provided on the tracking form. If the waste load is acceptable, staff will complete the "Facility" section of the tracking form and return the remaining copies to the transporter. The generator will need to retrieve their final completed copy of the tracking form from their transporter. One copy of each tracking form will be kept on file at the Olmsted County Environmental Resources Department office. **All Non-Hazardous Industrial Solid Waste Tracking Forms implemented by Olmsted County for use in the Industrial Solid Waste Management Program contain unique pre-printed manifest tracking numbers (MTNs) that allow for electronic storage and retrieval of data related to individual industrial solid waste deliveries. Each unique MTN is associated with one waste shipment or delivery.**

All waste loads consisting of asbestos-containing materials (ACM) arriving at the Olmsted County Kalmar Landfill must be accompanied by an Olmsted County-approved Asbestos-Containing Material Transport and Disposal Manifest. If appropriate County personnel are present at the time of disposal, the manifest can be completed at the disposal location. Empty chemical container deliveries must be accompanied by a completed, signed Empty Chemical Container Certification of Non-Hazardous Waste Status Form and, if applicable, a completed, signed Certification of Triple Rinsing Form. Deliveries of oil-contaminated wastes must be accompanied by an approved Oil Generator Certification Form. Deliveries of decontaminated infectious waste loads must be accompanied by a Certification of Autoclave Treatment. Waste loads that may potentially contain free liquids may be required to be accompanied by an Absence of Free Liquids Certification Form. A current, approved Non-Hazardous Industrial Solid Waste Tracking Form must accompany all industrial solid waste loads arriving at either facility, unless otherwise stipulated in Section

5.0 of Part I. A current, approved Non-Hazardous Infectious Solid Waste Tracking Form must accompany all industrial solid waste loads consisting of infectious waste. Examples of the aforementioned forms are located in Appendix D of this Plan.

Olmsted County reserves the right to, on a case-by-case basis, exempt generators of the requirement to utilize tracking forms. This exemption is granted only if the wastes in question have a current, approved Waste Evaluation Form on file with the Olmsted County Environmental Resources Department; are frequently delivered; are easily identifiable; and pose little risk to human health and the environment. Waste loads exempt from tracking form requirements must nonetheless be documented in the scale house industrial solid waste operations log by recording the time and date of delivery, the transporter, the generator, and the waste quantity.

Generators whose waste is rejected will, in a timely manner, be provided with an official letter explaining the decision for rejection of the waste.

3.3. Waste Deliveries

Olmsted County Kalmar Landfill

In some circumstances, a 24 hour notification is required prior to the delivery of industrial solid waste to the Kalmar Landfill - see the special generator requirements under the various waste categories in Section 5.0 of Part I of the ISWMP. Regular operating hours for the landfill are available online at www.olmstedwaste.com under the "Landfill" subcategory. Asbestos-containing material (ACM) has specific delivery requirements (see the ACM Fact Sheet for the current disposal requirements).

Olmsted Waste-to-Energy Facility

When industrial solid waste is approved for disposal at the OWEF, Regulatory Compliance staff will determine the delivery options available to a specific generator based on the type of material to be delivered, the quantity, and only after consultation with OWEF and, if necessary, OCRC staff. Currently, industrial solid waste generators are afforded the following delivery options:

1. Hire a licensed commercial transporter to transport and deliver the waste to the OWEF;
2. Self-haul material to the OWEF if they have the proper equipment and are registered with tipping floor access.
3. Self-haul material to the OCRC if the following conditions can be met:
    i. The vehicle can pass through the OCRC vehicle lanes to access the waste roll-off boxes; and
    ii. The generator/transporter can off-load and place their waste materials into the appropriate container in a reasonable amount of time, or pay the special handling fee (as set by the solid waste management fee and service charge schedule) to have OCRC staff assist with unloading.

The following procedure will apply when self-haulers deliver industrial solid waste to the OCRC:

1. The generator/transporter will be directed to the OWEF scale house to get weighed and, if applicable, present the approved Non-Hazardous Industrial Solid Waste Tracking Form;
2. The generator/transporter is directed to the OCRC and unloads;
3. After unloading, the generator/transporter is directed back to the scale house;

4. The generator/transporter returns to the scale house to weigh out, provides payment at the OWEF rates (as set by the solid waste management fee and service charge schedule), and is given a copy of the completed ISW Tracking Form.

At this time, prior notice is typically not required for waste deliveries to the OWEF. However, some industrial solid wastes, such as infectious waste, OCRC loads, and loads that require special handling do require a prior notice - see the special generator requirements under the various waste categories in Section 5.0 of Part I of the ISWMP. Regular OWEF operating hours are available online at www.olmstedwaste.com under the "OWEF" subcategory.

Industrial solid waste loads should be separated from other wastes at the generator location, but may be combined by the transporter at the time of pickup. Special restrictions may apply to generators and transporters of industrial solid wastes who choose to combine one or more industrial solid wastes.

3.4. Criteria for Acceptance

The five criteria for acceptance presented here form the basis for decisions on whether or not to accept an industrial solid waste for disposal at an Olmsted County solid waste management facility. **Meeting all criteria does not guarantee that an industrial solid waste will be accepted.** The criteria for acceptance are:

1. Not a Listed Unacceptable Waste Type - If the industrial solid waste is not an unacceptable waste as identified in Section 2.3 of Part II, it may be considered for industrial solid waste disposal. If the industrial solid waste is an unacceptable waste, please consult with Olmsted County staff for assistance with determining the proper method of management.

2. Leachate Treatability - Since leachate generated at the Kalmar Landfill is treated at the RWRP, industrial solid wastes potentially destined for disposal at the landfill will be evaluated regarding their potential to disrupt treatment processes or resulting sludge quality. The RWRP has strict discharge limits, as presented in Table 3. During the evaluation process, the potential impact of the waste on leachate quality will be considered, given the historical concentrations of the parameters listed. The volumes and leaching ability of the compounds will also be considered. Rejection of a waste based on this criterion will be the result of a determination that the waste will likely increase the concentrations of compounds and/or elements listed in Table 3 to the extent that the leachate may not be acceptable at the treatment plant.

3. Liner Compatibility – Cells in the MSW disposal area are constructed with a synthetic HDPE liner. There are some chemical compounds that, in sufficient concentrations, can be absorbed into the synthetic liner and cause softening and breakdown, affecting its long-term strength properties. In general, the liner may be oxidized by the action of strong oxidizing agents under acidic conditions. Specific compounds of concern include, but are not limited to:

    - aldehydes
    - aromatic and aliphatic hydrocarbons
    - ethers
    - halogenated hydrocarbons

- ketones
- acids
- peroxides

Liner manufacturers recommend limiting the concentrations of these compounds to 1,500 milligrams per liter (parts per million) for long-term exposure. The presence of these compounds, as determined by leaching tests, does not result in mandatory rejection of the waste. Instead, Olmsted County will more closely evaluate the waste, taking into account the concentrations, volumes, and leaching characteristics of the compounds of concern, as well as the concentrations of the compounds encountered in the leachate generated at the facility, and the amount of dilution estimated. Rejection based on this criterion is the result of a determination by Olmsted County that the waste may accelerate the long-term degradation of the liner system.

4. Air Quality Impacts - For industrial solid wastes considered for acceptance at the OWEF, the potential impacts on the quality of air emissions must be considered. Currently, Olmsted County must monitor for the compounds listed in Table 4. During the evaluation process, the potential effect of wastes containing these compounds on emissions will be considered in relation to the levels of emissions currently generated, the volume of the waste, and the frequency of delivery. In some instances, it may be deemed advantageous to reduce the delivery amounts, and /or delivery frequency, to minimize potential detrimental effects on the OWEF air emissions.

   Rejection based on this criterion is the result of a determination by Olmsted County that the waste may adversely impact the quality of air emissions from the OWEF.

5. Management Methods - Waste characteristics will be reviewed to assure that safe, reasonable management methods are available. The factors to be considered are employee health and safety, environmental protection, availability and capability of equipment, the potential for accidents, and the availability of space to manage the waste material. The frequency of loads and method of packaging will also be considered. Rejection based on this criterion is the result of a determination by Olmsted County that a safe and reasonable management method is not available.

3.5. Re-evaluating /Recertifying Waste

After initial approval, each waste type **must** be re-evaluated whenever a change in the raw materials and/or manufacturing process occurs that may affect the waste characteristics. **The industrial solid waste generator is obligated to immediately notify Olmsted County in the event that this should occur.** The purpose of re-evaluating the waste is to confirm that the waste remains non-hazardous and continues to meet all the criteria for acceptance. Unless special circumstances exist, Olmsted County generally requires that industrial solid waste generators re-evaluate their industrial solid waste every six (6) years. More frequent re-evaluations - including analytical testing, if deemed necessary - may be required if wastes exhibit changes in composition. In addition, Olmsted County will periodically require that industrial solid waste generators provide Olmsted County with a written statement, in the form of a completed, signed re-certification form, attesting to the fact that the raw materials and manufacturing process used in the generation of the waste remain unchanged since the submittal of the initial evaluation form. Every three (3) years, Olmsted County requires solid waste generators to re-certify that the raw

materials and manufacturing process used in the generation of the waste remain unchanged. Please see Appendix D of this Plan for a copy of the Re-Certification Form.

3.6. Construction and Demolition Debris

Olmsted County operates a demolition debris cell at the Kalmar Landfill which does not have an engineered liner and therefore is not capable of efficiently preventing contaminants from entering the groundwater. Therefore, only chemically inert materials such as concrete, glass, etc., can be accepted without adverse groundwater impacts. Industrial solid waste is not accepted in the demolition debris disposal area. Minnesota Administrative Rules, part 7035.0300, subpart 30, defines demolition debris as:

Solid waste resulting from the demolition of buildings, roads, and other man-made structures including concrete, brick, bituminous concrete [i.e., asphalt], untreated wood, masonry, glass, trees, rock, and plastic building parts. Demolition debris does not include asbestos wastes.

Construction debris differs from demolition debris and cannot be handled in the same manner. **All** adhesives, paints, cleaners, solvents, and other materials containing organic compounds must be separated from other inert wastes because these compounds can readily leach from the waste material into the groundwater. Many construction wastes may be accepted at the OWEF. Additionally, corrugated cardboard must be separated at the job site and recycled, as required by the Olmsted County Solid Waste Ordinance. Materials not accepted in the demolition cell are listed in Tables 1 and 2 of this Plan, as well as in the *Olmsted County Kalmar Landfill Demolition Debris Disposal Area* fact sheet, included in Appendix E.

3.7. Waste Inspections

Olmsted County conducts inspections of industrial solid waste loads destined for disposal at the OWEF and the landfill to ensure the waste materials are consistent with the conditions of approval. All materials are initially inspected upon entry to the facility. Random operator inspections are regularly conducted to ensure compliance. Inspections will generally be completed in the following manner:

1. Initial Inspections at the Scale House - The primary purpose of the inspection is to review the documentation necessary for entry to the site. All transporters must generally present a current, approved tracking form upon arrival. Additional documentation may also be required (see the documentation requirements under the various waste categories in Section 5.0 of Part I of the Plan). This initial inspection will be conducted by Olmsted County scale house staff during vehicle weighing and check-in. The waste type, quantity, packaging requirements, and general physical characteristics must be verified. If additional inspection is necessary, the scale house operator will contact a facility operator to more fully inspect the waste.

   Those transporters having the appropriate documentation will be allowed to proceed to the tipping floor or active working area at the landfill. Those transporters that do not have adequate information, or that have waste load inconsistencies, will be informed that their waste loads will not be accepted until adequate information is provided. It is the responsibility of the generator and/or transporter to provide the information requested.

2. Random Operator Inspections - Olmsted County staff will conduct random inspections of waste loads at the landfill working area and on the OWEF tipping floor to assure compliance

with the Plan's objectives. Facility operators are trained to inspect loads and identify inconsistencies with load descriptions. Site operators are able to verify with Olmsted County scale house staff the anticipated load qualities and quantities. Inconsistencies or the discovery of unacceptable wastes will be brought to the attention of the transporter, the generator, and the facility manager.

Discrepancies are noted on the tracking form and/or the scale house industrial solid waste log. Olmsted County may reject the waste materials and/or contact the transporter and/or generator for additional information. If rejected, the waste may be repackaged and returned to the appropriate party at the generator's expense. If any hazardous waste is discovered, the Landfill Supervisor, Operations Manager, Solid Waste Operations Manager or Assistant Solid Waste Operations Manager must immediately be notified. The South-East Regional MPCA Hazardous Waste Specialist will also be notified in the event that hazardous waste is discovered.

3.8. Record Keeping and Documentation

Olmsted County tracks and documents all incoming industrial solid waste loads through the use of waste inventory and evaluation forms, tracking forms and manifests, certification forms, approval letters specifying delivery and handling requirements, rejection letters, operations logs, and a comprehensive industrial solid waste database. All documentation is centrally located in the Olmsted County Environmental Resources Department office.

Additionally, at Olmsted County Kalmar Landfill, the disposal location of industrial solid waste and ACM loads are surveyed. The types and volumes of industrial solid waste and ACM disposed at the landfill are summarized in monthly reports developed by the Olmsted County Finance Department. The annual operations report for the landfill includes a map of the site that identifies the industrial solid waste and ACM disposal locations, and the total quantity of industrial solid waste accepted during the reporting year.

At the OWEF, generator information, amount, and description of industrial solid waste received is summarized in monthly reports developed by the Olmsted County Finance Department. The OWEF annual operations report includes the total quantity of industrial solid waste accepted during the reporting year.

3.9. Responsibility for Laboratory Results

It is the responsibility of the industrial solid waste generator to supply Olmsted County with accurate information needed to appropriately evaluate a waste. The generator is responsible for ensuring that samples submitted for laboratory analysis are representative of the waste in question. The generator will be asked to certify that a representative sample was collected on the Waste Evaluation Form.

The generator is further responsible for obtaining all laboratory data requested by Olmsted County. In certain cases, Olmsted County may request that the generator supply additional information or supply information from laboratories regarding quality control. Olmsted County has the right to challenge the validity of analytical results and will not compensate the generator for duplicate tests or quality control checks unless the initial analytical results are verified. All laboratory data must be certified by the laboratory as to the accuracy and methods used. As a courtesy, a list of regional laboratories that, at the time this Plan update was developed, conduct waste characterization analyses is included in Appendix B of this Plan. This list does not

TABLE 1

OLMSTED-DODGE INTEGRATED SOLID WASTE MANAGEMENT SYSTEM (ISWMS)

FACILITY	MATERIALS ACCEPTED
Olmsted County Hazardous Waste Facility	Potentially hazardous materials such as solvents, gasoline, auto products, lawn and garden products, painting and hobby supplies, etc. from households and Very Small Quantity Generators (VSQGs).
Olmsted County Recycling Center Plus	Clear, green, brown glass bottles and jars; corrugated cardboard; boxboard; aluminum; newspapers, magazines, mixed paper; tin cans; empty aerosol and metal paint cans; plastic bottles with a neck; ferrous metals; and universal wastes.
Olmsted Waste-to-Energy Facility (OWEF)	General household, commercial, and industrial solid waste.
Olmsted County Kalmar Landfill: Ash Monofill Cell	The ash that remains after municipal solid waste, industrial solid waste, medical waste, or coal is incinerated.
Olmsted County Kalmar Landfill: MSW Cell	Non-processible and non-combustible materials; asbestos; industrial solid waste; municipal solid waste bypassed from the OWEF.
Olmsted County Kalmar Landfill: Demolition Debris Cell	Materials resulting from the demolition of buildings, roads, and other man-made structures, including concrete, brick, asphalt, untreated wood, masonry, glass, rock, and plastic building parts. **Excludes:** Asbestos, tar and adhesive pails, paint pails, caulking tubes, appliances, garbage, brush, corrugated cardboard, treated wood, tires, and carpet.
Olmsted County Yard Waste Compost Site	Leaves and grass clippings; holiday trees are collected between December 26 and March 31, and typically are chipped in early April.

TABLE 2

UNACCEPTABLE WASTES, PROBLEM MATERIALS, AND SPECIAL WASTES

The acceptability of a solid waste at any particular Olmsted County solid waste management facility is determined by multiple factors, including federal, state, and local laws, rules, regulations, and ordinances; facility operational considerations; source of the waste; and Olmsted County internal policies. Due to the fact that Olmsted County residents enjoy the advantage of an integrated solid waste management system that includes multiple solid waste management facilities, there are local management options for almost every type of solid waste, and only a few wastes are categorically unacceptable. In the table below, for each listed waste category, an "**X**" marks which Olmsted County solid waste management facility **CAN** manage the waste. Where more than one facility is marked, the preferred order of options is 1) recycling at the Olmsted County Recycling Center *Plus*, 2) composting at the Olmsted County Compost Site, 3) energy recovery at the Olmsted Waste-to-Energy Facility (OWEF), and 4) land filling at the Olmsted County Kalmar Landfill. A blank box in a column indicates where the waste is **NOT** acceptable. If no "**X**" marks are shown for a given waste, it is prohibited from all Olmsted County-owned and-operated solid waste management facilities. In these cases, a reference may be provided for alternative management options. *A cautionary note: waste acceptance at the Hazardous Waste Facility (HWF) may be limited by the program authority governing the waste (Household Hazardous Waste, Very Small Quantity Generator, Agricultural Pesticides, and Universal Wastes). An "X" in these cases means the waste may be acceptable, depending on the waste source, since each program serves a specific clientele. Non-qualifying entities generating unacceptable hazardous wastes will be provided guidance in contacting a private licensed hazardous waste management vendor.* ***Please contact the Olmsted County Department of Environmental Resources at 507-328-7070, or via email at pwservice@co.olmsted.mn.us for hazardous waste disposal guidance.***

WASTE TYPE: Waste-specific information [Reference to Industrial Solid Waste Management Plan (ISWMP), federal and state laws and regulations, and/or local ordinances, if applicable]	**OWEF (1)**	**Recycling Center *Plus* (2)**				**Kalmar Landfill (3)**			**Compost**	**HWF (4)**
		Brush	**RC**	**CC**	**NCC**	**Ash**	**MSW**	**Demo**		
animal remains and carcasses: if approved according to the ISWMP (5) [ISWMP Category 26]					X (6)		X			

(1) The Olmsted Waste-to-Energy Facility (OWEF) operates under an MPCA-issued Air Emission Facility Permit.
(2) Brush: Brush Container; RC: Recyclables Container; CC: Combustibles Container; NCC: Non-Combustibles Container.
(3) The Olmsted County Kalmar Landfill has three different waste disposal cells: an ash monofill cell (Ash); a municipal solid waste (MSW) cell; and a demolition and construction debris cell.
(4) In cases where the waste evaluation identifies the waste as hazardous, the Hazardous Waste Facility (HWF) may potentially manage the waste.
(5) ISWMP = Non-Hazardous Industrial Solid Waste Management Plan.
(6) Household quantities or deliveries less than one cubic yard.
(7) Incidentally received waste that is commingled with MSW.
(8) If delivered in accordance with the Department of Environmental Resource's industrial solid waste delivery policy, in limited quantities, and on a case-by-case basis.
(9) Waste is to be placed in the demolition debris box or as otherwise directed by facility staff.
(10) Accepted at the Olmsted County Compost Site at no charge during the period of January 1st through March 31st.
(11) The Mayo Clinic Hospital Medical Infectious Waste Incinerator (HMIWI) is the preferred disposal option. Mayo Clinic HMIWI staff may be reached at 507-284-9400.
(12) Bulky items greater than 3ft. x 3ft. x 3ft. only. The Kalmar Landfill will accept only bulky, inert items that do not release blood, body fluids, or other infectious materials when compressed.
(13) Residential paint waste may be brought to the demolition debris cell only if it is still attached to the elements removed from the structure of a residence.
(14) OWEF facility-generated quantities only.
(15) Only fiberglass resins will be deposited in the MSW cell.
(16) Retailers selling pressure vessels may take back unvented tanks for ventilation and recycling. Alternatively, vented tanks may be managed at the recycling center or MSW cell at Kalmar Landfill.
(17) Incidentally received waste is accepted at nominal 5 foot length or less and is commingled with MSW.
(18) Incidentally received tires less than 20 inches without rims placed in CC. Tires greater than 20 inches or with rims placed in NCC.
(19) Or can be accepted for processing at the Kalmar Landfill Solid Waste Processing Area.

WASTE TYPE: Waste-specific information [Reference to Industrial Solid Waste Management Plan (ISWMP), federal and state laws and regulations, and/or local ordinances, if applicable]	OWEF (1)	Recycling Center *Plus* (2)				Kalmar Landfill (3)			Compost	HWF (4)
		Brush	RC	CC	NCC	Ash	MSW	Demo		
appliances, major: includes clothes washers and dryers, dishwashers, hot water heaters, heat pumps, furnaces, garbage disposals, trash compactors, conventional and microwave ovens, ranges and stoves, air conditioners, dehumidifiers, refrigerators and freezers. This includes removal of capacitors and ballasts that may contain PCBs, removal of CFC refrigerant gas, and recycling or reuse of metals, including mercury. [MN Stat. 115A.9561, 115A.03 (17a), 115A.552, 116.731]			X							
asbestos-containing materials: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 2]							X			X (6)
ash, combustion: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 8, Kalmar Landfill Solid Waste Management Facility Permit]						X				
automobile parts: includes gasoline tanks, engine blocks, drive shafts, etc. [Olmsted County Ordinance #10]			X							
batteries, automotive: spent or unspent lead acid [MN Stat. 115A.915]			X							X
batteries, dry cell: containing mercuric-oxide, silver-oxide, or nickel-cadmium electrodes; sealed lead-acid batteries; rechargeable batteries or battery packs; and products with non-removable battery packs [MN Stat. 115A.9155, 115A.9157]										X
brush and tree debris: [MN Stat. 115A.931, OWEF Air Emission Facility Permit, Olmsted County Ordinance #10] Generators are encouraged to contact a brush recycler. Contact your city or township officers – rural burning may be permitted if a DNR permit is obtained.	X (17)			X (17)	X (7)		X (19)			

(1) The Olmsted Waste-to-Energy Facility (OWEF) operates under an MPCA-issued Air Emission Facility Permit.
(2) Brush: Brush Container; RC: Recyclables Container; CC: Combustibles Container; NCC: Non-Combustibles Container.
(3) The Olmsted County Kalmar Landfill has three different waste disposal cells: an ash monofill cell (Ash); a municipal solid waste (MSW) cell; and a demolition and construction debris cell.
(4) In cases where the waste evaluation identifies the waste as hazardous, the Hazardous Waste Facility (HWF) may potentially manage the waste.
(5) ISWMP = Non-Hazardous Industrial Solid Waste Management Plan.
(6) Household quantities or deliveries less than one cubic yard.
(7) Incidentally received waste that is commingled with MSW.
(8) If delivered in accordance with the Department of Environmental Resource's industrial solid waste delivery policy, in limited quantities, and on a case-by-case basis.
(9) Waste is to be placed in the demolition debris box or as otherwise directed by facility staff.
(10) Accepted at the Olmsted County Compost Site at no charge during the period of January 1st through March 31st.
(11) The Mayo Clinic Hospital Medical Infectious Waste Incinerator (HMIWI) is the preferred disposal option. Mayo Clinic HMIWI staff may be reached at 507-284-9400.
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WASTE TYPE: Waste-specific information [Reference to Industrial Solid Waste Management Plan (ISWMP), federal and state laws and regulations, and/or local ordinances, if applicable]	OWEF (1)	Recycling Center *Plus* (2)				Kalmar Landfill (3)			Compost	HWF (4)
		Brush	RC	CC	NCC	Ash	MSW	Demo		
carbon filters, spent: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 12]	X			X (8)			X (19)			X (4)
carpet and carpet padding: generators are encouraged to contact a carpet retailer or installer for recycling outlets.	X			X			X (19)			
cathode ray tubes (CRTs): [MN Stat. 115A.9565]			X							
chemical containers, empty: includes aerosol cans, and containers for adhesives, oil, petroleum-based products, paint, and tar; disposal location to be determined based on the container material; if approved according to the ISWMP [40 CFR 261.7, ISWMP Category 1]	X		X	X (8)			X (19)			
chlorofluorocarbons: [MN Stat. 115A.9561, 116.731]										X
confiscated plant-form drugs, law enforcement:	For assistance, contact the Minnesota Pollution Control Agency at 1-800-657-3864.									
contaminated soils: if approved according to the ISWMP [ISWMP Category 13]							X			
construction wastes: [Olmsted County Ordinance #10, Kalmar Landfill Solid Waste Management Facility Permit]	X		X	X	X		X (19)	X		
corrugated cardboard: disposal should be considered only if recycling is not possible due to contamination or reinforcement with non-recyclable material such as wood or expanded polystyrene [Olmsted County Ordinance #10]	X		X	X			X (19)			
cosmetics: if approved according to the ISWMP [ISWMP Category 32)	X			X (8)			X			
demolition debris: [Olmsted County Ordinance #10, Kalmar Landfill Solid Waste Management Facility Permit]					X (9)			X		
electrical ballasts and capacitors, PCB-containing: [MN Stat. 115A.9561]										X

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		Brush	RC	CC	NCC	Ash	MSW	Demo		
electronic component waste: if approved according to the ISWMP [ISWMP Category 19]	X		X	X (8)			X			X
fire-damaged structural debris: if household hazardous waste/commercial hazardous chemicals are removed, and all appliances (e.g., washers, dryers, refrigerators, water heaters, etc.) are retrieved prior to disposal							X			
fluorescent tubes and high intensity discharge lamps: [MN Stat. 115A.932]										X
food waste: if approved according to the ISWMP [ISWMP Category 25]	X			X (8)			X (19)			
foundry wastes: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 7]							X (19)			
furniture, large: includes large bulky items that may contain metal, such as hide-a-beds, recliners, and all mattresses and box springs; if approved according to the ISWMP [Olmsted County Ordinance #10, ISWMP Category 33]			X		X		X (19)			
furniture, small: includes smaller combustible furniture items [Olmsted County Ordinance #10]	X			X			X (19)			
glass, laminated: includes automotive or structural windows [Olmsted County Ordinance #10]					X		X			
glass, non-laminated: includes structural windows [Olmsted County Ordinance #10]					X		X	X		
glass, non-recyclable: if approved according to the ISWMP [ISWMP Categories 22 and 27]					X		X			
hazardous waste: if approved by the HWF [MN Stat. 116.06, MN Rules 7045]										X

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		Brush	RC	CC	NCC	Ash	MSW	Demo		
holiday trees, natural: all ornaments must be removed [Olmsted County Ordinance #10]	X (17)			X (17)	X (7)		X (19)			
industrial solid waste, non-hazardous: generated as a result of industrial processes, such as from manufacturing, service, or commercial establishments; if approved according to the ISWMP [MN Rules 7001.3300, 7011.1250, 7035.0300, 7035.2535, ISWMP]	X			X (8)			X (19)			
infectious waste: if approved according to the ISWMP [ISWMP Categories 15 and 27, OWEF Infectious Waste Management Plan]	X (11)						X (19)			
ink sludges, solvents, and related clean-up materials: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 14]	X			X (8)			X			X
large combustible items: if approved according to the ISWMP [ISWMP Category 33, Olmsted County Ordinance #10]					X		X (19)	X		
large metal items: if approved according to the ISWMP [ISWMP Category 27, Olmsted County Ordinance #10]			X		X		X	X		
lead paint waste: [MN Stat. 116.875, 116.88, ISWMP Category 9]					X (9) (13)		X	X (13)		X
liquid waste, non-hazardous:	Contact your local water reclamation plant or septage hauler.									
machining wastes: if approved according to the ISWMP [ISWMP Category 17]	X		X	X (8)			X (19)			X
mercury-containing materials: includes dental mercury, thermostats, thermometers, electric switches, appliances, medical/ scientific instruments, mercury switches, relays, thermocouples, manometers, gauges, and metallic mercury; if approved by the HWF [MN Stat. 115A.932, 116.92]										X

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		Brush	RC	CC	NCC	Ash	MSW	Demo		
mining wastes: [MN Stat. 115A.03]	For assistance, contact the Minnesota Pollution Control Agency at 1-800-657-3864.									
mixed municipal solid waste (MMSW): i.e., "garbage" [OWEF and Kalmar Landfill Solid Waste Management Facility Permits]	X			X	X		X			
motor vehicle fluids and filters: includes brake, power steering, and transmission fluids, and antifreeze [MN Stat. 115A.916]										X (no motor oil)
oil-contaminated waste: if approved according to the ISWMP [ISWMP Category 21]	X			X (8)	X		X (19)			X (4)
oil, used motor: if approved according to the ISWMP [ISWMP Category 21, MN Stat. 115A.916]	X (14)									
out-of-state solid waste: acceptable on a case-by-case basis; and only if the waste meets the solid waste regulations of the state in which it was generated, and excludes wastes specifically banned from MSW in Minnesota [MN Stat. 115A.935]	Call the environmental agency in the state in which the waste was generated.									
paint residues, filters, and dust: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 9]	X			X (8)			X			X (4)
paints, solvents, gasoline, other flammable liquids, and combustible or ignitable wastes: [MN Rules 7035.2535 and 7045, ISWMP, OWEF Air Emission Facility Permit]										X
pesticides, insecticides, poisons, and other related toxic materials: [MN Rules 7045]										X
pharmaceuticals:	For assistance, contact the Minnesota Pollution Control Agency at 1-800-657-3864.									
photographic negatives, X-rays, and their fixing solutions: [Olmsted County Ordinance #10]										X

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		Brush	RC	CC	NCC	Ash	MSW	Demo		
plastics, non-recyclable: if approved according to the ISWMP [ISWMP Category 24]	X			X (8)			X (19)			
polychlorinated biphenyls (PCBs): if approved according to the ISWMP [ISWMP Category 3, MN Rules 7035.2535 and 7045]	X			X (8)			X			X (4)
radioactive waste: [MN Stat. 116C.852]	For assistance, contact the Minnesota Pollution Control Agency at 1-800-657-3864.									
recyclable materials, source-separated: includes, at a minimum, newsprint, white office paper, magazines, tin, plastic containers (#1 and #2 only), glass containers, aluminum containers and scrap, clean corrugated cardboard, and mixed paper (commercial generators only) [MN Stat. 115A.95]			X							
rendering and slaughterhouse wastes: [ISWMP Category 5]	For assistance, contact the Minnesota Pollution Control Agency at 1-800-657-3864.									
resins, cured: includes epoxy, fiberglass, urethane, and polyurethane resins; if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 11]	X (not fiberglass)			X (8) (not fiberglass)			X (15)			X
sharps, household: [Olmsted County Ordinance #10]										X
shingles: [Olmsted County Ordinance #10]					X (9)		X	X		
sludges: if approved according to the ISWMP [MN Stat. 115A.03, MN Rules 7035.2535, ISWMP Category 10]	X			X (8)			X			X
spilled non-hazardous material: if approved according to the ISWMP [MN Rules 7035.2535, ISWMP Category 4]	X			X (8)			X			
steel banding: [Olmsted County Ordinance #10]			X		X		X	X		
street-related waste: if approved according to the ISWMP [MN Stat. 115A.03, ISWMP Category 31]							X			
telephone books: [MN Stat. 115A.951]			X							

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		Brush	RC	CC	NCC	Ash	MSW	Demo		
tires: if approved according to the ISWMP [MN Stat. 115A.904, OWEF Air Emission Facility Permit, ISWMP Category 23]	X (7)			X (18)	X (18)		X (19)			
treated wood: if approved according to the ISWMP [Olmsted County Ordinance #10, ISWMP Category 16]	X (7)				X		X (19)			
vented tanks and pressurized vessels: [Olmsted County Ordinance #10]			X (6)				X (19)			X (only small propane canisters)
yard waste, uncontaminated: grass and leaves [MN Stat. 115A.931, Olmsted County Ordinance #10]	X (7)								X	

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TABLE 3

Leachate Disposal Limits[(1)]
Rochester Water Reclamation Plant (RWRP)

PARAMETER	DISCHARGE LIMIT (mg/L)
Arsenic	0.14
Cadmium	0.26
Chromium	1.71
Copper	1.0
Cyanide	0.65
Lead	0.43
Mercury	0.009
Molybdenum	1.43
Nickel	2.38
Selenium	0.44
Silver	0.24
Zinc	1.48
Total Toxic Organic compounds	2.13

(1) As set forth in the Olmsted County Kalmar Landfill's RWRP Industrial Discharge Permit (No. 14N-17)
mg/L = milligrams per Liter

TABLE 4

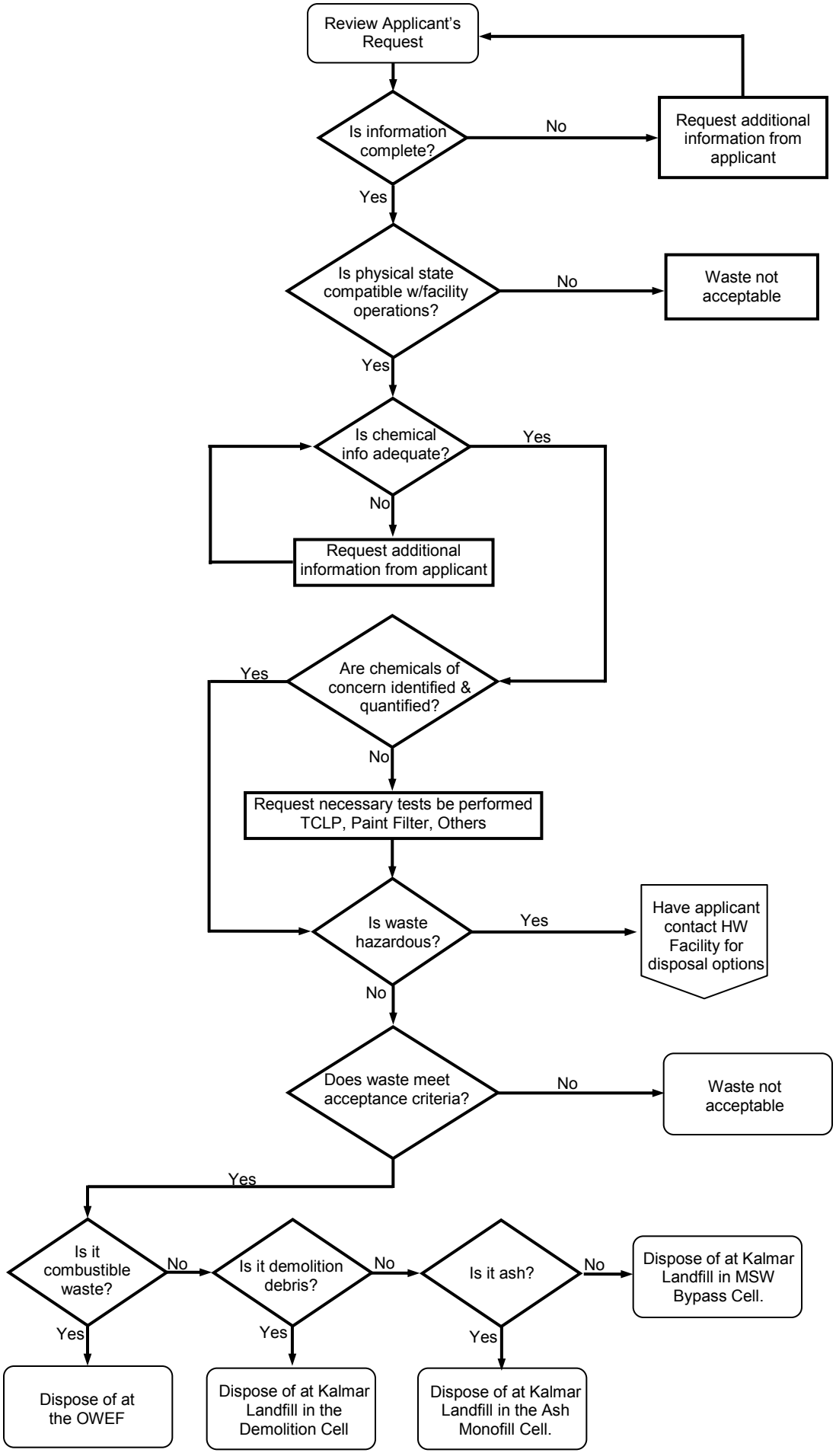
Air Quality Emission Limits
Olmsted County Waste-to-Energy Facility (OWEF)

Municipal Waste Combustor Units 1 and 2	
Parameter	**Permit Limit**
Particulate Matter Front half only (Federal)	70 mg/dscm
Particulate Matter Total (front half + organics) (MN)	0.02 gr/dscf
Dioxin/Furans	125 ng/dscm
Carbon Monoxide	100 ppm
Opacity	10%
Mercury (Federal)	0.80 mg/dscm
Mercury (short term) (MN)	0.1 mg/dscm
Mercury (long term) (MN)	0.06 mg/dscm
Cadmium	0.1 mg/dscm
Lead	1.6 mg/dscm
HCl	250 ppm
Nitrogen Oxides	500 ppm
Sulfur Dioxide	77 ppm

Municipal Waste Combustor Unit 3	
Parameter	**Permit Limit**
Particulate Matter Front half only (Federal)	24 mg/dscm
Particulate Matter Total (front half + organics) (MN)	0.02 gr/dscf
Dioxin/Furans	13 ng/dscm
Carbon Monoxide	100 ppm
Opacity	10%
Mercury (Federal)	0.80 mg/dscm
Mercury (short term) (MN)	0.1 mg/dscm
Mercury (long term) (MN)	0.06 mg/dscm
Cadmium	0.02 mg/dscm
Lead	0.2 mg/dscm
HCl	25 ppm
Nitrogen Oxides	150 ppm
Sulfur Dioxide	30 ppm

mg/dscm = milligrams per dry standard cubic meter
gr/dscf = grains per dry standard cubic foot
ng/dscm = nanogram per dry standard cubic meter
ppm = parts per million

Figure 1
Waste Evaluation Decision Tree
Olmsted County



APPENDICES

APPENDIX A

APPLICABLE MINNESOTA REGULATIONS

7001.3300. GENERAL INFORMATION REQUIREMENTS FOR FINAL APPLICATION.

Item B. [The application must contain] an industrial waste management plan in accordance with part 7035.2535, subpart 5, to include a description of the waste types to be handled at the facility and the quantities of each waste type including a procedure for determining the analyses necessary to treat, store, or dispose of the waste properly in accordance with parts 7035.2525 to 7035.2885. Municipal solid waste combustor ash land disposal facility applications must explain how the owner or operator will ensure that industrial wastes other than wastes specifically approved by the commissioner in accordance with part 7035.2885, subpart 3, will not be disposed of at the facility.

7011.1250. INDUSTRIAL SOLID WASTE MANAGEMENT PLAN.

Subpart 1. Preparation of industrial waste management plan. The waste combustor owner or operator shall prepare a plan for the management of industrial solid wastes in accordance with part 7035.2535, subpart 5, items A and B. The plan must also include the contents listed in subpart 2. The owner or operator shall submit the plan to the commissioner with the waste combustor's permit application.

Subpart 2. Contents of plan. The plan must address how the following additional categories of solid waste will be managed to comply with the requirements of part 7035.2535, subpart 5, item A, subitems (2) to (4), as well as state whether each of the following solid wastes will be accepted at the facility:

A. spilled fossil fuels and the sorbents used to collect the spilled fossil fuels;
B. infectious and pathological wastes;
C. media contaminated with oil;
D. problem materials as defined in Minnesota Statutes, section 115A.03, subdivision 24a; and
E. any other solid wastes that can be identified that would adversely impact waste combustor operations or result in environmental and health problems if combusted.

Subpart 3. Modification. The owner or operator shall modify the industrial waste management plan whenever the management practices or solid wastes identified in the plan have changed. The owner or operator shall submit the amended plan to the commissioner for approval.

7035.0300. DEFINITIONS.

Subpart 45. Industrial solid waste. "Industrial solid waste" means all solid waste generated from an industrial or manufacturing process and solid waste generated from nonmanufacturing activities such as service and commercial establishments. Industrial solid waste does not include office materials, restaurant and food preparation waste, discarded machinery, demolition debris, municipal solid waste combustor ash, or household refuse.

7035.2535. GENERAL SOLID WASTE MANAGEMENT FACILITY REQUIREMENTS.

Subpart 5. Industrial solid waste management. All industrial solid waste delivered to a solid waste management facility must be managed by the owner or operator to protect human health and the environment. The industrial solid waste management plan required under part 7001.3300 must address items A to C, except that the industrial solid waste management plan for a municipal solid waste combustor ash land disposal facility need not comply with items B and C.

A. The plan must include a discussion of how the owner or operator will manage all industrial solid wastes received at the facility. The owner or operator must specify:

(1) a procedure for notifying industrial solid waste generators of the facility operating requirements and restrictions, including the requirements imposed on haulers serving the facility, the steps required of generators submitting a request for waste management, and the measures to be taken to inform haulers and generators of the facility requirements;

(2) a procedure for evaluating waste characteristics, including the specific analyses that may be required for specific wastes, and the criteria used to determine when analyses are necessary, the frequency of testing, and the analytical methods to be used;

(3) a procedure for managing the waste and for identifying any special management requirements, and the rationale for accepting or rejecting a waste based on its analysis, volume, and characteristics;

(4) a procedure for inspecting industrial solid waste as it is delivered and the rationale for accepting or requiring further information and review of previously approved and unapproved waste as it is delivered.

B. The plan must address how the following categories of waste will be managed to comply with the requirements of item A, subitems (2) to (4):

(1) empty pesticide containers;
(2) asbestos;
(3) waste containing polychlorinated biphenyls at a concentration less than 50 ppm;
(4) spilled nonhazardous materials;
(5) rendering and slaughterhouse wastes;
(6) wastes that could spontaneously combust or that could ignite other waste because of high temperatures;
(7) foundry waste;
(8) ash from incinerators, resource recovery facilities, and power plants;
(9) paint residues, paint filters, and paint dust;
(10) sludges, including ink sludges, lime sludge, wood sludge, and paper sludge;
(11) fiberglass, urethane, polyurethane, and epoxy resin waste;
(12) spent activated carbon filters; and
(13) any other wastes that can be identified.

C. The owner or operator must indicate in the plan any wastes in item B or D that will not be accepted at the facility.

D. The owner or operator need not address the following wastes in the plan:

(1) paper and cardboard wastes from manufacturing processes or packaging;
(2) food and beverage packaging and handling materials;
(3) food not containing free liquids;
(4) aluminum, iron, steel, glass, wood, and hardened, cured plastic waste;
(5) dewatered sewage sludge that meets the Class B pathogen reduction standards in part 7041.1300, subpart 3;
(6) compost including sewage sludge compost produced in accordance with part 7035.2836;
(7) grit and bar screenings from a wastewater treatment plant; and
(8) ash from boilers and incinerators using only wood as a fuel source.

E. The owner or operator must amend the plan whenever the management practices or wastes identified in items A and B have changed. The owner or operator shall submit the amended plan to the commissioner for approval or disapproval.

APPENDIX B

ANALYTICAL PROCEDURES, WASTE CHARACTERIZATION, AND LABORATORIES

ANALYTICAL PROCEDURES FOR CHEMICAL CHARACTERIZATION

1. Toxicity Characteristic Leaching Procedure - The Toxicity Characteristic Leaching Procedure (TCLP) is an extraction procedure that is utilized to simulate the leaching a waste material will undergo in a landfill environment, and the resulting extraction fluid may be analyzed, using appropriate "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", also known as SW-846, for up to 52 different parameters in order to meet federal and state regulatory requirements. Separate TCLP analyses can be requested for metals, volatile organic compounds, and/or semi-volatile organic compounds. The TCLP analytical procedure includes the following steps:
   a. The extraction procedure is similar to the Extraction Procedure (EP) Toxicity Test Procedure (SW-846 1310B); however, the analysis of the extraction fluid is done entirely in a closed container to eliminate agitation with air. This allows for the measurement of volatile organic chemicals that normally would volatilize into the atmosphere.
   b. Other appropriate test methods are subsequently utilized to determine the concentration of leachable metals and organic compounds in a waste material. Establishing limits for multiple parameters allows for an improved correlation to ground water contaminants. The threshold limits are contained in Appendix C of this Plan.

2. Ignitability - A flash point test is used to determine the temperature at which a waste is ignitable.

3. Corrosivity - This is determined by taking a pH measurement of wastes that are liquid or aqueous.

4. Oxidizing Potential - This can be determined by conducting a screening for oxidizers in waste using SW-846 1040.

5. Reactivity - The definition of the reactivity characteristic may be found in 40 CFR 261.24. Although some analytical methods exist that may provide information about a waste material's reactivity characteristic (see waste characterization analyses below), the regulatory definition consists entirely of a descriptive narrative.

6. Paint Filter Liquids Test - This test is utilized to determine if there are free liquids in a waste material, such as paper mill sludge, wastewater sludge, etc. Wastes containing free liquids cannot be accepted at any Olmsted County solid waste management facility. To complete the test, 100 mL of a waste sample is placed in a 60 mesh or 400-micron conical paint filter for the duration of 5 minutes. If any liquid drains from the sample during this time, the waste is deemed to contain free liquid.

7. Total Composition Analysis - The total chemical composition of a waste must be determined when available data or the methods listed above are not sufficient to make a decision as to whether the waste is acceptable at an Olmsted County solid waste management facility. Standard laboratory procedures are available and are used by independent laboratories to characterize wastes.

   Generally, a complete chemical composition analysis of all wastes is not needed. However, Olmsted County must request sufficient data to determine baseline characteristics of the waste to establish whether the waste is acceptable. Adequate information must be provided on concentrations of metals (i.e., cadmium, lead, iron, zinc, etc.) and organic constituents (i.e., phenols, oil and grease, PCBs, solvents, etc.) that may be included in the waste. If available, Material Safety Data Sheets (MSDSs) may be helpful in determining what analyses will, and will not, be required.

   The chemical composition analysis for each waste type must be tailored to each individual waste, since each waste is different. The parameters listed in Appendix C can be used as a basis for a full-scale chemical composition analysis. If this is necessary, the generator may select the appropriate

parameters for analysis, but also must justify why the other parameters are not appropriate. In most cases, full-scale chemical evaluations should be completed when:

- very little is known about the waste material;
- when the generating process is entirely unknown;
- when there are no MSDSs for the raw materials or final waste;
- a bad batch of product is generated and the generator is not aware of the composition of the raw materials that went into the product; or
- an application is for disposal of unknown material from a tank removal or spill clean-up.

Based on a review of the submitted information, Olmsted County will make a decision as to whether the waste material is acceptable for disposal at an Olmsted County solid waste management facility.

8. Proximate Analysis - This is a routine fuel test that is useful in providing information on the burning mechanism of the material. It presents such information as volatile matter (the part of the fuel that will burn as a gas), fixed carbon (the part of the fuel that will burn as a solid), moisture content (which must be evaporated before the fuel will burn), higher heating value (heat content in BTUs/lb), and ash (or non-combustible) content. This information can be useful to operators of municipal solid waste combustors for such tasks as determining the need for fuel drying for proper combustion and estimating system throughput.

WASTE CHARACTERIZATION ANALYSES

Listed below is a listing of analytical methods that may be utilized by waste generators for the purpose of properly characterizing solid waste. Depending on the characteristics of the waste, only some of the listed analytical methods may be required to accurately and completely characterize the waste material. It is the generator's responsibility to select and contract with an accredited laboratory that is capable of adequately characterizing the waste. Please note that analytical methods are updated regularly, and the list presented below is not necessarily a complete listing of all available analytical methods that pertain to waste characterization, nor is it an endorsement of any specific analytical method. Waste generators are strongly encouraged to do their own research.

IGNITABILTY	
1. Flash point	**SW-846 1010**, *Test Methods for Flash Point by Pensky-Martens Closed-Cup Tester* **SW-846 1020**, *Standard Test Methods for Flash Point by Setaflash (Small Scale) Closed-Cup Apparatus*
2. Spark test	**SW-846 1030**, *Ignitability of Solids*
OXIDIZING ABILITY	
1. Screening of oxidizers in waste	**SW-846 1040**, *Test Method for Oxidizing Solids* **SW-846 1050**, *Test Methods to Determine Substances Likely to Spontaneously Combust*
CORROSIVITY	
1. pH determination	**SW-846 9040C**, *pH Electrometric Measurement* **SW-846 9045D**, *Soil and Waste pH* **SW-846 9041A**, *pH Paper Method*
2. Corrosivity toward steel	**SW-846 1110A**, *Corrosivity toward Steel*
REACTIVITY	
1. Compatibility with water mix screen	**ASTM D5058-90**, *Standard Test Methods for Compatibility of Screening Analysis of Waste, Test Method C-Water Compatibility*
2. Reactive cyanide	**SW-846**, *Chapter7 - Section 7.3 (Narrative Definition)*
3. Reactive sulfide	**SW-846**, *Chapter7 - Section 7.3 (Narrative Definition)*
TOXICITY	
1. TCLP extraction/analysis: *Inorganic analytes*	**SW-846 1311/6010C**, *Inductively Coupled Plasma-Atomic Emission Spectrometry* **SW-846 1311/6020A**, *Inductively Coupled Plasma-Mass Spectrometry* **SW-846 1311/7470A**, *Mercury in Liquid Waste (Manual Cold-Vapor Technique)* **SW-846 1311/7471B**, *Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique)*

2. TCLP extraction/analysis: *Semi-volatile organic analytes*	**SW-846 1311/8270D**, *Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*
3. TCLP extraction/analysis: *Volatile organic analytes*	**SW-846 1311/8260B**, *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)* **SW-846 1311/8261**, *Volatile Organic Compounds by Vacuum Distillation in Combination with Gas Chromatography/Mass Spectrometry (VD/GC/MS)*
4. TCLP extraction/analysis: *Pesticides*	**SW-846 1311/8081B**, *Organo-chlorine Pesticides by Gas Chromatography*
5. TCLP extraction/analysis: *Herbicides*	**SW-846 1311/8151A**, *Chlorinated Herbicides by GC Using Methylation or Pentafluorobenzylation Derivatization*

MISCELLANEOUS PROPERTIES

1. Free liquids	**SW-846 9095B**, *Paint Filter Liquids Test* **SW-846 9096**, *Liquid Release Test (LRT) Procedure*
2. Specific conductivity	**SW-846 9050A**, *Specific Conductance*

LABORATORIES

Listed below are several regional laboratories that may be able to provide waste characterization services. This list does not represent an endorsement of those firms or to their capabilities, nor does Olmsted County claim that the list is accurate or complete. It is the waste generator's responsibility to personally evaluate the services, capabilities, and compliance status of any company hired to conduct waste analyses. A more complete listing of laboratories can be obtained by contacting the Minnesota Pollution Control Agency at 1-800-657-3864 or by viewing the Minnesota Department of Health's internet web site at https://apps.health.state.mn.us/eldo/public/accreditedlabs/labsearch.seam.

Minnesota Valley Testing Laboratories, Inc.
1126 North Front Street
New Ulm, MN 56073
Phone: 1-800-782-3557
Fax: 507-359-2890
Email:crc@mvtl.com
http://www.mvtl.com/

Braun Intertec Corp.
11001 Hampshire Avenue South
Minneapolis, MN 55438
Phone: 1-800-279-6100
Fax: 952-995-2020
Email: info@braunintertec.com
http://www.braunintertec.com/

Pace Analytical Services
1700 Elm Street
Minneapolis, MN 55414
Phone: 1-877-722-3832
Fax: 612-607-6444
Email: info@pacelabs.com
http://www.pacelabs.com/

Interpoll Laboratories, Inc.
4500 Ball Road North East
Circle Pines, MN 55014
Phone: 763-786-6020
Fax: 763-786-7854
Email: interpoll@interpoll-labs.com
www.interpoll-labs.com

Test America, Inc.
7600 West 27th Street
Unit 236
St. Louis Park, MN 55426
Phone: 1-800-593-8519
www.testamericainc.com

Davy Laboratories
115 6th Street South
La Crosse, WI 54601
Phone: 608-782-3130
Fax: 608-784-6611
Email: info@davyinc.com
www.davyinc.com/

APPENDIX C

PARAMETER LIST AND LIMITS FOR INDUSTRIAL SOLID WASTE ACCEPTANCE

PARAMETER LIST AND LIMITS FOR INDUSTRIAL SOLID WASTE ACCEPTANCE

INTRODUCTION

The column titled "Hazwaste Limits" provides a summary of the regulatory standards for potentially hazardous compounds. If any of the waste's parameters exceed any of the applicable limits listed in this column, the waste is not acceptable and shall be rejected. Compounds that have no limits listed in this column will be reviewed on a case-by-case basis.

The column titled HRL provides chronic Health Risk Limits (HRLs) or other recommended health-based limits, such as Risk Assessment Advice (RAA) and Health Based Values (HBVs), set by the Minnesota Department of Health and/or the USEPA to evaluate potential human health risks from exposures to chemicals in groundwater and/or drinking water. A comparison can be made between the values listed in the HRL column to the concentrations of the same compounds in the waste material, landfill leachate, and/or groundwater at the disposal site, if present. If the site's leachate and/or groundwater contain(s) elevated concentrations of certain constituents, Olmsted County may, on a case-by-case basis, restrict or prohibit the acceptance of wastes containing said constituents. The decision to restrict or prohibit the acceptance of wastes containing certain constituents will be based on the need to protect human health and the environment.

The United States Environmental Protection Agency (USEPA)'s National Waste Minimization Program publishes a priority list of thirty-one (31) chemicals in accordance with their potential toxicity and associated health risks. This priority list is updated on a regular basis and can be useful, for example, if waste from a spill site is being evaluated, or to determine if waste handling methods at the site pose significant risks to employees. The USEPA priority list may be viewed at the following internet website: http://www.epa.gov/osw/hazard/wastemin/priority.htm. Furthermore, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act (SARA), mandates the Agency for Toxic Substances and Disease Registry (ATSDR) and USEPA to "*prepare a priorities list of substances that are most commonly found at facilities on the National Priorities List (NPL) and which are determined to pose the most significant potential threat to human health due to their known or suspected toxicity and potential for human exposure at sites listed on the National Priorities List (NPL).*" The 2007 CERCLA Priority List of Hazardous Substances may be viewed at the following internet website: http://www.atsdr.cdc.gov/spl/previous/07list.html.

The lack of a limit in the below table does not imply that Olmsted County may not, entirely at its discretion, and without need for any justification, impose restrictions and/or prohibit the acceptance of otherwise acceptable solid waste.

PARAMETER LIST & LIMITS FOR INDUSTRIAL WASTE ACCEPTANCE
OLMSTED COUNTY, MINNESOTA
(All values expressed in ug/L unless otherwise indicated)

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
ACENAPHTHENE	-	400
ACETOCHLOR	-	9
ACETOCHLOR ESA	-	300
ACETOCHLOR OXA	-	100
ACETONE	-	4,000
6-ACETYL-1,1,2,4,4,7-HEXAMETHYLTETRALINE	-	20
ACIFLUORFEN ACID	-	-
ACROLEIN	-	-
ACRYLAMIDE	-	-
ACRYLONITRILE	-	-
ALACHLOR	-	5
ALACHLOR ESA	-	70
ALACHLOR OXA	-	70
ALDICARB	-	1
ALDRIN	-	-
ALLYL CHLORIDE	-	30
AMETRYN	-	-
AMMONIUM SULFAMATE	-	-
ANTHRACENE	-	2,000
ANTIMONY	-	6
ARSENIC	5,000	10[3]
ASBESTOS FIBERS > 10 MICROMETERS (FIBERS/L)	-	7,000,000[3]
ATRAZINE	-	3[3]
BARIUM	100,000	2,000
BAYGON	-	-
BENTAZON	-	-
BENZENE	500	3
BENZIDINE	-	-
BENZO (A) ANTHRACENE	-	-
BENZO (A) PYRENE	-	0.2[3]
BENZO (B) FLUORANTHENE	-	-
BENZO (G,H,I) PERYLENE	-	-
BENZO (K) FLUORANTHENE	-	-
BENZOIC ACID	-	30,000
BERYLLIUM	-	0.08
1,1 BIPHENYL (DIPHENYL)	-	300
BHC (ALPHA-)	-	-
BHC (BETA-)	-	-

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
(3) USEPA Maximum Contaminant Level (MCL) set by National Primary Drinking Water Regulations (NPDWR).
(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
BHC (DELTA-)	-	-
BHC (GAMMA-)	-	-
BORON	-	1,000
BROMACIL	-	-
BROMODICHLOROMETHANE	-	6
BROMOFORM	-	40
BROMOMETHANE	-	10
n-BUTANOL	-	700
BUTYLATE	-	-
BUTYL BENZYL PHTHALATE	-	100
BUTYLPHTHALYL BUTYLGLYCOLATE	-	7,000
CADMIUM	1,000	4
CARBARYL	-	-
CARBOFURAN	-	40[3]
CARBON DISULFIDE	14,400	700
CARBON TETRACHLORIDE	500	3
CARBOXIN	-	-
CHLORAMBEN	-	100
CHLORDANE	30	2[3]
CHLORIDE	-	250,000[4]
P-CHLORO-M-CRESOL	-	-
CHLOROBENZENE (MONOCHLOROBENZENE)	100,000	100
CHLOROETHANE	-	-
BIS-CHLOROETHYL ETHER	-	0.3
CHLOROFORM	6,000	30
BIS-2-CHLOROISOPROPYL ETHER	-	-
CHLOROMETHANE	-	-
BIS-CHLOROMETHYL ETHER	-	0.002
2-CHLOROPHENOL	-	30
4-CHLOROPHENYL PHENYL ETHER	-	-
CHLOROTHALONIL	-	30
CHLORPYRIFOS	-	-
CHROMIUM III	-	20,000
CHROMIUM VI	5,000	100
CHRYSENE	-	-
COBALT	-	-
COPPER	-	1,300[5]
O-CRESOL(2-METHYL PHENOL)	200,000	30
M-CRESOL(3-METHYL PHENOL)	200,000	30
P-CRESOL	200,000	3
TOTAL CRESOL	200,000	-
CUMENE (ISOPROPYL BENZENE)	-	300

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
(3) USEPA Maximum Contaminant Level (MCL) set by National Primary Drinking Water Regulations (NPDWR).
(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
CYANIDE, FREE	-	100
CYANAZINE	-	1
DACTHAL	-	-
DALAPON	-	200[3]
DIAZINON	-	-
DI-N-BUTYL PHTHALATE	-	700
DI-N-OCTYL PHTHALATE	-	-
DIBENZO (A, H) ANTHRACENE	-	-
1,4 DIBROMOBENZENE	-	-
DIBROMOCHLOROMETHANE	-	10
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	-	0.2[3]
1,2-DIBROMOETHANE (ETYLENE DIBROMIDE [EDB])	-	0.004
DICAMBA	-	200
1,3-DICHLOROBENZENE (META-)	-	-
1,2-DICHLOROBENZENE (ORTHO-)	-	600
1,4-DICHLOROBENZENE (PARA)	7,500	10
3,3'-DICHLOROBENZIDINE	-	0.8
DICHLORODIFLUOROMETHANE	-	700
DICHLOROFLUOROMETHANE	-	-
P,P'-DICHLORODIPHENYL-DICHLOROETHANE (DDD) and DDE & DDT	-	1
1,1-DICHLOROETHANE	-	100
1,2-DICHLOROETHANE	500	90
1,1-DICHLOROETHYLENE	700	200
1,2-DICHLOROETHYLENE (CIS-)	-	50
1,2-DICHLOROETHYLENE (TRANS-)	-	100
DICHLOROMETHANE (METHYLENE CHLORIDE)	-	5[3]
2,4-DICHLOROPHENOL	-	20
2,4-DICHLOROPHENOXYACETIC ACID (2,4-D)	10,000	70
1,2-DICHLOROPROPANE	-	5
1,3-DICHLOROPROPENE (CIS-,TRANS, MIXTURE)	-	2
DIELDRIN	-	0.2
DIETHYL PHTHALATE	-	6,000
DI(2-ETHYLHEXYL)-PHTHALATE	-	6[3]
DIMETHRIN	-	-
2,4-DIMETHYL PHENOL	-	100
DIMETHYL PHTHALATE	-	70,000
4,6-DINITRO-O-CRESOL	-	-
2,4-DINITROPHENOL	-	10
2,4-DINITROTOLUENE	130	-
2,6-DINITROTOLUENE	-	-
DINOSEB	-	7[3]

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
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(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
1,4-DIOXANE	-	100
DIPHENAMID	-	-
1,2-DIPHENYLHYDRAZINE	-	-
DISULFOTON	-	0.3
DIURON	-	-
TOTAL DISSOLVED SOLIDS	-	500,000[4]
ENDOSULFAN (ALPHA-)	-	-
ENDOSULFAN (BETA-)	-	-
ENDOSULFAN SULFATE	-	-
ENDOTHALL	-	100[3]
ENDRIN	20	2[3]
ENDRIN ALDEHYDE	-	-
EPICHLOROHYDRIN	-	-
ETHYL BENZENE	-	50
S-ETHYLDIPROPYLTHIO-CARBAMATE	-	200
ETHYL ETHER	-	200
BIS-2-ETHYLHEXYL PHTHALATE	-	20
ETHYLENE GLYCOL	-	2,000
ETHYLENE THIOUREA	-	-
ETHYLPHTHYLETHYL-GLYCOLATE	-	-
FENAMIPHOS	-	-
FLASH POINT	<140F (60°C)	-
FLUOMETURON	-	-
FLUORANTHENE	-	300
FLUORENE	-	300
FLUORIDE	-	4,000[3]
FONOFOS	-	-
FORMALDEHYDE	-	1,000
GLYPHOSATE	-	700[3]
HEPTACHLOR	8	0.08
HEPTACHLOR EPOXIDE	8	0.04
HEXACHLOROBENZENE	130	0.2
HEXACHLOROBUTADIENE	500	1
HEXACHLOROCYCLOHEXANE (ALPHA-)	-	-
HEXACHLOROCYCLOHEXANE (BETA-)	-	-
HEXACHLOROCYCLOHEXANE (GAMMA-) (LINDANE)	400	0.2[3]
HEXACHLOROCYCLO-PENTADIENE	-	50[3]
HEXACHLORODIBENZO-P-DIOXIN	-	-
HEXACHLOROETHANE	3,000	-
HEXANE	-	400
HEXAZINONE	-	-
INDENO (1, 2, 3-C, D) PYRENE	-	-

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
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(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
IRON	-	300[4]
ISOPHORONE	-	100
LEAD	5,000	15[5]
LINURON	-	1
MALEIC HYDRAZIDE	-	-
MANGANESE	-	50[4]
MERCURY	200	2[3]
METHANOL	-	3,000
METHOMYL	-	-
METHOXYCHLOR	10,000	40[3]
METHYL BROMIDE	-	10
METHYL CHLORIDE	-	-
2-METHYL-4-CHLORO- PHENOXYACETIC ACID	-	3
METHYL ETHYL KETONE	200,000	4,000
METHYL ISOBUTYL KETONE	-	300
METHYL PARATHION	-	-
METHYLENE CHLORIDE	-	5[3]
METOLACHLOR	-	300
METOLACHLOR ESA	-	800
METOLACHLOR OXA	-	800
METRIBUZIN	-	10
METRIBUZIN DA, DK, AND DADK	-	10
MOLYBDENUM	-	-
NAPHTHALENE	-	70
NICKEL	-	100
NITRATE (MEASURED AS NITROGEN)	-	10,000[3]
NITRITE (MEASURED AS NITROGEN)	-	1,000[3]
1,3,5-TRINITROBENZENE	2,000	0.3
2-NITROPHENOL	-	-
4-NITROPHENOL	-	-
N,N-DIETHYL-META-TOLUAMIDE (DEET)	-	200
N-NITROSODIEHTYLAMINE	-	-
N-NITROSODI-N-BUTYLAMINE	-	-
N-NITROSODI-N-PROPYLAMINE	-	-
N-NITROSODIMETYLAMINE	-	-
N-NITROSODIPHENYLAMINE	-	70
OXAMYL	-	200[3]
PAHs (TOTAL CARCINOGENIC)	-	-
PAHs (TOTAL NON-CARCINOGENIC)	-	-
PARAQUAT	-	-
POLYCHLORINATED BIPHENYLS (PCBs)	-	0.04
PENTACHLOROBENZENE	-	-

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
(3) USEPA Maximum Contaminant Level (MCL) set by National Primary Drinking Water Regulations (NPDWR).
(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
PENTACHLOROPHENOL	100,000	1[3]
PERFLUOROBUTANE SULFONATE (PFBS)	-	7
PERFLUOROBUTYRATE (PFBA)	-	7
PERFLUOROHEXANE SULFONATE (PFHxS)	-	-
PERFLUOROOCTANOIC ACID (PFOA) AND SALTS	-	0.3
PERFLUOROOCTANE SULFONATE (PFOS) AND SALTS	-	0.3
pH (STANDARD UNITS)	2 > pH > 12.5	6.5-8.5[4]
PHENANTHRENE	-	-
PHENOL (TOTAL)	14,400	4,000
PICLORAM	-	500
PROMETON	-	100
PRONAMIDE	-	-
PROPACHLOR	-	90
PROPAZINE	-	-
PROPHAM	-	-
2-PROPIONIC ACID (SILVEX)	1,000	50[3]
PYRENE	-	200
PYRIDENE	5,000	-
SELENIUM	1,000	30
SILVER	5,000	30
SIMAZINE	-	4[3]
STYRENE	-	100[3]
SULFATE	-	250,000[4]
TEBUTHIURON	-	-
3-TERT-BUTYL-5-CHLORO-6-METHYLURACIL (TERBACIL)	-	-
TERBUFOS	-	-
1,2,4,5-TETRACHLORO-BENZENE	-	-
2,3,7,8-TETRA-CHLORODIBENZO-P- DIOXIN (TCDD)	-	0.00003[3]
1,1,1,2-TETRACHLOROETHANE	-	70
1,1,2,2-TETRACHLOROETHANE	-	2
1,1,2,2-TETRACHLOROETHYLENE (PERC)	700	5[3]
2,3,4,6-TETRACHLOROPHENOL	-	-
TETRAHYDROFURAN (THF)	-	-
THALLIUM SALTS	-	0.6
TIN	-	4,000
TOLUENE	-	200
TOXAPHENE	500	0.3
2,4,5-TP (SILVEX)	1,000	50[3]
1,2,4-TRICHLOROBENZENE	-	70[3]/100
1,3,5-TRICHLOROBENZENE	-	100
1,1,1-TRICHLOROETHANE	-	200[3]/9,000

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
(3) USEPA Maximum Contaminant Level (MCL) set by National Primary Drinking Water Regulations (NPDWR).
(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

PARAMETER	HAZWASTE LIMITS[1]	HRL[2]
1,1,2-TRICHLOROETHANE	-	3
1,1,2-TRICHLOROETHYLENE (TCE)	500	5[3]
TRICHLOROFLUOROMETHANE	-	2,000
2,4,5-TRICHLOROPHENOL	400,000	-
2,4,6-TRICHLOROPHENOL	2,000	30
2,4,5-TRICHLOROPHENOXYACETIC ACID	-	70
1,2,3-TRICHLOROPROPANE	-	10
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	-	200,000
TRICLOSAN	-	50
1,2,4-TRIMETHYLBENZENE	-	100
1,3,5-TRIMETHYLBENZENE		100
TRIFLURALIN	-	-
1,3,5-TRINITROBENZENE	-	0.3
TRIS(2-CHLOROETHYL)PHOSPHATE (TCEP)	-	200
VANADIUM	-	50
VINYL CHLORIDE	200	0,2[3]/10
XYLENES (MIXTURE OF ORTHO, META, AND PARA ISOMERS)	-	300
ZINC	-	2,000/5,000[4]

(1) Hazardous waste limits used in conjunction with the Toxicity Characteristic Leaching Procedure (TCLP) , SW-846 1311.
(2) HRL values are established in Minnesota Administrative Rules, Parts 4717.7810 through 4717.7900. The promulgation of the 2011 Rules added new HRL values for 14 additional priority chemicals, and replaced or repealed outdated values for 26 existing contaminants. Please note that this column also includes other recommended health-based limits besides HRLs.
(3) USEPA Maximum Contaminant Level (MCL) set by National Primary Drinking Water Regulations (NPDWR).
(4) USEPA standard set by National Secondary Drinking Water Regulations (NSDWR).
(5) USEPA Action Level (AL) set by 1991 Lead and Copper Rule.
- No standard currently exists.

APPENDIX D

BLANK OLMSTED COUNTY INDUSTRIAL SOLID WASTE MANAGEMENT PROGRAM FORMS

COUNTY OF Olmsted

Approval No._____

INDUSTRIAL SOLID WASTE EVALUATION FORM

WASTE APPROVAL

OLMSTED COUNTY TO COMPLETE THIS AREA.

Date:_____

WASTE REJECTED ☐

Reason:_____

_____

WASTE ACCEPTABLE ☐ Tracking Form Required: YES☐ NO☐

Testing Required:_____

Re-Certification: _____ Re-Evaluation:_____

Delivery Restrictions:_____

_____

Quantity Approved:_____

Facility:_____

Waste Code & Name: _____

Approved By:_____

WASTE CHARACTERIZATION DATA

IMPORTANT: THIS FORM IS TO BE COMPLETED BY A REPRESENTATIVE OF THE WASTE GENERATOR. PLEASE READ THE INSTRUCTIONS PRIOR TO COMPLETING THIS FORM. THIS FORM IS TO BE USED ONLY ONE TIME, AND MUST BE TYPEWRITTEN OR LEGIBLY PRINTED IN INK, AND SIGNED.

1. GENERATOR INFORMATION

a) Generator's Name_____

b) Generating Facility's Address:_____

City:_____State:_____ Zip:_____

c) Generator's Representative:_____

Title:_____ Telephone:_____

d) SIC Code:_____

2. GENERAL WASTE STREAM INFORMATION

a) Name/Description of The Waste:_____

b) Process Generating Waste:_____

c) Reason for disposal: ☐ Byproduct ☐ Contaminated ☐ Off-spec ☐ Damaged ☐ Spill ☐ Other_____

d) Is this a treatment residue of a waste that was previously a hazardous waste? ☐ YES ☐ NO

If YES, describe the waste and the process generating the waste prior to treatment:_____

e) Is this a "Hazardous Waste" as defined by Federal or State Regulations? ☐ YES ☐ NO

If YES, enter the Waste Identification Number:_____

f) Recommended personal protection equipment and special handling procedures:_____

_____

g) Anticipated Amount:_____ ☐Cubic Yards ☐Tons ☐Gallons ☐Pounds ☐Other_____

h) Frequency of Disposal:_____ Per: ☐Year ☐Month ☐Week ☐Day ☐One Time ☐Other _____

i) To be transported in: ☐Bulk ☐Drums(type/size)_____ ☐Other_____

3. WASTE PROPERTIES AT 72^{o} F

a) Physical State:
☐ Solid ☐ Semi-solid
☐ Powder ☐ Liquid
☐ Combination ☐ Other_____

b) Color(s): (Describe)_____

c) Odor:_____

Describe:_____

☐ None ☐ Mild ☐ Strong

d) Density Range:_____ to _____
☐ N/D ☐ lbs/gal. ☐g./cc.
☐ lbs./yd^3 ☐Kg/m^3 ☐Other

e) Flash Point, ^{o}F:
☐ ≤ 72 ☐ 73 - 100 ☐ 101 - 140 ☐ 141 - 200
☐ ≥ 201 ☐ N/A ☐N/D

f) pH:
☐ ≤ 2 ☐ 2.1 - 5.0 ☐ 5.1 - 9.0 ☐ 9.1 - 12.4
☐ ≥ 12.5 ☐ N/A ☐ N/D

4. REACTIVITY	5. WASTE CONTENTS	6. SPECIAL WASTE COMPOSITION
Note if the waste exhibits one or more of the following properties: ☐ Water Reactive ☐ Acid Reactive ☐ Alkaline Reactive ☐ Oxidizer ☐ Autopolymerizable ☐ Pyrophoric ☐ Explosive ☐ Thermally Sensitive ☐ Shock Sensitive ☐ None of the Above	Note if the waste contains one or more of the following: If any are checked "YES", provide specific information including the concentration in Section 6. ☐Free Liquids ☐OSHA Substances ☐Free Cyanide ☐Etiological Agents ☐Free Sulfide ☐Pathogens ☐Free Ammonia ☐Biological Materials ☐Dioxin/Furan/PCP ☐Radioactive Materials ☐Organic Solvents ☐PCBs not regulated ☐Virgin Oils by TSCA 40 CFR 761 ☐Used Oils ☐None of the Above	Concentration ranges are suggested and units must be identified in percentages (%) and/or parts per million (ppm). Attach additional pages if necessary. Components Range Min./Max. _____ _____ Attach confirmatory laboratory reports, if available.

7. HAZARDOUS MATERIAL CERTIFICATION

Is the waste described above hazardous as defined by federal law (40 CFR part 261 or the Resource Conservation and Recovery Act) or state statute (Minnesota Solid Waste Rules, chapters 7045 and 7046). ☐ YES ☐ NO

8. SUPPLEMENTAL INFORMATION

☐ None ☐ MSDS Sheets ☐ Analytical Data ☐ Chain of Custody ☐ Memo/Letter ☐ Waste Composition
☐ Other-Describe:_____ No. of Pages_____

9. GENERATOR'S CERTIFICATION

I hereby certify that the above and attached waste description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exist, that all known or suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste.
GENERATOR'S AUTHORIZED SIGNATORY as defined in Section 1(c):

_____
DATE PRINT NAME SIGNATURE TITLE

10. REPRESENTATIVE SAMPLE CERTIFICATION

This Section is to be completed by the person obtaining the sample of the above described waste.

I certify that the sample for which analytical data was provided on the waste described above is representative of that waste and was collected and preserved in a manner consistent with accepted technical standards.

Collector's Name:_____

Title:_____

Date Collected:_____

Signature:_____

Company Affiliation:_____

Work Phone Number: _____

Laboratory Conducting Analysis:_____

Telephone No. _____

INSTRUCTIONS
WASTE CHARACTERIZATION DATA
INDUSTRIAL WASTE

This form is to be completed by the Generator for each specific type of non-hazardous industrial solid waste. It will be used by Olmsted County staff to evaluate whether the waste can be managed in a safe, environmentally sound and lawful manner at an Olmsted County waste disposal facility. This information will serve to protect you, the Generator, as well as Olmsted County.

GENERAL INSTRUCTIONS

1. A representative of the Generator must complete the Waste Characterization Data. Please be thorough. Waste evaluation and acceptance cannot commence until a complete form is received. The entire form must be completed, typewritten or printed legibly in ink. The completed form must be signed and dated. Check "N/A" where the data requested is Not Applicable, and "N/D" if the information has not been determined. Please attach any additional relevant material such as a Material Safety Data Sheet (MSDS) or analytical data that will help to describe the waste and expedite its review. This form and supporting information will be kept on file at the Olmsted County Environmental Resources Department.
2. If further testing is required, the Representative Sample Certification section (10.) must be completed to certify that the sample submitted to the laboratory for which analytical data was submitted is representative of the waste to be managed by Olmsted County.
3. Return the completed form to: Olmsted County Environmental Resources Department, 2122 Campus Drive SE, Suite 200, Rochester, MN 55904. If you have questions regarding the completion of this form, please call 507-328-7070.

1. GENERATOR INFORMATION

a) Generator's Name: Name of the company generating the waste.
b) Generating Facility's Complete Address: Physical address including street, city, state, and zip. Do not use P.O. Box numbers.
c) Generator's Representative: Generator's employee or authorized representative completing this form and their title and telephone number. This person must also sign the form in Section 9.
d) SIC Code: Generator's Standard Industrial Classification code (If you do not know this information, please call the Olmsted County Environmental Resources Department at 507-328-7070).

SECTION 2 WASTE INFORMATION

a) Name/Description of the Waste: Describe the waste and the source from which it was generated. For example: paint chips and sand from a sandblasting operation, solidified epoxy paint from a spray booth, polyester resin from a tank clean-out, diesel soaked floor-dry from a spill, ceramic tumbling media from a manufacturing process, etc. Please be thorough.
b) Process Generating Waste: Describe the complete process, not just the source of the waste. For example: furniture manufacturing, sandblasting of cooling tower pans, repair of storage tank containing No. 6 fuel oil, etc. Please be thorough.
c) Indicate reason for disposal by checking the appropriate box (es).
d) Indicate if waste was previously a restricted hazardous waste which has been treated to render the waste non-hazardous.
e) Indicate if waste is defined as "Hazardous Waste". If YES, enter Waste Identification Number provided by MN Pollution Control Agency.
f) Indicate any equipment or special handling procedures necessary to manage the waste.
g) Estimate the amount of waste and indicate the correct unit of measurement.
a) Estimate the expected frequency of delivery of the quantities in "g" above.
b) Indicate the type of container in which the waste will be transported to the disposal facility.

SECTION 3 - WASTE PROPERTIES AT 72°F

a) Check the appropriate physical state(s) of the waste.
b) Describe the color(s) that make up the waste.
c) Describe any obvious odor, for example: sweet, acidic, solvent. Describe the intensity of the odor (none, mild, strong). Note that you should not purposefully smell the waste, but any incidental odor noticed upon management of the waste is to be described.
d) Density - Indicate the expected weight range of the waste per unit volume (i.e., density). If this has not been determined check "N/D".
e) Flash Point - If the waste is as a solid or powder, note "N/A". Otherwise, check the temperature range at which the waste exhibits a flash point. Do not check more than two (2) consecutive boxes. If this has not been determined, check "N/D".

Note the pH range of the waste. If the waste is completely free of liquids, check "N/A". No more than two (2) consecutive boxes may be checked. If this has not been determined, check "N/D"

SECTION 4 - REACTIVITY

If the waste exhibits any of the following reactive properties, mark the appropriate box (es).

- Water Reactive - Reacts violently, forms potentially explosive mixtures, or generates toxic gases or vapors when exposed to water.
- Acid or Alkaline Reactive - Releases heat, toxic gases or vapors when exposed to an acid (pH≤2) or an alkaline (pH≥12) environment.
- Oxidizer - Reacts with organic matter to cause fires or smoldering.
- Autopolymerizable - Hardens or solidifies without assistance, usually with a release of heat.
- Pyrophoric - Ignites in air.
- Explosive - Burns suddenly with violent results.
- Thermally Sensitive - The hazardous or toxic properties may change with the application of heat.
- Shock Sensitive - Detonates or explodes if jolted or dropped.
- None of the Above - The waste exhibits none of the reactive properties defined above.

SECTION 5 - WASTE CONTAINS

Indicate if any materials defined below are present in the waste; if so, indicate the specific type(s) and concentration(s) in Section 6.

- Free Liquids - The waste fails the Paint Filter Liquids Test (SW846,9095).
- Free Cyanide; Free Sulfide; Free Ammonia - Hydrogen cyanide or hydrogen sulfide is liberated when the waste is subjected to an environment with a pH≤2, ammonia liberated when the waste is subjected to an environment with a pH≥12.5.
- Dioxins/Furans/PCPs - Chlorinated dioxins, chlorinated dibenzofurans and tri-, tetra-, and penta-chlorinated phenols.
- Organic Solvents - Aromatic and aliphatic hydrocarbon solvents such as alcohols, ketones, esters, ethers, benzene, mineral spirits, lacquer thinner, amines or chlorinated hydrocarbons.
- Virgin Oils - Unused oils, for example: crude oil, fuel oil, diesel oil, mineral or edible oils.
- Used Oils - for example: motor oils, lubricating oils or cutting oils.
- OSHA Substances - The compounds identified by the federal health administration and/or OSHA as having occupational exposure limits.
- Etiological Agents - A substance which causes disease or abnormal conditions in humans.
- Pathogens - Disease causing organisms.
- Biological Materials - Living or once living organisms; e.g., bacteria, animal carcasses.
- Radioactive Materials - Naturally occurring or byproduct materials that emit radiation above background levels.
- PCB's - Polychlorinated Biphenyls is not regulated by TSCA, 40 CFR 761.
- None of the above - The waste contains none of the above.

SECTION 6 - SPECIFIC WASTE COMPOSITION

Describe the composition of the waste. Use common terms to describe the constituent concentrations in percentages (%), parts per million (ppm), or weight/volume or weight/weight. Avoid abbreviations, Trade Names, or vague descriptions, such as oil or sludge. When describing by %, if the total of all the components does not equal 100%, the generator is claiming that the non-listed content(s) of the waste is inert and poses no hazard to the environment or to worker health and safety (e.g., water, soil, vegetation). Attach confirmatory laboratory reports, if available.

SECTION 7 - HAZARDOUS MATERIAL CERTIFCATION

Certify whether the waste is hazardous waste as defined by law.

SECTION 8 - ATTACHMENTS

Identify all supplemental information that is attached to this Industrial Solid Waste Evaluation Form, if any. Note the total number of supplemental pages attached.

SECTION 9 - GENERATOR"S CERTIFICATION

The authorized representative of the generator identified in Section 1(c) must sign the certification. The Evaluation Form will not be processed and the waste will not be approved for Olmsted County management without completion of this and all other sections.

A copy of this form will be returned to the Generator at the Generating Facility Address when the Waste Approval Section has been completed by County staff with the determination whether the waste is rejected or accepted.

If the waste is **rejected** because it is a hazardous waste, Olmsted County is required to notify the MPCA of such rejection. It is the responsibility of the Generator to find an approved, alternate facility capable of accepting rejected loads..

If the waste is **approved**, Olmsted County will indicate any delivery restrictions and provide the generator with the appropriate number of tracking forms (if required) to be completed by the Generator indicating quantities and specifics about a particular load. The tracking form must be signed by Olmsted County staff **prior** to delivery. An approved tracking form must accompany each load to the specified facility.

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES

Olmsted County Environmental Resources Department
2122 Campus Drive SE, Suite 200 Rochester MN 55904
Telephone (507) 328-7070 Fax (507) 328-7090
www.co.olmsted.mn.us/environmentalresources

Non-Hazardous Industrial Solid Waste Tracking Form

- Use Ballpoint pen (press hard, making 4 copies) or typewriter •
- This form must accompany the waste to the disposal site •

☆GENERATOR

Generator Name: | Generator's Representative & Title: | Telephone: ( )

Generating Facility Address: | City: | State: | Zip:

A) Waste Description:

B) Physical State ☐ Solid ☐ Powder ☐ Combination ☐ Semi-Solid ☐ Liquid

C) Describe Color (s): | D) Describe Odor: ☐ None ☐ Mild ☐ Strong

E) Anticipated Quantity: ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

F) Transported In: ☐ Bulk ☐ Drums (specify type/size) _____ ☐ Other: _____

G) Recommended Personal Protection Equipment & Special Handling Procedures:

✵TRANSPORTER

Truck #: | Phone #:

Transporter Name: | Vehicle License # / State:

Address: | City: | State: | Zip:

Vehicle Certification: I hereby certify the above-described material was picked up at the generator facility listed above and delivered without incident to the disposal site listed below.

Driver Name: (Print) | Signature: | Date:

_____

ADMIN.

Approval #:

___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ - ___ ___ ___ ___ _____

Expiration Date | Disposal Facility | Waste Code | Company ID | Delivery Restrictions:

Approved for Delivery By (Olmsted County Agent): **Date:**

At: **OWEF** **Kalmar Landfill** **Kalmar Landfill → OWEF** **Recycling Center → OWEF**

FACILITY

Ticket #: | Discrepancy Indication Space:

Quantity Received: ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

Name (Print): | Title:

I hereby certify receipt of the material covered by this manifest except as noted in the discrepancy space above:

Signature: | Date:

WHITE COPY – Disposal Site YELLOW COPY – ☆Generator PINK – ✵Transporter GOLDENROD – SW Office

Non-Hazardous Infectious Solid Waste Tracking Form

Olmsted County Environmental Resources Department
2122 Campus Drive SE Suite 200 Rochester MN 55904
Telephone (507) 328-7070 Fax (507) 328-7090

COUNTY OF Olmsted

Office Use Only:

_____ of _____

******Use Ballpoint pen (press hard, making 4 copies) or typewriter******

✭This form must accompany the waste to the disposal site✭

☆GENERATOR

Generator Name: Telephone: ( )

Generator's Representative & Title:

Generating Facility Address:

City: State: Zip Code:

A) Infectious Waste Description:

B) Anticipated Quantity:_____ ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

I hereby certify that the waste described in Section A meets the definition of infectious waste as defined in Minnesota Rule 7035.9100 and does not contain any hazardous waste.

Signature: **Date:**

✵TRANSPORTER

Truck #: Phone #:

Transporter Name: Vehicle License # / State:

Address: City: State: Zip:

Vehicle Certification:

I hereby certify the above-described material was picked up at the generator facility listed above and delivered without incident to the disposal site listed below.

Driver Name: (Print) **Signature:** **Date:**

ADMIN.

Approval#:

____ ____ ____ ____ - ____ ____ ____ ____ - ____ ____ - ____ ____ ____ ____ _____

Expiration Date Disposal Facility Waste Code Company ID Delivery Restrictions:

Approved for Delivery By (Olmsted County Agent): Date:

FACILITY

Ticket #: Discrepancy Indication Space:

Quantity Received: ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

Name (Print): Title:

I hereby certify receipt of the material covered by this manifest except as noted in the above Discrepancy Indication Space:

Signature: Date:

WHITE COPY – Disposal Site YELLOW COPY – ☆Generator PINK – ✵Transporter GOLDENROD – SW Office

Oil Generator Certification Form

Olmsted Waste-To-Energy Facility

301 Silver Creek Road NE, Rochester MN 55906
Telephone: (507) 328-7070 Fax: (507) 328-7090
EPA I.D. Number: **MN 980 901 805**

******Use Ballpoint pen (press hard, making 4 copies) or typewriter******

✭This form must accompany the waste to the disposal site✭

✭GENERATOR

Generator Name: | Generator's Representative & Title: | Telephone: ( )

Generating Facility Address: | City: | State: | Zip:

Generator's EPA I.D. #:

A) Waste Description:

B) Anticipated Quantity: ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

C) Transported In: ☐ Bulk ☐ Drums (specify type/size) _____ ☐ Other: _____

I hereby certify the above described material was picked up at the generator facility listed above and delivered without incident to the disposal site listed below.

Name: (Print) | Signature: | Date:

✸TRANSPORTER

Truck #: | Phone #:

Transporter Name: | Vehicle License # / State:

Address: | City: | State: | Zip:

Vehicle Certification:

I hereby certify the above described material was picked up at the generator facility listed above and delivered without incident to the disposal site listed below.

Driver Name: (Print) | Signature: | Date:

ADMIN.

Approved for Delivery By (Olmsted County Agent): | Date:

Approval #: | Waste Code: 21.00 – Oil-Contaminated Waste

This used oil (or oil-contaminated waste) is subject to EPA regulation under 40 CFR 266

FACILITY

Discrepancy Indication Space:

Quantity Received: ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

Name (Print): | Title:

I hereby certify receipt of the material covered by this manifest except as noted in the above Discrepancy Indication Space:

Signature: | Date:

WHITE COPY – Disposal Site YELLOW COPY – ✭Generator PINK – ✸Transporter GOLDENROD – SW Office

PRESS HARD - You are Making 5 Copies

WHITE - DISPOSAL SITE GOLD - SOLID WASTE OFFICE PINK - ABATEMENT CONTRACTOR GREEN - TRANSPORTER CANARY - GENERATOR

State of Minnesota / Minnesota Pollution Control Agency

Asbestos-Containing Material Transport and Disposal Manifest

GENERATOR

1. Work Site Name _____

Address _____

City, State, Zip _____

Owner's Name _____

Owner's Phone No. _____

2. Abatement Contractor _____

Address _____

City, State, Zip _____

Operator's Phone No. _____

3. Waste Disposal Site: Olmsted County/Kalmar Landfill
Phone Number: 507/285-8515
Mailing Address: Olmsted County Public Works Dept.
2122 Campus Drive SE, Suite 200
Rochester, MN 55904

Physical Site Location (Be Specific)

_____

_____

4. Responsibility Agency: MPCA Regional Office
18 Woodlake Dr. SE
Rochester, MN 55904

5. Description of Materials:	**6. Containers (No. - Type)**	**7. Total Quantity** (m^3 or yd^3)

8. Special handling instructions and additional information

9. ABATEMENT CONTRACTOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Name & Title (Printed or typed) _____ Signature _____ Date _____

TRANSPORTATION

10. Transporter 1 (Acknowledgment of receipt of materials)

Name/Title _____ Signature _____ Date _____

Address _____ City, State, Zip _____ Phone No. _____

11. Transporter 2 (Acknowledgment of receipt of materials)

Name/Title _____ Signature _____ Date _____

Address _____ City, State, Zip _____ Phone No. _____

ADM

12. Approved for delivery by: _____ Date: _____
Landfill Supervisor

DISPOSAL

13. Discrepancy indication space

14. Waste Disposal Site Owner or Operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 13.

Name/Title _____ Signature _____ Date _____

Waste Generator Section

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located in the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.

2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.

BY PUBLIC WORKS

3. Enter physical Landfill Site Location.

4. Provides the name and address of the agency responsible for administering the asbestos NESHAP program. No response required.

5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
   - Friable asbestos material
   - Nonfriable asbestos material

6. Enter the number of containers used to transport the asbestos materials listed in item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):
   DM - Metal drums, barrels
   DP - Plastic drums, barrels
   BA - 6 mil plastic bags or wrapping

7. Enter the quantities or each type of asbestos material removed in units of cubic meters (cubic yards).

8. Use this space to indicate special transportation, treatment, storage or disposal of Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.

9. The authorized agent of the waste generator must read and then sign and date this certification. The date is the Date of receipt by transporter.

NOTE: The waste generator must retain a copy of this form.

Transporter Section

10. & 11. Enter the name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

NOTE: The transporter must retain a copy of this form and provide appropriate completed copy to the Generator and Waste Abatement Contractors.

Adm. Section

12. PRE-AUTHORIZATION BY LANDFILL SUPERVISOR OR DESIGNEE IS REQUIRED (located at Olmsted County Public Works Department)

Disposal Site Section

13. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided.

14. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in item 13. The date is the date of signature and receipt of shipment.

OLMSTED COUNTY SOLID WASTE INSPECTION FORM

☐ Olmsted Waste-to-Energy Facility ☐ Yard Waste Compost Site ☐ Recycling Center Plus

☐ Kalmar Landfill ☐ Hazardous Waste Facility ☐ Other:_____

Inspected by:
Date: Time:
Hauler (driver and company names or name and address if self-hauler):
Vehicle license # Box # (if applicable) Ticket #
Origin of waste/waste generator:

RESULTS OF INSPECTION	Yes	No
Unacceptable wastes, problem materials, or special wastes		
Hazardous waste		
Commercial/industrial waste		
Infectious waste		
Yard waste		
Tires		
Recyclable material		
Out-of-County waste		
Other: (specify)		
Waste load appears to be acceptable		

Load unacceptable because:

☐ unacceptable material was present ☐ waste was improperly containerized and/or labeled

☐ inability to pay ☐ paperwork was missing, incomplete or inaccurate

☐ ACM contaminated load; buried in place ☐ other:_____

Outcome: ☐ rejected prior to dumping ☐ rejected after load was dumped

☐ load accepted (reason):_____

☐ further action required (specify):_____

Comments:

Driver's Signature:_____ Inspector's Signature:_____

Driver Print Name: _____ Inspector Print Name:_____

Customer/generator notified? YES or NO If yes, name of contact:_____

FOR OFFICE USE ONLY: ACTION TAKEN:

☐ special handling fee charged ☐ letter sent ☐ fine assessed ($_____) ☐ other:_____

White – Regulatory Compliance Unit **Yellow – Hauler/Driver** **Pink – Waste Facility**

Revised 6/23/11

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

ENVIRONMENTAL RESOURCES DEPARTMENT
2122 CAMPUS DR SE - SUITE 200
ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

CERTIFICATION OF AUTOCLAVE TREATMENT

GENERATOR NAME: _____

GENERATOR ADDRESS: _____

_____

CONTACT NAME: _____

PHONE NUMBER: _____

SOLID WASTE MANAGEMENT FACILITY: _____

WASTE DESCRIPTION: _____

INDUSTRIAL SOLID WASTE APPROVAL NUMBER: __ __ __ __ - __ __ __ __ - 2 9 - __ __ __ __
Expiration Date | Disposal Facility | Waste Code | Company ID

CERTIFICATION

I hereby certify that the above described autoclaved (Steam Sterilization) medical waste shipped to an Olmsted County solid waste management facility for disposal complies with all federal and state regulations regarding autoclaved medical waste, including but not limited to:

- *The autoclave reached a temperature of at least 250 degrees Fahrenheit (121° C) at 15 pounds per square inch gauge pressure, for at least 1 hour.*
- *All sharps have been placed in a puncture resistant container.*
- *No recognizable human body parts, tissues, fetuses, or organs are acceptable for disposal in a municipal solid waste landfill.*
- *The autoclave is operated and maintained according to the manufacturer's instructions, and the waste is packaged and loaded into the chamber according to the recommendations set and provided by the manufacturer.*
- *Biological indicator tests are routinely performed, and the sterility of each run had been achieved.*

I am aware that there are significant penalties for submitting false information, including the possibility of fines, imprisonment, or both for knowing violations.

_____ _____
AUTHORIZED REPRESENTATIVE SIGNATURE DATE

_____ _____
AUTHORIZED REPRESENTATIVE (PRINTED NAME) TITLE

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ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

EMPTY CHEMICAL CONTAINER
CERTIFICATION OF NON-HAZARDOUS WASTE STATUS

GENERATOR NAME: _____

GENERATOR ADDRESS: _____

CONTACT NAME: _____

PHONE NUMBER: _____

SOLID WASTE MANAGEMENT FACILITY: _____

WASTE DESCRIPTION: _____

INDUSTRIAL SOLID WASTE APPROVAL NUMBER: __ __ __ __ - __ __ __ __ - 0 1 - __ __ __ __
(Expiration Date - Disposal Facility - Waste Code - Company ID)

CERTIFICATION

I certify that the empty container(s) that I have delivered to an Olmsted County solid waste management facility for disposal is(are) exempt from the hazardous waste rules based on the following conditions:

- *All wastes have been removed from the container(s) or liner(s) that can be removed using the practices commonly employed to remove materials from that type of container such as pouring, pumping, and aspirating;*
- *The container(s) never held pesticides, compressed gas, or material that meets the definition of an acute hazardous waste as defined by Minnesota Rule 7045.0135;*
- *No more than 1 inch of residue remains on the bottom of the container(s) or liner(s);*
- *No more than 3 percent material by weight remains inside the container(s) or inner liner(s) having a total capacity of 110 gallons or less;*
- *No more than 0.3 percent material by weight remains inside a container(s) or inner liner(s) having a total capacity of over 110 gallons.*

I am aware that there are significant penalties for submitting false information, including the possibility of fines, imprisonment, or both for knowing violations.

_____ _____
AUTHORIZED REPRESENTATIVE SIGNATURE DATE

_____ _____
AUTHORIZED REPRESENTATIVE (PRINTED NAME) TITLE

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2122 CAMPUS DR SE - SUITE 200
ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

EMPTY CHEMICAL CONTAINER CERTIFICATION OF TRIPLE RINSING

GENERATOR NAME: _____

GENERATOR ADDRESS: _____

_____

CONTACT NAME: _____

PHONE NUMBER: _____

SOLID WASTE MANAGEMENT FACILITY: _____

WASTE DESCRIPTION: _____

INDUSTRIAL SOLID WASTE APPROVAL NUMBER: __ __ __ __ - __ __ __ __ - 0 1 - __ __ __ __
(Expiration Date - Disposal Facility - Waste Code - Company ID)

To triple-rinse is to flush the container three times, each time using a volume of the appropriate diluting agent or solvent equal to approximately ten percent of the container's capacity. Any rinsate generated from the flushing of these containers must be used as product. If the rinsate is to be discarded (i.e., becomes a waste), it must be managed according to the Minnesota Hazardous Waste Rules (Chapter 7045).

CERTIFICATION

I certify that the empty container(s) that I have delivered to an Olmsted County solid waste management facility for disposal has (have) been triple-rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate, and the empty container(s) does(do) not contain any hazardous material(s). I am aware that there are significant penalties for submitting false information, including the possibility of fines, imprisonment, or both for knowing violations.

_____ _____
AUTHORIZED REPRESENTATIVE SIGNATURE DATE

_____ _____
AUTHORIZED REPRESENTATIVE (PRINTED NAME) TITLE

COUNTY OF Olmsted
DEPARTMENT OF ENVIRONMENTAL RESOURCES
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ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

ABSENCE OF FREE LIQUIDS CERTIFICATION

GENERATOR NAME: _____

GENERATOR ADDRESS: _____

_____

CONTACT NAME: _____

PHONE NUMBER: _____

SOLID WASTE MANAGEMENT FACILITY: _____

WASTE DESCRIPTION: _____

INDUSTRIAL SOLID WASTE APPROVAL NUMBER: __ __ __ __ - __ __ __ __ - __ __ - __ __ __ __
Expiration Date | Disposal Facility | Waste Code | Company ID

Minnesota Administrative Rules, part 7035.0300, subpart 39, defines a free liquid as *"the liquid produced when a 100-milliliter representative sample of solid waste is placed on a standard 400-micron conical paint filter for five minutes."* Minnesota Administrative Rules, part 7035.2535, subpart 1, prohibits the disposal of free liquids, or wastes containing free liquids, at a regulated solid waste management facility. As such, Olmsted County solid waste management facilities will accept for disposal only wastes that do not contain free liquids as defined by Minnesota Administrative Rules.

CERTIFICATION

I certify that the above described waste that I have delivered to an Olmsted County solid waste management facility for disposal is not a free liquid and does not contain any free liquids as defined by Minnesota Administrative Rules 7035.0300, subpart 39. I am aware that there are significant penalties for submitting false information, including the possibility of fines, imprisonment, or both for knowing violations.

_____ _____
AUTHORIZED REPRESENTATIVE SIGNATURE DATE

_____ _____
AUTHORIZED REPRESENTATIVE (PRINTED NAME) TITLE

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

Environmental Resources Department
2122 Campus Drive SE Suite 200
Rochester MN 55904
www.co.olmsted.mn.us/environmentalresources
507-328-7070

Non-Hazardous Industrial Solid Waste Re-Certification Form

Generator Name: _____

Generator Address: _____

_____

Contact Name: _____

Phone Number: _____

Email Address: _____

Waste Description: _____

Expired/Expiring Waste Approval Number: _____ - _____ - _____ - _____
Expiration Date | Disposal Facility | Waste Code | Company ID

Anticipated Amount: _____ ☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds ☐ Other (list)
Frequency of Disposal: _____ Per: ☐ Year ☐ Month ☐ Week ☐ Day ☐ One Time ☐ Other (list)
To Be Transported In: ☐ Bulk ☐ Drums (type/size) _____ ☐ Other (list) _____

I hereby certify under penalty of law that this re-certification form and all other documents required for this re-certification were prepared under my direction or supervision and that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons directly involved in gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. The information contained in the previously submitted Industrial Solid Waste Evaluation Form remains complete and accurate, no deliberate or willful omissions of composition and/or properties exist, all known or suspected hazards have been disclosed fully, and, based on analytical testing and/or applying knowledge of the characteristics of the waste in light of the materials or processes used, the above described industrial solid waste is not a regulated hazardous waste under Subtitle C of the Federal Resource Conservation and Recovery Act (RCRA) or the Minnesota Hazardous Waste Rules. I am aware that there are significant penalties for submitting false information, including the possibility of fines, imprisonment, or both for knowing violations.

_____ _____
Authorized Representative Signature *Date*

_____ _____
Authorized Representative *(Printed Name)* *Title*

OFFICIAL OLMSTED COUNTY USE ONLY

New Waste Approval Number: __ __ __ __ - __ __ __ __ - __ __ - __ __ __ __
Expiration Date | Disposal Facility | Waste Code | Company ID

Re-Evaluation Date: _____ Solid Waste Management Facility: _____
Restriction (s): _____
_____
_____ Approved By: _____ Date: _____

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2122 CAMPUS DR SE - SUITE 200
ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

Residential Lead Abatement Notification Form

This form must be completed and signed by the resident or owner of the residence after the lead abatement project is complete.

1. Residence Where Abatement Occurred (please print or type):

Resident Name:		Phone Number:
Address:		
City:	State:	Zip Code:

2. Owner Information (*if different than above*):

Owner Name:	Phone Number:

3. Contractor Information:

Company Name:		Company License Number:	
Business Address:			Phone Number:
City:	State:	Zip Code:	
Project Supervisor:	Email Address:		Fax Number:
U.S. EPA Lead Safe Certified Firm (Renovation, Repair and Painting Rule - 40 CFR Part 745): Yes / No (Circle)			

4. Lead Abatement Information:

Start Date:	Completion Date:
Briefly Describe Abatement Method(s) Used:	
Description of Waste:	Quantity of Waste:

5. Signatures:

The contractor named above removed the waste described in the quantities listed from my place of residence.

Signature of Owner: **Date:** _____

I have removed the waste described in the quantities listed from the residence named above and will dispose of the waste in accordance with any and all applicable Minnesota Rules and Statutes.

Signature of Contractor or Supervisor: **Date:** _____

I have received the waste as described and in the quantities listed.

Signature of Landfill Operator: **Date:** _____

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES

Olmsted County Environmental Resources Department
2122 Campus Drive SE, Suite 200 Rochester MN 55904
Telephone (507) 328-7070 Fax (507) 328-7090
www.co.olmsted.mn.us/environmentalresources

Residential Tire Disposal Tracking Form

- Use Ballpoint pen (press hard, making 4 copies) or typewriter •
- This form must accompany waste to the Kalmar Landfill •

Generator complete the gray highlighted sections below.

☆ GENERATOR

Generator Name:	Telephone: ( )
Address:	City: State: Zip:
A) Waste Type: **Tires**	B) Physical State: **X** Solid
C) Describe Color (s): **Black**	D) Describe Odor: **X** None
E) Transported In: ☐ Bulk ☐ Drums (specify type/size) _____ ☐ Other: _____	

☆ CERTIFICATION

Is the waste described above hazardous as defined by federal law (40 CFR part 261 or the Resource Conservation and Recovery Act) or state statute (Minnesota Solid Waste Rules, chapters 7045 and 7046):

☐ YES ☐ NO

I hereby certify that the above and attached waste description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exist, that all known or suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste.

Generator's Authorized Signatory:

Generator Name: (Print) Signature: Date:

_____

FACILITY

Ticket #:	Discrepancy Indication Space:
Quantity Received:	☐ Cubic Yards ☐ Tons ☐ Gallons ☐ Pounds

Approved for delivery by (Olmsted County Agent). I hereby certify receipt of the material covered by this manifest except as noted in the discrepancy space above:

Signature: Date:

At: **Kalmar Landfill → OWEF**

ADMIN

Approval #: ___ ___ ___ ___ - 3725 -23 - ___ ___ ___ ___

WHITE COPY – Olmsted County YELLOW COPY – ☆Generator

APPENDIX E

GENERAL INFORMATION FACT SHEETS APPLICABLE TO THE OLMSTED COUNTY INDUSTRIAL SOLID WASTE MANAGEMENT PROGRAM

Summary of Hazardous Waste Requirements

Basic Hazardous Waste Requirements for Minnesota Businesses

Hazardous wastes are materials that your business will discard, or that you cannot use any more for their intended purpose, and that present risks to public health or the environment if improperly managed. This fact sheet will provide basic guidance from the Minnesota Pollution Control Agency (MPCA) regarding statewide hazardous waste requirements and links to more detailed information in other MPCA publications.

Businesses located in the Minneapolis-St. Paul Metropolitan Area counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) may be subject to more strict county requirements. See More information on page 6.

To help you review the basic hazardous waste requirements, the MPCA has divided them into 10 individual steps plus some special wastes, known as the **10+ Steps to Compliance**. Fact sheets for each step are linked from this summary and also available on the MPCA's website at: https://www.pca.state.mn.us/waste/hazardous-waste-documents-and-forms.

You may also view narrated videos of the **10+ Steps to Compliance** published by the MPCA. See MPCA fact sheet #p-tr2-16, Online Training Directions – 10 Steps to Hazardous Waste Compliance, at: https://www.pca.state.mn.us/sites/default/files/p-tr2-16.pdf.

The 10+ steps to compliance

1. Evaluate your waste.
2. Determine your generator size.
3. Obtain a Hazardous Waste Identification Number (HWID).
4. Complete a hazardous waste generator license application.
5. Accumulate your hazardous waste at your site.
6. Treat or transport your hazardous waste.
7. Document your hazardous waste shipments.
8. Plan for emergencies.
9. Train your employees.
10. Keep records.

Æ Special wastes and other common requirements

Step 1: Evaluate your waste

See MPCA fact sheet #w-hw1-01, Evaluate Waste, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf for detailed guidance.

You must either:

- Assume that each of your wastes is hazardous.
- Examine each of your wastes and document that it is not a hazardous waste. That process is called *evaluation*.

If you do not evaluate and document that a waste is non-hazardous, you must accumulate and dispose of it as a hazardous waste.

Note: Some wastes may be eligible for reduced requirements if managed in certain ways. See special wastes and related regulations on page 5.

To evaluate a waste as non-hazardous, you must show that it is not **listed** and is also not **characteristic**.

Table 1. hazardous waste lists and characteristics

	Lists and characteristics	Fact sheet web address
Lists	F-List	https://www.pca.state.mn.us/sites/default/files/w-hw2-00.pdf
	K-List	https://www.pca.state.mn.us/sites/default/files/w-hw2-01.pdf
	P-List	https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf
	U-List	https://www.pca.state.mn.us/sites/default/files/w-hw2-03.pdf
	PCBs	https://www.pca.state.mn.us/sites/default/files/w-hw4-48a.pdf
Characteristics	Ignitability	https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf
	Oxidizer	
	Corrosivity	
	Reactivity	
	Toxicity	
	Lethality	https://www.pca.state.mn.us/sites/default/files/w-hw2-05.pdf

Step 2: Determine your generator size

See MPCA fact sheet #w-hw1-02, Determine Generator Size, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf for detailed guidance.

Your site's generator size is determined by the total amount of 'countable' hazardous waste and acute hazardous waste generated each calendar month and year. The hazardous waste requirements applicable to your site depend on its generator size.

Table 2. Generator size based on countable hazardous waste

If your site generates:	Then your site's generator size is:
Less than 100 pounds total per year and no acute hazardous waste	**Minimal Quantity Generator** (MiniQG) Follows all requirements for VSQGs but is exempt from annual fees. See MPCA fact sheet #w-hw1-50, Minimal Quantity Generators, at https://www.pca.state.mn.us/sites/default/files/w-hw1-50.pdf. Not applicable in all Metro Counties.
Less than 220 pounds total per month and less than 2.2 pounds per month of acute hazardous waste	**Very Small Quantity Generator** (VSQG) Note: The federal Conditionally Exempt Small Quantity Generator (CESQG) generator size is inapplicable in Minnesota.
Between 220 to 2200 pounds total per month and less than 2.2 pounds per month of acute hazardous waste	**Small Quantity Generator** (SQG)
More than 2200 pounds total per month or more than 2.2 pounds per month of acute hazardous waste	**Large Quantity Generator** (LQG)

Step 3: Obtain a Hazardous Waste Identification Number

See MPCA fact sheet #w-hw1-03; Obtain a Hazardous Waste Identification Number, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-03.pdf for detailed guidance.

All Minnesota hazardous waste generators, including MiniQGs, must have a Hazardous Waste Identification Number (HWID) – also known as an *EPA ID Number*.

To get your free HWID, use the MPCA's e-Services. See MPCA fact sheet #w-hw5-12, Notification of Regulated Waste Activity, at: https://www.pca.state.mn.us/sites/default/files/w-hw5-12.pdf.

Step 4: Complete a hazardous waste generator license application

See MPCA webpage, Hazardous Waste Licensing, at: https://www.pca.state.mn.us/waste/hazardous-waste-licensing for detailed guidance.

VSQGs, SQGs, and LQGs must submit a hazardous waste generator license application each year.

MiniQGs currently must submit an application every third year. The MPCA sends out application reminders each July. Metro County licensing schedules vary by county.

The MPCA's annual license fees are based on the amount of hazardous waste generated in the preceding calendar year and vary according to generator size. Metro County annual fees vary by county.

Step 5: Accumulate your hazardous waste at your site

See MPCA fact sheet #w-hw1-05, Accumulate Hazardous Waste, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf for detailed guidance.

Accumulate your hazardous waste in containers that are compatible with the waste and are able to fully contain the waste, even when dropped or overturned. *Compatible* means the waste will not corrode or degrade the container. Keep containers closed and manually secured except when waste is actually being added to or removed from a container. Do not rely on gravity alone to secure container lids or closures.

Label each hazardous waste container with:

- The words 'Hazardous Waste'
- A clear description of the waste - that identifies it and its risks to employees and emergency responders

  The accumulation start date - the day the waste was first placed in the container.
  Note: Satellite accumulation containers do not have an accumulation start date.

Keep your containers in an area that would hold all the contents of any container if it leaked. Ensure the floor under the containers does not have any cracks or open floor drains. Allow enough room around each container to ensure you can or get to it with emergency equipment without having to move other containers or materials. Perform and document weekly inspections of your hazardous waste containers unless they are satellite accumulation containers under daily control of the operator. You may accumulate hazardous waste on your site up to the volume and time limits in Table 3 below.

If you keep hazardous waste containers outside, meet all of the above requirements; additionally roof, curb, and lock the hazardous waste container area.

Immediately clean up spills. Immediately report any spills that reach the environment to the Minnesota Duty Officer. See More information on page 6.

Table 3. Hazardous waste accumulation volume and time limits

If your site is a:	You may accumulate up to:	For up to:
MiniQG or VSQG	2200 pounds	Indefinitely, until the accumulation exceeds 2200 pounds, then for 180 days*
SQG	6600 pounds	180 days from the accumulation start date*
LQG	any amount	90 days from the accumulation start date.

*MiniQGs, VSQGs, and SQGs may retain hazardous waste for an additional 90 days (for a total of 270 days) if the designated destination facility for the waste is located more than 200 miles from the generation site.

Note: Acute hazardous wastes have more complex accumulation requirements. See MPCA fact sheet #w-hw2-02, Managing Acute Hazardous Wastes, at: https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf.

Step 6: Treat or transport your hazardous waste

See MPCA fact sheet #w-hw1-06, Treat or Dispose of Hazardous Waste Correctly at: https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf for detailed guidance.

Table 4. Hazardous waste treatment and disposal options

If your site is a:	You may manage your hazardous waste by:
LQG or SQG	· Shipment to a permitted hazardous waste Treatment, Storage, or Disposal Facility (TSDF) using a uniform hazardous waste manifest. See MPCA fact sheet #w-hw1-07, Manifest Shipments of Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-07.pdf. · Shipment to a legitimate recycling facility using a uniform hazardous waste manifest. See MPCA fact sheet #w-hw2-42, Recycling Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw2-42.pdf. · Use as an eligible feedstock or byproduct. If used off-site, a uniform hazardous waste manifest is not needed for shipment. See MPCA fact sheet #w-hw2-42, Recycling Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw2-42.pdf. · Treatment on-site in a container or tank. Preapproval from the MPCA or Metro County is required if the container or tank will be not be closed during treatment. · Discharge to the sanitary sewer. Pre-notification to the receiving Publicly Owned Treatment Works (POTW, commonly known as a sewage treatment plant) is required.
VSQG	All of the allowed management methods allowed above, and: · Self-transport to a Very Small Quantity Generator Collection Program (VSQGCP) that has agreed to accept the waste. See MPCA fact sheet #w-hw2-51, VSQG Collection Requirements, at https://www.pca.state.mn.us/sites/default/files/w-hw2-51.pdf. · Self-transport of oil-based paint and coatings to a Licensed Paint Collection Site (LPCS). See MPCA fact sheet #w-hw4-37a, Architectural Paint, at https://www.pca.state.mn.us/sites/default/files/w-hw4-37a.pdf. · Mix non-chlorinated, non-paint waste solvents into used oil burned on site or shipped off site as used oil. See MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf
MiniQG	All of the allowed management methods allowed above, and: · Self-transport to a Household Hazardous Waste Collection Program (HHWCP) that has agreed to accept the waste. Contact your county to find local HHWCPs.

Step 7: Document your hazardous waste shipments

See MPCA fact sheet #w-hw1-07, Manifest Shipments of Hazardous Waste, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-07.pdf for detailed guidance.

If you are a VSQG and self-transport your waste, ensure that you meet all applicable requirements of the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR).
See MPCA fact sheet #w-hw2-53, Requirements for Transporting Waste to a VSQG Collection Program, at: https://www.pca.state.mn.us/sites/default/files/w-hw2-53.pdf.

Step 8: Plan for emergencies

Table 5. Guidance documents for hazardous waste emergency planning

If your site is a:	For hazardous waste emergency planning guidance, see:
MiniQG or VSQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-08a.pdf
SQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-08b.pdf
LQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-08c.pdf

Step 9: Train your employees

Table 6. Guidance documents for hazardous waste employee training

If your site is a:	For hazardous waste employee training guidance, see:
MiniQG or VSQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-09a.pdf
SQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-09b.pdf
LQG	https://www.pca.state.mn.us/sites/default/files/w-hw1-09c.pdf

Note: The online hazardous waste presentations or in-person workshops offered by the MPCA, as well as programs offered by consultants, are only a starting point for your employees' hazardous waste training. You must also document that you train your employees in all the aspects of hazardous waste management unique to your site, including emergency procedures and the specific wastes your site generates.

Step 10: Keep records

See MPCA fact sheet #w-hw1-10, Keep Hazardous Waste Records, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-10.pdf for detailed guidance.

In general, you must keep any hazardous waste-related record for a minimum of three years after the record is no longer active. As your best protection against liability, the MPCA further recommends that you keep your hazardous waste records for the life of the business. Records may be kept in hardcopy or electronic form.

+ Special wastes and other common requirements

Special wastes

Some hazardous wastes are eligible for management requirements less than discussed in this fact sheet so far.

Table 7. Common Hazardous wastes eligible for reduced management requirements in Minnesota

If you generate:	See:
Antifreeze	https://www.pca.state.mn.us/sites/default/files/w-hw4-02.pdf
Electronics waste (E-waste) that will be recycled	https://www.pca.state.mn.us/sites/default/files/w-hw4-15.pdf
Pharmaceuticals that are reverse-distributed	https://www.pca.state.mn.us/sites/default/files/w-hw3-36b.pdf
Polychlorinated biphenyls (PCBs)	https://www.pca.state.mn.us/sites/default/files/w-hw4-48a.pdf
Recyclable fuel	https://www.pca.state.mn.us/sites/default/files/w-hw4-19.pdf
Scrap metal	https://www.pca.state.mn.us/sites/default/files/w-hw4-27.pdf
Treated wood	https://www.pca.state.mn.us/sites/default/files/w-hw4-67.pdf
Universal waste, including: · Aerosol cans · Batteries · Compressed gas cylinders · Dental amalgam that will be recycled · Fluorescent & high intensity discharge lamps · Mercury-containing devices · Pesticides managed through the Minnesota Department of Agriculture · Pretreated dental wastewater	https://www.pca.state.mn.us/sites/default/files/w-hw4-62.pdf
Used oil and related wastes	https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf

Storage tanks

Many hazardous waste generators also store materials in aboveground or underground storage tanks.

See MPCA webpage, Tank Compliance and Assistance Program, at: https://www.pca.state.mn.us/waste/tank-compliance-and-assistance-program for detailed guidance.

Storage tanks that hold hazardous wastes must meet more strict standards. See MPCA fact sheet #w-hw1-05, Accumulate Hazardous Waste, at: https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf.

Stormwater permits

Many businesses are required to either:

- Obtain an Industrial Stormwater Permit from the MPCA.
- Certify their site is eligible for a Conditional No Exposure Exclusion.

Whether your business is subject to the industrial stormwater requirements depends on its Standard Industrial Classification (SIC) code or its regulated activity narrative description. See MPCA webpage, Industrial Stormwater, at: https://www.pca.state.mn.us/water/industrial-stormwater for a list of regulated SIC codes and regulated activity narrative descriptions and stormwater permit requirements.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045. To review Minnesota Rules, visit the Office of the Revisor of Statutes at: https://www.revisor.mn.gov/pubs.

For information about waste minimization, contact the Minnesota Technical Assistance Program (MnTAP). The MPCA's Small Business Environmental Assistance Program can offer free, confidential compliance assistance. Immediately report all hazardous waste spills that reach the environment to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka 763-422-7093
.....https://www.anokacounty.us/
Carver 952-361-1800
.....http://www.co.carver.mn.us/
Dakota 952-891-7557
..... https://www.co.dakota.mn.us/
Hennepin 612-348-3777
.....http://www.hennepin.us/
Ramsey 651-266-1199
.....https://www.ramseycounty.us/
Scott 952-496-8475
.....http://www.scottcountymn.gov/
Washington 651-430-6655
.....https://www.co.washington.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
All offices 651-296-6300
..... https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free 1-800-422-0798
Metro 651-649-5451

Small Business Environmental Assistance Program

Toll free 1-800-657-3938
Metro 651-282-6143
..... https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
.....http://www.mntap.umn.edu

Evaluate Waste

Step 1 in the 10 Steps to Hazardous Waste Compliance series

Every business and government agency creates waste. Improperly managed waste can create risks to human health and the environment. Certain wastes pose greater human health or environmental risks due to their chemical properties; these wastes are called *hazardous wastes*. Businesses and government agencies that create hazardous wastes are called *generators* of that waste.

In Minnesota, the Minnesota Pollution Control Agency (MPCA) and the metropolitan counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) regulate the management of hazardous wastes generated by businesses and government.

What is a waste?

The hazardous waste requirements apply only to wastes. A *waste* is a material that is unusable for its intended purpose, discarded, or intended to be discarded. *Products* that will be used for their intended purpose are not subject to the hazardous waste requirements.

How do I know which wastes are hazardous?

You must assume that any waste you generate that could reasonably be a hazardous waste is hazardous unless you document that the waste is *exempt* or non-hazardous.

The process of researching and documenting that a waste is non-hazardous is called *evaluation*. To evaluate a waste as non-hazardous, you must document that it is both not Listed and not Characteristic.

- ***Listed*** means that the chemical name of the waste or its ingredients meets the definitions found in the F, K, P, or U-list or is a regulated polychlorinated biphenyl (PCB).
- ***Characteristic*** means that the waste displays any of the chemical characteristics of Ignitability, Oxidizers, Corrosivity, Reactivity, Toxicity, or Lethality.

As the generator of the waste, you are responsible for evaluating the wastes. The MPCA and Metro Counties can assist with this process, but cannot perform it for you.

When do I need to evaluate my waste?

You do not have to evaluate your waste if you assume it is hazardous and manage it as a fully regulated waste. You must either make this assumption, or evaluate the waste as non-hazardous, within 60 days after the first time you generate that type of waste, and before you treat it or ship it off-site for disposal.

After you evaluate your waste, you only need to re-evaluate it if the process creating the waste or the waste itself changes.

What wastes are exempt?

You may assume wastes that would not reasonably be hazardous, such as office paper, vegetation, and uncontaminated clothing, are exempt.

The wastes in Table 1 on page 2 are exempt from hazardous waste regulation under the specified conditions.

Table 1. Common wastes exempt from hazardous waste regulation

Waste	Conditions
Air emissions	Emissions allowed by an air quality permit issued by the U.S. Environmental Protection Agency (EPA) or MPCA are exempt. See https://www.pca.state.mn.us/air/about-air-permits.
Asbestos	See https://www.pca.state.mn.us/waste/asbestos-demolition-or-renovations.
Chlorofluorocarbon refrigerants	Exempt if reclaimed.
Corrective Action Management Unit (CAMU) waste	Exempt until removed from the CAMU.
Demolition debris	Exempt if disposed in a permitted solid waste landfill. Abatement wastes generated from the deliberate removal of a specific hazard, such as lead paint or PCB-containing caulk, are not exempt. See MPCA fact sheet #w-sw4-07, Pre-renovation or demolition requirements, at https://www.pca.state.mn.us/sites/default/files/w-sw4-07.pdf.
Food handling waste	
Fossil fuel combustion residuals	Includes coal fly ash, coal bottom ash, used diesel exhaust fluid (DEF) and diesel particulate filter (DPF) ash.
Fuel spill cleanup debris	Exempt if the spill has been reported to Minnesota Duty Officer; applies only to refined fuels. See MPCA fact sheet #w-hw4-19, Fuel-related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-19.pdf.
Hazardous waste generated in a production process unit	Exempt until removed from the unit or until 90 days after the unit has ceased operation.
Household and farm waste	Exempt when directly and properly disposed by the household or farm. Household or farm hazardous wastes are regulated in Minnesota once collected by anyone else. Households and farms are prohibited from disposing of cathode ray tubes (CRTs), fluorescent lamps, and used oil in normal trash or in the ground.
Industrial ethyl alcohol	Exempt if reclaimed and regulated by the U. S. Alcohol and Tobacco Tax and Trade Bureau.
Infectious waste	Exempt unless a dual waste. See MPCA fact sheet #w-sw4-30, Infectious Waste, at https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf.
Low-level mixed wastes (radioactive hazardous waste)	Exempt if managed by the generator under a license from the Minnesota Department of Health.
Ore and mineral extraction, beneficiation, and processing waste	Extraction wastes are exempt if uniquely associated with ore or mineral production. Beneficiation or processing wastes are exempt if the generating activities are specified in Minnesota Rules.
Samples of waste	Exempt until returned to the generator or disposed by the laboratory.
Sanitary sewage	Only the combined stream is exempt; each individual sewered waste is regulated.
Scrap metal	Exempt if recycled. See MPCA fact sheet #w-hw4-27, Hazardous Scrap Metal, at https://www.pca.state.mn.us/sites/default/files/w-hw4-27.pdf.
Treated wood	Structural lumber and related waste is exempt if disposed in a permitted solid waste landfill. See MPCA fact sheet #w-hw4-67, Treated Wood, at https://www.pca.state.mn.us/sites/default/files/w-hw4-67.pdf.
Trivalent chromium	Exempt if handled in a non-oxidizing environment.
Wastewater	Discharges allowed by a National Pollutant Discharge Elimination System (NPDES) or Minnesota State Discharge System (SDS) permit are exempt. See https://www.pca.state.mn.us/water/industrial-wastewater-discharge-npdes-permits.

Note: Table 1 lists only the most common exempt wastes. Contact the MPCA or your Metro County if you believe your waste may also be exempt from hazardous waste regulation. See More information on page 5.

Frequently confused with exempt wastes are hazardous wastes that are eligible for reduced management requirements if managed in certain ways, such as some recycled wastes.

A common misconception is that any waste is exempt if it is recycled. Recycled hazardous wastes are regulated in Minnesota, but may be eligible for reduced management and 'counting' requirements. Minnesota's hazardous waste definitions differ substantially from the federal regulations in this area. These hazardous wastes are discussed in MPCA fact sheet #w-hw1-02, Determine Generator Size, at https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf.

What are listed wastes?

A waste is *listed* if the names of its chemical ingredients meet the definition of one of the hazardous waste lists. There are four federally-mandated lists. Minnesota also recognizes PCBs as a listed hazardous waste. Together, approximately 750 wastes are considered listed hazardous wastes in Minnesota. Find links to detailed information in Table 2.

Table 2. Hazardous waste lists

List	Fact sheet number	Fact sheet web address
F-List	w-hw2-00	https://www.pca.state.mn.us/sites/default/files/w-hw2-00.pdf
K-List	w-hw2-01	https://www.pca.state.mn.us/sites/default/files/w-hw2-01.pdf
P-List	w-hw2-02	https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf
U-List	w-hw2-03	https://www.pca.state.mn.us/sites/default/files/w-hw2-03.pdf
PCBs	w-hw4-48a	https://www.pca.state.mn.us/sites/default/files/w-hw4-48a.pdf

What are characteristic wastes?

A waste is *characteristic* if it chemically reacts in the environment or contains toxic contaminants. There are five federally-mandated hazardous waste characteristics. Minnesota also recognizes lethality as a hazardous waste characteristic. Because any waste that displays a characteristic is hazardous, it is not possible to compile a complete catalogue of all hazardous wastes. Find links to detailed information in Table 3.

Table 3. Hazardous waste characteristics

Characteristic	Fact sheet number	Fact sheet web address
Ignitability	w-hw2-04	https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf
Oxidizers		
Corrosivity		
Reactivity		
Toxicity		
Lethality	w-hw2-05	https://www.pca.state.mn.us/sites/default/files/w-hw2-05.pdf

How do I evaluate a waste?

Remember, you must assume any waste you generate that could reasonably be a hazardous waste is hazardous until you evaluate the waste as both not listed and not characteristic. Keep that evaluation documentation for at least three years after you stop generating the waste.

You may evaluate a waste by:

- Knowledge
- Laboratory analysis

Evaluating a waste by knowledge

Evaluating by knowledge means applying objective, documented information and scientific or industry-accepted reasoning to determine that a waste is not hazardous. Subjective opinion is not sufficient. Document the absence of each potential list or characteristic that reasonably might be present.

If the activity that produces the waste at your site reasonably precludes a particular characteristic or contaminant from being present, then you do not need to evaluate for that characteristic or contaminant.

You may use any generally accepted source documents or references, such as Safety Data Sheets (SDS), textbooks, instruction or operating manuals, or manufacturer certifications to evaluate by knowledge.

However, remember that the material you must evaluate is the waste you discard, not the original product. Use of a product at your site may change it significantly from its original specifications. Non-hazardous products frequently become hazardous wastes during use. For example, 'high-flash' parts washer solvent, aqueous detergents, and sorbents can be contaminated when they leach toxics from metals parts or are combined with organic solvents. Most SDS and manufacturer certifications apply only to the original, unused product, and cannot by themselves document that a used waste is non-hazardous.

In addition, SDS, formerly known as Materials Safety Data Sheets (MSDS), is governed by the employee safety standards of the U.S. Occupational Safety & Health Administration (OSHA), not the environmental protection standards of the EPA or MPCA. The SDS standards only require contaminants to be stated if present at far above hazardous waste thresholds. Therefore, you cannot assume that the absence of a contaminant from the SDS list of ingredients means that the contaminant is not present.

You may delegate anyone to evaluate your waste by knowledge for you, however you remain responsible for the evaluation regardless of who performs it. Ensure that whoever performs the evaluation applies the Minnesota hazardous waste characteristics, which are different than the federal. You must have access at your generation site to the complete documentation used to evaluate your waste – the final conclusion alone is not sufficient. Neither the MPCA nor Metro Counties can evaluate your waste for you.

Evaluating a waste by laboratory analysis

Evaluating by laboratory analysis means collecting a representative sample of the waste, running specified laboratory tests on the sample, and comparing it to hazardous waste thresholds to determine that a waste is not hazardous. You may not rely on an analysis of waste from another site or another generator, even if believed to be similar. Ensure that the representative sample of your waste is collected before any dilution, on-site treatment, or mixture of the waste with other material. If the waste to be analyzed is a spent material, such as used parts washer solvent or solution, collect the sample after the material has been used, when you would normally need to dispose of it.

You may use your own on-site laboratory, a laboratory contracted through your chosen waste vendor, or an independent laboratory to test your waste. No specific laboratory licensure or certification is required; however the Minnesota Department of Health (MDH) administers a voluntary environmental laboratory accreditation program. To locate an MDH-accredited laboratory, contact the MDH. See More information on page 5.

Ensure the laboratory tests for each list and characteristic that reasonably could be present. The MPCA, Metro Counties, and MDH cannot evaluate your waste for you.

What records must I keep?

Any evaluation showing your waste is non-hazardous must be documented. Keep these records accessible from the site where the waste is generated for at least three years after you last accumulate the waste on-site or ship it off-site for disposal.

Who else regulates hazardous wastes?

This and the other publications in the 10 Steps to Hazardous Waste Compliance series are intended to provide guidance only on the requirements of the MPCA and Metro Counties. However, a hazardous waste may also be regulated as a:

- *Hazardous material* under the federal Hazardous Materials Regulations (HMR) administered by the U.S. Department of Transportation (DOT).
- *Hazardous chemical* under the federal Hazard Communication Standard (HCS) administered by OSHA.
- *Hazardous substance* under the federal Clean Water Act (CWA) or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, better known as SuperFund) administered by the EPA and the MPCA.

In addition to the hazardous waste requirements discussed in this and other MPCA fact sheets, the HMR, HCS, CWA, and CERCLA may also require specific labeling, packaging, employee training, documentation, and reporting when a hazardous waste is transported, released into the environment, or when employees may be exposed to it. Although this publication does not discuss these other regulations, generators of hazardous waste must meet all applicable requirements. For questions regarding these requirements, contact the applicable regulatory agency.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review Minnesota Rules.

Contact your Metro County or the MPCA with your questions. The MPCA's Small Business Environmental Assistance Program (SBEAP) can also provide free, confidential regulatory compliance assistance.

The Minnesota Technical Assistance Program (MnTAP) can help you reduce the amount of hazardous waste your site generates.

Metro County Hazardous Waste Offices

Anoka 763-422-7093
..... https://www.anokacounty.us/
Carver 952-361-1800
..... http://www.co.carver.mn.us/
Dakota 952-891-7557
.....https://www.co.dakota.mn.us/
Hennepin 612-348-3777
..... http://www.hennepin.us/
Ramsey 651-266-1199
..... https://www.ramseycounty.us/
Scott 952-496-8475
..... http://www.scottcountymn.gov/
Washington 651-430-6655
..... https://www.co.washington.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices).....1-800-657-3864
All offices.....651-296-6300
..... https://www.pca.state.mn.us/

Small Business Environmental Assistance

Toll free 1-800-657-3938
Metro 651-282-6143
.....https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
.....http://www.mntap.umn.edu

Minnesota Department of Health

Toll free 1-888-345-0823
Metro 651-201-5000
.....http://www.health.state.mn.us/

Minnesota Pollution Control Agency

Characteristic Hazardous Wastes

Waste/Hazardous Waste #2.04 • May 2011

Contents

In Minnesota, a waste may be hazardous for one of these reasons:

- It displays a hazardous waste characteristic
- It is recorded in one of four lists of hazardous waste – the K, F, P, or U List
- It contains polychlorinated biphenyls (PCBs)

This document discusses the six characteristics that can make a waste hazardous.

For more information on the lists, PCBs, or the lethality characteristic, see Minnesota Pollution Control Agency (MPCA) hazardous waste fact sheets #2.00, 2.01, 2.02, 2.03, 2.05, and 4.48a, available on the MPCA's hazardous waste publications webpage, http://www.pca.state.mn.us/waste/pubs/business.html.

Evaluating wastes for hazardous waste characteristics

All wastes that display one of the hazardous characteristics – including both used and unused products that are discarded, manufacturing and process wastes, and soil and debris contaminated with these wastes – are hazardous wastes.

A waste must be evaluated at the point of generation – when it first becomes a waste – to determine whether it displays a hazardous characteristic. A nonhazardous product can become a hazardous waste if it changes or becomes sufficiently contaminated during use so that it displays a hazardous characteristic. For example, parts washer solvent with a high flash point as a product whose flash point is lowered enough during use or that becomes contaminated with toxic constituents to the point it displays a hazardous characteristic.

Characteristic wastes in Minnesota

Wastes are hazardous in Minnesota when they display one or more of these characteristics:

- Ignitable
- Oxidizer
- Corrosive
- Reactive
- Toxic
- Lethal

Minnesota Pollution Control Agency • 520 Lafayette Rd. N., St. Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

Although the first five characteristics are similar to the Federal hazardous waste characteristics, some definitions are slightly different in Minnesota. Ensure you apply the correct definition. Lethality is a Minnesota hazardous characteristic.

Reducing characteristic waste

Reducing the amount of hazardous waste you generate can lower your costs as well as make it easier to comply with regulatory requirements. The Minnesota Technical Assistance Program (MnTAP) has staff that can help you assess alternate products and processes with a goal of reducing your listed waste generation. See the *Contact information* section on page six.

Wastes mixed with characteristic waste

The status of a mixture of a characteristically hazardous waste with another waste depends on the characteristic(s) displayed by the original hazardous waste. If a waste is hazardous because:

- It is ignitable, an oxidizer, corrosive or reactive – when mixed with another waste, the resulting mixture is only hazardous if it still displays one of those hazardous waste characteristics. NOTE: You may not dilute a waste to eliminate a hazardous characteristic.
- It is toxic or lethal – when mixed with another waste, the resulting mixture becomes a toxic or lethal waste.

Ignitable characteristic

An Ignitable hazardous waste may be a liquid, solid, or compressed gas. All ignitable hazardous wastes are assigned the hazardous waste code 'D001'.

Liquid

Generally, a liquid whose flashpoint is less than 60° Celsius (140° Fahrenheit) is an ignitable hazardous waste. However, water-based solutions (50 percent or more water) containing less than 24 percent alcohol are not ignitable, regardless of their flashpoint.

For the purpose of the ignitability characteristic, *liquids* include suspensions, the liquid portion of multiphase wastes, and any fluid that can be tested using the standard closed-cup test methods. Common examples of ignitable hazardous waste liquids include oil-based paints and most solvents.

Used absorbent materials that release an ignitable liquid when compressed also are regulated as ignitable wastes. For more information on identifying and managing regulated absorbent materials, see MPCA hazardous waste fact sheet #4.61, Managing Towels, Wipes, and Sorbents at http://www.pca.state.mn.us/publications/w-hw4-61.pdf.

Note that under the U.S. Department of Transportation's (DOT) Hazardous Material Regulations (HMR), ignitable liquid hazardous wastes share the same flashpoint threshold (140° Fahrenheit) as Class 3 flammable liquids.

Solid

A waste is a solid ignitable hazardous waste if it will both:

1. Spontaneously combust, or ignite through friction or by absorbing moisture; and
2. Once ignited, will burn so vigorously and persistently that it creates a hazard.

If your waste is in granular or paste-like form, or if your waste which may be cut into strips, you should use Environmental Protection Agency (EPA) Test Method 1030 to determine whether the waste will burn vigorously or persistently enough to create a hazard. Wastes with a burn rate of 2.2 millimeters per second or greater are considered

to create a hazard under this definition. Many common waste forms, such as rags and filter materials, may likely fail this test. If your waste is in a form which cannot be tested using Method 1030, you must use other available knowledge to evaluate your waste to determine whether it burns vigorously and persistently enough to create a hazard.

Examples of solid ignitable hazardous wastes include rags soaked with linseed oil, aluminum dust, and phosphorus.

Compressed gas

A waste compressed gas is an ignitable hazardous waste if, when not compressed, it will either:

- Burn when mixed at 13 percent or less with air; or
- Has a flammability range of 12 percent or more, regardless of the lower limit.

Common examples of compressed gas ignitable hazardous wastes include acetylene, propane, and the propellant of most commercial and consumer aerosol products.

For more information on managing aerosols, see MPCA hazardous waste fact sheet #4.00, Managing Waste Aerosols at http://www.pca.state.mn.us/publications/w-hw4-00.pdf.

Oxidizer characteristic

A waste is classified as a hazardous waste oxidizer if it either:

1. Is defined as an oxidizer under the DOT Hazardous Materials Regulations
2. Readily supplies oxygen to a chemical reaction or acts similarly to oxygen in a reaction

Hazardous waste oxidizers are assigned the hazardous waste code 'D001' (the same code as ignitable waste).

Oxidizers under DOT Hazardous Materials Regulations

DOT Hazardous Materials Regulations define oxidizers as:

- Solids with a mean burning time less than or equal to that of a 3:7 mixture of potassium bromate and cellulose
- Liquids that spontaneously ignite or which will rise in pressure faster than a 1:1 mixture of nitric acid and cellulose

Wastes that readily supply oxygen or act similarly to oxygen in to a chemical reaction

Oxidative materials include, but are not limited to:

- Bromine, bromates, and perbromates
- Chlorine, chlorates, and perchlorates
- Chromates and dichromates
- Fluorine
- Iodine, iodates, and periodates
- Nitric acid and both organic and inorganic nitrates
- Oxygen, ozone, oxides, and both organic and inorganic peroxides
- Perborates, permanganates, perrhenates, and persulfates

While you may commonly find information about a product's status as an oxidizer in a Material Safety Data Sheet (MSDS) or other product literature, remember that absence of a specific warning that a product is an oxidizer is not evidence that the product is not a hazardous waste oxidizer.

Corrosive characteristic

In Minnesota, only liquids are subject to evaluation for corrosivity; however, you must ensure that hygroscopic solid wastes that may absorb enough water to become a liquid during accumulation or transport are also evaluated for the corrosive characteristic. All corrosive hazardous wastes are assigned hazardous waste code D002.

A waste is hazardous for the corrosive characteristic if it is:

- An aqueous waste (20 percent or more water) having a pH of 2 or less, or 12.5 or more; or
- Any other liquid that will corrode steel faster than ¼ inch per year.

Examples of hazardous wastes displaying the corrosive characteristic include ferric chloride and laboratory acids.

Reactive characteristic

Reactive hazardous wastes include wastes that may explode or release toxic fumes in common waste situations. Reactive hazardous wastes are assigned hazardous waste code 'D003'.

A waste is hazardous for the reactive characteristic if it:

- Is normally unstable and readily undergoes violent change without detonating
- Reacts violently with water
- Forms potentially explosive mixtures with water
- Releases toxic fumes in dangerous quantities when mixed with water
- Is a cyanide- or sulfide-bearing waste and releases toxic fumes in dangerous quantities when exposed to pH conditions between 2.0 and 12.5
- Is capable of detonation or explosion if subjected to a strong initiating source or heated under confinement
- Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure
- Is a Division 1.1, 1.2, or 1.3 or forbidden explosive under DOT Hazardous Materials Regulations

Common examples of hazardous wastes displaying the reactive characteristic include crystallized picric acid and cyanide-containing plating solutions.

Toxic (toxicity) characteristic

A toxic hazardous waste is a waste that will leach one of 40 contaminants at a concentration greater than the threshold concentration given in Minn. Rules 7045.0131, Subp. 8 (also see page seven). A toxic hazardous waste is assigned a hazardous waste code based on the leachable contaminant.

Examples of wastes commonly hazardous for the toxicity characteristic include used parts washer solvent and paints containing 'heavy' (toxic) metal pigments.

Toxicity Characteristic Leaching Procedure (TCLP)

The test to evaluate a waste for the toxicity characteristic is the Toxicity Characteristic Leaching Procedure (TCLP). This test simulates conditions that may occur within a landfill and assesses a waste's potential to leach a toxic contaminant into surface waste or ground water. You, your hazardous waste transporter, or an analytical laboratory may perform the TCLP. While there is no requirement to use a certified laboratory, the Minnesota Department of Health (MDH) maintains a voluntary laboratory accreditation program. For assistance finding an MDH-accredited laboratory, contact the MPCA or the MDH.

- Solid wastes are subjected to a leaching test using an acidic solution. The concentration of contaminants in the leachate is then compared to the thresholds specified in Table 1 on page 8 of this fact sheet. The waste is hazardous if a contaminant is present in the leachate at or above the threshold concentration.
- Liquid wastes (contain less than 0.5 percent filterable solids) are tested directly by comparing the concentration of contaminants in the waste to the thresholds specified in Table 1 on page 8. The waste is hazardous if a contaminant is present in the waste at or above the threshold concentration.
- A multi-phase waste containing both solid and liquid components is separated and each component tested as above. The entire multi-phasic waste is assigned the hazardous waste code(s) determined for any component.

Evaluating for the toxicity characteristic 'by knowledge' using a Material Safety Data Sheet

The most commonly available technical document for many products is the MSDS prepared by manufacturers to meet requirements of the U.S. Occupational Safety and Health Administration (OSHA). Unfortunately, only hazardous constituents present at a concentration of one percent or more (0.1 percent for carcinogens) are required to be listed on an MSDS by Federal OSHA Regulations. This limit is many times higher than any of the TCLP hazardous waste thresholds.

Therefore, a toxic contaminant may be present in a product at concentrations that would make the product hazardous for the toxicity characteristic without being listed on the MSDS at all. In addition, products that do not contain any contaminants may pick up toxic contaminants during use, particularly products used as solvents or cleaners. So, for:

- Products that will be disposed of without being used, or whose use would not reasonably result in contamination – you may only rely on explicit statements in an MSDS or other product literature stating a product does not contain toxic contaminants or only contains toxic contaminants at a concentration less than hazardous waste thresholds.
- Products that will be used and then disposed of – you may not use an MSDS to evaluate a resulting waste for the toxicity characteristic. You must perform a TCLP test or rely on other knowledge that the waste does not contain toxic contaminants.

'Rule of 20'

The TCLP can be expensive. Solid wastes, and the solid component of multi-phase wastes, may be evaluated (at least initially) using the 'totals' test. Since the TCLP test involves a 20-fold dilution of the leachate, you may test a solid waste (or consult available documentation, such as an MSDS), to determine the maximum total concentration of toxic contaminants that may be present in the solid waste. Then:

- If the total concentration for any contaminant is less than 20 times the hazardous waste threshold concentration for that contaminant, you may assume the waste is not hazardous for that contaminant.
- If the total concentration for a contaminant is 20 times or more than the hazardous waste threshold concentration for that contaminant, you must either perform the TCLP or consider the waste hazardous for that contaminant.

Liquid wastes may not be evaluated using the 'Rule of 20'.

Lethal characteristic

Lethality is a characteristic specific to Minnesota, although some other states have similar classifications. A waste is hazardous for the lethality characteristic if its oral or dermal median lethal dose (LD50) or inhalation median lethal concentration (LC50) is less than the hazardous waste threshold. Lethal hazardous wastes are assigned hazardous waste code 'MN01'.

Examples of wastes often displaying the lethality characteristic include poisons, pesticides, and some pharmaceuticals. If a waste is hazardous for the lethality characteristic, you must list the MN01 hazardous waste code on the uniform hazardous waste manifest as one of the six hazardous waste codes when you ship it off site for disposal.

Hazardous waste thresholds for the lethality characteristic are:

- Oral LD50 (rat) 500 milligram per kilogram (mg/kg)
- Dermal LD50 (rabbit) 1000 mg/kg
- Inhalation LC50 (rat)
  - dust/mist 2000 milligrams per cubic meter of air (mg/m3)
  - gas/vapor 1000 parts per million (ppm)

To help you evaluate waste for the lethality characteristic, the MPCA has compiled a list of attributes that indicate that a waste may be lethal. For the list and more information about the lethality characteristic, see MPCA hazardous waste fact sheet #2.05, The Lethality Characteristic, available at http://www.pca.state.mn.us/publications/w-hw2-05.pdf.

Contact information

Your metropolitan county and the MPCA have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional hazardous waste staff. For information about waste reduction, contact the Minnesota Technical Assistance Program.

Metro County Hazardous Waste Offices

Anoka	763-422-7093
Carver	952-361-1800
Dakota	952-891-7557
Hennepin	612-348-3777
Ramsey	651-266-1199
Scott	952-496-8475
Washington	651-430-6655
Web sites	http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free	1-800-247-0015
Metro	612-624-1300
Web site	http://www.mntap.umn.edu

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
Brainerd	218-828-2492
Detroit Lakes	218-847-1519
Duluth	218-723-4660
Mankato	507-389-5977
Marshall	507-537-7146
Rochester	507-285-7343
St. Paul	651-296-6300
Willmar	320-214-3786
Web site	http://www.pca.state.mn.us

Table 1. Maximum concentration of contaminants for the toxicity characteristic

Hazardous waste code	Contaminant	CAS #	Maximum concentration (mg/L)	Notes
D004	Arsenic	7440–38–2	5.0	7
D005	Barium	7440–39–3	100.0	
D018	Benzene	71–43–2	0.5	1,8
D006	Cadmium	7440–43–9	1.0	
D019	Carbon tetrachloride	56–23–5	0.5	1,8
D020	Chlordane	57–74–9	0.03	1
D021	Chlorobenzene	108–90–7	100.0	1,8
D022	Chloroform	67–66–3	6.0	1
D007	Chromium	7440–47–3	5.0	4
D023	o-Cresol	95–48–7	200.0	1,6,8
D024	m-Cresol	108–39–4	200.0	1,6,8
D025	p-Cresol	106–44–5	200.0	1,6,8
D026	Cresol	--------	200.0	1,6,8
D016	2,4-D	94–75–7	10.0	1
D027	1,4-Dichlorobenzene	106–46–7	7.5	
D028	1,2-Dichloroethane	107–06–2	0.5	
D029	1,1-Dichloroethylene	75–35–4	0.7	1
D030	2,4-Dinitrotoluene	121–14–2	0.13	1,3
D012	Endrin	72–20–8	0.02	2
D031	Heptachlor (and its epoxide)	76–44–8	0.008	2
D032	Hexachlorobenzene	118–74–1	0.13	1,3
D033	Hexachlorobutadiene	87–68–3	0.5	1
D034	Hexachloroethane	67–72–1	3.0	1
D008	Lead	7439–92–1	5.0	
D013	Lindane	58–89–9	0.4	1
D009	Mercury	7439–97–6	0.2	1,9
D014	Methoxychlor	72–43–5	10.0	1
D035	Methyl ethyl ketone	78–93–3	200.0	1,8
D036	Nitrobenzene	98–95–3	2.0	1,8
D037	Pentrachlorophenol	87–86–5	100.0	
D038	Pyridine	110–86–1	5.0	1,3,8
D010	Selenium	7782–49–2	1.0	
D011	Silver	7440–22–4	5.0	5
D039	Tetrachloroethylene	127–18–4	0.7	1,8
D015	Toxaphene	8001–35–2	0.5	2
D040	Trichloroethylene	79–01–6	0.5	1,8
D041	2,4,5-Trichlorophenol	95–95–4	400.0	
D042	2,4,6-Trichlorophenol	88–06–2	2.0	
D017	2,4,5-TP (Silvex)	93–72–1	1.0	
D043	Vinyl chloride	75–01–4	0.2	1

Explanation of Table 1 notes

1. Any waste disposed of without being used and containing this contaminant as the sole active ingredient is a U-listed hazardous waste regardless of the concentration of the contaminant. For more information on the U List, see MPCA hazardous waste fact sheet #2.03, U List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-03.pdf.

2. Any waste disposed unused and containing this contaminant as the sole active ingredient is a P-listed acute hazardous waste regardless of the concentration of the contaminant. For more information on the P List, see MPCA hazardous waste fact sheet #2.02, P List of Acute Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-02.pdf.

3. Though the Minnesota Rules do not contain this annotation, the Federal Regulations note that these contaminants may have quantitation limits greater than the hazardous waste threshold concentration. The quantitation limit is the lowest concentration that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions. The specific quantitation level is determined by current accepted interlaboratory studies or, in the absence of such studies, is five times the established minimum detection limit for each contaminant. If the current quantitation limit is greater than the stated hazardous waste threshold concentration, then the quantitation limit becomes the effective hazardous waste threshold concentration.

4. Wastes containing chromium which is exclusively or nearly exclusively trivalent which are generated from processes using exclusively or nearly exclusively trivalent chromium and do not generate hexavalent chromium are not D022 hazardous wastes if managed in nonoxidizing environments.

5. Silver-containing x-ray and photographic film and sludge from silver recovery units which will be recycled may be managed under reduced requirements. For the reduced requirements for photographic waste management, see MPCA hazardous waste fact sheet #4.46, Managing Photographic and X-ray Waste at http://www.pca.state.mn.us/publications/w-hw4-46.pdf.

6. If the concentration of each form of cresol cannot be differentiated, then the total cresol concentration must be used to evaluate the waste. If the total cresol concentration must be used, the hazardous waste concentration threshold is 200mg/L.

7. Arsenic-treated wood waste disposed of after structural use may be managed under reduced requirements without determining whether it leaches arsenic. Treated wood waste that is disposed of after any other use must be evaluated fully. For the reduced requirements for structural arsenic-treated wood management, see MPCA hazardous waste fact sheet #4.67, Treated Wood: Use, Disposal, and Alternatives for Businesses at http://www.pca.state.mn.us/publications/w-hw4-67.pdf.

8. Wastes containing this contaminant may meet the definition of F-listed hazardous waste regardless of the concentration of the contaminant, depending on their intended or actual use. For more information on the F List, see MPCA hazardous waste fact sheet #2.00, F List of Hazardous Waste at http://www.pca.state.mn.us/publications/w-hw2-00.pdf.

9. Fluorescent and high-intensity discharge lamps, such as neon, sodium vapor, and mercury vapor lamps, and mercury-containing devices, such as thermostats, thermometers, and pressure gauges, which would be U151 or D009 hazardous wastes for mercury may be managed under reduced requirements as Universal Wastes. Mercury is not considered an exempt scrap metal. For more information about Universal Wastes and their management requirements, see MPCA hazardous waste fact sheet #4.62, Universal Waste at http://www.pca.state.mn.us/publications/w-hw4-62.pdf.

Minnesota Pollution Control Agency

Hazardous Waste-related Contacts

Waste/Hazardous Waste #5.00 • October 2009

Topic	Organization / Web Site	Telephone Number
Air Quality Requirements	MPCA Small Business Environmental Assistance Program (available to businesses with less than 100 employees) www.pca.state.mn.us/sbeap	651-282-6143 800-657-3938
Collection Sites, VSQG	MPCA www.pca.state.mn.us/publications/w-hw2-51.pdf	651-296-6300 800-657-3864
Emergency Reporting/ Spills/ Releases	Minnesota Duty Officer www.erc.state.mn.us/duty_officer/	651-649-5451 800-422-0798
EPA Region V	www.epa.gov/reg5rcra/wptdiv/hazardous/index.html	800-621-8431
EPA Hotlines/Clearinghouses	www.epa.gov/epahome/hotline.htm	
Fire Code	Your local fire marshal or State Fire Marshal's office www.dps.state.mn.us/fmarshal/fmarshal.html	651-201-7200 - voice FAX: 651-215-0525 TTY: 651-282-6555
Environmental Audit	www.pca.state.mn.us/programs/audit_p.html	651-296-6300 800-657-3864
Grants and loans	MPCA www.pca.state.mn.us/grants/index.html	651-296-6300 800-657-3864
Green Star Award	MPCA www.pca.state.mn.us/programs/audit_p.html	651-296-6300 800-657-3864
Hazardous Waste, Superfund	Superfund Hotline (federal) www.epa.gov/superfund/ www.pca.state.mn.us/programs/superf_p.html	800-424-9346
Hazardous Waste Identification Numbers (EPA ID Numbers)	MPCA www.pca.state.mn.us/publications/w-hw1-02.pdf www.pca.state.mn.us/publications/w-hw7-09.pdf	651-296-2412 651-296-6300 800-657-3864
Hazardous Waste Reduction	Minnesota Technical Assistance Program (MnTAP) http://www.mntap.umn.edu	Metro: 651-624-1300 Non-metro: 800-247-0015
Loans – Small Business or Cleanup	Small Business Ombudsman www.pca.state.mn.us/sbo www.pca.state.mn.us/programs/sbomb_loan.html	651-757-2121 800-985-4247
MPCA General Numbers	www.pca.state.mn.us	651-296-6300 800-657-3864 24-hour emergency number: 651-649-5451 or 800-422-0798 TTY: 651-282-5332 TTY 24-hour emergency number: 651-297-5353 or 800-627-3529

Minnesota Pollution Control Agency • 520 Lafayette Rd. N., St. Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

Topic	Organization / Web Site	Telephone Number
Metro County Hazardous Waste Offices	Anoka County Department of Environmental Services 2100 3rd Ave Suite 360 Anoka MN 55303-5042 www.anokacounty.us	763-422-7093 FAX: 763-323-6150
	Carver County Department of Environmental Services 600 E 4th St Chaska MN 55318-2158 www.co.carver.mn.us/EnvServ/enserv.htm	952-361-1800 FAX: 952-361-1828
	Dakota County Environmental Management Department 14955 Galaxie Ave Apple Valley MN 55124 www.dakotacounty.us	952-891-7557 FAX: 952-891-7588
	Hennepin County Department of Environmental Services 417 N 5Tth St Minneapolis MN 55401-1309 www.hennepin.us	612-348-3777 FAX: 612-348-8532
	Ramsey County Environmental Health Section 2785 White Bear Ave Suite 350 Maplewood, MN 55109 www.co.ramsey.mn.us/PH	651-266-1199 FAX: 651-266-1177
	Scott County Environmental Health 200 4th Ave W Shakopee MN 55379-1220 www.co.scott.mn.us	952-496-8475 FAX: 952-496-8496
	Washington County Dept of Public Health & Environment 14949 N 62nd St, PO Box 6 Stillwater MN 55082-0006 www.co.washington.mn.us/info_for_residents/environment/hazardous_waste_at_businesses	651-430-6655 FAX: 651-430-6730
Minnesota Duty Officer	Point of contact for the emergency notification of a hazardous material or petroleum release. www.erc.state.mn.us/duty_officer/ www.erc.state.mn.us/duty_officer/DOPlacard.pdf	651-649-5451 800-422-0798
MPCA Regional Offices	North Central Office, Brainerd Northeast Office, Duluth Northwest Office, Detroit Lakes Southeast Office, Rochester Southeast Office, Mankato Southwest Office, Willmar Southwest Office, Marshall	218-828-2492 218-723-4660 218-847-1519 507-206-2631 507-389-5977 320-214-3786 507-537-7146
PCBs	MPCA www.pca.state.mn.us/waste/pubs/business.html#specific www.pca.state.mn.us/publications/w-hw4-48c.pdf	651-296-6300 800-657-3864

Topic	Organization / Web Site	Telephone Number
Pesticides, Management and Disposal	Dept. of Agriculture, Clean Sweep Collection Program www.mda.state.mn.us/chemicals/spills/wastepesticides/default.htm Pesticide management www.mda.state.mn.us/chemicals/pesticides/pestmgmt.htm E-mail: MDA.Info@state.mn.us	651-201-6121 800-967-2474
RCRA Hotline	www.epa.gov/superfund/contacts/sfhotlne/cerep.pdf	800-424-7672
Sewering Hazardous Waste, Metro area	Metropolitan Council Environmental Services (MCES) and your metro county *(refer to 'Metro County Offices')* www.metrocouncil.org/environment/environment.htm	651-602-4703 Spills: 651-602-4700 After hours spills: 651-602-4511
Sewering Hazardous Waste, Non-metro area	Your local waste water treatment plant and MPCA www.pca.state.mn.us/publications/w-hw7-11.pdf	651-296-6300 800-657-3864
Signs, Used Oil Lead-Acid Battery	Dept. of Public Service, Weights & Measures www.state.mn.us/portal/mn/jsp/content.do?id=-536881375&agency=Commerce www.pca.state.mn.us/waste/pubs/usedoilsign.pdf www.pca.state.mn.us/publications/w-hw4-07sign.pdf	651-639-4010
Storm Water Requirements	MPCA www.pca.state.mn.us/water/stormwater/index.html	651-296-6300 800-657-3864
Tanks	MPCA www.pca.state.mn.us/cleanup/tanks.html	651-296-6300 800-657-3864
Toxic Release Inventory TRI Reporting	EPA Hotline E-mail: tri.us@epa.gov MN Dept. of Public Safety www.erc.state.mn.us/	800-424-9346 651-201-7417 Fax: 651-296-0459
Toxic Substance Control Act	EPA Hotline E-mail: tsca-hotline@epa.gov	202-554-1404
Training, Hazardous Waste	MPCA www.pca.state.mn.us/news/training/index.html#hazwaste	651-296-6300 800-657-3864
Transporters, Hazardous Waste & Hazardous Materials	Minnesota Department of Transportation Office of Commercial Vehicle Operations www.dot.state.mn.us/cvo/hazmat.html	651-215-6330

COUNTY OF Olmsted
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

ENVIRONMENTAL RESOURCES DEPARTMENT
2122 CAMPUS DR SE - SUITE 200
ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

OLMSTED COUNTY DEMOLITION DEBRIS DISPOSAL AREA

HOURS OF OPERATION: MONDAY – FRIDAY, 8:30 A.M. TO (UNLOADED BY) 3:30 P.M.

IF WET CONDITIONS EXIST, CALL 507-285-8515

Due to the fact that only a thin layer of soil covers the porous limestone and sandstone throughout most of Olmsted County, underground drinking water supplies are susceptible to contamination from surface activities. Olmsted County spent seven years and close to five million dollars to site, permit, and construct the Kalmar Landfill in one of the few areas that is less sensitive to ground water contamination, and therefore suitable for land disposal of solid waste. To further safeguard drinking water supplies and prevent unnecessary loss of suitable landfill space, we ask for your cooperation in only bringing acceptable materials to the landfill.

Olmsted County wants to provide its customers with disposal options that balance environmental protection with affordability. We built a less expensive demolition debris cell without an engineered liner system. Therefore, only materials such as wood, concrete, plaster board, brick, plastic building parts, and metal can be accepted in the demolition debris cell, since they are less likely to degrade ground water. It is your responsibility to segregate unacceptable construction, remodeling, and demolition waste materials that cannot, by law, be disposed of at a demolition debris disposal site.

The following materials CANNOT be delivered to the Kalmar Landfill demolition debris cell:
(Alternate disposal options are given in parentheses. Please contact the Olmsted County Environmental Resources Department at 507-328-7070 for additional information.)

• **Adhesive*** & ** (HWF)	• **Electrical ballasts with PCBs** (HWF)
• **Appliances** (OCRC)	• **Fluorescent lights** (HWF)
• **Asbestos Containing Materials** (see asbestos fact sheet)	• **Municipal solid waste/garbage** (OCRC)
• **Brush** (OCRC)	• **Used oil & oil filters** (Call 507-328-7070 for disposal options)
• **Carpet and carpet padding** (OCRC)	• **Paints, solvents, flammable liquids, combustible or ignitable wastes*** & ** (HWF)
• **Caulking*** & ** (HWF)	• **Petroleum-based products*** & ** (HWF)
• **Corrugated cardboard, except that reinforced with wood or Styrofoam** (OCRC)	• **Tar pails*** & ** (HWF)

* If you are a business generating this waste, you may qualify as a "Very Small Quantity Generator" (i.e., generate <220 pounds of hazardous waste per month).
** Residents may dispose of empty containers and dry, residual amounts in the garbage.
OCRC^{P} = Olmsted County Recycling Center Plus
HWF = Olmsted County Hazardous Waste Facility

All solid waste delivered to the Kalmar Landfill must be loaded and covered in compliance with Minnesota Department of Transportation regulations. All heaped loads will be charged accordingly for additional yardage. Only the designated access route shall be used (see the map on the reverse side). At the time of disposal, the demolition debris cell operator is required to inspect all incoming loads. As a courtesy, if unacceptable items are found (five or less), the driver may place them in the on-site, blue roll-off container. Repeat offenders and those with more than five unacceptable items will be charged a minimum special handling fee of $50.00 and instructed to deliver the unacceptable wastes to the appropriate disposal site(s). If you have any questions, please contact the Olmsted County Kalmar Landfill at 507-285-8515 or 507-328-7070 for additional information.

Revised 7/24/2014

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

DEPARTMENT OF ENVIRONMENTAL RESOURCES
2122 CAMPUS DR SE - SUITE 200
ROCHESTER, MN 55904-4744
www.olmstedwaste.com
507.328.7070

ASBESTOS CONTAINING MATERIAL (ACM) DISPOSAL FACT SHEET

Disposal Requirements

Asbestos Containing Material (ACM) is accepted at the Hazardous Waste Facility and Kalmar Landfill. The Hazardous Waste Facility only accepts small household quantities of ACM (less than 100 pounds per item). The Kalmar Landfill accepts household and commercial loads of ACM. At the time of disposal, an "Asbestos Containing Material Transport and Disposal Manifest" form must be completed by the applicant and pre-approved by Olmsted County staff. If appropriate County personnel are present at the time of delivery, the manifest can be completed at the disposal location. These forms are available at the Olmsted County Environmental Resources Department located at 2122 Campus Drive SE Suite 200, Rochester, MN. **Please note that waste loads that do not have the proper documentation will be rejected.**

All ACM (friable or non-friable) accepted by the County must be packaged in drums or in one six-ply or two three-ply plastic bags/sheeting totaling no less than 6-millimeters (mil) in thickness. Any friable asbestos should be adequately wetted/dampened using a low pressure, fine water spray to prevent blowing of asbestos fibers, should the plastic wrapping/drum break during transport. Containers of ACM must be closed, without holes, rips or tears, and have no visible emissions emanating. **Loose asbestos will not be accepted by Olmsted County.** Olmsted County staff will inspect the waste containers at the facility. If containers are not intact and appropriately labeled (see the ACM Disposal Checklist for further details), they will be rejected. **The load must only contain ACM and cannot be mixed with other construction or demolition material.**

ACM can be disposed of at the Kalmar Landfill **by appointment on Mondays and Wednesdays between 8:30 a.m. and 11:30 a.m. A 24-hour notice is required. Please contact the Landfill at (507) 328-7070.** Note: disposal appointments will be cancelled if wind speeds at the landfill are greater than 10 miles per hour (mph). If your appointment is cancelled due to the weather, landfill staff will make arrangements with you to reschedule. To ensure there are no delays in receiving your ACM load, please call the landfill the day of your appointment to confirm the site is still able to accept the material.

Small household quantities (less than 100 pounds per load) are accepted at the Hazardous Waste Facility **- Mondays through Saturdays between 8:00 a.m. to 5:00 p.m.** Loads greater than 100 pounds will be redirected to the Kalmar Landfill for disposal.

ACM Background Information

Asbestos was generally used in building construction for fire-proofing purposes. The primary concern associated with handling asbestos wastes is exposure to airborne asbestos fibers. These fibers, if inhaled, can increase the risk of lung damage or cancer. Ordinarily, even a very small quantity of inhaled asbestos fibers may cause long-term respiratory side effects. Please note that new federal regulations (40 CFR Part 61) include more stringent requirements for labeling, manifesting and disposing of ACM in landfills. These regulations have been incorporated into the Olmsted County Industrial Solid Waste Management Plan.

Friable ACM *is defined as asbestos material that when dry can be crushed, crumbled, pulverized, or reduced to powder by hand pressure. Friable asbestos fibers can easily escape into the air. Examples of friable ACM are sheet vinyl with a paper or felt backing, pipe and boiler insulation, duct insulation, and sprayed insulation.*

Non-Friable ACM *is any material containing more than one percent asbestos (as determined by Polarized Light Microscopy) that when dry CANNOT be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable asbestos fibers are bound into a matrix and cannot easily escape into the air.*

> *Category I Non-Friable ACM – is pliable (not brittle), breaks by tearing rather than fracturing, and does not easily release asbestos fibers upon breaking. Examples include: packing material, gaskets, resilient floor covering and roofing products that contain greater than one percent asbestos and are in good condition.*
>
> *Category II Non-Friable ACM – any kind of non-friable ACM that is not covered under Category I. This type of ACM is NOT pliable, breaks by fracturing rather than tearing, and does release some asbestos fiber release upon breaking. Examples include: cement asbestos boarding, Transite® siding, asbestos putties, asbestos sealants and adhesives.*

The terms "friable" and "non-friable" are not necessarily meant to pertain to a particular material for its entire lifetime. Non-friable ACM can become friable if it is damaged or worn enough.

ASBESTOS CONTAINING MATERIAL (ACM) DISPOSAL CHECKLIST

Supplies for packaging asbestos containing material (ACM) may be obtained at local hardware stores and home retail centers. Official Occupational Safety and Health Administration (OSHA) ACM dangerous material labels are available at safety supply stores or they can be purchased or printed from industrial safety websites.

SUPPLIES

- **DUCT TAPE** (for sealing plastic bags or sheeting and affixing warning label)
- **HEAVY DUTY CONTRACTOR GRADE PLASTIC BAGS OR PLASTIC SHEETING** (total plastic thickness for packaging the material must be no less than 6-mil)
- **PERMANENT BLACK OR RED MARKER**
- **ACM DANGER WARNING LABELS** (for friable ACM)

Packaging and labeling requirements differ depending on whether the ACM is friable or non-friable.

ASBESTOS DISPOSAL CHECKLIST

☐ All friable asbestos was adequately wetted/dampened using a low pressure, fine water spray to prevent blowing of asbestos fibers prior to the plastic being applied – precaution should the container become damaged during transport.

☐ Material is properly packaged – fully contained/sealed in a plastic drum or bagged/wrapped in one six-ply or two three-ply contractor grade plastic bags/sheeting totaling no less than 6-mil in thickness. All seams are completely sealed with duct tape. Items that have sharp edges may need additional layers to avoid puncturing or tearing.

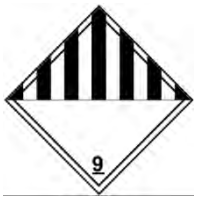
☐ All friable asbestos packages/containers are properly identified with the ACM warning or OSHA label:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

The warning must be affixed with a label or written on the container with a permanent marker. If the warning is written on the container, the type size of the lettering is specific to the size of the package but the lettering must be readily legible under normal day light conditions. The warning must also be prominently displayed on the package. If labels are used, they must be firmly affixed to the package.

☐ The Asbestos-Containing Material Transport and Disposal Manifest is completed and pre-approved by Olmsted County staff. If appropriate County personnel are present at the time of delivery, the manifest form can be completed at the disposal location.

☐ For Kalmar Landfill Disposal – Appointment Date: _____ and Time:_____
Please note: your disposal appointment may be cancelled due to high wind conditions. To ensure there are no delays in receiving your ACM load, please call the landfill the day of your appointment at (507) 328-7070 to confirm the site is still able to accept the material.



☐ Commercial Loads: An OSHA warning label is placed on the vehicle or container. At the landfill, the OSHA warning is required to be displayed during the disposal process. The landfill will also accept loads if they are marked with the U.S. DOT Class 9 Hazardous Waste placard with the ID # 2212, white-square on point device or orange panel. Vehicle signage is not required for homeowners transporting their own ACM.

It's always a good idea to bring extra packaging supplies with you, just in case there is any damage during transport. Improperly packaged asbestos material will NOT be accepted.

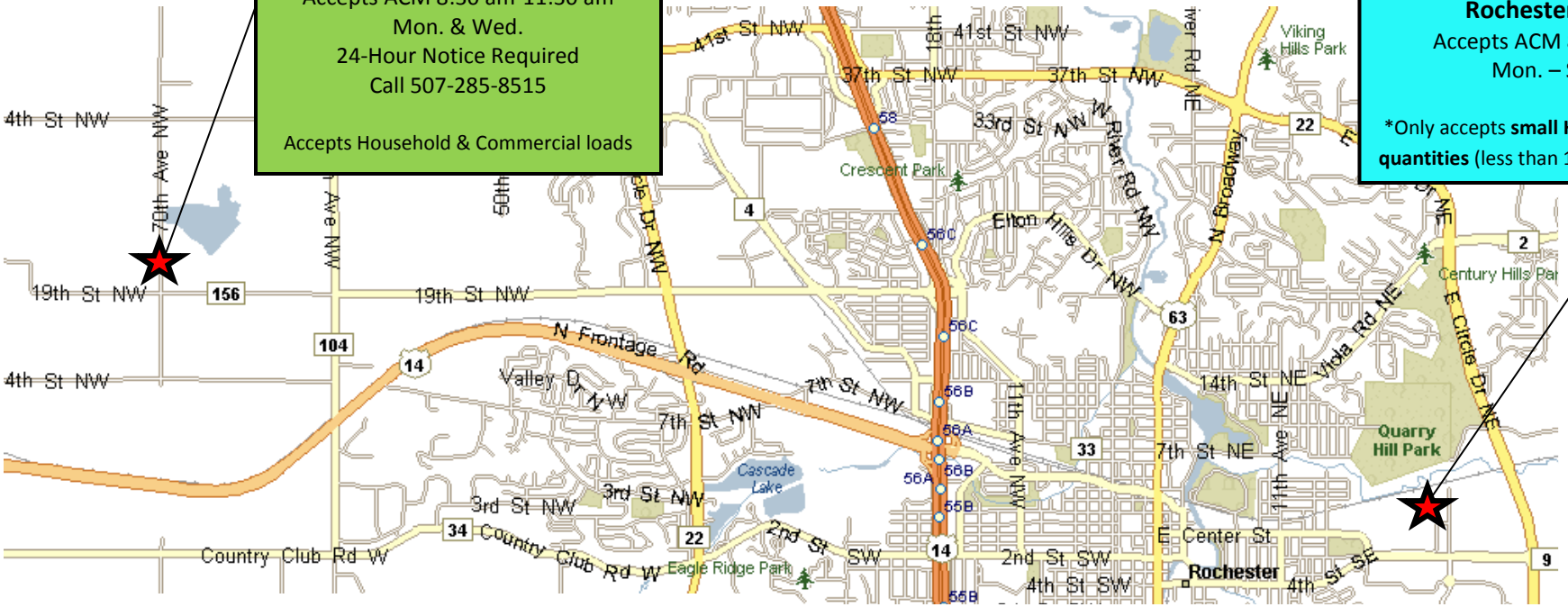
OLMSTED COUNTY ACM DISPOSAL LOCATIONS

Kalmar Landfill
7401 19th Street NW
Rochester, MN
Accepts ACM 8:30 am-11:30 am
Mon. & Wed.
24-Hour Notice Required
Call 507-285-8515

Accepts Household & Commercial loads

Hazardous Waste Facility
305 Silver Creek Road NE
Rochester, MN
Accepts ACM 8am-5pm
Mon. – Sat.

*Only accepts **small Household quantities** (less than 100 lbs per load)



Rochester, MN

Tips for Securing Your Load

- Don't rely on the weight of items to keep them secure in the truck bed or trailer. Place lighter items at the bottom of the load while packing.
- Secure all loads with ropes, bungee cords or straps. Tie larger items directly to the vehicle's frame.
- When necessary, cover loads with sturdy plastic or a canvas tarp. Use a tarp that is large enough to completely cover the trailer or truck bed – a minimum of four inches should overlap the outer sides, front, and back of the trailer or truck bed.
- Keep the load level with the sides of the truck bed or trailer unless the load is secured. Don't exceed the weight restrictions of the vehicle or the roadways.
- Before driving away, check the load to ensure that the cargo has been properly distributed and adequately secured. When transporting loads long distances, stop after traveling 25 miles and examine the load to ensure that it remains secure.
- Always dispose of trash at permitted solid waste disposal facilities.

APPENDIX F

INTERNAL FORMS AND MATERIALS RELATED TO THE OLMSTED COUNTY INDUSTRIAL SOLID WASTE MANAGEMENT PROGRAM

COUNTY OF Olmsted DEPARTMENT OF ENVIRONMENTAL RESOURCES
Clean Air • Clean Energy • Clean Soil • Clean Water

Environmental Resources Department
2122 Campus Dr SE - Suite 200
Rochester, MN 55904-4744
www.olmstedwaste.com
507.328.7070

Business Waste Assistance Visits

Introduction to the use of the Industrial Solid Waste Management Plan

Olmsted and Dodge County businesses undergoing a "Waste Assistance Visit" by Environmental Resources Department staff should be introduced fully to the proper use of the Industrial Solid Waste Management Plan (ISWMP). At a minimum, the following steps should be accomplished in full:

1. Unless the business owner already has a copy of the ISWMP, provide the owner with a copy of the updated ISWMP.

2. Define "industrial solid waste" as defined by Minnesota law.

3. Discuss the Plan objectives.

4. Assist the business owner complete a Waste Inventory Form (WIF), located in Appendix D of the Plan.

5. If the business generates any of the waste types listed in the WIF, review the corresponding specific industrial solid waste management procedures located in Part I, Section 5.0, of the ISWMP.

6. If any of the identified wastes are currently managed by Olmsted County, provide the business owner with a copy of the industrial solid waste evaluation form that must be completed for each acceptable waste type. Provide a general "walk through" to ensure that the owner understands how to complete the waste evaluation form. Provide the owner with enough evaluation forms for each type of waste generated, and indicate that the forms should be completed and returned to the Environmental Resources Department to initiate the disposal request process.

7. Refer specific technical questions to the appropriate Environmental Resources Department staff.

8. Bring the completed waste inventory form back to support staff for filing and follow-up by Environmental Resources Department staff.

IN OLMSTED COUNTY...THERE'S A PROPER PLACE FOR ALL of YOUR WASTE

Environmental Resources Department
2122 Campus Dr SE - Suite 200
Rochester, MN 55904-4744
www.Olmstedwaste.Com
507.328.7070

Attention
Businesses in Olmsted County!

Do You Generate "Industrial Solid Waste"?

If your business includes a manufacturing or industrial process, or is a service or commercial establishment, you are most likely generating one or more industrial solid wastes. By law, these wastes must be evaluated to determine their proper method of disposal. Industrial solid waste does not include hazardous waste, office materials, restaurant and food preparation waste, discarded machinery, or demolition debris.

How Do I Evaluate My Waste?

If you believe you may be a generator of industrial solid waste, you may obtain a free guide that will help you determine your disposal requirements. Call the **Olmsted County Environmental Resources Department** at 507-328-7070 to request your free copy.

What If I Generate Industrial Solid Waste?

Sometimes it is better to burn your waste, other times it may be better to bury it. Olmsted County solid waste staff can help you select the solid waste management facility that is most appropriate for your waste and will best reduce your long-term liability. Unless special handling is required, disposal costs will not be higher than the cost of regular garbage disposal.

Why Should I Do This?

It is a legal requirement for businesses generating waste, not waste haulers, to know the characteristics of their wastes. Proper waste evaluation and management is important to ensure that the most economical and environmentally correct disposal option is selected. Your diligence will ensure that your waste goes to the most environmentally-protective facilities available.

How Can I Get More Help?

Olmsted County Environmental Resources Department staff is able to assist you with your waste management needs. Please call 507-328-7070 today to request a free consultation!

In Olmsted County…There's A Proper Place for All of Your Waste

Environmental Resources Department
2122 Campus Dr SE - Suite 200
Rochester, MN 55904-4744
www.olmstedwaste.com
507.328.7070

What Should You Know About Industrial Solid Waste Management?

Does My Business Generate Industrial Solid Waste?

If your business includes a manufacturing or industrial process, or is a service or commercial establishment, you are likely producing industrial solid wastes. This is a special classification of non-hazardous, non-household waste which requires special evaluation to determine the proper disposal option. Industrial solid waste does NOT include office materials, restaurant and food preparation waste, discarded machinery, or demolition debris.

Where Can I Learn How To Evaluate My Waste?

The Olmsted County Industrial Solid Waste Management Plan is the guide that can assist you in properly evaluating your waste. Call the **Olmsted County Environmental Resources Department** at 507-328-7070 today to request your free copy.

What If My Waste Evaluation Tells Me That I Am Generating Industrial Solid Waste?

In many cases, an industrial solid waste evaluation will demonstrate that your waste may be disposed of in the same manner as regular garbage. Sometimes it is better to burn your waste, and other times it may be better to bury it. Olmsted County Environmental Resources Department staff can help you select the solid waste management facility that is most appropriate for your waste and will best reduce your long-term liability. **Unless special handling is required, disposal costs will not be higher than the cost of regular garbage disposal.**

Why Should I Evaluate My Waste?

Proper industrial solid waste management is required by law, and proper waste evaluation and management is important to ensure that the most economical and environmentally-protective management option is exercised. Your diligence will ensure that your waste is managed at the most environmentally protective-facilities available in Olmsted County (and, in most cases, in the United States).

Where Do I Get More Help?

Olmsted County Environmental Resources Department staff is able to assist you with your waste management needs. Please call 507-328-7070 today to request a free consultation!

IN OLMSTED COUNTY...THERE'S A PROPER PLACE FOR ALL OF YOUR WASTE