

Chapter NR 605

IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

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**NR 605.01 Purpose.** The purpose of this chapter is to establish criteria for identifying the characteristics of hazardous waste and to establish a list of solid wastes identified as hazardous based upon the use of the criteria, which shall be used by a solid waste generator, transporter or owner or operator of a solid waste treatment, storage or disposal facility to determine if the waste handled is a hazardous waste subject to regulation.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

**NR 605.02 Applicability.** This chapter identifies those solid wastes which are subject to regulation as hazardous waste under chs. NR 600 to NR 685. This chapter does not apply to metallic mining wastes resulting from a mining operation as defined in s. 144.81 (5), Stats., or polychlorinated biphenyls (PCBs) except where portions of this chapter are referenced in ch. NR 157.

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**NR 605.03 Definitions.** The definitions in s. NR 600.03 apply to this chapter.

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**NR 605.04 Definition of hazardous waste.** (1) A solid waste is a hazardous waste if:

(a) It is not excluded from regulation as a hazardous waste under s. NR 605.05 (1); and

(b) It meets any of the following criteria:

1. It is listed in s. NR 605.09 and has not been excluded from the lists under s. NR 605.10.

2. It is a mixture of solid waste and one or more hazardous wastes listed in s. NR 605.09 and has not been excluded under s. NR 605.10; however, the following mixtures of solid wastes and hazardous wastes listed in s. NR 605.09 are not hazardous wastes, except by application of subd. 1. or 3., if the generator can demonstrate that the mixture consists of wastewater, the discharge of which is subject to regulation under ch. 147, Stats., including wastewater at facilities which have eliminated the discharge of wastewater, and:

a. One or more of the following spent solvents listed in s. NR 605.09 (2) (a), table II: carbon tetrachloride, tetrachloroethylene, trichloroethyl-

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ene; if the maximum total weekly usage of these solvents, other than the amounts that may be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed one part per million; or

b. One or more of the following spent solvents listed in s. NR 605.09 (2) (a), table II: methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents; if the maximum total weekly usage of these solvents, other than the amounts that may be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million; or

c. One of the following wastes listed in s. NR 605.09 (2) (b), table III: heat exchanger bundle cleaning sludge from the petroleum refining industry, hazardous waste no. K050; or

d. A discarded commercial chemical product, or chemical intermediate listed in s. NR 605.09 (3) (b), table IV or (c), table V, arising from minimal losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this paragraph, "minimal" losses include those from normal material handling operations, e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials; minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment, and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

e. Wastewater resulting from laboratory operations containing hazardous wastes listed in s. NR 605.09, tables I to V with the hazard code (t) if the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation.

3. It exhibits any of the characteristics of hazardous waste identified in s. NR 605.08.

4. Except as provided in subd. 5, it is generated from the treatment, storage or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, and it is a waste which is listed under s. NR 605.09, contains a waste listed under s. NR 605.09, or is derived from a waste listed under s. NR 605.09, and it has not been excluded under s. NR 605.10.

5. It is a waste pickle liquor sludge derived from the lime stabilization treatment of spent pickle liquor from the iron and steel industry falling under the standard industrial classification (SIC) codes 331 and 332, and

the sludge exhibits one or more of the characteristics of hazardous waste identified in s. NR 605.08.

Note: If waste pickle liquor sludge derived from the lime stabilization treatment of spent pickle liquor from the iron and steel industry falling under SIC codes 331 and 332 does not display one or more of the characteristics of hazardous waste identified in s. NR 605.08, it is not a hazardous waste.

6. It is a mixture of nonhazardous solid waste and a hazardous waste that is listed in s. NR 605.09 solely because it exhibits one or more of the characteristics of hazardous waste identified in s. NR 605.08, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in s. NR 605.08.

Note: The process of mixing a nonhazardous solid waste and a hazardous waste may require a license under ch. NR 680 for hazardous waste treatment.

(2) A solid waste which is not excluded from regulation under s. NR 605.05 (1) becomes a hazardous waste when any of the following events occur:

(a) In the case of a waste listed in s. NR 605.09, when the waste first meets the listing description in s. NR 605.09.

(b) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in s. NR 605.09 is first added to the solid waste.

(c) In the case of any other solid waste, including a solid waste mixture, when the waste exhibits any of the characteristics identified in s. NR 605.08.

(3) A hazardous waste shall remain a hazardous waste unless and until it:

(a) No longer exhibits any of the characteristics of a hazardous waste identified in s. NR 605.08; or

(b) In the case of a waste which is listed under s. NR 605.09, contains a waste listed under s. NR 605.09, or is derived from a waste listed under s. NR 605.09, the waste is excluded under s. NR 605.10.

(c) Is no longer a solid waste.

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NR 605.05 Exemptions. (1) EXEMPTIONS. (a) The following materials are excluded from regulation as hazardous wastes:

1. Household waste, including all of the following:

a. Waste that has been collected, transported, stored, treated, disposed, recovered or reused, except if the hazardous waste in this stream is separated and accumulated for later treatment, storage or disposal by a person other than a member of the household where the waste is generated.

b. Waste accumulated by a municipality for 5 days or less in a clean sweep program as defined in s. NR 187.03 (1). This exclusion for clean sweep programs does not apply to the household waste upon its removal from the accumulation area for further management.

Note: The accumulation, treatment, storage and disposal of household wastes which are not excluded under this paragraph are subject to regulation under chs. NR 600 to 685.

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2. Waste that is treated, stored, disposed or otherwise managed by a resource recovery facility managing municipal solid waste, if such facility:

a. Receives and burns only:

1) Household waste, and

2) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

b. Does not accept hazardous waste and the owner or operator of the facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous waste is not received at or burned in the facility.

3. Cement kiln dust waste.

4. Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

a. The growing and harvesting of agricultural crops.

b. The raising of animals, including animal manures.

5. Discarded wood or wood products which fail the test for the characteristic of EP toxicity given in s. NR 605.08 (5) and are not a hazardous waste for any other reason, if the waste is generated by persons who utilize arsenical-treated wood and wood products for the intended end use of these materials.

6. Polychlorinated biphenyls (PCBs) regulated under ch. NR 157.

7. Fly ash waste, bottom ash waste, slag waste and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

8. Drilling fluids, produced waters, and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal energy.

9. Wastes which fail the test for the characteristic of EP toxicity because chromium is present or are listed in s. NR 605.09 due to the presence of chromium, which do not fail the test for the characteristic of EP toxicity for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or waste generators that:

a. The chromium in the waste is exclusively, or nearly exclusively, trivalent chromium; and

b. The waste is generated from an industrial process which used trivalent chromium exclusively, or nearly exclusively, and the process does not generate hexavalent chromium; and

c. The waste is typically and frequently managed in non-oxidizing environments.

10. Specific wastes which meet the standard in subd. 8., as long as they do not fail the test for the characteristic of EP toxicity, and do not fail the test for any other characteristic are:

a. Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

b. Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

c. Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; and through-the-blue.

d. Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

e. Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

f. Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

g. Waste scrap leather from the leather tanning industry, the shoe manufacturing industry and other leather product manufacturing industries.

h. Wastewater treatment sludges from the production of titanium dioxide pigment using chromium-bearing ores by the chloride process.

11. Mining overburden returned to the mine site.

12. Solid waste from the extraction, beneficiation and processing of ores and minerals, including coal, phosphate rock and the overburden from the mining of uranium ore.

14. By-products exhibiting a characteristic of hazardous waste that are reclaimed and complies with pars. (c) and (d).

Note: This exclusion does not apply to listed by-products included in s. NR 605.09.

15. Domestic sewage.

16. Any mixture of domestic sewage and other wastes that passes through a sewer system to a publiclyowned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(b) The following hazardous wastes are not subject to the requirements of chs. NR 610 to 685 when they are recycled and if the generator complies with pars. (c) and (d):

1. Scrap metal that is legitimately recovered or reclaimed.

2. Industrial ethyl alcohol that is legitimately recovered or reclaimed, except that:

a. A person initiating a shipment for legitimate recovery or reclamation in a foreign country, and any intermediary arranging for the shipment, shall comply with the requirements applicable to a primary exporter in ss. NR 615.12 (1) (a), (j) 1. to 4., 6. and 7., and (k) to (n), export the materials only upon consent of the receiving country and conforming with the EPA acknowledgment of consent, and provide a copy of the EPA acknowledgment of consent for the shipment to the transporter transporting the shipment for export;

b. Transporters transporting a shipment for export may not accept a shipment if the transporter knows the shipment does not conform to the EPA acknowledgment of consent, shall ensure that a copy of the EPA acknowledgment of consent accompanies the shipment and shall ensure that it is delivered to the facility designated by the person initiating the shipment.

(c) Generators of wastes that are excluded under pars. (a) 12. and (b) shall demonstrate, at the department's request, compliance with the terms of the exclusions by providing the following information:

1. The name, location and address of the recycling facility;
2. A description of the waste, hazardous waste number and waste quantity;
3. A detailed description of the recycling process and how the waste is used as an ingredient in the process;
4. A demonstration that there is a market or disposition of the waste; and

Note: An example of a demonstration of a market or disposition would be a contract showing the recycling facility uses the recyclable waste material as an ingredient in a production process.

5. Documentation that the recycling facility has the necessary equipment to conduct the recycling activity.

(d) The exclusions included in pars. (a) 12. and (b) do not apply to wastes that are used in a manner constituting disposal or speculatively accumulated. Wastes that are used in a manner constituting disposal or speculatively accumulated are hazardous waste and shall be managed in accordance with all the requirements of chs. NR 600 to 685.

(2) GENERATION OF WASTE IN PRODUCT OR RAW MATERIAL UNITS. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material vehicle, railroad freight car, vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment manufacturing unit, is not subject to regulation under chs. NR 600 to 685 until it exits the unit in which it was generated, unless the unit is a surface impoundment or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials. In accordance with s. NR 615.05 (4) (a) 4., the date upon which each period of accumulation begins after the unit ceases to be operated for manufacturing, or for storage or transportation of product

or raw materials, shall be clearly marked and visible for inspection on each unit.

(3) **SAMPLES.** (a) Except as provided in par. (b), a sample of solid waste or a sample of water, soil or air which is collected for the sole purpose of testing to determine its characteristics or composition is not subject to regulation under chs. NR 600 to 685 when the sample is being:

1. Transported to a laboratory for the purpose of testing;
2. Transported back to the sample collector after testing;
3. Stored by the sample collector before transport to a laboratory for testing;
4. Stored in a laboratory before testing;
5. Stored in a laboratory after testing but before it is returned to the sample collector; or
6. Stored temporarily in the laboratory after testing for a specific purpose.

Note: An example of a specific purpose would be storage until conclusion of a court case or enforcement action where further testing of the sample may be necessary.

(b) In order to qualify for the exemption in par. (a) 1. and 2., a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector shall:

1. Comply with DOT, U.S. postal service (USPS) or any other applicable shipping requirements; or
2. Comply with the following requirements, if the sample collector determines that DOT, USPS or other shipping requirements do not apply to the shipment of the sample:
  - a. Assure that the following information accompanies the sample: the sample collector's name, mailing address and telephone number; the laboratory name, address and telephone number; the quantity of the sample; the date of shipment; and a description of the sample; and
  - b. Package the sample so that it does not leak, spill or vaporize from its packaging.

(c) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory no longer meets any of the conditions stated in par. (a).

(4) **TREATABILITY STUDIES SAMPLES.** (a) Except as provided in par. (b), persons who generate or collect samples for the purpose of conducting treatability studies are not subject to any requirement of chs. NR 610 to 699 when:

1. The sample is being collected and prepared for transportation by the generator or sample collector;
2. The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility;
3. The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study; or

4. The sample shipment is accompanied by a manifest, according to the requirements of s. NR 615.08.

(b) The exemption in par. (a) is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies if:

1. The generator or sample collector uses in treatability studies no more than 1000 kg of any non-acute hazardous waste, 1 kg of acute hazardous waste, or 250 kg of soils, water or debris contaminated with acute hazardous waste for each process being evaluated for each generated waste stream;

2. The mass of each sample shipment does not exceed 1000 kg of non-acute hazardous waste, 1 kg of acute hazardous waste or 250 kg of soils, water or debris contaminated with acute hazardous waste;

3. The sample is packaged so that it does not leak, spill or vaporize from its package during shipment and meet the following requirements:

a. The transportation of each sample shipment complies with ch. NR 620, U.S. Department of Transportation (DOT), U.S. Postal Service (USPS) and any other applicable shipping requirement;

b. If the DOT, USPS or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

1) The name, mailing address and telephone number of the originator of the sample;

2) The name, address and telephone number of the facility that will perform the treatability study;

3) The quantity of the sample;

4) The date of shipment; and

5) A description of the sample, including its EPA hazardous waste number.

4. The sample is shipped to a laboratory or testing facility which:

a. Is exempt under s. NR 605.05 (5);

b. Has an operating license, interim license, variance or waiver from the department;

c. Is shipped to an out-of-state laboratory or facility that has an applicable exemption, operating license, interim license, variance or waiver which has been granted by EPA or an authorized state; and

5. The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:

a. Copies of the manifest and any other required shipping documents;

b. A copy of the contract with the facility conducting the treatability study; and

c. Documentation showing:

1) The amount of waste shipped under this exemption;



2) The name, address and EPA identification number of the laboratory or testing facility that received the waste;

3) The date that the shipment was made; and

4) Whether or not unused samples and residues were returned to the generator.

6. The generator reports the information required under subd. 5.c. in its annual report.

(c) 1. The department may grant requests, on a case-by-case basis, for quantity limits in excess of those specified in par. (b) 1., for up to an additional 500 kg of non-acute hazardous waste, 1 kg of acute hazardous waste and 250 kg of soils, water and debris contaminated with acute hazardous waste, to conduct further treatability study evaluation when:

a. There has been an equipment or mechanical failure during the conduct of a treatability study;

b. There is a need to verify the results of a previously conducted treatability study;

c. There is a need to study and analyze alternative techniques within a previously evaluated treatment process; or

d. There is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

2. The additional quantities allowed are subject to all the provisions in sub. (4) (a) and (b) 2. to 6.

3. The generator or sample collector shall apply to the department and provide the following information:

a. The reason why the generator or sample collector requires an additional quantity of sample for the treatability study evaluation and the amount needed;

b. Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including:

1) The date each previous sample from the waste stream was shipped;

2) The quantity of each previous shipment;

3) The laboratory or testing facility to which it was shipped;

4) What treatability study processes were conducted on each sample shipped, and

5) A summary of the results of each treatability study.

c. A description of the technical modifications or change in specification that shall be evaluated and the expected results;

d. If further study is being required due to equipment or mechanical failure, information concerning the reason for the failure or breakdown and what procedures or equipment improvements have been made to protect against further breakdowns; and

e. Other information that the department considers necessary.

(5) **SAMPLES UNDERGOING TREATABILITY STUDIES AT LABORATORIES AND TESTING FACILITIES.** Samples undergoing treatability studies and the laboratory or testing facility conducting treatability studies, to the extent the facilities are not otherwise subject to the requirements of chs. NR 600 to NR 685, are not subject to any requirement of chs. NR 600 to NR 685 if the conditions of pars. (a) to (k) are met. A mobile treatment unit may qualify as a testing facility subject to pars. (a) to (k). Where a group of mobile treatment units are located at the same site, the limitations specified in pars. (a) to (k) apply to the entire group of mobile treatment units collectively as if the group were one mobile treatment unit.

(a) No less than 45 days before conducting treatability studies, the facility shall notify the department, in writing, that it intends to conduct treatability studies under this subsection.

(b) The laboratory or testing facility conducting the treatability study shall have an EPA identification number.

(c) No more than a total of 250 kg of "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(d) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 1000 kg, the total of which may include 500 kg of soils, water or debris contaminated with acute hazardous waste or 1 kg of acute hazardous waste. This quantity limitation does not include:

1. Treatability study residues; and
2. Treatment materials, including nonhazardous solid waste, added to "as received" hazardous waste.

(e) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year has elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs.

(f) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(g) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information shall be included for each treatability study conducted:

1. The name, address and EPA identification number of the generator or sample collector of each waste sample;
2. The date the shipment was received;
3. The quantity of waste accepted;
4. The quantity of "as received" waste in storage each day;
5. The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;
6. The date the treatability study was conducted;

7. The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.

(h) The facility keeps, on-site, a copy of the treatability study contract and shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date for each treatability study.

(i) The facility prepares and submits a report to the department by March 15 of each year that estimates the number of studies and amount of waste expected to be used in treatability studies during the current year and includes the following information for the previous calendar year:

1. The name, address and EPA identification number of the facility conducting the treatability studies;

2. The types, by process, of treatability studies conducted;

3. The names and addresses of persons for whom studies have been conducted, including their EPA identification numbers;

4. The total quantity of waste in storage each day;

5. The quantity and types of waste subjected to treatability studies;

6. When each treatability study was conducted;

7. The final disposition of residues and unused sample from each treatability study.

(j) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under s. NR 605.07 and, if so, are subject to chs. NR 600 to NR 685, unless the residues and unused samples are returned to the sample originator under the s. NR 605.05 (4) exemption.

(k) The facility notifies the department, by letter, when the facility is no longer planning to conduct any treatability studies at the site.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

NR 605.06 Residues of hazardous waste in empty containers. (1) Any hazardous waste that is remaining in either an empty container or an inner liner removed from an empty container, that meet the criteria in sub. (3), (4) or (5), is not subject to regulation under chs. NR 600 to 685.

(2) Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as specified in sub. (3) to (5), is subject to regulation under chs. NR 600 to 685.

(3) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is listed as an acute hazardous waste in s. NR 605.09 (2) (a), table II or (b), table III, or identified in table IV of s. NR 605.09 (3) (b), is empty if all wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container; and

Note: Examples of commonly employed practices would be pouring, pumping and aspirating

(a) No more than 2.5 centimeters (one inch) of residue remains on the bottom of the container or inner liner, or

(b) No more than 3% by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size, or

(c) No more than 0.3% by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

(4) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric pressure.

(5) A container or an inner liner removed from a container that has held an acute hazardous waste listed in s. NR 605.09 (2) (a), table II or (b), table III, or identified in s. NR 605.09 (3) (b), table IV is empty if:

(a) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(b) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(c) In the case of a container, the inner liner, that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

Note: Empty containers and rinsate from the cleaning or reconditioning of empty containers are regulated as solid waste under chs. NR 500 to 522. In addition, any rinsate from the cleaning or reconditioning of empty containers as specified in this section is subject to regulation as a hazardous waste under chs. NR 600 to 695 if it exhibits any of the characteristics in s. NR 605.08.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

**NR 605.07 Criteria for identifying the characteristics of hazardous waste and for listing hazardous waste. (1) CRITERIA FOR IDENTIFYING THE CHARACTERISTICS OF HAZARDOUS WASTE.** The department shall identify and define a characteristic of hazardous waste only upon determining that:

(a) A solid waste that exhibits the characteristic may:

1. Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

2. Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(b) The characteristic may be:

1. Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or

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2. Reasonably detected by generators of solid waste through their knowledge of their waste.

(2) **CRITERIA FOR LISTING HAZARDOUS WASTE.** (a) The department shall list a solid waste as a hazardous waste under s. NR 605.09 only upon determining that the solid waste meets one of the following criteria:

1. It exhibits any of the characteristics of hazardous waste identified in s. NR 605.08.

2. It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown to have an oral LD50 toxicity measured in rats of less than 50 milligrams per kilogram, an inhalation LC50 toxicity measured in rats of less than 2 milligrams per liter, or a dermal LD50 toxicity measured in rabbits of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness.

3. It contains any of the hazardous constituents listed in Appendix IV unless, after considering any of the following factors, the department concludes that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed or otherwise managed:

a. The nature of the toxicity presented by the constituent.

b. The concentrations of the constituent in the waste.

c. The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in subpar. g.

d. The persistence of the constituent or any toxic degradation product of the constituent.

e. The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.

f. The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.

g. The plausible types of improper management to which the waste could be subjected.

h. The quantities of the waste generated at individual generation sites or on a regional or statewide basis.

i. The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.

j. Actions taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.

k. Other factors as may be relevant in a specific case.

(b) The department may list classes or types of solid waste if there is reason to believe that individual wastes, within the class or type of

waste, typically or frequently because their quantity, concentration, or physical, chemical or infectious characteristics, may:

1. Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
2. Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.

(c) Hazardous wastes which have been listed in accordance with the criteria in par. (a) 2, are designated as acute hazardous wastes and wastes which have been listed in accordance with the criterion in par. (a) 3, are designated as toxic wastes.

Note: Section 144.62, Stats., requires the department to add any waste listed by U. S. EPA to the lists in s. NR 605.09. The criteria of sub. (2) apply only to wastes listed by Wisconsin.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

**NR 605.08 Characteristics of hazardous waste. (1) GENERAL.** (a) A solid waste which is not excluded from regulation under s. NR 605.05 (1) is a hazardous waste if it exhibits any of the characteristics identified in this section.

(b) A hazardous waste which is identified by a characteristic in this section, but is not listed as a hazardous waste in s. NR 605.09, is assigned the hazardous waste number for that characteristic in this section. This number shall be used in complying with the notification requirements in s. NR 600.05 and record-keeping and reporting requirements under chs. NR 610, 615, 620 and 630.

(c) For purposes of this section, the department shall consider a sample obtained using any of the applicable sampling methods specified in appendix I to be a representative sample.

**(2) CHARACTERISTIC OF IGNITABILITY.** (a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

1. It is a liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a flash point less than 60°C (140°F), as determined by a Pensky-Martens closed cup tester, using the test method specified in ASTM standard D-93-79, or D-93-80, or a Setaflash closed cup tester, using the test method specified in ASTM standard D-3278-78, or as determined by an equivalent test method approved by EPA.

Note: The publications containing these standards may be obtained from:

American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103

The publications containing these standards are available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

2. It is not a liquid and is capable, at a temperature of 25°C and a pressure of one atmosphere, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

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3. It is an ignitable compressed gas as defined in 49 CFR 173.300 [November 1, 1985], and as determined by the test methods described in that regulation, ASTM standard D-323, or equivalent test methods approved by EPA.

Note: The publication containing this regulation may be obtained from:

The Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402

The publication containing this regulation is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

4. It is an oxidizer, such as a chlorate, permanganate, inorganic peroxide, nitro carbo nitrate or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

(b) A solid waste that exhibits the characteristic of ignitability, but is not listed as hazardous waste in s. NR 605.09 (2), has the hazardous waste number of D001.

(3) CHARACTERISTIC OF CORROSIVITY. (a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either EPA test method 9040 in SW-846, "Test Methods for Evaluating Solid Waste", 2nd Ed., 1982, as amended by update I in April, 1984 and update II in April, 1985 or an equivalent test method approved by EPA.

Note: This publication may be obtained from:

The Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

2. It is a liquid and corrodes plain carbon steel with a carbon content of 0.20% at a rate greater than 6.35 mm (0.250-inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) standard TM-01-69 as standardized in SW-846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984 and update II in April, 1985, or an equivalent test method approved by EPA.

(b) A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in s. NR 605.09 (2), has the hazardous waste number of D002.

(4) CHARACTERISTIC OF REACTIVITY. (a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

1. It is normally unstable and readily undergoes violent change without detonating.

2. It reacts violently with water.

3. It forms potentially explosive mixtures with water.

4. When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

5. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

6. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

7. It is readily capable of detonation or explosive decomposition or reaction at a temperature of 25°C and a pressure of one atmosphere.

8. It is a forbidden explosive as defined in 49 CFR 173.51 [November 1, 1985], or a Class A explosive as defined in 49 CFR 173.53 [November 1, 1985], or a Class B explosive as defined in 49 CFR 173.88 [November 1, 1985].

Note: The publications containing these regulations may be obtained from:

The Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402

The publications containing these regulations are available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) A solid waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in s. NR 605.09 (2), has the hazardous waste number of D003.

(5) CHARACTERISTIC OF EP TOXICITY. (a) A solid waste exhibits the characteristic of extraction procedure (EP) toxicity if, using the test methods described in s. NR 605.11, the extract from a representative sample of the waste contains any of the contaminants listed in table I at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5% filterable solids, the waste itself, after filtering, is considered to be the extract for the purpose of this section.

(b) A solid waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste in s. NR 605.09 (2), has the hazardous waste number specified in table I which corresponds to the toxic contaminant causing it to be hazardous.

Table I  
Maximum Concentration of Contaminants for Characteristic  
of EP Toxicity

Hazardous Waste Number	Contaminant	Maximum Concentration (milligrams per liter)
D004	Arsenic .....	5.0
D005	Barium .....	100.0
D006	Cadmium .....	1.0
D007	Chromium .....	5.0
D008	Lead .....	5.0
D009	Mercury .....	0.2
D010	Selenium .....	1.0

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Hazardous Waste Number	Contaminant	Maximum Concentration (milligrams per liter)
D011	Silver .....	5.0
D012	Endrin (1, 2, 3, 4, 10, 10 hexachloro-1,7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo, endo-5, 8-dimethano naphthalene) .....	0.02
D013	Lindane (1, 2, 3, 4, 5, 6 hexachlorocyclohexane, gamma isomer) .....	0.4
D014	Methoxychlor (1, 1, 1 Trichloro-2, 2-bis (p methoxyphenyl) ethane) .....	10.0
D015	Toxaphene (C10H10Cl8, Technical chlorinated camphene, 67-69 per cent chlorine) .....	0.5
D016	2, 4-D, (2, 4 Dichlorophenoxyacetic acid) .....	10.0
D017	2, 4, 5-TP Silvex (2, 4, 5 Trichlorophenoxypropionic acid) .....	1.0

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

NR 605.09 Lists of hazardous wastes. (1) GENERAL. (a) A solid waste is a hazardous waste if it is listed in this section, unless it has been excluded from the lists under s. NR 605.10.

(b) The department has indicated the basis for listing the classes or types of wastes listed in this section by employing one or more of the following hazard codes:

1. Ignitable waste (I)
2. Corrosive waste (C)
3. Reactive waste (R)
4. EP toxic waste (E)
5. Acute hazardous waste (H)
6. Toxic waste (T)

Note: Appendix III identifies the constituent which caused the department to list the waste as a EP toxic waste (E) or toxic waste (T) in sub. (2) (a) and (b).

(c) Each hazardous waste listed in subs. (2) and (3) is assigned a hazardous waste number which precedes the name of the waste. This number shall be used in complying with the notification requirements of s. NR 600.05 and recordkeeping requirements under chs. NR 610, 615, 620 and 630.

(d) The following hazardous wastes listed in table II of sub. (2) are acute hazardous wastes subject to the exclusion limits established in s. NR 610.09:

1. Hazardous waste numbers F020, F021, F022 and F023; and
2. Hazardous waste numbers F026 and F027.

(2) HAZARDOUS WASTE SOURCES. (a) Solid waste from nonspecific sources is a hazardous waste if it is listed in table II.

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**Table II**  
**Hazardous Waste from Nonspecific Sources**

Hazardous Waste Number	Hazardous Waste	Hazard Code
Generic:		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all mixtures and blends of spent solvents used in degreasing containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all mixtures and blends of spent solvents containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those listed in F001, F004 or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone and methanol; all mixtures and blends of spent solvents containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents and a total of 10% or more, by volume, of one or more of those solvents listed in F001, F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004	The following spent non-halogenated solvents: cresols, cresylic acid, and nitrobenzene; all mixtures and blends of spent solvents containing, before use, a total of 10% or more, by volume, of one or more of the above non-halogenated solvents or those solvents listed in F001, F002 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol and 2-nitropropane; all mixtures and blends of spent solvents containing, before use, a total of 10% or more, by volume, of one or more of the above non-halogenated solvents or those solvents listed in F001, F002 or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I, T)
F006	Wastewater treatment sludges from electroplating operations, except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating, segregated basis, on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning or stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.  Note: Electroplating operations are considered to include common and precious metals electroplating, anodizing, chemical etching and milling, and cleaning and stripping when associated with these processes. For more information, refer to 51 FR 43350 to 43351, Tuesday, December 2, 1986.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations.	(R, T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R, T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R, T)

Hazardous Waste Number	Hazardous Waste	Hazard Code
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R, T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum.	(T)
F020	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production or manufacturing use, as a reactant, chemical intermediate or component in a formulating process, of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.	(H)
F021	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production or manufacturing use, as a reactant, chemical intermediate or component in a formulating process, of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)
F022	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the manufacturing use, as a reactant, chemical intermediate or component in a formulating process, of tetra-, penta-, or hexa-chlorobenzenes under alkaline conditions.	(H)
F023	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production of materials on equipment previously used for the production or manufacturing use, as a reactant, chemical intermediate or component in a formulating process, of tri- and tetrachlorophenols. This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.	(H)
F024	Wastes including but not limited to, distillation residues, heavy ends, tars and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to 5, utilizing free radical catalyzed processes. This listing does not include light ends, spent filters and filter aids, spent desiccants, wastewater, wastewater treatment sludges, spent catalysts and waste listed in table III of s. NR 605.09 (2) (b).	(T)
F026	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production of materials on equipment previously used for the manufacturing use, as a reactant, chemical intermediate or component in a formulating process, of tetra-, penta or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded, used or unused formulations containing tri-, tetra- or pentachlorophenol or discarded used or unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.	(H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with hazardous wastes F020, F021, F022, F023, F026 or F027.	(T)

Hazardous Waste Number	Hazardous Waste	Hazard Code
F500	Waste contaminated with the halogenated compounds tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichlorofluoromethane, 1,1-dichloroethylene, and 1,2-dichloroethylene at greater than 1% (10,000 ppm) solvent concentration, except used chlorofluorocarbon refrigerants that are recycled and that are handled according to s. NR 605.05 (1) (c) and (d). This listing includes any combination of the above named halogenated compounds where the total concentration of the sum of the concentrations of the individual compounds exceeds 1% or 10,000 ppm on a weight to weight basis. Halogenated solvent concentration shall be determined using EPA methods 8010 or 8240 for halogenated volatile organics as specified in SW-846, "Test Methods for Evaluating Solid Waste" or total chloride analysis of bomb washings from ASTM D 240-76, "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter".	(T)

Note: The publication SW-846, "Test Methods for Evaluating Solid Waste", may be obtained from:

The Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

The publication containing the ASTM method may be obtained from:

American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103

The publications are available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) Solid waste from specific sources is a hazardous waste if it is listed in table III.

Table III  
Hazardous Waste from Specific Sources

Hazardous Waste Number	Hazardous Waste	Hazardous Code
Wood Preservation		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote or pentachlorophenol.	(T)
Inorganic Pigments		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments, anhydrous and hydrated.	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008	Oven residue from the production of chrome oxide green pigments.	(T)

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Hazardous Waste Number	Hazardous Waste	Hazardous Code
Organic Chemicals		
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015	Still bottoms from the distillation of benzyl chloride.	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017	Heavy ends or still bottoms from the purification column in the production of epichlorohydrin.	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022	Distillation bottom tars from the production of phenol or acetone from cumene.	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026	Stripping still tails from the production of methyl ethyl pyridines.	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029	Waste from the product stream stripper in the production of 1,1,1-trichloroethane.	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083	Distillation bottoms from aniline production.	(T)
K103	Process residues from aniline extraction from the production of aniline.	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K085	Distillation or fractionating column bottoms from the production of chlorobenzenes.	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(C, T)

Hazardous Waste Number	Hazardous Waste	Hazardous Code
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene dilsocyanate via phosgenation of toluenediamine.	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
Pesticides		
K031	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032	Wastewater treatment sludge from the production of chlordan.	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordan.	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordan.	(T)
K097	Vacuum stripper discharge from the chlordan chlorinator in the production of chlordan.	(T)
K035	Wastewater treatment sludges generated in the production of creosote.	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037	Wastewater treatment sludges from the production of disulfoton.	(T)
K038	Wastewater from the washing and stripping of phorate production.	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040	Wastewater treatment sludge from the production of phorate.	(T)
K041	Wastewater treatment sludge from the production of toxaphene.	(T)
K098	Untreated process wastewater from the production of toxaphene.	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K099	Untreated wastewater from the production of 2,4-D.	(T)
K123	Process wastewater, including supernates, filtrates and washwaters, from the production of ethylenebisdithiocarbamic acid and its salt.	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	(G, T)
K125	Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)
Explosives		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045	Spent carbon from the treatment of wastewater containing explosives.	(R)

Hazardous Waste Number	Hazardous Waste	Hazardous Code
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047	Pink or red water from TNT operations.	(R)
Petroleum Refining		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049	Slop oil emulsion solids from the petroleum refining industry.	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051	American Petroleum Institute (API) separator sludge from the petroleum refining industry.	(T)
K052	Tank bottoms, leaded, from the petroleum refining industry.	(T)
Iron and Steel		
K061	Emission control dust or sludge from the electric furnace primary production of steel.	(T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry identified by the SIC codes 331 and 332.	(C,T)
Secondary Lead		
K069	Emission control dust or sludge from secondary lead smelting.	(T)
K100	Waste leaching solution from acid leaching of emission control dust or sludge from secondary lead smelting.	(T)
Inorganic Chemicals		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073	Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
Ink Formulation		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments; driers, soaps and stabilizers containing chromium and lead.	(T)
Veterinary Pharmaceuticals		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
Coking		
K060	Ammonia still lime sludge from coking operations.	(T)
K087	Decanter tank tar sludge from coking operations.	(T)

(3) DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES AND SPILL RESIDUES THEREOF. (a) The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded, when they are mixed with used oil or other solid waste and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu

of their original intended use, they are produced for use as, or as a component of, a fuel, distributed for use as a fuel or burned as a fuel:

1. Any commercial chemical product or manufacturing chemical intermediate having a generic name listed in table IV or V.

2. Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have a generic name listed in table IV or V.

3. Any container or inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having a generic name listed in table IV, or off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have a generic name listed in table IV, unless the container is empty under the criteria in s. NR 605.06 (5).

4. Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any commercial-chemical product or manufacturing chemical intermediate having a generic name listed in table IV or V, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have a generic name listed in table IV or V.

(b) The commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products or manufacturing chemical intermediates described in par. (a) 1. or 2. or materials or items described in par. (a) 3. or 4. listed in table IV are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion in s. NR 610.07. These wastes and their corresponding hazardous waste numbers are:

**Table IV**  
**Acute Hazardous Commercial Chemical**  
**Products and Manufacturing Chemical Intermediates**

Hazardous Waste Number	Substance
P023	Acetaldehyde, chloro
P002	Acetamide, N-(aminothioxomethyl)
P057	Acetamide, 2-fluoro
P058	Acetic acid, fluoro-, sodium salt
P066	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present in concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide (R,T)
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate

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Hazardous Waste Number	Substance
P010	Arsenic acid
P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl
P099	Argentate(1-), bis(cyano-C)-, potassium
P036	Arsonous dichloride, phenyl
P054	Aziridine
P067	Aziridine, 2-methyl
P013	Barium cyanide
P024	Benzenamine, 4-chloro
P077	Benzenamine, 4-nitro
P028	Benzene, (chloromethyl)
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P045	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-(methylamino) carbonyl oxime
P021	Calcium cyanide
P123	Camphene, octachloro
P103	Carbamimidoseleonic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not otherwise specified
P031	Cyanogen
P033	Cyanogen chloride
P016	Dichloromethyl ether
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	0,0-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate
P040	0,0-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropylfluorophosphate (DFP)
P044	Dimethoate
P045	3,3-Dimethyl-1-(methylthio)-2-butanone-0 [(methylamino)carbonyl] oxime
P071	0,0-Dimethyl O-p-nitrophenyl phosphorothioate
P082	Dimethylnitrosamine
P046	alpha, alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol, and salts
P034	4,6-Dinitro-o-cyclohexylphenol
P048	2,4-Dinitrophenol

Hazardous Waste Number	Substance
P020	Dinoseb
P085	Diphosphoramidate, octamethyl
P039	Disulfoton
P049	2,4-Dithiobiuret
P109	Dithiopyrophosphoric acid, tetraethyl ester
P050	Endosulfan
P088	Endothall
P051	Endrin, and metabolites
P042	Epinephrine
P046	Ethanamine, 1,1-dimethyl-2-phenyl
P084	Ethanamine, N-methyl-N-nitroso
P066	Ethanimidothioic acid, N-[(methylamino)carbonyl]oxy-, methyl ester
P101	Ethyl cyanide
P054	Ethylenimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P065	Fulminic acid, mercury(2 ) salt (R,T)
P059	Heptachlor
P051	2,7:3,6-Dimethanonaph[2,3b]oxirane, octahydro-, (1alpha,2beta,2abeta,3alpha, 6alpha,6abeta,7beta,7alpha)
P037	2,7:3,6-Dimethanonaph[2,3b]oxirane, 3,4,5,6,9,9 -hexachloro-1a,2,2a,3,6,6a,7,7a octahydro-, (1alpha,2beta,2alpha,3beta,6beta,6a alpha,7beta,7alpha)
P080	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1, 4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)
P004	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8ahexahydro-, (1alpha,4alpha, 4abeta,5alpha,8alpha,8abeta)
P060	Hexachlorohexahydro-endo, endo-dimethanonaphthalene
P062	Hexaethyl tetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P064	Isocyanic acid, methyl ester
P060	Isodrin
P007	3(2H)-Isoxazolone, 5-(aminomethyl)
P092	Mercury, (acetato-0) phenyl
P065	Mercury fulminate (R,T)
P016	Methane, oxybis (chloro)
P112	Methane, tetranitro-(R)
P118	Methanethiol, trichloro
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro
P066	Methomyl
P067	2-Methylaziridine
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methylacetonitrile
P071	Methyl parathion
P072	alpha-Naphthylthiourea
P073	Nickel carbonyl

Hazardous Waste Number	Substance
P074	Nickel cyanide
P074	Nickel (2+) cyanide
P073	Nickel tetracarbonyl
P076	Nicotine and salts
P076	Nitric oxide
P077	p-Nitroaniline
P078	Nitrogen dioxide
P076	Nitrogen (2+) oxide
P078	Nitrogen (IV) oxide
P081	Nitroglycerine (R)
P082	N-Nitrosomethylamine
P084	N-Nitrosomethylvinylamine
P050	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite
P085	Octamethylpyrophosphoramide
P087	Osmium oxide
P087	Osmium tetroxide
P088	7-Oxabicyclo [2.2.1] heptane-2, 3-dicarboxylic acid
P089	Parathion
P034	Phenol, 2-cyclohexyl-4,6-dinitro
P048	Phenol, 2,4-dinitro
P047	Phenol, 2-methyl-4,6-dinitro-, and salts
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P036	Phenyl dichloroarsine
P092	Phenylmercuric acetate
P093	N-Phenylthiourea
P094	Phorate
P095	Phosgene
P096	Phosphine
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P044	Phosphorodithioic acid, 0,0-dimethyl S-[2-(methylamino)-2-oxoethyl]ester
P043	Phosphorofluoric acid, bis(1-methylethyl)ester
P094	Phosphorothioic acid, 0,0-diethyl S-(ethylthio)methyl ester
P089	Phosphorothioic acid, 0,0-diethyl 0-(4-nitrophenyl) ester
P040	Phosphorothioic acid, 0,0-diethyl 0-pyrazinyl ester
P097	Phosphorothioic acid, 0,0-dimethyl 0-[p-((dimethylamino)-sulfonyl) phenyl]ester
P110	Plumbane, tetraethyl
P098	Potassium cyanide
P099	Potassium silver cyanide
P070	Propanal, 2-methyl-2(methylthio)-, 0-[(methylamino)carbonyl]oxime
P101	Propanenitrile
P027	Propanenitrile, 3-chloro
P069	Propanenitrile, 2-hydroxy-2-methyl
P081	1,2,3-Propanetriol, trinitrate-(R)
P017	2-Propanone, 1-bromo
P102	Propargyl alcohol
P003	2-Propenal
P005	2-Propen-1-ol
P067	1,2-Propylenimine
P102	2-Propyn-1-ol
P008	4-Pyridinamine
P075	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts

Hazardous Waste Number	Substance
P111	Pyrophosphoric acid, tetraethyl ester
P103	Selenourea
P104	Silver cyanide
P105	Sodium azide
P106	Sodium cyanide
P107	Strontium sulfide
P108	Strychnidin-10-one, and salts
P018	Strychnidin-10-one, 2,3-dimethoxy
P108	Strychnine and salts
P115	Sulfuric acid, thallium (I) salt
P109	Tetraethyldithiopyrophosphate
P110	Tetraethyl lead
P111	Tetraethyl pyrophosphate
P112	Tetranitromethane (R)
P062	Tetraphosphoric acid, hexaethyl ester
P113	Thallic oxide
P113	Thallium (III) oxide
P114	Thallium (I) selenide
P115	Thallium (I) sulfate
P045	Thiofanox
P049	Thiomidodicarbonic diamide
P014	Thiophenol
P116	Thiosemicarbazide
P026	Thiourea (2-chlorophenyl)
P072	Thiourea, 1-naphthalenyl
P093	Thiourea, phenyl
P123	Toxaphene
P118	Trichloromethanethiol
P119	Vanadic acid, ammonium salt
P120	Vanadium pentoxide
P120	Vanadium (V) oxide
P001	Warfarin and salts, when present at concentrations greater than 0.3%
P121	Zinc cyanide
P122	Zinc phosphide, when present at concentrations greater than 10% (R,T)

(c) The commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products or manufacturing chemical intermediates described in par. (a) 1. or 2. or materials or items described in par. (a) 3. or 4. listed in table V are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion in s. NR 610.05 (1). These wastes and their corresponding hazardous waste numbers are:

**Table V**  
**Toxic Commercial Chemical Products and Manufacturing Chemical Intermediates**

Hazardous Waste Number	Substance
U001	Acetaldehyde (I)
U034	Acetaldehyde, trichloro
U187	Acetamide, N-(4-ethoxyphenyl)

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Hazardous Waste Number	Substance
U005	Acetamide, N-9H-fluoren-2-yl
U112	Acetic acid, ethyl ester (I)
U144	Acetic acid, lead salt
U214	Acetic acid, thallium (I) salt
U232	Acetic acid,(2,4,5-trichlorophenoxy)
U002	Acetone (I)
U003	Acetonitrile (I,T)
U248	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations of 0.3% or less
U004	Acetophenone
U005	2-Acetylaminofluorene
U006	Acetyl chloride (C, R, T)
U007	Acrylamide
U008	Acrylic acid (I)
U009	Acrylonitrile
U150	Alanine, 3-[p-bis(2-chloroethyl)amino] phenyl-L
U328	2-Amino-1-methylbenzene
U353	4-Amino-1-methylbenzene
U011	Amitrole
U012	Aniline (I,T)
U136	Arsenic acid, dimethyl
U014	Auramine
U015	Azaserine
U010	Azirino (2', 3': 3, 4) pyrrolo (1, 2-a) indole-4, 7-dione, 6-amino-3-[(amino-carbonyl) oxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-[1aS(1aalpha,8beta,8aa lpha,8balpha)]
U157	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl
U016	Benz[c]acridine
U016	3,4 Benzacridine
U017	Benzal chloride
U018	Benz(a)anthracene
U018	1,2-Benzanthracene
U094	1,2-Benzanthracene, 7,12-dimethyl
U012	Benzenamine (I,T)
U014	Benzenamine, 4,4'-carbonimidoylbis (N,N-dimethyl)
U049	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	Benzenamine, N, N'-dimethyl-4-(phenylazo)
U158	Benzenamine, 4,4'-methylenebis (2-chloro)
U222	Benzenamine, 2-methyl-, hydrochloride
U181	Benzenamine, 2-methyl-5-nitro
U328	Benzenamine, 2-methyl
U019	Benzene (I, T)
U353	Benzenamine, 4-methyl
U038	Benzenoacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	Benzene, 1-bromo-4-phenoxy
U037	Benzene, chloro
U190	1,2-Benzenedicarboxylic acid anhydride
U028	1,2-Benzenedicarboxylic acid, bis(2-ethyl-hexyl)ester
U069	1,2-Benzenedicarboxylic acid, dibutyl ester
U068	1,2-Benzenedicarboxylic acid, diethyl ester
U102	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	Benzene, 1,2-dichloro

Hazardous Waste Number	Substance
U071	Benzene, 1,3-dichloro
U072	Benzene, 1,4-dichloro
U017	Benzene, (dichloromethyl)
U223	Benzene, 1,3-diisocyanatomethyl-(R, T)
U239	Benzene, dimethyl-(I,T)
U201	1,3-Benzenediol
U127	Benzene, hexachloro
U056	Benzene, hexahydro-(I)
U188	Benzene, hydroxy
U220	Benzene, methyl
U105	Benzene, 1-methyl-2,4-dinitro
U106	Benzene, 1-methyl-2,6-dinitro
U203	Benzene, 1,2-methylenedioxy-4-allyl
U141	Benzene 1,2-methylenedioxy-4-propenyl
U090	Benzene, 1,2-methylenedioxy-4 propyl
U055	Benzene, (1-methylethyl)-(I)
U169	Benzene, nitro-(I,T)
U183	Benzene, pentachloro
U185	Benzene, pentachloronitro
U020	Benzenesulfonic acid chloride (C,R)
U020	Benzenesulfonyl chloride (C,R)
U207	Benzene, 1,2,4,5-tetrachloro
U023	Benzene, (trichloromethyl)-(C,R,T)
U234	Benzene, 1,3,5-trinitro-(R,T)
U021	Benzidine
U202	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, and salts
U120	Benzo [j,k] fluorene
U022	Benzo[a]pyrene
U022	3,4-Benzopyrene
U197	p-Benzoquinone
U023	Benzotrichloride (C, R, T)
U050	1,2-Benzphenanthrene
U085	2,2'-Bioxirane (I,T)
U021	(1,1'-Biphenyl)-4,4'-diamine
U073	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro
U091	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy
U095	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl
U024	Bis(2-chloroethoxy)methane
U027	Bis(2-chloroisopropyl) ether
U244	Bis(dimethylthiocarbamoyl) disulfide
U028	Bis(2-ethylhexyl) phthalate
U246	Bromine cyanide
U225	Bromoform
U030	4-Bromophenyl phenyl ether
U128	1,3-Butadiene, 1,1,2,3,4,4-hexachloro
U172	1-Butanamine, N-butyl-N-nitroso
U035	Butanoic acid, 4-[Bis(2-chloroethyl)amino] benzene
U031	1-Butanol (I)
U159	2-Butanone (I,T)
U160	2-Butanone peroxide (R,T)
U053	2-Butenal
U074	2-Butene, 1,4-dichloro-(I,T)
U031	n-Butyl alcohol (I)

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Hazardous Waste Number	Substance
U136	Cacodylic acid
U032	Calcium chromate
U238	Carbamic acid, ethyl ester
U178	Carbamic acid, methylnitroso-, ethyl ester
U176	Carbamide, N-ethyl-N-nitroso
U177	Carbamide, N-methyl-N-nitroso
U219	Carbamide, thio
U097	Carbamic chloride, dimethyl
U215	Carbonic acid, dithallium (I) salt
U156	Carbonochloridic acid, methyl ester (I,T)
U033	Carbon oxyfluoride (R,T)
U211	Carbon tetrachloride
U033	Carbonyl fluoride (R, T)
U034	Chloral
U035	Chlorambucil
U036	Chlordane, technical
U026	Chlornaphazin
U037	Chlorobenzene
U038	Chlorobenzilate
U039	4-Chloro-m-cresol
U041	1-Chloro-2, 3-epoxypropane
U042	2-Chloroethyl vinyl ether
U044	Chloroform
U046	Chloromethyl methyl ether
U047	beta-Chloronaphthalene
U048	o-Chlorophenol
U049	4-Chloro-o-toluidine, hydrochloride
U032	Chromic acid, calcium salt
U050	Chrysene
U051	Creosote
U052	Cresols
U052	Cresylic acid
U053	Crotonaldehyde
U055	Cumene (I)
U246	Cyanogen bromide
U197	2,5-Cyclohexadiene-1,4-dione
U056	Cyclohexane (I)
U057	Cyclohexanone (I)
U130	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro
U058	Cyclophosphamide
U240	2,4-D, salts and esters
U059	Daunomycin
U060	DDD
U061	DDT
U142	Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta [c,d]-pentalen-2-one
U062	Diallate
U133	Diamine (R,T)
U221	Diaminotoluene
U063	Dibenz(a,h)anthracene
U068	1,2,5,6-Dibenzanthracene
U064	1,2,7,8-Dibenzopyrene
U064	Dibenzo[a,i]pyrene
U066	1,2-Dibromo-3-chloropropane

Hazardous Waste Number	Substance
U069	Dibutyl phthalate
U062	S-(2,3-Dichloroallyl) diisopropylthiocarbamate
U070	o-Dichlorobenzene
U071	m-Dichlorobenzene
U072	p-Dichlorobenzene
U073	3,3'-Dichlorobenzidine
U074	1,4-Dichloro-2-butene (I, T)
U075	Dichlorodifluoromethane
U192	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide
U060	Dichloro diphenyl dichloroethane
U061	Dichloro diphenyl trichloroethane
U078	1,1-Dichloroethylene
U079	1,2-Dichloroethylene
U025	Dichloroethyl ether
U081	2,4-Dichlorophenol
U082	2,6-Dichlorophenol
U240	2,4-Dichlorophenoxyacetic acid, salts and esters
U083	1,2-Dichloropropane
U084	1,3-Dichloropropene
U085	1,2:3,4-Diepoxybutane (I,T)
U108	1,4-Diethylene oxide
U086	N,N'-Diethylhydrazine
U087	0,0-Diethyl-S-methyl-dithiophosphate
U088	Diethyl phthalate
U089	Diethylstilbesterol
U148	1,2-Dihydro-3,6-pyridizinedione
U090	Dihydrosafrole
U091	3,3-Dimethoxybenzidine
U092	Dimethylamine (I)
U093	Dimethylaminoazobenzene
U094	7,12-Dimethylbenz[a]anthracene
U095	3,3'-Dimethylbenzidine
U096	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	Dimethylcarbamoyl chloride
U098	1,1-Dimethylhydrazine
U099	1,2-Dimethylhydrazine
U101	2,4-Dimethylphenol
U102	Dimethyl phthalate
U103	Dimethyl sulfate
U105	2,4-Dinitrotoluene
U106	2,6-Dinitrotoluene
U107	Di-n-octyl phthalate
U108	1,4-Dioxane
U109	1,2-Diphenylhydrazine
U110	Dipropylamine (I)
U111	Di-n-propylnitrosamine
U001	Ethanal (I)
U174	Ethanamine, N-ethyl-N-nitroso
U067	Ethane, 1,2-dibromo
U076	Ethane, 1,1-dichloro
U077	Ethane, 1,2-dichloro
U114	1,2-Ethanediybiscarbamodithioic acid, salts and esters
U131	Ethane, 1,1,1,2,2,2-hexachloro

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Hazardous Waste Number	Substance
U024	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro]U003Ethanenitrile (I,T)
U117	Ethane, 1,1'-oxybis-(I)
U025	Ethane, 1,1'-oxybis[2-chloro]
U184	Ethane, pentachloro
U208	Ethane, 1,1,1,2-tetrachloro
U209	Ethane, 1,1,2,2-tetrachloro
U218	Ethanethioamide
U227	Ethane, 1,1,2-trichloro
U247	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)
U043	Ethene, chloro
U042	Ethene, 2-chloroethoxy
U078	Ethene, 1,1-dichloro
U079	Ethene, trans-1,2-dichloro
U210	Ethene, 1,1,2,2-tetrachloro
U173	Ethanol, 2,2F-(nitrosoimino)bis
U004	Ethanone, 1-phenyl
U006	Ethanoyl chloride (C,R,T)
U359	2-Ethoxyethanol
U112	Ethyl acetate (I)
U113	Ethyl acrylate (I)
U238	Ethyl carbamate (urethane)
U038	Ethyl 4,4'-dichlorobenzilate
U114	Ethylenebis(dithiocarbamic acid), salts and esters
U067	Ethylene dibromide
U077	Ethylene dichloride
U359	Ethylene glycol monoethyl ether
U115	Ethylene oxide (I, T)
U116	Ethylene thiourea
U117	Ethyl ether (I)
U076	Ethylidene dichloride
U118	Ethyl methacrylate
U119	Ethyl methanesulfonate
U139	Ferric dextran
U120	Fluoranthene
U122	Formaldehyde
U123	Formic acid (C, T)
U124	Furan (I)
U125	2-Furancarboxaldehyde (I)
U147	2,5-Furandione
U213	Furan, tetrahydro-(I)
U125	Furfural (I)
U124	Furfuran (I)
U206	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)
U126	Glycidylaldehyde
U163	Guanidine, N-methyl-N'-nitro-N-nitroso
U127	Hexachlorobenzene
U128	Hexachlorobutadiene
U129	Hexachlorocyclohexane (gamma isomer)
U130	Hexachlorocyclopentadiene
U131	Hexachloroethane
U132	Hexachlorophene
U243	Hexachloropropene
U133	Hydrazine (R, T)

Hazardous Waste Number	Substance
U086	Hydrazine, 1,2-diethyl
U098	Hydrazine, 1,1-dimethyl
U099	Hydrazine, 1,2-dimethyl
U109	Hydrazine, 1,2-diphenyl
U134	Hydrofluoric acid (C, T)
U134	Hydrogen fluoride (C,T)
U135	Hydrogen sulfide
U096	Hydroperoxide, 1-methyl-1-phenylethyl-(R)
U136	Hydroxydimethylarsine oxide
U116	2-Imidazolidinethione
U137	Indeno [1,2,3-cd]pyrene
U139	Iron dextran
U140	Isobutyl alcohol (I, T)
U141	Isosafrole
U142	Kepona
U143	Lasiocarpine
U144	Lead acetate
U145	Lead phosphate
U146	Lead subacetate
U129	Lindane
U147	Maleic anhydride
U148	Maleic hydrazide
U149	Malononitrile
U150	Melphalan
U151	Mercury
U152	Methacrylonitrile (I, T)
U092	Methanamine, N-methyl-(I)
U029	Methane, bromo
U045	Methane, chloro-(I,T)
U046	Methane, chloromethoxy
U068	Methane, dibromo
U080	Methane, dichloro
U075	Methane, dichlorodifluoro
U138	Methane, iodo
U119	Methanesulfonic acid, ethyl ester
U211	Methane, tetrachloro
U121	Methane, trichlorofluoro
U153	Methanethiol (I,T)
U225	Methane, tribromo
U044	Methane, trichloro
U121	Methane, trichlorofluoro
U123	Methanoic acid (C,T)
U036	4,7-Methano-1H-indene,1,2,4,5,6,7,8,8 octachloro-2,3,3a,4,7,7a-hexahydro
U154	Methanol (I)
U155	Methapyrene
U247	Methoxychlor
U154	Methyl alcohol (I)
U029	Methyl bromide
U186	I-Methylbutadiene (I)
U045	Methyl chloride (I,T)
U156	Methyl chlorocarbonate (I,T)
U226	Methylchloroform
U157	3-Methylcholanthrene

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Hazardous Waste Number	Substance
U158	4,4'-Methylenebis(2-chloroaniline)
U132	2,2'-Methylenebis(3,4,6-trichlorophenol)
U068	Methylene bromide
U080	Methylene chloride
U122	Methylene oxide
U159	Methyl ethyl ketone (I,T)
U160	Methyl ethyl ketone peroxide (R,T)
U138	Methyl iodide
U161	Methyl isobutyl ketone (I)
U162	Methyl methacrylate (I, T)
U163	N-Methyl-N'-nitro-N-nitrosoguanidine
U161	4-Methyl-2-pentanone (I)
U164	Methylthiouracil
U010	Mitomycin C
U059	5,12-Naphthacenedione, (8S-cis)8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxyl]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy
U165	Naphthalene
U047	Naphthalene, 2-chloro
U166	1,4-Naphthalenedione
U236	2,7-Naphthalenedisulfonic acid,3,3'-(3,3-dimethyl-(1,1'-biphenyl)-4,4'diyl)bis(azo)bis(6-amino-4-hydroxy)-,tetrasodium salt
U166	1,4-Naphthoquinone
U167	1-Naphthylamine
U168	2-Naphthylamine
U167	alpha-Naphthylamine
U168	beta-Naphthylamine
U026	2-Naphthalenamine, N,N'-bis(2-chloroethyl)
U169	Nitrobenzene (I, T)
U170	p-Nitrophenol
U171	2-Nitropropane (I, T)
U172	N-Nitrosodi-n-butylamine
U173	N-Nitrosodiethanolamine
U174	N-Nitrosodiethylamine
U111	N-Nitroso-n-propylamine
U176	N-Nitroso-N-ethylurea
U177	N-Nitroso-N-methylurea
U178	N-Nitroso-N-methylurethane
U179	N-Nitrosopiperidine
U180	N-Nitrosopyrrolidine
U181	5-Nitro-o-toluidine
U193	1,2-Oxathiolane, 2,2-dioxide
U058	2H-1,3,2-Oxazaphosphorine, 2-[bis(2-chloroethyl)amino]-tetrahydro-, 2 oxide
U115	Oxirane (I,T)
U041	Oxirane, 2-(chloromethyl)
U182	Paraldehyde
U183	Pentachlorobenzene
U184	Pentachloroethane
U185	Pentachloronitrobenzene
See F027	Pentachlorophenol
U186	1,3-Pentadiene (I)
U187	Phenacetin
U188	Phenol
U048	Phenol, 2-chloro
U039	Phenol, 4-chloro-3-methyl

Hazardous Waste Number	Substance
U081	Phenol, 2,4-dichloro
U082	Phenol, 2,6-dichloro
U101	Phenol, 2,4-dimethyl
U170	Phenol, 4-nitro
See F027	Phenol, pentachloro
See F027	Phenol, 2,3,4,6-tetrachloro
See F027	Phenol, 2,4,5-trichloro
See F027	Phenol, 2,4,6-trichloro
U137	1,10-(1,2-Phenylene)pyrene
U145	Phosphoric acid, lead (2 ) salt
U087	Phosphorodithioic acid, 0,0-diethyl- S-methyl ester
U189	Phosphorous sulfide (R)
U190	Phthalic anhydride
U191	2-Picoline
U192	Pronamide
U194	1-Propanamine (I,T)
U110	1-Propanamine, N-propyl-(I)
U066	Propane, 1,2-dibromo-3-chloro
U149	Propanedinitrile
U171	Propane, 2-nitro-(I)
U027	Propane, 2,2'-oxybis[2-chloro]
U193	1,3-Propane sultone
U235	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U126	1-Propanol, 2,3-epoxy
U140	1-Propanol, 2-methyl-(I,T)
U002	2-Propanone (I)
U007	2-Propanamide
U084	Propene, 1,3-dichloro
U243	1-Propene, 1,1,2,3,3,3-hexachloro
U009	2-Propenenitrile
U152	2-Propenenitrile, 2-methyl-(I,T)
U008	2-Propenoic acid (I)
U113	2-Propenoic acid, ethyl ester (I)
U118	2-Propenoic acid, 2-methyl-,ethyl ester
U162	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
See F027	Propionic acid, 2-(2,4,5-trichlorophenoxy)
U194	n-Propylamine (I, T)
U083	Propylene dichloride
U196	Pyridine
U155	1,2-Ethanediamine,N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)
U179	Pyridine, hexahydro-N-nitroso
U191	Pyridine, 2-methyl
U1644	(1H)-Pyrimidinone, 2,8-dihydro-6-methyl-2-thioxo
U180	Pyrrole, tetrahydro-N-nitroso
U200	Reserpine
U201	Resorcinol
U202	Saccharin and salts
U203	Safrole
U204	Selenious acid
U204	Selenium dioxide
U205	Selenium disulfide (R, T)
U015	L-Serine, diazoacetate (ester)
See F027	Silvex

Hazardous Waste Number	Substance
U089	4,4'-Stilbenediol, alpha, alpha'-diethyl
U206	Streptozotocin
U136	Sulfur hydride
U103	Sulfuric acid, dimethyl ester
U189	Sulfur phosphide (R)
U205	Sulfur selenide (R,T)
See F027	2,4,5-T
U207	1,2,4,5-Tetrachlorobenzene
U208	1,1,1,2-Tetrachloroethane
U209	1,1,2,2-Tetrachloroethane
U210	Tetrachloroethene
See F027	2,3,4,6-Tetrachlorophenol
U213	Tetrahydrofuran (I)
U214	Thallium (I) acetate
U215	Thallium (I) carbonate
U216	Thallium (I) chloride
U217	Thallium (I) nitrate
U218	Thioacetamide
U153	Thiomethanol (I,T)
U219	Thiourea
U244	Thiram
U220	Toluene
U221	Toluenediamine
U223	Toluene diisocyanate (R,T)
U328	o-Toluidine
U358	p-Toluidine
U222	o-Toluidine hydrochloride
U011	1H-1,2,4-Triazol-3-amine
U226	1,1,1-Trichloroethane
U227	1,1,2-Trichloroethane
U228	Trichloroethene
U228	Trichloroethylene
U121	Trichloromonofluoromethane
See F027	2,4,5-Trichlorophenol
See F027	2,4,6-Trichlorophenol
See F027	2,4,5-Trichlorophenoxyacetic acid
U234	sym-Trinitrobenzene (R, T)
U182	1,3,5-Trioxane,2,4,6-trimethyl
U235	Tris (2,3-dibromopropyl)phosphate
U236	Trypan blue
U237	Uracil, 5[bis(2-chloromethyl)amino]
U237	Uracil mustard
U043	Vinyl chloride
U248	Warfarin and salts, when present at concentrations of 0.3% or less
U239	Xylene (I)
U200	Yohimban-16-carboxylic acid, 11, 17-dimethoxy-18-[(3,4,5-trimethoxy-benzoyl)oxy]-, methyl ester
U249	Zinc phosphide, when present at concentrations of 10% or less
U237	2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

**NR 605.10 Procedures for modifying the hazardous waste lists. (1) Any person seeking to delist either a waste listed in s. NR 605.09 or a waste**

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produced at a particular generation site from the hazardous waste lists in s. NR 605.09 which is also listed as a hazardous waste in the federal regulations promulgated by the EPA under 42 USC 6921 (b) shall petition the EPA to delist that waste.

(2) Any person seeking to exclude a waste from the hazardous waste lists in s. NR 605.09 or a waste produced at a particular generation site which is not listed as a hazardous waste in the federal regulations promulgated by the EPA under 42 USC 6921 (b) shall petition the department to delist that waste. The department shall either deny the petition in writing or proceed with rulemaking to delist the waste from the hazardous waste lists in s. NR 605.09.

(3) If the EPA deletes a hazardous waste from the hazardous waste lists in the federal regulations promulgated by the EPA under 42 USC 6921 (b), the department shall proceed with rulemaking to either delete the waste from the hazardous waste lists in s. NR 605.09 or retain it. The department may retain the waste on the hazardous waste lists in s. NR 605.09 if the department determines that the waste has characteristics which identify it as a hazardous waste based on the criteria in ss. NR 605.07 and 605.08 and if the department determines that the retention is necessary to protect public health, safety or welfare. The department shall issue specific findings and conclusions on which its determination is based.

(4) If EPA deletes a hazardous waste from a particular generation site from the hazardous waste lists in the federal regulations promulgated by EPA under 42 USC 6921 (b), the department may not regulate under chs. NR 600 to 685 those wastes that have been deleted.

(5) If the EPA adds an additional solid waste to the hazardous waste lists in the federal regulations promulgated by the EPA under 42 USC 6921 (b), the department shall regulate the additional waste as a hazardous waste under chs. NR 600 to 685 as soon as EPA's action becomes final and shall proceed with rulemaking to adopt identical changes in s. NR 605.09.

(6) The department may include, or a person may petition the department to include, on the hazardous waste lists in s. NR 605.09 any additional solid waste which is not included on the hazardous waste lists in the federal regulations promulgated by the EPA under 42 USC 6921 (b) if the department determines that the solid waste has characteristics which identify it as a hazardous waste based on the criteria in ss. NR 605.07 and 605.08 and if the department determines that the inclusion is necessary to protect public health, safety or welfare. The department shall issue specific findings and conclusions on which its determination is based and shall include the additional solid waste on the lists of hazardous waste in s. NR 605.09 by rule.

Note: For the purpose of this section, petitions under subs. (2) and (6) are petitions for rules under s. 227.12, Stats.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

**NR 605.11 EP toxicity test procedure.** The following test procedure shall be used when determining whether a solid waste is a hazardous waste under the provisions of s. NR 605.08 (5).

(1) **TOXIC EXTRACTION PROCEDURE (EP).** (a) A representative sample of the waste to be tested, no less than 100 grams in size, shall be obtained

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using the methods specified in appendix I or any other method capable of yielding a representative sample within the meaning of s. NR 600.03 (177).

Note: For detailed guidance on conducting the various aspects of the toxic extraction procedure see SW846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984, and update II in April, 1985. This publication is available from:

The Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C., 20402

and is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

For further guidance on filtration equipment, for procedures see SW-846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984 and update II in April, 1985. This publication is available from:

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Washington, D.C. 20402

and is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) The sample shall be separated into its component liquid and solid phases using the method described in sub. (2). If the percent solids obtained from using this method totals less than 0.5% of the original weight of the waste, the residue shall be discarded and the operator shall treat the liquid phase as the extract and proceed to par. (h). The percent solids is determined by drying the filter pad at 80°C until it reaches a constant weight and then calculating the percent solids using the following equation:

$$\frac{(\text{weight of pad} + \text{solid}) - (\text{tare weight of pad})}{\text{initial weight of sample}} \times 100 = \% \text{ solids}$$

(c) The solid material obtained from the separation procedure, in sub. (2), shall be evaluated for its particle size. If the solid material has a surface area per gram of material equal to, or greater than, 3.1 cm or passes through a 9.5 mm (0.375 inch) standard sieve, the operator shall proceed to par. (d). If the surface area is smaller or the particle size larger than specified above, the solid material shall be prepared for extraction by crushing, cutting or grinding the material so that it passes through a 9.5 mm (0.375 inch) sieve or, if the material is in a single piece, by subjecting the material to the structural integrity procedure described in sub. (3).

(d) The solid material obtained in par. (c) shall be weighed and placed in an extractor with 16 times its weight of deionized water. Do not allow the material to dry prior to weighing. For purposes of this test, an acceptable extractor is one which shall impart sufficient agitation to the mixture to not only prevent stratification of the sample and extraction fluid but also insure that all sample surfaces are continuously brought into contact with well mixed extraction fluid.

(e) After the solid material and deionized water are placed in the extractor, the operator shall begin agitation and measure the pH of the solution in the extractor. If the pH is greater than 5.0, the pH of the solution shall be decreased to  $5.0 \pm 0.2$  by adding 0.5 N acetic acid. If the pH is equal to or less than 5.0, no acetic acid shall be added. The pH of the solution shall be monitored during the course of the extraction and if the pH rises above 5.2, 0.5N acetic acid shall be added to bring the pH down to  $5.0 \pm 0.2$ . However, in no event shall the aggregate amount of acid added to the solution exceed 4 ml of acid per gram of solid. The mixture shall be agitated for 24 hours and maintained at 20 - 40° C (68 - 104° F) during this time. It is recommended that the operator monitor and adjust the pH during the course of the extraction with a device such as the Type 45-A pH Controller manufactured by Chemtrix, Inc., Hillsboro, Oregon 97123 or its equivalent, in conjunction with a metering pump and reservoir or 0.5N acetic acid. If such a system is not available, the following manual procedure shall be employed:

1. A pH meter shall be calibrated in accordance with the manufacturer's specifications.

2. The pH of the solution shall be checked and, if necessary, 0.5N acetic acid shall be manually added to the extractor until the pH reaches  $5.0 \pm 0.2$ . The pH of the solution shall be adjusted at 15, 30 and 60 minute intervals, moving to the next longer interval if the pH does not have to be adjusted more than 0.5N pH units.

3. The adjustment procedure shall be continued for at least 6 hours.

4. If at the end of the 24-hour extraction period, the pH of the solution is not below 5.2 and the maximum amount of acid (4 ml per gram of solids) has not been added, the pH shall be adjusted to  $5.0 \pm 0.2$  and the extraction continued for an additional 4 hours, during which the pH shall be adjusted at one hour intervals.

(f) At the end of the 24-hour extraction period, deionized water shall be added to the extractor in an amount determined by the following equation:

$$V = (20)(W) - 16(W) - A, \text{ where,}$$

V = ml deionized water to be added

W = weight in grams of solid charged to extractor

A = ml of 0.5N acetic acid added during extraction

(g) The material in the extractor shall be separated into its component liquid and solid phases as described under sub. (2).

(h) The liquids resulting from pars. (b) and (g) shall be combined. This combined liquid, or the waste itself if it has less than 0.5% solids, as noted in par. (b), is the extract and shall be analyzed for the presence of any of the contaminants specified in table I of s. NR 605.08 (5) (b) using the analytical procedures designated in sub. (4).

(2) SEPARATION PROCEDURE. (a) Equipment. A filter holder, designed for filtration media having a nominal pore size of 0.45 micrometers and capable of applying a 5.3 kg/cm<sup>2</sup> (75 psi) hydrostatic pressure to the solution being filtered shall be used. For mixtures containing nonabsorptive solids, where separation can be affected without imposing a 5.3 kg/cm<sup>2</sup>



pressure differential, vacuum filters employing a 0.45 micrometers filter media may be used.

Note: For further guidance on filtration equipment for procedures see SW-846, "Test Methods for Evaluating Solid Waste". This publication is available from: The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, and is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) Procedure. 1. Following manufacturer's directions, the filter unit shall be assembled with a filter bed consisting of a 0.45 micrometer filter membrane. For difficult or slow to filter mixtures a prefilter bed consisting of the following prefilters in increasing pore size (0.65 micrometer membrane, fine glass fiber prefilter, and coarse glass fiber prefilter) shall be used.

2. The waste shall be poured into the filtration unit.

3. The reservoir shall be slowly pressurized until liquid begins to flow from the filtrate outlet at which point the pressure in the filter shall be immediately lowered to 10-15 psig. Filtration shall be continued until liquid flow ceases.

4. The pressure shall be increased stepwise in 10 psi increments to 75 psig and filtration continued until flow ceases or the pressurizing gas begins to exit from the filtrate outlet.

5. The filter unit shall then be depressurized, the solid material removed and weighed and then transferred to the extraction apparatus, or, in the case of final filtration prior to analysis, discarded. Do not allow the material retained on the filter pad to dry prior to weighing.

6. The liquid phase shall be stored at 4xC for subsequent use in sub. (1) (h).

Note: This procedure is intended to result in separation of the "free" liquid portion of the waste from any solid matter having a particle size greater than 0.45 fm. If the sample will not filter, various other separation techniques may be used to aid in the filtration. As described above, pressure filtration is employed to speed up the filtration process. This does not alter the nature of the separation. If liquid does not separate during filtration, the waste may be centrifuged. If separation occurs during centrifugation, the liquid portion, the centrifugate, is filtered through the 0.45  $\mu$  filter prior to becoming mixed with the liquid portion of the waste obtained from the initial filtration. Any material that does not pass through the filter after centrifugation is considered a solid and is extracted.

(3) STRUCTURAL INTEGRITY PROCEDURE. (a) Equipment. A structural integrity tester having a 3.18 cm (1.25 in.) diameter hammer weighing 0.33 kg (0.73 lbs.) and having a free fall of 15.24 cm (6 in.) shall be used.

Note: The device may be obtained from Associated Design and Manufacturing Company, Alexandria, VA 22314, as Part No. 125.

(b) Procedure. 1. The sample holder should be filled with the material to be tested. If the sample of waste is a large monolithic block, a portion shall be cut from the block having the dimensions of 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder. For a fixated waste, samples may be cast in the form of a 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder for purposes of conducting this test. In such cases, the waste may be allowed to cure for 30 days prior to further testing.

2. The sample holder shall be placed into the structural integrity tester, then the hammer shall be raised to its maximum height and dropped. This shall be repeated 15 times.

3. The material shall be removed from the sample holder, weighed and transferred to the extraction apparatus for extraction.

(4) ANALYTICAL PROCEDURES FOR ANALYZING EXTRACT CONTAMINANTS. The test methods for analyzing the extract are as follows:

(a) For arsenic, barium, cadmium, chromium, lead, mercury, selenium or silver: "Methods for Chemical Analysis of Water and Wastes", as contained in SW-846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984 and update II in April, 1985.

(b) For endrin; lindane; methoxychlor; toxaphene; 2,4-D; 2,4,5-TP Silvex; in "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater", as contained in SW-846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984 and update II in April, 1985.

(c) For all analyses, the method of standard addition shall be used for the quantification of species concentration. This method is described in SW-846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984 and update II in April, 1985.

Note: This publication may be obtained from:

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This publication is available for inspection at the offices of the department, the secretary of state, and the revisor of statutes.

Note: For detailed guidance on conducting the various aspects of the toxic extraction procedure see SW846, "Test Methods for Evaluating Solid Waste", second edition, 1982, as amended by update I in April, 1984, and update II in April, 1985. This publication is available from:

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and is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.

NR 605.12 Analytical methods. (1) Chemical and physical samples shall be analyzed by a laboratory certified or registered under ch. NR 149. The following tests are excluded from this requirement:

- (a) Physical tests of soil,
- (b) Air quality tests,
- (c) Gas tests,
- (d) Field pH tests,
- (e) Field conductivity,
- (f) Turbidity tests,
- (g) Water elevation,
- (h) Temperature,

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(1) Leachate-liner compatibility testing.

(2) Bacteriological and radiological samples shall be analyzed by the state laboratory of hygiene or at a laboratory approved or certified by the department of health and social services.

(3) Other chemical and physical samples shall be analyzed by a laboratory certified or registered under ch. NR 149. The department may allow, on a case-by-case basis, facilities to submit analytical test results from a laboratory that has not been certified, registered or approved by the department or the department of health and social services.

History: Cr. Register, February, 1991, No. 422, eff. 3-1-91.