Tennessee Department of Environment and Conservation
Division of Solid Waste Management

Special Waste
GUIDANCE

Purpose

This guidance provides clarification of **Rule 0400-11-01-.01(4)(c)1** by identifying wastes under Special Waste Evaluation Categories that require the submittal of a Special Waste Application (form CN-1051) to the Division of Solid Waste Management (DSWM) for evaluation before management at a permitted solid waste facility. Furthermore, this guidance provides clarification of **Rule 0400-11-01-.01(2)** by identifying wastes under the Special Waste Characteristics that are Special Wastes and require the submittal of a Special Waste Application (form CN-1051) to the DSWM for approval before management at a permitted solid waste facility. Additionally, ***T. C. A. § 68-211-102(b)*** calls on the DSWM to develop inspection programs that include "waste streams, baled waste and special waste generators and transporters to prevent the introduction of hazardous waste into solid waste disposal facilities."

Special Waste Evaluation Categories

Special Waste Evaluation Categories include all of the following non-domestic (non-household) wastes that could possibly be hazardous wastes (Notes: This list is not inclusive of all waste that could be a hazardous waste but are examples. Generators of all solid wastes (including liquids and compressed gases) must determine if their waste is a hazardous waste in accordance with Hazardous Waste Rule 0400-12-01-.03(1)(b) and maintain records in accordance with Hazardous Waste Rule 0400-12-01-.03(5)(a)3. Hazardous wastes cannot be managed at solid waste facilities permitted under Chapter 0400-11-01. Rule 0400-11-01-.04(2)(k) prohibits liquid wastes and whole tires from being disposed of in a landfill.):

(a) Combustion wastes (Note: This does not include the ash generated from the burning of natural and untreated wood, landscaping wastes, land clearing wastes, and combustion waste excluded from being a hazardous waste under Hazardous Waste Rule 0400-12-01-.02(1)(d)2(xiii).);
(b) Commercial chemical products or manufacturing chemical intermediates and off-specification commercial chemical products or manufacturing chemical intermediates;
(c) Contaminated environmental media (groundwater, soil, and/or rock) and debris resulting from the cleanup of a spill or release (Note: Contamination includes petroleum[1] and any other waste identified as a category in this document.)
(d) Cyanide wastes;
(e) Distillation bottom wastes;
(f) Pesticide wastes;
(g) Pharmaceutical wastes;
(h) Plating bath wastes;
(i) Sludge including any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant; and/or,
(j) Wastes that contain a constituent(s) in the definitions of listed wastes F001 through F005 found in Hazardous Waste Rule 0400-12-01-.02(4)(b)1 such as acetone, benzene, carbon disulfide, carbon tetrachloride, chlorobenzene, chlorinated fluorocarbons, cresols, cresylic acid, cyclohexanone, ethyl acetate, ethyl benzene, ethyl ether, 2-ethoxyethanol, isobutanol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, n-butyl alcohol, nitrobenzene, 2-

nitropropane, ortho-dichlorobenzene, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane, and/or xylene.

Special Waste Characteristics

The following descriptions identify characteristics distinctive to non-domestic (non-household) waste requiring special management and/or disposal, thus requiring Special Waste approval before managing at a permitted solid waste facility. All of the following examples of wastes require the submittal of a Special Waste Application and are Special Wastes (Notes: Generators of all solid wastes (including liquids and compressed gases) must determine if their waste is a hazardous waste in accordance with Hazardous Waste Rule 0400-12-01-.03(1)(b) and maintain records in accordance with Hazardous Waste Rule 0400-12-01-.03(5)(a)3. Hazardous wastes and TSCA PCB regulated/restricted wastes[2] cannot be managed at solid waste facilities permitted under Chapter 0400-11-01. Rule 0400-11-01-.04(2)(k) prohibits liquid wastes and whole tires from being disposed of in a landfill.):

(a) Dangerous to manage wastes because of potential exposure during unloading/processing/disposal (e.g. friable asbestos wastes[3], large amounts of fine dust wastes, waste containing cyanide, etc.);
(b) Dangerous to manage wastes because of problems during processing or after disposal (e.g. reaction with waste/leachate such as aluminum dross);
(c) Difficult to manage wastes because of the amount or type of the waste requires special operational considerations/conditions (e.g. requires deviation from normal operations such as bulky waste) and/or requires specialized equipment that is not listed in the facility's permit;
(d) Medical wastes[4];
(e) PCB wastes[2];
(f) Solvent-contaminated wipes that are excluded from being a hazardous waste under Hazardous Waste Rule 0400-12-01-.02(1)(d)2(xvii);
(g) Toxicity Characteristic Leaching Procedure (TCLP) analysis required wastes;
(h) Wastes subject to regulation by the U. S. Department of Energy, Nuclear Regulatory Commission, and/or the Tennessee Division of Radiological Health (including but not necessarily limited to Bulk Survey for Release wastes and Technologically-Enhanced Naturally Occurring Radioactive Materials)[5];
(i) Wastes that were hazardous wastes and because of treatment are no longer hazardous wastes, however, Land Disposal Restrictions of Hazardous Waste Rule 0400-12-01-.10 apply. (Note: Even though a waste may no longer be a hazardous waste, the waste must meet the Land Disposal Restriction requirements/standards of Hazardous Waste Rule 0400-12-01-.10 in order to be disposed of in a landfill.); and/or,
(j) Wastes the DSWM or the permitted facility determines requires special handling or restrictions or could possibly be prohibited from management as special wastes due to the danger and/or difficulty in initial management and/or long term impacts to the facility. This includes wastes that may affect the stability of the landfill and/or require special handling (e. g., volume is greater than 20 percent of the waste the facility normally manages).

Special Waste Evaluation Outcomes

The following are the three possible outcomes from the review of Special Waste Applications (Note: The fee for the special waste application/evaluation is not refundable no matter which determination is made by the DSWM.):

1. The DSWM determines based on the information/data submitted in the Special Waste Application or by inspection that the waste is a special waste but cannot be managed at a Tennessee Solid Waste Permitted Facility because it is a hazardous waste, a TSCA PCB

regulated/restricted waste[2], and/or due to the danger and/or difficulty in initial management and long term impacts to the facility. The DSWM will issue a Special Waste Denial Letter stating the reason(s) for the denial. If an applicant would like to discuss a denial determination they should contact the DSWM Central Office – Solid Waste Program Manager.

2. The DSWM determines based on the information/data submitted in the Special Waste Application that a waste is not a hazardous waste and it does not meet any of the Special Waste Characteristics. The DSWM will issue a Non-Designated Special Waste Letter stating:

   a) The waste will not have to be managed as a special waste and recertification is not necessary;

   b) The generator must maintain a copy of the Special Waste Application and the DSWM Non-Designated Special Waste Determination Letter for review/copy by the DSWM as long as the waste is generated and managed in a Tennessee Solid Waste Permitted Facility in order for the determination to remain valid; and,

   c) If the characteristics of a waste change due to any changes in the process generating the waste and/or any changes in the types or amounts of materials in the waste, then the generator must stop shipping the waste to a Tennessee permitted facility and submit a new Special Waste Application.

3. The DSWM determines based on the information/data submitted in the Special Waste Application or by inspection that the waste exhibits one or more of the Special Waste Characteristics, but is not a hazardous waste and/or a TSCA PCB regulated/restricted waste[2], and it can be safely managed at a Tennessee Solid Waste Permitted Facility. The DSWM will issue a Special Waste Approval Letter stating:

   a) The waste must be managed as a special waste in accordance with the conditions in the letter and recertification in accordance with Rule 0400-11-01-.01(4)(c)4 (Note: See DSWM Policy Number 013 regarding special waste from outside the State of Tennessee. Travel to inspect waste generated out of state will be in accordance with the State's Travel Policy);

   b) Wastes that require analyses for evaluation (e.g. TCLP analysis required wastes, etc.) as determined by the DSWM must, at a minimum, be sampled and analyzed within 365 days of the recertification date and the results submitted with the recertification (Note: The DSWM may require more frequent sampling analysis based on variability or possible variability of a waste.);

   c) The generator and the Tennessee Solid Waste Permitted Facility must maintain a copy of the Special Waste Application and the DSWM Waste determination letter for review/copy by the DSWM as long as the waste is generated and managed in a Tennessee Solid Waste Permitted Facility in order for the determination to remain valid; and,

   d) If the characteristics of a waste change due to any changes in the process generating the waste and/or any changes in the types or amounts of materials in the waste, then the generator must stop shipping the waste to a Tennessee permitted facility and submit a new Special Waste Application.

Use of Safety Data Sheets and Manufacture's Specifications

Safety Data Sheets (SDS- formerly MSDS) and Manufacturer's Specifications can be used to determine what constituents could be present in a waste and is important when making some hazardous waste F-

listed determinations and for identifying potential exposure concerns. However, the concentration of a constituent as shown on the SDS or in the Manufacturer's Specifications for a product will not likely be reflective of the concentration of a constituent in the waste. Please remember that 1 percent in a product equals 10,000 parts per million (ppm, mg/kg, mg/L).

Elaborating on Commercial Chemical Product or Manufacturing Chemical Intermediate and Off-Specification Commercial Chemical Products or Manufacturing Chemical Intermediates:

"Commercial Chemical Product or Manufacturing Chemical Intermediate" refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient and having the generic name is listed in Hazardous Waste Rule 0400-12-01-.02(4)(d)5 or 6. It does not refer to a material, such as manufacturing products or process waste that contains a chemical substance in which the chemical is not the sole active ingredient. "Off-Specification Commercial Chemical Products or Manufacturing Chemical Intermediates" refers to "Commercial Chemical Product or Manufacturing Chemical Intermediate" which, if it met specifications, would have the generic name is listed in Hazardous Waste Rule 0400-12-01-.02(4)(d)5 or 6.

Elaborating on TCLP Analysis Required Wastes:

"TCLP Analysis Required Wastes" are defined as solid wastes that must be analyzed to determine if they exhibit the characteristics of toxicity using the TCLP, Test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *EPA Publication SW-846*. A solid waste exhibits the characteristic of toxicity and is a hazardous waste under Hazardous Waste Rule 0400-12-01-.02(3)(e) if the **TCLP extract** from a representative sample of the waste contains any of the contaminants listed in the Table 1 at the concentration equal to or greater than the Regulatory Limit (mg/L) in column 3. For the purpose of this document a TCLP liquid waste is a solid waste that contains less than 0.5 percent filterable solids and a Non-TCLP liquid waste is a solid waste that contains 0.5 percent or more filterable solids. TCLP analysis is not required if the generator has:

1. Adequate knowledge to demonstrate and/or **total** analysis (*EPA Publication SW-846* Test Method 1311) to demonstrate that none of the contaminants is at a **total** concentration (mg/kg for non-TCLP liquid waste) such that the waste could exhibit the characteristic of toxicity by exceeding the Regulatory Level in the Table 1 (Note: Because the TCLP method dilutes the sample for non-TCLP liquid waste by 20, if the **total** concentration (mg/kg) of a contaminant from the analysis of a representative sample of a non-TCLP liquid waste is less than the value listed in column 4, then the regulatory level in column 3 could not be exceeded for that contaminant.); and/or,

2. Adequate knowledge with appropriate documentation, that the concentration (mg/L) of a contaminant in the **TCLP extract** from analysis of a representative sample could not equal or exceed the Regulatory Level listed in column 3. (Note: After filtering TCLP liquid waste using the methodology outlined in Test Method 1311, *EPA Publication SW-846*, the remaining liquid is considered to be the **TCLP extract**.)

If the characteristics of a waste change due to any changes in the process generating the waste and/or any changes in the types or amounts of materials in the waste, a new evaluation and analysis will be required and must be conducted on the waste as discussed above.

[1] Please refer to DSWM Policy Number 026 concerning Petroleum Contaminated Soil and the rules and statutes cited therein.
[2] Please refer to DSWM Policies Numbered 025, 111, and 113 concerning PCBs and the rules and statutes cited therein, and EPA's October 24, 2012 memo addressing PCB Bulk Product Waste Reinterpretation.
[3] Please refer to DSWM Policies Numbered 043, 087, and 118 concerning Friable Asbestos and the rules and statutes cited therein.
[4] Please refer to DSWM Policy Number 016 concerning Medical Waste and the rules and statutes cited therein.
[5] Please refer to DSWM Policy Number 126 concerning the Memorandum of Agreement between the Division of Radiological Health and DSWM and the rules and statutes cited therein.

TABLE 1				
1	2[A]	3	4	5
Contaminant	**CAS No.**	**Regulatory Level[B] (mg/L)**	**20 Times the Regulatory Level for Totals Concentrations (mg/kg) in Solids**	**Hazardous Waste Code if Applicable**
Arsenic	7440-38-2	5.0	100	D004
Barium	7440-39-3	100.0	2000	D005
Benzene	71-43-2	0.5	10	D018
Cadmium	7440-43-9	1.0	20	D006
Carbon tetrachloride	56-23-5	0.5	10	D019
Chlordane	57-74-9	0.03	0.6	D020
Chlorobenzene	108-90-7	100	2000	D021
Chloroform	67-66-3	6	120	D022
Chromium	7440-47-3	5	100	D007
o-Cresol [C]	95-48-7	200	4000	D023
m-Cresol [C]	108-39-4	200	4000	D024
p-Cresol [C]	106-44-5	200	4000	D025
Cresol [C]		200	4000	D026
2,4-D	94-75-7	10	200	D016
1,4-Dichlorobenzene	106-46-7	7.5	150	D027
1,2-Dichloroethane	107-06-2	0.5	10	D028
1,1-Dichloroethylene	75-35-4	0.7	14	D029
2,4-Dinitrotoluene [D]	121-14-2	0.13	2.6	D030
Endrin	72-20-8	0.02	0.4	D012
Heptachlor (and its epoxide)	76-44-8	0.008	0.16	D031
Hexachlorobenzene [D]	118-74-1 3	0.13	2.6	D032
Hexachlorobutadiene	87-68-3	0.5	10	D033
Hexachloroethane	67-72-1	3	60	D034
Lead	7439-92-1	5.0	100	D008
Lindane	58-89-9	0.4	8	D013
Mercury	7439-97-6	0.2	4	D009
Methyl ethyl ketone	78-93-3	200	4000	D035
Nitrobenzene	98-95-3	2	40	D036
Pentachlorophenol	87-86-5	100	2000	D037

TABLE 1, continued				
1	2[A]	3	4	5
Contaminant	**CAS No.**	**Regulatory Level[B] (mg/L)**	**20 Times the Regulatory Level for Totals Concentrations (mg/kg) in Solids**	**Hazardous Waste Code if Applicable**
Pyridine [D]	110-86-1 3	5	100	D038
Selenium	7782-49-2	1.0	20	D010
Silver	7440-22-4	5.0	100	D011
Tetrachloroethylene	127-18-4	0.7	14	D039
Toxaphene	8001-35-2	0.5	10	D015
Trichloroethylene	79-01-6	0.5	10	D040
2,4,5-Trichlorophenol	95-95-4	400	8000	D041
2,4,6-Trichlorophenol	88-06-2	2	40	D042
2,4,5-TP (Silvex)	93-72-1	1	20	D017
Vinyl chloride	75-01-4	0.2	4	D043

[A] Chemical abstracts service number.
[B] See Table 1 in Hazardous Waste Rule 0400-12-01-.02(3)(e).
[C] If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l and 20 times the regulatory level of total cresol is 4000 mg/l.
[D] Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

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