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Hazardous Waste Regulation

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I. Introduction §4.1

Federal and Michigan laws dealing with hazardous wastes are broad in scope, regulating everything from the generation, storage, treatment, transportation, and disposal of hazardous wastes to the cleanup of contamination at sites where these activities have been conducted. Hazardous wastes include such diverse materials as waste solvents and acids, scrap metals, used oil, fuels, paints and coatings, building debris, pharmaceuticals, wastewaters, contaminated soil and groundwater, and many other industrial and commercial wastes.

By far the greatest number of businesses and other entities regulated are “generators” of hazardous waste, i.e., businesses that “generate” or create the waste, which, in turn, triggers the regulatory process. “Transporters,” “disposal facilities,” and other regulated entities are far fewer in number and tend to be highly specialized. This chapter therefore focuses on hazardous waste issues as they apply to generators. Further, most legal practitioners who deal with hazardous waste law do so on a regular basis. Because the legal practice is so complex and specialized, much of the discussion in this chapter is summary in nature. This chapter, however, should provide practitioners with enough information to spot the important issues.

II. How are Hazardous Wastes Regulated?

A. The Federal Resource Conservation and Recovery Act (RCRA) §4.2

The foundation and model for hazardous waste law is the federal Resource Conservation and Recovery Act of 1976 (RCRA), [42 USC 6901 et seq.](#) (which is part of the Solid Waste Disposal Act), together with the RCRA regulations, which begin at [40 CFR 260](#). With few exceptions, however, RCRA and the RCRA regulations do not actually apply in most states, including Michigan. Instead, under RCRA, most states, including Michigan, have been authorized by EPA to implement their own hazardous waste laws and regulations “in lieu of” federal law. These “authorized” state programs must be at least as comprehensive and as stringent as federal law. [42 USC 6926\(e\)](#). Most state programs closely resemble RCRA or even adopt the RCRA regulations by reference. In turn, RCRA regulations, case law and EPA administrative guidance are often used to help interpret state regulatory requirements. Thus, in this chapter, while the Michigan regulation is cited as the starting point, EPA regulatory preambles, letters, and other guidance are used to help interpret those regulations. Typically, but not always, DNRE follows such federal guidance.

B. Michigan’s Hazardous Waste Law (Part 111 of NREPA) §4.3

Michigan’s hazardous waste law and regulations, closely track the federal program. They are found at [MCL 324.11101 et seq.](#); [R 299.9101 et seq.](#) Because the law is found in Part 111 of NREPA, the law is often referred to as “Part 111.” EPA gave Michigan initial authorization to administer the hazardous waste program effective October 30, 1986. 51 Fed Reg 36,804 (codified at [40 CFR 272.1151](#)). The initial authorization has been updated several times since then as state laws and regulations are amended to stay consistent with federal program updates.

III. What are Hazardous Wastes?

A. Overview §4.4

Part 111 is intended to provide cradle-to-grave management of hazardous wastes by regulating hazardous wastes from their generation through their final treatment or disposal. Part 111 regulates by status and waste-handling activity. Accordingly, there are regulations covering hazardous waste (1) generators, (2) transporters, and (3) owners or operators of treatment, storage and disposal facilities (TSDFs).

The first part of the regulations, however, deal with the complex issue of identifying what are, and are not, regulated “wastes” and “hazardous wastes.” See [R 299.9201](#)–299.9231. In order to determine whether a material is regulated as a hazardous waste, follow this progression:

- Is the material a “waste”?
- Is the material a “hazardous” waste?
- Does an exemption apply to exclude the material from regulation?

To be a “hazardous waste” the material must first be a “waste”. Although not defined in Part 111, “waste” is defined at length in the rules. See [R 299.9202](#). A “waste” is basically any “discarded material,” including materials that are abandoned, burned, incinerated or recycled, or materials that are accumulated before being abandoned, burned, incinerated or recycled. See [R 299.9202](#)(1). These materials are further subdivided into “spent materials,” “sludges,” “by-products” “scrap metal” and “commercial chemical products,” all of which have distinct regulatory meanings. See [R 299.9202](#)(2); R 299.9101–9109. Several exemptions are included in the description of “waste,” as described in [§ 4.7](#) and following.

On its face, the definition of “hazardous waste” in Part 111 is not very helpful:

“Hazardous waste” means waste or a combination of waste and other discarded material including solid, liquid, semisolid, or contained gaseous material that because of its quantity, quality, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness or serious incapacitating but reversible illness, or may pose a substantial present or potential hazard to human health or the environment if improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous waste does not include material that is solid or dissolved material in domestic sewage discharge, solid or dissolved material in an irrigation return flow discharge, industrial discharge that is a point source subject to permits under section 402 of title IV of the federal water pollution control act, chapter 758, 86 Stat. 880, [33 U.S.C. 1342](#), or is a source, special nuclear, or by-product material as defined by the atomic energy act of 1954, chapter 1073, 68 Stat. 919.

[MCL 324.11103](#)(3). This very broad definition does little to tell us *exactly which* materials are hazardous enough to warrant regulation as hazardous wastes. Indeed, determining exactly which substances are regulated as hazardous wastes under RCRA and Part 111 is anything but straightforward. The statutory definition, however, provides a few important limiting concepts.

First, hazardous wastes consist only of those things that are “discarded.” For example, products that are sold for money are not “discarded,” and therefore are not “wastes,” but instead are used for their intended purpose. Therefore, a new automobile rolling off the assembly line obviously is not regulated as a hazardous waste. Less obvious, though, are materials that are sold for recycling. DNRE sometimes deems these materials “wastes,” other times not. Recycling is discussed in [§ 4.9](#).

Second, a waste must be “solid, liquid, semisolid, or contained gaseous material” to be regulated as a hazardous waste. Therefore, uncontained gases, such as air emissions from a smokestack, are not regulated as “hazardous wastes,” although they may be regulated as hazardous air emissions. See [§ 4.30](#). Air emissions generally are regulated under the Clean Air Act and Part 55 of NREPA, not Part 111. See Chapter 1. Many gases contained in a cylinder, though, are regulated as wastes if discarded.

Third, in order to avoid duplicative regulation, the definition expressly exempts a few specific materials from regulation, including certain materials already regulated under water pollution control (see Chapter 2) and atomic energy laws.

Within these general confines, there are two basic types of hazardous waste: “characteristic” hazardous wastes and “listed” hazardous wastes, discussed in [§ 4.5](#) and [§ 4.6](#).

B. Characteristic Wastes §4.5

A waste is a Part 111 hazardous waste if it displays one of four hazardous characteristics: ignitability, corrosivity, reactivity, and toxicity. [R 299.9212](#). The tests for ignitability and corrosivity are specific. Ignitable wastes, which are relatively common, are liquid materials with a flashpoint below 140 degrees F, such as certain waste fuels and solvents. [R 299.9212](#)(1). Solids and gases may also be “ignitable,” but are less common. Corrosive wastes are defined by their pH — materials with a pH equal to or above 12.5, or equal to or below 2 — and include many acids and bases. [R 299.9212](#)(2). Corrosive wastes include only liquids, never solids. Many industrial cleaners fall into the corrosive category. The reactivity characteristic is not as specific, but generally describes materials that are very unstable and are capable of detonating under certain circumstances. [R 299.9212](#)(3). Materials that react violently or that generate toxic gases when mixed with water are a relatively common example of reactive wastes. There are no specific laboratory tests for determining “reactivity” — instead, this waste is identified through general knowledge of the material.

The last category of characteristic wastes are “toxic” wastes. Toxic wastes contain or leach levels of toxic constituents above the amounts specified in Table 201a, [R 299.9217](#), provided below. For solids, and liquids containing material levels of solids, a lab will subject the material to the “toxicity characteristic leaching procedure,” also known as “TCLP” or “T-clip,” and compare the resulting leachate to the constituent levels in Table 201a. For liquid wastes that

contain less than 0.5% filterable solids, the constituent levels in the liquid itself (after filtering) are compared to Table 201a. For example, if waste-contaminated soil is subjected to the TCLP and the resulting leachate contains lead at a level greater than 5.0 milligrams per liter, the waste soil is characteristically hazardous waste.

Table 201a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Material	Extract Concentration milligrams per liter
D004	440-38-2	Arsenic	5.0
D005	7440-39-3	Barium	100.0
D018	71-43-2	Benzene	0.5
D006	7440-43-9	Cadmium	1.0
D019	56-23-5	Carbon tetrachloride	0.5
D020	57-74-9	Chlordane	0.03
D021	108-90-7	Chlorobenzene	100.0
D022	67-66-3	Chloroform	6.0
D007	7440-47-3	Chromium	5.0
D023	95-48-7	o-Cresol	200.0**
D024	108-39-4	m-Cresol	200.0**
D025	106-44-5	p-Cresol	200.0**
D026	-----	Cresol	200.0**
D016	94-75-7	2,4-D (2,4-Dichloro-phenoxyacetic Acid)	10.0
D027	106-46-7	1,4-Dichlorobenzene	7.5
D028	107-06-2	1,2-Dichloroethane	0.5
D029	75-35-4	1,1-Dichloroethylene	0.7
D030	121-14-2	2,4-Dinitrotoluene	0.13*
D012	72-20-8	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
D031	76-44-8	Heptachlor (and its Epoxide)	0.008
D032	118-74-1	Hexachlorobenzene	0.13*
D033	87-68-3	Hexachlorobutadiene	0.5
D034	67-72-1	Hexachloroethane	3.0
D008	7439-92-1	Lead	5.0
D013	58-89-9	Lindane (1,2,3,4,5,6-hexachlorocyclo-hexane, gamma isomer)	0.4
D009	7439-97-6	Mercury	0.2
D014	72-43-5	Methoxychlor (1,1,1-trichloro-2,2-bis(p-methoxyphenyl)ethane)	10.0

For disclaimer and help in using the *Deskbook*, see the Reader's Guide.

D035	78-93-3	Methyl ethyl ketone	200.0
D036	98-95-3	Nitrobenzene	2.0
D037	87-86-5	Pentachlorophenol	100.0
D038	110-86-1	Pyridine	5.0*
D010	7782-49-2	Selenium	1.0
D011	7440-22-4	Silver	5.0
D039	127-18-4	Tetrachloroethylene	0.7
D015	8001-35-2	Toxaphene (C ₁₀ H ₁₀ C1 ₈ , Technical chlorinated camphene, 67-69 percent chlorine)	0.5
D040	79-01-6	Trichloroethylene	0.5
D041	95-95-4	2,4,5-Trichlorophenol	400.0
D042	88-06-2	2,4,6-Trichlorophenol	2.0
D017	93-72-1	2,4,5 TP Silvex (2,4,5-Tri- chlorophenoxypropionic acid)	1.0
D043	75-01-4	Vinyl chloride	0.2

A good starting point to determine whether a material has one of the four hazardous characteristics discussed above is the material's Material Safety Data Sheet (MSDS). An MSDS, however, is written for the unused material, and so consideration must be given as to how the material changes through use.

C. Listed Wastes §4.6

Listed wastes are wastes that have been named or described by EPA and DNRE on lists of wastes included in the regulations. See [R 299.9213](#). Listed wastes are assigned four-character waste codes that identify the waste for labeling, recordkeeping, and other purposes. For example, "still bottoms from the distillation of benzyl chloride" are designated as "K015." Spent methylene chloride is "F002." [R 299.9222](#) and [R 299.9220](#). Listed waste codes start with one of four letters: F, K, P or U. F-listed wastes describe wastes from non-specific sources, i.e., almost any industry can generate them. Spent solvents from cleaning operations are the most common F-listed wastes (F001–F005). K-listed wastes result from specific production processes, for example, bottom sediment from wood preserving operations (K001) or ammonia still lime sludge from coking operations (K060). P and U-listed wastes refer to pure, undiluted and unused commercial chemical products. For example, a drum of unused acetone being disposed because it is slightly off-specification or because it is simply no longer needed is designated U002. [R 299.9225](#). To be a P or U-listed waste, the chemical listed must be pure, undiluted, or be the sole active ingredient in the material (chemical mixtures are never P or U-listed wastes).

D. Exemptions

1. Exemptions from the Definition of “Waste” §4.7

Michigan regulations expressly list a number of materials that are not “wastes” and therefore are not regulated under Part 111. [R 299.9204\(1\)](#). This list should always be consulted as a starting point. Some of the more common exemptions include:

- Domestic sewage and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment.
- Industrial wastewater point source discharges regulated under the federal Clean Water Act (except for discharges into injection wells).
- “Excluded scrap metal” that is being recycled. Such exempt scrap metal typically includes turnings, cuttings, borings and punchings from metal fabricating processes, as well as any other metal that has been separated out by metal type for commercial recycling.

Other common exemptions from the meaning of “waste” are discussed in [§ 4.8](#) through [§ 4.12](#).

a. Products and Coproducts §4.8

A legitimate “product” or “coproduct” of a production process is not a “waste” subject to regulation. Determining what is the intended “product” of a production process is typically simple — it is the intended result of the production process that is either sold or used as a raw material or intermediate material in other processes. Determining whether something is a legitimate secondary or “coproduct” of a production process, however, is less straightforward.

Neither EPA nor DNRE define “coproduct.” Rather, “by-product” is defined as something other than a coproduct. [40 CFR 261.1\(c\)\(3\)](#); [R 299.9101\(bb\)](#). In its preamble to the rule revising the definition of solid waste, EPA described a coproduct as “a material produced for use by the general public and suitable for end use essentially as-is.” Hazardous Waste Management System; Definition of Solid Waste, [50 Fed Reg 614](#) (January 4, 1985). Further, such materials are “produced intentionally” and “are ordinarily used as commodities in trade by the general public.” *Id.* In a 1993 letter, EPA pointed out that whether a fuel component is a coproduct versus a by-product depends on several factors, including:

whether the material constitutes a separate production stream, whether it is fit for end use essentially as is or must undergo substantial additional processing prior to use, whether it is residual in nature or a highly processed material intentionally produced for sale to the public, whether a legitimate market exists for the material, etc.

Letter from EPA to Susan S. Ferguson (November 3, 1993). Overall, several factors may be relevant when determining whether a material is a legitimate “coproduct,” including whether such materials (a) are handled and managed similarly to other products, (b) are ordinarily used as commodities in trade by the general public, (c) are fit for end use essentially as is, (d) are

produced intentionally and are a separate production stream, (e) contain toxic impurities not typically found in virgin product, (f) meet product specifications and quality control procedures before being sold, and (g) when reused, whether such materials replace the same (albeit virgin) material.

b. Reclaimed and Beneficially Reused §4.9

As set forth in Michigan's regulations: "Materials that are reclaimed from wastes and that are used beneficially are not wastes and hence are not hazardous wastes . . . unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal."¹ [R 299.9203\(3\)](#); see also [40 CFR 261.3\(c\)\(2\)](#). In addition, "[t]he recycling process itself is exempt from regulation, except as provided in subdivision (d) of this subrule."² [R 299.9206\(1\)](#); see also [40 CFR 261.6\(c\)\(1\)](#). For example, waste solvents that are immediately distilled and beneficially reused are not considered wastes upon exiting the distillation equipment.

c. Reuse without Reclamation §4.10

"Materials" that are "used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed" or are "used or reused as effective substitutes for commercial products" are exempt, the reason being that these materials are more product-like than waste-like. [R 299.9202\(3\)](#). As in [§ 4.9](#), the exemption does not apply to use as fuel or use constituting disposal. [R 299.9202\(4\)](#); see also [40 CFR 261.2\(e\)](#). The language of the exemption itself, as well as some EPA guidance documents, limits this exemption to situations in which the material is "not being reclaimed". US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (May 1992). Although somewhat unclear, other EPA guidance states that materials may be reclaimed, but, in such a case, the exemption does not attach until *after* the reclamation process is complete. [Letter from EPA to T.L. Nebrich, Jr. \(March 30, 1994\)](#). Due to conflicting interpretations regarding whether reclamation is allowed, this exemption should be used with caution when materials need to be reclaimed before they are reused, or an agency interpretation obtained before relying on the exemption.

d. Closed Loop without Reclamation §4.11

There are three exemptions commonly referred to as "closed loop": the first does not involve reclamation, the second does, and the third is a variance that DNRE can grant on a case-by-case basis.³ The closed loop exemption without reclamation states:

- (1) Materials are not solid wastes when they can be shown to be recycled by being: . . . (iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials

[40 CFR 261.2\(e\)\(1\)\(iii\)](#). This relatively straightforward exemption covers materials that are reused over and over again without any treatment or reclamation, for example, recirculating coolant.

e. Closed Loop with Reclamation §4.12

Perhaps the most important “reclamation” exemption is the “closed loop with reclamation” exemption. This exemption allows spent or secondary materials to be cleaned up and returned to the production process without being regulated as wastes. Specifically:

The following materials are not wastes . . . (h) Secondary materials that are reclaimed and returned to the original production process or processes in which they were generated and where they are reused in the production process, if all of the following provisions apply: (i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance. (ii) The reclamation does not involve controlled flame combustion, such as occurs in boilers, industrial furnaces, or incinerators. (iii) The secondary materials are not accumulated in such tanks for more than 12 months without being reclaimed. (iv) The reclaimed material is not used to produce a fuel and is not used to produce products that are used in a manner that constitutes disposal.

[R 299.9204](#)(1); see also [40 CFR 261.4](#)(a)(8). EPA has justified this exemption based on the reasoning that “these types of operations are best viewed as part of the production process, not as a distinct waste management operation.” Hazardous Waste Management System; Standards for Hazardous Waste Storage and Tank Treatment Systems, [51 Fed Reg 25422](#), 25,441 (July 14, 1986) (Tank Rule). The exemption has also helped promote the in-house recycling and reuse of numerous production fluids, including solvents, rinse waters, oils, carriers and other chemical solutions, in a relatively safe (closed) fashion, to the benefit of the environment.

Two issues often combine, however, to negate the applicability of the exemption. The first is whether the system is truly “closed.” The second is whether the materials are returned to the original production process.

On the first issue, EPA has provided mixed guidance, sometimes in the same document. On one hand, the regulations clearly require only that the system be closed or piped “through completion of reclamation.” On the other hand, EPA appears to require at times that the entire loop be closed from the point of generation to the point of return to the production process (which in fact describes most closed loop systems).⁴ For example, in the 1986 preamble promulgating the exemption, EPA noted:

The decisive factors here, in the Agency’s view, [include] the closed nature of the process (hard connections from point of generation *to point of return to the original process*), [and the] integral relationship of the reclamation steps to production processes

Tank Rule, 51 Fed Reg at 25,443 (emphasis added). Although made in a somewhat general context, this statement supports the proposition that the entire “loop” must be closed from beginning to end. A few years later, EPA quoted this same statement to support its conclusion that secondary materials trucked to a recycling site could not qualify for the closed loop exemption. Memorandum from EPA to David Ullrich (September 12, 1989). Note, however, that EPA was dealing with a situation where the “gap” in the loop (i.e., the truck) came before reclamation, not after. Nonetheless, EPA did not focus on the distinction. In [US ENVTL PROT AGENCY, RCRA ORIENTATION MANUAL III-11 \(2003\)](#), however, EPA describes the closed-loop exemption as excluding “spent materials that are reclaimed and *returned to the original process in an enclosed system of pipes and tanks*” provided that “the entire process, *through reclamation*, is closed to the air (i.e., enclosed)” (emphasis added). These two requirements appear to be at odds.

On the second issue, closely related to whether the process is “closed” is whether the material is “returned to the original production process.” Generally, the “original production process” refers to the production process that generated the waste, but there is some room to interpret the requirement broadly. Cf [Letter from US Env'tl Prot Agency to Mr. Verrill Norwood, Jr. \(October 29, 1985\)](#). In the 1986 rule promulgating the exemption, EPA noted:

To be considered as being ‘returned to the original process,’ the reclaimed material need not be returned to the same unit operation from which it was generated, but only to the same part of the process. In addition, if the same material is reused in a number of production operations at an integrated plant, and the secondary material is reclaimed in a common reclamation operation, the reclaimed material can be returned to any process which originally used the material

By production process, the Agency intends to include those activities that tie directly into the manufacturing operation or those activities that are the primary operation at an establishment

Tank Rule, 51 Fed Reg at 25,442. In a guidance letter, EPA noted that “production process” entailed “those activities that tie directly into the manufacturing operation or those activities that are primary to the operation of an establishment. It does not include ancillary or secondary activities that are carried out as part of the total activities.” [Memorandum from US Env'tl Prot Agency to Mr. Robert L. Duprey \(November 28, 1986\)](#).

While the material need not be reused in exactly the same way as its original use, EPA has made clear that ancillary uses will not qualify for the exemption:

The material that is returned after having been reclaimed can be reused as a feedstock, as a purifying agent to remove contaminants from feedstock, and can also be used for other purposes, including as a reaction medium to dissolve or suspend chemicals, or as a reactant to facilitate chemical reactions.

Tank Rule, 51 Fed Reg at 25,442. But in response to a comment that EPA's definition would exclude solvents used for dry cleaning or equipment cleaning purposes, EPA stated:

EPA believes that solvents returned for use as cleaning agents in dry cleaning operations will be considered to be reused in the production process (as described earlier) since they are used as the basic raw material in the process (in this case, cleaning). On the other hand, materials used to clean equipment (for example, solvents returned and reused as degreasers) are not normally considered to be reused in a production process. The solvents do not contribute directly to the production process, but rather perform an ancillary function of cleaning.

Id. Finally, it appears that 100% of the reclaimed material must be reused for the exemption to apply. In 1997, EPA considered whether a system that recovered spent ethyl acetate and xylene qualified for the closed-loop exemption. Due to production constraints, only 80% of the xylene recovered was reused on site — the remaining 20% was sold for use off-site. EPA reasoned that because less than “100% of the product that is recovered⁵ is returned to the original process,” the exemption did not apply. [Letter from US Env'tl Prot Agency to Mr. Mitchell L. Press \(June 3, 1997\)](#). Accordingly, a business that wishes to rely on this exemption should ensure that all of the material recovered is reused.

2. Exemptions from the Definition of “Hazardous Waste”: High Volume Low Toxicity Wastes §4.13

Rule [299.9204](#)(2) contains a long list of materials that, while “wastes,” are not “hazardous wastes” and therefore are not regulated by Part 111. This list should be consulted when determining whether a particular material is regulated.

Perhaps the most important materials on this list are various high-volume, relatively low toxicity wastes associated with (i) mining and mineral processing, (ii) cement manufacturing, (iii) fossil fuel combustion, and (iv) oil and gas exploration. The first three categories are sometimes referred to as the “[Bevill](#)” exempt wastes and the fourth as the “[Bentson](#)” exempt wastes, in reference to Congressmen who helped pass the exemptions.

Specifically, [Rule 299.9204](#) exempts the following materials:

(2) The following wastes are not hazardous wastes for the purposes of Part 111 of the act and these rules:

(c) Mining overburden that is returned to the mine site.

(d) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste that is generated primarily from the combustion of coal or other fossil fuel

(e) Drilling fluids, produced waters, and other wastes that are associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy. . . .

(h) Waste from the extraction, beneficiation, and processing of ores and minerals, including coal, phosphate rock, and overburden from the mining of uranium ore

(j) Cement kiln dust waste

Generally, only the primary wastes generated by these activities are covered by the exemptions. Under current EPA guidance, EPA holds that waste from “ancillary” operations are not covered by the Bevill exemption because such wastes are not “uniquely associated” with exempt activities; for example, the wastes are not “‘from’ mining or mineral processing.” Land Disposal Restrictions Phase IV, [63 Fed Reg 28555](#), 28,578 (May 26, 1998). According to EPA:

One must consider the extent to which the waste originates or derives from processes that serve to remove mineral values from the ground, concentrate or otherwise enhance their characteristics or remove impurities, and the extent to which the mineral recovery process imparts its chemical characteristics to the waste.

Id. at 22,578–79. DNRE has adopted this “uniquely associated” approach. See, e.g., [Letter from EPA to Jim Sygo \(DEQ\) \(May 11, 1994\)](#). In this 1994 letter to the former DEQ (now DNRE), EPA expounded in regard to mining wastes:

The key consideration for establishing that a waste is uniquely associated is determining whether or not the waste originates primarily from, or, at the least, is significantly influenced by contact with ores, minerals, or beneficiated ores and minerals.

* * *

Even wastes that may come into contact with parts of the mineral feed stream, e.g., cleaning wastes, are not uniquely associated, because their fundamental character does not arise from such contact.

Id. This logic would seem to apply to gas, oil, or geothermal drilling and exploration-exempt wastes as well. Laboratory and shop wastes are not Bevill exempt, even if generated at a mine or exploration site, because such wastes are associated with any number of industrial activities, not just mining, and therefore are deemed to be “ancillary” by EPA. [63 Fed Reg at 28,592–93](#) (maintenance shop wastes and laboratory wastes are not exempt). See US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (November 1999) (laboratory wastes are not exempt); Memorandum from EPA to Carol Rustin (March 19, 1999) (laboratory wastes are not exempt).

3. Manufacturing Process Unit and Related Exemptions §4.14

EPA and DNRE have exempted from most hazardous waste requirements wastes generated in product or raw material storage tanks and pipelines, manufacturing process units (MPUs) and non-waste-treatment-manufacturing units (NTMUs). Generally, this exemption applies until the material “exits the unit”:

A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under parts 262 through 265 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.

[40 CFR 261.4\(c\)](#). This exemption makes sense, because it would be impossible to comply with hazardous waste “storage” requirements (see [§ 4.21](#)), for example, for wastes that are still moving about in process equipment.

According to EPA, MPUs are typically “tank-like” devices associated with production processes that are designed to hold valuable raw materials and therefore are “capable of holding, and are typically operated to hold, the hazardous wastes which are generated in them, until the wastes are purposefully removed.” Hazardous Waste Management System; General and Identification and Listing of Hazardous Waste, 45 Fed Reg 72,025 (October 30, 1980). Thus, according to EPA, hazardous wastes in such devices present less risk of a release:

these hazardous wastes are contained against release into the environment (except, of course, when abnormal circumstances such as a fire or explosion occur) and the risks they pose to human health or the environment are very low and are only incidental to the risks posed by the valuable product or raw material with which they are associated.

Id. Therefore, there is less need for regulation of MPUs. *Id.* Examples of MPUs provided by EPA include distillation columns, flotation units, and discharge trays. *Id.* Comparably, NTMUs are systems that manage or treat non-wastes — cooling towers are one example provided by EPA. *Id.* EPA has determined that hazardous wastes are not regulated until they are removed from MPUs and NTMUs. [Letter from US Evtl Prot Agency to Mr. Jack H. Goldman \(March 8, 1995\)](#).

A key defining characteristic of MPUs and NTMUs is that the units are connected to, and manage or treat, production process streams, not waste streams. EPA makes this apparent and important distinction in the hazardous waste Subpart BB final rule preamble:

Under [40 CFR 261.4\(c\)](#), hazardous wastes that are generated in process-related equipment such as product or raw material storage tanks or pipelines are exempt from RCRA regulation. This exemption applies until the waste is physically removed from the unit in which it was generated . . . This exemption is not affected by this rule [i.e., Subpart BB]. Therefore, units such as product (not hazardous waste) distillation columns generating hazardous waste still bottoms containing organics are not subject to the standard while the wastes are in the product distillation column. However, distillation columns that receive hazardous wastes and that are used in hazardous waste treatment (i.e., hazardous waste management units) are subject to this standard

Hazardous Waste Treatment, Storage and Disposal Facilities—Organic Air Emission Standards for Process Vents and Equipment Leaks, 55 Fed Reg at 25,454, 25,467 (June 21, 1990). The process unit exemption also exempts from regulation a “product or raw material pipeline,” although there is little helpful guidance shedding light on the scope of this exemption. EPA added the phrase to the MPU exemption after numerous parties pointed out that major pipeline systems are used throughout the United States to transport crude oil, chemicals and other valuable raw materials and products. Hazardous Waste Management System; Identification and Listing of Hazardous Waste, 45 Fed Reg 80,286 (December 4, 1980). According to EPA, “[p]ipelines, like product storage tanks, are designed and operated in a manner to hold the material and to prevent releases to the environment,” and therefore adding the exemption made sense. *Id.*

4. Use Constituting Disposal §4.15

A number of the reuse exemptions discussed in [§ 4.9](#) and [§ 4.10](#) do not apply to materials that are “used in a manner constituting disposal, or used to produce products that are applied to the land.” [40 CFR 261.2\(e\)\(2\)](#); [R 299.9202\(4\)](#). EPA guidance documents, federal register regulatory preambles, and state and federal case law provide little helpful guidance concerning the meaning of “use constituting disposal” or “applied to the land.” As background, the restriction stems from concerns that many reuse practices involving land disposal are “virtually the equivalent of unsupervised land disposal, a situation RCRA is designed to prevent.” Hazardous Waste Management System: General, 48 Fed Reg 14,472, 14,484 (April 4, 1983). The restriction grew from a few high-profile and very damaging waste disposal cases, particularly the use of distillation bottoms containing dioxin as a dust suppressant in Times Beach, Missouri. Land Disposal Restrictions for First Third Scheduled Waste, 53 Fed Reg 31,138 (August 17, 1988).

Although EPA will often refer to the practice as placing wastes “*directly* on the ground,” *id.* (emphasis added), it is clear that indirect placement may also be restricted. Examples of the types of practices prohibited include incorporating wastes into dust suppressants, fertilizers, asphalt, concrete, fill materials, road base materials, top grade road materials, landscaping timbers, fence posts, railroad ties, and well solvent. At least some juxtaposition with the ground appears to be required. For example, use of materials as “roofing granules” is not use

constituting disposal, even though such materials are obviously exposed to the weather. [Letter from US Evtl Prot Agency to Mr. William Guerry \(December 1, 1992\)](#). In any case, practitioners should be wary and should exercise caution whenever a situation presents itself in which reclaimed waste materials will be used in such a way that exposure to the environment is possible.

5. Potential New Rule Defining Solid Waste §4.16

Many of the exemptions and issues discussed in [§ 4.7](#) through [§ 4.15](#) may eventually become moot. In October 2008, EPA published a final rule revising the definition of solid waste to exclude materials from regulation that are generated and legitimately reclaimed under the control of the generator, or that are generated and transferred to another company for reclamation under specific conditions. Revisions to the Definition of Solid Waste, [73 Fed Reg 64668](#) (October 30, 2008). At the time this chapter was written, however, the new rule had not yet been adopted by DNRE (and, accordingly, is not effective in Michigan), and was subject to several court challenges at the federal level. If the rule survives the judicial challenges, it is expected that DNRE will adopt the new rule, which will significantly simplify and encourage waste recycling in Michigan.

6. Mixture, Derived-From and Contained-In Rules §4.17

Complicating the identification of “hazardous wastes” is that fact that hazardous wastes are not limited to the particular hazardous wastes themselves, but can also include mixtures of hazardous waste with other materials or the residues from the handling of hazardous waste.

For example, per the “mixture rule,” when solid wastes are mixed with hazardous wastes, the resulting mixture is often a hazardous waste. The purpose of the mixture rule is to discourage waste dilution as a form of waste treatment. When a listed hazardous waste is mixed with a solid waste, the resulting mixture is a listed hazardous waste, except in very limited circumstances.⁶ When a characteristic hazardous waste is mixed with a solid waste, however, the resulting mixture is hazardous only if it exhibits a characteristic. Rule [299.9203\(1\)](#).

A unique area of complication arises in regard to some of the Bevill exempt wastes discussed in [§ 4.13](#). The Bevill exemption has its own unique mixture rule:

(2) The following wastes are not hazardous wastes for the purposes of part 111 of the act and these rules:

* * *

(i) Mixtures of a waste that is excluded from regulation pursuant to the provisions of subdivision (h)⁷ of this subrule and any other waste that exhibits a hazardous waste characteristic pursuant to the provisions of [R 299.9212](#) and that is not listed pursuant to the provisions of [R 299.9213](#) or [R 299.9214](#), such that the resultant mixture does not exhibit any hazardous waste characteristic that

would have been exhibited by the non-excluded waste alone if the mixture had not occurred.

[R 299.9204](#)(2)(i). This rule is difficult to decipher, but the following examples are illustrative:

Characteristically hazardous waste due to <i>chromium</i> content	+	Bevill exempt waste (otherwise characteristically hazardous for <i>lead</i>)	=	If mixture is characteristically toxic for chromium, the mixture is hazardous. If only characteristically toxic for lead, the mixture is non-hazardous.
Characteristically hazardous waste due to <i>chromium</i> content	+	Bevill exempt waste (otherwise characteristically hazardous for <i>chromium</i>)	=	If the mixture is characteristically toxic for chromium, then the mixture is hazardous.
Characteristically hazardous waste due to <i>chromium</i> content	+	Bevill exempt waste (otherwise characteristically hazardous for <i>lead and chromium</i>)	=	If mixture is characteristically toxic for chromium, the mixture is hazardous. If only characteristically toxic for lead, the mixture is non-hazardous.
Listed hazardous waste	+	Bevill exempt waste (otherwise characteristically hazardous for <i>lead</i>)	=	This mixture will almost always be hazardous waste.

As the table illustrates, mixing even small amounts of non-exempt hazardous wastes with similar Bevill-exempt wastes risks nullifying the exemption.

An important consideration in applying the mixture rule is that it applies only when hazardous waste is mixed with *solid waste*. It does not apply when hazardous waste is mixed with other non-waste media, such as soil or groundwater. In such a case, the “contained in” rule applies. The “contained-in” policy is an interpretation, first articulated in the 1980s, of the rule that “a hazardous waste will remain a hazardous waste” See e.g., [R 299.9203](#)(3). Although never promulgated as law, the contained-in policy was upheld at the federal level in *Chem Waste Mgt v Environmental Protection Agency*, [276 US App DC 207](#); 869 F2d 1526 (1989). The Sixth Circuit (which includes Michigan) has not yet ruled on the policy’s validity. According to EPA and DNRE’s interpretation of the rule, soil that contains characteristic hazardous waste due to a spill is hazardous waste only if it exhibits a characteristic of hazardous waste. Soil that contains a listed hazardous waste, however, is itself a listed hazardous waste unless the generator can show that all contaminants are below Michigan’s former “Type B” cleanup criteria,⁸ which generally denote soils that are safe for any use.

EPA recognizes that knowing the source of contamination is often necessary to determine whether the media contains listed hazardous waste. Realizing this determination is often difficult or impossible to make, in 1998 EPA clarified the standard for determining when contamination is caused by listed waste, and established a presumption in favor of non-listed status:

Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste and, therefore, provided the material in question does not exhibit a characteristic of hazardous waste, RCRA requirements do not apply.

Memorandum from US Env'tl Prot Agency on Management of Remediation Waste under RCRA to RCRA Senior Policy Managers (October 1998). Therefore, if the evidence is inconclusive, the waste may be presumed to be non-listed. DNRE uses this standard.

Finally, any waste, including treatment sludge or residue, generated or "derived from" the treatment, storage, or disposal of a hazardous waste, is, as a general rule, itself a hazardous waste. [R 299.9203](#)(3). For example, a still bottom or sludge that results from the recycling of a hazardous waste solvent will generally carry the same waste code as that solvent. Waste derived from a characteristic waste, however, is a hazardous waste only if it exhibits a characteristic. Waste derived from the treatment, storage or disposal of listed waste, however, is almost always listed, unless the original listing is based solely on the ignitable, corrosive, or reactive nature of the waste (this applies most typically to F003 waste).

A corollary rule favorably applies to exempt wastes. Generally, any waste, including sludge or residue, generated or derived from the treatment, storage, or disposal of an *exempt* waste, is itself an exempt waste. Therefore, a sludge generated through treatment of Bevill-exempt waste is itself exempt, even if the sludge qualifies as characteristically hazardous (so long as the characteristic came from the exempt waste). See, e.g., US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (February 1986) (quench water derived from contact with exempt coal ash is itself exempt); US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (February 1985) (caustic sludge derived from the treatment of Bevill-exempt mine drainage is itself exempt).

E. Universal Wastes §4.18

Universal wastes are common hazardous wastes that a generator can choose to manage in a less complex manner. Universal wastes include antifreeze, electric lamps (including fluorescent, sodium vapor, mercury vapor, neon and incandescent lamps), batteries, certain pesticides and pharmaceuticals, and certain devices containing mercury (including thermostats, switches, thermometers, manometers, barometers, and various medical devices). There are several advantages to managing wastes as universal wastes. When wastes are managed as universal wastes, the waste volume is not counted when determining hazardous waste generator status, hazardous waste manifests and land disposal restriction forms are not required for shipping universal wastes, labeling requirements are simpler, and materials can be stored for up to one year, which is significantly longer than the general 90 day period allowed for hazardous wastes. Overall, companies with universal wastes must meet the following requirements: ensure that there are no spills or releases of the material (e.g., provide a sufficient container for the material, keep it closed and store it in a safe place), label the container "Universal Waste" (and add a

description of the type of waste), use an approved waste handler to ship the material off-site, and keep records showing that the material has not been stored for more than one year (often by listing a start accumulation date on the container label). For more specific requirements, see [R 299.9228](#).

F. Used Oil §4.19

For hazardous waste purposes, “used oil” includes all synthetic oils and all oils refined from crude oil⁹ that, as a result of use, are contaminated by physical or chemical impurities. Like universal wastes, used oil that is properly managed is not counted as a “hazardous waste.” Used oil must be recycled — if it is not, then it must be managed as waste and, if appropriate, as hazardous waste if it is characteristically hazardous or meets a hazardous waste listing description (e.g., because it has been mixed, even inadvertently, with listed waste).

To discourage businesses from disposing of used solvents in their used oil, EPA and DNRE consider mixtures of used oil and halogenated solvents (e.g., trichloroethylene) a hazardous waste. Therefore, generators of used oil are required to determine whether their used oil has been inadvertently mixed with such solvents. Any used oil that contains greater than 1,000 parts per million (ppm) total halogens is presumed to be hazardous waste unless proven otherwise. Many used oil recyclers, as part of their service, run total halogen tests on any used oil that they pick up. The entity generating the used oil should keep a copy of such tests to prove that its used oil does not exceed the 1,000 ppm standard.

Otherwise, to meet used oil requirements under Part 111, a generator must:

- Recycle all used oil through a legitimate recycling company.
- Store all used oil in containers and tanks that are in good condition, without any leaks, structural damage, or deterioration. All such containers and tanks must be
 - closed (e.g., bung tightly in place) when not being filled or emptied,
 - clearly marked “Used Oil” at all times, and
 - stored in a way that is protected from weather, fire, physical damage, and vandals.
- Use a liquid industrial waste manifest for all shipments of used oil off-site.

Note also that any scrap metal that contains free-flowing used oil should be managed as “used oil.” Therefore, it is best to drain off oil from scrap metal so that the oil can be managed separately (and the scrap metal recycled).

IV. Requirements Applicable to Generators of Hazardous Waste

A. Waste Counting §4.20

Once a company or other entity determines that it generates or creates either a characteristic or a listed hazardous waste, the entity must “count” the waste to determine how much waste the entity generates in any given calendar month. This calculation will determine the size category of the generator and the corollary requirements applicable to the generator, with generally more requirements applying as more wastes are generated.

Hazardous wastes are counted at their “point of generation.” As a general rule, if a waste has not yet been “generated,” it is not regulated and need not be counted. In one document, EPA notes that the point of generation “is usually defined as the point at which a generator first determines that a material is no longer useful (or the point at which the generator decides to discard the material).” In the same document, though, EPA admits “[d]ue to the complicated nature of some hazardous waste generating systems, it can be difficult to determine the precise point at which a hazardous waste is generated.” [US ENVTL PROT AGENCY, LAND DISPOSAL RESTRICTIONS: SUMMARY OF REQUIREMENTS 8-1 \(August 2001\)](#). Examples provided by EPA include when process equipment is cleaned (generating a wastewater), when waste is removed from pollution control equipment, and when paint or solvent is discharged from a paint spray gun into a collection funnel. [Letter from US Env'tl Prot Agency to Mr. John Albert Slaughter, Jr. \(December 30, 1986\)](#); [Letter from US Env'tl Prot Agency to Mr. James A. Lively \(October 19, 1995\)](#); Memorandum from US Env'tl Prot Agency to RCRA Senior Policy Advisors, Regions I–X. Further, EPA generally places the point of generation somewhere before the waste commingles with other materials, which could change the characteristics of the waste. See [Memorandum from EPA to Stephanie Wallace \(July 31, 1991\)](#).

As noted in [§ 4.15](#), due to spills and other unintentional releases, soil and groundwater can be hazardous waste. Because such media in their natural state are obviously not “waste” (even if contaminated) and therefore cannot be “hazardous waste,” a special “point of generation” rule applies. Such natural media are “generated” only when they are “actively managed” — typically, by being excavated or pumped from the ground. Therefore, the “point of generation” is the excavation or pumping activity. On the other hand, managing such contamination “in place,” for example, by installing an air sparging system to treat contaminated groundwater, does not qualify as “active management” or the generation or treatment of hazardous waste.

B. Generator Size Categories §4.21

All facilities generating hazardous waste are divided into three size categories for regulatory purposes: conditionally exempt small quantity generators (CESQGs), small quantity generators (SQGs), and large quantity generators (LQGs).

CESQG	SQG	LQG
Generates less than 100 kg (220 lbs) of hazardous waste per month	Generates more than 100 kg (220 lbs) but less than 1000 kg (2,200 lbs) of hazardous waste per month	Generates over 1000 kg (2,200 lbs) of hazardous waste per month

For perspective, twenty-six gallons of water (about half a drum) weighs about 100 kilograms; 1000 kilograms is equivalent to about five drums of water. Generators make a common mistake by counting the amount of waste shipped off-site in a month instead of the amount of waste generated per month.

Because the amount of waste generated from one month to the next will vary, generators may find themselves regulated as a different category each month. In such a case, a generator may want to comply with the highest applicable category for every month, instead of trying to switch from one set of requirements to the next. Alternatively, the generator should investigate ways to average out or reduce waste generation in every month so that it can always qualify for the lower applicable category.

1. Large Quantity Generators §4.22

Large quantity generators are subject to the most requirements.

a. Storage and Labeling §4.23

Once a generator has properly identified the hazardous waste generated on site and has determined that LQG requirements apply, the first task is to ensure that all hazardous wastes are properly stored. An LQG may store hazardous waste on site for only 90 days. Storage is typically done in containers (i.e., a portable storage device, such as a drum) or tanks (a fixed-in-place storage device). All containers or tanks must be protected, as appropriate, from weather, fire, physical damage and vandals. Therefore, it is generally not acceptable to leave hazardous waste drums outside in unfenced and open areas. Sufficient aisle space must be provided between containers and tanks to allow access to inspect the storage area as well as respond to emergency spills.

i. Containers §4.24

For containers, the following requirements apply:

- All containers of hazardous waste must be marked “Hazardous Waste” and be clearly labeled with the date that accumulation began and the waste’s hazardous waste number (e.g., D001, F003, etc.).
- The generator must provide secondary containment (curbing, sloping floors, etc.) to contain potential spills, with a volume equal to the greater of 10% of the hazardous waste volume stored in the area, or 100% of the largest container in that area.
- All containers must be kept closed except when necessary to add or remove waste.
- All containers must be in good condition and not leaking. LQGs must verify that containers are not leaking, bulging, rusting, damaged or dented.
- All containers must be compatible with the wastes stored in them. Therefore, for example, LQGs should verify that strong caustics and acids are not stored in metal drums (without liners).
- Containers must be inspected weekly, with written documentation of such inspections.
- All containers holding ignitable (D001) or reactive (D003) wastes must be located at least 50 feet from the facility’s property line.

See generally [R 299.9306](#); [40 CFR 262.34\(a\)\(1\)](#) and [40 CFR 265.170](#) *et seq.*

ii. Tanks §4.25

The requirements for tanks mirror those for containers, except for these differences:

- All tanks of hazardous waste must be marked “Hazardous Waste.”
- The generator must provide secondary containment for all hazardous waste tanks holding liquids, consisting of either a liner, vault, or double tank:
 - for a liner, verify that the liner will hold 100% of the tank’s capacity and that the liner does not show any cracks or gaps,
 - for a vault, verify that the vault will hold 100% of the tank’s capacity and that the vault is impermeable with water stops at any joints, and
 - for double tanks, verify that the tank has a leak detection system capable of detecting a leak within 24 hours.
- All threaded connections (i.e., not welded, plastic heat fused, etc.) associated with tank ancillary equipment must also have secondary containment (e.g., a trench, jacketing, double walled pipes, etc.).
- The generator must have a written tank assessment conducted and certified by an independent and certified engineer stating that the tanks have sufficient structural integrity and are acceptable for the type of waste being stored/treated.
- All hazardous waste tanks must have overfill protection equipment, such as level sensing devices or automatic feed shut-off valves.
- Any leaks into secondary containment devices must be drained or cleaned up within 24 hours, or as soon as possible (apparently, that includes more than 24 hours later)
- All tanks and overfill protection equipment must be inspected daily, evidenced by written documentation.

See generally [R 299.9306](#); [40 CFR 262.34\(a\)\(1\)](#) and [40 CFR 265.190](#) *et seq.*

iii. Satellite Accumulation §4.26

It is often impracticable for small amounts of hazardous waste to be delivered immediately into a tank or container meeting the requirements described in [§ 4.25](#) and [§ 4.26](#). For instance, an employee at a paint booth may generate a few ounces of spent solvent several times a day. It makes little sense to have the employee make several trips throughout the day to a hazardous waste container area. Recognizing this, EPA and DNRE both provide for the “satellite accumulation” of hazardous wastes in containers at or near the point of generation. Satellite accumulation allows a generator to accumulate small amounts of waste, up to fifty-five gallons total, at the place of generation without having to meet all storage requirements. Such a container must be marked “hazardous waste,” be in good condition, and must be kept closed except when waste is being added. It is also a good idea to mark the container “satellite accumulation” so that a government inspector will instantly understand the purpose of the container. Once any satellite accumulation container accumulates fifty-five gallons of hazardous waste, the container must then be marked with the date that the fifty-five gallon amount was first met, and must be removed to a waste storage area with secondary containment within three days of that date (at which point, all other waste storage requirements apply). [R 299.9306\(2\)](#); [40 CFR 262.34\(c\)](#).

b. Training and Contingency Planning §4.27

Large quantity generators must ensure that all employees that handle or are responsible for hazardous wastes are properly trained. New employees must be trained within six months of hire and all employees must receive annual refresher training. Such training must cover the proper management of the waste as well as effective responses to hazardous waste emergencies. The generator must keep a record showing the job title and description for each employee by name, a written description of the type and amount of both introductory and refresher training that will be given to each employee, and verification that each such employee has actually received the required training (e.g., provide a sign-in sheet). Training records must be kept for each employee for three years after the employee last worked at the facility. See generally [R 299.9306\(1\)\(d\)](#); [40 CFR 265.16](#).

Aside from general training, the LQG facility must be prepared for a hazardous waste spill or other emergency. In this regard, an “emergency coordinator” must be on premises or on-call at all times. More than one employee may share this position to ensure that someone is always available, although a “primary” coordinator should be designated. It is the emergency coordinator’s responsibility to direct activities in the case of an emergency. Employees must have quick access to the emergency coordinator’s contact information, which must be posted near a telephone accessible to employees, along with a description of the location of fire extinguishers and spill control materials, the location of fire alarms (if present), and the telephone number for the local fire department.

To assist the emergency coordinator, LQGs must have on hand at all times an up-to-date written “contingency plan” that describes actions to be taken in an emergency. The contingency plan must describe arrangements made with local police and fire departments, hospitals, and other relevant state or local coordinators; list the emergency coordinator’s name, address and telephone number; describe the location of emergency equipment on site;¹⁰ and set forth an evacuation plan (if evacuation could be necessary, depending on the types of wastes handled on site). The plan must be submitted to any emergency organization that could be called upon to assist, most typically the local fire department. If wastes on site pose a significant fire hazard, it is a good idea to invite the fire department for regular visits so that fire department staff stay familiar with the site and can develop appropriate response strategies.

Finally, whenever an incident requiring the implementation of the facility’s contingency plan occurs, the facility must record the details of the incident in its records and notify DNRE within 15 days. If there has been a release, fire, or explosion that could threaten human health or the environment outside the facility, the facility must immediately notify local, state and national emergency coordinators. See generally [R 299.9306\(1\)\(d\)](#); [40 CFR 265 Subpart D](#).

c. I.D. Numbers, Manifesting and Shipping, and Recordkeeping §4.28

LQGs must have a site-specific identification number for use on manifest forms and other records. An I.D. number is obtained by filing form EQP5150 with DNRE. This form is available on the DNRE’s website. I.D. numbers are location specific, not generator specific, and therefore the same number is often used to identify one property even through a succession of

different property owners or operators. Form EQP5150 is also used to notify DNRE regarding a change in ownership or a change in the generator's size category.

The LQG must use a waste transporter that is licensed to haul hazardous waste, and, if some portion of the waste is liquid, liquid industrial waste. A generator should inquire about the type and amount of insurance that the hauler carries, and should ask whether wastes are stored for long periods of time before being delivered to the ultimate disposal facility. Overall, the generator should seek a level of comfort that the transporter is and will take precautions to insure that a spill or other accident will not occur.

When shipping hazardous wastes off-site, a LQG must use a paper manifest to track the shipment to the ultimate TSDF. Upon receipt by the TSDF, the manifest is signed by that facility and a copy is returned to the generator, which helps the generator verify that the shipment was actually delivered as intended. A copy of the manifest must be sent to DNRE within ten days after shipment. If the generator does not receive a TSDF-signed manifest within 45 days of shipment, the generator must send an exception report to DNRE. All manifest copies (including the signed version from the destination facility) and exception reports must be kept for three years after shipment. See generally [R 299.9304](#).

Shipments must be prepared in such a way as to meet Department of Transportation requirements including having DOT-approved shipment placards available for use by the transporter (although in practice, the placards are usually provided by the transporter). [R 299.9305](#).

LQGs are required to file "Biennial Reports" with the DNRE before March 1 of each even numbered year. These reports provide basic information regarding the types and amounts of hazardous waste generated. Copies of Biennial Reports must be kept for three years.

d. Land Disposal Restrictions (LDR) §4.29

Most hazardous wastes are now restricted from land disposal unless they meet treatment standards in the LDR regulations. [R 299.9311](#). Generally, the LDR regulations, which can be exceedingly complicated to apply in practice (and, therefore, a full discussion is beyond the scope of this Chapter), govern any hazardous wastes that will be land disposed in any way.¹¹ A generator of hazardous waste must determine whether the waste must be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards found at [40 CFR 268.40](#) and [40 CFR 268.48](#). Such a determination can be made in two ways: (1) through analytical testing or (2) by using knowledge of the waste. With the initial shipment of regulated hazardous waste to a TSDF, the generator must send a one-time notice stating that the waste does or does not meet LDR treatment standards. A copy of the notice must be kept in the generator's files and no further notice is needed until such time that the waste or the TSDF change. Note that special LDR requirements apply to hazardous waste soil and debris. See [R 299.9311](#); [40 CFR 268.7](#), [268.45](#), [268.49](#).

e. Hazardous Air Emission Standards §4.30

Although Part 111 is not an air quality law per se, air emissions from hazardous waste storage and handling equipment may be regulated through Part 111. These regulations are known as the Subpart AA, BB and CC regulations, which refer to the federal regulatory subparts adopted by reference by Michigan law. The regulations are found at [40 CFR 264 Subpart A](#) and [40 CFR 265.1030](#) (Subpart AA), and [40 CFR 265.1050](#) (Subpart BB), and [40 CFR 265.1080](#) (Subpart CC) and are adopted by reference by [Rule 299.11003\(2\)](#). Overall, the intent of the regulations is to avoid inadvertent leaks of volatile hazardous wastes to the air.

Subpart AA applies to hazardous waste handling equipment with process vents. Specifically, generators (a) with tanks or containers (b) that have process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations, and (c) that manage hazardous wastes with organic concentrations of at least 10 parts per million (by weight) are required to meet Subpart AA air emission standards. For generators, however, Subpart AA does not apply to recycling units exempt pursuant to [40 CFR 261.6\(c\)\(1\)](#), which exempts many recycling processes, or to equipment that is in compliance with certain Clean Air Act standards. Therefore, the practical application of Subpart AA to generators is limited, and the Subpart applies mainly to licensed TSDFs.

Subpart BB sets forth leak detection and air emissions standards for pumps, valves, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges, and other connectors associated with generator tanks or containers. To be covered by the regulations, the regulated devices must contain or contact hazardous wastes with organic concentrations above 10% by weight for at least 300 hours per calendar year. Subpart BB does not apply to recycling units exempt under [40 CFR 261.6\(c\)\(1\)](#), or to equipment that is in compliance with CAA fugitive emissions controls found in 40 CFR 60 (NSPS), 61 (NESHAPs), or 63. Among other requirements, equipment subject to Subpart BB must be marked as such, be inspected on a regular basis, and a first attempt at fixing any leaks must be made within five days of detection. See 40 CFR 264 and [40 CFR 265.1050](#) for additional detail.

The air emission requirements most applicable to generators are found in Subpart CC. Subpart CC applies to generator hazardous waste tanks or containers if the generator is unable to demonstrate that the hazardous waste stored in the unit contains average volatile organic concentrations less than 500 ppm. Subpart CC, however, does not apply to any of the following: (a) satellite accumulation containers, (b) containers smaller than 26 gallons, (c) units exempt from Part 111 licensing requirements (e.g., wastewater treatment units), (d) recycling units exempt under [40 CFR 261.6\(c\)\(1\)](#), and (e) tanks and containers operating with controls in compliance with Clean Air Act standards. Because determining volatile organic concentrations can be difficult,¹² it is often easier to comply with Subpart CC by using the necessary tank and container controls, which are usually not burdensome and generally consist of ensuring that all containers and tanks have tight fitting lids that do not allow emissions to escape. See 40 CFR 264 and [265.1080](#) for additional detail and requirements.

2. Small Quantity Generators §4.31

Small quantity generators (SQGs) of hazardous waste must meet many of the requirements applicable to large quantity generators, although such requirements are often simplified and written requirements reduced. Perhaps the greatest difference from LQGs is that SQGs may store waste on site for 180 days¹³ compared to the 90 days allowed LQGs. Although LQGs are not limited in the amount of hazardous waste stored on site, SQGs are limited to 6000 kg at any one time. Other differences include:

- While tanks and containers of waste still need to be inspected, SQGs do not need to keep written documentation of the inspections.
- Secondary containment for wastes is not required so long as the total amount of waste is less than 1000 kg.
- While a SQG must have a contingency plan, it need not be written or documented.
- Training may be informal and no written record is necessary.
- No biennial report is required for SQGs.
- Hazardous air emission standards (Subparts AA, BB and CC) do not apply to SQGs.

See generally [R 299.9303](#)–9307.

3. Conditionally Exempt Small Quantity Generators §4.32

In comparison to SQGs and LQGs, generators of less than 100 kg (220 lbs) of hazardous waste in any one month are classified as “conditionally exempt small quantity generators” (CESQGs) and are subject to relatively few regulatory requirements. Specifically, CESQGs are required to:

- Identify all wastes to determine if they are hazardous.
- Ensure that less than 100 kg (220 lbs) of hazardous waste is generated in any one month.
- Ensure that no more than 1000 kg (2200 lbs) of hazardous waste is accumulated on site at any one time.
- Store wastes in a manner that is protected from weather, fire, physical damage or vandals, and in such a way as to prevent the escape or release of waste to the environment.
- Verify that all hazardous waste goes to a licensed hazardous waste treatment, storage or disposal facility, a state licensed municipal land fill, or a facility that legitimately uses, reuses or recycles the waste.
- Maintain records showing that the facility is in fact a CESQG.

CESQGs do not have to use manifests to ship their wastes unless those wastes qualify as “liquid industrial wastes.” Nor do CESQGs need to have a hazardous waste contingency plan. The regulations applicable to CESQGs are found at [R 299.9205](#).

V. Licensed Treatment, Storage and Disposal Facilities, and Interim Status Facilities

A. Overview §4.33

An entity that wishes to store hazardous wastes for a period of time longer than that allowed generators, or that wishes to treat or dispose of hazardous waste on-site, must be licensed. Such facilities are known as “treatment, storage and disposal facilities” or “TSDFs,” and typically include large manufacturing complexes, landfills and incinerators. Generally speaking, the requirements applicable to generators apply to TSDFs, but TSDFs are required to meet additional requirements. TSDFs are relatively rare compared to generators, and the legal practice related to TSDF licensing is highly specialized. Therefore, this Chapter does not describe TSDF requirements, except for corrective action requirements (section VI below), which can apply to generators and property owners as well as licensed TSDFs. The licensing and regulatory requirements applicable to TSDFs are found in Parts 5, 6 and 7 of the rules, beginning at [R 299.9501](#). TSDF licenses are currently issued by DNRE, but EPA occasionally must also issue licenses to Michigan facilities to cover portions of the RCRA program that EPA has not yet authorized DNRE to manage. Therefore, it is not uncommon for a facility to have two TSDF licenses, one from EPA and one from DNRE. There are two categories of licenses in Michigan: construction permits and operating licenses, the intent being that an entity should apply first for a construction permit authorizing the construction of the TSDF, then, after completion of construction, governance switches to an operating license.

B. Interim Status Facilities §4.34

The so-called “interim status” facility is a facility that requires a TSDF license, but does not have one. Interim status facilities were much more prevalent when RCRA was first enacted, because many then-currently-operating facilities needed licenses, but it took several years for EPA and DNRE to issue them. Interim status requirements basically adopt and mimic licensed facility requirements, and are found at [R 299.9601\(2\)](#). Some facilities can be “accidental” interim status facilities, i.e., they are conducting operations that require a license, but have not applied for one.

VI. Corrective Action

A. Overview §4.35

Although RCRA and Part 111 focus on the proper management of hazardous waste, both laws contain requirements to investigate and cleanup contamination associated with waste management operations. These requirements are known as “corrective action.”

B. Applicability and General Requirements §4.36

Typically, corrective action applies to facilities that have or have had a RCRA or Part 111 TSDF license at some point in their history. EPA and DNRE usually take the position that once a facility formally applies for a TSDF license, the facility is subject to corrective action unless the application is formally withdrawn and such withdrawal is approved by the issuing agency. Interim status and “accidental” interim status facilities are also subject to corrective action. The

agencies also usually take the position that once a property is subject to corrective action, it is always subject to corrective action, regardless of a change in ownership or the cessation of waste management practices. Therefore, potential buyers of property must be especially cautious when considering the purchase of property that could have had, or that simply applied for, a TSDF license in the past, or that could have been covered by the interim status regulations.

Although corrective action at large facilities often entails multi-million dollar investigations and cleanups, the actual law and regulations guiding the corrective action process are surprisingly slight. Federal RCRA corrective action legal requirements are largely found in two statutory sections and two relatively short regulatory sections. For licensed TSDFs, RCRA provides:

Standards promulgated under this section shall require, and a permit issued after November 8, 1984, by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit

[42 USC 6924\(u\)](#).¹⁴ Additional statutory corrective action authority provides:

Notwithstanding any other provision of this chapter, upon receipt of evidence that the past or present handling, storage, treatment, transportation or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit . . . to order such person to take such other action as may be necessary

[42 USC 6973\(a\)](#). The RCRA regulatory sections are found at [40 CFR 264.100](#) and [40 CFR 264.101](#). Numerous guidance documents on EPA's website add detail to the legal framework. The primary guidance document for corrective action is an advance notice of proposed rulemaking published by EPA in 1996. See Corrective Action Releases from Solid Waste Management Units at Hazardous Waste Management Facilities, [61 Fed Reg 19432](#), 19,442 (proposed May 1, 1996). Although this document never led to an actual rulemaking setting forth a comprehensive corrective action program as intended, the long notice sets forth broad guidelines that are still used by EPA today.

Earlier in 1996, EPA delegated corrective action authority to DNRE for all facilities with TSDF licenses. Michigan Final Authorization of Revisions to State Hazardous Waste Management Program, [61 Fed Reg 4742](#) (February 8, 1996). Accordingly, most "corrective action" activities in Michigan currently fall under DNRE authority, and so Michigan facilities should focus on Michigan law and regulation.

Michigan defines "corrective action" as "an action determined by the department to be necessary to protect the public health, safety, or welfare, or the environment" [MCL 324.11102\(3\)](#). For licensed TSDFs, Michigan's corrective action authority is found in section [MCL 324.11115a\(1\)](#) and (2) of Part 111:

(1) Beginning on June 4, 1992, the owner or operator, or both, of a facility specified in this subsection is subject to corrective action

requirements specified in this part and the rules promulgated under this part for all releases of a contaminant from any waste management unit at the facility, regardless of when the contaminant may have been placed in or released from the waste management unit. This requirement applies to a facility for which the owner or operator, or both, is applying for or has been issued a license under this part.

[MCL 324.11115a](#)(1). If DNRE determines “on the basis of any information” that there has been a release of a “contaminant” from “any waste management unit at the facility,” DNRE may require corrective action, including “that corrective action be taken beyond the facility boundary if the release of a contaminant has or may have migrated or otherwise has or may have been emitted beyond the facility boundary.” [MCL 324.11115a](#)(2). Similar language for interim status facilities is found in sections [MCL 324.11115a](#)(3) and (4).

Two important terms in this requirement are “contaminant” and “waste management unit.” A “contaminant” is defined as:

- a. a hazardous waste as defined in [R 299.9203](#) of the Michigan administrative code; [and]
- b. any hazardous waste or hazardous waste constituent listed in appendix VIII of part 261 or appendix IX of part 264 of title 40 of the code of federal regulations.

[MCL 324.11102](#). The term “waste management unit” (WMU) is meant to be synonymous with “solid waste management unit” (SWMU) under federal law. See [R 299.9504](#)(20). EPA defines a SWMU as:

Any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

Corrective Action Releases from Solid Waste Management Units at Hazardous Waste Management Facilities, [61 Fed Reg 19432](#) , 19,442 (proposed May 1, 1996). Note that management of “hazardous waste” is not required; solid waste will do. This application of corrective action requirements to essentially non-hazardous waste sources has been approved by the courts. *Owen Electric Steel Co of South Carolina, Inc v Browner*, [37 F3d 146](#), 148 (4th Cir 1994); *American Iron & Steel Institute v Environmental Protection Agency*, [280 US App DC 373](#); 886 F2d 390 (1989) (holding that although Bevill-Bentson wastes are exempt from hazardous waste regulatory requirements, such wastes are subject to corrective action).

Like the federal corrective action program, Michigan’s Part 111 corrective action regulations are somewhat sparse, and are contained largely in one rule. See [R 299.9629](#). Therefore, it is not surprising that DNRE uses Part 201 cleanup processes to implement its Part 111 program (see [§ 4.37](#)). Among other things, Rule 629 requires that an owner or operator “conduct corrective action as necessary to protect the public health, safety, welfare, and the environment pursuant to

a corrective action program approved by the director.” [R 299.9629](#)(1). For contamination beyond the facility boundary:

Owners or operators shall implement corrective action beyond the facility boundary if the releases . . . have or may have migrated, or otherwise have or may have been emitted, beyond the facility boundary, unless the owner or operator demonstrates, to the satisfaction of the director, that, despite the owner’s or operator’s best efforts, the owner or operator is unable to obtain the necessary permissions to undertake such actions. The owner or operator shall not be relieved of all responsibility to clean up a release that has migrated or been emitted beyond the facility boundary where access is denied. On-site measures to address such releases shall be determined on a case-by-case basis.

[R 299.9629](#)(2).

C. The interplay between Part 111 and Part 201 of NREPA §4.37

Part 201 of NREPA is Michigan’s primary cleanup law. See Chapter 5. If applicable, however, Michigan’s Part 111 corrective action requirements generally take precedence. Michigan’s Part 201 exempts from Part 201 liability owners and operators subject to Part 111 corrective action requirements:

[T]he following persons are not liable under this part [201]:

The owner or operator of a hazardous waste treatment, storage, or disposal facility regulated pursuant to part 111 from which there is a release or threat of release solely from the treatment, storage, or disposal facility, or a waste management unit at the facility and the release or threat of release is subject to corrective action under part 111.

[MCL 324.20126](#)(4)(a). In turn, Part 111 states that “[c]orrective actions conducted under this part satisfy a person’s remedial action obligations under part 201” [MCL 324.11115b](#). Note, however, that the baseline environmental assessment process, “innocent purchaser,” or other defenses to liability under Part 201 (and similar defenses under the federal Comprehensive Environmental Response, Compensation, and Liability Act, [42 USC 9601](#) *et seq.*) do not provide protection from Part 111 liability.

The practical difference between Part 111 corrective action and Part 201 remediation is becoming less and less. The Part 111 corrective action rules have always referenced and required compliance with Part 201 standards. See, e.g., [R 299.9629](#)(3)(a)(ii) and (iii). Outside the regulations, in 1998, EPA Region V sent a letter to DNRE recognizing “the State’s intention to use the new Part 201 cleanup standards in the administration of the State’s hazardous waste management program, including the closure and corrective action portions” Letter from US Envntl Prot Agency to Mr. Jim Sygo, DNRE (June 5, 1998). This policy was confirmed and

broadened in November 2000, when EPA Region V and DNRE (then known as the MDEQ) entered into a Memorandum of Understanding (MOU) sanctioning the DNRE's use of Part 201 cleanup processes and criteria at corrective action sites:

Region V . . . has determined that the MDEQ's use of Part 201 clean-up standards and related processes . . . are an acceptable way of achieving the objectives of the authorized Part 111 [corrective action] program.

The MOU defines these "corrective action objectives" as requiring (a) facility-wide assessments that address all releases on and off-site of hazardous wastes or constituents into the environment from all solid waste management units and areas of concern, (b) remedies that are protective of public health and the environment, and (cd) meaningful opportunities for public involvement. The MOU specifically contemplates the use of Part 201 land-use based cleanups, restrictive covenants and institutional controls.

DNRE has been working toward full use of Part 201 processes and criteria (and terminology) for corrective action purposes, and TSDF licenses currently issued by the DNRE generally use Part 201 cleanup terminology in place of RCRA terminology.

D. The Corrective Action Process §4.38

EPA and DNRE take the position that they can undertake or require investigative activities at SWMUs and WMUs to determine whether there has been an impact necessitating corrective action. See *Nat'l Standard Co v Adamkus*, [881 F2d 352](#), 354 (7th Cir 1989) (upholding EPA's inspection and sampling power at SWMUs under [42 USC 6927\(a\)](#), with reference to the corrective action power at [42 USC 6924\(u\)](#)). For example, according to current EPA regulations, a TSDF license must cover the following issues for all SWMUs:

1. The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.
2. The owner or operator must conduct and provide results of sampling and analysis of groundwater, land surface, and subsurface strata, surface water, or air, which may include the installation of wells, where the Director ascertains it is necessary to complete a RCRA Facility Assessment that will determine if a more complete investigation is necessary.

[40 CFR 270.14\(d\)\(2\)](#) and (3).¹⁵If no releases of contaminants are discovered during the investigation stage, then no additional corrective action is necessary.

The RCRA/Part 111 corrective action process in the past typically followed the path set forth below. Now that DNRE is using Part 201 processes to implement corrective action, however, the processes and terminology in the second column are generally used instead. Overall, the process starts with investigation, moves to remedy design, and then to implementation of the remedy.

RCRA/Part 111

Part 201

preliminary assessment/visual
site inspection/facility assessment

preliminary assessment

RCRA facility investigation

remedial investigation

interim measures

interim responses

corrective measures study

feasibility study

corrective measures implementation

remedial action plan

completion

remedial action

Each of these steps can require significant time and expense. Complex sites can take several years or decades.

Case law interpreting corrective action requirements under RCRA sets forth some restrictions on the reach of corrective action requirements, however minimal. This case law supports the proposition that investigations must be tailored to site-specific conditions in order to “avoid imposing unnecessary or inappropriate burdens upon the permittee.” See *In the Matter of American Cyanamid Co (Kalamazoo, Mich)*, 3 EAD 657 (August 5, 1991). An owner or operator must also be shown to be connected to the contamination in question before imposing corrective action requirements. In *In the Matter of Amoco Oil Co*, [4 EAD 954](#) (November 23, 1993), EPA sought to require Amoco to investigate sediments in water bodies in the vicinity of Amoco’s facility, although, according to Amoco, there was no support for such a requirement. The court agreed with Amoco, noting that there was “no evidence in the record” that these water bodies “may have been affected by a release” and that the EPA had not “articulated a rationale for stating that these water bodies must be studied.” In *In re Caribe General Electric Products, Inc*, [8 EAD 696](#) (February 4, 2000), the court held that there must be a “sufficient nexus” showing that contamination has migrated from the facility to the area being investigated and that the contamination poses a threat to human health.

E. Corrective Action Completion §4.39

In February 2003, recognizing that some sort of finality in regard to the completion of corrective action obligations would “benefit the owner or operator, the community, and the regulatory agency,” EPA published final guidance designed to assist RCRA-authorized states in acknowledging completion of corrective action activities. Final Guidance on Completion of Corrective Action Activities at RCRA Facilities, [68 Fed Reg 8757](#) (February 25, 2003). According to EPA, the catalyst for corrective action requirements is “protection of human health and the environment,” and therefore a determination that corrective action is complete is basically a determination that appropriate protective standards have been achieved. *Id.*

While nothing in Part 111 requires that corrective action continue indefinitely, the regulations also do not provide a clear end-point to corrective action obligations. Therefore, DNRE has generally adopted EPA's completion guidance and has begun issuing "corrective action complete" letters to property owners and operators.

EPA's guidance provides for two types of corrective action complete determinations: "without controls" or "with controls." A determination "without controls" means that "no additional remedial activity would be required on the part of the regulatory agency or the owner or operator to maintain protection of human health and the environment Thus, the corrective action requirements can be eliminated," including financial assurance mechanisms and restrictions on transfer. 68 Fed Reg at 8762. A determination without controls is appropriate when there was no need for corrective action in the first place (e.g., uncontaminated property), or where the remedy was "implemented successfully." *Id.* at 8761–62. "With controls" means that while corrective action activities are no longer necessary, controls are needed to ensure that the remedy remains protective, for example, through institutional or engineering controls. *Id.* at 8758, 8762. Such a determination is appropriate where (a) a full set of corrective measures has been defined, (b) the facility has completed construction and installation, (c) site-specific media cleanup objectives have been met, and (d) all that remains is performance of required operation, maintenance, and monitoring activities or compliance with, and maintenance of, institutional controls. An "enforceable mechanism" (e.g., permit, order, etc.) must be in place to ensure compliance with any necessary controls. *Id.* at 8762.

Although the idea is to provide finality, DNRE generally adds "reopeners" to any completion letter for newly discovered contamination or similar matters.

VII. Enforcement

A. Overview §4.40

The enforcement provisions of Part 111 start are found beginning at [MCL 324.11144](#). Perhaps the most unusual enforcement-related requirement is found in subsection 11144(5), which requires that a "person who has knowledge that hazardous waste is being treated, disposed of, or stored in violation of this part shall notify the department." [MCL 324.11144\(5\)](#). This, arguably, places an affirmative duty on anyone (even lawyers) to report almost any violation, although, taken to its extreme, the requirement borders on absurd. It is doubtful that the legislature intended that every trivial violation be reported to the DNRE, for example, reporting that a hazardous waste label on one drum was not completely filled out (arguably a "storage" violation). Instead, the legislature likely intended some sort of reasonable threshold of significance before a report would be required — but maybe not. Practitioners should be wary of this requirement and its interface with the Code of Professional Responsibility.

B. Formal Enforcement §4.41

Formal enforcement under Part 111 is relatively rare. Typically, a matter will arise during a DNRE inspection and will be resolved relatively informally through subsequent correspondence between the DNRE and the facility involved.

The formal enforcement tools available to the DNRE and the attorney general are significant. The department has both the express ability to request information and inspect a facility, including the right to sample hazardous wastes. [MCL 324.11146](#). If an activity may present an “imminent and substantial hazard” or is “endangering or causing damage,” then the DNRE may issue an order requiring necessary corrective measures, initiate an administrative action to revoke the facility’s license, or may request the attorney general to commence a court action to obtain injunctive relief. [MCL 324.11148](#). The attorney general “or a person” may also commence a civil action for any violation of Part 111, a Part 111 license, or the administrative rules. The circuit court in such an action has the power to restrain the violation or impose up to \$25,000 in fines per violation per day, to be deposited in the state general fund.

Note that the EPA takes the position that it can “over-file” or seek enforcement against any entity when the state fails to act, invoking EPA’s underlying RCRA authority.

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Endnotes

¹ “Used in a manner constituting disposal” generally refers to applying the material directly to the land or used to produce a product that will be applied to the land, for example, as an ingredient in roadway asphalt. See § 4.12.

² This exception is important, otherwise, the recycling process could be deemed the “treatment” of hazardous waste, which could require a treatment license. Subdivision (d) applies the requirements of 40 CFR 265, Subparts AA (air emission standards for process vents) and BB (air emission standards for equipment leaks) if the unit is located at a facility that is an interim status facility or that is a licensed TSD. [R 299.9206\(1\)\(d\)](#). See § 4.30.

³ [Rule 299.9202\(6\)\(b\)](#) states:

(6) The director may determine, on a case-by-case basis, that the following recycled materials are not wastes: * * *

(b) Materials that are reclaimed and then reused within the original production process in which they are generated.

⁴ EPA clearly considers the typical “closed loop” system as being piped from beginning to end. When EPA proposed the closed loop exclusion, for example, EPA provided an example of solvent reclamation where the solvent, after being distilled, is “returned by pipe to the original unit process for reuse” Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 50 Fed Reg 51,264 (December 16, 1985). Other guidance documents provide examples of systems closed from beginning to end. See, e.g., US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (December 1988).

⁵ Note that under EPA’s analysis, not everything needs to be returned to the production process for the closed-loop exemption to apply — only the “product recovered” must be returned to the process. Therefore, the fact that still bottoms and other materials are not recovered and returned to the process does not defeat the exemption. Cf US ENVTL PROT AGENCY RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY (December 1988). Although in its 1997 letter EPA notes that not all “secondary materials” were being returned to the production process, this was probably not intended by EPA to be read too literally.

⁶ If the hazardous waste was listed solely because it exhibits the characteristic of ignitability, corrosivity, or reactivity, then the resulting mixture is hazardous only if it exhibits one of those characteristics. The most common such listed wastes are F003 solvents. Otherwise, this listing is a fairly rare occurrence.

⁷ “Waste from the extraction, beneficiation, and processing of ores and minerals, including coal, phosphate rock, and overburden from the mining of uranium ore” [R 299.9204\(2\)\(h\)](#).

⁸ The reason the old Type B criteria are used is because these were the cleanup criteria in effect when EPA approved this portion of Michigan's hazardous waste program. It would make more sense if this portion of the program were updated to use Michigan's current cleanup criteria under Part 201 of NREPA.

⁹ "Used oil" does not include vegetable or animal based oils.

¹⁰ As appropriate for the wastes generated on-site, a facility may have to have an internal alarm system, portable fire extinguishers, spill control equipment, and water supply for hoses or automatic sprinklers.

¹¹ If any component of the waste will be disposed on the land in any way, then this element is satisfied. Therefore, if recycling the waste creates a residue that is land disposed, then the LDRs apply.

¹² See definition at [40 CFR 265.1081](#) and procedures at [40 CFR 265.1084](#).

¹³ The requirement is 270 days if waste is shipped 200 miles or more.

¹⁴ EPA also has the general authority to include in any TSD license any conditions or terms "necessary to protect human health or the environment," which might also arguably include corrective action-type requirements. [42 USC 6925\(c\)\(3\)](#).

¹⁵ This language is adopted by reference in Michigan's regulations concerning hazardous waste construction permits, [R 299.9504\(20\)](#), but not operating permits (apparently because all pre-existing facilities would have been subject to this requirement under the federal program).