

EPA has implemented these requirements by requiring treatment standards for hazardous wastes to be based on performance of Best Demonstrated Available Technology (BDAT).

b. Regulation of Characteristic Wastes. On May 8, 1990, EPA promulgated land disposal prohibitions and treatment standards for hazardous wastes that exhibited one or more of the following characteristics: ignitability, corrosivity, reactivity, or EP toxicity (40 CFR 261.21–261.24). These regulations established treatment standards for the characteristic wastes in one of four forms: (1) A concentration level equal to, or greater than, the characteristic level; (2) a concentration level less than the characteristic level; (3) a specified treatment technology (e.g., for ignitable wastes containing high levels of total organic carbon); and (4) a treatment standard of “deactivation” which allowed the use of any technology, including dilution, to remove the characteristic.

Such treatment frequently occurs in centralized wastewater management systems subject to regulation under the Clean Water Act or Safe Drinking Water Act. Furthermore, the deactivation can occur as a result of mixing wastewaters together (for example, to equalize wastewater flow into a centralized wastewater management unit). This mixing, however, is a type of dilution, and dilution is normally an impermissible means of achieving a land disposal regulation (LDR) treatment standard. EPA addressed at length the question of whether dilution incidental to such centralized wastewater management should be allowed. See generally 55 FR 22653–59 (June 1, 1990). The Agency found, generally, that mixing waste streams to eliminate certain characteristics was appropriate and permissible for corrosive wastewaters and, in some cases, reactive or ignitable wastewaters. Furthermore, EPA stated that the dilution prohibition did not normally apply to characteristic wastewaters that are managed in treatment trains, including surface impoundments, whose ultimate discharge is regulated

under the pretreatment and NPDES programs under sections 307(b) and 402 of the CWA, or in Class I underground injection well systems regulated under the Safe Drinking Water Act (SDWA). The Agency stated that the treatment requirements and associated dilution rules under the CWA are generally consistent with the dilution rules under RCRA, and that the Agency should rely on the existing CWA provisions. The Agency also singled out certain particularly toxic wastewaters to which the dilution prohibition still applies notwithstanding management in CWA systems. 40 CFR 268.3(b). Similarly, EPA stated that a regulatory program had been established under the SDWA to prevent underground injection that endangers drinking water sources.

c. The Third Third Court Decision. On September 25, 1992, the United States Court of Appeals for the District of Columbia Circuit ruled on the various petitions for review filed against the 1990 land disposal rule, also known as the Third Third rule. See *Chemical Waste Management v. EPA*, 976 F.2d 2, cert. denied, 113 S.Ct. 1961 (1993). The court issued three principal holdings of the case with respect to characteristic wastes. First, EPA may require treatment under RCRA section 3004(m) to more stringent levels than those at which wastes are identified as hazardous, *Id.* at 12–14. Second, section 3004(m) requires that treatment standards address both short-term and long-term potential harms posed by hazardous wastes, and consequently must result in destruction and removal of hazardous constituents as well as removal of the characteristic property, *Id.* at 16, 17, 23. As a consequence, dilution without destruction or removal of hazardous constituents is permissible as an exclusive method of treatment only for those characteristic wastes that do not contain hazardous constituents “in sufficient concentrations to pose a threat to human health or the environment” (*i.e.*, the minimize threat level in section 3004(m)). *Id.* at 16. Third, situations where characteristic hazardous wastes are diluted, lose their characteristic(s) and are then managed in centralized wastewater management

land disposal units (*i.e.*, subtitle D surface impoundments or Class I nonhazardous injection wells) are legal only if it can be demonstrated that hazardous constituents are removed or destroyed to the same extent they would be pursuant to otherwise-applicable RCRA treatment standards. *Id.* at 7.

As a consequence of these holdings, the court held that the deactivation standard for ignitable and corrosive wastes did not fully comply with RCRA section 3004(m). This was because that standard could be achieved by dilution, and dilution fails to destroy or remove the underlying hazardous constituents that can be present in the wastes. *Id.*

3. Phase 3 and the Pharmaceutical Effluent Guidelines

The RCRA regulations EPA proposed on February 16, 1995 are known as the Phase 3 rule. In response to the D.C. Circuit court decision requiring treatment beyond dechlorination or dilution for ignitable, corrosive, reactive and characteristically toxic wastes, the proposed rule addresses underlying hazardous constituents of these wastes.

EPA believes that the practices of disposal of spent solvents used extensively in pharmaceutical processes for cleaning out batch units result in the discharge of significant amounts of characteristically ignitable (D001) hazardous waste. Many of these streams are disposed in surface impoundments and will be covered by the Phase 3 proposal.

The Phase 3 rule sets out EPA’s general approach to have the RCRA standards be the same as BAT under the CWA. This is because the BAT standards reflect an industry-specific evaluation of best treatment for that industry’s wastewater. Thus, the RCRA technology-based standards will typically match those of the Clean Water Act. This approach works well for the pharmaceutical manufacturing industry because the Clean Water Act rule effluent limitations guidelines and standards are being revised contemporaneously with the Phase 3 LDR rules, and thus reflect current BAT.

TABLE XII.A.—IGNITABLE/CORROSIVE/REACTIVE/TOXICITY CHARACTERISTIC WASTES D001, D002, D003 AND D004–32

D001	IGNITABLE.
D001	Liquid—flash point<60 C—High TOC—261.21(a)(1).
D001	Liquid—flash point<60 C—Low TOC—261.21(a)(1).
D001	Nonliquid—burns vigorously/persistently—261.21(a)(2).
D001	Ignitable compressed gas—49 CFR 173.300—261.21(a)(3).
D001	Oxidizer—49 CFR 173.151—261.21(a)(4).
D002	CORROSIVE.
D002	pH<2—261.22(a)(1).
D002	pH>10—261.22(a)(1).