

together. If, for example, a temporary tank is brought on-site but does not have sufficient capacity to handle the estimated several hundred thousand gallons of rinsate at once, the waste will likely have to be managed in separate loads. In such instances, the generator will still be required to make hazardous waste and LDR determinations for each separate load.

In adopting today's interpretation, EPA emphasizes that this type of cleaning is a batch operation occurring at widely-spaced intervals and involving temporary storage units (i.e. units that are removed from the premises after receiving the rinsate). Thus, the interpretation does not ever apply where a surface impoundment receives rinsate (see, e.g., *Chemical Waste Management v. EPA*, 976 F. 2d at 20 n. 4 (placement of any amount of characteristic waste in a surface impoundment makes the unit a regulated unit even if diluted to non-characteristic levels afterwards)). The interpretation also does not apply where there are permanent storage units involved. EPA also notes the evident point that if commingled rinses still exhibit a hazardous waste characteristic, the receiving tank is a regulated unit. Persons owning or operating such tanks have the same obligations as other generators to determine whether the waste exhibits a characteristic. See 262.11.

### 3. Sludge From High TOC (Total Organic Carbon) D001 Treated in Tank Based Systems

Many generators introduce waste into tank-based wastewater treatment systems where the resulting effluent is discharged to a POTW or to navigable waters, and the resulting wastewater treatment sludge is land disposed. At times, the waste that is placed in the tank-based system exhibits the ignitable characteristic. If the organic content of the wastewater is sufficiently high, the liquid waste—when first released—can meet the definition of nonwastewater found in 40 CFR Part 268.2(d).

The fact situation of concern can involve releases of high TOC ignitable wastes (which have a designated method of treatment), raising a question of whether that treatment standard for high TOC waste still applies to sludge generated from the wastewater treatment, even if the sludge is not itself high TOC ignitable waste.

It is EPA's view that the sludge in this situation should be viewed as a new treatability group. Put another way, the change of treatability group principle applies to situations where liquid wastes which are technically

nonwastewaters are inadvertently placed in wastewater treatment systems in small quantities, for legitimate wastewater treatment, thereupon becoming wastewaters (as defined in 268.2(f) of the rules), and subsequently generating a sludge. See 58 FR 29871, May 24, 1993 ("In the Third Third final rule, EPA stated that for characteristic wastes, each change of treatability group in a treatment train marked a new point of generation for determining if a characteristic waste was prohibited from land disposal"). Consequently, because the sludge generated from the tank-based wastewater treatment system is a different treatability group from the wastewater from which it is generated, it would be considered to be a newly generated waste that should be evaluated at its point of generation to determine if it is hazardous, and if so, to then determine the appropriate LDR standard. (Also, please note that elsewhere in today's notice the Agency clarifies that the LDR *de minimis* exemption applies to small, inadvertent, releases of characteristic waste into wastewater treatment systems. As a practical matter, the *de minimis* exemption probably makes the question moot, because larger releases would not typically occur since they would likely interfere with wastewater treatment systems operation.)

### 4. Tank Rinsate

An issue arises when high-TOC ignitable wastes are stored in tanks, and some residue from these wastes remains in the tanks after the tanks are emptied and rinsed. The initial high-TOC ignitable waste is considered a nonwastewater with the treatment standard of CMBST (combustion) or RORG (recovery of organics). However, it is EPA's view that the rinsate from an empty tank (see 47 FR 1250, January 11, 1982, for guidance on empty waste tanks) is a newly generated wastewater and the high-TOC ignitable waste treatment standards do not attach. The rinsate must be evaluated at its point of generation, i.e., after the complete rinsing of the empty tank, and, if it exhibits a characteristic (or for some reason is listed independently) it is subject to treatment standards for that characteristic (or listed waste), rather than to the form of the waste from which it originated. This determination also applies to tanks that are used to collect wastewaters that are listed solely because they exhibit a characteristic (i.e., ignitability, corrosivity, or reactivity). EPA has stated that the existing rule, which provides that the dilution prohibition does not apply to wastewaters listed solely because they

exhibit a characteristic, remains in effect. See 61 FR 15662.

### D. POLYM Method of Treatment for High-TOC (Total Organic Carbon) Ignitable D001 Wastes

**Summary:** Today's rule establishes an alternative treatment standard of POLYM (polymerization) for high-TOC D001 wastes originally intended as chemical components in the commercial manufacture of plastics. In the polymerization treatment process (POLYM), the wastes are reacted to produce a chemically stable plastic in the same manner that commercial plastics are formed.

**Discussion:** The National Marine Manufacturer's Association contacted EPA with concerns that the May 1993 Interim Final Rule prohibited the practice of polymerizing excess polyester/styrene waste left over from the manufacture of modular shower stalls and recreational boats, among other things. EPA proposed to add polymerization (POLYM) to the set of required methods of treatment designated as BDAT for high-TOC ignitable (D001) wastes resulting from commercial polymerization processes. (60 FR 43679, August 22, 1995.) In these manufacturing processes, polyester/styrene reacts with methyl ethyl ketone (MEK) peroxide in a mold to form fiberglass. The ignitable waste polyester/styrene and MEK peroxide are the wastes of concern.

Small quantities of polyester/styrene monomers and MEK peroxide wastes can be reacted together to create fiberglass scraps. The scraps are inert and do not exhibit the hazardous waste characteristics of toxicity, ignitability, corrosivity, or reactivity. It is this practice that is referred to as polymerization for the purposes of this rule. The waste polyester/styrene monomers and MEK peroxide are currently regulated as high-TOC ignitable wastes (40 CFR 268.9) for which the current standard is treatment by CMBST (combustion) or by RORGS (recovery of organics) before land disposal. Neither CMBST nor RORGS allows for polymerization (as an exclusive treatment method) of high-TOC ignitable wastes. The Agency believes that the practice of polymerizing high-TOC ignitable waste polymers and monomers which are chemical components in the manufacture of plastics to a noncharacteristic inert mass adequately minimizes threats posed by disposal of the waste.

Today EPA is establishing POLYM as an alternative to CMBST or RORGS only for those high-TOC D001 wastes

originally intended as chemical components in the commercial manufacture of plastics. POLYM requires the addition of the same polymerizing component or catalyst to the deactivated high-TOC D001 monomer stream intended for land disposal. POLYM is defined as "formation of complex high-molecular weight solids through polymerization of monomers with high-TOC D001 nonwastewaters which are chemical components in the manufacture of plastics."

EPA acknowledges that POLYM is not as effective at destroying all of the hazardous constituents of the materials as CMBST, the specified treatment standard for high-TOC D001 nonwastewaters. However, as defined, POLYM is the same process that is used in the actual manufacturing of plastic products such as water pipe and watercraft. To allow materials and a process to be used to construct water pipe and boat hulls, but prohibit the same process to be used to treat excess materials from those same processes does not make sense. In addition, the treatment of these chemical components using POLYM does convert an ignitable waste into a non-ignitable solid prior to disposal. Treatment occurs as the organic materials react to form a hard, inert material. Data submitted by the Composites Institute (see CI Memo 20 DEC 96) show that of the Appendix VIII constituents that are present in scrap uncured polyester resins, greater than 50% of the constituents are chemically converted by the polymerization process to form a part of the solid polymer. The remaining constituents are physically bound in the solid polymer matrix. The Agency believes that the low quantities of Appendix VIII constituents are sufficiently bound in the polymer matrix so as to minimize the threats posed by disposal of the noncharacteristic inert mass of scrap material. Below is a table showing the Appendix VIII constituents typically found in scrap uncured polyester resins:

Appendix VIII constituents	Maximum % in uncured resin
Methyl methacrylate .....	10.0
Antimony trioxide .....	3.0
Dibutyl phthalate .....	1.8
Butyl benzyl phthalate .....	1.05
Dimethyl phthalate .....	1.05
Methyl ethyl ketone peroxide .....	1.05
Diocetyl phthalate .....	0.75
Methyl ethyl ketone .....	0.09
P-benzoquinone .....	0.05
Maleic anhydride .....	( <sup>1</sup> )
phthalic acid esters NOS .....	( <sup>1</sup> )

Appendix VIII constituents	Maximum % in uncured resin
phthalic anhydride .....	( <sup>1</sup> )

<sup>1</sup> Trace.

Of the constituents listed in the table above, methyl methacrylate (a monomer) and methyl ethyl ketone peroxide (a catalyst), are chemically converted by the polymerization process and form part of the solid polymer.

EPA has decided to promulgate POLYM as a treatment standard rather than dealing with this issue on an individual basis via Determination of Equivalent Treatment (DET) petitions. As defined, equivalency need not remove every single molecule of constituents as the comparison technology to be considered equivalent. A similar issue involving high-TOC ignitable waste was addressed in a Determination of Equivalent Treatment (see DET IBM Essex Junction, VT). In that determination, the high-TOC waste was being treated to a slightly lower level than combustion. EPA did so, in part, because the treatment process was achieving very substantial destruction of hazardous constituents, and otherwise assuring that the special concerns regarding treatment of high-TOC ignitable wastes, such as interference with wastewater treatment systems, were not present. Similarly, in this instance, POLYM will destroy most of the hazardous constituents present and substantially immobilize those that remain. In addition, there is no possibility that this treatment method will interfere with wastewater treatment. Finally, EPA notes that the POLYM process appears to be as efficient as the other type of allowable treatment method for high-TOC ignitable wastes, namely RORGS (recovery of organics). Thus, EPA believes that the POLYM process evaluated here, along with CMBST and REORG, satisfies the section 3004(m) requirement that threats be minimized by treatment, and also could satisfy the equivalency standard in 268.42(b).

A number of commenters have solicited EPA to expand the definition of POLYM to include other types of polymerization processes. EPA appreciates the suggestions of the commenters. However, the Agency does not currently have enough data to evaluate the effects of expanding the definition. The Agency will consider the idea of expanding the definition of POLYM and solicits any data that commenters may have regarding additional methods of polymerization.

Further, under 268.42(b), persons may petition the Agency for a determination of equivalent treatment for their specific polymerization process, if it is not included in today's rule.

Finally, in response to inquiries, EPA notes that POLYM treatment (or for that matter, most types of treatment) can occur at the site of generation without having to obtain a RCRA permit, provided treatment occurs in tanks, containers or containment buildings at these units comply with the substantive standards set out in 40 CFR 262.34 (standards for so-called 90-day generation tanks, containers, and containment buildings). See 51 FR at 10168 (March 24, 1986). EPA notes further that these standards for 90-day units may include compliance with the RCRA air emission standards set out in subparts AA, BB, and CC of part 265 (assuming the waste satisfies the applicability criteria set out in these rules). See generally, 61 FR at 59934-35 (Nov. 25, 1996) and 59 FR 62896 (Dec. 6, 1994). In addition, POLYM treatment occurring in units requiring a permit could be subject to the corresponding standards for air emissions found in Part 264 subparts AA, BB and CC.

*E. Decision To Retain Current Treatment Standard for Multi-Source Leachate (Waste Code F039)*

In the Phase IV proposed rule, EPA suggested that with the promulgation of the Universal Treatment Standards (UTS), there was no longer a need for the separate list of constituents for multisource leachate (F039) in the Treatment Standards for Hazardous Wastes table at 40 CFR 268.40. EPA proposed that F039 would be treated to meet all the UTS for the constituents at § 268.48, with the exceptions of fluoride, vanadium, and zinc, which are not underlying hazardous constituents.

Several commenters, however, pointed out that such an action would be more than a simplification of existing treatment standards. Rather, it would add several constituents to those for which EPA has set treatment standards in F039, without notice and an opportunity for comment. The Agency has reexamined the F039 list of constituents and agrees with commenters that changing F039 to cross reference the UTS constituents at § 268.48 would add regulated constituents to F039. This was not the intent of the proposed change. Therefore, the Agency is not promulgating any change to F039 in the final rule. The treatment standard level for the hazardous constituents in F039 are identical to the UTS for those constituents, so retaining the current