

TABLE 1—ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS<sup>1</sup>—Continued

Technology description	Performance and/or design and operating standard	Contaminant restrictions <sup>2</sup>
<p>3. <i>Sealing:</i> Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant.</p>	<p>Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).</p>	<p>None.</p>

<sup>1</sup> Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

<sup>2</sup> Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from Subtitle C regulation).

<sup>3</sup> "Clean debris surface" means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

<sup>4</sup> Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

<sup>5</sup> If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or other nondebris material.

<sup>6</sup> Dioxin-listed wastes are EPA Hazardous Waste numbers FO20, FO21, FO22, FO23, FO26, and FO27.

<sup>7</sup> Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

<sup>8</sup> The demonstration "Equivalent Technology" under §268.42(b) must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

<sup>9</sup> Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a "clean debris surface" as defined in note 3 when separating treated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

[57 FR 37277, Aug. 18, 1992, as amended at 59 FR 48103, Sept. 19, 1994; 63 FR 28738, May 26, 1998; 71 FR 40279, July 14, 2006]

**§ 268.46 Alternative treatment standards based on HTMR.**

For the treatment standards previously found in this section, refer to §268.40.

[59 FR 48103, Sept. 19, 1994]

**§ 268.48 Universal treatment standards.**

(a) Table UTS identifies the hazardous constituents, along with the

nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in §268.2(i), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.