

## TECHNICAL BULLETIN NO. 93-2

**SUBJECT:** UNDERSTANDING THE EPA'S NEW TOXICITY CHARACTERISTIC (TC) RULE

**SUMMARY:** ON MARCH 29, 1990, THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) ADOPTED THE TOXICITY CHARACTERISTIC REGULATIONS MAKING WASTES CONTAINING CERTAIN CONSTITUENTS AT OR ABOVE LISTED REGULATORY LEVELS A HAZARDOUS WASTE (SEE TABLE A). THESE 40 CONSTITUENTS ARE IDENTIFIED AS HAZARDOUS WASTES BECAUSE THEY REPRESENT A HEALTH THREAT IF CONSUMED IN DRINKING WATER.

Persons who generate, transport, treat, store, or dispose of solid wastes must decide if their solid waste is a hazardous waste regulated under the Resource Conservation and Recovery Act (RCRA). RCRA, in Title 40 Code of Federal Regulations (CFR), Part 261, contains lists specifying wastes as hazardous. It also identifies characteristics for nonlisted hazardous wastes. The four characteristics are Ignitability, Corrosivity, Reactivity, and Toxicity Characteristic (TC). Therefore, a material not categorically listed as hazardous may still be hazardous by its characteristics.

The TC rule was finalized by the EPA in March, 1990 and adds 25 new organic compounds to the list of toxic constituents.

Any solid waste capable of leaching one or more of listed organic constituents in concentrations greater than specified levels will be regulated as hazardous waste. The new Rule replaces Extraction Procedure (EP) Toxicity requirements with Toxicity Characteristic Leaching Procedure (TCLP). The TCLP, like the extraction procedure test, defines the toxicity of a waste by measuring the potential for toxic constituents to leach out and contaminate groundwater at levels of health or environmental concern. In addition, the TCLP also measures the potential of toxic constituents to leach, and is designed to determine the mobility of organic and inorganic contaminants in liquid, solid, and multiphase wastes.

Analytical testing of waste streams is not required by EPA. Generators of waste may use their knowledge of the waste stream to determine toxicity. However, an initial TCLP test is recommended because: 1) the regulatory thresholds are low (refer to Table A) and 2) the penalties for non-compliance are significant.

### COMMON APPLICATIONS WHEREIN THE TC RULE MAY APPLY:

#### 1. USED OIL

Under the Rule, used oil will be considered hazardous only if it exhibits one or more hazardous waste characteristic and if it is disposed instead of recycled. Oil filters must be drained until no free-flowing oil remains, then crushed and disposed as hazardous waste unless TCLP tests can prove they have no hazardous waste characteristics. An exemption

## UNDERSTANDING THE EPA'S NEW TOXICITY CHARACTERISTIC (TC) RULE

exists for non-terne-plated filters (see Technical Bulletin 93-3, "EPA's Final Rule on Listing Recycled Used Oil as a Hazardous Waste" for additional information.

### 2. UNDERGROUND STORAGE TANKS

EPA has deferred applying the TC rule to wastes that are generated from cleanup of underground storage tanks (USTs) regulated under RCRA, but will decide how these wastes will be regulated in the future. Wastes from UST cleanups not regulated under RCRA (e.g. heating oil and bulk tanks) are subject to the TC rule.

### 3. ENVIRONMENTAL CLEANUPS

Any soil or debris that is excavated from a site (other than a petroleum underground storage tank site) will have to be managed as a hazardous waste if it fails the TCLP.

### 4. WASTEWATER

Any waste currently excluded from regulation as a hazardous waste by 40 CFR 261.4 is still excluded under the TC rule. Examples of such exclusions include NPDES permits and industrial wastewater discharges (point source discharges) which are subject to regulation under the Clean Water Act. This exemption does not apply to wastewater sludges.

## WHAT ARE THE TOXIC CONSTITUENTS IDENTIFIED BY THE TC RULE?

**Table A**

<b>TOXIC CONSTITUENT</b>	<b>REGULATORY LEVEL (MG)</b>
ARSENIC	5.0
BARIUM	100.0
BENZENE	0.5
CADMIUM	1.0
CARBON TETRACHLORIDE	0.5
CHLORDANE	0.03
CHLOROBENZENE	100.0
CHLOROFORM	6.0
CHROMIUM	5.0
o-CRESOL	200.0
m-CRESOL	200.0
p-TOTAL CRESOL	200.0
TOTAL CRESOL	200.0
2,4-D	10.0
1,4-DICHLOROBENZENE	7.5
1,2-DICHLOROETHANE	0.5
1,1-DICHLOROETHYLENE	0.7
2,4-DINITROTOLUENE 0.13	0.13

## UNDERSTANDING THE EPA'S NEW TOXICITY CHARACTERISTIC (TC) RULE

ENDRIN	0.02
HEPTACHLOR	0.008
HEXACHLOROBENZENE	0.13
HEXACHLORO-1,3-BUTADIENE	0.5
HEXACHLOROETHANE	3.0
LEAD	5.0
LINDANE	0.4
MERCURY	0.2
METHOXYCHLOR	10.0
METHYL ETHYL KETONE	200.0
NITROBENZENE	2.0
PENTACHLOROPHENOL	100.0
PYRIDINE	5.0
SELENIUM	1.0
SILVER	5.0
TETRACHLOROETHYLENE	0.7
TOXAPHENE	0.5
TRICHLOROETHYLENE	0.5
2,4,5-TRICHLOROPHENOL	400.0
2,4,6-TRICHLOROPHENOL	2.0
2,4,5-TP(SILVEX)	1.0
VINYL CHLORIDE	0.2

**FURTHER INFORMATION:** For further information on understanding the Toxicity Characteristic Rule, contact any of the following:

Permission is granted to reproduce this Technical Bulletin as needed.  
Broward County at (954) 519-1260.

Florida Department of Environmental Protection's Hazardous Waste Section in Tallahassee at  
(904) 488-0300.

The RCRA Hotline at (800) 424-9346.