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CLARIFICATION ON WHAT CONSTITUTES DIOXIN RELATED MATERIALS

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

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Ms. Jackie Noles
Operations Manager
Laidlaw Environmental Services (TS), Inc.
208 Watlington Industrial Drive
Reidsville, North Carolina 27320

Dear Ms. Noles:

This letter is a reply to your July 20, 1992 letter to the Agency in which you requested clarification on what constitutes dioxin related materials. I understand my staff has been in contact with you about the lateness of our response, and I appreciate your patience.

Your first question addresses the regulation of dioxin-containing wastes. Specifically, your question asks under which waste codes are dioxins regulated. Your letter asks if F020, F021, F022, F023, F026, F027, F028, D017, D041, and D042 (as defined at 40 CFR §§261.31, 261.24) are the waste codes under which dioxin is regulated. You are correct. These waste codes apply, but are not the only waste codes which may apply to dioxin containing wastes. For example, F032 wastes (wastes generated at wood preserving processes which use chlorophenolic formulations) contain dioxin. Wastes which have Land Disposal Restriction (LDR) treatment standards for certain dioxins and furans include F039 "multi-source leachate," K043 (2,6-dichlorophenol waste from the production of 2,4-D), and K099 (untreated wastewater from the production of 2,4-D).

Your second question relates to proper characterization of dioxin-containing wastes based on known process information. Specifically, your question states that if any constituents exist in a material for which it was listed, but no identifiable process exists which would generate one of the above listed wastes, would

the waste be regulated, provided that no other EPA codes apply? The "F" waste codes (hazardous wastes from non-specific sources) would not apply if a waste contains dioxin but does not meet the listing descriptions for the dioxin listings in 40 CFR 261.31. The "D" codes (codes which correspond to the toxic contaminant causing a solid waste to meet the characteristic of toxicity) would only apply if the levels of the respective constituents are above the regulatory level. The "D" codes listed above may contain impurities of dioxin.

The third question asks if the processes do apply, but the constituents listed in Appendix VII are not present in the waste, would the F020-F023 and F026-F028 waste codes apply? The waste codes would apply if the waste did not meet a specific exemption as specified in 40 CFR 261.4. This is true even if no Appendix VIII constituents are present. Please note, however, that any person may, pursuant to 40 CFR 260.22, petition the Agency to exclude the wastes at a particular facility from regulation as a listed hazardous waste.

The fourth question asks what wastes generated from products which are derivatives of pentachlorophenol would be classified as F021? Any substance which is related structurally and can be made from pentachlorophenol in one or more steps is a derivative of pentachlorophenol. Examples include, but are not limited to, sodium pentachlorophenate, octachlorodibenzodioxin, octachlorodiphenyl ether, and potassium pentachlorophenate.

The fifth question asks what wastes generated from products which are derivatives of tri- and tetra-chlorophenols would be classified as F021? Derivatives of tri- and tetrachlorophenols include tri- and tetra-chlorophenoxy derivatives of carboxylic acids which include the most common tri- and tetra-chlorophenoxy acetic acids and their salts as well as the tri- and tetra-chlorophenoxy derivatives of other acids such as propionic acid, butyric acid, etc. Ester and ether derivatives include methyl ethyl, propyl, butyl esters and ethers as well as phenolic esters and ethers. Amine salts and other salts include all derivatives of tri- and tetra-chlorophenoxy acids reacted with various bases.

Your sixth question asks whether D017, D041, and/or D042 wastes can be landfilled in a Subtitle C landfill. It is important to emphasize that no matter what the hazardous waste is, the landfill must first be permitted to accept that specific hazardous

waste. D017 is a restricted waste and must be treated to reduce the concentration of silvex to 7.9 mg/kg or less, prior to landfilling. Although LDR standards for dioxin containing wastes are based on concentration levels, the dioxin listing rule (50 FR 1978) requires special management standards for certain types of units which manage F020-23 and F026-28: (1) Incineration in accordance with 40 CFR 264.343 and 40 CFR 265.352; (2) Thermal treatment to 99.9999 percent Destruction and Removal Efficiency (DRE) in accordance with 40 CFR 265.383. D041 and D042 wastes can be landfilled if the landfill is permitted to accept the waste.

With regard to your last question, you ask if samples identify the presence of constituents listed in Appendix VII, but the original process generating the material and any previously applicable wastecodes are unknown, would the samples be excluded from RCRA regulation at the time of disposal, unless it is found that characteristic codes D017, D041, and/or D042 or other characteristic codes apply? If the waste in question cannot be traced back to an original process that would generate a waste meeting any listing description, then it is exempt from regulation providing that it does not fail a hazardous waste characteristic test. Please be advised that State regulations may be more stringent than federal regulations, and that TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin) is a hazardous substance under CERCLA, regardless of its source.

If you have any further questions, please contact Mr. Rick Brandes, Chief, Waste Identification Branch at (202) 260-4770.

Sincerely,
Sylvia K. Lowrance, Director
Office of Solid Waste

cc: Judy Sophianopolis, Region IV