PPC 9441.1992(44)

IDENTIFICATION OF SPENT SOLVENT IN CERTAIN INDUSTRIAL PROCESSES

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

December 22, 1992

Mr. Jack E. Wilson
Vice President, Engineering
The Environmental Company, Inc.
1230 Cedars Court, Suite 100
Post Office Box 5127
Charlottesville, Virginia 22905

Dear Mr. Wilson:

This letter clarifies the position of the Office of Solid Waste (OSW) regarding the identification of spent solvents in certain industrial processes. The determination of what constitutes "use as a solvent" is critical in this definitional issue.

Your letter of inquiry was received by OSW on May 22, 1992. In it, you asked for confirmation of your conclusion that waste polyurethane generated in the manufacture of marine buoys and fenders is not a listed hazardous waste under RCRA.

As we understand the process, two different coats of foam materials, top and bottom, are sprayed onto a core. During the process, one spray gun is used to spray the coating materials. The coats are sprayed separately, in sequence. Since the coating materials cannot come in contact with each other in the gun, the gun must be cleared of the previous coating material before the other coat can be shot through the nozzle. The coating materials themselves are used to clear the nozzle prior to applying the other coat. The clearing spray, designed to ensure that only the coat to be applied is present in the gun's nozzle, is sprayed into a waste drum during the nozzle clearing process. Waste polyurethane is generated in this way.

We interpret your inquiry to ask whether this clearing of the nozzle constitutes "solvent use" thereby generating spent solvent

(waste code F005) meeting the RCRA hazardous waste listing definition.

EPA regulations at 40 CFR 261.31(a) state that the following solid wastes are F005 listed hazardous wastes:

> " ... spent non-halogenated solvents: Toluene, . . etc.; all spent solvent mixture/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents ... "

Your inquiry suggested that although the top and base coats do contain greater than ten percent toluene, they are not used for their solvent properties when used to clear the spray gun nozzle. The waste generated during the manufacturing process includes only residues of the based and top coats used to produce the final product. Toluene is present only as contained in the waste polyurethane. As this processing waste is not a spent solvent, it is not an F005 waste.

In a response dated August 17, 1992, Rick Brandes, Chief of the Waste Identification Branch in OSW concluded the waste generated in this specific case did not meet the regulatory definition of a spent solvent hazardous waste for the following reasons:

- the regulations only cover those spent solvents that are used for their solvent properties, i.e., to solubilize, mobilize, degrease, dilute, extract, etc., other constituents.

- the preamble to the regulations (see 50 FR 53316, December 31, 1985 at section II.A.) states " . . . process wastes where solvents were used as reactants or ingredients in the formulation of commercial chemical products are not covered by the listing."

- therefore, the definition of spent solvent does not extend to cases in which the solvents are strictly reactants or ingredients in a product formulation.

The response went on to say that this interpretation was based solely on the information provided in the inquiry. If the clearing spray is used for its solvent properties or if the resin or curative mixtures which make up the top and bottom coats were to be used individually to clean the spray gun, the waste could then be considered F005 hazardous waste. Mr. Brandes reserved the right to change this interpretation in the event that other information became available indicating the clearing spray was using toluene or ethyl acetate for their solvent properties.

In clarifying this interpretation, we note that in this specific case the clearing spray of the gun's nozzle is a mechanical process using the unaltered top and bottom coats to physically clear the gun's nozzle from the undesired coating. This is, to OSW, different than a process in which the clearing spray uses a solubilizing property, such as the chemical ability to dissolve or dilute, to clean the gun's nozzle. In this case, the fact that the top and bottom coats contain high concentrations of toluene does not mean the toluene is being used to solubilize the small amount of coating material remaining in the nozzle after one coat is sprayed. The coating materials merely push the residue of the previous coating out of the nozzle so that pure top or bottom coat can be applied to the products. The toluene is there as part of the manufacturing process itself. It is therefore part of the formulation of the commercial chemical product and not covered by the listing.

For this or any other case in which it is shown that a material used to clear the nozzle is used for its solvent properties, that is, to solubilize or mobilize other constituents, the material would be a spent solvent and thus, would meet the definition of Hazardous Waste Nos. F003 and F005.

OWS realizes that a definitional distinction like this can result in two compositionally similar materials being separated into two different classes of waste (hazardous and non-hazardous) simply by the way in which the waste is generated. RCRA listing determinations must make these differentiations to avoid bringing an unnecessarily large universe of materials into specific hazardous waste listings. To avoid leaving unregulated wastes which pose a true hazard, we rely on another mechanism for bringing wastes into the hazardous waste management system. If a waste exhibits one of four "characteristics" of hazardous waste (ignitability, corrosivity, reactivity, toxicity) of 40 CFR 261

Subpart C, it is considered a hazardous waste. This ensures that wastes which fail to meet a listing definition are not exempted from the hazardous waste management system if they exhibit one or more of these characteristics. One application of this principle was pointed out in the preamble to the solvents final rule:

> "Since the threshold level (ten percent solvent) promulgated today is not based on health criteria, but rather on typical use patterns, we are not applying this threshold to all wastes that may contain one or more of these solvents. Instead, we will rely on [the toxicity] characteristic to bring these waste streams into the hazardous waste management system." (See 50 FR 53317, December 31, 1985.)

In conclusion, while the process described may not produce a listed hazardous waste, any wastes produced may be characteristically hazardous. Generators of waste are responsible for making a determination of hazardousness. Since the distinction is a complex one, any case in which the definition of "use as a solvent" is raised should be dealt with on a case-by-case basis.

Please be aware that many states are authorized to implement Federal regulations and may be more strict. Thus you should always check with the appropriate State environmental authority.

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