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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 6 1988

MEMORANDUM

SUBJECT: Regulatory Status of Solvent-Contaminated Wastestreams
from a Pharmaceutical Manufacturer

FROM: Devereaux Barnes, Director
Characterization and Assessment Division (OS-330)

TO: Arthur Moretta, UIC Control Program
Water Division, Region V (5WD-TUB-9)

This memorandum is in response to your request for determination of the regulatory status of aqueous wastestreams generated at an Upjohn Company pharmaceutical facility in Kalamazoo, MI. All answers are based on our best understanding of the process flowsheets which you sent and the information which you provided over the telephone to my staff.

The spent solvent listings cover those streams that are used to solubilize or mobilize other constituents (e.g., for degreasing or fabric scouring, as diluents, extractants, reaction and synthesis media, and similar uses) and through such use, have become contaminated to the extent that they must be reclaimed prior to further use or reuse. See 50 FR 53315, December 31, 1985.

Use as a reactant or an ingredient in the manufacture or formulation of a commercial chemical product is not classified as a solvent use for the purpose of the RCRA hazardous waste listings F001 - F005. Therefore, spent materials from these "non-solvent" uses do not meet the listing descriptions for spent solvents. Also, process wastes that become contaminated with small amounts of solvents during processing are not within the scope of the spent solvent listings. An example of this is an aqueous effluent from a liquid-liquid extraction step, in which a solvent has been used to extract a product from the water and the water becomes contaminated with small amounts of solvent. In this example, the solvent is removed with the product and the solvent-contaminated water is not a spent solvent.

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Based on our review of the data submitted, we have made the following determinations:

All streams being sent to disposal wells from the acetone, methanol, and methylene chloride recovery processes (pp. A, B, C, and D) either meet the listing description for spent solvents or are residuals derived from the treatment of spent solvents and therefore should be designated as an EPA hazardous waste (F001 - F005).

Those aqueous streams which result from liquid-liquid extraction steps involving solvents are considered process wastestreams and as such, do not meet the listing description for spent solvent streams (see above).

Filter press effluents such as the one exiting the unit designated "ST-110" (p. 2-1) are considered spent solvent streams because they consist of a solvent that was used as a carrier for the product in the filtration step. However, filter press effluents, such as the one exiting the filter designated "VF-" (p. 4-2) are process wastewater streams, not spent solvent streams, because water was introduced into the production process as the carrier for the product in filtration. In this configuration, the solvent was removed prior to filtration; the small quantity of solvent remaining in the system does not render the wastewater filter press effluent a spent solvent.

Rinse wastewaters, such as those from product or equipment rinsing steps (pp. 1-3, 2-1) are not considered spent solvents because they are process streams which may have become contaminated with organic solvents.

Although a particular waste stream may not meet the listing description for spent solvents, it may be hazardous if exhibits one or more of the hazardous characteristics described in 40 CFR 261.20-261.24. Certain states may also have special restrictions on the disposal of solvent-contaminated wastestreams.

Thank you for your inquiry. If you have any further questions, please contact Ron Josephson at FTS 475-6715.

Attachments

cc: Eric Callisto, OW/ODW (WH-550)

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