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OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

JUL 1988

Mr. Marshall R. Turner
Vice President, Manufacturing
Racon Refrigerants
6040 South Ridge Road
P.O. Box 198
Wichita, KS 67201

Dear Mr. Turner:

This letter is in response to your February 1, 1988 petition to change 40 CFR Part 261 to encourage chlorofluorocarbon recycling. It is based on information contained in your petition and in telephone conversations with Michael Petruska of the Office of Solid Waste (OSW) and with our contractor, Becky Cuthbertson of Geo/Resource Consultants, Inc. This response is based on the Federal RCRA regulations; individual states implementing RCRA may have more stringent requirements, or regulations which are broader in scope. The tentative conclusion we have reached is that under Federal rules, the refrigerants you are concerned about are probably not hazardous waste. Therefore, your rulemaking petition may be moot. Our conclusion is explained in detail below.

The Agency understands that the refrigerants manufactured by your company may become contaminated during customers' use. The contamination may occur because atmospheric moisture condenses, because lubricating oil from the compressor is released into the refrigerant, or because the compressor's high temperature may cause small amounts of hydrochloric acid to form. We understand that when servicing the refrigeration system, the service person may either vent the used refrigerant to the atmosphere, or collect the used refrigerant in cylinders to transfer it for reclamation.

Refrigerant that has been used and has become contaminated through use fits the definition of a spent material (40 CFR Section 261.1(c)(1)) if it must be reclaimed prior to its reuse. Spent materials that are reclaimed are solid wastes per Section 261.2(c). Your environmental engineer, Denise Pope, indicated that the used refrigerant is collected from customers in cylinders and transferred to your facility for reclamation, and is not tested to determine whether it can be reused directly

i.e., without processing. Thus, it would fall under the definition of a spent material going for reclamation, which is a solid waste.

The used refrigerant would not be considered a listed spent solvent. The spent solvent listings in Section 261.31 apply to certain materials that have been used for their solvent properties and have become spent. See the December 31, 1985 Federal Register notice (50 FR 53315) which clarifies the scope of the spent solvent listings.

The used refrigerant would not meet the listing description in Section 261.33(e) for trichlorofluoromethane (U121) or dichlorodifluoromethane (U075) because it has been used. The listings in Section 261.33(e) and (f) apply to the commercially pure grades of the listed chemicals, technical grades, and formulations in which the listed chemical is the sole active ingredient, but not to used chemicals.

If the solid waste is not identified as a listed hazardous waste, the generator's responsibility is to test the waste or apply knowledge to determine if the waste exhibits a characteristic. See Sections 261.5(f)(1), 261.5(g)(1) and 262.11(c). "Generator" includes the person who act or process produces hazardous waste, or whose act first causes the waste to become subject to regulation. In most cases, the generators would be the owner of the refrigeration equipment, as well as the service person who may be involved in determining whether the refrigerant is still useful, or who may be collecting the material for reclamation, i.e., there would be a co-generator situation.

Based on the information available at this time, it seems unlikely that the used refrigerant would exhibit any of the four characteristics of hazardous waste (ignitability, corrosivity, reactivity, or EP toxicity - see Sections 261.20 - 261.24). Corrosivity may be a characteristic of concern, if hydrochloric acid is present due to breakdown of the chlorofluorocarbons at high compressor temperatures. However, the characteristic in Section 261.22 refers to aqueous wastes with a pH less than or equal to 2, or liquid wastes that corrode steel at a rate greater than one-quarter inch per year. The Paint Filter

Liquids test (Test Methods for Evaluating Solid Wastes, Method 9095) is the method that is recommended for generators to isolate the liquid portion of their waste. See 50 FR 18372, April 30, 1985. If the hydrochloric acid is present in the liquid phase, and the waste does exhibit the corrosivity characteristic, it is a hazardous waste.

The generator's responsibility includes determining whether a waste is hazardous using the steps outlined in Section 262.11. If the waste is not listed, the generator has the option of testing or applying knowledge to determine whether the waste exhibits a characteristic. Enclosed is a portion of the background document for the hazardous waste generator regulations. The enclosed portion details the generator's option to apply knowledge "in light of the materials or processes used." Pages I-2.11 and I-2.12 explain that "If operations at different facilities are sufficiently similar as to provide the requisite basis, then nothing in the regulation prevents the use of such information. Persons are cautioned, however, that data from one facility are not necessarily transferrable to another; that subtle differences in the facilities or raw materials may significantly alter the character of the resulting waste."

If your company is interested in testing the used refrigerant that you would normally be reclaiming to see if it exhibits a characteristic of hazardous waste, the data obtained may be quite useful in that equipment owners or service personnel could use the data to make their hazardous waste determinations. If testing shows that these refrigerants never exhibit any of the characteristics, they may be reclaimed without complying with the EPA hazardous waste rules.

Finally, states authorized to implement RCRA are required to have programs that are consistent with the Federal RCRA program. These states' requirements may be more stringent or more extensive than the Federal regulations (Section 270.1(i)(1)), as long as they are consistent according to the criteria in Section 271.4. States may have requirements more stringent than EPA's.

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If you have further questions in this area, please contact Michael Petruska at (20) 475-9888.

Enclosure

Sincerely,

Original Document signed

Sylvia K. Lowrance, Director
Office of Solid Waste