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MEMORANDUM

SUBJECT: Texas Industries' Use of Wastewaters Generated by Off-site
Sources as an Effective Substitute for a Commercial Product

FROM: Joseph S. Carra, Director
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TO: William K. Honker, Chief
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Hazardous Waste Management Division (6H-P)

The purpose of the memorandum is to clarify procedures for classifying wastes under both 40 CFR 261.2(e)(1)(ii) [exclusion based on recycling] and 40 CFR 261.2(e)(2)(i) [inclusion based on final use].

On October 4, 1989, you sent a copy of an interoffice memorandum from a Texas Water Commission (TWC) staff attorney to the TWC Executive Director, and a copy of a letter from the Executive Director to the Environmental Manager of Texas Industries (TXI) (both dated September 18, 1989). As we understand, TWC had tentatively approved the use by TXI of industrial wastewaters generated off-site as an effective substitute for fresh water in the cement manufacturing process. The basis for the decision was that the proposal appeared to fit the exclusion provided in 31 Texas Administration Code 335.1 (40 CFR 261.2(e)(1)(ii)). The decision was subsequently overruled under the provision of the Texas air program because the waste water was found to contain volatile organic compounds (VOCs) and the process neither met best available control technology nor demonstrated 99.99% destruction of several of the organic compounds. You requested any views that we may have on this issue. However, at this point, we will only address the issues pertaining to the proper methodology for characterizing the waste stream.

The information provided states that TXI was using an off-site industrial wastewater, containing VOCs, to produce the slurry in their cement production process. The first determination to be made is whether the wastewater is in fact a solid waste. Under 40 CFR 261.2(e)(2)(i), materials used to produce

products that are applied to the land are solid wastes. Cement is a product that is typically applied to the land. This clearly makes the wastewater a solid waste (although the owner/operator of the cement kiln may document a claim that none of the cement produced using this wastewater is applied to the land, as provided in 40 CFR 261.2(f)).

Because the wastewater is a solid waste, for regulatory purposes, we must next determine if this solid waste is either a characteristic or listed hazardous waste. After reviewing the materials submitted by Region VI, we determined that not enough information was supplied about the generation of the waste stream or its constituents to make a decision on whether the waste was hazardous by characteristic or listing. Therefore, at this time we can only classify this wastewater as a solid waste.

In addition, also based on the information we have received, the "effective substitute" classification would not apply because the product is being used on the land (see 40 CFR 261.2 (e)(2)(i)). However, in such a case that the product (i.e., cement) was clearly not applied to the land and was derived from a waste which was hazardous by characteristic or listing, it might be helpful for us to share with you our approach to the issue of effective substitute (legitimate recycling) vs. treatment.

Determining whether a secondary material is an effective substitute for a commercial product requires a comparison of the secondary material to the commercial product that would otherwise be used. In this case, one would compare wastewater to fresh water. Assuming the substitutes (wastewater) is a hazardous waste, the commercial product (fresh water) would probably contain significantly fewer hazardous constituents or characteristics. Therefore, the wastewater is not likely to be an effective substitute. Note that this determination is not based on the qualities of the final product (cement) but on the qualities of the water sources. This approach determines whether the actual "secondary material" is an "effective substitute". The State's approach, which compares the impact to the environment posed by the use of the secondary material to the impact to the environment posed by using the commercial product that would otherwise be used, is in error. This would lead us to conclude that the assumed hazardous wastewater is being treated, not legitimately recycled. Whether the constituents in the wastewater are "bound" in the final product is not relevant to the determination. The issue is whether the constituents in the substitute water source are a desired ingredient of the final product or are being, in some fashion, treated.

Therefore, based on the material we received, the only determination that can be made regarding the wastewater is that it is a "solid waste". As opposed

to the State's approach in characterizing the wastewater, we believe that the methodology discussed above is the appropriate approach to determine the regulatory status of a waste stream.

For your information, we are enclosing a copy of an April 26, 1989 memorandum from Sylvia Lowrance to the Regional Hazardous Waste Management Division Directors regarding recycling vs. treatment for F006 wastes. This memorandum includes criteria for helping to decide if a waste is being legitimately recycled.

We hope our views are useful to you. If you have any further questions, please contact either Dave Eberly, OSW, (FTS 382-4691) or Reggie Cheatham, OWPE, (FTS 475-9360) of our staffs.

Enclosure

cc: Mitch Kidwell, CAD, OSW
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