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OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

JUN 21 1991

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Dear Mr. Young:

This letter responds to your letters of June 19, 1990 and December 21, 1990 to Mr. Randolph Hill of EPA's Office of General Counsel regarding the RCRA regulatory status of air pollution control dusts (i.e., baghouse dusts) generated at facilities owned by Norlite. These facilities burn hazardous waste fuels and the baghouse dust will either be recycled to produce the aggregate product or be directly used as aggregate. Specifically, you have asked for a determination that the baghouse dust, when recycled, meets the exemption from RCRA regulation for waste-derived products used in a manner constituting disposal found at 40 CFR 266.20(b). You have also requested a determination that baghouse dust used as an ingredient in the manufacture of concrete masonry is not solid waste under 40 CFR 261.2(e)(1)(i).

There appear to be four different scenarios for recycling the baghouse dust that you outline in your letters, two in which the material is used directly as a product, and two in which the material is used as an ingredient to produce a product. More specifically, the scenarios are when the baghouse dust is used: 1) as a product used in a manner constituting disposal (e.g., when used as an aggregate material for asphalt production), 2) as a product not used in a manner constituting disposal, 3) as an ingredient in a process that produces a product used in a manner constituting disposal, and 4) as an ingredient in a process that produces a product that is not used in a manner constituting disposal (e.g., when used as an ingredient of "block mix" for the manufacture of concrete masonry that is not, in turn, used in a manner constituting disposal). Although the uses of the baghouse dust presented in these four scenarios may seem very similar, the regulatory determinations differ based on the ultimate destination of the baghouse dusts or products into which they are incorporated. We have considered two issues raised by your request: 1) whether the process or activity involving the baghouse dust is legitimate recycling (i.e., not treatment or disposal), and 2) whether the baghouse dust itself is a solid waste or is excluded from being a solid waste because it is a legitimate substitute for a commercial product or raw ingredient.

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We should note at the outset that a final determination on these questions must be made by the authorized State regulatory agency or appropriate EPA Regional office. As we understand it, your request relates to the Norlite facility in New York; thus, the regulatory determination must be made by the State of New York. We provide below a discussion of the factors that EPA would use to evaluate whether the recycling of the baghouse dust generated by the burning of listed hazardous waste fuels is legitimate under Federal regulations; however, this discussion does not constitute a site-specific regulatory determination for the Norlite facility.

Scenario 1 -- Use as a product in a manner constituting disposal

The baghouse dust would be considered a waste-derived product and, when used in a manner constituting disposal, subject to the conditions placed on such products in the exemption provided at 40 CFR 266.20(b). It appears from the data you supplied that the baghouse dust meets the applicable treatment standards. Thus the waste-derived product would be exempt from further regulation, assuming it is otherwise determined to be a legitimate product, which we discuss further in Scenario 2.

In section E of your letter, you suggest that the "contained in" rule is not applicable to the baghouse dust, and thus that the baghouse dust is not derived from the listed wastes burned as fuel in the aggregate kiln and thus is not a listed waste. You cite the Land Disposal Restrictions for First Third Wastes final rule preamble discussion that presented the Agency's position regarding the regulatory status of products produced using hazardous waste fuels. The Agency stated that such products are not deemed to be used in a manner constituting disposal because hazardous wastes were not used as ingredients to produce them. The hazardous waste burned as fuel does not contribute to the product as an ingredient, but rather fires the production process. 53 FR 31198. This preamble discussion is clearly not applicable to the baghouse dust itself. The baghouse dust is the residue from burning the hazardous waste fuel; it is not the product. Thus, the baghouse dust itself would be a "derived-from waste. However, since the dust itself appears to meet the section 266.20(b) waste-derived product exemption, this rule would not affect the status of the dust used as a product.

In section D of your letter you also raise the issue of how the Bevill rule affects "derived-from" wastes from mineral processing. As you note, EPA has stated that mineral processing wastes removed from the Bevill exemption are considered "newly identified" for the purposes of the land disposal restrictions. While the preamble discussion states that characteristic wastes from mineral processing which were removed from the Bevill exclusion are not subject to treatment standards pending further

rulemaking, it is silent on how and whether listed wastes used in the process, either as a fuel or as an ingredient, affect the wastes newly removed from the exclusion, including residues derived from listed wastes. We wish to clarify that the aggregate kiln generates a residue, the baghouse dust, from the treatment of listed hazardous wastes -- wastes that are not newly identified and for which treatment standards are applicable. So, the baghouse dust is subject to the land disposal restrictions treatment standards applicable to the listed wastes burned in the aggregate kiln. Nonetheless, since the data indicate that the treatment standards are met, this issue is also moot.

Scenario 2 -- Use an a product in a manner that does not constitute disposal

The baghouse dust would be considered a waste-derived product, although there are no regulatory requirements for use in a manner that does not constitute disposal (e.g., the land disposal restrictions treatment standards do not apply). We believe that the State of New York should, however, evaluate the baghouse dust to determine whether it is a legitimate product by comparison with the aggregate that would normally be used. Based on your letter, we assume the "normal aggregate" would be the multiclone dust (i.e., the typical fines product). The data you submitted indicate that the lead and cadmium concentrations in the baghouse dust are double the concentrations found in the multiclone dust. The State should determine whether this is a significant difference and, therefore, determine whether the baghouse dust is not a legitimate product.

Scenario 3 -- Use as an ingredient to make a product used in a manner constituting disposal

Use as an ingredient to make a product that is used in a manner constituting disposal would not exclude the baghouse dust from the definition of solid waste (see 40 CFR 261.2(e)(2)(i)). The aggregate (as a product that is to be placed on the ground) continues to be a derived-from waste and would be required to meet the treatment standard. Further, an evaluation of the actual processing would be in order, i.e., a determination as to whether the process would be considered legitimate exempt recycling vs. fully regulated treatment or disposal by incorporating the hazardous constituents into the product. To the extent that there are hazardous constituents found in the baghouse dust that are not found in the analogous raw material, or that are found in the baghouse dust in significantly greater concentrations, the process would be determined to be treatment, unless a demonstration is made that the hazardous constituents are necessary or beneficial to the process or product. In other words, the hazardous constituents are being treated rather than being used as ingredients, unless demonstrated otherwise using the criteria mentioned above. We should note that EPA would

generally use a total concentration analysis rather than a leachate analysis to make this determination since we are comparing the waste against the raw material rather than their respective leachates. A demonstration of legitimate recycling would also need to show that the baghouse dust actually replaces a raw material (e.g., for every ton of baghouse dust used, there is a roughly equivalent reduction of shale or other raw materials). We note that your letter asserts that the baghouse dust would be used as a direct substitute for additional raw material consumption.

In section F, you cite EPA's "indigenous principle" to suggest that the baghouse dust may not be a hazardous waste when returned to the kiln. However, absent such a policy EPA evaluates the baghouse dust as it would any secondary material being used as an ingredient. The "indigenous principle" most closely captured in the current regulatory language at 40 CFR 261.2(e)(1)(iii) (the closed-loop exclusion) is not applicable in any instance where the product is to be used in a manner constituting disposal (see 40 CFR 261.2(e)(2)(i)).

Scenario 4 -- Use as an ingredient to make a product not used in a manner constituting disposal

As in Scenario 2 above, there are no regulatory requirements for a waste-derived product that is not used in a manner that constitutes disposal (or burned for energy recovery). If the baghouse dust will be legitimately used as an ingredient to produce a product that is not used in a manner constituting disposal, it would be excluded from the definition of solid waste. The determining consideration, however, is whether the baghouse dust is a legitimate substitute for a raw material (as discussed in Scenario 3). If the baghouse dust is determined to not be a legitimate substitute, the production process would be considered treatment, and thus would subject the aggregate kiln to RCRA regulation as a treatment process for the hazardous waste burned as an ingredient.

Under Federal regulations, regardless of the scenario, since the baghouse dust appears to meet the applicable treatment standards, it could be used as a waste-derived product or ingredient, assuming that it is marketed commercially and is a legitimate product. When the baghouse dust is used as an ingredient in the manufacturing process, the State of New York must determine: 1) whether the baghouse dust is a solid waste (i.e., whether the product will be used in a manner constituting disposal) and 2) whether the process is legitimate recycling (i.e., whether the baghouse dust is a legitimate substitute).

We must again emphasize that the New York Department of Environmental Conservation must make the determinations regarding the status of baghouse dust under each of these scenarios for the

facilities operating in New York. The role of EPA Headquarters is to provide technical and policy support to the Regional offices (or to the States through the Regional offices). We have provided you the factors that we would use to evaluate whether the recycling of the derived-from baghouse dust is legitimate under Federal regulations. The key considerations are whether the lead and cadmium concentrations are considered to be significantly greater in the baghouse dust than in the raw material and whether the process that uses the baghouse dust as an ingredient would be considered treatment.

If you have any further questions regarding the factors to consider in evaluating the regulatory status of a secondary material when recycled, please contact Mitch Kidwell at (202) 475-8551. For a specific determination regarding the regulatory status of the baghouse dust when recycled at Norlite's New York facility, you must contact the State regulatory agency.

Sincerely,

Original Document signed

David Bussard, Director  
Characterization and  
Assessment Division