

Mr. Stephen P. Holt
Director, Environmental Affairs
Giant Cement Company
320-D Midland Parkway
Summerville, South Carolina 29485

Dear Mr. Holt:

Thank you for your letter of December 23, 2003 regarding the burning of containment rainwater contaminated with hazardous waste fuel (referred to in this letter as "contaminated rainwater") in Giant Cement Company's (Giant) kilns. In your letter, you state that Giant would like to pump the contaminated rainwater into its burn tanks and blend it into the fuel used to fire the kilns. You requested that the Environmental Protection Agency (EPA) address the regulatory implications of burning contaminated rainwater in Giant's kilns. Before addressing the specific question raised in your letter, we review some of the general principles that govern application of Subtitle C requirements of the Resource Conservation and Recovery Act (RCRA) to contaminated environmental media, such as Giant's contaminated rainwater.

The "contained-in" policy is the basis for EPA's interpretation regarding application of RCRA Subtitle C requirements to environmental media contaminated with hazardous wastes. Under the contained-in policy, EPA requires that contaminated environmental media, although not hazardous wastes themselves, be managed as if they were hazardous waste if they contain hazardous waste or exhibit a characteristic of hazardous waste. See "Land Disposal Restrictions Phase IV" final rule (63 Fed. Reg. 28621-622, May 26, 1998).

Contaminated rainwater would be considered contaminated environmental media and subject to regulation under RCRA Subtitle C because it is contaminated with hazardous waste fuel. EPA generally considers contaminated environmental media to contain hazardous waste: (1) when they exhibit a characteristic of hazardous waste; or, (2) when they are contaminated with concentrations of hazardous constituents from listed hazardous waste that are above health-based levels. Note that if the contaminated rainwater does not exhibit a characteristic of hazardous waste or contain

listed hazardous waste, then the containment rainwater is not subject to any RCRA requirements.

If contaminated rainwater “contains” hazardous waste fuel, it is subject to all applicable RCRA requirements until the rainwater no longer contains hazardous waste (i.e., until the containment rainwater is de-characterized or, in the case of containment rainwater containing listed hazardous waste, until EPA or an authorized State determines that the rainwater no longer contains listed hazardous waste). Typically, these determinations, called “contained-in” determinations, that contaminated media do not contain hazardous waste, do not mean that no hazardous constituents are present in environmental media, but simply that the concentrations of hazardous constituents present do not warrant management of the media as hazardous waste. A contained-in decision is made by EPA or an authorized State on a case-by-case basis considering the risks posed by the contaminated media. Given that your letter makes no mention of whether a contained-in determination has ever been made on the contaminated rainwater, for purposes of this response, we assume that it is or would be contaminated with concentrations of hazardous constituents from listed hazardous waste that are above health-based levels.

In the Giant case, we understand from our discussions that the contaminated rainwater is the result of rainwater contacting tanks and ancillary equipment which are all related to the hazardous waste-derived fuel operations. That is, rainwater does not come into contact with other tanks and equipment holding hazardous waste that would not be considered a legitimate hazardous waste-derived fuel.

Generally, when listed hazardous waste (i.e., wastes defined in 40 CFR part 261, subpart D) is burned in a cement kiln in a manner that results in the clinker product “containing” the hazardous waste (e.g., burned as an ingredient), then the clinker product is a waste-derived product subject to the provisions of 40 CFR 266.20.¹ See “Land Disposal Restrictions for First Third Scheduled Wastes” final rule (53 Fed. Reg. at 31198, August 17, 1988) that you mention in your letter. This waste-derived product is eligible for an exemption from any further regulatory requirements pursuant to 40 CFR 266.20(b) if the clinker product meets the applicable treatment standards in subpart D of 40 CFR part 268. That same preamble indicates, however, that cement produced from kilns that are fired by hazardous waste fuel are not considered to “contain” hazardous waste, because the hazardous waste is not being used as an ingredient and so would not be “contained” in the product.

Thus, cement produced when Giant’s kilns are fired by hazardous waste fuel is

¹ There would be no waste-derived product implications with regard to burning a solid waste that only exhibits the characteristic of hazardous waste (i.e., waste defined in 40 CFR part 261, subpart C).

not considered to contain hazardous waste, and so is not subject to the waste-derived product provisions in 40 CFR 266.20. We considered whether the burning of the contaminated rainwater – that is, contaminated with small amounts of that same hazardous waste fuel – should be analyzed the same way. As we understand how Giant intends to process and burn the contaminated rainwater, the cement product should not be considered to be a waste-derived product under 40 CFR 266.20. As you state in your letter, the contaminated rainwater contains small quantities of hazardous waste-derived fuel originally destined to be burned in Giant’s cement kilns. Had these incidental and essentially unavoidable “losses”² of hazardous waste not occurred at Giant’s on-site tank farm, then the hazardous waste fuel would have been burned in Giant’s kilns without adverse waste-derived product consequences.

Water is typically associated with hazardous waste fuels in burn tanks of commercial facilities such as Giant. When the fuel is introduced into the kiln, this water is simply evaporated. In the case of the rainwater contaminated with fuel constituents, returning these hazardous waste fuel losses to the waste fuel burn tanks in a manner that does not significantly lower the heating value of the hazardous waste fuel will not alter the disposition of the toxic constituents in the contaminated rainwater. The hazardous constituents in the contaminated rainwater are no different than in the hazardous waste fuel, are no more likely to partition to cement product, and the burning activity is no more using the containment rainwater as an ingredient than burning the hazardous waste fuel itself. Thus, given that the clinker product will not “contain” the hazardous waste if the contaminated rainwater is burned in the kiln, we conclude that the cement produced should not be considered a waste-derived product.

We note that this letter applies only to the specific fact situation described in your letter (as we understand the facts concerning Giant’s kilns and burn tanks). We would not necessarily analyze situations involving other contaminated media (such as contaminated soils, where the solid fraction could be contributing ingredient value to cement) the same way. Finally, a state program may be more stringent or different than the federal regulations so it may be necessary to check with the State of South Carolina on their interpretation.

I hope this information will be helpful in resolving issues related to Giant’s Notice of Deficiency. If you have any further questions, please contact Frank Behan of

²Though not specified in your letter, we assume that the contaminated rainwater is a result of losses from normal hazardous waste material handling operations such as spills from the unloading or transfer of materials from other containers, or leaks from well-maintained pipes, valves, fittings, or other devices used to transfer hazardous waste materials. Thus, it is assumed that the contaminated rainwater contains trace levels of the original hazardous waste.

my staff at 703-308-8476.

Sincerely yours,

Matt Hale, Director
Office of Solid Waste

cc: Beth Antley, Region IV (980 College Station Road, Athens, GA 30605)

RO 14726