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**CKRC Members Only**

**5000Btu – A Bright Line?**

**October 2003**

In past meetings of the Cement Kiln Recycling Coalition (CKRC) Waste Management (WM) Committee, members expressed support for CKRC efforts to compile documentation supporting the perspective that “5000 Btu is not a bright-line” when determining whether someone is engaged in legitimate burning for energy recovery.

EPA has often referred to 5000 Btu/lb as a general, non-binding benchmark or presumption for determining energy recovery. EPA has always made clear, however, that the 5000 Btu level is not a hard-and-fast or “bright-line” rule. Rather, EPA has consistently ruled that such determinations are to be made on a case-by-case basis and has consistently recognized that valid energy recovery may be obtained from wastes containing less than 5000 Btu/lb. While CKRC has long taken the position that 5000 Btu/lb is arbitrarily and inappropriately high as a general benchmark for cement kilns, the Coalition has at least agreed with EPA’s position that case-by-case determinations can be made that valid energy recovery can be achieved at less than 5000 Btu/lb.

**Pre-1991 BIF Rules**

In 1983, EPA’s “sham recycling policy” claimed that it is illegal for cement kilns to burn HW unless it is for bona fide energy or material recovery unless cement kilns obtain RCRA Subpart O incineration permits. This policy does mention 5000 Btu as an example in a footnote, but does not draw a bright line. In the following years leading up to the 1991 Boiler and Industrial Furnace Rules, EPA published a series of preamble statements which mention 5000 Btu occasionally but clearly states that site-specific considerations govern. (See Attachment 1.)

**Post-1991 BIF Rules**

With the publication of the 1991 BIF rules, all cement kilns in compliance with the new regulations could legally burn hazardous waste for any purpose. However, EPA also articulated on several occasions an interpretation that, unless a cement kiln is burning hazardous waste for bona fide energy recovery, the product of the cement kiln would be a “waste-derived” product subject to 40 CFR 266.20; and therefore a waste unless it meets all land disposal restriction requirements. EPA increasingly referred to 5000 Btu/lb “as generated” as a general presumption by which a facility would unquestionably be deemed to engage in bona fide energy recovery.

### **CKRC's 1994 Petition for Rulemaking**

In 1994, CKRC filed a petition with EPA disputing for the record that cement product can ever be subject to Subtitle C. However, due to the importance of the energy recovery issue, CKRC's petition sought an EPA rule for cement kilns on that very issue. Specifically, CKRC's petition highlighted the history of EPA policy that 5000 Btu/lb was never intended to be specifically determinative and demonstrated with data and calculations that wastes with minimum heating value of 996-1948 Btu/lb contribute valid energy recovery in cement kilns (see attachment 2). EPA has never responded to the CKRC petition. However, in response to requests for guidance, the Director of the Office of Solid Waste at the time issued letters restating EPA's general presumption of 5000 Btu/lb for cement kilns for valid energy recovery. (See Attachments 3 and 4.)

In March of 1995, EPA proposed the "Phase III" LDR rules in the Federal Register and included certain clarifications regarding combustible wastes. In addition, the proposal included a specification of 5000 Btu/lb as a general presumptive reference for energy recovery.

### **More Recent FR Publications**

On May 2, 1997, EPA published a RCRA notice noting that cement kilns and other industrial furnaces could obtain valid energy recovery at less than 5000 Btu "due to these devices" general efficiency of combustion (62 FR at 24251, n. 68, May 2, 1997). EPA concluded:

Thus, the 5000 Btu level is not an absolute measure of burning for energy recovery (i.e., a rule), particularly when industrial furnaces and industrial boilers are involved.

Id.

Then, in 1998, EPA responded to a complaint filed by CKRC regarding the Toxic Release Inventory. In this notice, EPA clarified that "EPA's references to 5,000 British Thermal Units...in the definition of "treatment for destruction" in 40 CFR 372.3 and in the preamble of the expansion rule...is not intended to function as a regulatory floor at this time for determining the heating value at which energy maybe recovered." (See Attachment 5))

## **As-generated vs. As-burned**

Some EPA letters in the early 1990s articulated EPA's Btu policy on the basis of evaluating Btu content on an "as generated" basis. Under such a policy, each component of a blended, "as-fired" waste stream would have to meet an energy value criterion (whether 5000 Btu or otherwise) in order for the burning to be considered valid energy recovery burning. In the most recent Federal Register statements of its position, however (the 1997 NODA and the 1998 TRI clarification discussed above), EPA never mentioned "as generated" as a criterion.

In reviewing the basis for EPA's policy as articulated most fully in the 1997 NODA, in fact, one can only conclude that EPA's policy is based on a concern over the condition of waste "as burned," not "as generated." As EPA said in the NODA, the basic issue is "whether toxic contaminants would more likely partition to the clinker." 62 FR at 24251, col. 2. In another passage, EPA states: "To implement this regulation, the Agency has used Btu values of a waste as a proxy to determine whether contaminants in the HW fuels will or will not be deemed to transfer to the product . . . ." 62 FR at 24251, col. 1.

The degree of metal concentration being fed to a kiln at any given time, of course, is a function of the status of the HWF as it is being fed to the kiln, not of the status of any particular "as generated" hazardous waste that is one portion of a blend being fed to the kiln. Consistent with EPA's stated purposes in adopting its 5000 Btu interpretation, then, the relevant issue concerns the quality of the material as it is being fed to the kiln, not the quality of various components of blended material before there is any blending. Moreover, EPA's statements in Federal Register notices must be given more weight than statements in letters, and the absence of any mention of "as generated" in the two Federal Register notices should be given much more weight than the statements in the earlier letters.

Moreover, EPA's recycling and BIF rules have long contained a special exemption for facilities that "process hazardous waste solely for metal recovery." See § 266.100(d). These regulations include a section that specifies certain criteria for determining whether a waste is processed solely for metal recovery purposes, and one criterion for losing the exemption has always been whether waste is burned as fuel. As to this criterion, EPA's regulations state:

A hazardous waste meeting either of the following criteria is not processed solely for metal recovery: . . . (ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, *as fired*, and so is considered to be burned as fuel.

§ 261.100(d)(2) (emphasis added).

It is quite significant that the only place in the regulations that does speak to the 5000 Btu as-fired vs. as generated issue (in defining situations in which waste will be considered as fuel) explicitly states “as fired.”

### **List of Attachments**

1. Relevant FR Exceptrs Relating to Legitimate ER 1983-1987
2. CKRC 2/8/94 Rulemaking Petition, Exhibit C
3. Guidance Letter re: Blending and Burning of Low-Btu Organic Wastewaters
4. Some EPA 1994 Guidance Letters
5. FR Publication re: Clarification of Combustion for Energy Recovery