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United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

APPLICABILITY OF MINING WASTE EXCLUSION TO WASTED LIME KILN
REFRACTORY BRICKS

May 11, 1994

Mr. Jim Sygo, Chief
Waste Management Division
Department of Natural Resources
John Hannah Building
P.O. Box 30241
Lansing, Michigan 48909

Dear Mr. Sygo:

This letter is in response to your April 15, 1994 letter requesting concurrence with a determination of the Michigan Department of Natural Resources (MDNR) that lime kiln refractory bricks are not Bevill exempt wastes pursuant to 40 CFR 261.4(b)(7).

The State is correct in determining that lime kiln bricks are not Bevill exempt wastes; we agree with the state that such bricks are not "uniquely associated" with mining or mineral processing and, therefore, are not contained within the Bevill exemption. The concept of "uniquely associated" has been used consistently by the Agency as a factor in determining which wastes would remain under the Bevill Amendment. The Agency stated in 45 FR 76619, November 19, 1980 that:

[T]his exclusion does not, however apply to solid wastes, such as spent solvents, pesticide wastes, and discarded commercial chemical products, that are not uniquely associated with these mining and allied processing operations, or cement kiln operations. Therefore, should either industry generate any of these non-indigenous wastes and the waste is identified or listed as hazardous under Part 261 of the regulations, the waste is hazardous and must be managed in conformance with Subtitle C regulations.

The Agency then restated its position regarding "uniquely associated" wastes in 54 FR 36616, September 1, 1989. In that rule, the Agency said that the Bevill exclusion does not apply to solid wastes such as discarded commercial chemicals, many cleaning wastes (such as spent commercial solvent) and used lubricating oils because they are not uniquely associated with mineral extraction, beneficiation, or processing operations.

The key consideration for establishing that a waste is uniquely associated is determining whether or not the waste originates primarily from, or, at the least, is significantly influenced by contact with ores, minerals, or beneficiated ores and minerals. Wastes that are essentially the same as analogous wastes generated by other industries or activities are not uniquely associated, and hence are not eligible for the Mining Waste Exclusion. Even wastes that may come into contact with parts of the mineral feed stream, e.g., cleaning wastes, are not uniquely associated, because their fundamental character does not arise from such contact.

Refractory bricks used at lime kilns are not essentially different from refractory bricks found in industrial furnaces, since lime kiln refractory bricks are essentially the same as that found in other industrial sectors. Further, while lime kiln refractory brick does come into contact with the lime, the chemical composition of the this waste is not affected by such contact. Based on both of the factors noted above, lime kiln refractory bricks are not Bevill exempt waste.

Your letter indicates that Dow Chemical claims that the refractory brick are uniquely associated with mineral processing. The only mineral processing wastes currently exempt from regulation under RCRA Subtitle C are those noted in 40 CFR 261.4. Lime kiln refractory bricks are not listed in this section. Any discussion of refractory brick in draft rules prior to the final September, 1989 rule do not have any legal status.

Dow Chemical appears to be combining two separate regulatory issues. A solid waste from mining or mineral processing is first assessed to determine whether it is uniquely associated with mining. If it is not uniquely associated, it does not matter where in the mining or mineral processing cycle it is generated; such wastes are not exempt under the Bevill exclusion.

To summarize, based on the information in your April 15, 1994 letter, and upon the Agency's interpretation of the scope of the Bevill exemption, we agree with the state that wasted lime kiln refractory bricks are not Bevill exempt wastes.

I hope this letter is useful in your efforts to determine the regulatory status of wastes at the Dow Chemical Company, Michigan Division facility. If your staff needs to discuss this matter further, please contact Steve Hoffman of my staff at (703)-308-8413.

Sincerely yours,
Michael Shapiro, Director
Office of Solid Waste

Attachment

State of Michigan
Department of Natural Resources
Lansing, MI 48909

April 15, 1994

Mr. Michael Shapiro,
Director Office of Solid Waste, 5301
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 10460

RE: Applicability of Mining Waste Exclusion

Dear Mr. Shapiro:

The purpose of this letter is to request your concurrence with a determination of the Michigan Department of Natural Resources (MDNR) on the applicability of the so-called mining waste exclusion" contained in 40 CFR 261.4(b)(7) to lime kiln refractory bricks.

Administrative rules under Michigan's Hazardous Waste Management Act, 1979 PA 64, as amended, exempts from regulation as hazardous waste "solid waste from the extraction, beneficiation, and processing of ores and minerals, including coal, phosphate rock, and overburden from the mining of uranium ore." The exemption in Michigan's rules is based on 40 CFR 261.4(b)(7) as promulgated in the November 19, 1980 Federal Register.

The MDNR has concluded that waste refractory bricks from a lime kiln are not excluded from hazardous waste regulation under the Michigan rule. Although the MDNR believes that lime kilns are involved in "beneficiation" as a result of being used for calcining to remove water and/or carbon dioxide, the MDNR does not believe refractory bricks from such a kiln are also excluded.

To be excluded from regulation as hazardous waste, wastes must be "uniquely associated" with mining operations. The U.S. Environmental Protection Agency (U.S. EPA) clearly established this principle in 1980, when they indicated that "this exclusion does

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not, however, apply to solid wastes ... that are not uniquely associated with these mining and allied processing operations..." (45 Fed. Reg. 76,618, November 19, 1980). The MDNR believes waste refractory brick from a lime kiln are not uniquely associated with mining operations for the following reasons.

- Waste refractory brick results from kiln maintenance. It is not a byproduct or residue from calcination. The fact that the bricks come into contact with the ores and minerals being "beneficiated" is irrelevant.
- Waste refractory brick from a lime kiln is not different in nature than refractory brick from other types of kilns not involved in mineral processing, such as a cement kiln or rotary kiln incinerator. In other words, kiln bricks are not "unique" to mineral processing.

The Dow Chemical Company, Michigan Division (Dow) has claimed that lime kiln bricks are uniquely associated with mineral processing. To support this position, they reference a proposed determination by the U.S. EPA on furnace bricks from different mineral processing sectors (54 Fed. Reg. 15, 343, April 17, 1989) and a determination by the U.S. EPA on spent potliners from the aluminum industry (53 Fed. Reg. 35,412, September 13, 1988) which they claim are similar to furnace brick. In both cases, the U.S. EPA indicated that these wastes were not exempt under the mining waste exclusion, but justified this conclusion on the basis that the wastes did not meet the so-called "high volume-low hazard" criteria applicable to processing wastes.

The MDNR does not believe the claims by Dow referenced above to be relevant to the regulation of lime kiln bricks, for the following reasons:

- The April 17, 1989 proposal was not a final rule, and therefore, has no legal standing. In fact, the MDNR notes that the proposed furnace brick determination referenced by Dow was not finalized on September 1, 1989, as were determinations on other process wastes.
- Both the September 13, 1988 rule and the April 17, 1989 proposal involved mineral processing, not beneficiation. The "low hazard, high volume" concept used to determine the applicability of the exclusion to processing wastes

has not been identified as a criterion for beneficiation. Therefore, it is impossible to make an analogy between waste from beneficiation and waste from mineral processing operations.

- Both the September 13, 1988 rule and the April 17, 1989 proposal were silent on the issue of whether the furnace bricks and the spent potliners are uniquely associated. The Office of Solid Waste has indicated to the MDNR that the U.S. EPA has determined in other cases that furnace bricks are not uniquely associated.
- Michigan hazardous waste rules effective at this time do not reflect either the September 13, 1988 rule-making, or the September 1, 1989 rule-making. Therefore, even in U.S. EPA had made a determination in these rules regarding whether furnace bricks are uniquely associated, such a determination would not be binding in Michigan, an authorized state under Subtitle C of the Resource Conservation and Recovery Act (RCRA).

Based on the rationale listed above, the MDNR has concluded that lime kiln furnace bricks are not uniquely associated to mineral processing and, therefore, are not excluded from regulation as hazardous waste under RCRA or Michigan law.

The MDNR requests written concurrence by the Office of Solid Waste on our determination. If you have any questions about our conclusions regarding lime kiln furnace brick, please contact Mr. Phil Roycraft, Waste Management Division Cadillac District Supervisor, at 616-775-9727 or Mr. Jack Schinderle, Waste Management Division Hazardous Waste Program Section, at 517-373-8410.

Jim Sygo, Chief
Waste Management Division
517-373-9523

cc: Mr. Norm Niedergang, U.S. EPA Region 5
Mr. Jim McLaughlin/Mr. Phil Roycraft, MDNR-Cadillac
Mr. Phil Schrantz, MDNR
Mr. Jack Schinderle, MDNR
Mr. Mark Stephen, MDNR