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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

June 30, 1995

William C. Hopper  
Industrial Hygienist  
Brown & Davis, Incorporated  
1201 Main Street, Suite 1915  
Columbia, SC 29201

Dear Mr. Hopper:

This is in response to your May 30, 1995 letter requesting clarification of regulatory language with respect to permitted hazardous waste container storage facilities. You specifically request clarification regarding the term "sufficiently impervious", as it occurs in 40 CFR 264.175(b)(1), and ask whether coatings and liners are required in conjunction with concrete containment pads.

The regulations at Section 264.175 address containment requirements for container storage areas only. Specifically, 264.175(b) addresses the design and operational requirements for containment systems, and requires that container storage areas consist of a base underlying the "containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed." There is no specific definition of "sufficiently impervious" with respect to container storage areas provided in the regulations, and there is no mention that liners or coatings must be used with concrete pads.

However, the intent of "sufficiently impervious" may be understood by considering preamble language from the January 12, 1981 rules (46 FR 2802). Specifically, at 46 FR 2829, the Agency states that bases underlying containers by "constructed of concrete or asphalt but latitude has been incorporated to allow for other materials of construction." Further, "the important consideration is that the containment system in its entirety be capable of collecting and holding escaped wastes and contaminated precipitation." The container storage regulations also require

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that the base must be sloped or the system must be designed so that liquids resulting from releases can drain and be removed, and that any waste that has spilled or leaked into the secondary containment area, or any accumulated precipitation, must be removed in a timely manner.

Your letter mentions that certain policy correspondence regarding surface impoundments and waste piles indicated that concrete is not considered sufficiently impervious. Those statements addressed the appropriate materials for primary containment units are that are designed to operated in direct continuous contact with hazardous waste. This is fundamentally different than the question you ask regarding a container storage area where the concrete pad functions as a secondary containment device to catch any spillage of hazardous waste in the event of container failure. The container provides the primary containment, while the concrete base provides the secondary containment.

Finally, although the regulations at §264.175 do not specifically require a liner or coating to be used in conjunction with a concrete base, States may have more stringent requirements for container storage areas, as deemed necessary to protect human health and the environment. for site-specific requirements, you should contact the appropriate State regulatory agency. If you have any further questions, please call Jeff Gaines of my staff at (703) 308-8655.

Sincerely,

Frank McAlister, Chief Permits Branch (5303W)  
Office of Solid Waste

cc: Matt Hale, OSW  
Jim Michael, SW  
Jeff Gaines, OSW  
Ross Elliott, OSW  
Brian Grant, OGC  
G. Alan Farmer, Region IV

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Attachment  
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May 30, 1995

Sylvia K. Lowrance, Director  
Office of Solid Waste  
United States Environmental Protection Agency (USEPA)  
Washington, D.C. 20460

Dear Mrs. Lowrance:

I am writing you in regards to the container storage standards for permitted facilities as specified in Part 264, Subpart I in title 40 of the Code of Federal Regulations. Specifically, I am confused about the words "sufficiently impervious" found in 264.175 (b)(1). My understanding of the meaning of the work impervious is that it means something that is incapable of being penetrated or incapable of being affected. This would indicate to me that containment for a storage area used to store liquid volatile organics would require an impervious coating or liner. In addition, the September 2, 1988 Federal Register, which discusses the containment requirements for "new" tanks systems, states that concrete is not sufficiently impervious. Also, several policy letters I have read regarding waste piles and surface impoundments also state that concrete is not sufficiently impervious. Are permitted container storage areas required to have coating or liner covering over a concrete pad? If so, is this a requirement in every case or only under certain circumstances?

I appreciate your time and effort in providing me with assistance regarding this matter. If need be, I can be reached at (803) 748-1226.

Sincerely,

William C. Hopper  
Industrial Hygienist

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