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RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY

MAY 88

6. Hazardous Waste Tank - Leak Detection

40 CFR Sections 264 and 265.193(b)(2) require that hazardous waste tank systems must be provided with secondary containment systems that are capable of detecting releases. The leak detection system must be able to detect the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours as specified in Sections 264 and 265.193(c)(3). The type of leak-detection method used is afforded some flexibility according to the October 2, 1987 OSWER Policy Directive No. 9483.00-3 titled "Questions and Answers Regarding the July 14, 1986 Hazardous Waste Tank System Regulatory Requirements." The directive explains that "In some cases, daily visual inspection will be allowed as a means to comply with the leak detection requirement."

Can a daily visual inspection be used as a means to comply with the leak-detection requirement when a hazardous waste tank is resting on a concrete pad?

For completely aboveground tank systems, or portions thereof, a daily visual inspection of the hazardous waste tank system is an acceptable method of leak-detection. When a tank is resting directly on a concrete pad, it is not possible to visually inspect the bottom portion of the tank that is in contact with the concrete.

In this situation, if the owner/operator can demonstrate that any release of hazardous waste from the tank bottom will be promptly detected by a daily visual inspection before the released material potentially migrates to the environment (e.g., via cracks in the concrete), then a daily visual inspection may be allowed by the appropriate permitting authority. To enhance the detectability of releases in these situations, the concrete pad must be impermeable and free of cracks. The pad would have to be sloped or otherwise designed to facilitate the flow of released waste from beneath the tank to a point where it can be readily detected in order for the owner/operator to make a showing that a release can be detected within a 24-hour period. Other methods of leak-detection for the secondary containment may also be used.

Other options are being used by the regulated community to provide release

detection for this situation. When a tank, especially one of greater than 20,000 gallons, is resting directly on a concrete pad and is not tightly surrounded by any structural walls, an area for a leak detection system can be created by physically entering the tank and welding a new tank bottom above the existing bottom of the tank (double bottom or false bottom tank). The space between the two tank bottoms is the area where the leak detection system will be installed. Assuming the rest of the tank is not double-walled, a secondary containment system, such as diking the perimeter area of the tank, would also be needed.

6. Hazardous Waste Tank - Leak Detection (Cont'd)

If the tank is within a concrete vault and resting directly on the floor of the vault, a leak-detection system can be installed between the outer tank wall and the inner vault walls. The leak-detection system may be positioned at the lower end of the sloped vault floor and all portions of the floor including the area on which the tank rests must be lined or coated. These specific requirements and all other applicable provisions in Sections 264 and 265.193 must be met. The leak-detection system, installed entirely within the walls of the vault, is sufficient. No leak-detection system outside of the vault walls, such as monitoring wells, is required.

Another possibility for leak detection if the tank is resting on a concrete pad unsurrounded or on the floor of a concrete vault, is raising the tank above the floor or pad permanently with structural support such as metal legs. If the support is provided and the tank bottom is exposed, a visual inspection may be used to fulfill the leak-detection requirement for the hazardous waste tank's secondary containment system.

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