9483.1987(09)

TANKS AND ANCILLARY EQUIPMENT DESIGN

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

JUN 25 1987

Mr. Thomas G. Neltner
Environmental Engineer
Environmental Affairs Division
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Dear Mr. Neltner:

I am sorry for the delayed response to your letter of May 6, 1987. However, I have attempted to resolve the issues concerning the definition of welded flanges and your proposed use of plastic- or teflon-lined, threaded pipe joints without secondary containment.

In general, your interpretations are correct. However, I have several comments/concerns which are attached and follow the same format as the attachment to your letter titled: "Hazardous Waste Tank Interpretations of the July 14, 1986 Regulations". Please be reminded that Lilly facilities must comply with all applicable provisions relating to the management of hazardous waste, not just the July 14, 1986 tank rule.

If you have any questions or need additional clarification, please feel free to call me at (202) 382-4499 or Bill Kline at (202) 382-7917 or our Region V office.

Sincerely,

Original Document signed

Chester J. Oszman, Jr.
Environmental Engineer
Office of Solid Waste

Attachment
cc: Bill Kline, OSW
Gary Victorine, Region V

ATTACHMENT

INCINERATION/STORAGE PAT SECTION
COMMENTS RESPONDING TO "LILLY"
REGULATORY INTERPRETATIONS

I. TANKS

1. Dike Design

I generally agree with your "Dike Design" concept. However, you should be prepared to demonstrate compatibility of the impermeable interior coatings with the stored wastes. If the dike system is designed like a "vault" (e.g., built in the ground with concrete floors and walls) and if the dike/vault is subject to hydraulic pressure, then the design must include an exterior moisture barrier or be otherwise designed to prevent migration of moisture into the dike/vault.

2. Leak Detection

Again, all impermeable barriers must be compatible with the stored waste(s). If existing technology or site conditions will not allow detection of a release within 24 hrs, for the "vertical tank" and the "insulated tank" situation, the EPA Regional Administrator will make a determination which will define the "earliest practicable time" to report releases. This determination will be based on your design and subsequent demonstration.

3. Assessment and Certification

In the third and fourth paragraphs the word "system" should be inserted after the word "tank" wherever the word "tank" is not followed by the word "system". Doing this adds clarity to your interpretation of the inspection and construction requirements.

II. ANCILLARY EQUIPMENT

1. Pipe Arbors

Large, sudden failures, although uncommon, must be accounted for in the facility's contingency plan. Being in the contingency plan, sudden failures could influence the design of the tank system.

Flanges bolted together, with the pipe welded to the flange, with a gasket between the flange faces, will not require secondary containment. However, it is essential that welded pipe to flange systems be tested for tightness before being placed in use and that the flange be inspected daily for leaks. If the welded pipe to flange system is dismantled and reassembled, then the system would have to be retested for tightness before being placed back in service.

It is the intent of the rule to require secondary containment for any threaded joint system. The plastic- or teflon-lined, threaded pipe joint would be no exception. Your description of the plastic- or teflon-lined, threaded pipe to flange joint is inadequate to determine the reliability of the system. To use this threaded pipe to flange system without secondary containment you will need to demonstrate to the applicable permitting authority (EPA Region or authorized State) that the joint is significantly more reliable than other (unlined) threaded pipe to flange systems. If you choose to make this demonstration, we at Headquarters would like to see the data and complete design.

2. Loading/Unloading Stations

Your description of the sump in the loading/unloading stations is inadequate. More detail relating to the design and operation of the sump is needed before we can judge its adequacy. Why was the containment volume of 10% picked? The sump should be designed to provide capacity to hold any expected spill or leak plus and subsequent wash-down products. Also, additional capacity is needed to contain precipitation from a 25 yr., 24 hr. rainfall event if the stations are in the open. Your design should consider how/when the sump will be inspected, sampled and emptied. Also, the loading/unloading station sump will have to be designed to prevent any uncontrolled release of hazardous waste to the environment.