



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

AUG 1 1990

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

**SUBJECT:** Review of Total Containment's "Enviroflex" Piping

**FROM:** Dave O'Brien, Chief  
Standards Branch

**TO:** Lee Daniels  
UST/LUST Program Coordinator  
Region VII

This responds to your July 13, 1990 request for a review of the Total Containment's "Enviro Flex" piping technical submittal to Region VII in order to determine if their piping system is no less protective of human health and environment than the other piping methods allowed under Section 280.20(b)(1)-(3). A positive determination in this matter by the implementing Agency (in this case EPA) would assure users of the "enviro flex" product that they are in compliance with the requirements for new piping under Section 280.20(b)(4).

It is our determination that the enviroflex prototype's design and construction meets the intent of the requirements for new piping in section 280.20(b). Based on the information provided by Total Containment to you, we have concluded that the enviroflex piping system is no less protective than the other methods allowed under Section 280.20(b)(1)-(3) for the reasons provided below.

First, as stated in the preamble to the final rule, it remains EPA's intent to avoid interfering whenever possible with the ongoing development of innovative and more environmentally protective new technologies (See 53 FR p37095, September 23 1988). Clearly, Total Containment's flexible piping/secondary containment system is innovative and intended to be environmentally protective. The Company's attempts to first install several Closely-monitored test/prototype sites nationwide we believe warrants special consideration by EPA.

Second, we have evaluated the technical information against our knowledge of the three most common failure modes of piping in the past and recognize that Total Containment has already tried to address them. The primary containment piping's materials of construction, plus the fact that it is all placed within a secondary containment jacket, should eliminate the threat of releases due to external corrosion. The flexible nature of the piping should address the types of piping failures that are due to accidents, frost heaves, and other stress-causing underground movements. Finally, we also noted the draft installation procedures provided, and the company's stated commitment to use ANSI/NFPA 30A, PEI/RP100, API 1615 as guidelines so the

installation-caused releases are kept to a minimum. Each of the above features are aimed at the three major causes of release from piping we have witnessed to date.

The extensive nature of the static and dynamic testing already done by Dayco with reference to numerous existing standards (such as UL330 NFPA30, ANSI B31.3 and B31.4) demonstrate proper concern with the primary containment piping's design. Total Containment's submittal to U.L. for listing and the scheduling of other independent test lab work is appropriate and reassuring.

And finally, the fact that Total Containment also admits these installations are prototypes, will be continuously and automatically monitored, as well as having all the sumps inspected monthly, have caused us to conclude that this piping system is no less protective of human health and the environment than the other methods allowed under 28O.20(b)(1)-(3). However, please note that we may need to reconsider this determination in the future should Total Containment fails to get UL listing in a timely manner, does not pass their independent lab tests, or experiences operational problems with the integrity of the piping system that are detected through their continuous monitoring of the prototype systems,

If you want to discuss this matter further let me know. However, if you agree, when you discuss it with Total Containment, please remind them to check with State and local officials where they want to use the enviroflex system. As you know, they have to also satisfy those other governments' requirements which may be different or more stringent the EPA's.