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Arnold Schwarzenegger
Governor

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To: Underground Storage Tank (UST) Local Regulatory Agencies and Interested Parties

Matrix of Pipe Monitoring Applications

California Code of Regulations, Title 23, section 2631, subdivision (b) requires that the design and construction of tanks and piping be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. For piping, this requirement is typically met through obtaining listing from Underwriters Laboratories Inc. (UL) by successful completion of testing performed in accordance with UL 971: *Standard for Nonmetallic Underground Piping for Flammable Liquids*.

UL 971 was revised in 2004, and all piping manufactured after July 1, 2005 must meet the revised version of the standard in order to bear the UL marking.¹ The UL 971 standard includes different test procedures depending on the intended use of the piping being tested. For example, piping intended for use with a closed interstitial space will be tested with higher pressure on the secondary containment than if the piping were intended for use with an open interstitial space. Other application-specific test procedures can be followed depending on which products will be stored in the system and which monitoring methods (vacuum, pressure, or liquid) will be used to monitor the piping.

Because there are numerous test procedures within UL 971, it is important to verify that piping has been tested for the application in which it will be used. The attached "Matrix of Pipe Monitoring Applications" can be used to assist with identification of piping that complies with the independent testing requirements of California Code of Regulations, Title 23, section 2631(b).

The Matrix of Pipe Monitoring Applications is based on information provided by the listed pipe manufacturers and reviewed by the State Water Board's UST Program staff. These manufacturers have had a chance to review and comment on the matrix. It will

¹ Refer to the State Water Board's 8/31/2005 Advisory Regarding Thermoplastic Flexible Piping for additional information. (http://www.waterboards.ca.gov/ust/leak_prevention/docs/ca_advisory_re_tfp.pdf)

be updated periodically as we receive and review additional documentation from manufacturers. If you have questions on this memo or the attached matrix, please contact me at (916) 341-5870 (Ichaddock@waterboards.ca.gov).

Sincerely,

Original signed by

Laura Chaddock, Chief
Underground Storage Tank Program
Leak Prevention Technical Unit

Enclosure: Matrix of Pipe Monitoring Applications