



## MEMORANDUM

SUBJECT: The Use of Sealants and Caulking in the Installation of Entry Boots or Fittings and the Repair of Containment Sumps on Petroleum Storage Tank Systems Regulated under 20.5 NMAC.

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TO: Prevention and Inspection Program Staff in the Petroleum Storage Tank Bureau  
Owners and Operators of Storage Tanks Systems Regulated under 20.5 NMAC

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The purpose of the memorandum is to provide guidance on the use of sealant and caulking in the installation of entry boots and fittings, and the repair of containment sumps that are part of a petroleum storage tank system regulated under 20.5 NMAC. Pursuant to 20.5.106 NMAC for underground storage tank ("UST") systems and 20.5.109 NMAC for aboveground storage tank ("AST") systems containment sumps shall be maintained and repaired in accordance with a national code of practice or standard, or in accordance with manufacturer's installation instructions. Entry boots and fittings used to seal penetrations in containment sumps shall be installed in accordance with the manufacturer's installation instructions or a national code of practice or standard. All equipment and materials used in the repair of containment sumps shall be compatible with the substance stored in the tank system.

When repairing containment sumps for UST systems pursuant to 20.5.107 NMAC or for AST systems pursuant to 20.5.110 NMAC, the repair shall be performed in accordance with a national code of practice or standard, or in accordance with the equipment manufacturer's instructions. Currently, there is only one national standard for the repair of containment sumps, National Leak Prevention Association ("NLPA"), Standard 823, *"Standard for Preventative Maintenance, Repair, and In-situ Construction of Petroleum Sumps."* Containment sumps made of fiberglass reinforced plastic ("FRP") can be repaired by the use of resins but not by the use of sealants and caulking spread over the damage to the sump. Containment sumps made of polyethylene cannot be repaired by the use of sealants or caulking unless the sump manufacturer has published instructions that include the use of these materials. The New Mexico Petroleum Storage Tank Bureau ("Bureau") has reviewed the instructions from all the polyethylene sump manufacturers and none allow this practice.

It is the Bureau's determination that sealants and caulking may only be used when recommended by the sump or boot manufacturer as part of the installation process to bond the boots to the sump wall. Sealants and caulking are not to be used to repair damage to entry boots or fittings in containment sumps unless a manufacturer has published repair instructions that include the

use of these materials in the repair. If there are no manufacturer's repair instructions for entry boots or fittings, the entry boots or fittings must be replaced when found to be damaged or no longer functioning as required. The resins used to install FRP entry fittings in FRP containment sumps is acceptable, but the use of a sealant cannot be used to repair such a fitting if it was found to be damaged or a leak point during integrity testing. Typically, entry boots made of rubber or a nitrile material has a warranty of 12 months and it the Bureau's position that the use of sealants and caulking is an unacceptable means of extending the life of these types of entry boots.

Another type of entry fitting is the electrofusion entry seal which must be installed in accordance with the manufacturer's instructions. If these fittings or seals are found to be damaged, they must be repaired or replaced in accordance with the manufacturer's instructions and not by using sealants or caulking.

Please keep in mind that all materials used to repair entry boots or fitting must meet the compatibility requirements in 20.5 NMAC. The compatibility requirements in 20.5.107.708 NMAC for UST systems and 20.5.110.1009 NMAC for ASTs contains two options, one is the material must have a certification or listing from a nationally recognized, independent testing laboratory, or two, the equipment or component manufacturer must approve the application of their products in writing. The document from the manufacturer must contain all the required information pursuant to the above-mentioned compatibility sections in 20.5 NMAC. If either of these two requirements are not met, then the materials cannot be used in a storage tank system regulated under 20.5 NMAC.