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April 27, 2006

John D'Antonio, P.E.
New Mexico State Engineer
Office of State Engineer
P.O. Box 25102
Santa Fe, New Mexico 87504

Subject: Variance to the Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells Adopted August 31, 2005

Dear Mr. D'Antonio:

Some requirements of 19.27.4.29 NMAC, Well Drilling - General Requirements, and 19.27.4.30 NMAC, WELL DRILLING - NON-ARTESIAN WELL REQUIREMENTS, are inappropriate or infeasible for drilling, installing, and abandoning monitoring wells and soil borings at leaking petroleum storage tank sites. Pursuant to 19.27.4.37 NMAC, the New Mexico Environment Department, Petroleum Storage Tank Bureau (Bureau) requests a variance to the sections below for all monitoring wells and soil borings associated with workplans approved by the Bureau.

19.27.4.29.C Decontaminating drilling equipment with chlorine for environmental investigations is not feasible. Chlorine may bias or contaminate soil and groundwater samples, negating the purpose of the drilling. Currently, the Bureau requires steam cleaning of drilling equipment to prevent cross contamination of soil and groundwater samples.

19.27.4.29.F Extending the well casing 18 inches above the floor of the vault is not feasible. Most monitoring wells are commonly installed at locations engaged in the retail sale of gasoline and diesel. To be useful, monitoring wells have to be near petroleum tanks, piping, and dispensers where leaks occur. Subsurface vaults are the norm because of traffic. Standard subsurface well vaults are 8 inches in diameter with 12-inch deep skirts.

19.27.4.29.I Placing permanent caps on monitoring wells will make the wells unusable. Lockable expanding plugs are the industry standard.

19.27.4.29.K Pursuant to 19.27.1.17.2, monitoring wells shall not be permitted. Well forms for monitoring wells will burden the Office of State Engineer with non-beneficial paperwork.

19.27.4.30.A.2 Installation of monitoring wells with screens less than 20 feet below land surface is common because contaminants are more likely to reach shallow groundwater. Monitoring wells have short screens and sand packs to avoid spreading contamination. If the annular seal begins at the bottom of the blank casing, grout will likely intrude into the sand pack and ruin the well. The requirement to extend the annular seal to the land surface is not consistent with the requirement in 19.27.4.29.F to have 18 inches between the top of casing and floor of subsurface vault. Placing sealing material with a tremie or by pressure-grouting through the well casing and up the annulus is not appropriate for monitoring wells installed at leaking petroleum tanks sites. Monitoring wells are usually screened across the water table to intercept contamination. The sealing material is entirely above the water table. Placing the sealing material does not require displacing groundwater or drilling fluids from the well annulus. The weight of the sealing material is enough to place it.

19.27.4.30.C Most monitoring wells at leaking petroleum storage tank sites penetrate less than 15 feet into the aquifer. Workplans for monitoring well abandonment at leaking petroleum storage tank sites are already reviewed and approved when appropriate by the Bureau. No well records exist for these monitoring wells. Submission of plugging plans and records for these wells will burden the Office of State Engineer with non-beneficial paperwork.

I can be reached at (505) 984-1939. Please contact Christopher Holmes of my staff at (505) 984-1902, if you have any technical questions regarding drilling, installing, and abandoning monitoring wells.

Sincerely,

James H. Davis, Ph.D.
Bureau Chief
Petroleum Storage Tank Bureau

Cc: Paul Wells, Office of State Engineer
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