

06-039

From: Goering, Tim J [mailto:tjgoeri@sandia.gov]
Sent: Thursday, September 21, 2006 2:56 PM
To: Mayerson, David, NMENV
Cc: Jackson, Tim; Moats, William, NMENV
Subject: Depth from which MWL-MW4 samples were collected

David,

The majority of MWL groundwater samples from MWL-MW4 were collected from the upper screened interval of the well. The upper interval has a much lower hydraulic conductivity than the lower interval. As a result, during sampling, this well purges dry when the packer is inflated. During times when we have deliberately sampled commingled water (which is predominantly water from the lower interval), the well does not purge dry. Hence, it would be totally obvious to our water sampling crew if the packer were not fully inflated and functioning properly.

The packer in MWL-MW4 was installed with its current dedicated Bennett pump configuration on May 23, 1994. Samples collected prior to this date represent commingled samples from both screened intervals, which are essentially samples from lower screened interval (due to its much higher hydraulic conductivity).

The MWL-MW4 packer was removed for servicing during the following periods:

- a. August 17, 1998 to October 8, 1998
- b. May 22, 2001 to August 23, 2001.

I am still convinced that nitrate concentrations are related to the depth from which the samples are collected. The upper screened interval of MWL-MW4 is completed deeper than the screened intervals for wells MWL-MW1, MWL-MW2, MWL-MW3, and MWL-BW1, and has lower nitrate concentrations. Although your analysis suggests that MWL-MW4 samples appear to originate from our lower screened interval, this is not the case, based on the evidence from our field notes, and based on the dates during which the packer was installed in the well.

If you need any additional information, please give me a call at 284-2563, or email me, and we'll try and get you what you need.

Regards.....

Tim Goering
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