

Cobrain, Dave, NMENV

From: Cobrain, Dave, NMENV
Sent: Monday, January 30, 2006 4:30 PM
To: 'John Hopkins (johnhopkins@lanl.gov)'; 'Gregory, David R.'
Cc: Lynnes, Kate, NMENV; chamberlain, kathryn, NMENV; Young, John, NMENV; Bearzi, James, NMENV; 'Dave McInroy'; Goering, Darlene, NMENV; Dhawan, Neelam, NMENV; 'john.kieling@state.nm.us'; 'Gabriela Lopez Escobedo'
Subject: MDA L scheduled drilling

John/David,

I located a copy of LANL's May 31, 2005 draft pilot test proposal for MDA L. As stated previously, DOE/UC is conducting this test at risk, since NMED has determined that site investigation at MDA L is not complete and therefore will not review or comment on the proposed work. Section 3.1 proposes to drill two borings to depths of 215 feet. In our meeting last week (January 25th) I recall that you planned to drill to 250 feet below ground surface. Is 215 or 250 feet bgs correct?

Regardless of the depth, NMED strongly suggests that DOE/UC collect both tuff and subsurface vapor samples at 20 or 25 ft intervals to, and including, the total depth drilled in each boring using the methods described in the Consent Order. Since field screening was not successful during the last drilling event, we recommend laboratory analysis of all of the tuff samples for VOCs using EPA Method 8260.

We also recommend screening the tuff samples, using methods described in the Consent Order, using a combustible gas indicator, even though these instruments typically provide less reliable readings at lower concentrations than a PID, they are not as easily fouled by dust or moisture. These instruments detect total VOCs unlike the B&K, which you have stated is not accurate at low concentrations. Given that you have contaminants with relatively high ionization potentials, using a PID with a less sensitive lamp that is not as subject to fouling is not practical since it wouldn't detect TCA, freons, etc. Perhaps this is a chance to rent some instruments and test their effectiveness for potential future use.

As far as subsurface vapor screening goes, you indicated that the methods used at MDA L last winter were not effective. I'm not sure why you'd pull the augers back to collect an air sample, but since you've reported problems, why not isolate the bottom two feet of the boring without pulling the augers back and start screening after you've purged two volumes of the space isolated inside the augers? All you'd have to know is the ID of the augers, the depth of the base of the packer, the flow rate and the ID and length of the sampling tube to guarantee that you're sampling formation air, if you're drilling with hollow stem auger. If slough is a problem, measure the depth of the augers and the depth of the boring inside the augers and purge enough to account for the thickness of the slough. If you're drilling with air rotary, obviously you'd have to purge extensively before collecting air samples. A PID equipped with an 11.7 eV lamp would be appropriate for this application.

Screening for tritium, percent CO2 and oxygen, and for VOCs using the instrument you use for tuff field screening, would also provide useful information. NMED recommends screening subsurface air at all tuff sampling intervals. The closer you drill to the center of the shaft rows, the better. Please let us know when you expect to begin drilling prior to mobilization to the site. Thanks.

Dave

As of June 25, 2005 my email address is dave.cobrain@state.nm.us



11907