

From: Miller.Scott@epamail.epa.gov
To: [John Mousa](mailto:John.Mousa)
Subject: Re: ACEPD Comments Regarding the Draft Soil Gas Investigation Report at Former Cabot Site - December 14, 2012
Date: Thursday, January 10, 2013 4:13:10 PM

Dr. Mousa,
Thank you.

Scott Miller
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-----John Mousa <jjm@alachuacounty.us> wrote: -----

To: Scott Miller/R4/USEPA/US@EPA
From: John Mousa <jjm@alachuacounty.us>
Date: 01/10/2013 03:07PM
Cc: "Laurent C. Levy" <LLevy@gradientcorp.com>, Manu Sharma <MSHARMA@gradientcorp.com>, Wayne Reiber <wayne.reiber@cabotcorp.com>, "mark.taylor@westonsolutions.com" <mark.taylor@westonsolutions.com>, Patricia Cline <ta@protectgainesville.org>, "Pearson, Stewart E." <pearsonse@cityofgainesville.org>, "Hutton, Richard H" <HUTTONRH@gru.com>
Subject: ACEPD Comments Regarding the Draft Soil Gas Investigation Report at Former Cabot Site - December 14, 2012

Dear Scott,

In anticipation of the conference call to discuss the draft Soil Gas Investigation Report at the Northside Shopping Center on the Former Cabot Carbon Site dated December 14, 2013, ACEPD has the following preliminary issues and comments to discuss:

- 1) ACEPD has questions about the integrity testing that was done at each sampling point. This integrity testing in our opinion was to be used as a quality control measure to assure that an adequate seal was achieved to prevent ambient air from infiltrating into the soil gas sample. The report indicates that this integrity testing shows that for several of the sample locations, it appears that there may have been substantial infiltration of ambient air due the high helium concentrations in the bag samples. We are uncomfortable without additional explanation to accept that the data collected from these samples are in fact valid samples. For example, in Sample SG-03 which is one of the samples with the higher level of target compounds, the oxygen (O₂) levels in the bag samples was about 20% which is very near atmospheric levels. Also in this same sample the average helium concentration 12.1% in the outside Helium and 8.8% in the bag samples. This could indicate that there has been significant dilution of the soil gas sample with outside air. Also sample SG-04 shows similar concerns.

Further justification or explanation needs to be provided to explain why these samples should not have been rejected as valid samples.

- 2) In section 4.2 of the report, a comparison is shown between the groundwater concentrations of acetone and methyl ethyl ketone (MEK) and compares it to the ratio of the concentrations in the soil gas. The statement is made that the ketones signature in the soil gas samples is not consistent with that of the groundwater samples. It is also stated that the MEK concentrations in the groundwater were of the same order of magnitude as the acetone (0.3 to 0.5) compared to ratio of (0.1 to 0.2 in the soil gas samples). We have questions about this conclusion. Both ratios are within a factor of 10 of each other and do not differ by an "order of magnitude". In addition, we have some concerns that there may be differences in the ratios observed in the vapor phase in soil gas as compared to the dissolved phase due to differences in vapor pressures between the Acetone and MEK. This may also have affected the observed ratios. Also different soil adsorption factors may play a role. This needs to be further addressed. In general we are not convinced that one can be so definitive as to state that the Acetone and MEK are not associated with the groundwater and Cabot operations.
- 3) In the calculation of risks, the report uses the geometric mean and the arithmetic mean to perform the risk comparisons. We are not sure why it is valid to use the geometric mean as this tends to underestimate the concentration or at least to give a low estimate. We believe it would be more appropriate to use the arithmetic mean and the "maximum concentration observed" to give an upper limit to the risk calculation.

These are the main comments and concerns we have. There may be additional to discuss on Monday.

Thanks

John Mousa

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