

Memorandum

Date: January 30, 2006

To: Jim Erickson

From: Brendan Shine, David Bohmann

Subject: Response to January 24, 2006 e-mail with the subject *ACEPD Comments on Field Sampling at Koppers Site*

Jim,

We have reviewed the comments referenced above and have prepared the following response in Attachment A.

Should you require additional information, please contact either one of us.

1658 — GeoTRANS Response from
Field Geologist Brendan Shine
to ACEPD Comments of
Jan 24, 2006 on Field
Sampling at Koppers,
Jan 30, 2006

Attachment A:
Response to U. S. EPA January 24, 2006 Email Entitled:
“QA/QC for Sampling at Koppers Site, Gainesville”

The following is GeoTrans response to comments emailed to Beazer on January 24, 2006. The comments detailed in the referenced email are provided followed by GeoTrans response to the comment. Comments #8 through #10 in the email contained comments that appeared to be random text. Comments #8 through #10 are provided for completeness; however, no specific responses are provided.

Comment No. 1

The stainless steel sampling device was not rinsed with isopropyl alcohol or another solvent between sampling intervals or wells. The decontamination procedures used on the sampler between intervals and wells consisted of a TSP wash with "store bought" DI water (in plastic containers) and a rinse with that same water.

Response to Comment No. 1

The Site QAPP does not specify the use of isopropyl alcohol or other solvent for field decontamination of sampling equipment.

Decontamination measures used at this Site included cleaning with store bought distilled water and TSP using a brush, followed by a distilled water rinse. These same protocols have been used at numerous other CERCLA and RCRA sites with organic constituents; to name a few examples: Lowry Landfill (Arapahoe County, CO), Doepke-Holliday Landfill (Johnson County, KS), Norton Air Force Base (San Bernardino, CA), ASARCO's Globe Plant (Globeville, CO), and Beazer's Denver, CO site. Moreover, it has been our observation through experience at these sites that the decontamination procedures used are adequate and do not result in cross contamination or false positives.

Because of the prohibitive cost of laboratory-prepared distilled, deionized water, most field programs (including those cited above) utilize store bought distilled water in plastic containers (as contrasted with "DI", or deionized water described in the comment) for the decontamination process. Based on our experience at the sites listed above and at numerous other locations, the water used for decontamination is of a suitable grade and will not result in false positives.

To evaluate the unlikely potential for detections from the commercially-purchased distilled water, a field blank sample was submitted for analysis using the same analytical suite as the investigative samples.

water or equipment blank

Comment No. 2

Organic-free water was not used for sampler rinsing.

Response to Comment No. 2

As stated above, most field programs (including those cited in the Response to Comment No. 1) utilize store bought distilled water in plastic containers. Use of laboratory-prepared deionized, distilled water is generally limited to preparation of field rinsate, equipment and process blank samples. Because of logistics and costs, this water is seldom used in the decontamination process at most sites.

Comment No. 3

No equipment blanks or rinsate blanks were reportedly being collected.

Response to Comment No. 3

An equipment blank was prepared at the Site using laboratory-supplied water. This sample was submitted using a "blind" identification (so the laboratory cannot identify it as a blank) for analysis of the same analytical suite as the investigative samples.

Comment No. 4

Written records of instrument calibration were not being kept for the field multimeter (Horiba). GeoTrans personnel reported that the field meter was being calibrated between wells and at the beginning of each day.

Response to Comment No. 4

The Horiba U-22 (serial number T-510001) field meter was calibrated at the beginning of each day. Additionally, the unit was shop-calibrated prior to shipment to the Site on December 12, 2005. The meter was also calibrated during the day if the readings indicated a poor meter response. The field calibration process for the Horiba U-22 is an automatic process which calibrates for pH, conductivity, turbidity, dissolved oxygen, and oxidation reduction potential (ORP) simultaneously. There is no resulting output message or data at the end of the calibration to record, unless an error message is displayed indicating calibration was not completed. The first field crew utilizing the Horiba U-22 unit documented calibrations in the field book when they were performed. From the afternoon of January 17, 2006 through January 21, 2006, a second field crew was onsite for well purging. The second crew routinely performed the Horiba calibration at the same frequency described above; however, they did not document the calibration process since the meter does not provide an output at the end of the calibration process. The staff responsible for calibrating the meter has written a memo (attached) clarifying that calibrations were performed at a minimum of once a day.

The final purge criteria, as identified in the Site QAPP, included purging a minimum of 3 well volumes, with the purge considered complete when pH, conductivity and temperature vary less than 10 percent from previous reading. For all wells, a volume significantly greater than 3 well volumes was purged during well development, ranging from approximately 7,000 to 19,000 gallons. A final purge of a minimum of 3 well volumes was also performed following Westbay installation to help ensure representative samples. Field parameters were collected to document aquifer stability. All readings were within the range of values observed in other Site wells and zones being sampled and

each zone exhibited less than 10 percent variation in pH, conductivity and temperature readings.

Comment No. 5

No additional standards were used (pH, conductivity...) for bracketing the range of constituents anticipated to be in the groundwater. Only one calibration solution container was noted in the field meter case.

Response to Comment No. 5

In accordance with Horiba's U-22 user manual, only one calibration standard (Horiba Auto-Cal Calibration Solution) is required for U-22 meter calibration of pH, conductivity, turbidity, dissolved oxygen, and ORP. The instrument was calibrated in accordance with the manufacturer's instructions.

Comment No. 6

It was unclear but it appeared that calibration solutions were being reused for each calibration. No waste solution container for used calibration solutions was evident. There was no "date opened" or other information on the calibration solution container.

Response to Comment No. 6

At the request of GeoTrans, Inc, the equipment rental company shipped a new bottle of Horiba Auto-Cal calibration standard (Lot # 5333-13) with the Horiba U-22 meter. The expiration date of the calibration standard is December 6, 2007. The Horiba U-22 manual does not indicate a change-out schedule for the calibration standard, only indicating that the standard should be replaced if calibration errors are encountered. The meter was rinsed with distilled water prior to calibration, and calibration errors were not encountered. Therefore, the calibration standards were appropriate for reuse.

Comment No. 7

On one occasion, samples were not immediately placed on ice after collection.

Response to Comment No. 7

GeoTrans field personnel are instructed to place samples on ice upon collection. Contrary to our internal sampling protocol, it has recently come to our attention that a few samples were not placed on ice immediately following sample collection. These samples were placed in an ice chest for storage until ice was obtained later that day. All samples collected at the Site were placed on ice for shipment to the laboratory, consistent with the Site QAPP protocol.

GeoTrans has contacted two laboratories, Columbia Analytical in Jacksonville, FL and Evergreen Analytical in Evergreen, CO, to qualify potential impacts from samples not being placed on ice immediately following collection. Analytical chemists at these laboratories did not feel that analytical results for metals, VOCs and SVOC would be significantly impacted, as long as the bottles were properly sealed and had limited head space. Further, the analytical chemist at Columbia Analytical has re-analyzed similar

samples for clients that were at room temperature for up to 2 months with limited impacts on analytical results. Hence, the professional opinion of the analytical laboratories referenced above is that there should not be any significant impact on the final sample results.

Procedures have been implemented to ensure that all future samples are placed on ice immediately following collection of the sample. In addition, the Westbay system requires sampling equipment to be lowered into the well up to three times to collect sufficient sample analysis volume for each of the four Westbay intervals per well. Each of the three sample runs can require up to 30 minutes for retrieval of the sample. Procedures will be established requiring partial sample volumes to be placed on ice in between each of the three partial sample collections.

Comment No. 8

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Response to Comment No. 8

This comment is not project related.

Comment No. 9

email: jjm@alachua.fl.us

Response to Comment No. 9

This comment is not project related.

Comment No. 10

*Click here to subscribe to the Alachua County Community
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Response to Comment No. 10

This comment is not project related.