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LETTER AND U S EPA REGION III COMMENTS TO DRAFT TIER II SAMPLING AND ANALYSIS PLAN AREA B OFFSITE MIGRATION SITE 1 CAMP ALLEN LANDFILL NB NORFOLK VA
5/14/2012
U S EPA REGION III

REGION 3: THE MID-ATLANTIC STATES

SERVING THE DISTRICT OF COLUMBIA, DELAWARE, MARYLAND, PENNSYLVANIA, VIRGINIA AND WEST VIRGINIA
Environmental Science Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE:	May 14, 2012
SUBJECT:	Review of Draft Tier II Sampling and Analysis Plan; Area B Offsite Migration Evaluation; Sampling and Analysis Plan Site 1, Camp Allen Landfill [DCN 120059]
FROM:	Jarmael A. Burman, Chemist OASQA/QAT (3EA22)
THROUGH	Fred Foreman, Chief, Technical Services Branch OASQA (3EA22)
TO:	Steven Hirsh (3HS11)

The Draft Tier II Sampling and Analysis Plan (SAP); Area B Offsite Migration Evaluation; Sampling and Analysis Plan Site 1, Camp Allen Landfill prepared for the Naval Station Norfolk, Norfolk, Virginia by CH2MHILL,was reviewed against the appropriate guidance documents.[1] It is recommended that this SAP not be approved, but resubmitted when the following areas of concern and recommendations are properly addressed.

Major Concerns:

- The reviewer strongly feels the objective of this SAP, which is to evaluate the potential for contaminate migration under Bousch Creek, cannot be achieved through short term monitoring. One round of sampling cannot properly determine migration given the effect of increased contaminate levels on monitoring well (MW) B-MW16 when active extraction from MW B-EW8A, which is located south east of MW B-MW16. This unexplained phenomenon is in and of itself reason to question short term monitoring effectiveness at achieving the intended purpose of this SAP.

- It is clear that a migration pathway that differs from the current understanding exists. The reviewer fails to understand how 10 grab samples will determine this when the variance

1 The review was based on guidance provided in " Guidance on Systematic Planning using the Data Quality Objectives Process (**QA/G-4**) EPA/240/B-06/001 February 2006, "EPA Requirements for Quality Assurance Project Plans" (QA/G5) EPA/240/R-02/009 December 2002, "Guidance on Environmental Data Verification and Data Validation", Re-issued January 2008 (EPA QA/G-8), "Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-99/008 (USEPA, 1999), "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA 540/R-034/004 (USEPA, 2004c), AGuidance for Data Quality Assessment: Practical Methods for Data Analysis@ (QA/G9, EPA/240/B-06/003 February 2006, ARegion III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis,@ April 1993, and ARegion III Modifications to National Functional Guidelines for Organic Data Review Multi-media, Multi-concentration (OLMO1.0-OLMO1.9) September 1994.

mentioned above greatly impacts the level of contaminates found at a particular monitoring well. The sampling and analysis needs to be of sufficient quantity over an extended period of time while simultaneously extracting from other monitoring wells to determine or simulate the unexplained migration effects that may be present in the new sampling wells as it does between MW B-MW16 and MW B-EW8A. Again, the reviewer fails to understand how 10 temporary monitoring wells with one round of sampling from each will be adequate to determine contaminate migration and the placement of one permanent well.

- The equipment blank and field blank preparation section IV C mentions an equipment blank, but does not specify the frequency or order in which each should be collected. In an effort to eliminate the introduction of contamination from the direct push technology, a protocol needs to be implemented that would require an equipment blank before and after each sampling event. These equipment blanks should be collected between sampling locations and after decontamination to prevent carryover from one sampling well to another, this would help to eliminate a potential variable. The incorporation of trip blanks sent to the laboratory for analysis is also strongly recommended.

- A more definitive method of sample site identification and monitoring well location other than in relation to permanent site features should be established. Use of the GPS unit described in the GPS SOP would provide more reliable coordinates in the event a permanent feature is inadvertently moved or dislodged.

Minor Concerns:

- This SAP clearly and repeatedly states no field QA/QCs will be collected during this investigation. However, it is strongly advised to send the laboratory performing the analyses a quality control sample as well as a quality control sample duplicate with a concentration between the lab's method detection limit and the project action limit per sample set.

- It is recommended that the laboratory performing the analyses also report tentatively identified compounds (TICs). This would reveal the presence of potentially hazardous compounds other than the select volatile organic compounds (VOC) screened for.

Notes:

1. Since the intended purpose of this SAP is to evaluate the potential for migration under Bousch Creek, a round of soil samples collected from the entire circumference, of the housing complex and elementary school, at varying depths sent to the laboratory for analysis is highly recommended.

2. Since the majority of the VOCs detected in shallow ground water at site 1 are present at higher concentrations at the bottom of the shallow (Columbia) aquifer, it is important to have the wells installed at varying depths to account for this phenomenon.
3. The SAP does not address what will be done with site generated waste such as decontamination solutions.
4. While often considered ancillary, pH can actually be used to reveal chemical behavior that is very important to a study. Therefore, it is recommended by the reviewer that a secondary standard from a source other than that which was used to calibrate the pH meter be used as a quality control check standard run twice each day. This would enable the operator to determine if the calibration standards used had been concentrated or diluted.
5. Under the Documentation and Records section II Field Notebooks, the reviewer suggests including the date the calibration standards are opened. This will enable analytical equipment users to better track the source of calibration standard related issues.

If you have any questions or comments regarding this document please contact Jay Burman, at burman.jarmael@epa.gov (410) 305-2743.