



ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Land Protection Branch

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September 19, 2017

Mr. Rich Schoeck, P.E., PMP
Division Director of Engineering & Construction
Gwinnett County Department of Water Resources
684 Winder Highway
Lawrenceville, GA 30045

Re: Semi-Annual VRP Progress Report No. 5
HSI # 10844
Gwinnett County Fire Station No. 19
3275 North Berkeley Lake Road
Duluth, Gwinnett County

Dear Mr. Schoeck:

The Environmental Protection Division (EPD) is in receipt of the June 2017 Voluntary Remediation Program (VRP) Progress Report (the Report) for the Gwinnett County Fire Station No. 19, in Duluth, Gwinnett County. After completing a review of the Report, EPD has the following comments on the Report:

- EPD recognizes and appreciates that Gwinnett County has been diligent in tracking the progress of the US Environmental Protection Agency (EPA) towards approval of the alternative arsenic bioavailability method.
 - a) EPD finds the proposed relative bioavailability of arsenic (RBA) of 14% to be acceptable for use in deriving the Type 4 and Type 5 Risk Reduction Standard (RRS) for soil at the site. The proposed RBA was derived in accordance with the now validated and approved U.S. EPA Relative Bioaccessibility Leaching Procedure method (RBALP; EPA Method 1340) and applied the appropriate and recommended regression equation by Diamond et al. (2016). It should be noted that EPD's rationale for not previously accepting the arsenic in vitro bioaccessibility (IVBA) assay extraction method was not just limited to the fact that the method had not yet been validated as predictive by EPA, but also due to the selection and pairing of the method to the gastric in vivo-in vitro gastrointestinal correlation (IVIVC) model by Brattin et al. (2013) for use in deriving the RBA. Although EPD acknowledged that the IVBA results were applied correctly to the IVIVC linear regression model, the data set used in the study was very limited resulting in an unreasonably high y-intercept [i.e., 19.7 versus 0.79 (Diamond et al., 2016)]. Note that EPD evaluates bioavailability on a site-by-site basis with consideration of background, different arsenic sources, sampling techniques, data quality objectives, the range in physicochemical soil properties (i.e., soil mineralogy and the chemical forms of arsenic in soil), and the anticipated land use of the site.
 - b) Confidence in the IVBA results is contingent about the data collected and sent for analysis (e.g., the amount and spread of samples, sample locations (depths), sample quality, etc.).

Based on EPD's review of the sample locations depicted in Figure 2-2, the site has met the performance criteria for ensuring suitability and robustness. However, it is not well-documented in the report how samples were selected for IVBA analysis. For instance, the subsurface sample with the highest concentration was not selected (i.e., SB-7 reported a concentration of 491 mg/kg at 4 feet bgs; also, SB-13 reported 274 mg/kg at 4 feet bgs. This should be addressed in the CSR.

- Gwinnett County proposes to implement the Uniform Environmental Covenant (UEC) and submit the Compliance Status Report (CSR) as its next actions. EPD reminds Gwinnett County that the UEC must reference the CSR, therefore the CSR should be submitted and approved by EPD prior to Gwinnett County attempting to implement the UEC.

The above listed comments must be addressed to EPD's satisfaction in order to demonstrate compliance with the provisions, purposes, standards and policies of the Act. Please provide a response to the above listed comments as part of the next scheduled Progress Report submittal. If you should have any questions regarding this matter, please call Tom Brodell of the Response and Remediation Program at (404) 657-8600.

Sincerely,



David Brownlee
Unit Coordinator
Response and Remediation Program

c: Andrew Romanek, CDM Smith <RomanekAP@cdmsmith.com>

File: VRP – North Berkeley Lake Road, HSI # 10844, Gwinnett Fire Station

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