



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 4**

**61 Forsyth Street**

**Atlanta, Georgia 30303-3104**

March 19, 2015

Mr. James Erickson, P.G.

Vice President, Principal Hydrogeologist

Tetra Tech GEO

363 Centennial Parkway, Suite 210

Louisville, CO 80027

Dear Mr. Erickson:

Thank you for the February 17, 2015, document entitled "Pre-Final Design for Former Process Area In-Situ Geochemical Stabilization Remediation, Former Cabot Carbon/Koppers, Inc. Site, Gainesville, Florida." Our comments on this document are as follows:

1. Section 2.4.3 – Have you considered that the pilot area may have been underdosed? Despite the reduction in dense non-aqueous phase liquid (DNAPL) volumes being collected from the temporary injection points (TIPs) and recovery wells, the free phase DNAPL in the immediate vicinity of the injection locations is not completely contained within a precipitate shell, as was intended (refer to Section 1.1), and the volume of DNAPL being recovered appears to have begun to rebound some in July/August 2014. Additionally, no evidence of unreacted reagent was observed in the cores collected. With a radius of influence (ROI) of 15 feet and the density of spacing of injection points around 420N/345E, one would expect to have seen a more complete precipitate shell formed and less or no DNAPL rebound.
2. Figures 2.9a and 2.9b – Having these cross-sections aligned in the same orientation as the cross-sections associated with Figure 2-3 and related figures from other reports would greatly assist in comparing the data shown on each.
3. EPA concurs with GRU's comments relating to the number and density of the post-treatment cores. Tetra Tech should propose a more robust spatial testing frequency that is agreeable to all parties.

**Comments on Related GRU Comment Letter (March 16, 2015)**

In general, EPA concurs with the comments made by GRU with the following exceptions:

1. General Comment #2: EPA does not agree with GRU's request that many of the areas field identified with a rating of 3 having a thickness of 4 feet or more or "elevated" PID readings should be considered for treatment. Per Tetra Tech's rating system, a DNAPL rating of 3 indicated elevated PID readings and/or limited residual staining, while a rating of 4 indicated elevated PID readings and heavy residual staining but minimal or no staining on the core sleeve. The areas that were assigned a rating of 3 did not generally appear to have continuous intervals of staining, but staining that was widely distributed over the length of the core. Further, many of the locations identified in GRU's comments did not exhibit any staining at all, but had only slightly elevated PID readings. Given that many of the locations identified in GRU's comments are in the shallower portions of the borings, these areas are likely to present some difficulty given the challenges observed with daylighting during the pilot. The additional expense and difficulty to treat these areas with minor impacts is not likely to significantly increase the protectiveness of the remedy, particularly since the ISGS area will also be contained within a barrier wall. Contingent upon the installation of the barrier wall, EPA believes that Tetra Tech's approach meets the intent of treating all areas with "prominent staining" by using the EVS rating of 3.6 as the cutoff. After research of previous meeting notes, it appears that this is what was presented by Tetra Tech and generally agreed to in the December 2013 working group meeting.
2. Specific Comments #2 and 3: Regarding the Zone of Discharge, EPA does not concur with the assertion that injection of less than 20,000 gallons of reagent at relatively low pressures caused such a significant increase in contaminant concentrations nearly 150 feet from the pilot area within 2 months. Given that only three or fewer data points exist for many of the monitoring locations, we suggest routine monitoring of these locations before the full-scale implementation to determine if a clear trend exists.

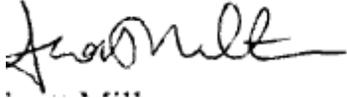
#### **Comments on Related ACEPD Comment Letter (March 17, 2015)**

In general, EPA concurs with the comments made by ACEPD with the following exception:

1. Comment 5: Regarding treatment of all areas with a DNAPL rating of 3 or higher, please refer to Comment #1 above to GRU's related comment.
2. Trends in DNAPL Recovery Tables: Two locations, HG-36SE and 420N/340E, have an asterisk next to their label. We are unclear as to what the asterisks are intended to signify.

We look forward to working with you on ISGS injections in the former Process Area.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Miller".

Scott Miller  
Remedial Project Manager  
U.S. Environmental Protection Agency

DRAFT