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Memorandum

Date:	27 March 2020
To:	Matthew J. Ohl, USEPA
Copies to:	Norman W. Bernstein – N.W. Bernstein & Associates, LLC Peter M. Racher – Plews Shadley Racher & Braun LLP
From:	Suzanne O'Hara and Chris Gale, Geosyntec Consultants, Andrew Gremos Ramboll
Subject:	Response to EPA Notice to Proceed Email March 25, 2020

The following provides the Trust's response to the email from Matt Ohl from March 25, 2020 providing approval to proceed with the proposed work in the DNAPL containment area as outlined in Geosyntec's workplan dated February 10, 2020 and its addendum dated March 13, 2020 and requesting the following additional work:

1. groundwater profiling to a minimum depth of 46 ft. where concentrations of VOCs exceed 1) cleanup values in groundwater samples from a nearby piezometer/monitoring well/thermal well and 2) elevated soil concentrations in a new direct-push borehole;
2. historical information for vertical hydraulic gradients within the DNAPL Containment Area;
3. collecting groundwater samples using Hydrasleeves in case there is neutrally buoyant NAPL present in the water column and/or a greater quantity of water is needed, and analyzing groundwater samples for a full suite of analysis using EPA Methods 8260 and 8270; and
4. reporting should include a discussion of potential alternate remedial technologies and enhancements of the existing ERH system.

Responses are presented below.

1. The work outlined in the work plan and addendum is intended to characterize the distribution of contaminant mass within the DNAPL Containment Area. We understand that additional groundwater characterization may be required. Previous work within this area indicates that a combination of equipment may be required for any groundwater profiling. We do not believe that any type of groundwater profiling tool will be able to be direct pushed to a depth greater than approximately 35 ft bgs based on the MIP profiling that was conducted at the Site in 2014 (ENVIRON DNAPL Containment Area

Supplemental Data Collection Report, Third Site Superfund Site, Zionsville, Indiana. November 1, 2014). Each of the MIP borings was advanced until refusal was encountered, with the majority encountering refusal at approximately 30 ft bgs with the deepest being advanced to approximately 37 ft bgs. We will use the data from the groundwater samples collected from wells and boreholes and the soil samples to target collection of additional groundwater samples at a later mobilization, as necessary, from depths with elevated soil concentrations that would indicate possible DNAPL presence.

2. As requested, historical information for vertical hydraulic gradients within the DNAPL Containment Area is as follows. Groundwater gauging data collected from monitoring wells MW-19A and MW-19B, installed by CH2MHill in 1988, provide historical information for vertical hydraulic gradients within the DNAPL Containment Area. The locations of MW-19A and MW-19B are shown on Figure 2-New Monitoring Well Locations[1] map provided in Attachment A. Monitoring well MW-19A was screened within the Upper Till Unit and MW-19B was screened within the Sand and Gravel Unit. Construction records for these two monitoring wells are provided on Figure 6-Monitoring and Observation Well Construction Diagram[2] located in Attachment B. A cross-section (Cross-section A-A' (1999 Borings))[3] illustrating the geologic setting of these two monitoring wells is also provided in Attachment B.

   Groundwater gauging data are available for MW-19A and MW-19B from April 1988 and December 1999. These monitoring wells were subsequently decommissioned as a part of the Third Site Non-Time Critical Removal Action prior to construction activities in the DNAPL Containment Area[4].Groundwater gauging data from 1988 is shown on Table 3-Groundwater Elevations5 provided in Attachment C. Gauging data collected in December

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[1] Figure 2-New Monitoring Well Locations map is from the ENVIRON February 2003 Pre-Design Data Report for the Non-Time Critical Removal Action, Third Site, Zionsville, IN

[2] Figure 6-Monitoring and Observation Well Construction Diagram is from the CH2MHill November 1988 Technical Memorandum 2, Geotechnical, Hydrogeological, and Supplemental Pre-Design Investigation for the Northside Landfill/ECC Superfund Site, Zionsville, IN

[3] Figure 4-Cross-Section A-A' (1999 Soil Borings) is from the ENVIRON October 2000 Engineering Evaluation/Cost Analysis, Third Site, Zionsville, IN

[4] Section II C1, March 2004 Design Report for Non-Time Critical Removal Action-Revision 2, Third Site, Zionsville, IN

[5] Table 3-Groundwater Elevations is from the CH2MHill November 1988 Technical Memorandum 2, Geotechnical, Hydrogeological, and Supplemental Pre-Design Investigation for the Northside Landfill/ECC Superfund Site, Zionsville, IN

1999 is shown on Table B-2 Field Measurements and Purge Data[6] which is also provided in Attachment C. The groundwater gauging data collected in April 1988 show a slight upward hydraulic gradient of -0.3 feet (871.1 feet elevation minus 871.4 feet elevation). Data collected in December 1999 show a slight downward hydraulic gradient of 0.4 feet (871.4 feet elevation minus 871 feet elevation). No consistent vertical hydraulic gradient is apparent from these data.

3. As requested, the groundwater samples from the existing wells will be sampled using Hydrasleeves. Groundwater samples will be submitted for laboratory analysis to Pace Analytical of Indianapolis, Indiana for a full suite of analysis using EPA Method 8260. The Consent Decree, Enforcement Action Memorandum, and remedy design for the sheet pile enclosed DNAPL area all reference only a reduction of 90% in total VOCs as the cleanup objective. EPA's Method 8270 is for SVOCs. SVOCs are not relevant to any of the cleanup objectives for the sheet pile enclosed DNAPL area and analyzing for these may cause confusion and unnecessary contractual disputes with the Trust's contractor. The full suite of VOCs will be analyzed for using EPA Method 8260, including 1,2-Dichlorobenzene.

4. As requested, the report prepared to summarize methods and results of this investigation will include a discussion of potential alternate remedial technologies and enhancements of the existing ERH system.

If you have any further concerns, please let us know. Otherwise we will proceed pursuant to the approval provided.

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[6] Table B-2 Field Measurements and Purge Data is from the ENVIRON January 2000 Field Sampling Data Report for Third Site, Zionsville, IN