



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

February 4, 2014

4WD-FFB

Rachel Blumenfeld
United States Department of Energy
Portsmouth/Paducah Project Site Office
P.O. Box 1410
Paducah, Kentucky 42002

RE: EPA request to modify the Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky SWMU 4 Sampling and Analysis Plan (DOE/OR/07-2179&D2/A2/R2)

Dear Ms. Blumenfeld,

In accordance with Section XX.J of the Paducah Gaseous Diffusion Plant Federal Facility Agreement, the U.S. Environmental Protection Agency (EPA) is requesting modification to the *Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky SWMU 4 Sampling and Analysis Plan (DOE/OR/07-2179&D2/A2/R2)* (SAP). As specified in the SAP, the purpose of the five phase sampling approach is to optimize remedy selection by filling data gaps that were jointly identified by DOE, EPA and KDEP. The sampling approach was designed so that data collected from each sampling phase can be used to determine sampling and/or boring locations in each subsequent phase.

The purpose of the first two sampling phases were to characterize soil contamination from 0 to 20 ft below land surface (bls) and ultimately direct optimal soil boring locations for phase III (UCRS sampling 20 to 58 ft). However, soil samples collected during Phase I and II reflected minimal contamination in shallow soils down to 20 ft, so historical data was relied upon to determine soil boring locations for Phase III. During analysis of Phase III data, it became apparent that although Cell 4 of SWMU 4 has much higher levels of soil contamination at depth compared to the other northern cells (cells 1, 2, 3, and 5), soil samples are mostly uncontaminated from 0 to 25 ft. This called into question whether data collected in the other cells were sufficient to indicate whether contamination exists at depth (20 to 58 ft). Other than a few horizontal borings, none of the soil samples were collected below 25 ft in the northern cells. Although the horizontal borings in the northern cells were not contaminated, limited data from 20 to 58 ft warrants additional deep

soil borings through the cells. In order to address the soil data gaps, EPA recommends that 11 soil borings be collected in addition to the 5 contingency boring locations allowed in the SAP. The additional soil boring locations and sampling protocol have been discussed in conference calls with DOE. EPA and KDEP recommended boring locations are included in the attached map (16 total). Please modify the SAP to reflect the additional 11 soil boring locations necessary to fill data gaps at SWMU 4 that are not part of the original sampling plan design.

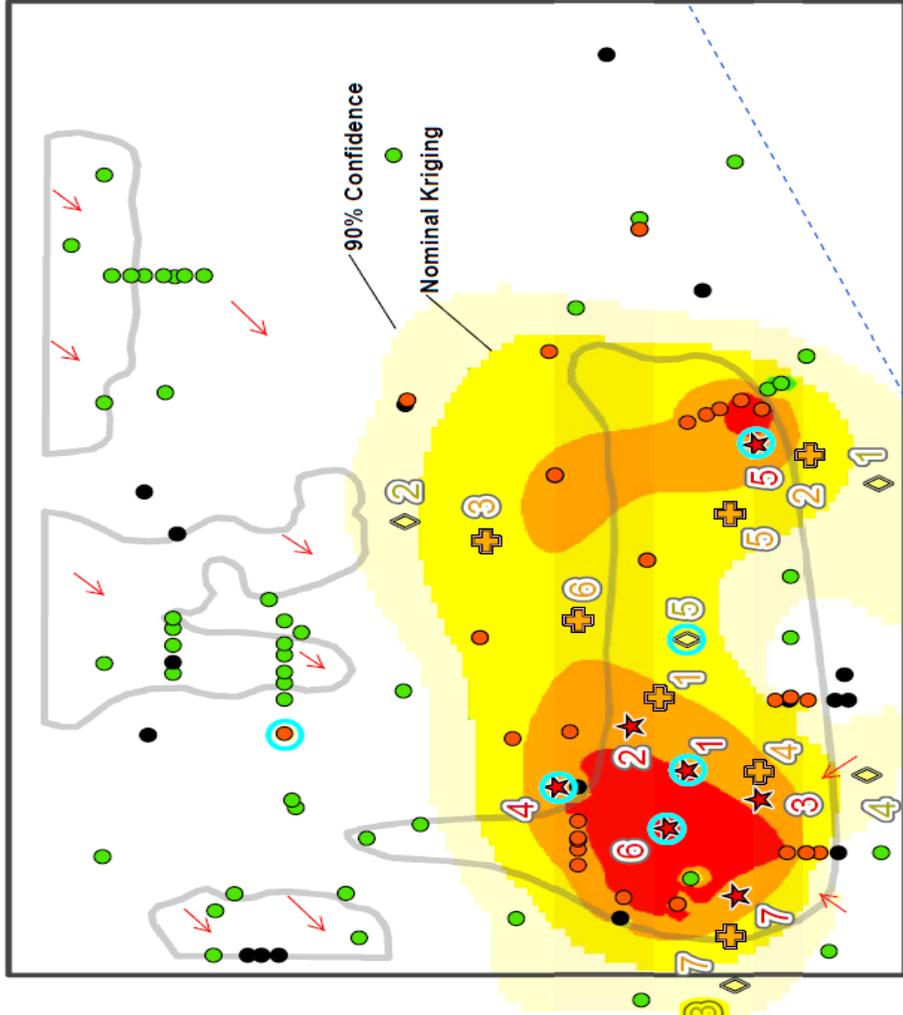
If you have any questions or require additional information, please contact me at (404) 562-8513.

Sincerely,

Jennifer Tufts
Remedial Project Manager
Federal Facilities Branch

ec: Todd Mullins, KDEP-Frankfort
Leo Williamson, KDEP-Frankfort
Jeff Snook, DOE - Paducah

Draft:
To be used solely for selecting
Phase IV and V sampling locations.



Trichloroethene in Soils and
 Suggested Additional Sampling Locations
 SWMU 4
 Paducah, KY

Geosyntec
 consultants

Figure
 1

Kennesaw, GA 11-November-2013

Notes:

- Concentrations are listed in ug/kg.
- Duplicate values have been reduced by the following rules:
 - The largest detected value is used.
 - If there are no detected values, the smallest non-detected value is used.
 - If there are both estimated and non-estimated, detected results, the largest non-estimated, detected result is used.
- TCE: Trichloroethene.
- U qualified data indicates this is the reporting limit of this non-detect result.
- The brighter colored plume indicates the estimated plume extent using C'tech's Environmental Visualization Software (EVS) using nominal kriging.
- The fainter colored plume indicates the estimated plume extent using C'tech's EVS software using 90% confidence plume.
- The suggested additional sampling locations were calculated using C'tech's EVS Drill Guide module which iteratively selects the locations with the highest uncertainty.
- Depth-specific analytical data labels are not shown for soil locations that were entirely non-detect.

Additional Region 4 Locations

State Locations

Soil Sample Locations

- Not Detected
- Detected
- > 75 (ug/kg)
- Estimated Water Line
- Disposal Cell Boundaries

Suggested Additional Sampling Locations

- 10,000 Threshold
- 1,000 Threshold
- 75 Threshold

TCE (ug/kg)

10,000
 1,000
 75