



ENERGY AND ENVIRONMENT CABINET

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Leonard K. Peters
Secretary

September 24, 2013

Ms. Rachel Blumenfeld
US Department of Energy
Portsmouth/Paducah Project Site Office
PO Box 1410
Paducah, Kentucky 42002

RE: Submittal of Comments to the Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume (DOE/LX/07-1288&D1)
Paducah Gaseous Diffusion Plant
Paducah, McCracken County, Kentucky
KY8-890-008-982

Ms. Blumenfeld:

The Kentucky Division of Waste Management (Division) received the *Final Characterization Report for Solid Waste Management Unit 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume*, dated June 26, 2013. The Division has completed its review of the subject document and is hereby submitting comments as an attachment. Please address these comments in a D2 version of the document.

If you have any questions or require additional information, please contact Brian Begley of my staff at (502) 564-6716, or e-mail at brian.begley@ky.gov.

Sincerely,

A handwritten signature in black ink that reads "April J. Webb".

April J. Webb, P.E., Manager
Hazardous Waste Branch

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DWM File: #1160-E, Graybar ARM20130012 (SW Plume VOC Sources Final RAR)
Attachment: Kentucky Comments

**Kentucky Division of Waste Management Comments Pertaining to the
*Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile
Organic Compound Sources for the Southwest Groundwater Plume*
Paducah Gaseous Diffusion Plant, Paducah, Kentucky**

DOE/LX/07-1288&D1

September 24, 2013

General Comments:

- 1) Tables ES.1 and ES.2 contain blank cells. If a table value or standard does not exist for a particular analyte, then please indicate so with ‘NA,’ or appropriate qualifier. Also, Table ES.1 is missing a separation line between the MCL column and the Secondary Standard column. Tables ES.1 and ES.2 represent the summarized groundwater results from MWs at SWMU 211-A and SWMU 211-B; however, they do not specify which monitoring wells are being included in the table and what sampling event(s) are being summarized. Please add this level of detail to both tables in the Executive Summary.
- 2) The number of groundwater sampling events associated with the existing monitoring wells at each unit is not apparent in the Executive Summary. Please add a sentence that details the number of groundwater sampling events that have occurred at each unit (being utilized in this document).
- 3) Throughout this document the depth of soil borings are described in relation to the ground surface. When describing the depth where a sample was collected, it would make sense to also include the corresponding elevation above mean sea level. Without this information it is not clear how the soil boring logs and elevation-specific data relate to one another.
- 4) The acronym ‘bcy’ is used twice on page 63 and twice on page 67 without being defined. It is also not present in the Acronyms page (vii). Please add the acronym and define the first occurrence in the text on page 63 and 67.

Specific Comments:

1) **Page xiv, Table ES.1, Vinyl chloride Row:**

A range of 2 to 20 U is provided for vinyl chloride in the ‘maximum detected groundwater concentration*’ column. It is not apparent to the reviewer what these numbers actually represent. An asterisks description indicates “where all analyses are ‘U’ qualified. Table ES.1 reports the laboratory reporting limits.” Why is there a range provided for vinyl chloride and trans- 1, 2-Dichloroethene? Why is a range provided for these two analytes and what does it mean?

2) **Page xv, SWMU 211-B RDSI Summary, 2nd bullet:**

The average TCE concentration for the subset of borings that exceeded the soil remediation goal was provided for SWMU 211-A, but not for SWMU 211-B. Please provide the average TCE concentration for the four boring locations mentioned in this bullet.

3) **Page xv, DATA GAPS, 1st paragraph, last sentence:**

“If the soil boing ...” Please correct this spelling typo.

4) **Page 11, Section 2.5, C-720 Northeast Site (SWMU 211-A) CSM:**

When referring to a concentration (8,100 µg/kg) from a historical investigation, please include the sample identification number. Add the sample id to this sentence.

5) **Page 11, Section 2.5, C-720 Southeast Site (SWMU 211-B) CSM:**

When referring to a concentration (68,000 µg/kg) from a historical investigation, please include the sample identification number. Add the sample id to this sentence.

6) **Page 12, Figure 3:**

Consider adding language to this figure reiterating that any TCE contamination located underneath the C-720 building footprint will be investigated and addressed under the Soils and Slabs OU.

7) **Page 28, Table 4 and Table 5:**

These tables are somewhat misleading. Either add the additional monitoring well construction details for the remainder of the wells associated with each SWMU or rephrase the caption to each table so that they only refer to monitoring wells installed during the 2012 RDSI.

8) **Page 34 and 48, Table 6 and 10, Soils VOC Data (Average Borehole Concentration):**

Consider demarking the average concentrations that are below the ‘groundwater protection remediation goal’ but had at least one sample that exceeded the remediation goal.

9) **Page 59, Figure 9, SWMU 211-A Cross Section, Sample 211-A-028, 34 ft.:**

The TCE concentration for the sample depth of 34 ft bgs should be highlighted as it exceeds the remediation goal.

10) **Page 59, Figure 9, SWMU 211-A Cross Section, Sample Borings 211-A-014 / 720-101 and sample Borings 211-A-020 / 720-106:**

These two locations are so close together it is difficult to visualize. Consider off-setting them slightly for visualization purposes.

11) **Page C-3, Section C.1.2 Methods, 1st paragraph:**

“Data was evaluated at 60, 70, 80, and 90% confidence intervals.” This statement appears to be inaccurate based on the yellow areas defined on figures six and eight. Both figures depict the Nominal (50%) Confidence Level TCE Concentrations greater than 75 µg/kg. Please revise this statement.

---End of Division of Waste Management Comments---