



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

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

September 3, 2013

4WD-FFB

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

RE: EPA comments on Certified Page Changes for the Remedial Action Work Plan for Phase IIa of the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/1271&D2/R2)

Dear Ms. Blumenfeld,

The Environmental Protection Agency (EPA) has received Certified Page Changes for the Remedial Action Work Plan for Phase IIa of the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/1271&D2/R2). EPA's comments are attached that address management of media (e.g. groundwater and soil) contaminated with RCRA Listed Waste. These changes may be documented through submittal of replacement pages.

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

Sincerely,

Jennifer Tufts
Federal Facility Agreement Manager
Federal Facilities Branch

1. **Section 12.2.4 Purge/Decontamination/Drilling Equipment, second paragraph**

The health-based concentration for TCE is identified as 0.081 ppb. This concentration is no longer valid since it has been replaced by the surface water standard for fish consumption which is 30 ppb. All references to the health-based concentration should reflect this new health-based limit.

The second paragraph of the section should be deleted and replaced with contained-in language similar to that from the NE Plume ESD: “The Northeast Plume groundwater is contaminated with certain VOCs that originated from disposal of spent solvents. As a result, the TCE contamination in the Northeast Plume has been declared a RCRA listed hazardous waste (code F001, F002, U228). Additionally, 1,1,1-trichloroethane (1,1,1-TCA), also a RCRA hazardous waste constituent associated with F001 and F002, has been detected at low levels in the Northeast Plume. Under the EPA “contained-in” policy, environmental media, such as groundwater, must be managed as hazardous waste if they “contain” listed hazardous waste. EPA guidance, *Management of Remediation Waste under RCRA*, recommends that “contained-in” determinations use conservative, health-based standards to develop site-specific health-based levels of hazardous constituents below which contaminated environmental media would be considered to no longer contain hazardous waste (EPA 1998). Consequently, per the EPA’s contained-in policy, the Northeast Plume groundwater is considered to contain the RCRA listed hazardous waste. Management of such groundwater must comply with the RCRA ARARs for hazardous waste identified in the original ROD and this ESD, unless the groundwater is determined to contain TCE below the health-based levels. The site-specific health-based level for TCE in groundwater at PGDP has been established at 30 ppb, which is based on Kentucky ambient water quality criteria for protection of human health for consumption of fish [401 KAR 10:031 § 6(1)]. Groundwater contaminated with TCE generated from the Northeast Plume project at or below 30 ppb will be considered to no longer contain the RCRA listed hazardous waste (F001, F002, U228). Groundwater that meets the health-based level for TCE also shall be deemed to no longer contain 1,1,1-TCA. Degradation products (*cis*-1,2-DCE; *trans*-1,2-DCE; or vinyl chloride) associated with TCE may be present in groundwater, and any treatment process used for the TCE-contaminated groundwater also would be effective in treating/reducing the concentrations of the degradation products. Most of the contaminated groundwater extracted for treatment exceeds this site-specific health-based level; thus, it must be managed as RCRA listed hazardous waste. Consequently, certain solid wastes generated from treatment units that treat groundwater containing TCE above 30 ppb are considered RCRA hazardous waste due to the derived-from rule at 40 *CFR* § 261.3(c) and (d) (401 KAR 31:010 § 3). The treated groundwater that is discharged into the receiving surface water body (e.g., Little Bayou Creek) through the CERCLA outfall will comply with identified Clean Water Act and Kentucky water quality standards identified as ARARs and will be below the 30 ppb TCE. Pursuant to 40 *CFR* § 261.4(a)(2) (401 KAR 31:010 § 4), point source discharges are excluded from regulation as a hazardous wastes. The exclusion applies only to the actual point source discharge and does not exclude industrial wastewaters while they are collected, stored, treated before the discharge, nor does it exclude sludge that is generated by industrial wastewater treatment.”

2. **Section 12.2.4 Purge/Decontamination/Drilling Equipment, third paragraph**

The third paragraph is vague in the description of how suspended solids will be removed from the wastewater. EPA has learned that DOE is planning to use “sock tubes” to separate solids. Information should be provided in the RAWP that describes the “sock tube” technology, how the soils will be dewatered, and where the solids and wastewater will be disposed of including all potential options for disposal. Both the groundwater and the solids (soils and sediment particles in the groundwater) are considered to contain RCRA Listed Wastes as described in the comment above. Separation of the solids from the wastewater appears to meet the definition of ‘treatment’ in RCRA regulations since clearly making one of the wastes more amenable for further treatment. Treatment can occur in containers or tanks, but these units must comply with associated ARARs. Information should be included to show that the sock tube container and the roll-off boxes meet the criteria for a RCRA hazardous waste container.