

TMDL FACT SHEET

LITTLE BAYOU CREEK

Project Name: Little Bayou Creek, Polychlorinated Biphenyls (PCBs)

Location: McCracken County, Kentucky

Scope/Size: River mile 0.0 to 6.5

TMDL Issues: Point and Nonpoint Sources

Data Sources: University of Kentucky (School of Biological Sciences)
U.S. Department of Energy
KY Department for Environmental Protection – Division of Water
Kentucky Division of Waste Management

Control Measures: Kentucky Pollutant Discharge Elimination System (KPDES)
Toxic Substances Control Act (TSCA)
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Kentucky Non-point Source TMDL Implementation Plan
Kentucky Watershed Management Framework

Summary: Past industrial and waste management activities at the Paducah Gaseous Diffusion Plant have resulted in PCB contamination throughout the plant site and in a segment of Little Bayou Creek. PCB contamination within the stream has led to establishment of a fish consumption advisory and an impairment of the Warm Water Aquatic Habitat (WAH) use. Little Bayou Creek has been

included on the 303(d) list of impaired waters since 1990 for priority organics (i.e. PCBs).

TMDL Development: The total maximum daily load for PCB is 0.00 (zero) pounds/day (lbs/day). Fish consumption advisories will be lifted when the PCB concentrations in fish are consistently less than 0.06 mg/kg (full support of fish consumption use). Regulatory controls to prevent new contributions of PCB contamination to Little Bayou Creek are already in place. Additionally, actions to control and investigate historic PCB contamination are underway by the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (USEPA), and the Kentucky Department for Environmental Protection (DEP). PCB levels within the sediments of Little Bayou Creek will diminish through time, eventually resulting in lowered levels in fish tissue.

Implementation

Controls:

A number of actions are ongoing to control and remediate PCB contamination at the site.

- Remediation of contaminated outfall sediments and soils.
- Waste management practices to prevent improper waste disposal or storage.
- Inspections and spill cleanup programs to prevent PCB-contaminated oils from reaching outfalls and Little Bayou Creek.
- Excavation of highly contaminated soils.
- Silt fencing and vegetative cover to prevent mobilization of soil contamination.