



PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

111 Memorial Drive • Paducah, Kentucky 42001 • (270) 554-3004 • padssab@apex.net • www.oakridge.doe.gov/pgdpssab

Chair

Mark Donham

Board Members

Nola Courtney

Judy Ingram

Vicki Jones

Merryman Kemp

Ricky Ladd

Ronald Lamb

Becky Lambert

Linda Long

Douglas Raper

Craig Rhodes

John Russell, Ph.D.

Rosa Scott

Jim Smart, Ph.D.

Bill Tanner

John Tillson

Rev. Gregory Waldrop

Deputy Designated Federal Official

W. Don Seaborg, DOE
Ex-officio member

Ex Officio Members

Carl Froede, Jr.
Environmental Protection Agency

Jim Lane, Jr.
Fish and Wildlife Resources
(Kentucky)

Tuss Taylor
Division of Waste Management
(Kentucky)

John A. Volpe, Ph.D.
Radiation Control Branch
(Kentucky)

DOE Federal Coordinator

Patricia J. Halsey

Consensus Recommendation: 02-01

Submitted for Discussion by Surface Water Task Force February 21, 2002

Title: Sewer Rehabilitation and Leak Repair at the Paducah Gaseous Diffusion Plant (PGDP).

Background:

1. Previous water audits conducted at the PGDP have been inconclusive and indicate a large imbalance of water “in” and water “out.”
2. The Department of Energy and the Bechtel Jacobs staff indicate the presence of leaks in the pressure mains at the PGDP.
3. Gravity sewer systems are constructed of vitrified clay pipe, many of which are more than 50 years old.
4. Groundwater levels under the site are surcharged at artificial levels.
5. Groundwater velocities are excessive.
6. Contaminants continue to appear in receiving streams.
7. The current Lifecycle Baseline shows water audit scheduled for 2012.

Concerns:

1. Underground trench bedding and backfill provide reservoir space for contaminants.
2. Leaking mains and sewers surcharge the groundwater.
3. Infiltration and exfiltration of gravity sewers provide a path for contaminants to enter receiving streams and groundwater.
4. The current Lifecycle Baseline for action is too far in the future.
5. Previous water audits indicate there is a problem.
6. Leaking pressure and gravity utility pipes pose a high risk for transporting contaminants off site.

Recommendation:

Funding for a leak survey of pressure mains and television inspection of gravity sewers should be included in FY 2004. All leaks discovered as a result of the surveys should be repaired as soon as possible to eliminate the existing high risk paths which contribute to surface water and groundwater off-site contamination. Future water budget analysis should not be completed until leaks are identified and repaired and proper metering is in place to eliminate excessive assumptions. This will allow development of more realistic modeling.

References:

1. Paducah Water Budget Analysis, DOE/OR/07=1888 & D1
2. EE/CA for Site-Wide Sediment Controls at PGDP, DOE/OR/07-1958 & D!/R1
3. Analysis and Interpretation of Water Levels in Observation Wells at the PGDP 1990-1997
4. 401 KAR 5:037, Groundwater Protection Plan
5. 401 KAR 5:060 KPDES Application requirements

Approved by Consensus April 18, 2002