



Department of Energy

Oak Ridge Operations
Paducah Site Office
P.O. Box 1410
Paducah, KY 42001

October 15, 2002

Ms. Merryman Kemp, Chairwoman
Paducah Gaseous Diffusion Plant
Citizens Advisory Board
111 Memorial Drive
Paducah, KY 42001

Dear Ms. Kemp:

RESPONSE TO CITIZEN ADVISORY BOARD CONSENSUS RECOMMENDATION 02-01, SEWER REHABILITATION AND LEAK REPAIR AT THE PADUCAH GASEOUS DIFFUSION PLANT

The following is the Department of Energy's response to the subject Paducah Gaseous Diffusion Plant (PGDP) Citizens Advisory Board (CAB) recommendation:

Comprehensive Water Budget

The purpose for performing a comprehensive water budget is to confirm the water use at the PGDP and to determine water loss to, and impact on, the site groundwater flow system and contaminant (trichloroethene [TCE] and technetium [Tc^{99}]) plumes distribution. This information would be used to predict changes in groundwater flow direction, velocity, and hydraulic gradient in the event the current industrial operations at PGDP should change. It is assumed that the water system infrastructure lines leak and affect the groundwater system and the plumes distribution. If industrial operations change, then water system leakage and recharge to the groundwater would also change, and the plumes distribution could be re-oriented. If the orientation of the plume changes, then this could impact the performance of the remedial action(s) constructed along the PGDP security fence. However, the current remedial strategy for the Groundwater Operable Unit does not include a fenceline action. Therefore, the benefit for performance of a comprehensive water budget is not justified at this time. However, if the remedial strategy changes to include a fenceline action, then consideration for performance of a water budget will be reevaluated.

Sewer Rehabilitation and Leak Repair

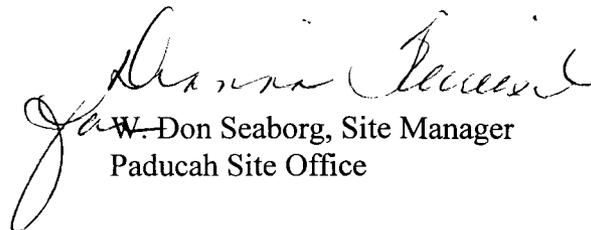
On April 18, 2002, the CAB approved consensus Recommendation 02-01, stating, "Funding for a leak survey of pressure mains and television inspection of gravity sewers should be included in FY04. All leaks discovered as a result of the surveys should be repaired as soon as possible to eliminate the existing high-risk paths, which contribute to surface water and groundwater off-site contamination. Future water budget analyses 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.” After careful consideration, the project does not support the above consensus recommendation. It is unlikely that leaking water and sewer lines provide high-risk paths to surface water and groundwater off-site contamination. Surveying and repair of leaking pressure mains and gravity sewers is not justified. Information supporting this recommendation includes the following:

- Under the current cleanup plan, high-risk path areas, such as the C-400 site, are being aggressively pursued for cleanup action.
- Infiltration of rainwater presents a higher-risk path than leaking water lines and sewers. Rainwater infiltration affects the entire PGDP. This provides the path for water infiltration into contaminated soil and carrying dissolved contamination from the Upper Continental Recharge System (UCRS) into the Regional Gravel Aquifer.
- Most water lines and sewers are not located in source areas of TCE. This would further limit the risk path and impact to groundwater contamination.
- If leaking water and/or sewer lines were a high risk to surface water, then TCE would be detected at significant concentrations from outfalls to PGDP. Since October 1987, TCE has been detected above 80.7 µg/l (aquatic criteria for human consumption) in only three samples. If leaking lines were a high-risk pathway to surface water, then greater magnitude and more frequent detection of TCE would be observed.
- Use of TCE was discontinued during 1993. Therefore, releases of TCE to the environment and from sewer systems no longer occur. Additionally, since that time, water infiltration would have carried the TCE source areas deeper into the UCRS, further reducing any possible impacts to surface water.
- Any repair or replacement of water and sewer lines would likely be included in scope to reindustrialize PGDP.

If you have any questions or require additional information, please call David W. Dollins at (270) 441-6819.

Sincerely,



W. Don Seaborg, Site Manager
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