



Paducah Gaseous Diffusion Plant
Citizens Advisory Board

Chair

Judy Clayton

Chair-Elect

Ralph Young

Board Members

John Anderson

Allen Burnett

Robert Coleman

David M. Franklin

Jonathan Hines

Shirley Lanier

Margaret Morgan

Dianne O'Brien

Elton Priddy

Alex Roman

Mark Sullivan

Don Swearingen

May Louise Zumwalt

Board Liaisons

Reinhard Knerr

DOE DDFO

Buz Smith

DOE Federal Coordinator

Ed Winner

Division of Waste

Management

Turpin Ballard

Environmental Protection

Agency

Mike Hardin

Fish and Wildlife Resources

Stephanie Brock

Radiation Health Branch

Support Services

EHI Consultants, Inc.

111 Memorial Drive

Paducah, KY 42001

Phone 270.554.3004

Fax 270.554.3248

www.pgdpcab.org

info@pgdpcab.org

Consensus Recommendation: 10-03

Approved March 18, 2010 by the Paducah Gaseous Diffusion Plant Citizens Advisory Board

Title: Recommendation for DOE's Contingency Plan for a Potential Waste Cell Breach

BACKGROUND

The Paducah Gaseous Diffusion Plant (PGDP) is an active uranium enrichment facility that is owned by the U.S. Department of Energy (DOE). The uranium enrichment facility is leased to and operated by the United States Enrichment Corporation. PGDP was placed on the National Priorities List in 1994. DOE, U.S. Environmental Protection Agency (EPA), and the Commonwealth of Kentucky entered into a Federal Facility Agreement (FFA) in 1998 (EPA 1998) that established the regulatory framework for site cleanup activities at PGDP conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and Resource Conservation and Recovery Act of 1976.

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) at PGDP have been combined into six operable units (OUs). Each of these OUs is expected to generate a variety of CERCLA waste throughout the cleanup process, including radioactively contaminated media and debris. An estimated 573,000 yd³ of waste is forecast to be generated prior to PGDP shut-down and an additional 3.14 million yd³ is estimated to be generated after PGDP shut-down, totaling an estimated 3.7 million yd³ from both phases of the cleanup.

DOE is evaluating a site wide disposal strategy to deal with these wastes. Both on-site and off-site disposal alternatives are being considered for this waste. Off-site disposal would involve shipping the waste either on a project by project basis or on a site wide basis to disposal facilities licensed to accept these wastes. The on-site alternative involves construction on the DOE reservation of a CERCLA Class D disposal facility meeting design and regulatory criteria. Both on-site and off-site waste disposal alternatives will be considered in the Remedial Investigation/ Feasibility Study (RI/FS) evaluation and decision documentation process required by CERCLA.

In an effort to inform stakeholders and prepare them to provide timely and appropriate input in this decision making process, DOE is hosting a series of public meetings on disposal options. The two public meetings held thus far on disposal options have taken a technically analytical, cost-driven approach and clearly stated that on-site disposal is the lowest cost option for DOE. Community feedback has been mixed. Although the community is a proponent of the obvious financial savings associated with on-site disposal, concerns have been expressed for human health and safety, the environment, and community economic repercussions.

Engineering analyses alone are insufficient to assure a significant portion of the public that on-site disposal will not pose an unacceptable risk to the public health and safety and the environment. An evaluation of the consequences of a containment failure of an on-site disposal facility is needed to establish bounds on the consequences of containment failure and put the risk into perspective.

RECOMMENDATION

The PGDP CAB recommends that, as part of the evaluation of waste disposal options at the PGDP, DOE communicate to the public potential consequences of a containment failure. This would establish bounds on the consequences of containment failure and put the risk to the public health and safety and the environment into perspective.

It is anticipated that the DOE response will include:

- **a description of possible failure modes,**
- **how radioactive and/ or hazardous materials would be released and how quickly,**
- **a plan for repairing identified damages, and**
- **DOE's plans to minimize the consequences of a failure.**