

FINDING OF NO SIGNIFICANT IMPACT

**CONSTRUCTION, OPERATION, AND CLOSURE OF
THE PROPOSED SOLID WASTE LANDFILL (SWL)
AT
PADUCAH GASEOUS DIFFUSION PLANT (PGDP),
PADUCAH, KENTUCKY**

AGENCY: Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE has prepared an environmental assessment (EA) for the proposed construction, operation, and closure of a Solid Waste Landfill (SWL) that would be designed in accordance with Commonwealth of Kentucky landfill regulations (401 Kentucky Administrative Regulations Chapters 47 and 48 and Kentucky Revised Statutes 224.855). The operation of PGDP produces approximately 7,200 cubic yards per year of non-hazardous, non-radioactive solid waste that is currently being disposed of in a transitional contained (residential) landfill cell (Cell #3). New Kentucky landfill regulations mandate that all existing landfills be upgraded to meet the requirements of the new regulations or stop receiving wastes by June 30, 1995. Cell #3 must stop receiving wastes at that time and be closed and capped within 180 days after final receipt of wastes. The proposed SWL would occupy 25 acres of a 60-acre site immediately north of the existing PGDP landfill (Cell #3). The EA evaluated the potential environmental consequences of the proposed action and reasonable alternative actions. Based on the analysis in the EA, DOE has determined that the proposed action does not constitute a major Federal action which will significantly affect the human environment within the meaning of the National Environmental Policy Act of 1969 (NEPA), 42 USC 4321 et seq. Therefore, it is determined that an environmental impact statement will not be prepared, and DOE is issuing this FONSI.

COPIES OF THIS ENVIRONMENTAL ASSESSMENT ARE AVAILABLE FROM:

U.S. Department of Energy
Public Reading Room
55 Jefferson Circle
Oak Ridge, Tennessee 37830

U.S. Department of Energy
Environmental Information Center
West Kentucky Technology Park
Highway 60
Kevil, Kentucky 42053

FOR FURTHER INFORMATION ON THE NEPA PROCESS, PLEASE CONTACT:

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SUPPLEMENTAL INFORMATION:

PROPOSED ACTION: To provide the additional capacity to dispose of contained waste and construction/demolition debris, DOE proposes to construct, operate, and ultimately close, a new SWL at PGDP. The proposed SWL, which would be operated under an area-fill method, would occupy 25 acres of a 60-acre site immediately north of the existing PGDP landfill and would accept both contained and construction/demolition debris waste generated at PGDP. Initial construction of three one-acre phases of the proposed SWL and associated support facilities for a total of 25 acres would be completed in 1995. Future expansion would be conducted in phases as necessary to provide adequate solid waste disposal capacity for PGDP. The proposed landfill would accept only solid non-hazardous, non-radioactive wastes. The contained waste would consist of cardboard, paper, canteen (cafeteria) waste, plastic, and glass. Construction/demolition debris would consist of small quantities of wood, metal materials, and construction debris (building materials, concrete, bituminous concrete [asphalt], masonry, wood scrap, and fly ash). No off-site waste would be accepted. Wastes would be placed in a specially designed working face, which would be underlain by a leachate drainage and collection system and a low permeability liner. The wastes would be


- **Geology and Soils** The geology of the area would not be affected by construction of the proposed facilities. Approximately 25 acres of prime farmland would be converted to other use by the proposed action. This is less than 1% of the prime farmland of McCracken County.
- **Land Use** The area proposed for the SWL is owned by DOE but available for public access, farming, or recreational activities. Minor disruption to field dog trials (competitions) would result from the proposed action. Development of this area as a landfill site is consistent with adjacent site development.
- **Noise** A temporary increase in local noise levels would occur due to construction activities. Intermittent increases in noise levels would occur over the projected life of the landfill due to the construction of additional phases as the area is developed. Operational activities would be limited to the active areas and would be similar to noise levels occurring at the adjacent existing landfill. Off-site receptors would not be impacted by increased noise.
- **Socioeconomics** Construction of the proposed SWL is not expected to affect the local economy on a long-term basis. The SWL would be operated by existing PGDP personnel and only short-term construction employment would be created. Transportation requirements would not change since the SWL would be located adjacent to the existing landfill facilities.
- **Water Resources** Small streams may be impacted by surface water runoff and additional siltation during construction and potentially during operation of the landfill, however, measures such as creation of sedimentation basins would be taken to mitigate runoff from the site. Therefore, runoff is not expected to affect aquatic biota. A potential exists for inadvertent discharge of landfill leachate to either the groundwater due to a breach in the landfill liner, or to surface water due to failure of the leachate collection tank. The leachate, however, would not be radioactively contaminated, and may be discharged to the existing

PGDP sewage treatment plant, if necessary. Cells would be excavated to at least 4 ft above the seasonal high water table per Kentucky regulations.

- Wetlands No wetlands would be affected by the proposed action.
- Floodplains No floodplains would be affected by the proposed action.
- Threatened and Endangered Species Consultation with the U.S. Fish and Wildlife Service has confirmed that no federally listed threatened or endangered species would be affected by the proposed action.
- Health & Safety Worker health and safety concerns would be typical of any construction project. All aspects of the project would be monitored by health and safety personnel for concurrence with the Health and Safety Plan that would be required for the project. Operational concerns for worker health and safety would be related to equipment operation, as no hazardous materials would be permitted in the landfill. All operators would be trained on the equipment necessary for day to day operations and per Commonwealth of Kentucky requirements.

DETERMINATION: The construction, operation, and ultimate closure of the proposed Solid Waste Landfill at PGDP does not constitute a major federal action that would significantly affect the quality of the human environment within the meaning of NEPA. This finding is based on the analyses presented in the EA. Therefore, an environmental impact statement will not be required.

Issued at Oak Ridge, Tennessee, this 27th day of March, 1995.


Joe La Grone
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Oak Ridge Operations Office