

DOE/LX/07-0107&D2/R1/V2

**Methods for Conducting Risk
Assessments and Risk Evaluations
at the Paducah Gaseous Diffusion Plant
Paducah, Kentucky**

Volume 2. Ecological



CLEARED FOR PUBLIC RELEASE

EXECUTIVE SUMMARY

An Ecological Risk Assessment Working Group (ERAWG) was chartered in April 2000 to develop effects-based threshold concentrations for no-action and action decisions and to develop risk assessment and analysis methods to support decision making for sites requiring further evaluation and to support verification that cleanup goals have been reached following implementation of a response action. In 2008, another ERAWG comprised of representatives from the Kentucky Department for Environmental Protection (KDEP), U.S. Environmental Protection Agency (EPA), and U.S. Department of Energy was assembled to update the document in accordance with new guidance. In 2014, the Paducah Risk Assessment Working Group included ecological evaluations in their discussions and provided updates to this document.

The ERAWG agreed that the overall process of designing and conducting ecological risk assessments (ERAs) would continue to follow an eight-step process concordant with current EPA Superfund guidance, *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final*. This document is not intended to be prescriptive, rather it is meant to be a guidance document describing the ERA process for Paducah Gaseous Diffusion Plant (PGDP). The ERAWG agreed upon sources and types of published data, model parameters, and methods for obtaining site-specific data that are required in various steps of the ERA process, and these are described. Revision 1 of this document incorporates updates to the no-action levels and provides additional information on guidance from EPA and KDEP issued after the development of the initial version of this document.

This ERA guidance document describes the input from ecological risk assessors that is required for PGDP decision documents. Ecological risk input to decision documents includes summaries of ERA and screening results, evaluations of the adverse effects on ecological receptors of the proposed remedial actions and the effectiveness of proposed exposure controls, and the requirements of monitoring plans.