Department of Energy

Portsmouth/Paducah Project Office
1017 Majestic Drive, Suite 200
Lexington, Kentucky 40513
(859) 219-4000

MAY 02 2013

Mr. Arthur L. Collins, Chief
U.S. Environmental Protection Agency, Region 4
Federal Facilities Branch, Superfund Division
61 Forsyth Street
Atlanta, Georgia 30303

PPPO-02-1829693-13

Mr. Todd Mullins, FFA Manager
Kentucky Department for Environmental Protection
Division of Waste Management
200 Fair Oaks Lane, 2nd Floor
Frankfort, Kentucky 40601

Dear Mr. Collins and Mr. Mullins:

TRANSMITTAL OF THE PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT SOURCE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY: SOLID WASTE MANAGEMENT UNITS 5 AND 6, DOE/LX/07-1275&D1

Please find enclosed the D1 *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6,* DOE/LX/07-1275&D1, for your review.

If you have any questions or require additional information, please contact Lisa Santoro at (270) 441-6804.

Sincerely,

W. E. Murphie

William E. Murphie
Manager
Portsmouth/Paducah Project Office

Enclosure:
D1 Proposed Plan for the BGOU Source Areas: SWMUs 5 and 6

e-copy w/enclosure:
brandy.mitchell@lataky.com, LATA/Kevil
brian.begley@ky.gov, KDEP/Frankfort
bruce.ford@lataky.com, LATA/Kevil
christie.lamb@lataky.com, LATA/Kevil
collins.arthur@epa.gov, EPA/Atlanta
craig.jones@lataky.com, LATA/Kevil
gaye.brewer@ky.gov, KDEP/PAD
jennifer.woodard@lex.doe.gov, PPPO/PAD
jim.erickson@lataky.com, LATA/Kevil
leo.williamson@ky.gov, KDEP/Frankfort
lisa.santoro@lex.doe.gove, PPPO/PAD
mark.duff@lataky.com, LATA/Kevil
pad.dmc@swiftstaley.com, SST/Kevil
rachel.blumenfeld@lex.doe.gov, PPPO/PAD
reinhard.knerr@lex.doe.gov, PPPO/PAD
rob.seifert@lex.doe.gov, PPPO/PAD
todd.mullins@ky.gov, KDEP/Frankfort
tracey.duncan@lex.doe.gov, P2S/PAD
tufts.jennifer@epamail.epa.gov, EPA/Atlanta

CERTIFICATION

Document Identification: ***Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6,*** **DOE/LX/07-1275&D1**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

LATA Environmental Services of Kentucky, LLC

Mark J. Duff, Paducah Project Manager

5-2-13
Date Signed

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U.S. Department of Energy

William E. Murphie, Manager
Portsmouth/Paducah Project Office

5/2/13
Date Signed

Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6

May 2013

INTRODUCTION

The U.S. Department of Energy (DOE) is conducting cleanup activities at the Paducah Gaseous Diffusion Plant (PGDP), Paducah, Kentucky, to address contamination resulting from past waste-handling and disposal practices at the plant. As part of these cleanup activities, DOE, the U.S. Environmental Protection Agency (EPA), and the Commonwealth of Kentucky Energy and Environment Cabinet (KEEC) request public review and comment on this Proposed Plan for remediation of specific areas within the Burial Grounds Operable Unit (BGOU). DOE is the lead agency for conducting the cleanup action, and EPA and KEEC are supporting regulatory agencies providing oversight. This Proposed Plan was developed consistent with the PGDP Federal Facility Agreement (FFA).

The BGOU includes 10 solid waste management units (SWMUs) consisting of PGDP's historical burial grounds and some landfill areas. The Scope and Role section of this Proposed Plan describes how the BGOU is integrated into PGDP's pre-shutdown scope. The integration with other actions is described in the "Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky," DOE/LX/07-1284&D2, Annual Revision—FY 2013.

Only two SWMUs are addressed in this Proposed Plan (see Figure 1):

- *C-746-F: Burial Ground (SWMU 5)*
- *C-747-B: Burial Area (SWMU 6)*

The nature and extent of contamination at SWMUs 5 and 6 was presented in the "Remedial Investigation Report for the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky," DOE/LX/07-0030&D2/R1, dated February 2010 (hereafter referred to as the RI Report). The feasibility study (FS) process was undertaken because the Baseline Risk Assessment (BRA) included in the RI Report identified potential risk levels that required an evaluation of remedial alternatives.

The "Feasibility Study for Solid Waste Management Units 5 and 6 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky," DOE/LX/07-0130a&D2/R3, dated February 2013 (hereafter referred to as the FS) evaluated alternatives to mitigate the potential risks to human health and ecological receptors from the waste and contaminated soil under the reasonably anticipated future industrial use scenario. SWMU 5 contains various types of radionuclide-contaminated scrap metal, slag from nickel and aluminum smelters, and magnesium scrap. SWMU 6 contains magnesium scrap, radionuclide-contaminated scrap metal,

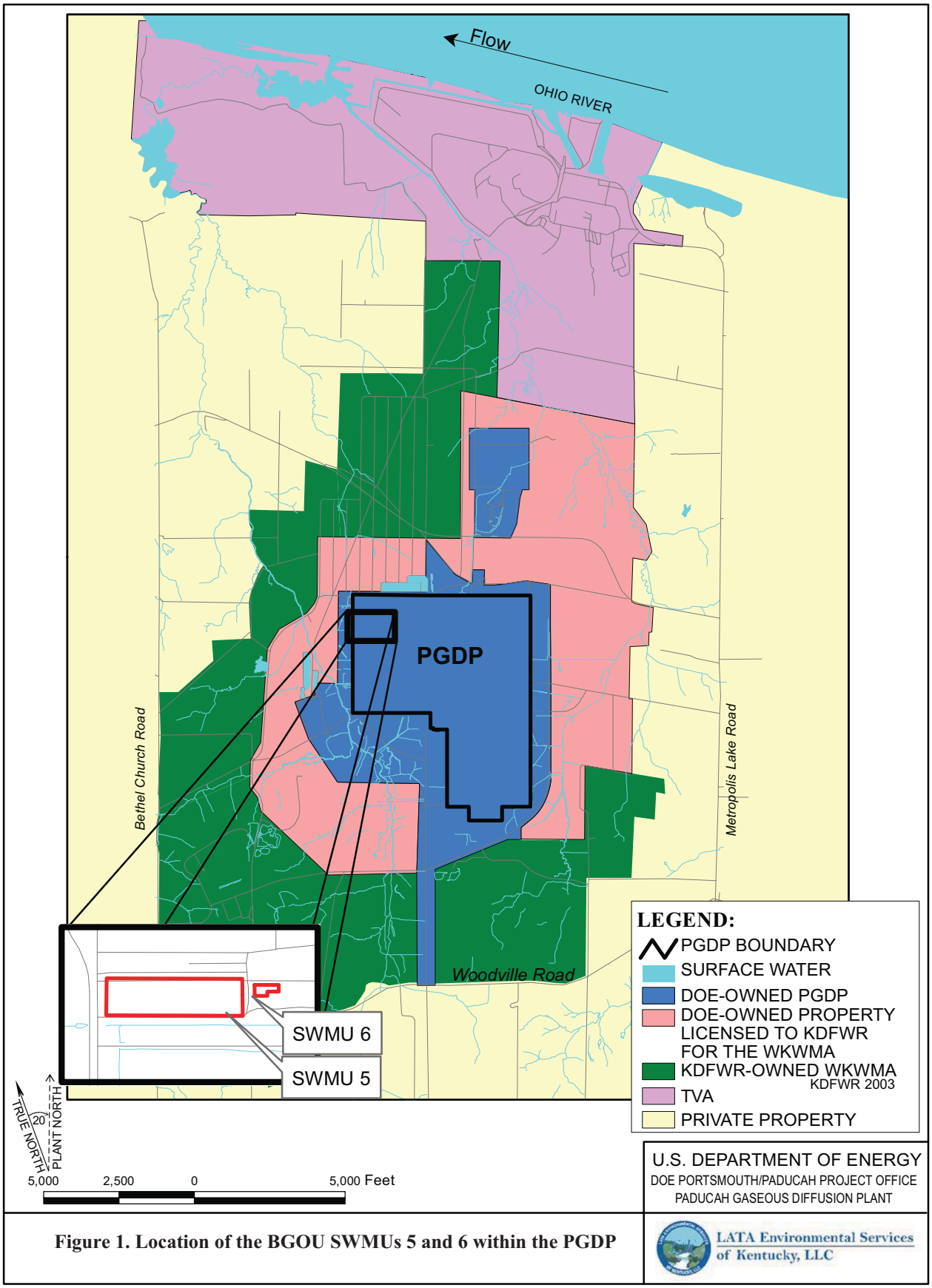

Figure 1. Location of the BGOU SWMUs 5 and 6 within the PGDP

exhaust fans, and a condensate trap. Table 1 summarizes the known or expected contents of SWMUs 5 and 6. As assessed in the BRA, the contamination within SWMUs 5 and 6 burial cells does not pose a current threat to the public, on-site workers, or ecological receptors. Additionally, no impacts to local groundwater by contamination within SWMUs 5 and 6 were determined by transport modeling completed in the RI and evaluated further in the FS. Contaminants at SWMUs 5 and 6 are unlikely to migrate downward through the Upper Continental Recharge System (UCRS) to the Regional Gravel Aquifer (RGA) in less than 1,000 years (i.e., the modeled period), due to their limited mobility.

Although the FS concludes, based on results in the RI and BRA, that the contaminated soils and waste at SWMUs 5 and 6 do not pose a current threat, the FS acknowledges that this conclusion is uncertain because sampling results from waste and certain soils, as discussed below, are limited.

Regarding SWMU 5, there are no direct-sample analytical data from the buried waste itself and only limited data from the surface and subsurface soils. Thus, there is uncertainty in the magnitude of potential risk and hazard that could be posed by direct contact with low-level threat waste (i.e., buried waste and contaminated soil). Additionally, there is uncertainty associated with the potential for and impact of contamination that might migrate to the surface through periodic seeps. These periodic circumstances, should they occur, would create a route for SWMU 5 contaminants to migrate to the surface and could contaminate adjacent surface soils and/or expose workers to potential contamination in seep water. These circumstances could result in an unacceptable level of risk.

Regarding SWMU 6, there are no direct-sample analytical data from the buried waste and only limited data from the subsurface soils. Thus, there is uncertainty in the magnitude of potential risk and hazard that could be posed by direct contact with low-level threat waste (i.e., buried waste and contaminated subsurface soil). Unlike SWMU 5, there are sufficient surface soils data to understand the associated risk and hazard.

The FS is the basis for the discussion of the remedial alternatives in this Proposed Plan and for the selection of a preferred alternative. The FS determined that, under the reasonably anticipated future industrial use of SWMUs 5 and 6, there are no contaminants of concern (COCs) in surface or subsurface soils, including soils associated with waste. Rather than threats from COCs, the FS developed remedial alternatives to address the uncertainties associated with the waste and nature and extent of soil contamination.

The FS evaluated common remedies for SWMUs 5 and 6 combined. Consequently, this Proposed Plan identifies a consolidated/common action for both SWMUs.

The FS focused on how to minimize potential risks from direct contact with waste and contaminated soil. The FS also focused on how to minimize the potential formation of seeps at SWMU 5. Remedial alternatives were developed and evaluated against the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, (CERCLA) criteria.

*Alternative 5: **Kentucky Subtitle D Cap, Land Use Controls (LUCs), and Monitoring** is the preferred alternative. This alternative eliminates direct contact with surface soils and maintains restrictions on direct contact with the waste and soils in close proximity to the waste by controlling access and excavation in applicable areas. A Land Use Control Implementation Plan (LUCIP) will be used to impose and maintain the required LUCs. Monitoring will be conducted to verify there is no unacceptable threat to surface water or groundwater because waste is left in place. Installation of a Kentucky Subtitle D Cap at SWMUs 5 and 6, which includes multilayers that are distinctly different from the natural subsoils, provide greater depth to the buried waste. These aspects (thickness and distinctive properties) of the cap are expected to provide protection of individuals from inadvertent intrusion by alerting them that this is a man-made engineered cover over something that is potentially hazardous to human health and by making it more difficult to expose the buried waste. This multilayer cap, which includes an impermeable layer, also will prevent infiltration of water into the buried waste.*

By summarizing the FS and RI Reports and requesting public comments on the preferred alternative, this Proposed Plan supports the public participation requirements of CERCLA as amended; the Resource Conservation and

Table 1. Summary of SWMUs 5 and 6 Disposal Cells

Sub Unit	Dates of Operation	Area of Waste (Depth of Waste)	Cover[a]	Volume of Contaminated Media to be Addressed by the Remedial Action[b]	Known or Expected Contents (Special Hazards)[c]
SWMU 5 C-746-F Burial Yard					
Not applicable	1965–1987	197,400 ft^2 (6-15 ft deep)	2 to 3 ft soil	113,555 yd^3	Radionuclide-contaminated scrap metal, slag from nickel and aluminum smelters
SWMU 6 C-747-B Burial Ground					
Area H	1971	180 ft^2 (6 ft deep)	3 ft soil	6,215 yd^3	Magnesium scrap
Area I (including Area I-2)	1966	316 ft^2 (8 ft deep)	5 ft soil		Exhaust fans (contaminated with perchloric acid)
Area J	Early 1960s	4,000 ft^2 (6 ft deep)	3 ft soil		Contaminated aluminum
Area K	1968–1969	180 ft^2 (6 ft deep)	3 ft soil		Magnesium scrap
Area L	1969	600 ft^2 (6 ft deep)	3 ft soil		Modine trap[d]

Table 1 is based on Table 1.3 of the RI Report.
[a] The source material used for cover is unknown.
[b] Volume of waste is assumed to approximate the volume of the burial cell. Volumes calculated using information from the RI Report and Appendix C of the FS Report.
[c] Any specific hazards associated with a specific waste are identified in parenthesis.
[d] A Modine trap is a brand name of a condensate trap.

Recovery Act (RCRA) of 1976; and Kentucky Revised Statute 224. It also serves as a "Statement of Basis" for the modification of the Kentucky Hazardous Waste Facility Permit, KY8-890-008-982. The Administrative Record for this action is available for review at the DOE Environmental Information Center or the McCracken County Public Library (see the last page of this Proposed Plan for location information).

DOE, EPA, and KEEC encourage public review and comment on the proposed alternatives for BGOU SWMUs 5 and 6. The public comment period for this Proposed Plan is from September xx, 2013, through November xx, 2013. The "Responsiveness Summary" section of the Record of Decision (ROD) will address public comments received on this Proposed Plan. Public comments also will become part of the basis of modification for the Kentucky Hazardous Waste Facility Permit, KY8-890-008-982. The preferred alternative represents DOE's recommendation, subject to public comment. The eventual remedial action(s) selected in the ROD for SWMUs 5 and 6 may be different from the preferred alternative presented in this document because of public comments. Additional information regarding the public participation process can be found in "Community Participation."

SITE BACKGROUND

PGDP is located in McCracken County in western Kentucky, about 3.5 miles south of the Ohio River and approximately 10 miles west of the city of Paducah. PGDP is an operating uranium enrichment facility owned by DOE. PGDP was placed on the National Priorities List on May 31, 1994. In accordance with Section 120 of CERCLA, DOE entered into an FFA with EPA and the Commonwealth of Kentucky on February 13, 1998. The FFA established one set of consistent requirements for achieving comprehensive site remediation in accordance with RCRA and CERCLA, including stakeholder involvement.

SWMUs 5 and 6 are located in the northwestern section of the approximately 650-acre security fenced area of PGDP, which is heavily industrialized. Table 1 shows the dates of operation, sizes, and summarized contents for these burial areas.

C-746-F Burial Yard (SWMU 5). SWMU 5 is located in the northwestern section of the PGDP secure area and covers an area of approximately 197,400 ft^2. It was in operation from 1965 to 1987 for the burial of components that resulted from

work performed at PGDP for other federal agencies. It also contains radionuclide-contaminated scrap metal and slag from the nickel and aluminum smelters.

Disposal cells at SWMU 5 were located on a grid system. Documentation verifies that the size of these grids ranges from 10 ft by 10 ft cells to 20 ft by 20 ft cells, excavated to depths of 6 to 15 ft below ground surface (bgs). Waste placed in the disposal cells was covered with 2 to 3 ft of soil. The total estimated quantity of wastes buried at SWMU 5 is approximately 896,000 ft^3. The total estimated quantity of waste and contaminated soil at SWMU 5 is approximately 113,555 yd^3.

C-747-B Burial Ground (SWMU 6). SWMU 6 is located in the northwestern section of the PGDP secure area. The burial area was in operation from 1960 to 1976 and covers approximately 8,400 ft^2. It is divided into five separate burial cells. Each of the burial cells was used for the disposal of a distinct waste stream per historical records. The following list describes the contents of each of the cells.

- Area H—Magnesium Scrap Burial Area. The scrap buried at this location is magnesium, in various shapes, generated in the machine shop.

- Area I—Exhaust Fan Burial Area. Eight exhaust hood blowers removed from C-710 were buried in this cell. Additional exhaust fans from C-710 were buried in cell I-2.

- Area J—Contaminated Aluminum Burial Area. The radiologically contaminated scrap buried in this cell consists of aluminum scrap in the form of nuts, bolts, plates, and trimmings that were generated in the converter and compressor shop.

- Area K—Magnesium Scrap Burial Area. The scrap buried at this location is magnesium in various shapes generated in the machine shop.

- Area L—Modine Trap Burial Area. A single radiologically contaminated Modine (condensate) trap was buried in this area.

SITE CHARACTERISTICS

SWMUs 5 and 6 are located within the security fenced area of PGDP. Beyond the secured industrial area is mostly open land, with some forested areas. Within the secured area, aboveground and belowground utilities and paved and gravel roadways are located adjacent to SWMUs 5 and 6. The surface of SWMU 5 is covered with grass. SWMU 6 is covered with gravel.

The topography of the PGDP area is relatively flat, varying from 360 to 390 ft above mean sea level (amsl). Storm water runoff from the SWMUs flows to ditches that discharge via permitted outfalls to Bayou Creek.

General Geology and Hydrogeology. A sequence of silt and clay layers, with interbedded sand and gravel lenses, occurs to an average depth of 55 to 60 ft bgs. These units comprise the UCRS. Below the UCRS is the RGA, a highly permeable layer of gravelly sand or chert gravel. Typically, the RGA is encountered from approximately 55 to 60 ft deep and extends to a base as much as 105 ft deep. Water within the UCRS tends to flow downward to the RGA. Groundwater flow in the RGA is generally to the north toward the Ohio River.

Nature and Extent of Contamination. The RI Report provided an assessment of past historical and present investigative and characterization data. The following information is provided about the nature and extent of potential contamination associated with the buried waste and subsurface and surface soils. Refer to Table 1 for a summary of the SWMU 5 and 6 disposal cells.

Based on disposal records, SWMUs 5 and 6 contain industrial wastes, some of which are low-level radioactive waste (LLW). Industrial wastes in burial grounds at PGDP are known to contain waste that could be contaminated with polychlorinated biphenyls (PCBs) or RCRA hazardous waste. Without more definitive waste characterization (i.e., sampling and analysis), it is not possible to state whether PCB or RCRA hazardous wastes also are present at SWMUs 5 and 6. Based upon waste inventory, the buried wastes at SWMUs 5 and 6 (including LLW) are considered low-level threat waste consistent with EPA guidance.

SWMU 5. There is no direct sampling and analytical data for buried waste and only limited data for associated subsurface soil and surface soil at SWMU 5; therefore, uncertainties associated with the waste and nature and extent of soil contamination remain. Characterization of SWMU 5 included limited sampling. Analysis included metals, radionuclides, and organic constituents (PCBs, volatile organic analytes, and semivolatile organic analytes) in surface and subsurface soils. Metals and radionuclides were the primary contaminants of interest at SWMU 5 because the majority of items believed to be buried there include radionuclide-contaminated scrap metal and slag from PGDP nickel and aluminum smelters.

The concentrations of metals in the soils were reviewed based on comparisons with background and patterns indicative of releases from the wastes. The metals analyses rarely exceeded the screening criterion (background) and where exceedances occurred, the analytical data suggested natural variability in soil properties with depth rather than migration from the waste as the source of these constituents.

With respect to radionuclides, there were limited occurrences of both uranium and technetium-99 in the surface and subsurface soils. There was 1 detection of technetium-99 out of 64 samples collected. There were 6 detections of uranium-238 out of 27 samples collected.

No organic constituents were detected in subsurface soil samples. There were detections of PCBs, polycyclic aromatic hydrocarbons (PAHs), and naphthalene in a few surface soil samples.

Additionally, no impacts to local groundwater by contamination within SWMU 5 were determined by transport modeling. Contaminants at SWMU 5 are unlikely to migrate downward through the UCRS to the RGA in less than 1,000 years (i.e., the modeled period), due to their limited mobility. However, transport modeling is uncertain due to limited sampling of low-level threat waste.

SWMU 6. There is no direct sampling and analytical data for buried waste and only limited data for associated subsurface soil at SWMU 6; therefore, uncertainties associated with the waste and nature and extent data for the subsurface soil contamination remain. Characterization of SWMU 6 also included limited sampling. Analysis included metals, radionuclides, and organic constituents in surface and subsurface soils. Metals analyses rarely exceeded the screening criterion (background) and, where exceedances occurred, they appeared to reflect natural variability in soils. No radionuclides were identified as potential contaminants for SWMU 6. Organic constituents were infrequently detected in soils, and, where detected, they occurred in surface locations associated with roads and drainageways.

Additionally, no impacts to local groundwater by contamination within SWMU 6 were determined by transport modeling. Contaminants at SWMU 6 are unlikely to migrate downward through the UCRS to the RGA in less than 1,000 years (i.e., the modeled period), due to their limited mobility. However, transport modeling is uncertain due to limited sampling data for the low-level threat waste.

SCOPE AND ROLE OF THE RESPONSE ACTION

As described in the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1284&D2, Annual Revision—FY 2013, site cleanup activities will occur in a sequenced approach consisting of (1) pre-shutdown scope, (2) post-shutdown scope, and (3) Comprehensive Site Operable Unit (OU) scope. The pre-shutdown scope is associated with media-specific OUs initiated prior to shutdown of the operating gaseous diffusion plant (GDP) (i.e., Pre-GDP Shutdown Activities). These media-specific OUs were established by developing a site conceptual risk model for each source area (SWMUs/areas of concern). This process included a qualitative evaluation of contaminant types and concentration, release mechanisms, likely exposure pathways, estimated points of exposure, and potential receptors based on current and reasonably foreseeable future land and groundwater uses. The source areas for the Pre-GDP shutdown scope have been grouped into these media-specific OUs:

- Groundwater OU
- Surface Water OU[1]
- Soils OU
- Burial Grounds OU
- D&D OU

The scope of the BGOU consists of the following 10 SWMUs:

- C-749: Uranium Burial Ground (SWMU 2)
- C-404: Low-Level Radioactive Waste Burial Ground (SWMU 3)
- C-747/748-B: Contaminated Burial Ground (SWMU 4)
- C-746-F: Burial Ground (SWMU 5)
- C-747-B: Burial Area (SWMU 6)
- C-747-A: Burial Ground and Burn Area [SWMUs 7 and 30, which includes the area beneath the former C-747-A UF_4 Drum Yard (SWMU 12)]
- Residential/Inert Borrow Area/Old North-South Diversion Ditch Disposal Trench (SWMU 145)
- C-746-S: Residential Landfill (SWMU 9)[2]
- C-746-T: Inert Landfill (SWMU 10)[3]

An RI Report has been approved, and it will be amended following additional investigation of SWMUs 4 and 145.

The FS for SWMUs 5 and 6 is *Feasibility Study for Solid Waste Management Units 5 and 6 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0130a&D2/R3.

Three additional FSs will be developed to support the selection of appropriate remedial actions for the burial grounds. The three FSs will be developed for each of the following BGOU groupings: (1) SWMUs 2, 3, 7, and 30; (2) SWMU 4; and (3) SWMUs 9, 10, and 145.

The BGOU will employ the CERCLA remedial process to accomplish the following general goals: (1) contribute to the protection of groundwater by eliminating, reducing, or controlling sources of groundwater contamination; (2) prevent exposure to waste and contaminated soils that present an unacceptable risk from direct contact; and (3) treat or remove principal threat wastes wherever practicable, consistent with 40 *CFR* § 300.430(a)(1)(iii)(A).

The goals listed above are general to the BGOU. SWMU-specific remedial action objectives (RAOs) are developed pertinent to SWMU-specific risks and conditions. For example, no principal threat waste is known to exist at either SWMU 5 or SWMU 6; therefore, goal 3 was not developed as a SWMU-specific RAO for these SWMUs.

No prior removal actions or early remedial actions have occurred at either SWMU 5 or 6.

SUMMARY OF SITE RISKS

The BGOU RI Report included a BRA, including the Baseline Human Health Risk Assessment (BHHRA), and a Screening Ecological Risk Assessment (SERA).

Summary of Human Health Risks. The BHHRA identified several COCs that could pose a potential threat to human health. The next section, Remedial Action Objectives, describes how these COCs were refined in the FS evaluation. The presence of COCs in some surface soil samples indicated a potential risk to future workers and future residents from direct contact with surface soils (although residential use is not a reasonably anticipated future land use). The BHHRA suggested that the presence of these COCs in the buried waste and immediately surrounding soils could pose a potential unacceptable risk to future industrial and outdoor workers who may contact the waste or subsurface soil. The BHHRA also suggested that the presence of these COCs in the

[1] The cumulative effects to terrestrial habitat will be assessed facility-wide (or watershed-wide) in the PGDP baseline ecological risk assessment for the Surface Water OU.
[2] Previously closed under solid waste regulations (C-746-T closed on 2/9/95; C-746-S closed on 8/4/95).
[3] Previously closed under solid waste regulations (C-746-T closed on 2/9/95; C-746-S closed on 8/4/95).

buried waste and immediately surrounding soils of SWMU 5 potentially could limit future residential use of the RGA groundwater.

Per the BHHRA, no noncarcinogenic COCs were identified for the future industrial worker in the surface soil at SWMUs 5 and 6. The noncarcinogenic COCs in subsurface soil, including those associated with waste, that could pose a risk to future outdoor workers at both SWMUs 5 and 6 include aluminum, barium, beryllium, chromium, iron, and manganese. Additionally, arsenic was identified at SWMU 5, and vanadium was identified at SWMU 6 as COCs in subsurface soils, including those associated with waste that could pose a potential hazard to future outdoor workers.

Per the BHHRA, the carcinogenic COCs in surface and subsurface soil, including subsurface soil associated with waste, that could pose a potential hazard to future outdoor or industrial workers at SWMU 5 are arsenic, beryllium, and Total PAHs. Total PCBs could pose a potential hazard only to the future outdoor worker. The carcinogenic COCs in surface and subsurface soil, including subsurface soil associated with waste, that could pose a risk to future outdoor or industrial workers at SWMU 6 are beryllium and Total PAHs.

Per the BHHRA, the COCs in soil that could pose a threat to RGA groundwater at the SWMU 5 boundary are arsenic, technetium-99, uranium (soluble salts/oxides), manganese, and naphthalene. No soil COCs posing a threat to RGA groundwater were identified for SWMU 6.

For additional information, refer to the four-step process to estimate the baseline human health risk at a CERCLA site, which is outlined in the text box on page 15 titled, "WHAT IS RISK AND HOW IS IT CALCULATED?"

Summary of Ecological Risks. The SERA concluded that the BGOU SWMUs are located in an active operational industrial facility that already is disturbed by construction and operational activities, and these SWMUs do not support any unique or significant ecological resources. Based on the existing data, risks to terrestrial receptors are not expected at SWMU 6 from current or future exposures. For SWMU 5, risk characterization for terrestrial receptors is uncertain due to the limited soils data used in the SERA.

It is the lead agency's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

REMEDIAL ACTION OBJECTIVES

RAOs provide a general description of what a CERCLA cleanup is designed to accomplish. During the FS process, the following SWMU-specific RAOs were developed for SWMUs 5 and 6:

- Contribute to the protection of groundwater by eliminating, reducing, or controlling sources of groundwater contamination that will result in an exceedance of the maximum contaminant level (MCL) or risk-based concentration for residential use of groundwater in the absence of an MCL in RGA groundwater.

- Prevent exposure to waste or waste-related contaminated soils that exceed target cumulative excess lifetime cancer risks (ELCRs) and cumulative noncancer hazard indices (HIs) for the future industrial and future outdoor worker receptors.[4] The acceptable cumulative risk levels for this RAO are defined as follows:

  - Surface Soil: cumulative ELCR < 1E-05 and cumulative HI $\leq$ 1 for a future industrial worker

  - Subsurface Soil: cumulative ELCR < 1E-04 and cumulative HI $\leq$ 1 for a future outdoor worker

[4] For both SWMUs 5 and 6, the reasonably expected future use is as an industrial area. The future industrial worker's reasonable maximum rate of exposure to surface soil in these areas is assumed to be 8 hours per day, 250 days per year, for 25 years. The reasonable maximum rate of exposure to surface and subsurface soil for the outdoor worker, who is assumed to be involved in site maintenance and excavation activities, is 8 hours per day, 185 days per year, for 25 years.

Part of the FS process is to review COCs developed in the BHHRA to refine the preliminary remediation goals (PRGs). These refined PRGs are the initial or proposed cleanup goals developed to provide risk reduction targets and serve as the basis for identifying and screening the treatment processes or removal and containment efficiencies required for remedial alternatives. The PRGs are further refined and will be identified as cleanup goals in the ROD, as appropriate. The final cleanup goal may reflect a different risk level within the acceptable risk range (10^{-4} to 10^{-6} for carcinogens) than the originally identified PRG.

The FS further evaluated the potential cancer risks and noncancer hazards from the COCs carried forward from the BHHRA. The FS concluded that there were no carcinogenic or noncarcinogenic COCs that warranted the development of PRGs. The FS also concluded that there were no COCs that warranted the development of PRGs for the protection of groundwater. Appendices A and B of the FS contain detailed risk discussions supporting these conclusions. The discussion that follows summarizes the FS evaluation of COCs identified in the BHHRA.

Potential hazards from noncarcinogenic COCs are expressed in terms of the cumulative HI. The EPA threshold defining the need to develop remedy-specific PRGs is a calculated cumulative HI greater than or equal to 1. The FS evaluation found that, under the reasonably anticipated future industrial use, the cumulative HI was less than 1 for direct contact to both surface soil and subsurface soil at SWMUs 5 and 6.

The FS also concluded that there were no carcinogenic COCs that warranted the development of PRGs for both SWMUs 5 and 6 with regard to the protection of future industrial or outdoor workers for the following reasons:

- Beryllium was removed as a COC for the BGOU based upon an updated toxicity assessment.

- Arsenic at SWMU 5 was removed as a COC because sample concentrations were evaluated and found to be consistent with background.

- PAHs for both SWMUs and PCBs at SWMU 5 were removed because the samples inside the SWMU boundaries did not result in risks above the threshold used in the COC evaluation.

The BHHRA identified COCs in soil at SWMU 5 that could pose a threat to RGA groundwater. The FS concluded that there were no COCs that warranted the development of PRGs for the protection of groundwater for the following reasons:

- Arsenic and manganese were found to occur at concentrations consistent with background. In addition, for arsenic, the MCL was not exceeded in RGA groundwater modeling.

- For technetium-99, subsurface soil sample concentrations were consistent with background. Further, modeled concentrations of technetium-99 in the RGA were below the MCL, and the soil screening levels for protection of RGA groundwater were not exceeded.

- No releases of uranium to soils were identified (all subsurface soil sample results were below background). Further, concentrations were below screening levels protective of RGA groundwater, and because of limited uranium mobility, no loading to the RGA groundwater would be expected within the modeled 1,000 year travel time.

- Naphthalene was not detected in any subsurface soil samples (only in surface soils), and was expected to attenuate and not exceed groundwater protection criteria.

In conclusion, the FS determined that there are no COCs in surface or subsurface soil, including those associated with waste, under the reasonably anticipated future industrial use of SWMUs 5 and 6. The FS developed remedial alternatives to address uncertainties identified in the RI, BRA, and FS associated with the buried waste and in the nature and extent of contamination in soils and impacts of migration of contaminants from potential sources to groundwater due to limited sampling data. Additionally, the FS developed remedial alternatives to address the potential for seeps at SWMU 5. At SWMU 5, there is a potential for periodic expression of seeps to the surface. These periodic circumstances, should they occur, would create a route for SWMU 5 contaminants to migrate to the surface and could

contaminate adjacent surface soils and/or expose workers to potential contamination in seep water. These circumstances could result in an unacceptable level of risk.

SUMMARY OF ALTERNATIVES

In the FS, technologies and process options were screened for their effectiveness to manage the uncertainties and potential risk posed by low-level threat wastes at SWMUs 5 and 6. The FS combined representative process options to develop remedial action alternatives. The alternatives then were screened for their (1) effectiveness, (2) implementability, and (3) cost.

The developed alternatives are consistent with EPA's expectation that engineering controls, such as containment, be used for low-level threat waste or where treatment is impracticable; therefore, no alternatives were developed in which treatment is a principal element. The developed alternatives are summarized below.

(1) No Action. Formulation of a No Action alternative is required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 *CFR* § 300.430(e) (6). The No Action alternative serves as a baseline for evaluation of other remedial action alternatives. Alternative 1 includes no actions and no costs.

(2) Limited Action (LUCs and Monitoring). The limited action alternative consists of LUCs and long-term monitoring. LUCs maintain restrictions on direct contact with waste and associated soils. LUCs consist of the following:

- Excavation/Penetration Permit (E/PP) Program
- Warning Signs
- Property Record Notices
- Contingent Deed/Lease Restrictions

The E/PP program includes a specific permitting procedure designed to provide a common sitewide system to identify and control potential personnel hazards related to trenching, excavation, and penetration greater than 6 inches into the surface of the earth, concrete, or pavement. Warning signs are a physical control placed at the source areas and left posted until such time as contaminant levels have reduced so that unrestricted use is allowed. Should DOE transfer or convey ownership of the property encompassing SWMUs 5 and 6, any deed or lease would include use restrictions prohibiting residential development or agricultural development within the SWMUs 5 and 6 source areas. A LUCIP will be used to impose and maintain the required LUCs. Monitoring will be conducted to verify that there is no unacceptable threat to surface water or groundwater because waste is left in place.

(3) Soil Cover, LUCs, and Monitoring. This alternative consists of a 1-ft clean topsoil cover that will provide a direct contact barrier to any contaminated soils and waste. LUCs maintain restrictions on direct contact with the waste and soils in close proximity to the waste by controlling access and excavation A LUCIP will be used to impose and maintain the required LUCs. Monitoring will be conducted to verify that there is no unacceptable threat to surface water or groundwater because waste is left in place.

(4) 18/6 Soil Cover, LUCs, and Monitoring. This alternative consists of a more substantial soil cover—18 inches of compacted local soil and 6 inches of topsoil—and provides a direct contact barrier to any contaminated soils and waste using locally available materials. LUCs maintain restrictions on direct contact with the waste and soils in close proximity to the waste by controlling access and excavation A LUCIP will be used to impose and maintain the required LUCs. Monitoring will be conducted to verify that there is no unacceptable threat to surface water or groundwater because waste is left in place.

(5) Kentucky Subtitle D Cap, LUCs, and Monitoring. This cap eliminates direct contact with surface soils. A Subtitle D cap generally is selected for a disposal facility based on the function of the bottom liner system or natural subsoils present. In the case of SWMUs 5 and 6, the cap is evaluated because of its capability in preventing direct contact with existing surface soils and buried waste. The cover includes the components listed below (from bottom to top).

- Filter fabric or other approved material
- 12-inch sand gas venting system with a minimum hydraulic permeability of 1E-03
- Filter fabric or other approved material

- 18-inch clay layer with a maximum permeability of 1E-07 cm/sec

- 12-inch drainage layer with a minimum permeability of 1E-03 cm/sec for areas of the final cap with a slope of less than 15%

- 36-inch vegetative soil layer

Alternative specifications may be used if approved through the CERCLA document review process. For example, a gas venting layer may not be an appropriate design feature for installations involving inorganic waste that will not generate methane as it decomposes. Also, an alternative design may substitute a synthetic liner of 40 mil for the 18-inch clay layer.

Installation of a Kentucky Subtitle D Cap at SWMUs 5 and 6, which includes multilayers that are distinctly different to the natural subsoils, provides greater depth to the buried waste. These aspects (thickness and distinctive properties) of the cap are expected to provide protection of individuals from inadvertent intrusion by alerting them that this is a man-made engineered cover over something that is potentially hazardous to human health and by making it more difficult to expose the buried waste.

In addition to the Subtitle D Cap, this alternative includes LUCs and monitoring, as described in Alternative 2. LUCs maintain restrictions on direct contact with the waste and soils in close proximity to the waste by controlling access and excavation. A LUCIP will be used to impose and maintain the required LUCs. Monitoring will be conducted to verify that there is no unacceptable threat to surface water or groundwater because waste is left in place.

(6) Excavation and Disposal of Waste Materials and Affected Soils. Waste materials in the burial cell and surrounding affected soil would be excavated and removed and replaced with clean backfill. This alternative assumes that waste and soil will be transported to an off-site disposal facility. A cost estimate also was developed in the FS for an **Alternative 6a** for disposal of waste and soil in an on-site CERCLA disposal unit, should one be available. Construction of an on-site disposal unit is being considered for the benefit of PGDP environmental cleanup in general, but no decision has been reached as of the date of this Proposed Plan.

Alternatives Carried Forward. The alternatives for the combined action at SWMUs 5 and 6 were screened for their (1) effectiveness, (2) implementability, and (3) cost. Alternative 5, Kentucky Subtitle D Cap, LUCs, and Monitoring, and Alternative 6 (including 6a), Excavation and Disposal of Waste Materials and Affected Soils, were retained for detailed evaluation against the CERCLA threshold, balancing, and modifying criteria. Additionally, Alternative 1, the No Action alternative, was retained, as required by CERCLA, to provide a baseline against which to compare other alternatives.

Alternative 2 was screened out and did not move to detailed analysis based on its lack of effectiveness because it does not mitigate the uncertainty due to the lack of surface soil characterization at SWMU 5 and would not meet the threshold criterion of protection of human health and the environment.

Alternatives 3 and 4, are both soil covers, but do not contain a low-permeable layer. These alternatives were screened from detailed analysis because they are ineffective at minimizing infiltration of precipitation through the buried low-level radioactive waste.

EVALUATION OF ALTERNATIVES

The evaluation process is outlined in the text box on page 16. The "Detailed Analysis of Alternatives" can be found in the FS.

The alternatives retained were evaluated in detail against the threshold and balancing CERCLA criteria. Evaluations involving the two modifying criteria will depend on input from state regulators and the public gathered during the public comment period for this Proposed Plan. A summary level qualitative evaluation for the threshold and balancing criteria is shown in Table 2. The following discussion summarizes the evaluation of alternatives in the context of the threshold and balancing criteria.

The No Action alternative was found not to meet the threshold criteria for protectiveness of human

health and the environment because it does not manage the uncertainties associated with the waste and nature and extent of soil contamination. Because it does not meet threshold criteria, it cannot be selected as the preferred alternative.

The retained action alternatives were found to meet the threshold requirements, which are overall protection of human health and the environment, and compliance with applicable or relevant and appropriate requirements (ARARs).

Alternative 6 (including 6a) provides a high degree of long-term effectiveness and permanence because the waste materials in the burial cell and surrounding affected soil would be excavated and removed and replaced with clean backfill. Alternative 5 is evaluated as having a moderate to high long-term effectiveness and permanence because the installation of a thick soil layer (cap) over the SWMUs will prevent contact with surface soil and waste. The cap also contains a low-permeable layer that will reduce infiltration into the waste.

None of the alternatives would reduce the toxicity, mobility, or volume of the waste or contaminated soil through treatment. Waste and contaminated soil excavated as part of Alternative 6 (including 6a) may require treatment prior to disposal. Additionally, water collected as incidental to excavation would be treated prior to discharge to existing ditches.

Of the action alternatives, Alternative 5 was evaluated high for the Short-Term Effectiveness criterion because its workers can be readily protected from the risks associated with the work and implementation of the alternative would have minimal community impact. Alternative 6 (including 6a) was evaluated as moderate because of the increased complexity associated with excavating, packaging, and transporting the waste.

All alternatives are evaluated as having high implementability, although it is noted that 6a can be implemented only if an on-site disposal facility is available at the time of remedy implementation. All of the action alternatives can be readily implemented using standard construction means and methods.

The life-cycle costs for the evaluated alternatives at both SWMUs were calculated and are presented in Table 2 as net present worth fiscal year 2012 dollars. For Alternative 5, where waste will remain in place, operation and maintenance costs and/or long-term monitoring costs are included for 30 years for the purpose of the cost evaluation. These tasks would continue until there no longer is a potential for a completed exposure pathway under reasonable future use scenarios as determined by monitoring conducted after the remedial action is complete or through the CERCLA 5-year remedy review. Alternatives 6 and 6a do not offer increased long-term effectiveness and permanence commensurate with their cost.

PREFERRED ALTERNATIVE

The preferred alternative for SWMUs 5 and 6 is Alternative 5, Kentucky Subtitle D Cap, LUCs, and Monitoring.

The preferred alternative meets the threshold criteria (overall protection of human health and the environment and compliance with ARARs) and provides the best balance of trade-offs among the alternatives with respect to the balancing and modifying criteria for remedy selection. The costs of the preferred alternative was determined to be the best overall value to public and the community, providing overall protectiveness and effectiveness without incurring excessive costs for relatively minor incremental gains in protectiveness and effectiveness.

EPA and KEEC concur with the preferred remedial alternatives identified in this Proposed Plan. Consistent with the NCP at 40 *CFR* § 300.430(f)(4), EPA jointly selects these proposed remedial alternatives with DOE at PGDP, a federal facility. This document serves as the Statement of Basis, as discussed in the Introduction. The preferred alternative can change in response to public comment or new information.

DOE expects the preferred alternative to satisfy the following statutory requirements of CERCLA Section 121(b): (1) be protective of human health and the environment; (2) comply with ARARs;

Table 2. Detailed Analysis Summary for SWMUs 5 and 6

	Alternative 1	Alternative 5	Alternative 6	Alternative 6a
Evaluation Criteria	**No Action**	**Kentucky Subtitle D Cap, LUCs, and Monitoring**	**Excavation and Disposal of Waste Materials and Affected Soils**	**Excavation and Disposal of Waste Materials and Affected Soils (at Proposed On-Site Disposal Unit)**
Overall Protection of Human Health and the Environment	Does not meet the threshold criterion	Meets the threshold criterion	Meets the threshold criterion	Meets the threshold criterion
Compliance with ARARs	No ARARs identified	Meets the threshold criterion	Meets the threshold criterion	Meets the threshold criterion
Long-Term Effectiveness and Permanence	Low	Moderate to High	High	High
Reduction of Toxicity, Mobility, or Volume through Treatment	None	None	No reduction through treatment other than incidental to treatment of collected waste to meet disposal facility waste acceptance criteria. Water collected as incidental to excavation would be treated and discharged to existing ditches.	No reduction through treatment other than incidental to treatment of collected waste to meet disposal facility waste acceptance criteria. Water collected as incidental to excavation would be treated and discharged to existing ditches.
Short-Term Effectiveness	High	High	Moderate	Moderate
Implementability	High	High	High	High (applicable only if an on-site disposal cell is available)
Cost	Low	Moderate	High	Moderate to High
Capital Cost	$0	$8,092,000	$240,203,000	$72,714,000
Average Annual O&M Cost	$0	$63,784	$6,844	$6,844
Net Present Worth Cost	$0	$10,006,000	$240,408,000	$72,919,000

(3) be cost-effective; (4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The preferred alternative does not satisfy the preference for treatment as a principal element.

Five-Year Review Requirements. DOE will review the final remedial action no less than every five years per CERCLA Section 121(c) and the NCP at 40 *CFR* § 300.430(f)(4)(ii). The five-year reviews will be conducted to ensure that the remedy is protective of human health and the environment. If results of the five-year reviews reveal that the remedy's integrity is compromised and protection of human health is insufficient, then additional remedial actions would be evaluated by the parties and implemented by DOE. The statutory reviews will be conducted in accordance with CERCLA 121(c), the NCP, and EPA guidance.

COMMUNITY PARTICIPATION

Community involvement is a critical aspect of the cleanup process at PGDP. DOE, EPA, and KEEC encourage the public to read and comment on this Proposed Plan. The preferred alternative discussed in this document represents a preliminary decision that is subject to public comment. A Notice of Availability will be published in *The Paducah Sun* announcing the 45-day public review period for this document. The public comment period for this Proposed Plan is scheduled from September xx, 2013, through November xx, 2013.

A public meeting will be conducted if requested during the public review period. All public comments resulting from such meeting will be documented. The Kentucky Department for Environmental Protection, Division of Waste Management, will conduct a public hearing following the public meeting, if requested. A hearing is a formal gathering during which public comments are recorded officially by a hearing officer (to be designated by KEEC), as required by RCRA and Kentucky hazardous waste regulations. Written requests for a public hearing should state the issues to be discussed.

If either a meeting or a hearing is requested, a notice will appear in *The Paducah Sun*. To submit comments on this Proposed Plan, please contact the Paducah DOE Site Office, P.O. Box 1410, Paducah, KY 42001, phone (270) 441-6800. To request a public hearing and/or submit comments on this "Statement of Basis," please contact Tony Hatton, Kentucky Department for Environmental Protection, Division of Waste Management, 200 Fair Oaks Lane, 2nd Floor, Frankfort, KY 40601, phone (502) 564-6716.

WHAT IS RISK AND HOW IS IT CALCULATED?

A CERCLA human health risk assessment estimates "baseline risk." This is an estimate of the likelihood of health problems occurring under current and expected future use if no cleanup action is taken at a site. To estimate the baseline risk at a CERCLA site, a four-step process is followed.

Step 1: Analyze Contamination

Step 2: Estimate Exposure

Step 3: Assess Potential Health Dangers

Step 4: Characterize Site Risk

In Step 1, the risk assessor looks at the concentrations of contaminants found at a site, as well as at past scientific studies on the effects these contaminants have had on people (or animals, when human health studies are unavailable). Comparisons between site-specific concentrations and concentrations reported in past studies enable the risk assessor to determine which contaminants are most likely to pose the greatest threat to human health.

In Step 2, the risk assessor considers the different ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Using this information, the risk assessor calculates dose from a "reasonable maximum exposure" (RME) scenario, which represents an estimate of the highest level of human exposure that reasonably could be expected to occur within a given time period.

In Step 3, the risk assessor uses the information from Step 2, combined with the information of the toxicity of each chemical, to assess potential health risks. Two types of risk are considered: cancer risk and noncancer risk. The likelihood of any kind of cancer resulting from a CERCLA site generally is expressed as an upper bound probability: for example, a "1 in 10,000 chance." In other words, for every 10,000 people exposed under the RME scenario, one extra cancer *may* occur as a result of exposure to site contaminants. An extra cancer case means that one more person could get cancer than normally would be expected from all other causes. For noncancer health effects, the risk assessor calculates a "hazard index." The key concept for noncancer health effects is that a "threshold level" (measured as a hazard index of 1) exists; below this level, noncancer health effects are not expected.

In Step 4, the risk assessor determines whether the site risks are great enough to cause unacceptable health problems for people exposed at or near a site. To do this, the risk assessor combines and summarizes the risk results for the individual chemicals and routes of exposure within the RME scenario and compares the resulting scenario risk estimates to the generally acceptable risk range for site-related exposures.

Adapted from EPA 540-R-98-031.

CRITERIA FOR REMEDIAL ALTERNATIVES EVALUATIONS

Nine criteria developed by the EPA are used to compare alternatives and select a cleanup plan or remedy that meets the statutory goals of protecting human health and the environment, maintaining protection over time, and minimizing contamination. These nine criteria make up the assessment process regulated under CERCLA Section 121 and regulations promulgated in the NCP and are the standard criteria used for all Superfund sites. The following list highlights these nine criteria and some questions that must be considered in selecting a final cleanup plan. More detailed definitions are contained in Section 4 of the FS.

Threshold Criteria

1. **Overall protection of human health and the environment:** Will the alternative protect human health and plant and animal life on and near the area? The chosen cleanup plan must meet this criterion.

2. **Compliance with applicable or relevant and appropriate requirements:** Does the alternative meet all pertinent federal and state environmental statutes, regulations, and requirements? The chosen cleanup plan must meet this criterion.

Balancing Criteria

3. **Long-term effectiveness and permanence:** How reliable will the alternative be at long-term protection of human health and the environment? Is contamination likely to present a potential risk again?

4. **Reduction of toxicity, mobility, or volume through treatment:** Does the alternative incorporate treatment to reduce the harmful effects of the contaminants, their ability to spread, and the amount of contaminated material present?

5. **Short-term effectiveness:** How soon will risks be adequately reduced? Are there short-term hazards to workers, the community, or the environment that could occur during the cleanup process?

6. **Implementability:** Is the alternative technically and administratively feasible? Are the goods and services needed to implement the alternative (e.g., treatment machinery, space at an approved disposal facility) readily available?

7. **Cost:** What is the total cost of constructing and operating the alternative? Costs presented in this document represent the present worth costs of construction, operation, and monitoring for the anticipated lifetime of the alternative.

Modifying Criteria

8. **State acceptance:** Do state environmental agencies agree with the recommendations? What are their preferences and concerns?

9. **Community acceptance:** What suggestions or modifications do residents of the community offer during the comment period? What are their preferences and concerns?

Of these nine criteria, the two threshold criteria (protection of human health and the environment and compliance with ARARs) must be met for a candidate cleanup alternative to be selected. The five balancing criteria are used to evaluate and compare the elements of the alternatives that meet the threshold criteria. This comparison evaluates which alternative provides the best balance of trade-offs with respect to the balancing criteria outlined above (3-7). State and community acceptance are considered modifying criteria and are factored into a final evaluation of all criteria to select a remedy. Consideration of state and community comments may prompt aspects of the preferred alternative to change or suggest that another alternative provides a more appropriate balance.

This document serves both as a Proposed Plan and as a Statement of Basis.

To send written comments or obtain further information about this Proposed Plan, contact:
Lisa Santoro
U.S. Department of Energy
Paducah Site Office
P.O. Box 1410
Paducah, KY 42001
(270) 441-6800

To send written comments about this Statement of Basis, contact:
Tony Hatton
Kentucky Department for Environmental Protection
Division of Waste Management
200 Fair Oaks, 2nd Floor
Frankfort, KY 40601
(502) 564-6716

Administrative Record Availability

Information about this site considered during the response action determinations for this project, including the Proposed Plan, is available for review at the DOE Environmental Information Center
115 Memorial Drive, Barkley Centre, Paducah, KY 42001
(270) 554-6979

Hours: 8:00 A.M. to 12:00 P.M. Monday through Friday
or electronically at www.paducaheic.com

The Proposed Plan also is available at the
McCracken County Public Library
555 Washington Street, Paducah, KY 42003
(270) 442-2510

Hours: 9:00 A.M. to 9:00 P.M. Monday through Thursday
9:00 A.M. to 6:00 P.M. Friday and Saturday
1:00 to 6:00 P.M. Sunday

***

Regulatory Contacts

Kentucky Energy and Environment Cabinet
Kentucky Department for Environmental Protection
Division of Waste Management
200 Fair Oaks, 2nd Floor
Frankfort, KY 40601-1190
Attention: Todd Mullins
todd.mullins@ky.gov
(502) 564-6716

(Record reviews at the Kentucky Department for Environmental Protection are by appointment only.)

U. S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, GA 30303-8960
Attention: Arthur L. Collins
collins.arthur@epa.gov
(404) 562-8550

The Record of Decision and the proposed modification to the Kentucky Hazardous Waste Management Permit will be made available at the Environmental Information Center and at the McCracken County Public Library after they have been signed by the United States Department of Energy and the United States Environmental Protection Agency and concurred with by the Kentucky Department for Environmental Protection.

The United States Department of Energy, the United States Environmental Protection Agency, and the Kentucky Energy and Environment Cabinet do not discriminate upon the basis of race, color, national origin, sex, age, religion, or disability in the provision of services. Upon request, reasonable accommodations will be provided. These accommodations include auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs, and activities. To request appropriate accommodations for a public hearing or meeting (such as an interpreter) or alternate formats for printed information, contact Matthew Hackathorn at (502) 564-6716 or the LATA Environmental Services of Kentucky, LLC, Public Information Officer at (270) 441-5000.