



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

June 14, 2016

Ms. Tracey Duncan
Federal Facility Agreement Manager
United States Department of Energy
Portsmouth/Paducah Project Site Office
5501 Hobbs Road
Kevil, KY 42053

RE: EPA Approval: Extension for the Submittal of the D2 Fiscal Year 2016 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2400&D2), transmittal dated June 10, 2016 (PPPO-02-3605143-16)
EPA I.D. KY8890008982, McCracken County, KY

Dear Ms. Duncan,

The U. S. Environmental Protection Agency (EPA) Region 4 has reviewed the Department of Energy's (DOE) request for an second extension of the submittal date for the D2 Fiscal Year (FY) 2016 Site Management Plan (SMP) that responds to comments submitted by the EPA (March 7, 2016) and the Kentucky Department for Environmental Protection (KDEP; December 15, 2016) on the D1 version of the planning document. DOE states that good cause exists for this request and that it is consistent with Section XXIX.B.6 (*Extensions*) of the Federal Facility Agreement (FFA): *"to allow time for Kentucky Department for Environmental Protection, U.S. Environmental Protection Agency, and the U.S. Department of Energy senior management to discuss the priorities for the Paducah site."* EPA agrees with the basis of the extension request under Section XXIX.B.6: *Any other event or series of events mutually agreed to by the Parties as constituting good cause.* Upon approval by the KDEP, the due date for the D2 SMP should be extended from June 20 to July 20, 2016.

EPA notes the DOE Portsmouth/Paducah Project Office (DOE-PPPO) initiated the discussion regarding PGDP priorities (including, but not limited to, cleanup work priorities under the FFA) with EPA senior management on April 21, 2016. EPA requested, but has not yet received, a detailed written proposal from the DOE in support of completing this discussion; nor have we received timely submission of the revised SMP by DOE addressing EPA comments related to establishing deadlines and milestones for cleanup projects. The DOE-PPPO Acting Manager is scheduled to meet with EPA Region 4 Superfund Division senior management on June 20, 2016. In view of having meaningful dialogue between the FFA parties and in view of finalizing the SMP, EPA again requests that the DOE provide the detailed site-wide prioritization proposal in writing to Mr. Franklin Hill in advance of the June 20 meeting in Region 4 offices at the Atlanta Federal Center.

Ms. Tracey Duncan

EPA Approval: Extension for the Submittal of the D2 Fiscal Year 2016 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2400&D2), transmittal dated June 10, 2016 (PPPO-02-3605143-16)

June 14, 2016

Page 2

For purpose of reference by all parties, I have enclosed the current version (dated April 12, 2016) of DOE's draft responses to EPA and KDEP comments on the D1 SMP. Through April 28, 2016, there have been two (2) meetings to discuss comments (a third was cancelled due to scheduling conflicts). As of the last tri-party meeting (April 28, 2016) to discuss revisions to the FY 2016 SMP, the majority of EPA and KDEP comments had only been "binned" by DOE for future discussion. Specifically, as of the date of this letter, DOE draft responses have not been provided for the majority of the EPA and KDEP comments for our consideration and discussion in support of SMP finalization.

If you have any questions about this correspondence, please do not hesitate to contact me at (404) 562-8547 or via electronic mail at corkran.julie@epa.gov.

Sincerely,



Julie L. Corkran, Ph.D.
Federal Facility Agreement Manager
Superfund Division

Enclosure (as stated)

Electronic copy:

Jon Richards, US EPA – Region 4; Richards.jon@epa.gov

Eva Davis, US EPA – ORD; davis.eva@epa.gov

Noman Ahsanuzzaman, US EPA – Region 4; Ahsanuzzaman.noman@epa.gov

Nicole Goers, TechLaw; ngoers@techlawinc.com

Robert Edwards, DOE – LEX; Robert.edwards@lex.doe.gov

David Dollins, DOE – Paducah; dave.dollins@lex.doe.gov

Jennifer Woodard, DOE – Paducah; Jennifer.Woodard@lex.doe.gov

Kim Knerr, DOE – Paducah; kim.Knerr@lex.doe.gov

Mark J. Duff, Fluor Federal Services – Kevil; mark.duff@FFSpaducah.com

Myrna Redfield, Fluor Federal Services – Kevil; Myrna.redfield@FFSpaducah.com

John Wesley Morgan, Fluor Federal Services – Kevil; John.morgan@FFSpaducah.com

Jana White, Fluor Federal Services – Kevil; jana.white@FFSpaducah.com

Craig Jones, Fluor Federal Services – Kevil; Craig.jones@FFSpaducah.com

Karen Walker, Fluor Federal Services – Kevil; Karen.walker@FFSpaducah.com

Karla Morehead, P2S – Paducah; karla.morehead@lex.doe.gov

Ms. Tracey Duncan

EPA Approval: Extension for the Submittal of the D2 Fiscal Year 2016 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2400&D2), transmittal dated June 10, 2016 (PPPO-02-3605143-16)

June 14, 2016

Page 3

Christa Dailey, P2S – Paducah; christa.dailey@lex.doe.gov

Bethany Jones, P2S – Paducah; Bethany.jones@lex.doe.gov

Paige Sullivan, P2S – Paducah; paige.sullivan@lex.doe.gov

Jim Ethridge, CAB – Paducah; jim@pgdpcab.org

Matt McKinley, CHFS – Frankfort; matthewW.mckinley@ky.gov

Stephanie Brock, CHFS – Frankfort; StephanieC.Brock@ky.gov

Nathan Garner, CHFS – Frankfort; Nathan.garner@ky.gov

Brian Begley, KDWM – Frankfort; brian.begley@ky.gov

Gaye Brewer, KDWM – Paducah; gaye.brewer@ky.gov

Mike Guffey, KDWM – Frankfort; mike.guffey@ky.gov

Leo Williamson, KDWM – Frankfort; Leo.Williamson@ky.gov

April Webb, DSWM – Frankfort; Webb.April@ky.gov

FFS Correspondence; FFSCorrespondence@FFSPaducah.com

FY 2016 Site Management Plan

Binning of EPA and KDEP Comments

Category 1 - General Comments (Discussed at March 30 Meeting):

EPA Comment #1: Operable Unit Designations. For the purpose of required tracking in EPA databases, reporting to Congress, and communication among interested parties, it is necessary that the Operable Units (OUs) at Superfund Sites, including the PGDP Superfund Site, be assigned unique numbers. At this time, the SMP Appendix 4 appears to establish six (6: Groundwater, Surface Water, Burial Grounds, Soils, D&D, and Comprehensive Site), seven (7: to include Permitted) or possibly twelve (12) OUs (to include Remaining Remediation Groundwater Sources, Remaining Remediation Lagoons and Ditches, Remaining Remediation Burial Grounds Sources, Remaining Remediation Soils and Slabs, Remaining Remediation D&D).

- After discussion among the FFA Parties, revise the SMP to assign unique numbers to each of the PGDP OUs and utilize those numbers in the SMP itself and in SMP deliverables under the PGDP FFA.
- EPA's tracking database assigns OU 00 to all facility-wide activities under CERCLA. For example, the Community Relations Plan updates, Five Year Reviews (FYR) and FYR Addenda, the Comprehensive Site Operable Unit and the CERCLA Waste Disposal Alternatives Evaluation are appropriate for inclusion under OU 00.

Response for Discussion:

Updated Response: Proposed tables with numbers for Appendix 5 were presented at the March 30, 2016, meeting. The FFA parties agreed on March 30, 2016, to DOE's proposal language to include the proposed OU numbering into Appendix 5 of the FY 2016 SMP. The FFA parties also agreed to include the OU numbering into Appendix 2 of the FY 2016 SMP. A note will be added that states that programmatic documents such as the five-year review or site management plan will be identified as OU 00.

EPA Comment #2: Completion dates for pre-GDP shut-down scope. DOE has added text to page 2 describing pre-GDP completion date changes made to the FY2013 SMP. Briefly expand the scope of this text to explain the reader the basis for the decision to push these dates out from 2019 to 2032.

Response for Discussion:

Updated Response: Proposed language was presented at the March 30, 2016, meeting.

Below is updated language based on feedback at the meeting that would replace the sentence on page 1 that states, “The fiscal year 2013 SMP officially incorporated the changes agreed to by the FFA parties to move completion date for the pre-GDP shutdown scope OUs from 2019 to 2032.”

During fiscal year (FY) 2012, based on projected near term flat funding and reasonable funding increases beyond 2017 for the Paducah Site, the FFA Senior Managers commissioned the FFA Managers to review and reprioritize FFA work, as needed, to achieve continuous progress while ensuring a bias for action. A series of meetings were held among the FFA Managers to evaluate options. The FFA Managers agreed to the following prioritization for work implementation:

- Optimize plume containment;
- Address groundwater sources;
- Complete Decontamination and Decommissioning of C-340 and C-410;
- Continue CERCLA Waste Disposal Alternatives activities to support future disposal needs; and
- Implement other work ensuring there is continuous progress/bias for action.

The reprioritization of projects based on projected near term flat funding and reasonable funding increases beyond 2017 for the Paducah Site resulted in the rescheduling of milestones, including outyear completion dates for the pre-GDP shutdown scope OUs. The FY 2013 SMP officially incorporated the changes agreed to by the FFA parties and moved completion dates for the pre-GDP shutdown scope OUs from 2019 to 2032.

DOE is requesting feedback on this proposed language to address EPA Comment #2.

EPA Comment #5: Remaining Remediation Groundwater OU – Scope. DOE’s revised text on page 3-8 states that “*This OU consists of potential sources (e.g., DNAPL) that are contributing to groundwater contamination and the dissolved-phase groundwater plumes that cannot be accessed due to being under a building structure or newly identified sources not addressed under the pre-GDP shutdown GWOU projects.*” EPA does not accept DOE’s general assertion that DNAPL and dissolved phase plumes under buildings at the PGDP “cannot be accessed”: this is an evaluation that must be made on a case by case basis (as is currently being done for the C-400 Building). Revise the text as follows: “*This OU consists of potential sources (e.g., DNAPL) that are contributing to groundwater contamination and the dissolved-phase groundwater plumes ~~that cannot be accessed due to being~~ under a building structure or newly identified sources not addressed under the pre-GDP shutdown GWOU projects.*”

Response for Discussion: After review of the comment, DOE does not believe that building structures and accessibility should be referenced. DOE proposes to change the sentence to:

This OU consists of potential sources (e.g., DNAPL) that are contributing to groundwater contamination and the dissolved-phase groundwater plumes ~~that cannot be accessed due to being under a building structure~~ or newly identified sources that are not addressed under the pre-GDP shutdown GWOU projects.

Updated Response: The proposed text was reviewed by the FFA parties during the March 30, 2016, meeting. The FFA parties agreed on March 30, 2016, that the proposed text was adequate. The proposed language will be added to the D2 FY 2016 SMP.

EPA Comment #6: Surface Water Remedial Action – Key DOE Planning Assumptions from Life Cycle Baseline – Footnote 4. On page 3-14 of the SMP, revise Footnote 4 to state: “...characterization; however, EPA ~~has raised~~ and KY have raised concerns...”. The concern addressed in Footnote 4 was identified in EPA correspondence (J. Corkran to J. Woodard, July 8, 2015) as “a joint concern that EPA is sharing in this letter.”

Response for Discussion: DOE agrees to the revision as proposed by EPA as long as Kentucky also concurs with the proposed revision.

Updated Response: The proposed text was reviewed by the FFA parties during the March 30, 2016, meeting. Kentucky concurred with the proposed change and the FFA parties agreed on March 30, 2016, that the proposed text was adequate. The proposed language will be added to the D2 FY 2016 SMP.

EPA Comment #8: CERCLA Waste Disposal Alternative Evaluation. Under Key Planning Assumptions, Item (1), on page 3-20, please evaluate the sentence and revise for completeness.

Response for Discussion: DOE has evaluated the sentence and has no concerns as written. Please clarify any additional concerns.

Updated Response: The current text was reviewed by the FFA parties during the March 30, 2016, meeting. EPA agreed on March 30, 2016, that the text was accurate as written and that no additional changes were required to the FY 2016 SMP as a result of the comment.

EPA Comment #23: Appendix 6 – Data Management Plan. Appendix 6, Data Management Plan (1998), is appended to the SMP but is never explained to the reader, or referenced, in the body of the SMP. The DMP appended to the SMP is almost 20 years old. Revise the SMP to include a brief text explanation of why the 1998 Data Management Plan is appended to the SMP, why the DMP has not been updated since 1998, and how the 1998 DMP is used by DOE at the PGDP Superfund Site.

Response for Discussion: The DMP has been reviewed several times and again recently and there are no substantive changes in the way that data management is conducted under the FFA. The addition of the programmatic QAPP supplements the additional quality aspects that EPA and Kentucky have requested for FFA projects.

Updated Response: The FFA parties discussed the Data Management Plan at the March 30, 2016, meeting and following options:

- a) Minor modification
- b) Add a sentence to FY 2016 SMP to reference Data Management Plan
- c) Include a reference/link of the Data Management Plan in the 2016 SMP and delete the Data Management Plan as an attachment

The FFA parties discussed the options at the March 30, 2016, meeting and determined that it was acceptable to add a sentence to the FY 2016 SMP that calls out Appendix 6 at the Data Management Plan and references the FFA section XXVII.c that requires it to be attached to SMP.

KDEP Comment #5: Appendix 5: Provide the following entries for SWMU Assessment Reports-PA/SIs

- SAR for 409 Bldg. – 45 days after SMP approval
- SAR for C-613 Sedimentation Basin - 45 days after SMP approval

Response for Discussion: DOE has discussed identifying the C-409 and C-613 Sedimentation Basin as either AOCs/SWMUs with KY Management; however it was left that KY Management would get back to DOE on the points raised during the conversation. The timeframe for submittal of SARs is defined under the RCRA permit as 90-days following notification of identification of a new AOC/SWMU. If DOE designates either facility as a SWMU/AOC, the due date for the SARs will be established. The FFA does not require SARs to be included in Appendix 5 of the SMP since the permit establishes the timeframe.

Updated Response: The FFA parties discussed concerns associated with C-613 and C-409 at the March 30, 2016, meeting. EPA indicated that all three parties should be involved in the decision to determine if the units should be a SWMU/AOC and that this should be worked at the FFA Managers level, not a Senior Managers level. As a result the following actions were taken:

Action: DOE submitted an e-mail to Kentucky management on 3/28 stating that there was a commitment for Kentucky to provide input to DOE. J. Woodard stated that she would setup a meeting with Jon Maybriar to discuss.

Action: DOE will provide the FFA parties with DOE's historical position (letters) on why C-409 and C-613 do not meet the definition of a SWMU – Submitted to EPA and Kentucky on 4/11/16

Note: The FFA parties are not in agreement concerning the definition of a SWMU/AOC for C-613.

Action: The FFA parties need to continue discussion on the wetland associated with zinc - (K013) and DUF6 (K017).

Action: DOE will look at a SWOU Memo to File to document C-613 and wetlands at K013 and K017. DOE will also look to determine if there are other similar areas that need to be included

Action: DOE will review the language on page 3-15 of the SMP and determine if additional language needs to be added. If additional language is needed, DOE will present the additional language to the FFA parties for review and comment.

Category #2 - NFA/KOW Comments (Discussed at March 30 Meeting):

EPA Comment #9: Appendix 4 – Solid Waste Management Units/Areas of Concern by Operable Unit – “No Further Action” Table and Footnote 11. On page 4-10, the SMP includes the following footnote: *Footnote 11. A portion of the SWMUs/areas of concern listed may not qualify as NFAs per CERCLA and may require additional characterization for radionuclides under the appropriate Remaining Remediation OU.* It is not transparent to the reader, including the EPA reviewer, which SWMUs/AOCs “may not qualify as NFAs per CERCLA”. Also, it is not clear why the footnote asserts that the only hazardous substance for which EPA would conduct a review under CERCLA is radionuclides: this is not correct. An NFA determination under CERCLA must be based on a robust evaluation of the information and data to ensure that there is no unacceptable risk to human health or environmental resources from hazardous substances, pollutants and contaminants that require response action to ensure long-term protectiveness.

- Revise the NFA Table to indicate those SWMUs/AOCs for which DOE is able provide the Administrative Record illustrating that EPA has approved an NFA determination.
- In support of EPA’s review of the revised table, provide the AR Index for those SWMUs where DOE believes EPA has approved an NFA determination.

Response for Discussion:

The FFA parties reviewed a proposed matrix at the March 30, 2016, meeting. The FFA parties agreed to the following actions:

Action: The FFA parties agreed that DOE will modify the FY 2016 SMP Appendix 4 to include a third column that shows what party granted the NFA for the SMWU. The FFA parties also agreed to retain the footnote.

Action: DOE will send EPA and Kentucky an expanded table that contains the references (RODs, etc.) for review. – Submitted to EPA and Kentucky on 4/11/16

Action: FFA parties will continue to work this table to finalize a complete closure chain. Additional updates will be included in future revisions of the SMP.

Note: Kentucky wants demonstration of UUEE as we finalize information in this table.

EPA Comment #10: Appendix 4 – Solid Waste Management Units/Areas of Concern by Operable Unit – “SWMUs that will be investigated and remediated by the U.S. Army Corps of Engineers” Table and Footnote 13. On page 4-14, the SMP includes the following footnote: *Footnote 13. EPA review/approval of the CERCLA documentation associated with these SWMUs has not occurred.* The four Kentucky Ordnance Works (KOW) SWMUs are:

- SWMU 94 KOW Trickle Filter and Leach Field
- SWMU 95 KOW Burn Area
- SWMU 157 KOW Toluene Spill area
- SWMU 182 Western Portion of Yellow Water Line

As written, the SMP text implies that the CERCLA documentation for the KOW SWMUs has been generated and is awaiting EPA review and approval. Region 4 is not in receipt of draft CERCLA documentation for the four KOW SWMUs for Agency review and approval. Also, as written, the SMP text implies that KY has no role in the review and approval of the KOW SWMU CERCLA documentation: this is not the case under the FFA.

The SMP does not provide any information to help the reader (including EPA) understand when (timetable and deadlines) this scope of work will be initiated and completed, and how investigation and cleanup of these SWMUs dovetails with other scope of work (including the CS OU) for the PGDP Superfund Site.

Revise the SMP to:

- include an explanation for the reader of the status (not yet available; complete and pending review; etc.) of the CERCLA documentation mentioned in Footnote 13;
- explain the regulatory path forward, including the respective roles of DOE, KY, EPA and the U.S. Army Corps of Engineers in the investigation and cleanup of the four SMWUs and how this scope of work dovetails with other scope of work for the PGPD; and
- provide the timetables and deadlines (Appendix 5) for investigation, reporting and closeout of these SWMUs.

Response for Discussion:

The FFA parties reviewed the status of the four SWMUs targeted for Corps investigation at the March 30, 2016, meeting. The FFA parties agreed to the following actions:

Action: DOE will communicate with the Corps to understand the status and path forward of the four SWMUs located on DOE property and to understand how closure will occur. - Pending

Action: EPA will send letters that EPA has received on the new PRP for these four SMWUs – Completed 3/30/16

Action: EPA will discuss the status of the Corps actions with EPA legal

Action: DOE will send the WAGs 1 and 7 ROD to EPA – Completed 3/30/16

Action: No changes to SMP at this time – Determination is still pending

Action: DOE will send EPA letters associated with yellow water line – Completed 3/30/16

Category 3 – Additional Groundwater Scope Comments (Discussed at March 30 Meeting):

KDEP Comment #1: Appendix 5: Provide the following entries for a C-400 Building Supplemental Investigation:

- Work Plan – 4th Quarter FY 16
- Report – 3rd Quarter FY 17

EPA Comment #13: Groundwater Operable Unit – C-400 Sub-Slab Sources Investigation.

As noted in the “Comments” field of the C-400 Phase IIb Treatability Study schedule (DOE/LX/07-2202&D1), a Remedial Design Site Investigation is being considered by DOE to evaluate C-400 sub-slab contamination. Revise the SMP to include a plan (Appendix 3), including timetables and deadlines for Primary Document milestones (Appendix 5), for the conduct of a sub-slab investigation of TCE sources and other potential contaminants at the C-400 Building. The schedule for the sub-slab investigation should ensure that the investigation work is completed and an approved report is available to the FFA parties prior to the next scheduled Five Year Review (FY2018).

Response for Discussion: EPA and Kentucky both have several comments that increase or realign the existing pre-GDP shutdown scope. DOE requests that the three agencies identify their must and wants similar to what was done in 2012 to develop the current strategy and comprehensively realign the pre-GDP shutdown scope. DOE is evaluating whether or not a sufficient investigation can be performed prior to building demolition prior to committing to an investigation timeframe. DOE understands that this is the agencies primary concern for

groundwater sources mitigation. DOE also needs to understand the preference for this action in relation to the current C-400 source action.

Updated Response: The FFA parties discussed KDEP Comment #1 and EPA Comment #13 at the March 30, 2016, meeting. The FFA parties agreed to the following actions:

Action: Send EPA and KY backup schedules that support the 2032 milestones (blue/green chart) – Completed 4/11/16

Action: Schedule meeting to discuss C-400 strategy: Full scale steam vs. Sub-slab investigation, timing, etc. Status: Internal DOE meetings have been scheduled. Pending further discussion with EPA and Kentucky.

Action: DOE will take the lead to propose a resequencing of the cleanup program at the next SMP meeting on April 27/28 - Pending

KDEP Comment #7: Appendix 5: Provide the following entries (Target Date) for a GWOU Remedial Action (C-400 Residuals)

- Remedial Action Work plan – 1st Quarter FY 20

Response for Discussion: DOE assumes that this is the follow-on RA after the C-400 sub-slab investigation is completed. Parties need to discuss the FFA logic and timing of the follow-on actions.

Updated Response: The FFA parties discussed KDEP Comment #7 at the March 30, 2016, meeting and the FFA parties agreed that this is the follow-on RA after the C-400 sub-slab investigation is completed. This comment will be addressed as part of the sequencing discussions.

KDEP Comment #2: Appendix 5: Provide the following entries for a GW Datagaps Investigation:

- Work Plan – 2nd Quarter FY 17
- Report – 2nd Quarter FY 18

Response for Discussion: EPA and Kentucky have several comments that increase or realign the existing pre-GDP shutdown scope. DOE requests that the three agencies identify their must and wants similar to what was done in 2012 to develop the current strategy and comprehensively realign the pre-GDP shutdown scope. The GW Datagaps investigation scope needs to be further discussed among the FFA parties to understand the magnitude and priority of this investigation.

Updated Response: The FFA parties discussed KDEP Comment #2 at the March 30, 2016, meeting. The FFA parties agreed to the following actions:

Action: Groundwater modeling team has identified datagaps that need to be taken into consideration. FFA parties need to take these into consideration. - Pending

Notes: Building and source areas that are datagaps. Datagaps may be done in phases. Spatial vs another source. Monitoring wells vs. borings; Contaminants - TCE, TC-99; PCBs.

Action: DOE will request C-720 building maps, etc. and submit to EPA and Kentucky - Pending

Action: DOE will setup a meeting to discuss sequencing. DOE will develop a proposal for resequencing. – Meetings have been scheduled for April 27th and 28th.

Category 4 - Milestone/Appendix 5 Comments (To Be Discussed at April 27th/28th Meeting):

EPA Comment #12: Groundwater Operable Unit – Dissolved Phase Plumes. Although interim response action decision documents are in place to address migration of the higher concentration areas of TCE in the dissolved phase plumes beyond the current plant boundary (Limited Area), the SMP schedule for addressing the remaining extent of the dissolved phase plumes beyond the plant boundary is set far into the future: FY2029 for a ROD and an Interim Remedial Action Completion Report in FY2032.

In the meantime, the contaminated groundwater outside the plant boundary (TCE above the MCL, for example) continues to migrate toward the Ohio River and express itself at various surface water bodies (seeps, creeks, the Ohio River). In lieu of an Interim Record of Decision and reporting under the FF A, it appears that DOE is implementing a Long-Term Monitoring {LTM} program under the DOE Environmental Monitoring Plan (outside the FFA) for natural attenuation of groundwater contaminants by dilution outside the plant boundary.

- Revise the SMP to include the plan, timetables, and deadlines for the necessary off-plant investigations and Primary Documents to support an acceleration of the phased approach to dissolved phase plumes groundwater cleanup outside the plant boundary. The accelerated schedule should emphasize progress toward attaining the goal of “Groundwater Migration Under Control” under the Government Performance Results Act (GPRA).

Response for Discussion: DOE has been implementing the GWOU in the phased approach described and approved in the past and current Site Management Plan, consisting of sequenced response actions designed to accomplish the following goals:

- (1) Prevent human exposure to contaminated groundwater; (Water Policy Removal Action)
- (2) Prevent or minimize further migration of contaminant plumes; (Northwest and Northeast Interim Record of Decisions)
- (3) Prevent, reduce, or control contaminant sources contributing to groundwater contamination; (WAGs 1 and 7 Record of Decision, LASAGNA SWMU 91 Interim Record of Decision, C-400 Interim Record of Decision, Southwest Plume Sources Record of Decision, future Burial Ground Remedial Actions, future C-400 Residual Sources, etc.)
- (4) Restore the groundwater to its beneficial uses wherever practicable. (Dissolved Phase Plume Action)

Based on this strategy, which is consistent with EPA Guidance, DOE does not agree that it would be beneficial to the current site cleanup strategy to abandon this phased approach, which is the phase of addressing sources contributing to groundwater contamination to focus on the dissolved phase plume prior to addressing the sources. DOE requests that the three agencies revisit the priorities in the current SMP in order to comprehensively realign the pre-GDP shutdown scope.

DOE currently implements a significant amount of groundwater monitoring under CERCLA actions at the site. The data is reported in the FFA Semiannual Progress Report. The Environmental Monitoring Plan is a compilation of the groundwater monitoring requirements for CERCLA projects, permits, and DOE orders.

EPA Comment #14: Groundwater Operable Unit – Northeast Plume Interim Remedial Action Optimization. Revise the SMP to include the timetable and deadlines for conduct of the Northeast Plume optimization activities as reflected in the Remedial Action Work Plan. Include the remedial action construction start date (aka “field start”) from the D2/R2 RA WP (July 25, 2016) in Appendix 5. (This is the date when DOE has projected that substantial, continuous, physical, on site, remedial optimization activities will begin.) In the “Comments” field, add a note that DOE will provide a letter to EPA and KY documenting the remedial action construction start date.

Response for Discussion: In the past, DOE at the request of the agencies has included field start dates in Appendix 5. DOE has no concerns with identification of a field start date for this project.

EPA Comment #15: D&D OU – Disposition of Inactive Facilities at PGDP – C410/420 Complex. DOE has advised the EPA and KY that waste disposition from this activity has been completed and the “90-day” interval for submission of the DI Removal Completion Notification Letter has been triggered. Revise the SMP to include the date (mm/dd/yy) of waste removal completion and the deadline mm/dd/yy) for submission of the Completion Notification Letter. The notation in the SMP should note that the Completion Notification Letter will be accompanied by the Removal Action Report for the Non-Time Critical Removal Action.

Response for Discussion: DOE will modify the “90-day” text to the actual date of 4/11/16. The Removal Action Report for the Non-Time Critical Removal Action was submitted on 4/11/16. Since this has already been submitted, DOE proposes not to modify the SMP to include a reference to it.

EPA Comment #16: Burial Grounds OU – SWMUs 5&6 Remedial Action. The Formal Dispute related to SWMUs 5&6 has been resolved.

- Revise the SMP to include the deadline (mm/dd/yy) defined in the Memorandum of Agreement for submittal of the D2/R1 Proposed Plan for regulatory review and approval.
- Revise the SMP to include the schedule for publishing the PP and receiving public comment on the PP.
- Revise the note in the “Comments” field to state that the FFA Managers will confer within 10 days of the close of public comment to evaluate the potential need for a revised PP (consistent with FFA Section XIV(C)).

Response for Discussion: By the time the SMP is submitted these activities will have been completed and submitted for EPA and Kentucky review; therefore, DOE proposes not to include the submittal of the D2/R1 Proposed Plan in the SMP.

Note: Public notices are not required to be included in Appendix 5. DOE would like to discuss the necessity of including canned FFA language covered in the CRP and FFA within Appendix 5 of the SMP.

EPA Comment #17: Burial Grounds OU – SWMUs 2 and 3 Remedial Action. Although a few issues related to the Burial Grounds 2/3/7/30 02 FS are currently in formal dispute at the Dispute Resolution Committee level, the long-term planning date of 2Q 2022 for public notice and gathering of public input on the PP is far in the future. It is not reasonable to wait six (6) years before soliciting public feedback on a preferred alternative for these Burial Grounds, especially considering that a decision on the CERCLA WDA is likely to occur within the next two years. It is EPA’s expectation that, after approval of the FS, PPs will be developed for regulatory agency review and approval and subsequently published for public comment without delay and consistent with the timetables in the FFA.

- Revise the D1 Proposed Plan submittal date from 2nd Q 2022 to propose a date within the enforceable window (FY2016-2018).
- Retain the current note stating that the D1 PP will be submitted 45 days after EPA and KY approval of the FS.
- Include line item entries with projected dates in the schedule for public notice (upon regulatory approval of the PP) and receipt of public comment.

- Add a note in the Comments field to state that the FFA Managers will confer within 10 days of the close of public comment to evaluate the potential need for a revised PP (consistent with FFA Section XIV(C)).

Response for Discussion: DOE does not agree that the proposed plan should be accelerated for this project when the priority established does not show an action being implemented until 2023. DOE would like to discuss this comment with the FFA parties to better understand EPA’s desire to accelerate the proposed plan.

Note: Public notices are not required to be included in Appendix 5. DOE would like to discuss the necessity of including canned FFA language covered in the CRP and FFA within Appendix 5 of the SMP.

EPA Comment #18: Grounds OU – SWMUs 7 and 30 Remedial Action. Although the Burial Grounds 2/3/7/30 D2 FS is currently in formal dispute at the Dispute Resolution Committee level, the long-term planning date of 4Q 2023 for public notice and gathering of public input on the PP is not reasonable. It is EPA’s expectation that, after approval of the FS, PPs will be developed for regulatory review and approval and subsequently published for public comment without delay and consistent with the timetables in the FF A.

- Revise the D 1 Proposed Plan submittal date from 4Q 2023 to propose a date within the enforceable window (FY2016-FY2018).
- Retain the current note stating that the D 1 PP will be submitted 45 days after EPA and KY approval of the FS.
- Include line item entries with projected dates in the schedule for public notice (upon regulatory approval of the PP) and receipt of public comment.
- Add a note in the “Comments” field to state that the FF A Managers will confer within 10 days of the close of public comment to evaluate the potential need for a revised PP (consistent with FFA Section XIV(C)).

Response for Discussion: DOE does not agree that the proposed plan should be accelerated for this project when the priority established does not show an action being implemented until 2023. DOE would like to discuss this comment with the FFA parties to better understand EPA’s desire to accelerate the proposed plan.

Note: Public notices are not required to be included in Appendix 5. DOE would like to discuss the necessity of including canned FFA language covered in the CRP and FFA within Appendix 5 of the SMP.

EPA Comment #19: Burial Grounds – SWMU 4 Remedial Action. In Appendix 5, DOE moved the D1 PP milestone date from 1Q 2018 to a date outside the enforceable window (1 Q

2019). Revise the SMP to restore the deadline of 1Q 2018 (within the 3 year enforceable window) for the D1 PP consistent with the PGDP FFA timetables.

- Add a note stating that the D1 PP will be submitted 45 days after EPA and KY approval of the FS.
- Include line item entries with projected dates in the schedule for public notice (upon regulatory approval of the PP) and receipt of public comment.
- Add a note in the “Comments” field to state that the FFA Managers will confer within 10 days of the close of public comment to evaluate the potential need for a revised PP (consistent with FFA Section XIV(C)).

Response for Discussion: DOE was concerned that this document could not be submitted within the window as previously planned and therefore it was not moved into the 3 year window. The project team is reviewing the overall project schedule to determine if the D1 document submittal would fall within the three-year timeframe. At the time of submission DOE was unsure of whether the document could be submitted in FY18 due to project uncertainties with the test pit implementation.

Note: Public notices are not required to be included in Appendix 5. DOE would like to discuss the necessity of including canned FFA language covered in the CRP and FFA within Appendix 5 of the SMP.

Note: DOE needs to confirm what the current schedule is for SMWU 4 proposed plan based upon the delays that the project has experienced in order to update the date.

EPA Comment #21: Community Relations Plan. Revise the SMP to include text (Appendix 3) describing a plan to conduct a broad-reaching community survey tailored to the PGDP cleanup, the results of which will be incorporated into the next revision of the Community Relations Plan.

- Establish a deadline {mm/dd/yy} in the Appendix 5 for submission of this primary document to EPA and KY not later than June of 2018. (Ref: J. Corkran, February 17, 2016, EPA Comments on the D2 CRP dated December 2015).
- In the Operable Unit column of the schedule, table, delete “NA” and insert “OU 00” to designate a Site-wide activity.

Response for Discussion: DOE has agreed to perform the surveys prior to submittal to the next update of the CRP; however, DOE does not believe a plan for conducting the surveys should not be included as part of the SMP (propose to be included in a letter or memo to file documenting expectations for surveys). DOE has agreed to update the CRP every two years but should not be held to an enforceable date for this revision since it not required by the FFA.

Programmatic documents such as the CRP; QAPP, etc. will be identified with an OU “00” for future submittals.

EPA Comment #22: Five Year Reviews. In correspondence dated September 30, 2014, the EPA Region 4 Acting Division Director issued a “protectiveness deferred” determination and established a scope of work for conduct by DOE and a deadline of March 31, 2016, for reporting the results of the additional work in a FYR Addendum. Consistent with CERCLA Section 120 and Section XXX (Five Year Review) of the PGDP Federal Facility Agreement, revise Appendix 5 of the SMP to:

- Delete the TBD planning date and inset the deadline established by EPA of March 31, 2016.
- Delete the note in the “Comments” field and insert a citation to the R. Chaffins letter of September 30, 2014.
- In the Operable Unit column of the schedule table, delete “NA” and insert “OU 00” to designate a Site-wide activity.

Response for Discussion: DOE has addressed the March 31, 2016, date as part of the extension request recently submitted for the Addendum to the Five-Year Review. The Five-Year Review is a secondary document under the FFA and is not required to be included in Appendix 5 of the SMP; however, DOE does recognize that the Five-Year Review is a statutorily required document that must be approved by a certain date and has reflected that in Appendix 5. Revisions to the document (such as the addendum) would not be part of Appendix 5.

Note: Provide history and copy of previous EPA letter concerning the Five-Year Review enforceability.

KDEP General Comment #1: In SMP discussions occurring since approval of the FY 13 annual revision, DOE and their contractors have clutched certain elements and bases from FY 13 agreement and attempted to limit post-FY 13 discussions. As stated in the cover letter, the Division looks forward to a fresh approach to the SMP and requests the lead agency limit their verbal and written discussions to the FY 13 agreements, which the Division believes to be historical (obsolete). No written response is necessary

Response for Discussion: DOE is going to provide background information that supports the validity of the 2012 agreements as part of any realignment discussion. DOE does believe the parties should re-evaluate priorities based on the SMP comments but would like the parties to understand commitments and agreements made at the Senior Manager level so that the appropriate documentation and communication can be made if changes are made to established dates.

KDEP General Comment #2: The Division is proposing in this specific comment, somewhat arbitrarily, some new milestones to begin filling the void of environmental cleanup projects specified in the D1 submittal. Dates were chosen to accommodate three-party binning and scoping for projects such as the Soils OU. The new work proposed is chiefly composed of documents which are prerequisite to actual cleanup work and viewed by the Division as achievable in the current budgetary environment. The Division looks forward to upcoming discussions for incorporating GFP D&D into this agreement and recognizes that may additional changes merit discussion in arriving at a balanced approach for the comprehensive cleanup at the site.

Response for Discussion: See specific response to comments below.

KDEP Comment #3: Appendix 5: Provide the following entries for a Soils OU Group 1* – (Removal Action)

- Removal Notification – 4th Quarter FY 16
- EE/CA – 3rd Quarter FY 17

Response for Discussion: EPA and Kentucky have several comments that increase or realign the existing pre-GDP shutdown scope. DOE requests that the three agencies identify their must and wants similar to what was done in 2012 to develop the current strategy and comprehensively realign the pre-GDP shutdown scope. DOE's current position is that there are no soils SWMUs that warrant an action as this time other than SWMU 27 and do not understand the need to accelerate soils over other higher priority projects (i.e., groundwater).

KDEP Comment #4: Appendix 5: Provide the following entries for a Soils OU Group 2* – (Remedial Action)

- Feasibility Study – 1st Quarter FY 18

Response for Discussion: EPA and Kentucky have several comments that increase or realign the existing pre-GDP shutdown scope. DOE requests that the three agencies identify their must and wants similar to what was done in 2012 to develop the current strategy and comprehensively realign the pre-GDP shutdown scope. DOE's current position is that there are no soils SWMUs that warrant an action as this time other than SWMU 27 and do not understand the need to accelerate soils over other higher priority projects (i.e., groundwater).

KDEP Comment #6: Appendix 5: Provide the following entries (Target Date) for a Soils OU Group 1 (Removal Action)

- Removal Action Work Plan – 1st Quarter FY 19

Response for Discussion: EPA and Kentucky have several comments that increase or realign the existing pre-GDP shutdown scope. DOE requests that the three agencies identify their must and wants similar to what was done in 2012 to develop the current strategy and comprehensively realign the pre-GDP shutdown scope. DOE's current position is that there are no soils SWMUs that warrant an action as this time other than SWMU 27 and do not understand the need to accelerate soils over other higher priority projects (i.e., groundwater).

Category 5 – Vapor Intrusion Comments (To Be Discussed at April 27/28th Meeting):

EPA Comment #11: Groundwater Operable Unit – Vapor Intrusion Study. Significant TCE-contaminated groundwater plumes exist within the PGDP Plant boundary. The potential for intrusion of vapors from the subsurface soils and groundwater into buildings at the plant, and exposures of people to those vapors exists within the Limited Area. Buildings with potentially completed exposure pathways include those that are currently occupied and those that are not occupied now but may be occupied in the future by workers. In addition, new construction over a groundwater plume may require an analysis to evaluate whether potential vapor intrusion warrants building design and construction considerations to prevent completed exposure pathways.

Revise the SMP to describe the vapor intrusion scope of work at the PGDP (Appendix 3) and submission of a D1 Work Plan including timetables and deadlines (Appendix 5) for the conduct of a Vapor Intrusion Study (or Studies) for those areas of the PGDP that overlie the Groundwater Operable Unit. EPA notes that the DOE has recently demonstrated the presence of (previously unknown) TCE DNAPL at 211-B at the C-720, a building that EPA understands is currently occupied and in use.

- The deadline for submission of the draft Work Plan should be established for a date (mm/dd/yy) within the three-year enforceable window: EPA recommends 3Q FY2017 considering that, at present, there may be unacceptable risk to human health at one or more facilities at the PGDP.

Response for Discussion: Pending

Category 6 - GDP New Scope Comments (To Be Discussed at April 27th/28th Meeting):

EPA Comment #3: D&D Regulatory Framework – D&D outside the FFA Scope. The text on page 2 states that “DOE is currently implementing deactivation and utility optimization

activities outside of the FFA scope to prepare the site for effective implementation of all future mission activities and “When decommissioning work is identified for inclusion under the FFA, it will be integrated into the SMP and prioritized by the FFA Parties”. DOE’s simplified paradigm regarding the regulatory framework for D&D activities under the PGPD FFA, and the text revisions to the SMP to reflect that DOE paradigm, are not acceptable to EPA. EPA provided to DOE our perspective regarding the conduct of D&D activities under the PGPD FFA in May of 2014 (D. Buxbaum and J. Tufts, EPA Region 4, May 2014 power-point presentation). The EPA DOE to the FY 2016 SMP to address each of the bullets listed below.

Revise the SMP text to include a table of the SWMUs on which DOE/FLUOR conducted deactivation activities and/or decommissioning activities in calendar year 2015. The table entries should include (minimally) SWMU number; SWMU name; whether the action was a deactivation only, a decommissioning (through demolition/disposal), or both; date completed; Administrative Record document ID number documenting the DOE’s administrative determination for the SWMU disposition. Revise the SMP text to include a table of the SWMUs on which DOE/FLUOR intended to conduct deactivation and/or decommissioning and/or maintenance actions in calendar year 2016. Include the AR Document ID number documenting the DOE’s administrative determination for the proposed disposition of each SWMU. Those Facilities that will be addressed by a D&D process under the FFA, presumably as a CERCLA non-time critical removal action, should be identified.

Revise the SMP text to state that EPA does not concur with DOE’s current implementation of deactivation and decommissioning activities outside of the terms of the FFA. The FFA (Sections III *Purposes of Agreement* and Section XI *Removal Actions*) and the 1995 EPA-DOE D&D Policy describe a consultation process to determine the appropriate path forward (removal, remedial, maintenance) for a particular facility at this Superfund Site.

Revise the SMP text to describe:

- the regulatory framework for deactivation and decommissioning at the PGDP;
- specific deactivation activities and decommissioning activities currently anticipated by DOE in three- year enforceable window (FY16 through FY18);
- the currently anticipated deactivation activities and decommissioning activities projected for 2016 through 2025.

Revise Appendix 5 to include:

- The timetables and deadlines for Primary Document milestones associated with implementing and completing the scope of deactivation and decommissioning activities described in the above-listed bullets.

Response for Discussion: Pending

EPA Comment #4: Soils and Slabs OU. Revise the SMP to forecast a scope of work and a completion date for the Soils and Slabs OU.

Response for Discussion: Pending

EPA Comment #7: Remaining Remediation D&D OU.

a. The SMP is not transparent to the reader (including EPA) regarding the remaining D&D scope at the PGPD and how that scope has been narrowed down to “*currently includes 30 units*” in a “*remaining remediation*” D&D OU.

- Revise the SMP to explain to the reader the basis for DOE’s identification of this cohort of “30 units” as the “remaining remediation” D&D scope.
- Revise the text to specify that these units will be addressed under the FF A CERCLA process or revise the text to commit to consultation with EPA and KY on the proper disposition of these 30 units.
- Propose an out-year enforceable completion date for the “30 units” scope of work for incorporation into Appendix 5.
- Revise the SMP to identify the actual remaining D&D scope at the PGDP (beyond the 30 units), and explain why any particular SWMUs or facilities have not been included in the “remaining remediation” D&D OU.

b. EPA seeks in the revised SMP a transparent presentation of the regulatory framework for D&D and the tri-party vetting process under the FFA for binning Facilities and SWMUs for decisions on whether a removal, remedial, and maintenance action is appropriate. In particular, EPA expects that, consistent with the PGDP FFA, releases of hazardous substances or a substantial threat of hazardous substances from these Facilities will be addressed under the FFA as a CERCLA non-time critical removal action or possibly as a CERCLA remedial action. Now that the GDP plant has shut down, and the United States Enrichment Corporation has returned the plant facilities to DOE, the most significant hurdle to planning the integration and timing of environmental media cleanup and D&D activities has been eliminated. Revisions to the FY2016 SMP are appropriate to describe the remaining scope of environmental media cleanup and D&D at the facility, and to forecast integrated schedules of work that achieve a balance each year between investigation and cleanup of soils, surface water, groundwater and air contamination and cleanup of the contaminated facilities across the PGDP.

- Revise the SMP to describe the regulatory framework for D&D at Paducah GDP.

- Revise the SMP to describe the tri-party vetting and documentation process under the FFA for binning Facilities and SWMUs for removal, remedial, and maintenance actions.
- Revise the SMP to describe the remaining environmental media cleanup and D&D at the facility.
- Revise the SMP to forecast an integrated schedule of work that achieves a balance each year between investigation and cleanup of environmental media and D&D of the contaminated facilities across the PGDP.

Response for Discussion: Pending

EPA Comment #20: Remaining Remediation Scope (previously post-GDP scope). Revise the SMP to include a plan, including timetables and deadlines, for investigation and cleanup of the remaining remediation scope. Propose an enforceable completion date for the Remaining Remediation Scope.

Response for Discussion: Pending

KDEP Comment #8: Appendix 5: Provide the following entries (Target Date) for the GDP D&D OU – Surface Water Controls for D&D

- Removal Notification – 4th Quarter FY 19
- EE/CA – 3rd Quarter FY 2020

Response for Discussion: Pending