



Department of Energy

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OCT 06 2017

Mr. Brian Begley
Federal Facility Agreement Manager
Division of Waste Management
Kentucky Department for Environmental Protection
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

PPPO-02-4482392-18

Ms. Julie Corkran
Federal Facility Agreement Manager
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Dear Mr. Begley and Ms. Corkran:

PADUCAH FEDERAL FACILITY AGREEMENT—SIGNED MEMORANDUM OF AGREEMENT FOR RESOLUTION OF FORMAL DISPUTE REGARDING THE NON-CONCURRENCE BY U.S. ENVIRONMENTAL PROTECTION AGENCY AND KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION ON THE U.S. DEPARTMENT OF ENERGY MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE REVISED PROPOSED PLAN FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING (DOE/LX/07-2407&D1)

Please find enclosed the signed *Memorandum of Agreement for Resolution of Formal Dispute Regarding the Non-concurrence by EPA and KDEP on the DOE Milestone Modification Request for Submittal of the Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2407&D1) (MOA)*. The enclosed MOA memorializes the agreement reached by the Federal Facility Agreement Senior Managers concerning submittal of the *D1 Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2407&D1*.

If you have any questions or require additional information, please contact me at (270) 441-6862.

Sincerely,

A handwritten signature in black ink, appearing to read "Tracey Duncan".

Tracey Duncan
Federal Facility Agreement Manager
Portsmouth/Paducah Project Office

Enclosure:

Signed Memorandum of Agreement

e-copy w/enclosure:

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MEMORANDUM OF AGREEMENT FOR RESOLUTION OF FORMAL DISPUTE
Regarding the Non-concurrence by EPA and KDEP on the DOE Milestone Modification Request
for Submittal of the *Revised Proposed Plan for the Volatile Organic Compound Contamination*
at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky
(DOE/LX/07-2407&D1)

Background

In August 2005, the Federal Facility Agreement (FFA) parties signed the *Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant (PGDP), Paducah, Kentucky*, [DOE/OR/07-2150&D2/R2] to address trichloroethene (TCE) contamination in soil and groundwater outside the C-400 Cleaning Building that are sources of the Northwest and Northeast volatile organic compounds (VOC) groundwater plumes. The scope of the 2005 interim remedial action was limited to only those accessible areas located outside the perimeter of the southern part of the C-400 Cleaning Building due to the on-going United States Enrichment Corporation operations. The U.S. Department of Energy (DOE) implemented a Treatability Study (Six-Phase) for Electrical Resistance Heating (ERH), which subsequently was deployed as the selected source treatment technology in the 2005 Record of Decision at two distinct areas at C-400, referred to as the Phase I and Phase II areas. The Phase I area consisted of soil and groundwater contamination near the eastern and southwestern corners of the C-400 Cleaning Building. The Phase II area was limited to an area near the southeast corner of the C-400 Cleaning Building. During Phase I, the FFA parties determined that ERH did not remediate trichloroethene (TCE) sources located in the lower Regional Gravel Aquifer (RGA) effectively; therefore, the FFA parties further divided Phase II activities into two sub-phases. Phase IIa utilized ERH targeted at TCE sources in the Upper Continental Recharge System (UCRS) groundwater and upper RGA. Phase IIb scope consisted of addressing TCE sources in the lower RGA.

As a result of resolution of a dispute on the D1 Revised Proposed Plan for Phase IIb in 2013 and due to the performance limitations of ERH in the lower RGA, DOE agreed to undertake a second Treatability Study to determine the viability of Steam Enhanced Extraction (SEE) for the Phase IIb area in the lower RGA.

The 2013 Informal Dispute Memorandum of Agreement (MOA) established a trigger for DOE submittal of the Revised Proposed Plan within 120 days of the U.S. Environmental Protection Agency (EPA) and the Kentucky Department for Environmental Protection (KDEP) approval of the Treatability Study (TS) Report. The 120 day enforceable milestone trigger for DOE submission of the D1 Revised Proposed Plan for Phase IIb is included the FY2015 Site Management Plan that is currently in effect for PGDP. In 2015, the DOE conducted a SEE Treatability Study in the lower RGA. The Treatability Study Report for Phase IIb, submitted to the EPA and KDEP in 2016, demonstrated the technology would be technically implementable in the hydrogeologic conditions tested. On May 27 and June 9, 2016 respectively, the KDEP and EPA approved the TS Report, establishing the September 27, 2016, enforceable milestone date for DOE submittal of the Phase IIb D1 Revised Proposed Plan.

Construction start for the Treatability Study for SEE was September 14, 2014. In October of 2014, USEC returned the leased facilities, which included the C-400 Cleaning Building to DOE. The return of the C-400 Cleaning Building gave DOE free access to the interior part of the building for the first time since 1998, thereby affording DOE the opportunity to investigate the nature and extent of any and all additional contamination that may exist beneath the C-400 Cleaning Building, including evaluating whether the Phase IIb source area might extend beneath the building structure, and allowing consideration of a comprehensive strategy for the C-400 Complex.

Due to DOE's need to conduct infrastructure optimization activities, deactivation of buildings, and Tc-99 and Uranium holdup studies in the enrichment buildings, and the expected impacts of anticipated future funding across the DOE Complex, DOE developed a new C-400 Complex strategy. As a result of the return of the enrichment facilities, the recognition of the need to perform work in a comprehensive, integrated manner at the C-400 Complex; and due to the expected impacts of anticipated future funding across the DOE Complex, DOE developed a new C-400 Complex strategy. This strategy was verbally discussed with EPA and KDEP senior management in March 2016; summarized in writing and presented to EPA and KDEP senior management in June 2016; subsequently discussed with the EPA and KDEP technical personnel later in June 2016; and discussed further in a series of subsequent meetings. A final version of the proposal was provided in April of 2017. (See attached MOA, dated August 8, 2017)

A Revised Proposed Plan for the C-400 Phase IIb area lower RGA was due to the regulators on September 27, 2016. On September 6, 2016, DOE requested a 120 day extension for submittal of the *Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2407&D1, (D1 Revised Proposed Plan) to allow time for the FFA parties to complete tri-party discussions concerning re-prioritization of site cleanup priorities and to determine a path forward for the C-400 Complex. The DOE's milestone request was made pursuant to PGDP FFA Section XXIX. Extensions and the good cause DOE cited for the milestone extension under FFA Section IIIX.B(6) was: *Any other event or series of events mutually agreed to by the parties as constituting good cause.* The specific series of events identified by DOE was the consideration by senior managers from EPA and KDEP of the DOE strategy for addressing the C-400 Complex along with re-prioritization of PGDP site priorities, including environmental cleanup activities under the FFA.

On September 26, 2016, and September 27, 2016, EPA and KDEP issued letters of non-concurrence in response to DOE's September 6, 2016, milestone modification request. EPA did not concur on DOE's proposed 120 day milestone extension because EPA did not agree with DOE's assertion that evaluation of site cleanup priorities by FFA senior management constitutes good cause. EPA stated that timely treatment of the Phase IIb source was necessary to mitigating an on-going source of VOC groundwater contamination to the off-site plumes and ensuring sustained progress towards a final cleanup of the Groundwater Operable Unit (OU) by September 30, 2032. The KDEP letter indicated that DOE's extension request did not provide good cause to justify delay on extending submittal of the a D1 Proposed Plan by 120 days and addressing the largest known PTW source at the PGDP.

On October 11, 2016, pursuant to Section XXIX.E.3, Extensions, of the PGDP FFA, DOE invoked informal dispute resolution regarding EPA's and KDEP's September 26, 2016, and September 27,

2016, letters of non-concurrence of DOE's September 6, 2016, milestone modification request for submittal of the Revised Proposed Plan. The DOE stated that the request for extension was in good faith and timely, and reiterated that the Department had good cause for the reasons previously included in its September 6, 2016 letter. The FFA parties conducted a period of informal dispute under Section XXV.A, Informal Dispute, of the PGDP FFA. On November 30, 2016, pursuant to Section XXV.B, Formal Dispute, of the PGDP FFA, DOE issued a written statement of formal dispute, elevating the informal dispute to the Dispute Resolution Committee (DRC) for resolution.

On August 8, 2017, DOE, EPA, and KDEP FFA senior management agreed to creation of the C-400 Complex OU, that includes an investigation of all remaining building structure(s) (e.g., slab and subsurface structures) and releases of any hazardous substances to soils and groundwater associated with the C-400 Building and C-400 Complex area operations (including, but not limited, to TCE DNAPL areas considered principal threat waste). The Phase IIb source area would be integrated into the final remedial action for the C-400 Complex OU. The C-400 Complex OU will have milestones and planning dates for: decommissioning/demolition of the C-400 Building, followed by a comprehensive remedial investigation/feasibility study for all contaminants of concern, followed by a Proposed Plan/ROD and final remedial action. (See attached MOA, dated August 8, 2017)

Terms and Conditions of Resolution

As a result of the agreed path forward for the C-400 Complex, specified in the attached FFA senior managers MOA (dated August 8, 2017), the DRC has reached a mutually acceptable resolution concerning submittal of the D1 Revised Proposed Plan. The undersigned agree that the formal dispute invoked by DOE is hereby resolved. The terms of the Memorandum of Agreement for resolution of this dispute are set forth below.

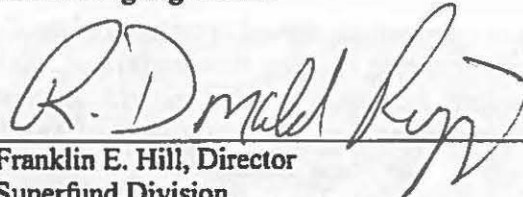
- The FFA parties agree (as evidenced in the FFA senior managers MOA effective August 8, 2017) that, because the C-400 Phase IIb source area is being integrated into the final remedial action for the C-400 Complex OU, a new enforceable milestone for the D1 Revised Proposed Plan, is unnecessary.
- Since the final remedy for the C-400 Complex OU will include the Phase IIb source area, the FFA parties agree that the remediation work under the 2005 C-400 Cleaning Building Interim Action ROD is complete.
- DOE shall submit a Final Remedial Action Completion Report for the C-400 Cleaning Building interim action for EPA and KDEP review and approval as specified in the Fiscal Year 2018 SMP.
- The FFA parties acknowledge that, in accordance with FFA Section XLIII, Stipulated Penalties, stipulated penalties will not be assessed by EPA and/or KDEP.

Other Terms and Conditions

This MOA resolves all issues of the dispute and serves as the written decision by the DRC under FFA Section XXV.B.3. Pursuant to Section XXV.B.10 of the PGDP FFA, resolution of this

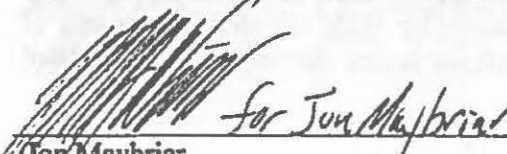
dispute constitutes a final resolution of the dispute, which resolution is incorporated into and becomes a term and condition of the PGDP FFA. Nothing in this MOA modifies other FFA Terms and Conditions or other CERCLA projects at PGDP, except as specifically stated above. To the extent authorized under the PGDP FFA, nothing in this MOA shall prevent any of the Parties from disputing any other matters related to the aforementioned projects.

Authorizing Signatures

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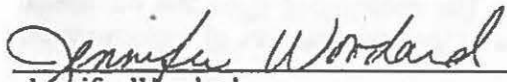
Franklin E. Hill, Director
Superfund Division
U.S. Environmental Protection Agency, Region 4

9/28/2017
Date



Jon Maybriar
Director, Division of Waste Management
Kentucky Department for Environmental Protection

9/28/2017
Date



Jennifer Woodard
Paducah Site Lead
U.S. Department of Energy, Portsmouth/Paducah Project
Office

9/27/2017
Date