

**ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT, DIVISION OF
ENVIRONMENTAL QUALITY**

IN THE MATTER OF:

**United States Army
Pine Bluff Arsenal
10020 Kabrich Circle
Pine Bluff, Arkansas 71602**

**LIS No. 23- 057
Permit No. 01H-RN3
AFIN 35-00116**

CONSENT ADMINISTRATIVE ORDER

This Consent Administrative Order (CAO) is issued pursuant to the authority of the Arkansas Hazardous Waste Management Act of 1979, Ark. Code Ann. § 8-7-201 *et seq.*; the Arkansas Remedial Action Trust Fund Act, Ark. Code Ann. § 8-7-501 *et seq.*; and Arkansas Pollution Control and Ecology Commission (APC&EC) Rule. Nos.7, 8, and 23.

The issues herein having been settled by the agreement of United States Army, Pine Bluff Arsenal (Respondent) and the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), it is hereby agreed and stipulated that the following FINDINGS OF FACT and ORDER AND AGREEMENT be entered.

FINDINGS OF FACT

1. Respondent designs, manufactures and refurbishes smoke, riot control, and incendiary munitions, as well as chemical and biological defense operations items at the Pine Bluff Arsenal (Facility) located at 10020 Kabrich Circle, White Hall, Jefferson County, Arkansas.
2. Respondent is a Large Quantity Generator of hazardous waste.
3. Respondent is permitted by the Resource Conservation and Recovery Act (RCRA) 1H-RN3 for disposal of solid waste in the 86 Hazardous Waste Landfill (86 HWL), storage of hazardous waste in the Phosphorus Storage Facility (PSF), Solid Storage Facility (SSF), Liquid Storage Facility (LSF), Recovered Chemical Weapons/Munitions Storage Igloo (RCWMI), Run-off Control Impoundment (RCI), performance of post-closure care for the 83 Hazardous Waste

Landfill (83 HWL), and corrective action for remediation of any releases of hazard constituents from Solid Waste Management Units (SWMUs).

4. Ark. Code Ann. § 8-7-204(c) provides that each day of a continuing violation may be deemed a separate violation for purposes of penalty assessment and authorizes DEQ to assess an administrative civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day for violations of any provision of the Arkansas Hazardous Waste Management Act (Act) and any rule or permit issued pursuant to the Act.

5. Ark. Code Ann. § 8-7-205(1) states, “It shall be unlawful for any person to [v]iolate any provisions of this subchapter or of any rule, permit, or order adopted or issued under this subchapter[.]”

6. On April 20, 2021, Respondent observed a dense nonaqueous phase liquid (DNAPL) in Phillips Creek.

7. On April 21, 2021, Respondent notified DEQ that Respondent had observed DNAPL in Phillips Creek and that Respondent had taken steps to remove the DNAPL from the creek.

8. During the week of May 10, 2021, Respondent reported to DEQ that no additional DNAPL had been observed in Phillips Creek since the initial discovery on April 20, 2021.

9. On June 3, 2021, Respondent submitted to DEQ a letter with attachments that described Respondent’s discovery of the DNAPL and Respondent’s clean-up response and included laboratory analysis of the DNAPL and the sample containing the crystalline substance discovered during the clean-up activities. The laboratory analysis indicated that the DNAPL observed in Phillips Creek contained 10500 mg/kg of DDT and a total of approximately 240,000 mg/kg of trichlorobenzene, dichlorobenzene, and chlorobenzene compounds and that the sample containing the crystalline substance contained 3070 mg/kg of DDT.

10. On June 16, 2021, Respondent observed DNAPL in the same area as the previous DNAPL discovery on April 20, 2021. The approximate size of the largest DNAPL accumulation was five (5) feet long with a maximum width of twelve (12) inches and a maximum depth of about four (4) inches.

11. On June 17, 2021, DEQ asked Respondent to take the following actions in response to this additional discovery of DNAPL in the same location as the previous discovery:

- a. Immediately clean up the DNAPL that was found in Phillips Creek;
- b. Provide DEQ with the interim measures Respondent will implement to protect human health and the environment and prevent the substance from moving downstream; and
- c. Provide DEQ with a plan to identify the source of the substance.

12. On June 18, 2021, Respondent informed DEQ that the visible DNAPL had been removed from Phillips Creek. Respondent indicated that during those removal efforts Respondent identified a possible source location for DNAPL entering Phillips Creek. Respondent placed concrete bags over the area where the DNAPL appeared to be entering Phillips Creek.

13. On June 22, 2021, Respondent and DEQ met to discuss the DNAPL and the crystalline substance discovered in Phillips Creek and Respondent's efforts to clean up this site.

14. On June 24, 2021, Respondent submitted photographs to DEQ via email showing the identification and removal of DNAPL from Phillips Creek on June 18, 2021.

15. On June 24, 2021, Respondent reported to DEQ via email that DNAPL was observed in Phillips Creek on June 24, 2021, and that all visible DNAPL was removed. Respondent stated that they would begin flagging areas where DNAPL is observed on June 25, 2021.

16. On June 25, 2021; June 26, 2021; June 27, 2021; June 28, 2021; June 30, 2021; and July 1, 2021, Respondent reported via email that DNAPL was observed in and removed from Phillips Creek.

17. On June 30, 2021, DEQ sent a letter to Respondent regarding the discovery of DNAPL in Phillips Creek and the information submitted by Respondent. In that letter DEQ stated:

Based upon the findings of the Supplemental River Study, in conjunction with the findings from the 2018 Assessment of DDT Compounds and Mercury in Ecological Receptors in The Arkansas River Adjacent to the Pine Bluff Arsenal (samples from this study were collected in 2016 but not reported until 2018), the 2019 Groundwater Assessment and Ecological Trend Monitoring Report (submitted December 28, 2020), and the recent discoveries of DNAPL and a crystalline substance in Phillips Creek on April 20 & 21, 2021 and June 16, 2021, DEQ concludes that contamination from Pine Bluff Arsenal's facility is contributing to levels of DDT and its degradants DDD and DDE in sediment and fish tissue samples that are above the Remedial Action Decision Document (RADD) screening level of 1 µg/kg for sediment and 6 µg/kg dw for fish tissue along Phillips Creek as well as the Arkansas River near the mouth of Phillips Creek. Fish tissue samples from Phillips Creek exceeded the Federal Drug Administration's (FDA) advisory level of 5000 µg/kg dw for DDT and DDE; however, the FDA advisory was not exceeded in any fish tissue samples from the Arkansas River. Additionally, analytical results included with the June 3, 2021 notification showed sediment concentration levels of chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene that are above RADD screening levels.

DEQ requested that Respondent take the following actions:

- a. Conduct additional sampling in the Arkansas River near the mouth of Phillips Creek and in the backwater area identified as AR-5 in the Supplemental River Study as soon as possible. Sampling should include sediment and fish tissue with analysis for DDT and its degradants. DEQ requested that Respondent provide a Sampling and Analysis Plan (SAP) for review and approval.

- b. Respondent must immediately perform interim measures to limit the continued discharge of DNAPL into Phillips Creek.
- c. Based upon reports and notifications provided by Respondent, Respondent is required to prepare a RCRA Facility Investigation Work Plan (RFI) under Module XII(b) of Respondent's RCRA Permit.

18. On July 9, 2021, DEQ required the Respondent to implement appropriate interim measures including, a diversion of Phillips Creek to immediately control the human health and environmental risk associated with contamination of Phillips Creek and implement source removal action along the bed of Phillips Creek to control DNAPL migration.

19. On July 14, 2021, Respondent submitted its SAP for additional sampling of fish in the Arkansas River near the mouth of Phillips Creek and in the backwater area identified as AR-5 in the Supplemental River Study.

20. On July 21, 2021, and July 22, 2021, Respondent reported via email that DNAPL was observed in and removed from Phillips Creek.

21. On July 28, 2021, Respondent conducted additional sampling of fish in the Arkansas River near the mouth of Phillips Creek and in the backwater area identified as AR-5 in the Supplemental River Study. DEQ observed the collection of these fish.

22. On August 31, 2021, Respondent submitted the analytical results from the July 28, 2021, fish tissue sampling that occurred in the Arkansas River near the mouth of Phillips Creek and in the backwater area identified as AR-5 in the Supplemental River Study. Those analytical results indicated that the concentrations of DDT within Phillips Creek exceed both the DEQ-permitted screening and FDA fish action levels. The highest concentration from Phillips Creek was found in the larger fish that are considered bottom feeders. Those analytical results indicated that the

concentrations of total DDT in the Arkansas River Samples are below the FDA fish advisory levels. The highest DDT concentration from the Arkansas River Samples was found in the largest fish, as measured by weight.

23. Throughout this process, Respondent has met with DEQ weekly to discuss activities at the site, interim measures intended to limit the continued discharge of DNAPL into Phillips Creek, and a RCRA Facility Investigation (RFI) Work Plan under Module XII(b) of Respondent's RCRA Permit.

24. From June 2021 to February 2022, Respondent completed substantial site characterization to further define soil quality impacts north of the SWMU 75 Remnant DDT Source Area by taking 35 soil borings and analyzing 105 samples. Additionally, Respondent performed 69 soil borings north of Phillips Creek and analyzed 203 samples. Respondent performed borings north of the SWMU 75 and to the south of Phillips Creek in an attempt to characterize potential sources of the DNAPL entering Phillips Creek at the seep identified June 16, 2021. Respondent performed borings to the north of Phillips Creek in an attempted to identify a clean path for the diversion channel around the highly contaminated section of Phillips Creek. This diversion channel is part of the required interim measures that DEQ required Respondent to implement.

25. On July 7, 2022, and July 8, 2022, Respondent reported via email that DNAPL was observed in and removed from Phillips Creek.

26. On July 27, 2022, Respondent submitted its interim measures work plan.

27. On August 11, 2022, Respondent completed installation of a check dam in Phillips Creek as an additional interim measure approved by DEQ.

28. On August 17, 2022, DEQ approved Respondent's interim measures work plan.

29. On September 29, 2022, PBA revised the interim measures work plan.

30. Respondent began work in October 2022 on the construction of the diversion channel that was included in both the July 27, 2022, interim measures work plan and the September 29, 2022, revised interim measures work plan, and has since provided DEQ with routine updates.

31. On October 20, 2022, Respondent submitted a Description of Current Conditions (DOCC) for this facility with updated information related specifically to the discovery of DDT and chlorobenzene in Phillips Creek and the surrounding area, ongoing interim measures, and other pertinent information related to this release.

32. On December 5, 2022, DEQ approved the revised interim measures work plan with minor editorial comments.

33. On January 10, 2023, DEQ provided Respondent with comments on the DOCC submitted on October 20, 2022.

34. On February 16, 2023, Respondent submitted revisions to the DOCC.

35. On April 12, 2023, DEQ acknowledged the revisions with no further comments.

ORDER AND AGREEMENT

WHEREFORE, the parties stipulate and agree as follows:

1. Respondent shall implement Respondent's revised interim measures work plan dated September 29, 2022, and approved by DEQ on December 5, 2022.

2. Respondent shall conduct fish tissue sampling annually until Respondent has completed implementation of its revised interim measures work plan dated September 29, 2022. Each annual sampling event shall occur on or before July 31 of that year with first annual sampling event to occur on or before November 15, 2023. Respondent shall submit for review and approval by DEQ its Sampling and Analysis Plan prior to collecting samples. Alternatively, Respondent may follow the procedures and locations as described in "DDT and Chlorobenzene Assessment of the Confluence of Phillips Creek and the Arkansas River, and the AR-5 Backwater Area of the

Arkansas River Sampling and Analysis Plan” as previously approved by DEQ. A Report of Findings following the sampling shall be submitted within sixty (60) calendar days following the completion of field activities.

3. Within 120 calendar days of the effective date of this CAO, Respondent shall submit a RCRA Facility Investigation (RFI) Work Plan to DEQ for review and approval. The RFI Work Plan shall comply with Module XII(b) of Respondent’s RCRA Permit.

4. Upon DEQ’s approval of Respondent’s RFI Work Plan, Respondent shall immediately begin implementing the approved RFI Work Plan. See Module XII(b) of Respondent’s RCRA Permit.

5. Within 60 calendar days following the completion of actions specified in the RFI Work Plan, Respondent shall submit a RFI Report in accordance with Module XII(b) of Respondent’s RCRA Permit describing the procedures, methods, and results of all investigations of solid waste management units (SWMUs) and their releases, extent of contamination, sources, migration pathways, and receptors. The RFI Report shall contain adequate information to support the development of a Corrective Measures Study (CMS) plan to identify the corrective actions that could be implemented as a remedy, if necessary.

6. If notified by DEQ that a CMS Plan is required, Respondent shall comply with the timelines and conditions in Module XII(b) of Respondent’s RCRA Permit for submission of the CMS Plan and all subsequent events triggered following approval from DEQ.

7. All documents required by this CAO to be submitted to DEQ shall be emailed to Enforcement, Office of Land Resources, at olnforcement@adeq.state.ar.us, or submitted by Certified Mail or hand delivered to Enforcement, Office of Land Resources, DEQ, 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317.

8. All requirements of this CAO are subject to approval by DEQ. In the event of any deficiencies, Respondent shall submit any additional information or changes requested, or take additional actions specified by DEQ to correct any such deficiencies within the timeframe specified by DEQ. Failure to respond adequately in writing within the timeframe specified by DEQ constitutes a failure to meet the requirements established by this CAO.

9. If Respondent fails to meet any requirement of this CAO within the deadline established by the CAO, DEQ may assess stipulated penalties for the delay in the following amounts:

- a. First day through the fourteenth day: \$250.00 per day
- b. Fifteenth day through the thirtieth day: \$1,250.00 per day
- c. Each day beyond the thirtieth day: \$2,500.00 per day

These stipulated penalties for delay in performance shall be in addition to any other remedies or sanctions that may be available to DEQ by reason of Respondent's failure to comply with this CAO.

10. Respondent shall notify DEQ in writing within five (5) calendar days of knowledge of any delay or potential delay in complying with any provision of this CAO, specifying in detail the anticipated length of delay, the precise cause of delay, and the measures being taken to correct and minimize the delay.

11. DEQ may grant an extension of any provision of this CAO, provided that Respondent requests such an extension in writing and provided that the delay or anticipated delay has or will be caused by circumstances beyond the control of and without the fault of Respondent. This includes any delay caused by an event arising from causes not reasonably foreseeable and beyond the control of Respondent and which cannot be overcome by due diligence. The time for performance may be extended for a reasonable period but in no event longer than the period of

delay resulting from such circumstances. The burden of proving that any delay is caused by circumstances beyond the control of and without the fault of Respondent and the length of the delay attributable to such circumstances shall rest with Respondent. Failure to notify the DEQ promptly, as provided in the preceding paragraph of this Section, shall be grounds for a denial of an extension.

12. Any requirement for the payment or obligation of funds by Respondent established by the terms of this CAO shall be subject to the availability of funds, and no provision herein shall be interpreted to require obligation of funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

13. Nothing contained in this CAO shall be construed as a waiver by DEQ of its authority over alleged violations not specifically addressed herein. This CAO does not purport in any way to relieve Respondent of its responsibilities for obtaining any necessary permits or licenses, nor does it relieve Respondent of any other obligations imposed by any local, state, or federal laws. This CAO does not exonerate any past, present, or future conduct not expressly addressed herein.

14. This CAO is subject to public review and comment in accordance with Ark. Code Ann. § 8-4-103(d) and APC&EC Rule No. 8. This CAO shall be effective upon the DEQ Chief Administrator's signature. DEQ retains the right to rescind this CAO based upon the comments received within the thirty-day public comment period.

15. Notwithstanding the public notice requirements, the corrective actions necessary to achieve compliance shall be taken immediately. The publication of this CAO shall occur on or about the 10th or 25th day of the month following the date this CAO is executed. As provided by APC&EC

Rule No. 8, this matter is subject to being reopened upon APC&EC initiative or in the event a petition to set aside this CAO is granted by the APC&EC.

16. Each of the undersigned representatives of the parties certifies that he or she is authorized to execute this CAO and to legally bind that party to its terms and conditions.

So Ordered This 13th Day of July, 2023.



**Caleb J. Osborne, Division of Environmental Quality, Director
Chief Administrator, Environment
Arkansas Department of Energy and Environment**

Approved as to Form and Content:

United States Army
Pine Bluff Arsenal

BY:

Signature 

Print Name COLLIN K KEENAN

Title COLONEL, COMMANDER

Date 12 JULY 2023