

MEMORANDUM FOR RECORD

SUBJECT: No Further Action Documentation Pursuant to Releases of Per- and Polyfluoroalkyl Substances on Base Realignment and Closure (BRAC) Property at the Former Alabama Army Ammunition Plant (ALAAP)

1. Purpose:

a. Document the Army's review of historical information and the administrative record for former Alabama Army Ammunition Plant (ALAAP); and the determination there was no historical use, storage, or release of PFAS containing materials or compounds into the environment that would require further investigation under the Comprehensive Response, Compensation and Liability Act (CERCLA). The term PFAS includes but is not limited to, perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS).

b. This Memorandum for Record (MFR) provides background and justification why No Further Action related to PFAS is warranted.

2. Background:

a. ALAAP has been transferred outside of the federal government and no Army owned property remains.

b. In May 2016, the U.S. Environmental Protection Agency (EPA) declared a Life Time Health Advisory (LHA) for PFOS and PFOA, of 0.07 micrograms per liter ($\mu\text{g/L}$). In September 2018, the Army issued guidance to complete historical research to find potential PFAS releases. This resulted in performing "Key Word" Search efforts within the DERP environmental site inventory. Words such as crash, burn, fire, training and pit were searched in the inventory database, resulting in a list of installations where Army potentially used or stored PFAS compounds, and included ALAAP.

3. Recommendation: No Further Action is required at ALAAP with regards to PFAS because the only sites that potentially had AFFF or other PFAS-containing material exposures were operationally closed prior to the Department of Defense's use of PFAS materials in the early 1970's as described in Attachment A.

4. The point of contact for this memorandum is Heather Elliott, BRAC Environmental Coordinator, Heather.Elliott@calibresys.com.

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Richard C. Ramsdell
Chief, Base Realignment and Closure Branch
Installation Services Directorate, DCS, G-9

ATTACHMENT A

1. **Name of Installation:** Alabama Army Ammunition Plant (ALAAP)
2. **Installation Summary:** ALAAP was established in 1941 on approximately 13,200 acres near the junction of the Coosa River and Talladega Creek. During World War II E.I. duPont de Nemours & Co. operated the facility as a government-owned/contractor-operated facility. The plant produced a variety of explosives and explosives-related materials in support of World War II efforts, and was only active between 1941 and 1945. Parts of the plant were leased until 1973 to produce acid and rayon. The plant also produced chemicals for the manufacturing operations, including nitric and sulfuric acids. ALAAP was designed to manufacture 400,000 pounds of TNT, 30,000 pounds of DNT, and 36,000 pounds of tetryl on a daily basis. When ALAAP operations were terminated in August 1945, the plant was converted to standby status. Nearly 6,600 acres that were never developed were returned to their original owners or other buyers. In August 1945, the Government began excessing property (prior to BRAC).

The Army maintained the plant in various stages of standby status until the early 1970s. In 1973 the Army declared ALAAP's remaining 6,584 acres excess to its needs and released the entire facility to the General Services Administration (GSA) for sale. GSA declined to accept approximately for 2,000 acres (Area B) of the former manufacturing area because the area could not be certified free from contamination. Beginning in 1973, the U.S. Army implemented a controlled burning program to destroy explosive residues in the former industrial and storage areas of the facility. Nearly all of the buildings that were components of the explosives manufacturing facilities and the acid and organic chemical manufacturing facilities were burned from 1973 to the early 1980's. In 1977, GSA sold a 1,354-acre parcel in the southern portion of the site to Kimberly-Clark Corporation (now Alliance Forest Products, Inc.).

In July 1987, ALAAP was placed on the National Priorities List (NPL). To facilitate the release of the remaining acreage, the property was divided into two parts, Area A and Area B. Area A consisted primarily of former storage areas, while Area B consisted of the manufacturing areas. In December 1988, ALAAP was identified for closure in the Report of the Defense Secretary's Commission on Base Realignment and Closure. Since actions which led to the sale of Area A (2,803 acres) were initiated prior to June 1990, ALAAP Area A did not fall under the Base Realignment and Closure Act [Public Law 100-526, Section 201(3)]. In 1990, the Army, Environmental Protection Agency (EPA), and GSA agreed to ensure the sale and transfer of ALAAP Area A would comply with the Federal Facilities Agreement. In 1990, Area A was conveyed through a private sale. The new owners of the former Area A property use the land as private game preserves and occasionally for logging. Remedial actions were completed at ALAAP Area A in 1998.

The approximately 2,200 acres, known as Area B, are included under the Base Closure Program. Area B was transferred to the City of Childersburg in 2003 through the early transfer authority. Deed restrictions limiting residential use and groundwater

access were included in the deed. The Army, EPA and Alabama Department of Environmental Management continue to work toward a groundwater remedy.

3. **Environmental Summary:** In July 1987, ALAAP was placed on the National Priorities List (NPL). Soil cleanup and groundwater investigation occurred under a Federal Facilities Agreement and IAW CERCLA. All cleanup actions have been completed except for two sites which are located in Area B. Site 39, which is a relatively new investigation for asbestos contamination resulting from building flashing during demolition and site 34 site wide groundwater, which requires groundwater monitoring for explosives related compounds, 2,4-dinitrotoluene and 2,4,6 - trinitrotoluene in perpetuity.
4. **Date Transferred, Authority Used (BRAC '88, etc) Anticipated Transfer of Army-owned Property:** ALAAP was closed due to BRAC 1988. All of the property at ALAAP has been transferred. Area A was transferred in 1990 and Area B in 2003. Area A is used as private game preserves and occasionally for logging and Area B is being redeveloped by the owner, the City of Childersburg. There are businesses in Area B that are recycling motor oil, making cinder blocks, cutting steel, and manufacturing PVC pipe. Much of the property has not been redeveloped; however, the City and County continue to pursue potential industries for the area.
5. **Groundwater Remedy/Use:** Groundwater at ALAAP comes from the dolomite aquifer of the Coosa Valley that supplies the potable needs of the communities, homes, farms, woodlands and wetlands. Most of the wells draw water from solution cracks and cavities in the dolomite. A few wells are finished in the residual soil, but these wells are less productive. Groundwater in the surficial aquifer flows to the west-southwest or toward Area B.

Area A was transferred without any restrictions and is currently used for logging and hunting. Area A is located up gradient from Area B.

Area B has groundwater, soil excavation, and landfill restrictions and is restricted to industrial and commercial use. The groundwater use restriction on Area B is to prevent exposure to explosives related contamination. All new property owners are notified of the restrictions in deeds at the time of purchase.

A groundwater remedy has not yet been selected at ALAAP. The Army is collecting boundary well samples to better define extent and assess the data gaps at particular locations on the Area B boundary.
6. **State status.** Alabama has not established any PFAS standards.
7. **Potential for PFC contamination? Yes or No or likely:** No. See details below.

8. **PFAS Issue summary and Recommendation (Procedures contemplated, Right of Entry, sampling, etc):** A key word search with the Defense Environment Restoration Program (DERP) Environmental Site Inventory was completed to develop a list of installations that may have had a release related to the use or storage of PFAS on Base Realignment and Closure (BRAC) Installations. The key word search for ALAAP found two sites: Site 08 – Acid and Organic Manufacturing Area (Burn Area) and Site 12 – Old Burning Ground (Burn Area).

Site 08 – Acid and Organic Manufacturing Area: This area is located in Area B, and is also known as Study Area 8. This was the site of the production of aniline, N-N-dimethylaniline, concentrated nitric acid, oleum, and sodium sulfite (sellite). Liquid wastes generated from these production activities at Study Area 08 were discharged into part of the Industrial Sewer System (ISS) onsite and subsequently were discharged into either the Red Water Ditch or Coosa River. A former sulfur burning pit is also in this area. The manufacturing area was last used by the Army between 1941 and 1945, and it was last leased for the purpose of using the acid production facilities until 1966. This area was included in the Area B Soil ROD, which stated that the soil is acceptable for industrial use, but needed LUCs to prevent residential development. The ROD was finalized in 2010. The groundwater under this area is restricted. Due to the fact this facility was last used in the early 1970's, and a sulfur burn pit would not be a PFAS source, there is no evidence of that PFAS or PFAS-containing materials were used this area.

Site 12 – Old Burning Ground: The Old Burning Ground is located in the northern section of Area A and was the primary disposal site for unacceptable batches of explosives, propellants, and other reactive wastes. The last known use of this area was when the plant was in operation in 1945. Periodic burning of the study area's vegetation was practiced during plant operation to minimize the danger of wildfires. Surface water flow in this area is intermittent and occurs only during heavy rain events. There were no groundwater issues identified in Area A and any associated private property wells around Area A are up gradient from Area B. This site achieved site closure in 1997. Due to fact the usage of this site was prior to the manufacturing of AFFF, no further investigation is recommended because there is no evidence of PFAS or PFAS-containing materials used at this site.

ALAAP Overall: The main facility was in operation between 1941 and 1945, but was leased until 1973. This was prior to the usage of AFFF. Most buildings were razed from 1973 to the early 1980's. Due to the timeframe this facility was used, there is no reason to believe PFAS was used, stored or released on ALAAP.

No further action is required at ALAAP.

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ATTACHMENT B

1. 10 U.S.C. 2701 et. seq.
2. DoDM 4715.20 Defense Environmental Restoration Program Manual (9 March 2012)
3. DoDI 4715.18 Emerging Contaminants (13 December 2017)
4. AR 200-1 (13 December 2007)
5. Base Redevelopment and Realignment Manual (1 March 2006)
6. Department of Army Guidance to Address Perfluoro-octane Sulfonate and Perfluoro-octanoic Acid Contamination (29 August 2016)
7. Memorandum, Subject: Army Guidance for Addressing Releases of Per-Polyfluoroalkyl Substances (September 2018)