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Agency

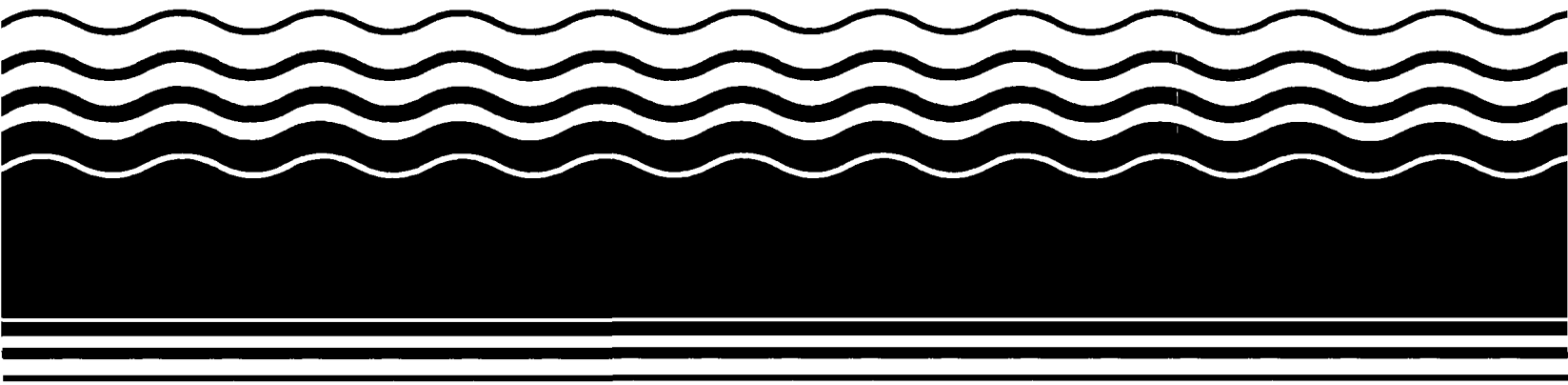
Office of
Emergency and
Remedial Response

EPA/ROD/R04-92/102
December 1991

EPA

Superfund Record of Decision:

Alabama Army Ammunition Plant (Operable Unit 1), AL



NOTICE

The appendices listed in the index that are not found in this document have been removed at the request of the issuing agency. They contain material which supplement, but adds no further applicable information to the content of the document. All supplemental material is, however, contained in the administrative record for this site.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. EPA/ROD/R04-92/102	2.	3. Recipient's Accession No.

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SUPERFUND RECORD OF DECISION
Alabama Army Ammunition Plant (Operable Unit 1), AL
First Remedial Action - Final

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16. Abstract (Limit: 200 words)
The 2,200-acre Alabama Army Ammunition Plant (AAAP) site is located in Talledega County, Alabama, near the junction of Talledega Creek and the Coosa River. Land use surrounding AAAP is mixed recreational and industrial. The majority of the surface runoff from AAAP drains west or southwest into the Coosa River. Prior to construction of AAAP, the area consisted of farms, woodlands, and wetlands. AAAP was built in 1941 as a government-owned/contractor-operated facility that produced nitrocellulose, nitroaromatic explosives, and 2,4,6-trinitrophenyl methyl nitramine. Support of chemical manufacturing included the use of sulfuric acid; aniline; N,N-dimethylaniline; and diphenylamine. Operations at AAAP were terminated in August 1945, and in 1973 several parcels of the original 13,233-acre property were sold. In 1978, the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), managing the Army's Installation Restoration Program (IRP), identified soil, sediment, and ground water potentially contaminated by explosives, asbestos, and lead as a result of past site operations. During the RI/FS, the facility was divided into two general areas: the eastern area (Area A) and the western area (Area B). In 1985, investigations identified soil contamination by explosives, asbestos, and lead in Area A, and ground

(See Attached Page)

17. Document Analysis a. Descriptors
Record of Decision - Alabama Army Ammunition Plant (Operable Unit 1), AL
First Remedial Action - Final
Contaminated Media: soil, debris
Key Contaminants: explosives (2,4,6-TNT, 2,4-DNT, 2,6-DNT, and tetryl), metals (lead), inorganics (asbestos)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 52
	20. Security Class (This Page) None	22. Price

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Alabama Army Ammunition Plant (Operable Unit 1), AL
First Remedial Action - Final

Abstract (Continued)

water contamination by these materials in Area B. In 1986, the Army conducted clean-up activities at Area A, which included building decontamination and demolition, soil excavation, and stockpiling. Soil excavated from Area A was stockpiled in Area B in two covered buildings and on a concrete slab, which was subsequently covered with a membrane liner. A 1991 characterization study of Area B concluded that explosives, lead, and asbestos contamination were present above regulatory limits. This ROD addresses a final action for the contaminated soil in the Stockpile Soils Area (Area B). A final remedy for the remainder of the AAAP facility will be proposed by the U.S. Army following completion of the RI/FSs currently in progress. The primary contaminants of concern affecting the soil and debris are explosives, including 2,4,6-TNT, 2,4-DNT, 2,6-DNT, and tetryl; metals, including lead; and asbestos, an inorganic.

The selected remedial action for the stockpiled soil in Area B includes separating between 24,300 to 25,650 cubic yards of contaminated soil and between 1,350 to 2,700 cubic yards of asbestos-containing material; incinerating onsite contaminated soil; testing the treated soil for explosives and lead to verify compliance with the treatment criteria and stabilizing the soil or ash, if necessary, to meet LDR's followed by disposing of the treated soil and stabilized material onsite at designated backfill area; and containerizing asbestos-containing material, followed by either onsite or offsite disposal at a regulated facility depending on the quantity of material to be disposed of and the availability of disposal facilities. The total present worth cost for this remedial action ranges from $10,672,400 to $16,736,100, which includes a total O&M cost of $8,782,800 to $12,767,500 for 9 to 12 months, depending on the type of incinerator used. The estimated cost for asbestos disposal is $319,500, based on offsite disposal and the cost of stabilization is $250 per cubic yard. The cost for stabilization is not included in the total estimated cost because of the unknown quantity of material to be stabilized.

PERFORMANCE STANDARDS OR GOALS: Chemical-specific soil and debris clean-up goals are based on federal standards, including explosives 1 ug/g of 2,4,6-TNT (RCRA) and lead 5 mg/l in the TCLP extract (RCRA).

U. S. ARMY INSTALLATION
RESTORATION PROGRAM

RECORD OF DECISION

ALABAMA ARMY AMMUNITION PLANT, ALABAMA
STOCKPILE SOILS AREA OPERABLE UNIT

DECEMBER 1991

In accordance with Army Regulation 200-2, this document is intended by the Army to comply with the National Environmental Policy Act (NEPA) of 1969.

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DECLARATION OF THE RECORD OF DECISION

SITE NAME AND LOCATION

Alabama Army Ammunition Plant
Stockpile Soils Area Operable Unit
P. O. Box 368
Childersburg, AL 35044-0368

STATEMENT OF PURPOSE

This decision document presents the selected remedial action for the Stockpile Soils Area Operable Unit, at Alabama Army Ammunition Plant, Childersburg, Alabama, which was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the administrative record for the site.

This early remedial action is taken to protect human health and the environment from unacceptable risks and is the final remedial action planned for the Stockpile Soils.

The U.S. Environmental Protection Agency and the State of Alabama concurs with the selected remedy.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in Record of Decision (ROD), may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The Stockpile Soils Area Operable Unit addresses the principal threats from explosives, lead, and asbestos containing material posed by the Stockpile Soils at the Alabama Army Ammunition Plant. The Stockpile Soils Area Operable Unit consists of soil stockpiled in a covered building and on a concrete slab covered with an impermeable membrane. The scope of the ROD is limited to the Stockpile Soils Area Operable Unit.

The selected Remedy for the Stockpile Soils Area Operable Unit consists of the following:

- On-Facility Thermal Treatment of Stockpile Soils

- On-Facility Disposal of Treated Soil
- On- or Off-Facility Disposal of Asbestos-Containing Material

STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable, and satisfies the statutory preference for remedies that employ treatment that reduce toxicity, mobility, or volume as a principal element.

Lewis D. Walker

Lewis D. Walker
Deputy Assistant Secretary of the Army
(Environment, Safety, and Occupational Health)

12/31/91

Date

RECORD OF DECISION

ALABAMA ARMY AMMUNITION PLANT, ALABAMA
STOCKPILE SOILS AREA OPERABLE UNIT

DECEMBER 1991

31 December 1991

Lieutenant Colonel T. E. Dresen
Commander, Holston Army Ammunition Plant
Commander, Alabama Army Ammunition Plant

Date

DECISION SUMMARY

DECISION SUMMARY

1.0 SITE NAME, LOCATION, AND DESCRIPTION

AAAP is located in central Alabama in Talledega County, 4 miles north of Childersburg and 40 miles southeast of Birmingham, Alabama, as shown in Figure 1. It encompasses 2,200 acres of land near the junction of Talledega Creek and the Coosa River. This early action ROD is limited to the soils stockpiled in a covered building, and on a concrete slab and covered with an impermeable membrane. This "Stockpile Soils Area" is located in the western section of AAAP as shown in Figure 2.

The climate of Talladega County is temperate. The majority of the surface runoff from AAAP drains either west or southwest into the Coosa River. Prior to the construction of AAAP, the area consisted of farms, woodlands, and wetlands. Much of the western half of AAAP was poorly drained. Small natural drainways were enlarged and rerouted to provide drainage from the various manufacturing operations.

Potable groundwater from the dolomite aquifer of the Coosa Valley supplies the needs of the communities, homes, farms, and industries around AAAP. The majority of the successful wells draw water from solution cracks and cavities in the dolomite.

2.0 SITE HISTORY

AAAP was built in 1941 and operated during World War II as a Government-owned/contractor operated facility. AAAP produced nitrocellulose (NC), a single-base smokeless powder; nitroaromatic explosives, i.e., 2,4,6-trinitrotoluene (TNT), 2,4-dinitrotoluene (DNT); and 2,4,6-trinitrophenylmethylnitramine (tetryl). Supporting chemical manufacture included sulfuric acid, aniline, N,N-dimethylaniline, and diphenylamine. Operations at AAAP were terminated in August 1945. The plant was maintained under standby status until 1973. In 1973, the Department of the Army declared AAAP as an excess property. Since that time, several parcels of the original 13,233-acre property have been sold.

In 1978, the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), managing the Army's Installation Restoration Program (IRP), conducted a record search that concluded that specific areas of the facility were potentially contaminated by explosives and lead compounds. Further studies confirmed contamination of the soils at AAAP with explosives compounds, asbestos, and lead. Several investigations were conducted between 1981 and 1983 to further define contamination. In 1984, AAAP was proposed for inclusion on the CERCLA (Superfund) National Priorities List (NPL).

A remedial investigation and feasibility study (RI/FS) under the Department of Defense (DOD) IRP was initiated in 1985 to determine the nature and extent of contamination at AAAP and to determine the alternatives available to clean up the site. For the purposes of the RI/FS, the

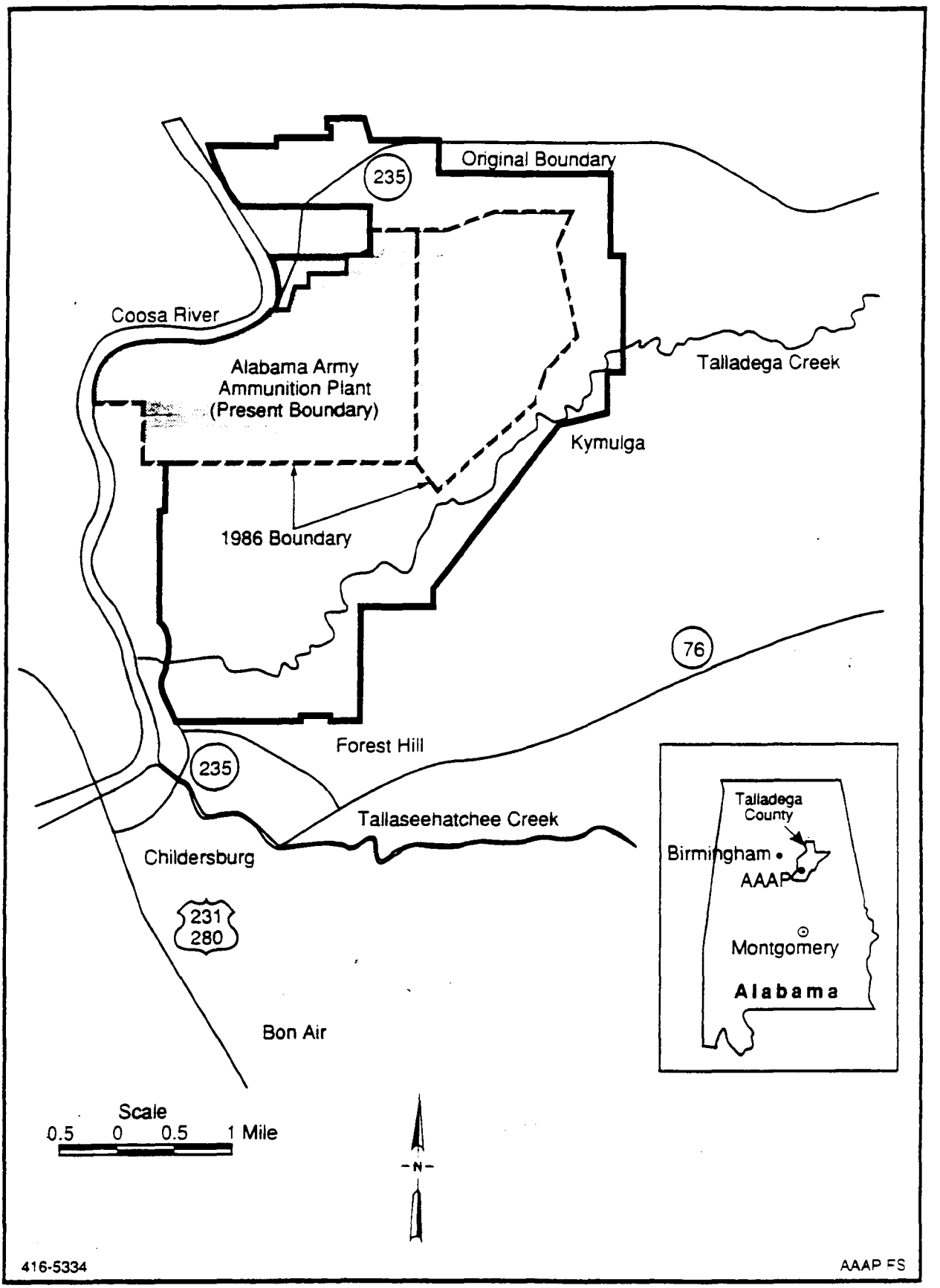

FIGURE 1 LOCATION MAP OF AAAP

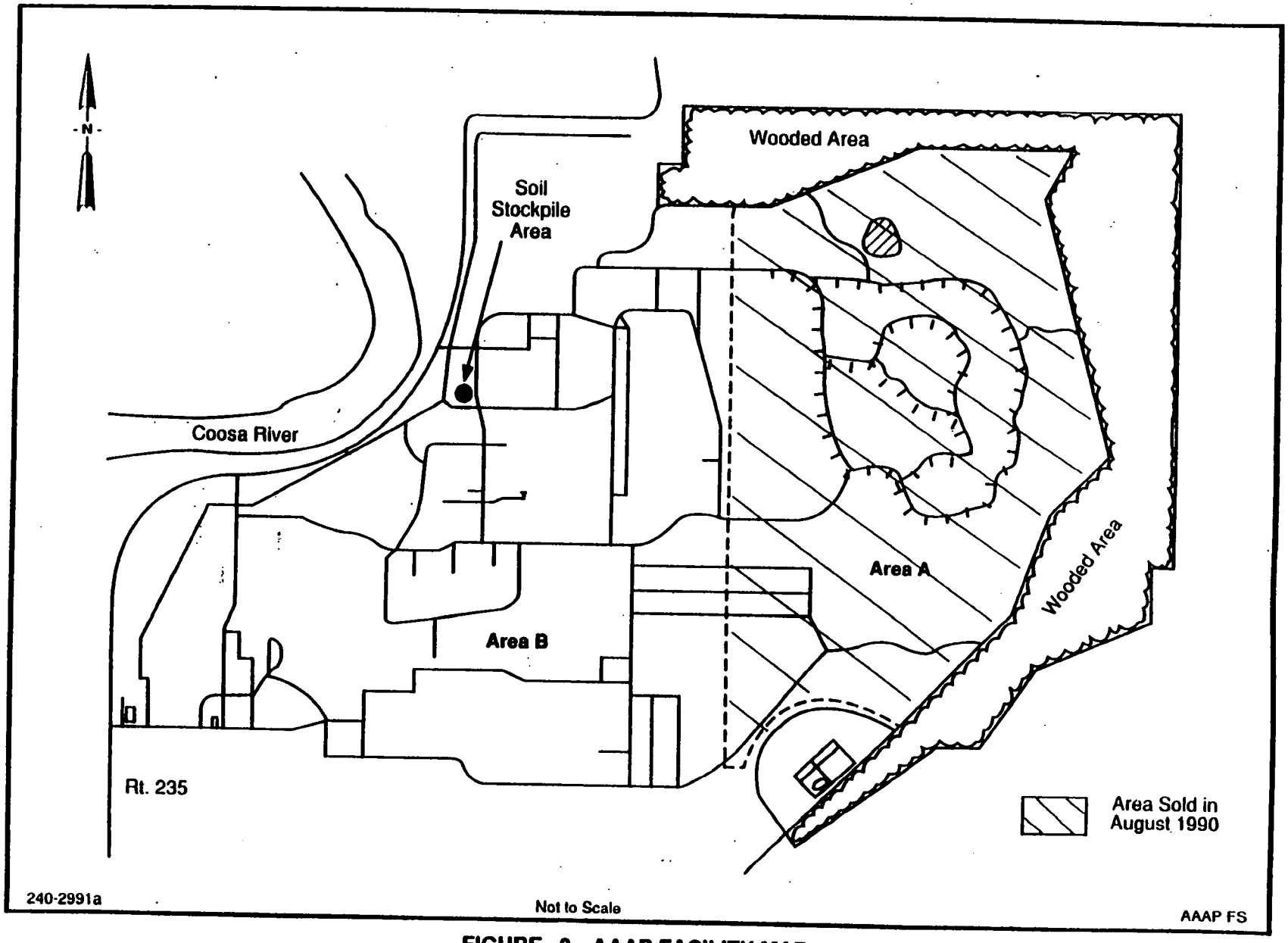

FIGURE 2 AAAP FACILITY MAP

facility was divided into two general areas. Area A consisted of the eastern portion of the facility, while Area B consisted of the western portion (Figure 2). The initial RI under the IRP confirmed the existence of explosives, asbestos and lead contamination in the soil in Area A, and in the soil, sediment, and groundwater in Area B. The RI for Areas A and B was completed in 1986. As a result of the findings of the RI, cleanup activities at Area A were conducted in 1986 and 1987 which included building decontamination and demolition, soil excavation, and stockpiling. Soils excavated from Area A were stockpiled in Area B in two covered buildings and on a concrete slab which was subsequently covered with a membrane liner. In 1987, AAAP was placed on the NPL. In 1990, the EPA indicated that additional investigations needed to be conducted at Area A to ensure that no residual contamination remained. Area A was conveyed to private buyers in August 1990, with the provision that additional investigations would be performed.

In February 1991, a Characterization Study was conducted for the Stockpile Soils in Area B. The Study concluded that explosives, lead and asbestos contamination were present above regulatory limits. On 29 March 1991, a tornado demolished one of the two buildings that contained Stockpile Soils. Soils from the demolished building were relocated on the concrete slab and secured with the membrane liner.

The following documents outline the results of the initial assessment of the AAAP, clean up actions conducted in Area A, and the investigations of the Stockpile Soils Area Operable Unit.

1. Installation Assessment of Alabama Army Ammunition Plant, Report 130, May 1978.

2. Alabama Army Ammunition Plant, Area A Remedial Actions, Final Report, February 1988.

3. Stockpile Characterization Report for Alabama Army Ammunition Plant (AAAP), Childersburg, Alabama, July 1991.

4. Feasibility Study for the Alabama Army Ammunition Plant (AAAP) Soil Stockpile Area, October 1991.

5. Proposed Plan for Early Remedial Action of Stockpile Soils at the Alabama Army Ammunition Plant (AAAP) Stockpile Soils Area Operable Unit, November 1991.

3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

In accordance with the Army's Community Relations Plan (CRP), for the Alabama Army Ammunition Plant, October 1990, the Feasibility Study and the Proposed Plan for the Stockpile Soils Area Operable Unit were released to the public on November 21, 1991. The public comment period started on November 21, 1991 and ended on December 23, 1991. Documents were made available to the public at the following locations: the U.S. Environmental Protection

Agency (EPA) Library, Atlanta, Georgia; the Library Service, Alabama Public Information, Montgomery, Alabama; the B.B. Comer Memorial Library and Information Center, Sylacauga, Alabama; and the Earle A. Rainwater Memorial Library, Childersburg, Alabama. The notice of availability of the Proposed Plan was published in Daily Home, Birmingham News, Anniston Star, and Montgomery Advertiser on 19 November 1991. In accordance with the CRP, a public meeting was held on December 5, 1991 to inform the public of the preferred alternative and to seek public comments. At this meeting, representatives from AAAP, EPA, Alabama Department of Environmental Management (ADEM), United States Army Corps of Engineers (USACE), USATHAMA, and Weston Services, Inc. (a remediation contractor) answered questions about the site and the remedial alternatives under consideration. A response to the comments received during this period is included in the Responsiveness Summary, which is a part of this Record of Decision.

The Proposed Plan identified Alternative 2 as the preferred remedy for the Stockpile Soils Area Operable Unit. Alternative 2, which is described in the Feasibility Study, consists of: On-Facility Thermal Treatment of Stockpile Soils and On-Facility Disposal of Treated Soil/On- or Off-Facility Disposal of Asbestos-Containing Material.

AAAP, EPA, ADEM, and USATHAMA reviewed all written and verbal comments submitted during the public comment period. Upon review of these comments, it was determined that no significant changes to the preferred remedy outlined in the Proposed Plan were necessary.

4.0 SCOPE AND ROLE OF THE STOCKPILE SOILS AREA OPERABLE UNIT

The Stockpile Soils Area Operable Unit cleanup strategy is an early remedial action for the Stockpile Soils at AAAP. The action is intended to be the final action for only the contaminated soils within the Stockpile Soil Area. A Final remedy for the remaining portions of the AAAP facility will be proposed by the U.S. Army following the completion of RI/Fss currently in progress. No further actions are planned for the remediated Stockpile Soils.

The threats addressed in the in the early remedial action are the contaminated Stockpile Soils contained in a covered building and on a concrete slab covered with a membrane liner. These storage and access controls are considered inadequate for any permanent storage. Actual or threatened release of hazardous substances from the contaminated Stockpile Soils, if not addressed by implementing the selected Early Remedial Action, may present a current or potential threat to public health, welfare and the environment.

5.0 SITE CHARACTERISTICS

5.1 Physiography

AAAP is located in the Coosa Valley district of the Valley and Ridge physiographic province. The border between the Valley and Ridge province and the Piedmont province is south of AAAP between Talladega and Tallaseehatchee Creeks.

5.2 Climate

The climate of Talladega County is temperate. Summer weather, which lasts from May or June until September or October, is almost subtropical because maritime tropical air prevails along the Bermuda high-pressure system.

Mean annual rainfall is 52 inches. The lowest average monthly rainfall (2.2 inches) occurs in October and the highest average monthly rainfall (6.4 inches) occurs in March.

5.3 Surface Hydrology

The majority of the surface runoff from AAAP drains either west or southwest into the Coosa River. A small portion of the southern and eastern side of AAAP drains toward Talladega Creek, a tributary of the Coosa River. Prior to the construction of AAAP, the area consisted of farms, woodlands, and wetlands. Much of the western half of AAAP was poorly drained. Small natural drainways were enlarged and rerouted to provide drainage from the various manufacturing operations.

As shown in Figure 3, two natural drainage systems conveyed surface runoff from AAAP, west to the Coosa River. Liquid industrial wastes from the explosives manufacturing operations were conveyed west to the Coosa River by a manmade channel. No natural ponds existed on AAAP during its operation, however, two large storage lagoons were constructed to retain industrial wastes. Extensive wooded swamp and open pond areas have developed in the drainage systems at AAAP since the beginning of demolition activities in 1973, primarily as a result of damming of drainways by beavers.

5.4 Geologic Setting

The bedrock underlying AAAP has been mapped on a regional scale and has been identified as the undifferentiated Knox Group of Upper Cambrian to Lower Ordovician age dolomite. The dolomite underlying AAAP is thick- to medium-bedded, cherty, and penetrated by numerous cavities, joints and fractures. The dolomite is overlain by residual soil derived from it by weathering processes. This soil matrix consists primarily of clay, with some silt, sand, and occasional chert boulders, and varies in thickness from less than 1 meter (m) to over 15 m.

5.5 Land Use

The AAAP is currently in an inactive caretaker status with controlled access. There is no activity on AAAP other than occasional Army-supervised logging. The land use surrounding AAAP is a mixture of recreational and industrial. AAAP is bordered on the west side by a country club, on the south by a paper products company, on the east by wooded, private property, and on the north by a water treatment plant.

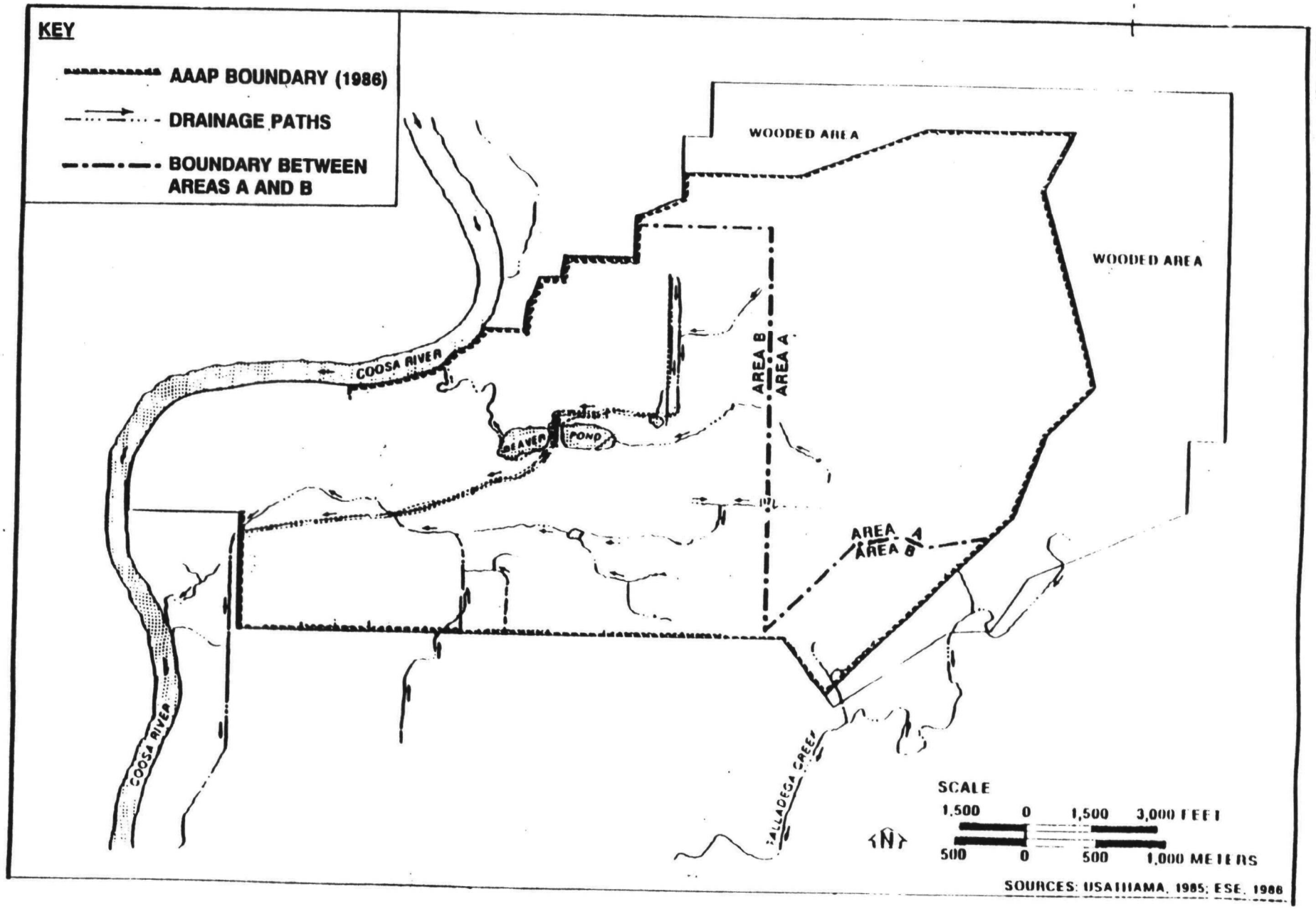

FIGURE 3 DRAINAGE PATTERNS AT AAAP

5.6 Soils

The soils at AAAP are generally divided into three associations. Soils of the Bodine-Minvale association are found on the high ground of the eastern portion of AAAP. This association is composed of deep, well-drained, steep, cherty, medium-textured soils derived from limestone and dolomite. Most of AAAP is covered by soils of the Decatur-Dewey-Fullerton association, which are also deep, well-drained, loam soils derived from limestone and dolomite. The soils of the floodplains of Talladega Creek and the Coosa River have been classified as the Chewacla-Chenneby-McQueen association. These are deep, nearly level, alluvial loam soils which grade from somewhat poorly-drained to well-drained and are subject to flooding.

These broad-based associations represent agricultural classifications rather than engineering descriptions. Soil constitution within any of the three associations may range from soils consisting primarily of sand and silt with little clay to soils comprised almost entirely of clay.

5.7 Groundwater

Potable groundwater from the dolomite aquifer of the Coosa Valley supplies the needs of the communities, homes, farms, and industries around AAAP. The majority of the successful wells draw water from solution cracks and cavities in the dolomite. A few wells are completed in the residual soil, but these wells are less productive than those drilled into the dolomite.

5.8 Ecological Systems

Prior to the construction of the ammunition plant, the area consisted primarily of cropland and woodland. During its operational years, much of AAAP consisted of maintained industrial areas. The Army instituted a woodland management plan following the closure operations which extensively modified AAAP by allowing for the planting of 3,411 acres of controlled pine forest. The area was also changed as a result of demolition of various areas following closure operations.

At present, many of the formerly maintained drainages, pathways, pine plantations, and cleared areas have undergone considerable vegetative overgrowth. Damming of surface drainages by beavers has modified the drainage systems; drainage has become much slower, and extensive wooded swamp and shallow pond areas have developed. As a result of these changes, the major ecological systems currently consist of the following types: grassland/old field association, upland pine forest/pine plantations, oak forests, low moist pine woods, hardwood swamps, intermittent streams, shallow ponds, and drainage ditches.

These systems support abundant populations of aquatic and terrestrial organisms. White-tailed deer, introduced in the 1960's have become particularly abundant as have certain predators (the red-tailed hawk, the marsh hawk, and the bobcat).

The extensive development of shallow beaver ponds has resulted in large populations of

amphibians and aquatic reptiles and has provided habitat for wading birds and other waterfowl. Wood ducks are abundant, year-round residents at AAAP. During fall and winter, the ponds support large populations of migratory waterfowl.

The Stockpile Soils Area Operable Unit is located in a cleared well-drained area adjacent to the western boundary of the AAAP.

5.9 Nature and Extent of Contamination

The soils of concern in the Stockpile Soils Area Operable Unit are stockpiled in a covered building and on a concrete slab covered with an impermeable membrane. These Stockpile Soils are contaminated with explosives, lead and asbestos concentrations above regulatory limits. Table 1 presents the contaminants of concern from the Characterization Study, conducted in February 1991. The results are summarized as follows:

Explosives - 2,4,6-TNT, 2,4-DNT, 2,6-DNT and tetryl were detected in samples; the total concentration of explosives was as high as 12 ppm (parts per million).

Lead - Lead concentrations in the extract of samples generated by using the Toxicity Characteristic Leaching Procedure (TCLP) varied between 0.66 and 185 mg/l (milligrams per liter). The average lead concentration was 17.1 mg/l.

Asbestos - Asbestos was present in Stockpile Soils in two forms: (1) mixed with soil in low concentrations; and (2) large pieces or chunks with high percentages of asbestos.

Currently, approximately 27,000 cubic yards of soil is stockpiled at AAAP. The volume of soil, excluding asbestos-containing material, is estimated to range from 24,300 to 25,650 cubic yards. The quantity of asbestos-containing material, is estimated to range from 1,350 to 2,700 cubic yards.

During the characterization study field activities, small clumps of 1/4 to 1 inch in diameter yellowish-gray material which had the appearance of TNT was identified in Stockpile Soils. Explosives contamination with sufficient concentration to be flammable and reactive is considered hazardous under the Resource Conservation and Recovery Act (RCRA). Materials that contain greater than 5 mg/l of lead in the TCLP extract are considered to be a hazardous waste under RCRA. Material that contains greater than 1% asbestos by weight is called asbestos-containing material (ACM) and is considered hazardous under the Toxic Substances Control Act (TSCA).

TABLE 1

CONTAMINANTS OF CONCERN AND CONCENTRATIONS IN STOCKPILE SOILS

Field/Site Identification	Contaminant Concentration 2,4,6-TNT (ug/g)	2,4-DNT (ug/g)	2,6-DNT (ug/g)	Tetryl (ug/g)	Lead in TCLP Extract mg/l	Asbestos (%)
Building TC-4*						
TC4-1	ND	ND	ND	ND	6.5	ND
TC4-2	2.84	ND	ND	ND	185	ND
Building TC-4A						
TC4A-1	3.31	1.18	ND	6.94	34.4	ND
TC4A-2	2.32	0.65	ND	3.04	2.6	ND
TC4A-3	ND	0.95	ND	ND	0.72	< 1 chrysotile
TC4A-4	ND	0.70	ND	ND	0.66	ND
Concrete Slab						
CS-1	ND	ND	ND	ND	1.4	< 1 chrysotile
CS-2	ND	ND	ND	ND	4.5	< 1 chrysotile
CS-3	ND	ND	ND	ND	0.69	ND
CS-4	ND	ND	ND	ND	1.9	< 1 chrysotile
CS-5	ND	0.75	ND	ND	2.7	ND
CS-6	ND	ND	0.68	ND	13.9	ND
CS-7	6.06	ND	ND	ND	3.9	< 1 chrysotile
CS-8	ND	ND	ND	ND	10.1	ND
CS-9	ND	ND	ND	ND	1.1	ND
CS-10 (CS-8 duplicate)	ND	ND	0.56	ND	4.9	< 1 chrysotile

* Building TC-4 was destroyed by a tornado after characterization sampling was conducted.

Key: ug/g = micrograms/gram (parts per million)
mg/l = milligrams per liter
ND = Not Detected

6.0 SUMMARY OF HUMAN HEALTH AND ECOLOGICAL RISKS

In summary, based on the Characterization Study, the contaminants of concern in the Stockpile Soils Area Operable Unit are explosives, lead, and asbestos.

The early remedial action is being taken because the contaminated soils represent an actual or threatened release of hazardous substances from the contaminated Stockpile Soils Area.

The remediation goal is the elimination of site risks by treating the contaminants of concern in accordance with applicable or relevant and appropriate requirements and regulations. Achieving this goal will result in overall protection of human health and the environment.

No ecological risks are known to exist as a result of Stockpile Soils. Conducting the early remedial action will eliminate threats of ecological harm by eliminating Stockpile Soils.

7.0 DESCRIPTION OF ALTERNATIVES

Three different remedial action alternatives have been developed for the treatment of Stockpile Soils at AAAP. A brief description of the remedial alternatives that were evaluated is presented in Subsections 7.1, 7.2, and 7.3.

7.1 Alternative 1 - No Action

The No Action alternative is required to be included as stipulated by CERCLA/SARA. No remedial action will be performed in this alternative. The no action alternative serves as a baseline against which other alternatives can be evaluated. Under this alternative, hazardous soil would remain in a storage location that was approved only for temporary storage. The risks from the contaminants of concern would continue to remain. No cost is associated with this alternative.

Estimated Construction Cost	$ 0
Estimated Operation and Maintenance Cost	$ 0
Estimated Total Present Worth Cost	$ 0
Approximate Duration	0 months

7.2 Alternative 2 - On-Facility Thermal Treatment and On-Facility Disposal of Treated Soil/On- or Off-Facility Disposal of Asbestos-Containing Material

In Alternative 2, soil will be separated from the asbestos containing material. Soil will be transported to the on-facility thermal treatment unit for incineration. Treated material will be analyzed for explosives and lead to verify compliance with the treatment criteria as described in "Remediation Goals", in Section 9.1. The explosives will be destroyed during the incineration process. If lead concentrations in the treated soil or fly ash exceed the allowable regulatory standards, that material will be stabilized in compliance with Land Disposal

Restrictions. Treated soil and stabilized material will be placed at the on-facility designated backfill area at AAAP. The on-facility incinerator will be removed upon completion of the project.

Asbestos-containing material will be containerized and transported to an on- or off-facility disposal facility that meets the technical standards for asbestos disposal. The quantity of material to be disposed of and the availability of disposal facilities will determine whether on- or off-facility disposal of the asbestos-containing material will be used.

The cost of the remediation will depend upon the type of incinerator that will be used. The estimated cost of asbestos disposal is approximately $319,500 based on off-facility disposal. The cost of stabilization is approximately $250 per cubic yard of material. The cost of stabilization is not included in the total estimated costs, as the quantity of material to be stabilized is not known at this time. The remediation costs employing three available types of on-facility incinerators are presented below.

Rotary Kiln Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 8,782,800
Estimated Total Present Worth Cost	$ 10,672,400
Approximate Duration	9-12 months
Approximate Waiting Period	0 months

Infrared Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 14,846,500
Estimated Total Present Worth Cost	$ 16,736,100
Approximate Duration	9-12 months
Approximate Waiting Period	0 months

Fluidized Bed Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 12,767,500
Estimated Total Present Worth Cost	$ 14,657,100
Approximate Duration	9-12 months
Approximate Waiting Period	0 months

7.3 Alternative 3 - Off-Facility Thermal Treatment and Off-Facility Disposal of Treated Soil/On- or Off-Facility Disposal of Asbestos-Containing Material.

In this alternative, soil will be separated from the asbestos containing material. Soil will be transported to an off-facility thermal treatment unit for incineration. Treated material will be analyzed to ensure compliance with the treatment standards, and disposed at a permitted landfill that will accept the material. Stabilization of incinerator bottom ash and fly ash will be performed, if required, prior to disposal to ensure compliance with treatment standards. Treated soil and stabilized material will be disposed at an off-facility landfill.

Asbestos-containing material will be containerized and transported to a disposal facility that meets the technical standards for asbestos disposal.

Estimated Construction Cost	$ 8,229,700
Estimated Operation and Maintenance Cost	$ 59,909,850
Estimated Total Present Worth Cost	$ 68,139,550
Approximate Duration	9-12 months
Approximate Waiting Period	36-60 months

8.0 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

8.1 Threshold Criteria

Overall Protection of Human Health and the Environment

Alternative 1 does not provide protection of human health or the environment. Risks to the community, workers and the environment will continue to remain. Alternative 1 does not meet the threshold criteria, is not protective and does not meet ARARs. Alternatives 2 and 3 provide protection to the community and the workers by reducing the risks posed during remedial actions. Once the remedial actions are completed, there is expected to be no unacceptable residual risk to human health or the environment.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Alternative 1 will not comply with any of the ARARs. Alternatives 2 and 3 will be conducted in accordance with all applicable, relevant, and appropriate requirements and regulations. The major laws include:

- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA)
- Clean Air Act (CAA)
- Alabama Department of Environmental Management (ADEM) Hazardous Waste Regulations

- Department of Transport (DOT) regulations
- Endangered Species Act (ESA)
- Occupational Safety and Health Act (OSHA)

8.2 Primary Balancing Criteria

Long-Term Effectiveness and Permanence

A high residual risk is expected in Alternative 1 as no remedial actions are involved. Existing storage and access controls are not reliable or adequate. In Alternatives 2 and 3, the magnitude of residual risks will be removed as all of the contaminants are treated and disposed in accordance with applicable regulations. The treatment technologies and disposal options used are reliable and adequate for Alternative 2. There is no waiting period for on-facility incineration. For Alternative 3, there is a 3 to 5 year waiting period for capacity in an off-facility incinerator. Alternative 2 is preferred as the remedial actions can be completed much earlier than in Alternative 3, thereby removing the residual risks 3 to 5 years earlier than in Alternative 3.

Reduction of Toxicity, Mobility and Volume of Contaminants

Alternative 1 does not address the principal threats of the Stockpile Soils nor does it satisfy the statutory preferences for treatment. Toxicity, mobility, and volume of contaminants are expected to remain at their present values for extended periods of time. Alternatives 2 and 3 address the principal threats of the Stockpile Soils and satisfy the statutory preference for treatment. All of the contaminants of concern are treated and disposed in accordance with applicable regulations thereby reducing or eliminating the toxicity, mobility, and volume of the contaminants.

Short-Term Effectiveness

In Alternative 1, the residual risks to the community, workers and the environment will continue to remain as no remedial actions will be conducted. In Alternatives 2 and 3, the community, workers, and the environment will be protected during remedial actions by taking appropriate protective measures. Alternative 2 is preferred as there is no short-term risk associated with transporting contaminated soil off-facility on public roads. Alternative 3 will involve transporting contaminated soil from AAAP to an off-facility incinerator.

Implementability

All three alternatives can be implemented. However, Alternative 1 is eliminated as it does not satisfy the threshold criteria of Protection of Human Health and the Environment and compliance with ARARs. Alternative 2 is preferred to Alternative 3 due to (1) Ease of implementation as there is no off-facility transport of contaminated soil; and (2) There is no waiting period for on-facility incineration. Off-facility incineration has a 3 to 5 year waiting period.

Cost

Alternative 1 will not involve any cost, however, it does not satisfy the threshold criteria of Protection of Human Health and the Environment and compliance with ARARs. For Alternative 2, the total cost of remedial actions employing the three types of on-facility incinerators are: (1) Rotary Kiln Incinerator - $10,672,400; (2) Infrared Incinerator - $16,736,100 and; (3) Fluidized Bed Incinerator $14,657,100. For Alternative 3, the total cost of remedial action is $68,139,550. The total cost for remedial action in Alternative 2 employing one of the three types of on-facility incinerators ranges between 15 - 25% of the cost associated with remedial action in Alternative 3. Therefore, Alternative 2 is strongly preferred to Alternative 3 on the basis of cost.

8.3 Modifying Criteria

ADEM/EPA Acceptance

EPA and ADEM have concurred with the choice of Alternative 2.

Community Acceptance

Public comments on the selected remedial action were minimal. The majority of the comments requested additional information about the safety of the remedial action, and the status and the results of the environmental studies ongoing at the remainder of AAAP. These concerns appear to have been addressed. The only opposition was to spending funds to mitigate soil stockpiles that appeared to pose little threat to human health or the environment. The public appears to have no concern about the implementation of the remedy other than its cost.

9.0 SELECTED REMEDY

The selected alternative (Alternative 2) calls for implementation of an early remedial action to protect human health and the environment from the Stockpile Soils at AAAP. This action is intended to be the final action for only the contaminated soils in the Stockpile Soils Area Operable Unit. A Final Remedy for the remaining portions of the AAAP facility will be proposed following the completion of the other Remedial Investigations and Feasibility Studies currently in progress.

Based upon the CERCLA requirements, the detailed analysis of the alternatives, and public comments, AAAP, in consultation with EPA and ADEM has determined that Alternative 2 is the most appropriate remedy for the Stockpile Soils Area Operable Unit.

The complete remedy for the Stockpile Soils Area Operable Unit for source control includes;

- On-Facility Thermal Treatment of Stockpile Soils

- On-Facility Disposal of Treated Soil

- On- or Off-Facility Disposal of Asbestos-Containing Material

The cost of the remediation will depend upon the type of incinerator that will be used for the treatment of Stockpile Soils. The remediation costs employing three types of on-facility incinerators are presented below.

Rotary Kiln Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 8,782,800
Estimated Total Present Worth Cost	$ 10,672,400

Infrared Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 14,846,500
Estimated Total Present Worth Cost	$ 16,736,100

Fluidized Bed Incinerator

Estimated Construction Cost	$ 1,889,600
Estimated Operation and Maintenance Cost	$ 12,767,500
Estimated Total Present Worth Cost	$ 14,657,100

9.1 Remediation Goals

The selected remedy will meet the following treatment standards for the contaminants of concern in the Stockpile Soils:

- Explosives - Deactivation of explosives, as required by RCRA. A treatment standard of 1 microgram per gram (μg/g) of 2,4,6-TNT will be used to demonstrate deactivation;

- Lead - Concentration less than 5 mg/l in the TCLP extract, as required by RCRA;

- Asbestos Containing Material - Containerize appropriately and dispose at a facility that meets the technical standards for asbestos disposal, as required by TSCA.

10.0 STATUTORY DETERMINATIONS

The selected remedy satisfies the requirements under Section 121 of CERCLA to:

- Protect human health and the environment.

- Comply with ARARs.
- Be cost-effective.
- Utilize permanent solutions and alternative treatment technologies or resource. recovery technologies to the maximum extent practicable.
- Satisfy the preference for treatment as a principal element.

10.1 Protection of Human Health and the Environment

The selected remedy protects human health and the environment through treatment and disposal of soils in the Stockpile Soils Area Operable Unit.

During the remediation activities, adequate protection will be provided to the community by reducing the short-term risks posed by air emissions from the thermal treatment unit, and by the dust and asbestos fibers potentially generated during material handling activities. In addition, workers will be provided with personal protection equipment during all phases of remediation activities.

Long-term protection to the human health and environment will be provided by leaving no residual risk from the contaminants and by reducing or eliminating the impact on the environment.

Controls employed in this alternative are adequate and reliable. There are no unacceptable short-term or long-term impacts on human health or the environment in this alternative.

10.2 Compliance with Applicable or Relevant and Appropriate Requirements

The selected remedy complies with all Applicable or Relevant and Appropriate Requirements. All ARARs will be satisfied in this alternative. All of the contaminants of concern at the Stockpiled Soil, i.e., explosives, lead and asbestos are expected to meet required regulatory treatment/disposal standards prior to disposal.

10.3 Cost-Effectiveness

The selected remedy for the Stockpile Soils Area Operable Unit has been determined to provide overall effectiveness proportionate to its costs. While providing overall protection of public health and the environment, this alternative is substantially less expensive than the other remedial alternative that provides the same results. The estimated total present worth costs for the selected remedy (based on the type of on-facility incinerator) are as follows:

- Rotary kiln incineration - $10,672,400

- Infrared incineration - $16,736,100

- Fluidized bed incineration - $14,657,100

10.4 Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

The selected remedy meets the statutory requirements to utilize permanent solutions and treatment technologies to the maximum extent practicable to achieve remediation goals. The rationale for selecting this remedy is based on the comparative analysis of the evaluation criteria. The criteria used in selecting the remedy include:

- Long-Term Effectiveness and Permanence: No waiting period is involved for implementation of the selected remedy.

- Short-Term Effectiveness: Selected remedy does not involve off-facility transportation of contaminated soils, thereby, eliminating the risks due to spillage and dust emissions. The community, workers, and the environment will be protected during remedial actions by implementing appropriate protective measures.

- Implementability: Ease of implementation - no waiting period, and no off-facility transportation of contaminated soils.

- Cost: The cost of the selected remedy is substantially less expensive, an estimated 15-25% less than the cost of the other remedial alternative.

11.0 DOCUMENTATION OF SIGNIFICANT CHANGES

No significant changes to the Proposed Plan were made.

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

1.0 OVERVIEW

The public reaction to the selected remedy is mainly acceptance, though a small number of commenters questioned the need for the remedial action and expenditure of the funds. This appears to be due to the fact that the contamination from this operable unit has been contained for the last several years and has caused no known exposure. More public concern has been for the possibility of off-post groundwater contamination. Studies have not discovered evidence of such contamination. However, this information has not reached all of the public, although remedial investigation documents have been published in the local libraries and a public meeting was held in August 1991 to discuss the AAAP site in general. Responses to the comments received appear to have addressed public concerns, and continued community relations activities will be held to increase the public awareness of the conclusions at AAAP.

2.0 BACKGROUND ON COMMUNITY INVOLVEMENT

General community interest in the AAAP site has historically not been great. Since the site was declared excess to Army needs in 1973, more interest has come from private groups or industry hoping to develop portions of the site. The southern part of the site (i.e., the former nitrocellulose manufacturing area) was sold to the Kimberly Clark Corporation in the late 1970's and a paper products plant was constructed. In the mid-1980's, in response to interest in purchasing the eastern part of AAAP, this section was remediated by the Army and the contaminated soil was stockpiled in the western part of AAAP, creating the Soil Stockpile Operable Unit.

Studies to find the existence and extent of contamination in the western part of AAAP (i.e., former main industrial area) have been published in the local libraries. Almost no public comments have been received. Following a period of minor community relations activities, a public meeting was held in August 1991 to discuss the conclusions of the past years' studies for the entire site. Despite notices being placed in 4 local newspapers, only 2 persons from the news media attended the meeting.

Notice of the public comment period and meeting for the Soil Stockpile Operable Unit was placed in 4 local newspapers on November 19, 1991 and the comment period extended from November 21 through December 23, 1991. The public meeting was held at the Central Alabama Community College located about 5 miles from the AAAP site. Fourteen persons from the public and media attended the meeting. The questions asked were mainly intended to get more detailed information on the proposed remedy, also to determine the contamination hazards of the site in general, and to a small degree to question why this action was being taken now if there is no major concern with the stockpile and other parts of AAAP may require remediation in the future.

3.0 SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSE

At the public meeting held on 5 December 1991, the public was given the opportunity to comment and ask questions on the Proposed Plan. The following is a summary of the questions/comments raised by the public, Army/regulators' responses given at the meeting, and supplemental answers, where applicable:

Q1. Could there be nitrates in the water in the Childersburg area that are contributing to the high cancer rate in the community?

Answer at the Meeting: (ADEM) TNT and degradation products do not volatilize. Nitrates have been found in monitoring wells at the base but there is not much groundwater in the area. Contamination has not left the site. In 1980, the wells were tested and there was 10,000 parts per million (ppm) of something (maybe TNT) in well P10. In 1982 or 1983 the wells were tested again and there was 4,000 ppm in P10.

Buildings were torn down in 1978. The high levels in the monitoring wells in 1980 may have been from the 1978 activities at the site.

Supplemental Answer: The P10 well located on-post was sampled in 1982. The results indicated that the groundwater was contaminated with TNT with a concentration of 15,000 ppm. No evidence of off-post contamination by chemicals produced or found on AAAP has been found in the studies conducted.

Q2. Has testing been limited to AAAP boundaries?

Answer at the Meeting: (ADEM) Monitoring wells are scattered all the way to the Coosa River. Work activities were conducted in Area A and studies were conducted in Area B. The site has been tested to the Coosa River.

Supplemental Answer: Residential drinking water wells at 6 locations around AAAP, including those known to be closest to AAAP, have been tested and no contamination has been found.

Q3. Are portions of the stockpiles considered reactive contaminated waste?

Answer at the Meeting: (WSI) Overall, the explosives concentrations in the soil are low. There are chunks of material that are potentially high in explosives concentrations. Samples of the material show that concentrations are low in the chunks but the potential for high explosives concentration still exists.

Supplemental Answer: The soil in general is not considered a reactive hazardous waste because the explosives concentrations found were very low (less than 12 parts per million). Soil with these concentrations would not be considered reactive by the Army.

However, because a small number of small pieces of material that appeared to look like explosives was found in the soils, there is the possibility that such material exists at a low abundance throughout the stockpile. Such pieces of explosives would be considered a reactive hazardous waste, and they cannot easily and completely be removed. Therefore, the thermal treatment remedial action will satisfy EPA-developed operating criteria as if the entire soil stockpile being remediated is a reactive hazardous waste.

Q4. What will AAAP do with the chunks that are found?

Answer at the Meeting: (WSI) WSI will stage the material for disposal by AAAP.

(USATHAMA) Small quantities of chunks are expected, if any. The chunks may be open-burned on a concrete pad at the site if allowed by the regulators. The pad will be cleaned after burning.

Q5. What does the Army consider a small amount?

Answer at the Meeting: (USATHAMA) During a site visit, USATHAMA representatives saw 1 piece (chunk) of material, but suspect that there are more. A small amount would be 1-10 pounds. 100 pounds would be a lot.

Q6. Weren't private wells in the Kymulga area tested?

Answer at the Meeting: (ADEM) Yes, no residences had contamination.

Q7. Was TNT the contaminant found in the P10 well (10,000 ppm)?

Answer at the Meeting: (ADEM) It isn't known at this time.

Supplemental Answer: See supplemental answer for Question 1.

Q8. What type of incinerator will be used and how about smoke? Will it have concrete vats to catch what comes out of the incinerator?

Answer at the Meeting: (WSI) The rotary kiln and secondary combustion chamber are used to volatilize and thermally destroy contaminants from the soil. The gas conditioning system is used to cool and clean the exhaust gas. The gas that exits the stack is water and carbon dioxide. A continuous monitoring system of the stack gas monitors the gas to be sure it is within regulatory limits. There is an automatic waste feed shut-off if the stack gases are not within regulatory limits. The incinerator a not a net generator of water. There are no chlorides in the stockpiled material. A scrubber will not be used. The gas treatment for this system will be a baghouse.

Supplemental Answer: The incinerator to be used will be a rotary kiln type. In this type,

a long cylindrical heated kiln is turned slowly while in the horizontal position. Soil is introduced at one end, and works its way through the rotary kiln chamber, where the explosives are volatilized. The kiln exhaust gas subsequently passes through the secondary combustion chamber where thermal destruction of volatilized explosives takes place. The soil discharges the kiln, and is tested to confirm that explosives are below hazardous levels, and is then placed in a backfill area on the AAAP site. After the gas is cooled by a water quench, it passes through a baghouse to remove solid particles and then exits through a stack. Any visible smoke in the stack is steam from the water quench. The stack gas is monitored to be sure it meets the maximum allowable levels of particulates, carbon dioxide and carbon monoxide, and minimum required levels of oxygen.

Q9. What temperature is necessary to destroy the contaminants?

Answer at the Meeting: (WSI) RCRA requires 1800°F.

Q10. Will the incinerator be able to get to nothing left?

Answer at the Meeting: (WSI) The soil stream is heated up in the kiln to remove the contaminants and transfer them into the gas stream. The soil is left with very little contaminants and it is tested when it is discharged. The gas stream with the volatilized contaminants is heated further in the secondary combustion chamber. The minimum gas retention time in the secondary combustion chamber is 1 second as required by RCRA. The gases then go into the spray chamber for cooling and the baghouse for particulate removal. The gases exiting the stack will be tested by a stack test program to be sure that the gases meet the regulatory limits for explosives and particulate. The regulations state that at least 99.99% of the contaminants entering the incinerator must be removed in the incinerator. The CEM system will continuously monitor the stack gas to be sure the limits are maintained during operations.

Additional comment to the same question: A community member stated that if the incinerator were to have almost nothing coming out of the stack and it still left a blanket of powder on the ground, the public would be very upset.

(WSI) If a blanket of material was building on the ground, the incinerator would have several other operating parameters out of compliance and would be shut down well before the blanket could form.

Q11. How about water from the incinerator? Will it be contaminated?

Answer at the Meeting: (WSI) Fly ash from the incinerator comes out from several places. The fly ash will be collected in bins and sampled to be sure it meets the regulatory criteria. If it does not pass the criteria for lead, it will require stabilization. The bottom ash is collected separately. It is also sampled to be sure it meets the

treatment criteria. The bottom ash is not expected to be a problem.

Supplemental Answer: The incineration system does not generate any water. The only water collected for treatment during on-site activities are decontamination water collected from the decontamination pad, rainwater collected from the containment structures or concrete sumps, and aqueous laboratory wastes. The water will be treated in the aqueous waste treatment system and tested for explosives. If the water treatment criteria have been met, the treated water will be used to moisten the treated soil and as dust control on the transport roadways and backfill area.

Q12. Does the fly ash get recycled?

Answer at the Meeting: (WSI) The fly ash bins are sampled and tested to be sure the treatment criteria are met. The fly ash will be recycled if the explosives concentration exceeds the treatment level. The fly ash will be stabilized if the lead concentrations exceed the regulatory level.

Q13. Is there any other work ongoing at the site?

Answer at the Meeting: (USATHAMA) If accepted, incineration will be done on-site. Site-wide studies are being conducted for the rest of the site.

Q14. Since everyone agrees that incineration is the way to go, how soon will it happen?

Answer at the Meeting: (USATHAMA) If accepted, USATHAMA is required by law to begin 15 months from the ROD acceptance.

Supplemental Answer: The Army must start the incineration and related activities within 15 months of the acceptance of the Record of Decision.

Q15. Has the ground water been tested against drinking water standards?

Answer at the Meeting: (ADEM) Some later tests were done for other contaminants that are included in the drinking water standards, like chromium.

Q16. Will the results of those tests be published?

Answer at the Meeting: (ADEM) Once the state gets the results and they are approved and finalized, they will be placed in the library.

Q17. Are there additional contaminants in Area B that have not been addressed?

Answer at the Meeting: (US EPA) The topic of discussion tonight is the stockpile area. Other areas on the site are being or have been studied, such as the old manufacturing area, run-off areas (red water/pink water ditches), sewer lines, etc. Steps are being taken toward total cleanup of the installation.

Q18. The costs shown on the Fact Sheet are high and there is considerable work to do. The community thinks the stockpile area presents less harm than exposed areas leaching in to the ground. Should the other areas be addressed first?

Answer at the Meeting: (USATHAMA) Other areas that are being studied may be combined with the present project.

Supplemental Answer: The other areas of the site may require from 1 to 3 years to study and decide on a solution. If there is no exposure to the public, and the cost to clean the sites for unrestricted public use is high, it may be acceptable to the Army and the public to not disturb the sites and to retain the site as the AAAP with minimal activity. The future of the site is still being worked out, but we know there is a problem with the stockpile now, and the budget and contractual process is in place to clean up that site in an year or two. The stockpile site is not very secure in the long term as shown by the tornado event at building TC4 and the need for maintenance of the cover over the soil. A couple of other sites on AAAP are known to have contamination that could be cleaned with the incineration remedy and these will be discussed in the next year. If it is advantageous to incinerate them also, than another proposed plan will be published for public review and another public meeting will be held to discuss increasing the amount of soil we want to clean up.

Q19. Why was the stockpile area the priority of the Army?

Answer at the Meeting: (USATHAMA) The AAAP site was the priority for a while. The Army had a lot of sites that had higher priority and were remediated, for example, Cornhusker Army Ammunition Plant in Nebraska and Louisiana Army Ammunition Plant. The priority is established by the Army. The other areas of AAAP will be addressed.

Supplemental Answer: The stockpile area was not a priority for the work at AAAP; all other studies at AAAP have proceeded regardless of the stockpile. Considering Army contaminated sites, the stockpile was considered a potential remediation site because it was designed as a temporary storage of material removed from the eastern part of AAAP.

Q20. A community member has heard that the idea of building a hazardous waste landfill on-site has been considered. (Comment only, not a question. No response is necessary.)

Supplemental Answer: No hazardous waste landfill is contemplated for AAAP as part of the remediation of the stockpile. No incinerated material is expected to be classified as hazardous waste.

Q21. The local paper stated that the cost for off-site landfilling is $68,000,000. Is this true?

Answer at the Meeting: (WSI) No, the $68 million refers to the off-site incineration and subsequent landfilling. On-site incineration is cheaper since commercial incinerators usually take in small quantities of materials from many customers. They are not accustomed to accepting a large quantity of material just dropped on their doorstep. The off-site incinerators would probably only accept small quantities at a time (truck by truck). If the concentration of explosives goes up, the waste may not be able to go off-site since off-site incinerators don't usually accept explosives.

Q22. What level of worker protection is expected for the project?

Answer at the Meeting: (WSI) Level C worker protection is expected for initial activities in contaminated areas. It is expected that after appropriate sampling and monitoring, and approval, the level of protection will be downgraded to Level D.

Level D protective equipment consists of typical construction site attire, including cotton or chemical resistant coveralls. The difference between typical construction activities and Level D activities on the site is that protective equipment does not usually leave the site, coveralls are laundered or disposed of on-site. Level C protection includes chemical resistant coveralls, boots, safety glasses, hard hat, and respiratory protection.

Q23. What type of asbestos is present on the site?

Answer at the Meeting: (ADEM) Not much asbestos is present; it is mostly roof shingles and there may be some pipe insulation.

(WSI) If the material contains asbestos in concentrations exceeding 1%, it is considered asbestos-containing material. Asbestos has been found in the soil in concentrations less than 1% and chunks of highly concentrated materials are present. The majority of the chunks of asbestos is non-friable.

Q24. If incineration is accepted, how long will it take?

Answer at the Meeting: (WSI) Site preparation, foundations, erection, checkout will require at least 3 months, operation will require about 6 months, and demobilization will require 2 months.

Q25. Does WSI own the incinerator? Is it working now?

Answer at the Meeting: (WSI) Yes, WSI does own the incinerator. It is a new incinerator so it is currently being manufactured. WSI owns another incinerator which has completed projects on two sites in Illinois and is currently working on a third project.

Q26. What area of Illinois has the incinerator operated?

Answer at the Meeting: (WSI) The first site was PCB-contaminated soil in Beardstown, Illinois. The second site was lagoon sludge and soil contaminated with organic and inorganic compounds in Chicago, Illinois.

Q27. Is there a brand name of the incinerator? Is it custom-built?

Answer at the Meeting: (WSI) The incinerator is custom-designed and built to WSI specifications. One contractor is supplying most of the equipment up to the baghouse, another supplier is supplying the baghouse.

Q28. What is the hourly rate of production?

Answer at the Meeting: (WSI) The rate of production is based on the material handling characteristics, density, and the water content of the soil. It is expected that operation will be conducted at 20 tons per hour. The expected range of operation is 15 to 25 tons per hour. The expected operating efficiency is 65%. The incinerator will operate 24 hours per day, 7 days per week.

Q29. Does WSI expect to rerun material?

Answer at the Meeting: (WSI) No, based on past experience, very little will be recycled. At the Chicago site, about 1-2% of the material required retreating.

The public took the opportunity to call Army representatives following December 5,1991 public meeting. The following is a summary of the public questions and Army responses (by Joseph Ricci and Catherine Stalcup of the U.S. Army Toxic and Hazardous Materials Agency) during December 17-19, 1991.

Q1. What is the cost of burning and what will the impact be?

Answer: For stockpile there is no impact, the incineration would not be releasing anything to the air. Joe Ricci then read the figures listed in the Proposed Plan of the cost to do each alternative.

Q2. I have a concern with groundwater, and the effect on it.

Answer: The groundwater has been tested. There were studies conducted in April 1991, and the wells tested were clean.

Q3. My concern was because the terrain leads to the rivers. If no contamination can go through then why go through the process?

Answer: You can't just leave it sit there. Its already been dug up and there were explosives in the soil. There are two areas. Area A, which had explosives, and Area B, which has more. The contaminants in the groundwater are not getting off post, but it does need to be cleaned up.

Q4. Have you tested river water downstream?

Answer: Yes, studies have been done on the Coosa River for clean water.

Q5. So much money is involved, I worry about the economy and unnecessary spending.

Answer: I understand, but in some cases we do need cleanup. Its been in the soil for a long time.

Q6. Since it has been there for a long time, with no effect on the groundwater, why clean it up now? Does the gunpowder have a time release, after about 40 yrs? Will it release substances that it hasn't already?

Answer: Compounds break down in time. I don't think time release would be a problem.

Q7. I feel like we go off the deep end sometimes.

Answer: We try very hard to have good justification for Remediation.

Q8. Do you know what will be done with Area B?

Answer: A Feasibility Study is being conducted to assess necessary remediation for Area B.

Q9. What will the total cost of incineration cleanup be?

Answer: I don't know. For stockpile incineration on post is $10.5 million to $16.7 million. Off post facilities for incineration would be about $70 million. Using the rotary kiln incinerator would be $10.5 million.

Q10. I can not see after 40 years that now we have to get rid of it. If it was a health hazard it has affected the wildlife.

Answer: We wanted to release Area A to be sold, and by law it must be cleaned up to prevent problems in the future.

Q11. If you don't know there is a problem, why spend money? I am against Government handouts and spending. I think the public should speak out.

Answer: The comment period is open now to submit any comments. (Gave Joe Ricci's address). When writing, address your comments to the Proposed Plan for Stockpile Soils.

Ms. Stalcup asked if he would like to be placed on the mailing list for any handout materials. He said he would, so his address was taken. He was also given our phone number and was told he could call if he had any questions in the future.

4.0 REMAINING CONCERNS

Remaining concerns appear to be with existence of health risks off-post and the need to know more about the operation of the thermal treatment remedial action selected. The first concern has been partially addressed. Phone calls were made to some commenters to provide additional information about the results of the remedial investigation. The discussions of these phone calls are presented in the preceding section. Additional information promised to the commenters will be provided by mail. To provide more information about the thermal treatment remedial action, copies of the remedial design documents will be placed in the information repositories.

ATTACHMENT 1

COMMUNITY RELATIONS ACTIVITIES AT ALABAMA ARMY AMMUNITION PLANT

COMMUNITY RELATIONS ACTIVITIES AT ALABAMA ARMY AMMUNITION PLANT

To date, communication with local community regarding past and ongoing environmental studies at AAAP has consisted of:

1. A public meeting was held in April 1985 to announce plans to conduct a Remedial Investigation/Feasibility Study at AAAP.

2. A public meeting was held in September 1986 in Childersburg, Alabama, to brief the public on a (a) the findings of the completed Remedial Investigation; (b) the initiation of the Area A decontamination and/or cleanup effort; and (c) the status of the ongoing feasibility study.

3. Mr. Ronnie Wynn, AAAP caretaker, spoke to the Sylacauga Rotary Club in July 1990 on the status of AAAP. Mr. Wynn has also offered site tours to interested citizens in the AAAP community.

4. Community interviews were conducted with community leaders and residents adjacent to AAAP (July 23-26, 1990).

5. A public meeting was held at the Central Alabama Community College in August 1991 to discuss the results of the site-wide remedial investigation.

6. A public comment period on the Proposed Plan for the Soil Stockpile Operable Unit was held from November 21, 1991 to December 23, 1991.

7. A public meeting was held at the Central Alabama Community College on December 5, 1991 to discuss the Proposed Plan for the Stockpile Soils Area Operable Unit.

Other communication techniques the Army has used to provide the public and media with updated information on AAAP include, producing fact sheets, mailing out news releases and letters of invitation, providing site tours, and storing AAAP documents in repositories for public review.

ATTACHED

* **EPA letter of concurence**

* **ADEM letter of concurence**

* **Community Relations Items**

  - Public Meeting Agenda

  - Hand-outs, Description of Base Realignment and Closure Program

  - **Proposed Plan**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DEC 31 1991

4WD-RCRAFFB

OVERNIGHT MAIL

Lewis D. Walker, Deputy Assistant Secretary
of the Army for Environment, Safety and
Occupation Health
Room 2E557
The Pentagon
Washington, D.C. 20310-0110

Re: **Early Remedial Action Record of Decision for the Stockpile Soils Area Operable Unit at the Alabama Army Ammunition NPL Site, Alabama**

Dear Mr. Walker:

The U.S. Environmental Protection Agency (EPA) Region IV has reviewed the above referenced decision document and concurs with the findings and the proposed early remedial actions.

It is understood that this decision is for an early remedial action for only the stockpiled soils and that a final remedial action decision will be submitted following the completion of the current remedial investigation and feasibility studies associated with Area-A and Area-B at the NPL Site.

Sincerely yours,

Patrick M. Tobin
Deputy Regional Administrator

cc: Jim Warr, Assistant Deputy Director, ADEM
Daniel E. Cooper, Chief Special Projects, ADEM
Commander's Representative, Volunteer Army Ammunition Plant, ATTN: Mr. James Fry, P.O. Box 22601, Chattanooga, Tennessee 37422-2607
Commander, U.S. Army Toxic & Hazardous Materials Agency, ATTN: CETHA-BC (Mr. Joseph Ricci), Aberdeen Proving Ground, MD 21010-5401

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ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Guy Hunt
Governor

Leigh Pegues, Director

1751 Cong. W. L.
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Montgomery, AL
36130
205/271-7700

Field Offices:

Unit 905, Building 8
225 Oxmoor Circle
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35209
205/942-6168

P.O. Box 953
Decatur, AL
35602
205/353-1713

2204 Perimeter Road
Mobile, AL
36615
205/479-2336

December 30, 1991

Lewis D Walker, Deputy Assistant Secretary
Army Environment, Safety and
Occupational Health
Room 2E557
The Pentagon
Washington, D.C. 20310-0110

Re: Early Remedial Action Record of Decision for the Stockpile Soils Area Operable Unit at the Alabama Army Ammunition NPL Site, Childersburg, Alabama

Dear Mr. Walker:

The Alabama Department of Environmental Management has reviewed the above document in conjunction with negotiations among the U.S. Environmental Protection Agency, U.S.Army Toxic and Hazardous Materials Agency and ADEM, and concurs that incineration of the Stockpile Soils appears to be an environmentally sound alternative for remediation.

We would call to your attention that this Department's position remains that appropriate pre-construction Permits for the incineration facilities are required. Given that the incinerator is a source of air emissions, an Air Permit should be obtained before construction may begin. Should it be determined that the facility will remediate material defined as a hazardous waste under Division 14 of the Department's Administrative code, a Part B Permit application should also be submitted to ADEM.

It is understood that this decision document is applicable only to the Stockpile Soils Operable Unit and that a final remedial action decision will be submitted following the completion of the current Remedial Investigation/Feasibility Study for Operable Units Area-A and Area-B at the Alabama Army Ammunition Plant.

Sincerely,

Leigh Pegues

Leigh Pegues, Director
Alabama Department of Environmental Management

cc: Patrick M. Tobin, Deputy Regional Administrator, USEPA
Region IV, 345 Courtland St N.E. Atlanta, GA 30365
Commander, USATHMA, ATTN:CETHA-BC (Joseph Ricci)
Aberdeen Proving Ground, MD 21010-5401

AGENDA

PUBLIC MEETING

ALABAMA ARMY AMMUNITION PLANT

December 5, 1991

7 p.m.

Welcome and Administrative Notes (Introduction of Panel Members)	Ms. Catherine Stalcup Public Affairs Representative U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)
Alabama Department of Environmental Management (ADEM)	Mr. Joseph Downey Special Projects
U.S. Environmental Protection Agency (EPA) Region IV	Mr. James Barksdale Remedial Project Manager
Introduction of Stockpile Soils Area Operable Unit	Mr. Joseph Ricci Project Officer U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)
Discussion of Proposed Plan for Stockpile Soils Area Operable Unit	Mr. Tim Forden Vice President, Operations Weston Services, Inc.
QUESTION AND ANSWER PERIOD	Ms. Catherine Stalcup Moderator
CLOSING REMARKS	

PRESENTATION FOR
PUBLIC MEETING
SOIL STOCKPILE AREA
ALABAMA ARMY AMMUNITION PLANT

GENERAL OVERVIEW OF PROCESS

SITE BACKGROUND

NATURE AND EXTEND OF CONTAMINATION

SUMMARY OF SITE RISKS

CLASSIFICATION OF SOILS

FINDINGS OF FEASIBILITY STUDY (FS)

- REMEDIATION GOAL
- EVALUATION OF ALTERNATIVES
- IDENTIFICATION OF ALTERNATIVES
- SUMMARY OF FINDINGS

DETAILED DESCRIPTION OF PREFERRED ALTERNATIVE

SUMMARY OF PROPOSED PLAN

US Army Corps of Engineers

USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

Aberdeen Proving Ground, Maryland 21010-5401

BASE REALIGNMENT AND CLOSURE PROGRAM

ALABAMA ARMY AMMUNITION PLANT

Alabama Army Ammunition Plant (AAAP), formerly the Alabama Ordnance Works, is located in Childersburg, AL, approximately 40 miles southeast of Birmingham. The plant was established in 1941 on 15,233 acres of land located near the junction of the Talladega Creek and the Coosa River. It was government-owned contractor operated (GOCO).

The plant was operated during World War II to produce nitrocellulose, smokeless powder, high explosives and industrial chemicals. In August 1945, operations were terminated at AAAP and the plant converted to standby status.

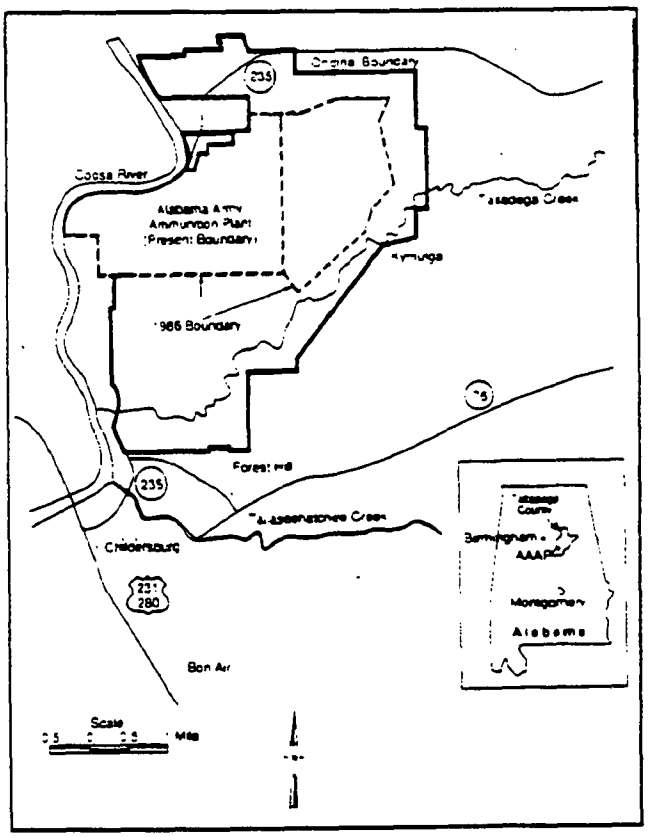
Immediately following termination of operations, the operating contractor proceeded to decontaminate machinery, equipment, buildings, and ground areas during a five to six month period ending January 1946. After completing the decontamination and a complete physical inventory, the government released the constructing and operating contractor, E.I. DuPont de Nemours and Co., in a final settlement in September 1946.

During the period from April 1955 through October 1957, Associated Contractors and the Rust Engineering Co. under contract rehabilitated several explosives production lines to incorporate the latest proven production developments and techniques. Seventy-five percent of the rehabilitation had taken place before work was stopped due to lack of funds. The plant was maintained in various stages of standby status until the early 1970s.

In 1973, the Department of the Army declared AAAP excess to its needs. In the same year, the General Services Administration (GSA) declined to accept 1,620 acres of the former manufacturing area because the area could not be certified as free from contamination.

In 1977, a 1,354-acre parcel was sold to Kimberly-Clark Corporation, a newsprint, pulp and forest products company. Contained within the parcel were the Nitrocellulose and Smokeless Powder Manufacturing Areas. In order to allow the government to remove equipment and to decontaminate these manufacturing facilities, a 272-acre area was leased back to the government until August 1982. This area is referred to as the Leaseback Area.

In 1978, a records search concluded that specific areas of AAAP were potentially contaminated by explosive materials and lead compounds. This led to a 1979-1981 Exploratory Survey, which indicated that explosives-related contaminants and lead were present in certain areas above applicable criteria.



AAAP ENVIRONMENTAL STUDIES

During the exploratory survey, twenty-one specific study areas were sampled and analyzed for possible contamination. Survey results indicated that explosives-related contaminants and lead were present in certain areas above applicable criteria. The majority of the contamination was found in the Industrial Area, where soils, sewers, sediments, and a portion of the water table aquifer were found to be contaminated. As a result, the Army initiated additional studies to determine the extent and exact location of contamination.

In 1982, the Leaseback Area was decontaminated and returned to Kimberly Clark. Decontamination consisted of asbestos removal and decontamination of buildings, sumps, sewers, and contaminated soils.

In 1982 to 1983, a confirmatory survey was initiated, to verify and quantify the extent of contamination identified in the exploratory survey. The confirmatory survey determined that though regions of soil, sediment and surface water were contaminated with nitroaromatic residues (TNT, DNT, Tetryl) and lead, no migration was expected beyond the boundary by subsurface and surface water.

In October 1984, AAAP was proposed for the U.S. Environmental Protection Agency's (EPA) National Priorities List. In 1985, USATHAMA began additional studies, culminating in a Remedial Investigation/Feasibility Study (RI/FS). The RI determines the extent and nature of contamination at a site; the FS evaluates the information from the RI to determine the alternatives available to clean up the site. The RI/FS documentation was coordinated with the state of Alabama and EPA Region IV.

For the RI/FS, AAAP was divided into two major regions: Area A and Area B (see map). Area A consists of the eastern portion of the site, which includes: the Magazine Area, the Old Burning Ground, the Small Arms Ballistics Range, the Cannon Range, the Old Well, and a portion of the Propellant Shipping Area.

Area B consists of the western portion of the site, which includes: the Sanitary Landfill and Lead Facility, Manhattan Project Area, Red Water Storage Basin, Southern TNT Manufacturing Area, Northern TNT Manufacturing Area, Acid/Organic Manufacturing Area, Aniline Sludge Basin, Tetryl Manufacturing Area, Flashing Ground, the majority of the Propellant Shipping Area, Blending Tower Area, Lead Remelt Facility, Rifle Powder Finishing Area and the Demolition Landfill.

The RI confirmed that soils in Area A were contaminated with nitroaromatic (non-reactive) contamination, asbestos and lead. In addition, the RI confirmed the following forms of contamination at Area B, which exist in varying degrees in the soil, sediment, surface water and ground water: explosive residue (reactive) contamination, nitroaromatic (non-reactive) contamination, asbestos and lead.

The RI for Areas A and B was completed in 1986.

Cleanup of Area A's contaminated soil (removing it from Area A to temporary storage structures in Area B) began in August 1986 and was completed in December 1987.

In July 1987, AAAP was placed on EPA's National Priorities List (NPL), a list of civilian and federal sites ranked according to the risks they pose to human health and the environment.

At the request of EPA Region IV, additional RI/FS work was initiated at Area B in September 1988 and was completed in 1990. The Supplemental RI report for Area B, finalized in April 1991, confirmed the original RI information -- that certain portions of Area B contained soil and groundwater contamination. The risk related to this contamination is currently being assessed and a draft report, the Risk Assessment, was submitted for regulatory review in October 1991. A draft FS will be issued upon finalization of the Risk Assessment.

In December 1988, AAAP was identified for closure in the Report of the Defense Secretary's Commission on Base Realignment and Closure.

In December 1989, a Federal Facility Agreement (FFA) was signed by EPA Region IV, the Army and the Alabama Department of Environmental Management (ADEM) specifying the process and schedule to complete the remedial actions. Following a public review period, the agreement became effective in March 1990.

In July 1990, onsite sampling was conducted on the underground sewer lines at Area B as part of a separate RI/FS effort initiated by the U.S. Army Engineer Division, Huntsville. The RI and FS reports for this study were finalized in September 1991. The RI report found that the sewer lines contained explosive residue and the soil surrounding the lines was also contaminated with explosives. The remediation of the sewer lines and surrounding soil will be included in the Area B remediation schedule. (A remediation schedule will be determined at the time a Record of Decision is signed).

Also in 1990, the EPA indicated that additional investigations needed to be conducted at Area A to ensure that no residual contamination remained. Area A w conveyed to private buyers in August of that year, after a May auction, with the provision that additional investigations will be performed by the Army. A task to perform these investigations was awarded in June 1991. Although the Army believes all contamination was removed in 1986, should any residual contamination be found, it will be removed. Onsite work commenced in July 1991 and was completed in August 1991. The contaminated soil removed from Area A in 1986, was stored in a stockpile in Area B until an appropriate remedial technology could be selected (it is referred to as the Stockpile Soils). In 1991, the Army, EPA and ADEM agreed to remediate, or clean up, this soil as a separate task, or Operable Unit, within the overall remedial plan for AAAP.

In October 1991, the Army issued the Final Feasibility for the Stockpile Soils Area Operable Unit. In November 1991, the Proposed Plan for the Stockpile Soils Area Operable Unit was finalized. The public comment period for the Proposed Plan began in November 1991. In December 1991, as part of the Army's public participation program, the Army held a public meeting to discuss the Alternatives listed in the Proposed Plan.

Throughout the entire environmental studies process, the Army has coordinated with all appropriate state and federal agencies, which include ADEM and the EPA.

PUBLIC INVOLVEMENT

This fact sheet is part of the Army's program to keep members of the community surrounding AAAP and federal and state officials informed of activities involved in the investigation of the facility. Throughout the investigation, the Army will hold public meetings, and publish additional fact sheets and news releases.

To keep the public informed and updated, the Army has established information repositories, which offer fact sheets, news releases, the Public Involvement and Response Plan, and other pertinent documents, at four locations:

U.S. Environmental Protection Agency
Library
345 Courtland Street, NE
Atlanta, GA 30365
(404) 347-4216

Library Service
Alabama Public Information
6030 Monticello Drive
Montgomery, AL 37130
(205) 277-7330

B.B. Comer Memorial Library
and Information Center
310 North Broadway
Sylacauga, AL 35150
(205) 249-0961

Earle A. Rainwater Memorial Library
The Alabama Room
112 9th Avenue, SW
Childersburg, AL 35044
(205) 378-7239

The Army encourages the public to visit the information repositories and attend the public meetings to become more knowledgeable about the ongoing investigations at AAAP. Additional information can be obtained by contacting the U.S. Army Toxic and Hazardous Materials Agency Public Affairs Office, at (301) 671-2556; the Army Armament, Munitions and Chemical Command Public Affairs Office, at (309) 782-5838; and, the Commander's Representative at Volunteer Army Ammunition Plant, at (615) 855-7109.

If you would like to be placed on a mailing list to receive more information about AAAP, please send your mailing address to:

U.S. Army Toxic and Hazardous Materials Agency
Bldg. E4480, ATTN: CETHA-PA
Aberdeen Proving Ground, MD 21010-5401

If you would like to receive information about upcoming public meetings and related material, please complete the form below and mail to:

U.S. Army Toxic and Hazardous Materials Agency
Bldg. E4480, ATTN: CETHA-PA
Aberdeen Proving Ground, MD 21010-5401

REQUEST FORM FOR ADDITIONAL INFORMATION

Name(s): _____

_____

Address: _____

_____

City: _____

State: _____ Zip: _____

Telephone (optional): _____

☐ I am particularly interested in receiving additional information on the following

_____

_____

_____

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PLEASE DETACH AND MAIL

US Army Corps of Engineers

Proposed Plan Summary Fact Sheet

Alabama Army Ammunition Plant
Childersburg, Alabama

December 1991

Alabama Army Ammunition Plant Proposes Cleanup Plan

The Alabama Army Ammunition Plant (AAAP) in consultation with the Alabama Department of Environmental Management (ADEM) and the U.S. Environmental Protection Agency (EPA) recently reviewed options to address the soil stockpile area contamination at AAAP in Childersburg, Alabama.

The Army initiated the Remedial Investigation/Feasibility Study (RI/FS) process in 1985 under the Department of Defense Installation Restoration Program (IRP). An RI is a long-term study to identify the nature and extent of contamination, and the FS evaluates remedial alternatives for site conditions.

For the purposes of the RI/FS, the facility was divided into two general areas: Area A and Area B. The RI was completed in 1986 and concluded that the site is contaminated with explosives, lead, and asbestos in the soil in Area A, and in the soil, sediment, and groundwater in Area B.

As a result of the findings of the RI/FS, cleanup activities at Area A were conducted in 1986 and 1987 which included building decontamination and demolition, and soil excavation and stockpiling. Soil excavated from Area A was stockpiled in Area B in two covered buildings and on a concrete slab which was subsequently covered with a synthetic liner.

In February 1991, another environmental study, known as the Characterization Study, was conducted for the stockpiled soil in Area B. The Study concluded that explosives, lead, and asbestos contamination were present above regulatory limits.

On March 29, 1991, a tornado demolished one of the two buildings that contained stockpiled soil. Soils from the demolished building were relocated on the concrete slab and covered with a synthetic liner.

Storage of the stockpiled soils is a temporary action to contain the contamination while a final remedy is identified, evaluated, and approved. The preferred final remedy is described in the Proposed Plan document.

The Proposed Plan addresses the contaminated stockpiled soils contained in the covered building and on the concrete slab. Currently, approximately 27,000 cubic yards of soil are stockpiled. The remediation goal is the elimination of facility risks by treating the contaminants of concern in accordance with federal and state requirements and regulations. Achieving this goal will result in protection of human health and the environment.

Proposed Plan Alternatives

Three remedial action alternatives have been developed for the treatment of the stockpiled soil at AAAP. A brief description of the remedial alternatives is presented in the following paragraphs.

Alternative 1 -- No Action. The EPA Superfund program requires that the "No Action" alternative be evaluated at every site to establish a baseline for comparison. Under this alternative, no remedial action will be performed. No cost is associated with this alternative.

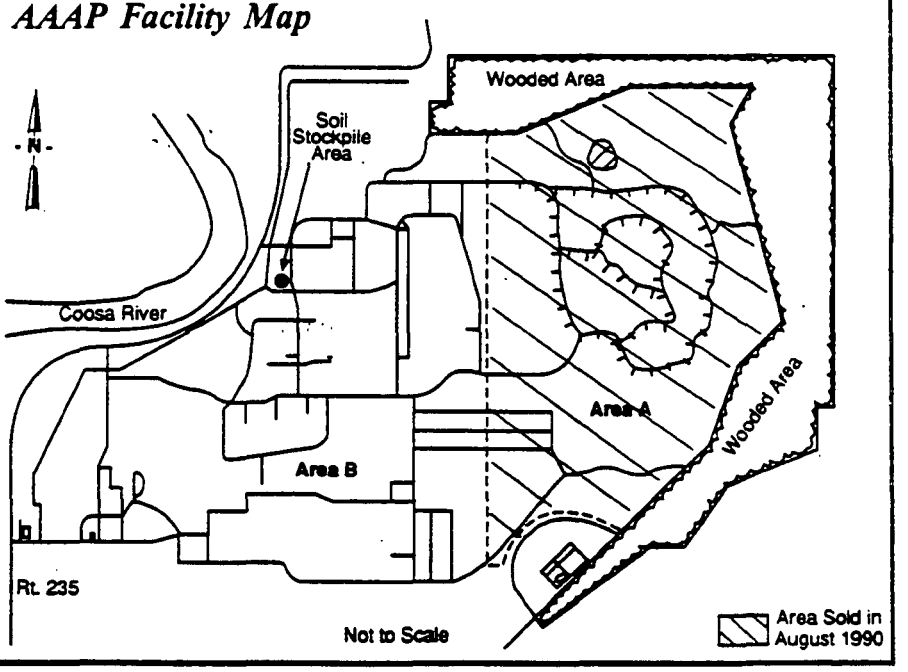
Alternative 2 -- On-Facility Thermal Treatment and On-Facility Disposal of Treated Soil/On- or Off-Facility Disposal of Asbestos-Containing Material. Soil will be separated from the asbestos-containing material and transported to the on-facility thermal treatment unit for incineration. Asbestos-containing material will be transported to an approved disposal facility. The on-facility incinerator will be removed upon completion of the project. Costs for Alternative 2 range from $10 to $16 million, depending on the type of incinerator used.

Alternative 3 -- Off-Facility Thermal Treatment and Off-Facility Disposal of Treated Soil and Asbestos-Containing Material. The contaminated soil will be separated from the asbestos-containing material and transported to an off-facility incinerator. Asbestos-containing material will be transported to an approved disposal facility. Total cost for Alternative 3 is approximately $68 million.

Preferred Alternative

Alternative 2 is proposed as the preferred remedial action. Alternative 2 has been selected based on the following evaluation criteria: protection of human health and the environment; state and federal requirements and regulations; long-term effectiveness; reduction of toxicity, mobility, and volume of contamination; short-term effectiveness; ease of implementation; and cost.

AAAP Facility Map

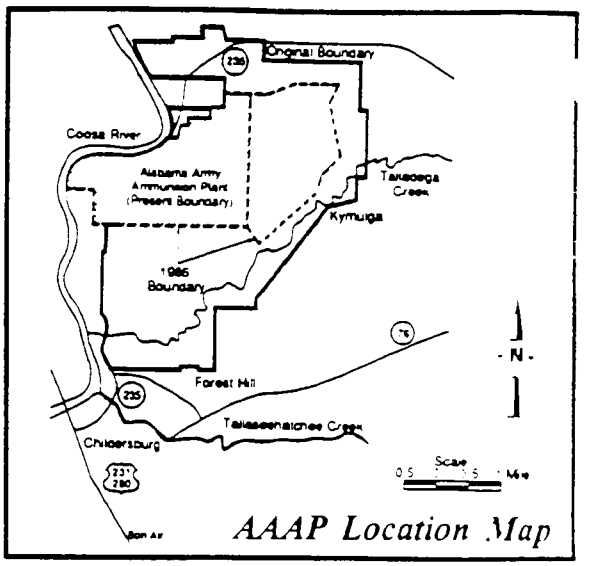


Site Background

AAAP is located in northeastern Alabama in Talledega County, 4 miles from Childersburg and 40 miles southeast of Birmingham, Alabama. The facility encompasses 2,200 acres of land near the junction of Talledega Creek and the Coosa River.

AAAP was built in 1941 and operated during World War II as a government-owned/contractor operated facility. The facility produced explosives and chemicals. Operations at AAAP were terminated in August 1945. The plant was maintained under standby status until 1973 when the Army delcared the facility as excess property. Since that time, several parcels of the original 13,233-acre property have been sold. In 1978, the Army concluded that specific areas of the facility were potentially contaminated by explosives and lead compounds. Further studies confirmed contamination of the soil with explosives, asbestos, lead, and other organic compounds.

Several investigations were conducted between 1981 and 1983 to further define contamination. In 1984, AAAP was proposed for inclusion on EPA's National Priorities List (NPL) and was included on the list in 1987. The NPL is the list of priority (contaminant) releases for long-term remedial evaluation and response.



AAAP Location Map

Opportunity for Public Involvement

Comments from the public are considered by the Army to select final remedial actions for the site. Interested individuals are encouraged to present comments on the FS and Proposed Plan documents during a public meeting or submit their comments in writing. The public comment period is from November 21 to December 23, 1991. Written comments and questions, postmarked no later than December 23, 1991, should be sent to:

Commander
U.S. Army Toxic and Hazardous Materials Agency
Attn: CETHA-BC-B
Aberdeen Proving Ground, MD 21010-5401

A list of typical questions is included at the end of this fact sheet. For more information contact the representatives at the above address or call 1-800-826-3461 (ask for Ext. 3261 at Edgewood Area) or dial (410) 671-3261 or (410) 671-3461.

Documents relating to RI/FS and Proposed Plan activities as the AAAP site are organized and presented in the information repositories. The public is invited to review copies of applicable documents at these repositories.

A report addressing public comments will be prepared following the comment period. The report will be submitted with the selected early remedial action plan, called the Record of Decision (ROD). After approval by the Army, EPA, and ADEM, the ROD will be placed in the information repositories for public review. The AAAP information repositories are located at the following four locations:

Earle A. Rainwater Memorial Library
The Alabama Room
1129th Avenue SW
Childersburg, Alabama 35044
Phone: (205) 378-7239

B.B. Comer Memorial Library
and Information Center
310 N. Broadway
Sylacauga, Alabama 35150
Phone: (205) 249-0961

Library Service
Alabama Public Information
6030 Monticello Drive
Montgomery, Alabama 37130
Phone: (205) 277-7330

EPA Library
345 Courtland Street NE
Atlanta, Georgia 30365
Phone: (404) 347-4216

If you would like to receive information about activities at the AAAP facility, please complete this form and mail to:
U.S. Army Toxic and Hazardous Materials Agency
Bldg. E4480, ATTN: CETHA-PA
Aberdeen Proving Ground, MD 21010-5401

Request Form for Additional Information

Name(s): _____

_____

Address: _____

City: _____

State: _____

Zip: _____

Telephone (optional): _____

☐ I am particularly interested in receiving additional information on the following:

_____

_____

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Please detach and mail

Responses to Frequently Asked Questions

1. Who prepares the proposed plan?

The "lead agency" prepares the proposed plan in coordination with the support agencies. For Army installations such as AAAP, the Army is the "lead agency", and the EPA and ADEM are the support agencies.

2. What requires the Army to prepare a proposed plan?

The National Contingency Plan, which implements the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund), requires the preparation of the proposed plan. EPA guidance also contains the requirment for the proposed plan, as well as recommended content and format.

3. What is contained in a proposed plan?

The proposed plan contains the lead agency's proposed remedial action for a site, which it has selected from among the alternatives that are compared in the Feasibility Study (FS). The proposed plan also contains a short description of the site and the other alternatives.

4. When does a proposed plan have to be developed?

The proposed plan is developed as the FS is being finalized.

5. Why does a proposed plan have to be developed?

In order to have a singe document that clearly states the proposed remedial action at a site so the public can understand and comment on it.

6. Who approves the proposed plan?

The EPA, the ADEM, and the Army approve the proposed plan that is published for public comment. Following public comment, the selected remedial action is documented in the Record of Decision (ROD) which will contain a Responsiveness Summary addressing public comments. The ROD and Responsiveness Summary will be approved by the Army with the concurrance of EPA and ADEM.

7. How is the public involved with the proposed plan?

The proposed plan is provided to information repositories near the site so the public can review and comment on it for a minimum of 30 days. The public is encouraged to comment on the proposed plan and attend a public meeting by a public notice published in the local newspapers. The proposed plan is discussed at a public meeting held near the site during the comment period.

8. What kind of installations require a proposed plan?

Installations that are listed on the National Priority List (NPL) require a proposed plan. This list is commonly known as the Superfund list. Funding for an Army site, like AAAP, does not come from Superfund, but from the Army itself. However, being listed on the NPL requires that the same types of documents be prepared as for sites that are funded by Superfund. These documents include the FS and proposed plan. Non-NPL sites may also have a proposed plan, though this is not required.

9. Does the preferred alternative listed in the proposed plan necessarily mean that it will be the one chosen?

No, it means that it is the preferred alternative based on consideration of various criteria like protectiveness of human health and the environment, ability to satisfy Federal and State requirements, long- and short-term effectiveness, and cost. But, community acceptance is also a required factor that must be considered in selecting the remedial action. Any community concerns obtained during the comment period must be addressed in conjunction with the other required factors before the remedial alternative is selected.

10. What if the EPA/state do not agree with the Army's proposed alternative?

Any such disagreements are worked out during preparation and review of the FS and proposed plan. The published FS and proposed plan have been approved by the EPA, ADEM, and the Army.

11. What if the public does not agree with the proposed plan?

Public concerns with the proposed plan can be discussed at the public meeting. All comments are addressed in writing by the Army in a Responsiveness Summary that is reviewed by the EPA and ADEM, and is published along with the Record of Decision (ROD) in the information repositories. A news release informs the public that the ROD and Responsiveness Summary are available.

12. To whom do I write to have my comments addressed?

To the address shown on the cut-out form in this fact sheet.

13. Will there be more than one proposed plan developed for AAAP?

Yes, the proposed plan being reviewed now covers only the soil in the stockpile. At least one other proposed plan will be published for the remainder of AAAP.

14. Who is conducting the work at AAAP?

The U.S. Army Corps of Engineers is conducting the cleanup of the stockpile soils for AAAP.

15. When would the preferred cleanup alternative be performed?

It is currently expected that the cleanup could be conducted in 1992 and/or 1993.

16. Where would the cleanup work occur?

Under the preferred alternative, the work would occur on AAAP, immediately adjacent to the soil stockpiles.

17. How is it proposed to cleanup the stockpile soils?

The preferred alternative is to remove and properly dispose of asbestos-containing material and to set up a transportable incinerator on the site temporarily to burn the explosives out of the stockpiled soils. The cleaned soil would remain on AAAP, and the incinerator would be dismantled and removed from the site.