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FINAL

**Community Environmental Response
Facilitation Act (CERFA) Report
Former Army Reserve Center
Gaithersburg, MD**

Prepared for

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND 21010**

Prepared by

**ENVIRONMENTAL RESOURCES MANAGEMENT, INC.
855 Springdale Drive
Exton, PA 19341**

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evaluating another command.

Requests for this document must be referred to:
Commander, U. S. Army Environmental Center
Aberdeen Proving Ground, MD 21010

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
AEHA	Army Environmental Hygiene Agency
ARC	Army Reserve Center
AREE	Area Requiring Environmental Evaluation
AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
DA	Department of the Army
DN	Department of the Navy
EPA	Environmental Protection Agency
ERM	Environmental Resources Management
ERNS	Emergency Response Notification System
FGGM	Fort George G. Meade
FO/A	Freedom of Information Act
FS	Feasibility Study
FY	Fiscal Year
gpm	Gallons Per Minute
GRC	Gaithersburg Research Center
GRF	Gaithersburg Research Facility
HDL	Harry Diamond Laboratories

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IRP	Installation Restoration Program
LBP	Lead-based Paint
MDE	Maryland Department of the Environment
MSL	Mean Sea Level
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
°F	Degrees Fahrenheit
PA	Preliminary Assessment
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricant
ppb	Parts Per Billion
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SI	Site Inspection
USAEC	U.S. Army Environmental Center
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USDA	U.S. Department of Agriculture
UST	Underground Storage Tank
UXO	Unexploded Ordnance

EXECUTIVE SUMMARY

This report presents the results of the Community Environmental Response Facilitation Act (CERFA) investigation conducted by Environmental Resources Management (ERM) at the former Army Reserve Center, Gaithersburg (ARC), a U.S. Government property selected for closure by the Base Realignment and Closure (BRAC) Commission under Public Laws 100-526 and 101-510. Under CERFA (Public Law 102-426), Federal agencies are required to identify expeditiously real property that can be immediately reused and redeveloped. Satisfying this objective requires the identification of real property where no hazardous substances or petroleum products, regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), were stored for one year or more, known to have been released, or disposed.

ARC is an 18-acre site located in Gaithersburg, Maryland. ARC was used for a variety of activities from 1955-1986. It has served as a Nike Missile Control Site, as a communications and electronics research facility, and as an Army Reserve Center. Activities of environmental concern were mainly associated with construction, testing, and maintenance of electronic systems. The site has been vacant since 1986.

ERM reviewed existing investigation documents; U.S. Environmental Protection Agency (EPA), State, and county regulatory records; environmental data bases; and title documents pertaining to ARC during this investigation. In addition, ERM conducted interviews and visual inspections of ARC as well as visual inspections of and data base searches for the surrounding properties.

Information in this CERFA report was current as of April 1994 (no operations are ongoing). This information was used to divide the installation into three categories of parcels: CERFA Disqualified Parcels, CERFA Qualified Parcels, and CERFA Parcels, as defined by the Army.

The total BRAC property acreage at ARC is 18 acres. Areas of the facility that have no history of CERCLA-regulated hazardous substance or petroleum product release, disposal, or storage; and no history of other environmental hazards (such as asbestos, radon gas, lead-based paint, unexploded ordnance, radionuclides, or not in-use equipment containing polychlorinated biphenyls), are categorized as CERFA Parcels. One (1) CERFA Parcel, comprising 11.84 acres, was identified.

Areas of the facility that had no evidence of CERCLA-regulated hazardous substance or petroleum product release, disposal, or storage,

but contained other environmental hazards (such as asbestos, radon gas, lead-based paint, unexploded ordnance, radionuclides, or not in-use equipment containing polychlorinated biphenyls) were categorized as CERFA Qualified Parcels. One (1) CERFA Qualified Parcel, comprising 1 acre, was identified.

Areas of the facility, for which there is a history of release, disposal, or storage for one year or more of CERCLA-regulated hazardous substances or petroleum products or had a release of the other environmental hazards identified above were categorized as CERFA Disqualified Parcels. Two CERFA Disqualified Parcels, comprising 5.44 acres, were identified.

Areas on the facility that will be retained by the Federal Government or that have already been transferred by deed are categorized as CERFA Excluded Parcels. None of the property is CERFA Excluded.

The primary objective of CERFA is satisfied by the identification of CERFA Parcels and CERFA Qualified Parcels. As a result, concurrence has been sought from the regulatory agencies on these two categories of parcels. This CERFA Report has been reviewed by the U.S. Army Environmental Center (USAEC), EPA Region III, and the Maryland Department of the Environment (MDE). Comments received from regulatory agencies and USAEC's response to these comments are located in the Appendix. Concurrence on this report was received from MDE.

This report contains maps that summarize the categorization of ARC on the basis of the above definitions. This Executive Summary should be read only in conjunction with the complete CERFA Report for this installation. The CERFA Report provides the relevant environmental history to substantiate the parcel categorization. This report does not address other property transfer requirements that may be applicable under the National Environmental Policy Act (NEPA), nor does it address natural resource considerations such as the threat to plant or animal life.

1.0

INTRODUCTION

1.1

PURPOSE AND SCOPE

Public Laws 100-526 and 101-510 designated more than 100 Department of Army facilities for closure and realignment. As a result, it became necessary to expedite the environmental investigation and cleanup process, as necessary, prior to the release and reuse of Army Base Realignment and Closure (BRAC) property. The BRAC environmental restoration program was established in 1989 with the first round (BRAC 88) of base closures and continued with subsequent rounds (BRAC 91, BRAC 93, etc.). The BRAC program is patterned after the Army's Installation Restoration Program (IRP), except that it has been expanded to include such categories of contamination as asbestos, radon, polychlorinated biphenyls (PCBs), and others that are not normally addressed under the Army IRP.

In October 1992, Public Law 102-426, the Community Environmental Response Facilitation Act (CERFA) amended Section 120 (h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and established new requirements with respect to contamination assessment, cleanup, and regulatory agency notification/concurrence for federal facility closures. CERFA requires the federal government, before termination of federal activities on real property owned, to identify property where no hazardous substances were stored, released, or disposed of. Also, the designation must be concurred with by the appropriate regulatory agency (U.S. Environmental Protection Agency for National Priority List (NPL) bases and state for non-NPL bases). These requirements retroactively affect the Army BRAC 88 and BRAC 91 environmental restoration activities, and are being implemented at BRAC 93 sites concurrently with their enhanced PAs. The primary CERFA objective is for federal agencies to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed.

Environmental Resources Management, Inc. (ERM) was awarded the task to identify real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed at twelve BRAC 88 sites. Under this task, an Execution Plan was developed

to describe the process in satisfying the CERFA task objective. The purpose of this report is to present the findings for the former Army Reserve Center, Gaithersburg, Maryland.

1.2

DEFINITION OF TERMS

The following definitions are used to categorize and label parcels identified on the installation:

- **CERFA Parcel** - A portion of the installation real property for which investigation reveals no evidence of storage for one year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. CERFA Parcels include areas where PCB containing equipment is in operation, but there is no evidence of release. CERFA Parcels also include any portion of the installation which once contained related environmental, hazard, or safety issues including unexploded ordnance (UXO) located on firing ranges or impact areas, radon, stored (not in-use) PCB containing equipment, asbestos contained within building materials, and lead-based paint applied to building material surfaces, but which have since been fully remediated or removed.
- **CERFA Qualified Parcel** - A portion of the installation real property for which investigation reveals no evidence of storage for one year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. Parcel does, however, contain related environmental, hazard, or safety issues including unexploded ordnance (UXO) located on firing ranges or impact areas, radon, radionuclides contained within products being used for their intended purposes, asbestos contained within building materials, lead-based paint applied to building material surfaces, or stored (not in use) PCB-containing equipment.
- **CERFA Disqualified Parcel** - A portion of the installation real property for which investigation reveals evidence of a release, disposal, or storage for more than one year of a CERCLA hazardous substance, petroleum, or petroleum derivative; or a portion of the installation threatened by such a release or disposal. CERFA Disqualified Parcels also include any portion of the installation where PCB, asbestos containing material, lead-based paint residue, or any ordnance has been disposed of, and any locations where chemical ordnance has been stored. Additionally, CERFA Disqualified Parcels include any areas in which CERCLA hazardous substances or

petroleum products have been released or disposed of and subsequently fully remediated.

- **CERFA Excluded Parcel** - A portion of the installation real property retained by the Department of Defense, and therefore not explicitly investigated for CERFA. CERFA Excluded Parcels also include any portions of the installation which have already been transferred by deed to a party outside the federal government, or by transfer assembly to another federal agency.

The following labels are used in conjunction with the identified parcels. Each parcel is given a unique number to which the appropriate labels are attached.

- **P = CERFA Parcel**
- **Q = CERFA Qualified Parcel**
- **D = CERFA Disqualified Parcel**
- **E = CERFA Excluded Parcel**

EXAMPLE: 4P indicates that the fourth parcel is in the CERFA Parcel category.

The presence of related environmental, hazard, and safety issues, responsible for placing a parcel in the CERFA Qualified Parcel category, is indicated by the following labels:

- **A = Asbestos**
- **L = Lead-Based Paint**
- **P = PCB**
- **R = Radon**
- **X = Unexploded Ordnance (UXO)**
- **RD = Radionuclides**

EXAMPLE: 5Q-L indicated that the fifth parcel is in the CERFA Qualified Parcel category because of the presence of lead-based paint.

The following designations are used to indicate the type of contamination or storage present in a parcel. Conditions responsible for placing a parcel in the CERFA Disqualified category are indicated by the following:

- PR = Petroleum Release
- PS = Petroleum Storage
- HR = Hazardous Release
- HS = Hazardous Storage

EXAMPLE: 12D-HR indicates that the twelfth parcel is in the CERFA Disqualified category because of evidence of hazardous release.

For all parcels, (P) [i.e., P with parentheses around it] is used to indicate that the presence of the contamination is possible, but that data is unavailable for verification.

EXAMPLE: 9Q-A(P) indicates that the ninth parcel is in the CERFA Qualified Parcel category because of the possible presence (unverified) of ACM.

OTHER EXAMPLES:

Parcel label 15D-HR/PS/A(P) indicates that the 15th parcel is in the CERFA Disqualified category based on evidence of a hazardous substance release and petroleum storage. It also contains possible ACM.

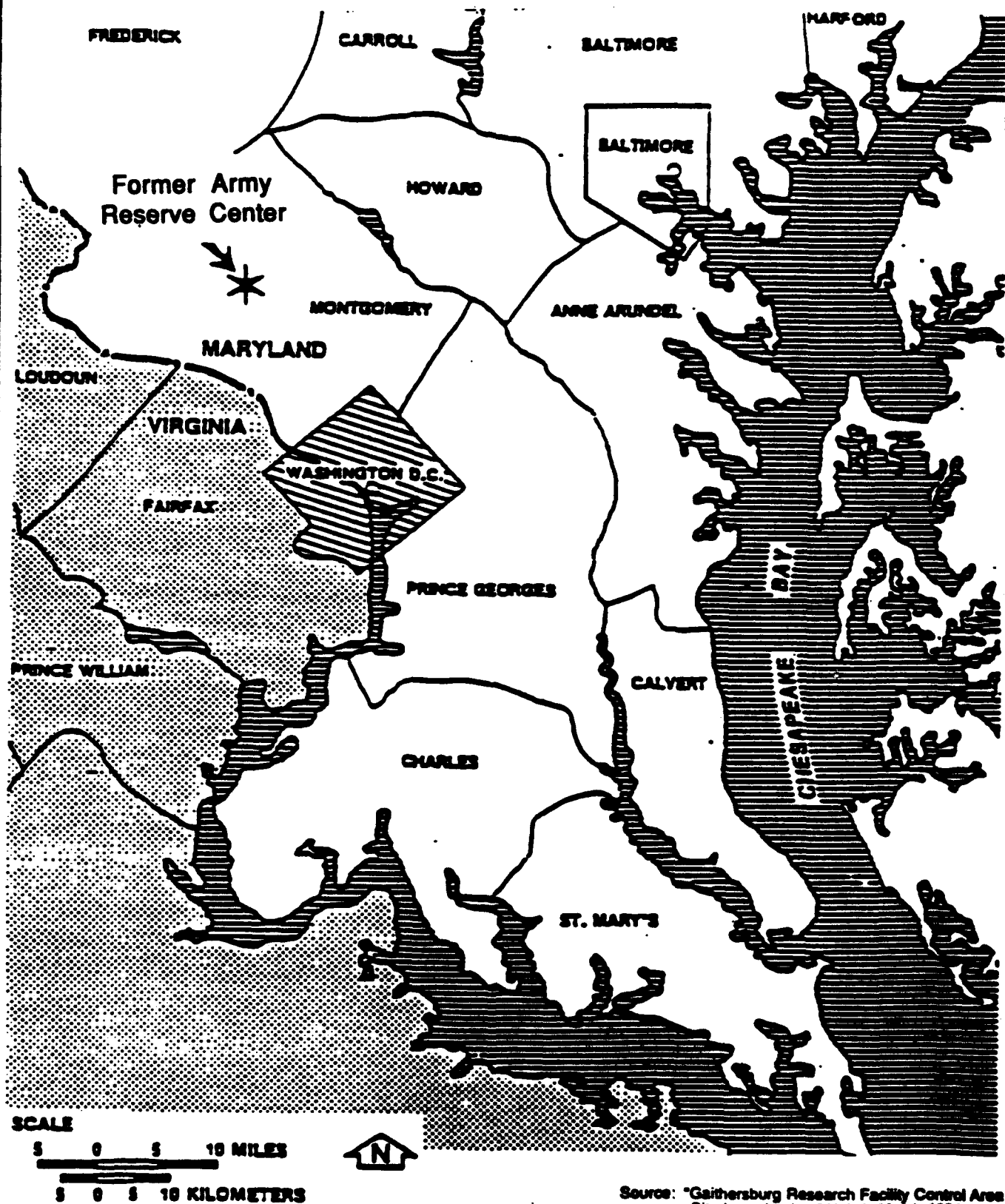
Parcel label 8Q-X/R indicates that the eighth parcel is in the CERFA Qualified Parcel category because of the presence of unexploded ordnance and radon.

1.3

GEOGRAPHICAL/ENVIRONMENTAL SETTING

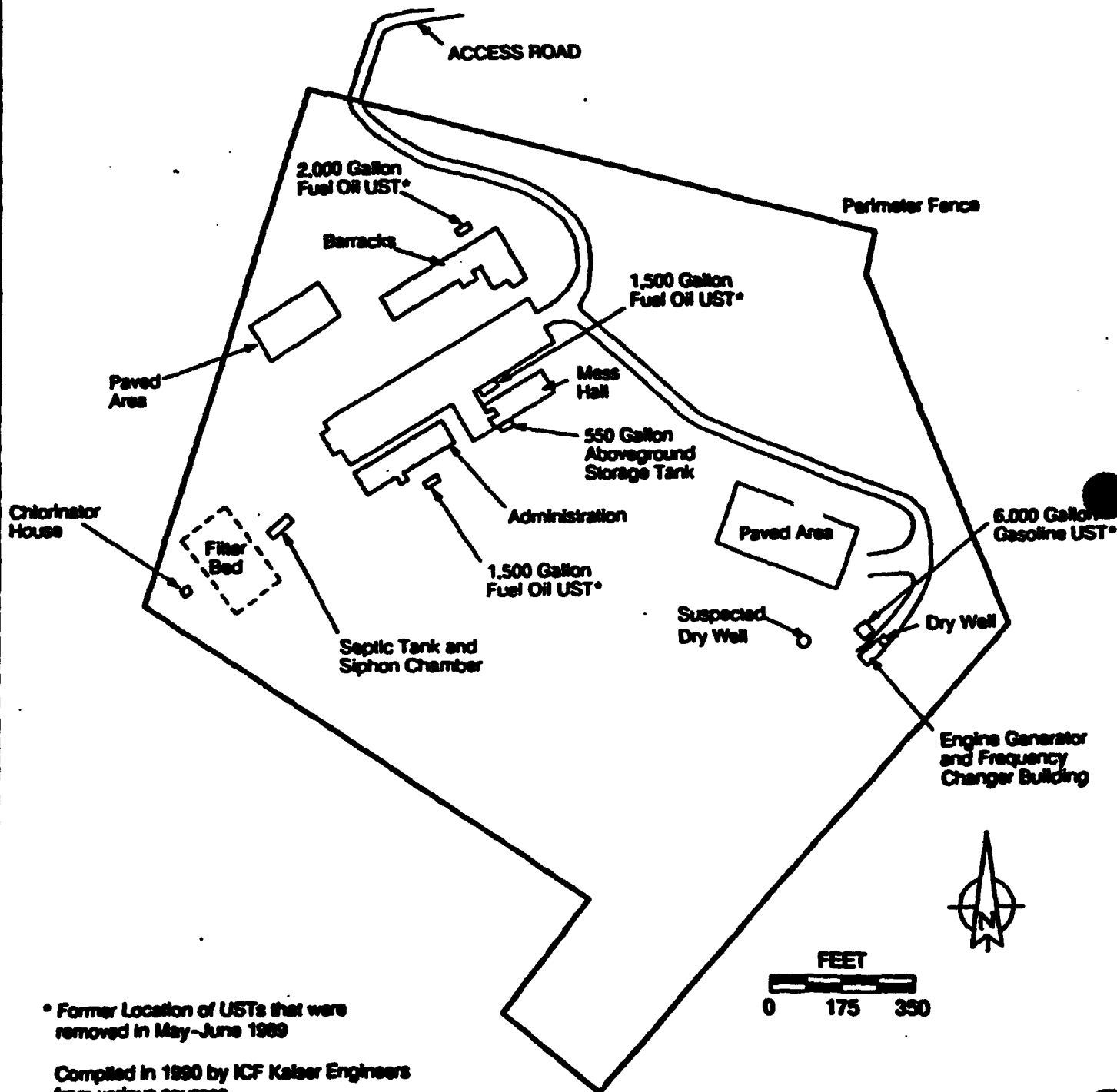
The former Army Reserve Center (ARC), Gaithersburg is located northeast of Gaithersburg, Montgomery County, Maryland, approximately 22 miles northwest of Washington, D.C. and three miles northwest of Gaithersburg, MD (see Figure 1.3-1). The site is also known as the Gaithersburg Research Center (GRC) and the Nike Control Site. Prior to acquisition by the federal government, the property was farmland. ARC is approximately 18 acres in size and is the subject of this report (Figure 1.3-2).

Figure 1.3-1
Location Map of Former Army Reserve Center (ARC)
Gaithersburg, Maryland



Source: "Gaithersburg Research Facility Control Area
Site Investigation," Vol. 1, March 1991.

Figure 1.3-2
Site Map of Former Army Reserve Center (ARC)
Gaithersburg, Maryland



* Former Location of USTs that were removed in May-June 1989

Compiled in 1990 by ICF Kaiser Engineers from various sources

Source: "Gaithersburg Research Facility Control Area Site Investigation," Vol. 1, March 1991.

ARC was owned and operated by the Department of the Army (DA) from 1955 to 1962. During this time, the Army constructed the Nike-Ajax Missile Control and Launch Areas at this site. The site was named the Gaithersburg Support Facility – Nike Ajax Site W-94. In 1962, DA transferred this facility to the Department of the Navy (DN), which used the facility for communications research. In March 1972, the property was transferred to Harry Diamond Laboratories (HDL) and named Gaithersburg Research Facility (GRF). HDL activities involved constructing, maintaining, and testing of electronic and mechanical systems to track aircraft. HDL utilized this site until 1979, after which it was transferred to Fort George G. Meade (FGGM) and became an Army Reserve Center. In 1986, the reserve activities were relocated to a new facility nearby. Since 1986, the site has been vacant and serves no Army mission. The property was declared excess in 1988.

ARC is not being used in any capacity at the present time and was identified for closure in the BRAC Report completed by the Defense Secretary's Commission in December 1988.

The site consists of open grassy areas with a few, widely scattered trees and shrubs and is surrounded by metal fencing topped with barbed wire. Two one-story concrete buildings (the former Barracks and Administration buildings), two other small buildings, concrete pads and antenna bases, a wastewater filter bed, and approximately 1,100 square yards of paved parking area comprise the site. No wetlands, floodplains nor threatened or endangered wildlife species are present. ARC is surrounded by a residential subdivision of single-family residences called the Flower Hill District.

The climate at ARC is variable with influences from the Appalachian Mountains to the west, and the Chesapeake Bay and Atlantic Ocean to the east. Summer is characterized by prevailing winds from the south and southwest, which bring humid air to the region. High pressure systems stagnate over the area creating high levels of air pollution several times during the summer. The winter season is characterized by prevailing winds from the west and northwest.

Mean monthly temperatures range from a low of 35 degrees Fahrenheit (°F) in January to a high of 75°F in July. Temperature extremes range from a maximum of 106°F to a minimum of -15°F. The average annual precipitation is 42 inches. Snowfall in the area averages 20 inches annually. Average annual relative humidity ranges from 50 to 80 percent.

ARC lies within the Eastern Division of the Piedmont Physiographic Province and is approximately 15 miles west of the fall line which separates the Piedmont from the Coastal Plain Province of eastern

Maryland. The site is situated on a small ridge within gently rolling topography that is deeply dissected by streams. ARC is located within the Whetstone Run Drainage Basin which flows west into Great Seneca Creek. The surface elevation at the site is approximately 509 feet above mean sea level (MSL).

Surface water drainage on the site is controlled primarily by storm drainpipes. Surface runoff leaves ARC along its western boundary via small drainage ways. These small streams flow west into Great Seneca Creek which is a tributary of Cabin Branch Creek.

The geology of the area consists of relatively impermeable rock of the Wissahickon Group which yields little or no interstitial water to wells. However, significant supplies of water are found in the faults, joints and fractures within the rock units of this group and in the mantle of saprolite overlying the bedrock. The bedrock aquifer is an important potable water source in Montgomery County. The average well yield of the Upper Pelitic Schist facies of the Wissahickon Group is 11 gallons per minute (gpm). Ground water underlying ARC occurs under water-table conditions at a depth of 7.4 to 34.4 feet below grade. There are no drinking water wells at the site.

Regionally, the ground water moves to the west. The ground water is recharged primarily in the topographically high areas on the installation by means of precipitation migrating through the overburden soils. Recharge is somewhat impeded by paved surfaces and buildings in the surrounding residential areas.

SCOPE OF INVESTIGATION

The scope of the CERFA investigation includes:

- Review of previous environmental investigations, assessments, reports, etc.
- Review of applicable government regulatory records: federal, state, and local (where applicable and available).
- Interviews with representatives from the installation (or command responsible for the installation), other federal agencies, regulatory officials, and others.
- Review of maps and aerial photographs (where available).
- Inspection of adjacent property that potentially could contaminate the BRAC property.
- Detailed site inspection (the scope of these site inspections was determined principally by the review of previous investigations and assessments).
- Review of recorded chain of title documents.

These seven activities are specifically included within the statutory scope of CERFA. All seven activities were conducted during the CERFA investigation at ARC.

EXISTING INVESTIGATION DOCUMENTS

The operations at ARC have encompassed a wide variety of activities. Several site-specific documents have been prepared under separate contract to the U.S. Army. These documents, listed below, were consulted as primary sources for the preparation of this report:

1. *Memorandum For Record: Written Documentation on Underground Storage Tank (UST) Removal at the Gaithersburg Research Facility (GRF)* [U.S. Toxic and Hazardous Materials Agency (USATHAMA), 26 October 1989].
2. *Final Report: Gaithersburg Nike Control and Launch Area Preliminary Assessment/Site Inspection Gaithersburg, Maryland*, EA Engineering, Science, and Technology, Inc., January 1990.
3. *Installation Assessment Army Base Closure Program, Gaithersburg Research Facility, Gaithersburg, Maryland*, The Bionetics Corporation, August 1990.

4. *Report of Observations, Gaithersburg Research Facility - Control Area Site Investigation*, State of Maryland, Department of the Environment, February 1991.
5. *Final Project Report: Gaithersburg Research Facility Control Area Site Investigation*, ICF Technology Incorporated, March 1991.
6. *Environmental Assessment: Base Closure of Former U.S. Army Reserve Center Gaithersburg, Maryland*, U.S. Army Corps of Engineers (USACE), August 1991.
7. *Quality Control Summary Report Removal of AST and Contaminated Soils, Gaithersburg, MD*, Engineering Technologies Associates, Inc., September 1993.

2.2

GOVERNMENT REGULATORY RECORDS

Federal Records

A review of U.S. Environmental Protection Agency, Region III (EPA) files was conducted by ERM on 1 October 1993. Information found in the EPA files corroborated the information obtained from the Department of the Army files. No new information regarding releases or the potential for environmental contamination of the site was identified in the EPA files.

A search of the EPA's Emergency Response Notification System (ERNS) database over the period 30 January-2 February 1994 identified no reports of releases of oil or hazardous substances at ARC since the inception of the database in 1986. ERNS collects information on releases reported to Federal authorities.

State and Local Government Records

ERM submitted a Freedom of Information Act request to the Maryland Department of the Environment (MDE) to review file information regarding the ARC facility. On 28 October 1993, ERM visited the MDE office to review the files. No new information regarding releases or the potential for environmental contamination at the site was identified in MDE files. Information found in the MDE files corroborated the information obtained from Army files and the CERFA site inspection.

NRC Records

There is no record of a Nuclear Regulatory Commission (NRC) license being issued to any current or past activities on ARC.

AEHA Records

A records search conducted by the U.S. Army Environmental Hygiene Agency (AEHA) revealed no reports regarding the use of radioactive materials at ARC.

2.3

INTERVIEWS

Table 2.3-1 provides a summary for those individuals interviewed during the CERFA investigation.

2.4

VISUAL INSPECTIONS

A CERFA site visit was conducted on 23 September 1993. During the visit, the interior and exterior of all buildings were inspected. The septic field area and the chlorinator house were also inspected. A concrete lined pit approximately five feet deep with a two foot square opening was observed between the parking lot and the area where the former Mess Hall was located. The pit was partially filled with water. After the site visit, site plans were reviewed and it appears that this pit was a clean out for the sanitary sewer line.

The areas where underground and above ground storage tanks were located were also inspected. There were no signs of oil staining on the surface soils at the site.

The entire perimeter of the property was traversed. All of the property is fenced and bordered by single family housing.

The surrounding property was reviewed via an automobile tour of the area and through the use of aerial photographs. Aerial photographs were obtained from the 1990 Installation Assessment. The aerial photo analysis from this report included photos taken on the following dates:

- 30 April 1957
- 10 October 1963
- August 1968
- 2 September 1987

The 1957 photographs show that the site was already developed as the Nike facility. At this time the septic field and chlorinator house were already in place. Some ground scars assumed to be a result of construction and development activities are evident at several areas

within the site. In the 1963 photograph, the construction of the Nike installation appears to be complete. Some of the ground scars noted in the 1957 photograph are no longer evident. A new building, the gatehouse at the northeast section of the property, had been built. The 1968 photograph shows little change from 1963. There is a possible impoundment northeast of the septic field and a pit just west of the Frequency Changer building. This pit is likely to be a dry well. Little change to the site is noted in the 1987 photograph. All facilities at the site were still present. The most notable change is not the site itself, but the surrounding area, which by then was completely developed for residential housing. In prior year photographs, the adjacent areas were in agricultural use.

2.5

TITLE DOCUMENTS

ERM conducted a review of tract maps and transfer documents to identify the prior property owners of the ARC property at the time of its transfer to the Army. The purpose of this review was to collect additional information concerning the property's prior use and environmental condition at the time of its transfer to the Army. Based on this review, no additional information was collected. Previous ownership and the dates of transfer to the Army are indicated on Figure 5.2-1.

Table 2.3-1
List of Interviewees for Gaithersburg (ARC) CERFA Assessment

Interview No.	Date	Name	Telephone	Organization/Position	Length of Service
I-1	9/93 to 4/94	Kristine Kingery	(410) 671-1607	U.S. Army Environmental Center ARC CERFA Project Officer	5 Years
I-2	11/4/93	Paul Robert	(301) 677-9549	RCGM Department of Public Works (DPW) Chief, Environmental Management Office (EMO)	5 Years
I-3	3/21/94	Tom Croyle	(410) 962-2714	U.S. Army Corps of Engineers, Baltimore District Eng. Div. Hazardous and Toxic Waste Branch	20 Years
I-4	3/21/94	Will Hutchins	(410) 551-3804	U.S. Army Corps of Engineers, Baltimore District Construction Division - Bay Area Office	10 Years
I-5	3/24/94	Alice Ginter	(301) 677-9795	RCGM Real Property Officer Eng. Plans and Services Div. - Dir. of Public Works	16 Years
I-6	3/23/94	Captain Chip Larsen	(410) 962-6784	U.S. Army Corps of Engineers, Baltimore District Program Project Management	9 Months
I-7	10/1/93 to 10/4/93	Maureen Zacharias	(215) 597-2842	U.S. Environmental Protection Agency Region III Freedom of Information Act (FOIA) Officer	
I-8	10/28/94	Donald Mauldin	(410) 631-3000	MDE, Waste Management Administration FOIA Liaison	

3.0

PROPERTY BACKGROUND INFORMATION

This section provides a description of the BRAC property and a discussion of its operational history (Section 3.1), and a description of any changes to environmental conditions since the last environmental assessment or investigation (Section 3.2).

3.1

PROPERTY DESCRIPTION AND OPERATIONAL HISTORY

ARC occupies approximately 18.3 acres of fee-owned land located off Snouffer School Road in Montgomery County, Maryland. The site is surrounded by single family homes called the Flower Hill District residential development. The buildings on ARC include the former Barracks, Administration Building, Engine Generator and Frequency Changer Building, and Chlorinator House. A wastewater septic field is located on the site. The buildings, constructed in 1955, are currently severely deteriorated because of neglect and vandalism. Three fuel oil (two 1,500 and one 2,000 gallon) and one 6,000 gallon gasoline underground storage tanks (UST) were located at ARC, but were removed in 1989.

The ARC property was acquired by the U.S. Government in 1955 for use as a Nike Missile Control Area as part of the Washington Area Defense Nike Missile Base system whose mission was to protect the Washington, D.C. metropolitan area from hostile aircraft attack. In 1962, DA transferred this facility to DN, which used the facility for communications research. In 1972, the mission of the Nike Missile Control Area was abandoned, and the property was transferred to Harry Diamond Laboratories (HDL) for use as a research facility. Activities conducted by HDL involved the fabrication and testing of ground-based radar systems. In 1979, the HDL research mission at the site was abandoned and the property was transferred to FGGM, and became an Army Reserve Center. In 1986, the reserve activities were relocated to a nearby facility. Since 1986 the site has been vacant and serves no Army mission. The property was declared excess in 1988. Prior to purchase by the federal government, the ARC property was farmland.

3.2

CHANGES TO REAL PROPERTY ENVIRONMENTAL CONDITIONS SINCE MOST RECENT ENVIRONMENTAL INVESTIGATION

In April 1993, an aboveground storage tank (AST) used for fuel oil storage was removed. Some leakage associated with this tank necessitated the

excavation and subsequent disposal of contaminated soil. Because of the presence of contaminated soils and the consequent remediation efforts, the former Mess Hall had to be demolished. According to the Quality Control Summary Report, a total of 360 tons of contaminated soil was transported to an incinerator plant in Hagerstown, Maryland by Soil Recycling Technologies, Inc. The excavation pit was backfilled with gravel and topsoil.

Four ground water monitoring wells were installed at the facility in 1989 to assess the potential ground water and soil contamination associated with past Army operations. The wells have since been sealed and are closed.

Asbestos was removed from the Mess Hall prior to its demolition. Asbestos material from piping and floor tile was also removed from the Barracks and Administration buildings.

Four out-of-service transformers were removed from the site in 1993 as part of the effort to close the site for public sale. The fluid in these transformers had been tested previously. The Control Area Site Investigation reported that none of the transformers contained PCBs above 1,000 micrograms/per kilogram (mg/kg).

INVESTIGATION RESULTS

This section describes the results of the CERFA investigation by identifying areas of environmental concern, both those previously identified in prior investigations and those uncovered as a result of the CERFA site visit. In addition, Section 4 identifies parcels in accordance with the parcel definitions contained in Section 1.2.

A number of environmental studies have been conducted at ARC (see Section 2.1 for a list of references). The most recent comprehensive study is the Control Area SI report which is dated March 1991. The Control Area SI included soil and ground water sampling and analysis. Environmental site assessment data were collected at each of the former UST locations. Other areas that were investigated include: asbestos containing materials and lead-based paint in each of the buildings; soils beneath the aboveground storage tank; soils around each of the buildings and subsurface soils in several areas of the site.

4.1

PREVIOUSLY IDENTIFIED AREAS REQUIRING ENVIRONMENTAL EVALUATION (AREES)

This section describes the previously identified Areas Requiring Environmental Evaluation (AREEs). The AREEs, described below are numbered sequentially to correspond to the Parcel numbers on Figure 5.1-1 and the accompanying map table (Table 5.1-1). Each site name also includes the appropriate CERFA Parcel identifiers, which describe the basis for Parcel selection (see Section 1.2). The sites included in the section are only those which have been determined to be CERFA Disqualified Parcels. CERFA Qualified Parcels are described in Section 4.4. CERFA Disqualified Parcels not previously identified are described in Section 4.2.

1. Abandoned UST [Parcel 1D-PS]

As mentioned in Section 3.1, one 6,000-gallon steel gasoline UST was removed from the site in 1989. A Memorandum for Record by Kristine Kingery indicates that no contamination exists as a result of the use or removal of the UST. In addition, a Report of Observations, issued by MDE on 28 February 1991, indicates that the tank was removed and soil samples were taken around the tank zone. Agency records indicate that no contamination was found.

2. Parcel 2D-PS/PR/A/L

This parcel contains the following sites:

Abandoned USTs

Three USTs (two 1,500-gallon fuel oil tanks, and one 2,000-gallon fuel oil tank) were removed from the site in 1989. A Memorandum for Record by Kristine Kingery indicates that no contamination exists as a result of the use or removal of the UST. In addition, a Report of Observations, issued by the State of Maryland Department of the Environment on 28 February 1991, indicates that the tanks were removed and soil samples were taken around the tank zones. Agency records indicate that no contamination was found.

From late 1990 through early 1991, an SI was conducted. During this investigation, soil and ground water samples were collected at locations downgradient from the USTs. The report indicates that no detectable levels of petroleum contaminants were found.

Aboveground Storage Tank

A 550-gallon fuel oil AST was located just south of the Mess Hall. During the months of April through June of 1993, the AST was removed. Soil beneath the tank showing evidence of fuel oil release was removed, requiring demolition and removal of the Mess Hall. Approximately 360 tons of soil were excavated and disposed off site.

Asbestos and Lead-Based Paint

During the Control Area SI, the Administration Building and the Barracks were found to contain lead-based paint (Page 6-1). Asbestos-containing material (ACM) was found in the floor tile. Asbestos was removed from the Mess Hall prior to its demolition, as well as from the Barracks and Administration Building. Based on observations during the site visit, floor tile remained in some areas of the Administration Building and the Barracks. This material is not friable, but should be removed prior to construction or demolition of the building.

4.2

ADDITIONAL AREAS IDENTIFIED

No new areas of environmental concern were identified as a result of the CERFA investigation.

ADJACENT/SURROUNDING PROPERTIES

According to the August 1990 Installation Assessment (Bionetics Corporation), the area surrounding ARC was used as farmland prior to development to single family housing. This report is essentially an aerial photo survey of the site and the surrounding area. The 1957, 1963 and 1968 aerial photographs show that the area surrounding the site was used for agriculture. The next aerial photograph, taken in 1987, shows that the area surrounding the site had been developed for single family housing. Ms. Alice Ginter, the Real Property Manager for the site, also stated that the area was used for farmland prior to development of the Nike site.

Currently, the site is located within an area of single family homes designated as the Flower Hill District. The Flower Hill District is a planned neighborhood of approximately 266 acres and 1,300 dwelling units. Completely surrounded by single family housing, the ARC site occupies 2.1 percent of the Flower Hill District.

During the CERFA site visit, a tour was conducted of the nearby surrounding area. The site is topographically higher than the surrounding area. A gasoline station located on Snouffer School Road is approximately one-half mile to the northeast of the site, and the Montgomery County Airpark is approximately three-quarters of a mile to the east. If a release were to occur from either of these areas there would be no expected impact to the subject site, based on the topography and the relative distance to the site. There is also a small strip shopping center that houses a convenience store, restaurant and several other small stores. The remaining surrounding area, developed for single family housing, is not expected to present an adverse environmental impact to the subject site.

RELATED ENVIRONMENTAL, HAZARD, AND SAFETY ISSUES

Military installations frequently contain issues which the U.S. Army Environmental Center (USAEC) believes fall outside of the provisions of CERFA. For example, while a release of lead-based paint onto the ground may be a CERCLA concern, the application of lead-based paint to a building surface is generally not. However, lead-based paint applied to buildings may represent a safety hazard to young children. Similarly, other substances or materials commonly applied to or found in buildings (for example, radon and asbestos) may not be explicitly regulated under CERCLA, but may require a notice to potential transferees and lessees that they exist.

USAEC has sought to balance the statutory requirements of CERFA with the law's intent to identify uncontaminated property to the public which

can be expeditiously reused. Notice has been provided for those parcels which appear to be uncontaminated under the definition provided in CERFA, but which may contain environmental, hazard, or safety issues. Buildings which contain asbestos-containing materials, lead-based paint, or naturally occurring radon fall into this category and are identified as "CERFA Qualified Parcels" in this CERFA report. Parcels which contain stored (not in use) equipment containing 50 parts per million (ppm) or more of polychlorinated biphenyl (PCB) oil, low level radionuclide-containing equipment such as dials and weapon site posts, and unexploded ordnance are also designated "CERFA Qualified Parcels".

In those cases, however, where for example, asbestos or PCBs have been disposed in the environment, the parcel has been identified as "CERFA Disqualified". In this example, the designation indicates that a CERCLA hazard may exist at this location.

Sites described in this section are those which have been designated as CERFA Qualified Parcels. These sites have been determined through investigation to be of interest only for the presence of the environmental, hazard, and safety issues described above. The sites described below are numbered to follow the sequence established by Sections 4.1 and 4.2, corresponding to the site map (Figure 5.1-1) and accompanying map table. In addition to the description of Qualified Parcels, a general discussion of several of the environmental, hazard, and safety issues at ARC is included in this section. A listing of buildings at ARC containing CERFA Qualifiers may be found in Table 4.4-1.

3. *Barracks Building [Parcel 3Q-A/L]*

Parcel 3Q consists of that portion of the Barracks Building that does not lie within Parcel 2D. This parcel is qualified due to the presence of ACM in the building materials and the fact that LBP was found in this building. Friable asbestos found on pipe, tank and flue insulation was removed; however, ACM in floor tile remains.

LBP was detected throughout the interior and exterior of all buildings at the site at concentrations of 600 micrograms per gram (ug/g) or above in 22 of 30 paint samples and at concentrations of 5,000 ug/g in 7 of 30 samples. Only the Engine Generator and Frequency Changer Building was found to have insignificant levels of lead paint. Locations containing lead paint were distributed throughout the remaining four buildings in no apparent pattern and therefore all painted surfaces in these buildings should be considered to contain significant concentrations of lead.

Table 4.4-1
Buildings with CERFA Qualifiers
Former Army Reserve Center, Gaithersburg (ARC)
Gaithersburg, Maryland

Buildings	Qualifiers
Administration Building	A/L
Barracks	A/L

A Asbestos-containing material
A(P) Asbestos-containing material (possible)
L Lead-based Paint
L(P) Lead-based paint (possible)
R Radon

CERFA EXCLUDED PROPERTY

There are no CERFA Excluded Parcels on the ARC property.

After concluding the review of investigation documents, regulatory records, personnel interviews and visual inspections, ERM identified parcels on the installation as CERFA Parcel, CERFA Qualified Parcels, CERFA Disqualified Parcels, or CERFA Excluded Parcels in accordance with the definitions in Section 1.2. The parcels are delineated on a map of the BRAC portion of the installation using a one-acre square grid for boundary definition.

The Army chose a one-acre grid system to aid in the presentation of data gathered during the CERFA report investigation, and to facilitate use of the document by reuse groups and others. The one-acre grid provided a consistent method to report and locate environmental or other concerns. In the many cases where the concerns are much smaller than one acre, the grid system simplifies the depiction of the concern. Accordingly, the areal extent of many small areas of concern, such as UST sites, are liberally depicted in the CERFA report.

Additionally, the one-acre grid size was chosen as a generally redevelopable parcel size for either industrial or residential uses. However, the grid does not drive reuse nor restrict it. Reuse decisions should be made irrespective of the grid.

The entire one-acre grid square is colored or shaded to indicate the applicable parcel category based on the history of storage or release for any portion of that square. Parcels are labeled according to a system outlined in Section 1.2 of this report to indicate the applicable parcel category and the contaminating circumstances. Parcel labels are connected to the respective parcel boundaries by a line or are located within the parcel boundaries.

Where CERFA Disqualified Parcels and CERFA Qualified Parcels have coincided, the overlapped area has been designated CERFA Disqualified. Labels for any such overlapped parcels also indicate the presence of the qualifying hazards. CERFA Excluded Parcels have been excluded from this investigation of contaminant locations and therefore have no overlapping CERFA Disqualified Parcels or CERFA Qualified Parcels. Structures within CERFA Disqualified Parcels that contain qualifying safety hazards are designated with the applicable qualifying label, where map scale permits this level of detail.

ERM's investigation and subsequent parcelization of ARC determined that 11.84 acres of the facility fall within the CERFA Parcel category.

Table 5.1-1
Former Army Reserve Center (ARC)
Gaithersburg, Maryland

PARCEL NUMBER (SIZED)	NAME AND LOCATION	CATEGORY	BASIS	SOURCE OF EVIDENCE	REMEDIATION
1D-PS (1.74 acres)	Engine Generator and Frequency Changer Building Coordinates: 5,2	Disqualified	6,000 gallon gasoline UST	Control Area SI (1991)	UST removed in 1989
2D-PS/PR/A/L (3.70 acres)	Administration Building, Barracks and Old Mess Hall Complex Coordinates: 4,5	Disqualified	1,500 gallon fuel oil UST at Administration Building	Control Area SI (1991)	UST removed in 1989
			1,500 gallon fuel oil UST north of Old Mess Hall		
			2,000 gallon fuel oil UST at Barracks		
	Old Mess Hall Coordinates: 5,5	Disqualified	550 gallon fuel oil AST south of Old Mess Hall leaked	Control Area SI (1991)	AST and contaminated soil removed in 1993
	Administration Building and Barracks Coordinates: 4,5	Qualified	Asbestos floor tiles in buildings	Control Area SI (1991)	Partial remediation of asbestos
			Lead paint interior and exterior surfaces	Control Area SI (1991)	

*Table 5.1-1
Former Army Reserve Center (ARC)
Gaithersburg, Maryland*

PARCEL NUMBER (B200)	NAME AND LOCATION	CATEGORY	HAZ	SOURCE OF EVIDENCE	REMEDIATION
3Q-A/L (1 acre)	Remainder of Barracks Building Coordinates: 4,5	Qualified	Asbestos floor tile Lead paint interior and exterior surfaces	Control Area SI (1991)	Partial remediation of asbestos
4P (11.84 acres)	Remaining Area Coordinates: 4,4	CERFA Parcel	No issues		

Parcel Category

D = CERFA Disqualified Parcel
Q = CERFA Qualified Parcel
E = CERFA Excluded Parcel
P = CERFA Parcel

(P) = Possible

Disqualified Designations

PS = Petroleum Storage
PR = Petroleum Release/Disposal
HS = Hazardous Materials Storage
HR = Hazardous Materials Release/Disposal

Qualified Designations

A = Asbestos
L = Lead-Based Paint
P = PCBs (Polychlorinated biphenyls)
R = Radon
X = UXO (unexploded ordnance)
RD = Radionuclides

Approximately 1 acre of the facility are categorized as CERFA Qualified Parcels. 5.44 acres constitute the CERFA Disqualified portion of the installation. None of the property is designated CERFA Excluded.

In determining the applicable parcel categories for the installation property, ERM observed the following guidance provided by the USAEC for specific circumstances:

- Buildings constructed prior to 1978 are assumed to contain lead-based paint. A similar assumption is made for asbestos in buildings constructed prior to 1985.
- Storage of petroleum products, petroleum derivatives and CERCLA regulated hazardous substances will prevent an area from becoming a CERFA Parcel as long as that storage is for one year or greater. The quantity of substances stored is not relevant to determining the applicable parcel category. However, if the operation requiring such substances is in the immediate area, and the storage is in limited quantities for immediate use, the area is not precluded from being a CERFA Parcel.
- Non-leaking equipment containing less than 50 ppm PCBs does not preclude an area from becoming a CERFA Parcel. Non-leaking, out-of-service equipment with greater than 50 ppm PCBs will place an area in the CERFA Qualified Parcel category. An area is designated CERFA Disqualified if there is a known release containing greater than 50 ppm PCBs.
- Areas where there are transport systems or process equipment which handle hazardous material or petroleum products and upon which there have been no release, storage, or disposal are categorized as CERFA Parcels.
- Ordnance disposal locations are designated CERFA Disqualified. This does not include ordnance impact areas which are designated CERFA Qualified Parcels.
- Routine pesticide and herbicide application in accordance with manufacturer's directions and chlorofluorocarbons and halon in operational systems do not preclude an area from becoming a CERFA Parcel.
- Coal storage piles and railroad tracks do not by themselves preclude an area from becoming a CERFA Parcel.

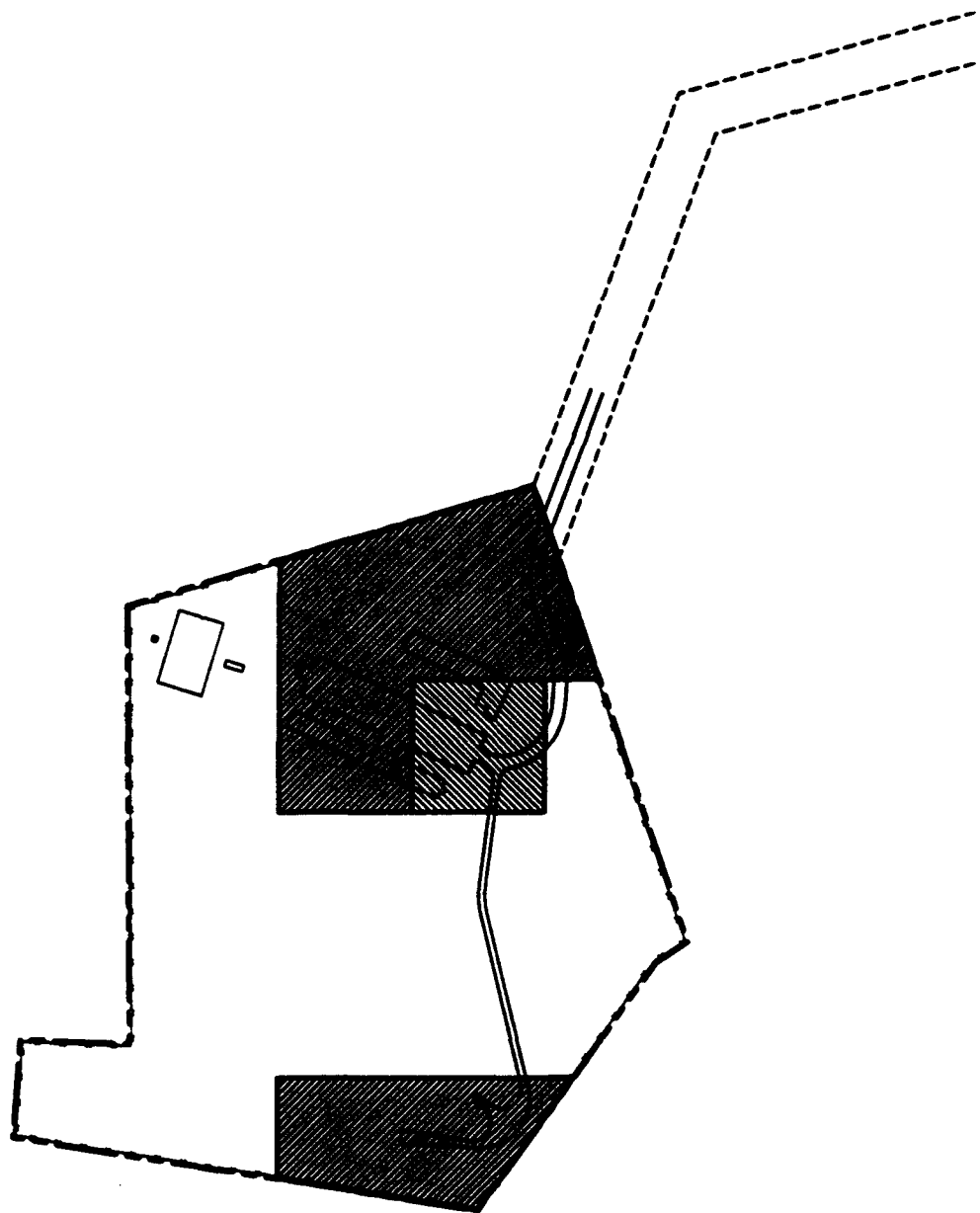
5.1

CERFA CATEGORY AND DESIGNATION MAP

Table 5.1-1 and Figure 5.1-1 identify the breakdown of the ARC property according to the criteria for parcel identification under CERFA.

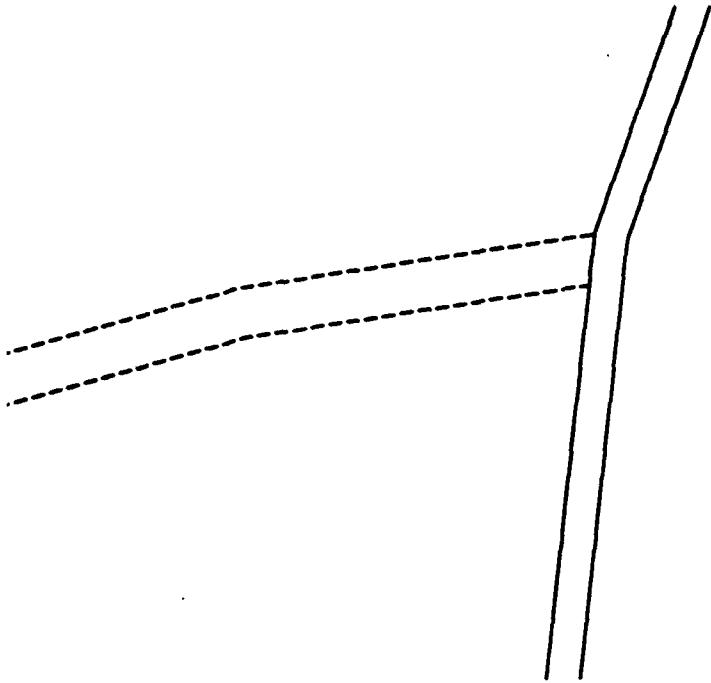


THE ERM GROUP



108 2

Figure 5.3-1
CERFA Parcel Designations
Former Army Reserve Center,
Gaithersburg
Gaithersburg, Maryland



LEGEND:



CERFA DISQUALIFIED
 CERFA QUALIFIED
 CERFA EXCLUDED
 CERFA PARCEL

300 150 0 300

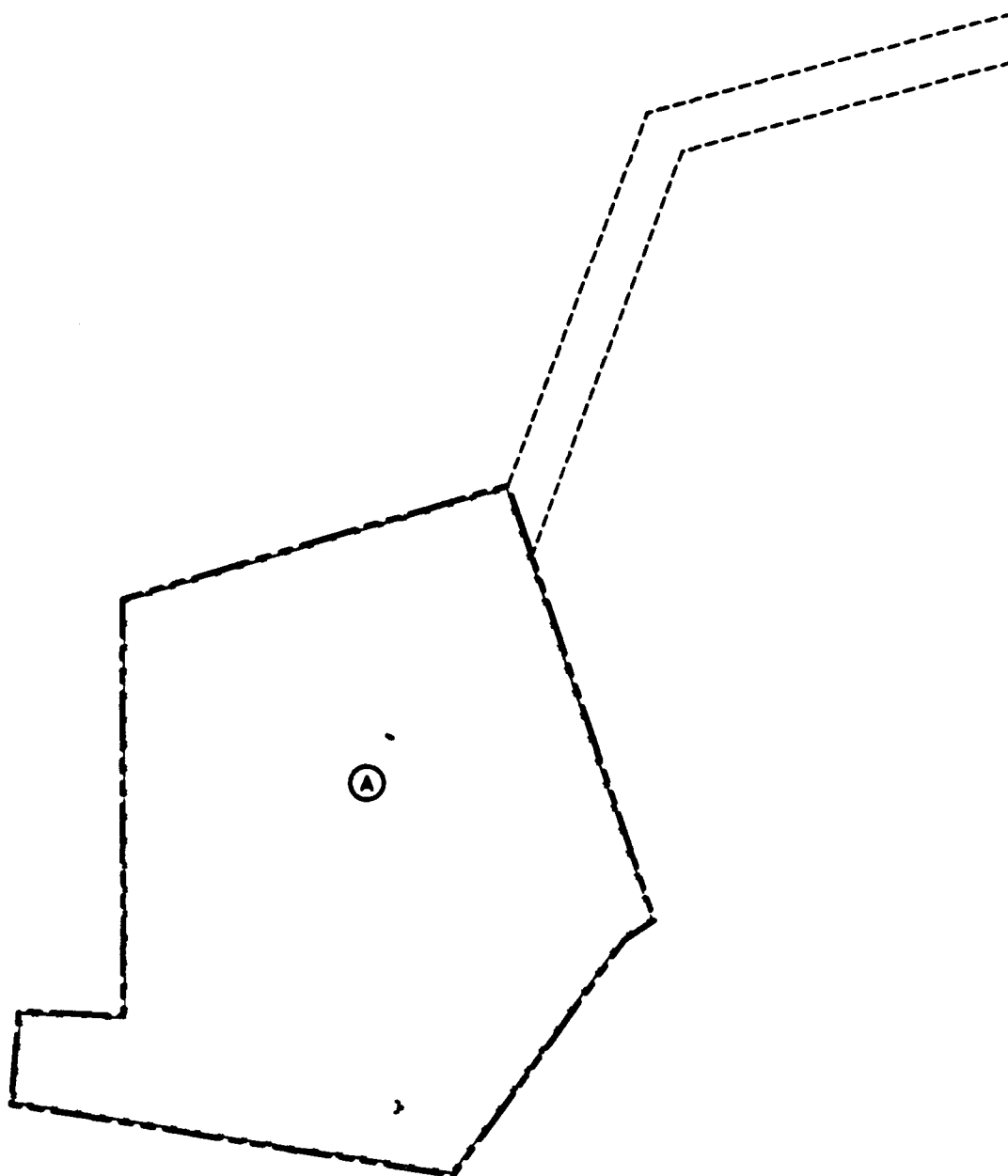
Scale in Feet



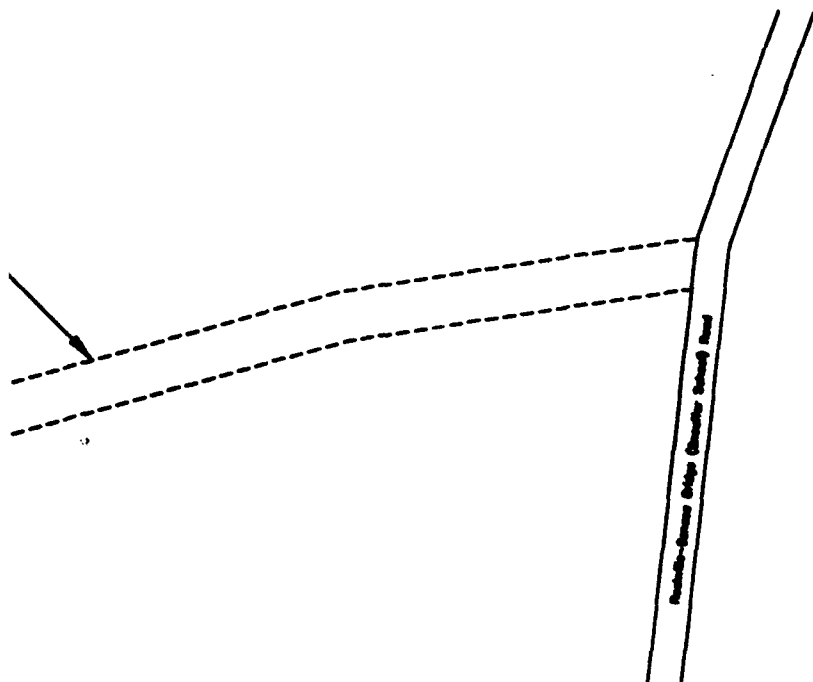
Former Army Reserve Center, Galthersburg Previous Owners

Tract No.	Name of Previous Owner (Transferors)	Date of Transfer	Acreage Fee
A	Transferred from the Department of the Navy	25 February 1972	18.20

Right-Of-Way
Not Part Of
BRAC Property



**Figure 5.2-1
Tract Map
Former Army Reserve Center,
Gaithersburg
Gaithersburg, Maryland**



Legend

--- Property Boundary
(Real BRAC Property)

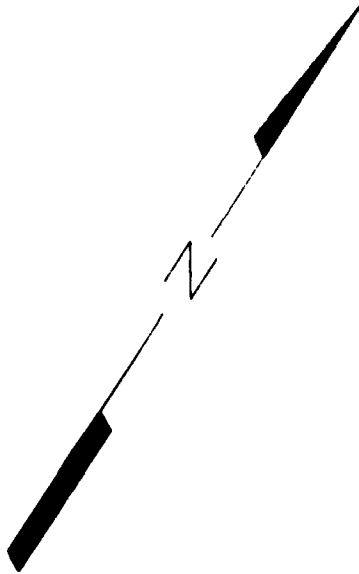
Ⓐ Tract Identifier

300 150 0 300

Scale in Feet



①



13

12

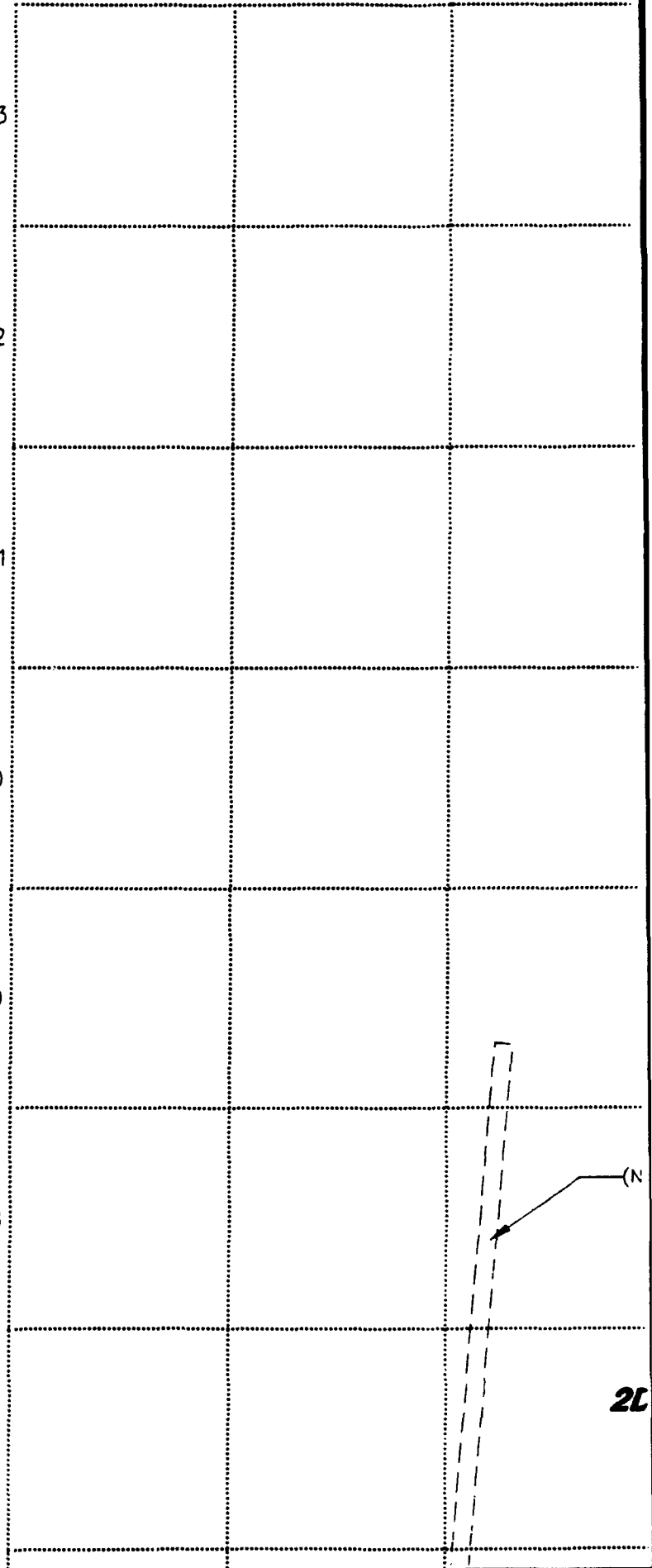
11

10

9

8

7

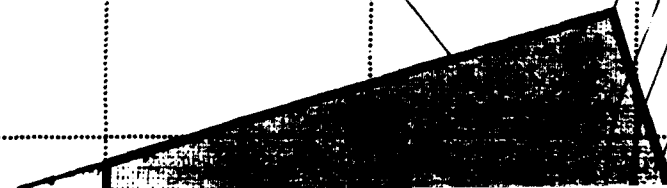


2L

2

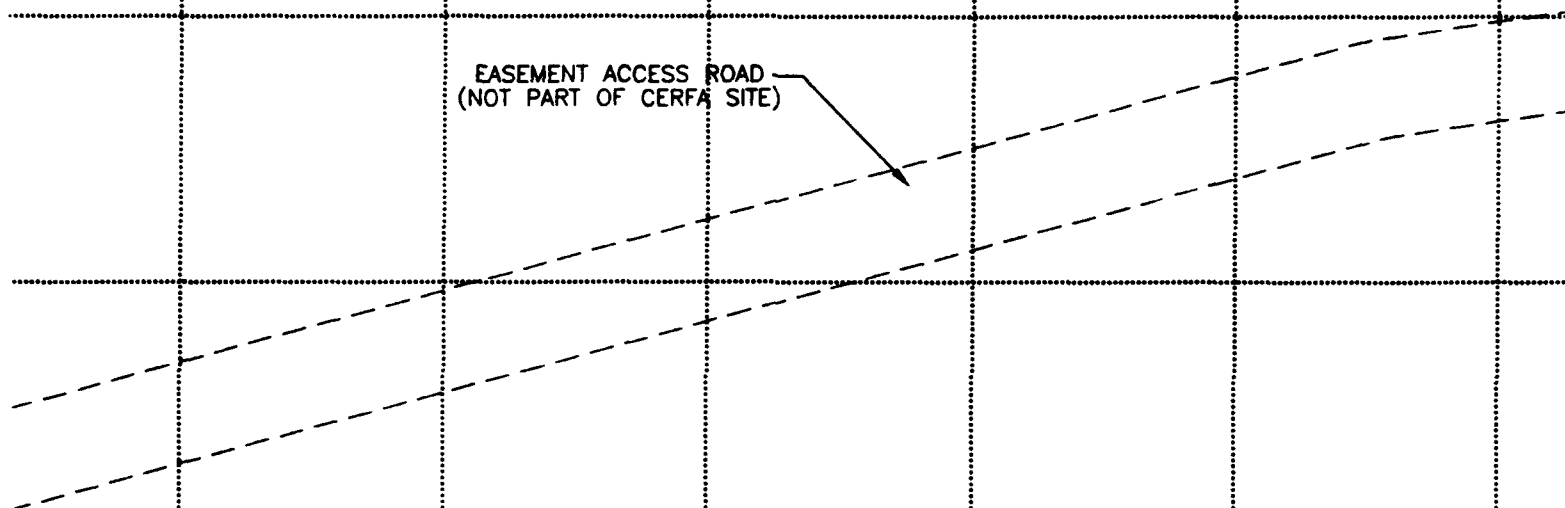
EASEMENT
(NOT PART OF CERFA SITE)

2D-PS/PR/A/L



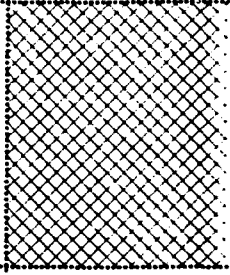
3

EASEMENT ACCESS ROAD
(NOT PART OF CERFA SITE)

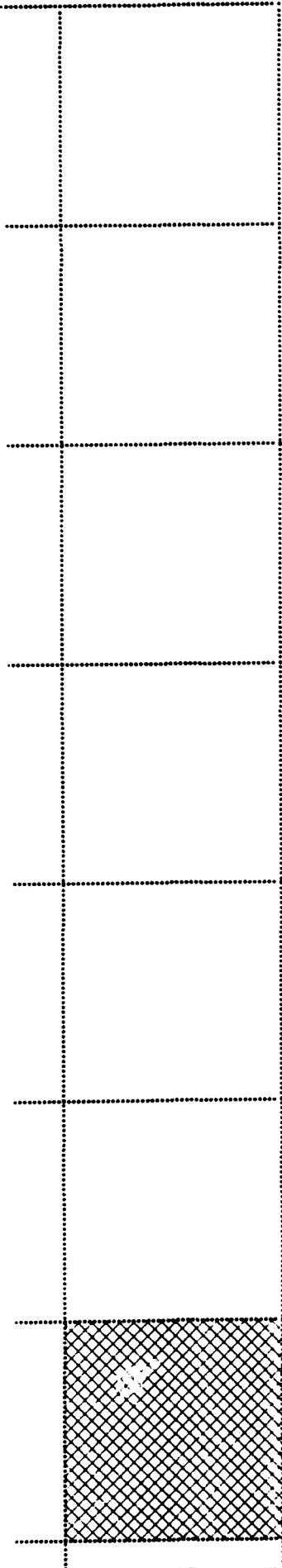


4

ROCKVILLE - SENECA BRIDGE (SNOUFFER SCHOOL) ROAD



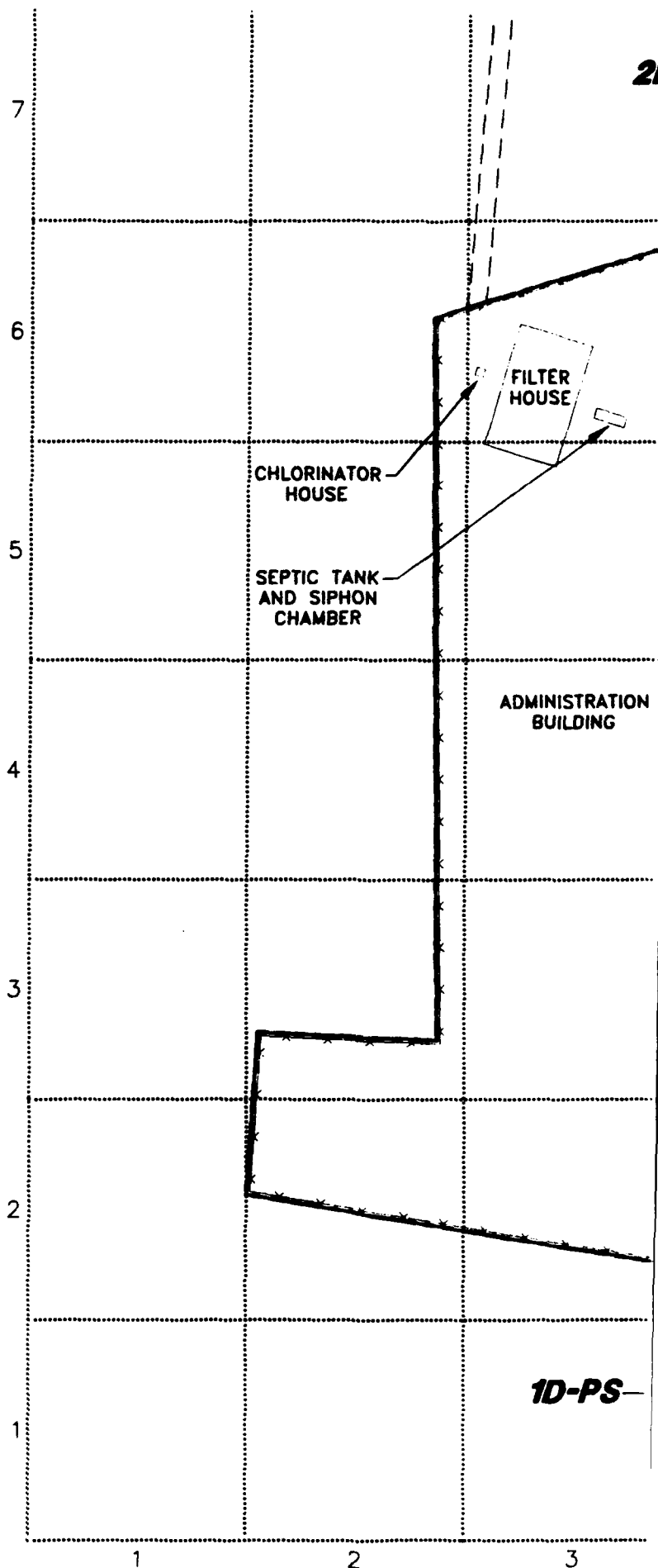
5



ONE ACRE GRID SQUARE
COORDINATE LOCATION: 17,7

6

21



2D-PS/PR/A/L

⑦

BARRACKS

3Q-A/L

FILTER
HOUSE

ADMINISTRATION
BUILDING

A/L

OLD MESS HALL
(DEMOLISHED)

SUSPECTED
DRY WELL

4P

DRY WELL

1D-PS

ENGINE GENERATOR
FREQUENCY CHANGER
BUILDING

3

4

5

6

7

8

8

2-A/L

3 HALL
SHED)

4P

7

8

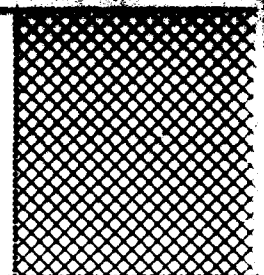
9

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12

9



12

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14

15

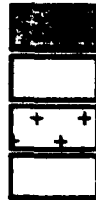
16

17

ONE ACRE GRID SQUARE
COORDINATE LOCATION: 17,7

10

LEGEND:



CERFA DISQUALIFIED

CERFA QUALIFIED

CERFA EXCLUDED

CERFA PARCEL

5D-PR/HR

PARCEL LABEL



PARCEL DESIGNATION

PARCEL CATEGORY

PARCEL NUMBER AS NOTED
ON DRAWING AND TABLE

PARCEL CATEGORY

D = CERFA DISQUALIFIED PARCEL
Q = CERFA QUALIFIED PARCEL
E = CERFA EXCLUDED PARCEL
P = CERFA PARCEL

DISQUALIFIED DESIGNATIONS

PS = PETROLEUM STORAGE
PR = PETROLEUM RELEASE/DISPOSAL
HS = HAZARDOUS MATERIALS STORAGE
HR = HAZARDOUS MATERIALS RELEASE/DISPOSAL

QUALIFIED DESIGNATIONS

A = ASBESTOS
L = LEAD-BASED PAINT
P = PCBS (POLYCHLORINATED BIPHENYLS)
R = RADON
X = UXO (UNEXPLODED ORDNANCE)

(P) POSSIBLE DISQUALIFIER/QUALIFIER



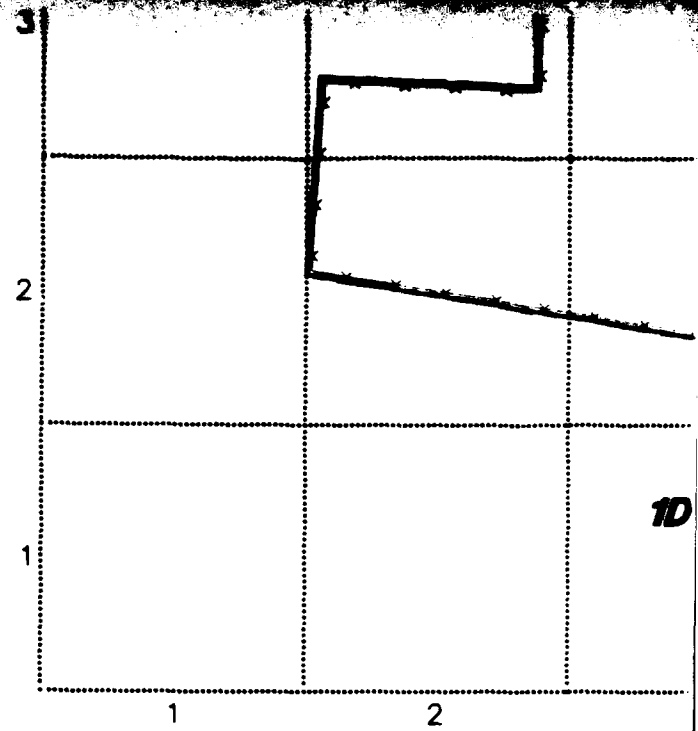
NON-LEAKING UST OR AST
(FORMER OR ACTIVE)



LEAKING UST OR AST
(FORMER OR ACTIVE)



BUILDING WITH CERFA QUALIFIER IN A DISQUALIFIED PARCEL



1D



NO.	DATE	APP.	REVISION:	NO.

11

12

8

9

10

11

12

Former Army Reserve Center, Galthersburg

Galthersburg

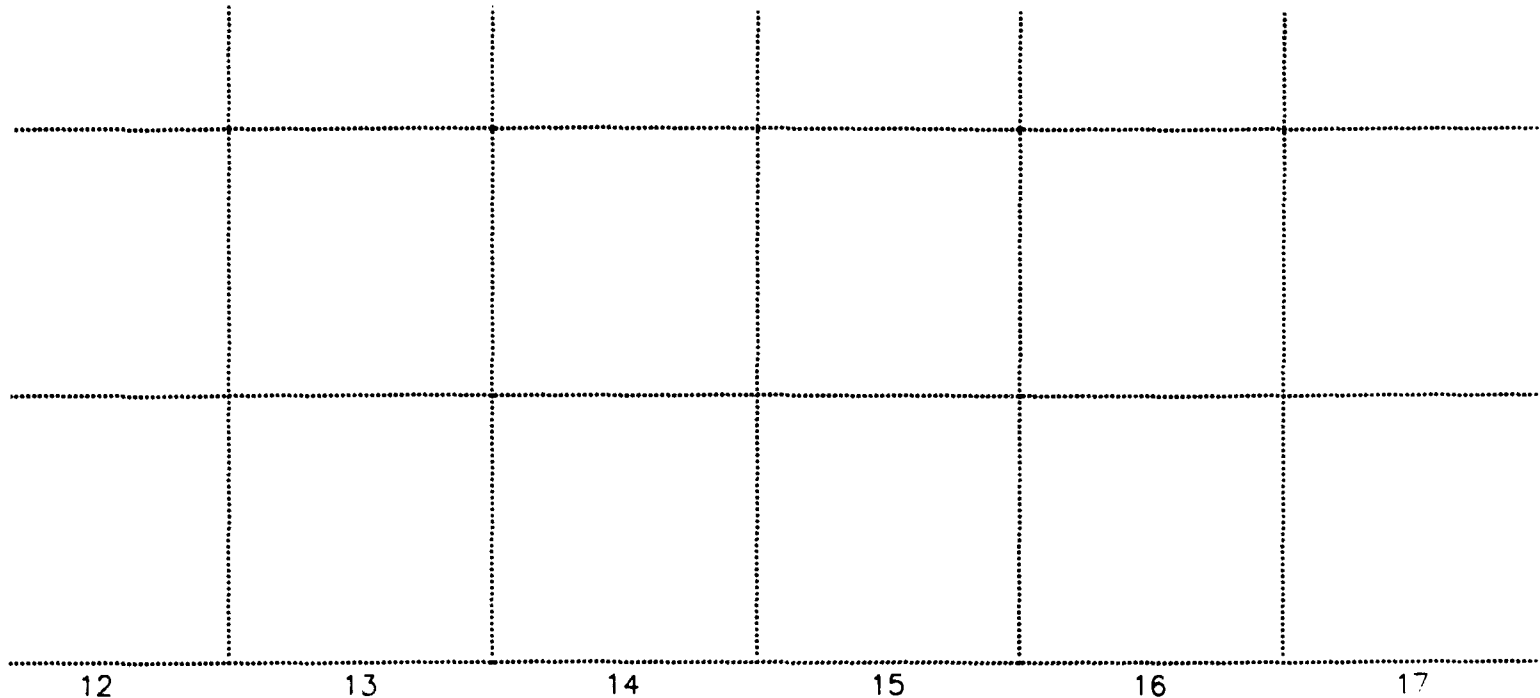
Maryland


Environmental Resources Management, Inc.

Exton, Pennsylvania 19341 (215) 524-35

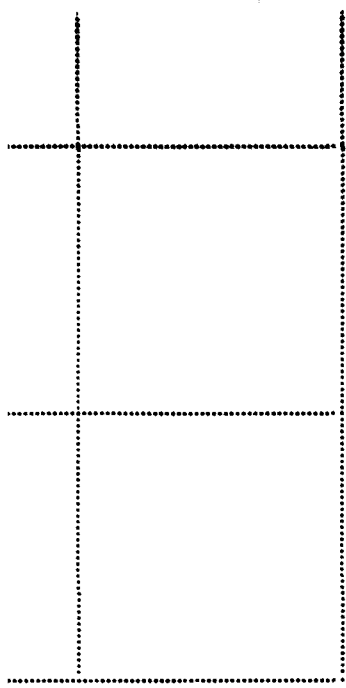


13



		CHECKED	DATE	CERFA Cate		
		DESIGN ENGINEER				
		PROJECT ENGINEER				
		PROJECT MANAGER				
		APPROVED		DRAWN	M.K. Bond/CMP	DATE
		APPROVED		SCALE	1" = 150'	W.D. N

14



17

PS = PETROLEUM STORAGE
 PR = PETROLEUM RELEASE/DISPOSAL
 HS = HAZARDOUS MATERIALS STORAGE
 HR = HAZARDOUS MATERIALS RELEASE/DISPOSAL

QUALIFIED DESIGNATIONS

A = ASBESTOS
 L = LEAD-BASED PAINT
 P = PCBS (POLYCHLORINATED BIPHENYLS)
 R = RADON
 X = UXO (UNEXPLODED ORDNANCE)

(P) POSSIBLE DISQUALIFIER/QUALIFIER



NON-LEAKING UST OR AST
 (FORMER OR ACTIVE)



LEAKING UST OR AST
 (FORMER OR ACTIVE)



BUILDING WITH CERFA QUALIFIER IN A DISQUALIFIED PARCEL



Scale in Feet

CERFA Category and Designation Map

DRAWING NO.

Figure 5.1-1

REV. NO.

Bond/CMP	DATE 10.26.93/04.06.94	CLIENT APPROVAL			
150'	WORK NO. PM307.70.01/A301-1	ISSUED FOR	DATE	SHEET 1	OF 1

15

5.2***CERFA TRACT MAP***

The property boundaries and all property transfers including prior ownership information is shown in Figure 5.2-1.

5.3***CERFA PARCEL DESIGNATORS***

Figure 5.3-1 summarizes the breakdown of the ARC property according to the criteria for parcel identification under CERFA.