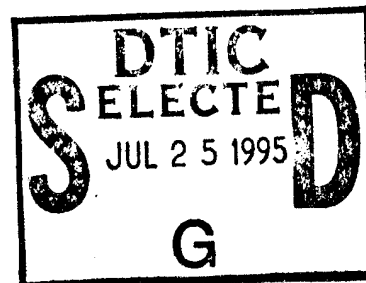


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**FINAL**

**Community Environmental Response  
Facilitation Act (CERFA) Report  
Vint Hill Farms Station  
Warrenton, Virginia**



**Prepared for:**

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

**Prepared by:**

**SCIENCE APPLICATIONS INTERNATIONAL CORPORATION  
1710 Goodridge Drive  
McLean, Virginia 22102**

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Aberdeen Proving Ground, Maryland 21010

May 1994

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**COMMUNITY ENVIRONMENTAL RESPONSE FACILITATION  
ACT (CERFA) REPORT  
VINT HILL FARMS STATION  
WARRENTON, VIRGINIA**

**FINAL**

**Submitted to:**

**U.S. Army Environmental Center  
SFIM-AEC-BCB  
Aberdeen Proving Ground, Maryland 21010-5401**

**Submitted by:**

**Science Applications International Corporation  
1710 Goodridge Drive  
McLean, Virginia 22102**

**USAEC Contract DAAA15-91-D-0017  
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**SAIC Project No. 01-827-03-6521-002**

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The results of SAIC's investigation are limited to the data sources described in this report. SAIC's description in this report of the site facilities and operations includes only conditions plainly visible on the date(s) of our inspection. Any description of previous site activities (i.e., waste management practices) is limited to information obtained from the data gathering efforts described in this report.

It is important to emphasize that the investigation carried out by SAIC was not a full environmental audit in the traditional meaning of these terms. Our investigation focused on current and previous practices that SAIC identified from information gathered under this contract. SAIC examined activities and practices that could represent a potential liability to the owner or buyer of the site under current environmental laws and regulations. Beyond the deficiencies or potential problems at Vint Hill Farms Station described in this report, other nonconformances, obligations, or potential liabilities may exist.

Quantitative verification of the presence or absence of contaminants in soils or groundwater can only be provided by appropriate sampling and analysis. To determine with a relatively high degree of confidence whether concentrations of hazardous materials are present in the subsurface, USAEC may wish to consider a more detailed data collection and analysis program such as a soil gas investigation, soils analysis, installation and sampling of groundwater monitoring wells, or geophysical techniques.

# REPORT DOCUMENTATION PAGE

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<b>13. ABSTRACT (Maximum 200 words)</b> A Community Environmental Response Facilitation Act (CERFA) investigation was conducted at Vint Hill Farms Station (VHFS) in Warrenton, Virginia. VHFS is a 701-acre facility located 30 miles west of Washington, D.C. The Installation is used by a variety of tenants to research, develop, produce, and sustain new signals warfare technology for military intelligence. Federal government records, records of adjacent property, employee interviews, visual inspection of the facility, visual inspection of adjacent property, title documents, and aerial photographs were used to divide the Installation into one of four categories of Parcels: CERFA Disqualified Parcels, CERFA Parcels with Qualifiers, CERFA Excluded Parcels, or CERFA Parcels. Based on these designations, approximately 149.5 acres of the facility fall within 20 CERFA Disqualified Parcels, 135 acres fall within 12 CERFA Parcels with Qualifiers, and 416.5 acres fall within 17 CERFA Parcels. No CERFA Excluded Parcels were identified on the Installation.				
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## LIST OF ACRONYMS

AAFES	Army, Air Forces Exchange Service
ACIC	Aeronautical Chart and Information Center
ACM	Asbestos Containing Material
AMC	Army Materiel Command
AMCP	Asbestos Management and Control Program
APCB	Air Pollution Control Board
AREE	Area Requiring Environmental Evaluation
AST	Aboveground Storage Tank
ATMs	Alpha Track Monitors
BLS	Below Land Surface
BRAC	Base Realignment and Closure Commission
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CARC	Chemical Agent Resistant Coating
CCSW	CECOM Center for Signals Warfare
CECOM	Communications - Electronics Command
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act
COD	Chemical Oxygen Demand
DEH	Department of Health
DEQ	Department of Environmental Quality
DIA	Defense Intelligence Agency
DOD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DRMO	Defense Reutilization Management Office
EM	Electromagnetic
ENPA	Enhanced Preliminary Assessment
EPA	U.S. Environmental Protection Agency
EPIC	Environmental Photographic Interpretation Center

**LIST OF ACRONYMS**  
(continued)

ERNS	Emergency Response Notification System
ESE	Environmental Science and Engineering, Inc.
FEMA	Federal Emergency Management Agency
FHU	Family Housing Unit
FY	Fiscal Year
GC/MS	Gas Chromatography/Mass Spectrometry
GPD	Gallons per Day
IEWD	Intelligence Electronic Warfare Directorate
IMMC	Intelligence Materiel Management Center
IRP	Installation Restoration Program
ISCP	Installation Spill Contingency Plan
LERA	Lead Exposure Risk Assessment
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tanks
MCL	Maximum Contaminant Level
MSL	Mean Sea Level
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRA	National Rifle Association of America
NRC	National Response Center
OSW	Oil/Water Separator
PA	Preliminary Assessment
PCB	Polychlorinated Biphenyl
PDO	Property Disposal Office
PPM	Parts Per Million
PRI	Program Resources, Inc.
RCRA	Resource Conservation and Recovery Act
RCRIS/HWDMS	Resource Conservation and Recovery Information System/Hazardous Waste Data Management System
SAIC	Science Applications International Corporation

**LIST OF ACRONYMS**  
**(continued)**

SI/EW	Signals Intelligence/Electronics Warfare
SPCC	Spill Prevention Control and Countermeasures
SPL	State Priority List
SQG	Small Quantity Generator
STP	Sewage Treatment Plant
SWCB	State Water Control Board
SWMF	Solid Waste Management Facilities
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center
USAEHA	U.S. Army Environmental Health Agency
USAF	U.S. Air Force
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USDA	U.S. Department of Agriculture
USDOJ	U.S. Department of Interior
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tanks
UV	Ultraviolet
UXO	Unexploded Ordnance
VDH	Virginia Department of Health
VHFS	Vint Hill Farms Station
VOC	Volatile Organic Compound
VPDES	Virginia Pollutant Discharge Elimination System

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## EXECUTIVE SUMMARY

This report presents the results of the Community Environmental Response Facilitation Act (CERFA) investigation conducted by Science Applications International Corporation (SAIC) at Vint Hill Farms Station (VHFS), 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 expeditiously identify 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 1 year or more, known to have been released, or disposed of.

VHFS is a 701-acre site located in Fauquier County, Virginia, approximately 30 miles west of Washington, DC, and 8 miles east of Warrenton, Virginia. The property was purchased by the Army in 1942 and used, during World War II, as a training center for signal corps personnel and as a retrofitting station for signal units returning from combat prior to future overseas deployment. Currently, the installation is used by a variety of tenants to research, develop, produce, and sustain new signals warfare technology for military intelligence. The environmentally significant operations associated with the property are photographic processing, vehicle maintenance, electronic equipment refurbishing, metal etching, sandblasting, and painting.

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

Information in this CERFA report was current as of the site visit by SAIC in September and October 1993. This information was used to divide the installation into three categories of



parcels: CERFA Disqualified Parcels, CERFA Parcels with Qualifiers, and CERFA Parcels, as defined by the Army.

The total BRAC property acreage at VHFS is 701 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 [UXO], radionuclides, or not in-use equipment containing polychlorinated biphenyls [PCBs]), are categorized as CERFA Parcels. Approximately 416.5 acres of the facility fall within 17 CERFA Parcels.

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, UXO, radionuclides, or not in-use equipment containing PCBs) were categorized as CERFA Parcels with Qualifiers. Approximately 135 acres of the facility fall within 12 CERFA Parcels with Qualifiers.

Areas of the facility in which there is a history of release, disposal, or storage for 1 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. Twenty (20) Disqualified Parcels were identified and included approximately 149.5 acres of the facility.

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. No CERFA-Excluded Parcels were identified.

The primary objective of CERFA is satisfied by the identification of CERFA Parcels, CERFA Parcels with Qualifiers, and CERFA Disqualified Parcels. As a result, concurrence has been sought from the regulatory agencies on these three categories of parcels. This CERFA Report has been reviewed by the U.S. Army Environmental Center (USAEC), EPA Region 3, and the Virginia Department of Environmental Quality (DEQ). Comments received from

regulatory agencies and USAEC responses to comments are included in Appendix D. Concurrence on this report was received from EPA Region 3.

This report contains maps that summarize the categorization of VHFS 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, nor does it address natural resource considerations such as the threat to plant or animal life.

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## 1. INTRODUCTION

### 1.1 PURPOSE AND SCOPE

Public Laws 100-526 and 101-510 designate more than 100 Department of the 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 the second round (BRAC 91) and the third round (BRAC 93). The BRAC program is patterned after the Army's Installation Restoration Program (IRP), except 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.

The BRAC environmental restoration program began by conducting enhanced Preliminary Assessments (PAs). The term "enhanced" is used to distinguish these assessments from previous IRP PAs, since the BRAC PAs are conducted from a property transfer perspective and evaluate areas that are not included in the IRP (e.g., asbestos, radon, and PCBs). The enhanced PAs include reviews of existing installation documents, regulatory records, and aerial photographs; a site visit and visual inspection; and employee interviews. Enhanced PAs were conducted for BRAC 88 and BRAC 91 installations, and are currently underway at BRAC 93 installations. A final enhanced PA was prepared for Vint Hill Farms Station (VHFS) in May 1994 by Science Applications International Corporation (SAIC) under the direction of the U.S. Army Environmental Center (USAEC) (formerly U.S. Army Toxic and Hazardous Materials Agency [USATHAMA]).

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. Also, the designation must be concurred with by the appropriate regulatory agency (U.S. Environmental Protection Agency [EPA] on National Priority List [NPL] bases and state on 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 of.

In March 1993, the BRAC commission submitted its recommendation that VHFS be closed. SAIC was awarded the task to identify VHFS real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed of. The purpose of this report is to present the findings for VHFS.

## 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 1 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 Parcel with Qualifier(s)*—A portion of the installation real property for which investigation reveals no evidence of storage for 1 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 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 1 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 Parcel with Qualifier

- D = CERFA Disqualified Parcel
- E = CERFA Excluded Parcel.

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

The presence of non-CERCLA hazards, responsible for placing a parcel in the CERFA Parcel with Qualifier category, is indicated by the following labels:

- A = Asbestos
- L = Lead-based paint
- P = PCB
- R = Radon
- X = UXO
- RD = Radionuclides.

Example: 5Q-L indicates that the fifth parcel is in the CERFA Parcel with Qualifiers 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/disposal
- PS = Petroleum storage
- HR = Hazardous release/disposal
- 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 Parcel with Qualifiers category because of possible presence (unverified) of asbestos containing material (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 Parcel with Qualifiers category because of the presence of UXO and radon.

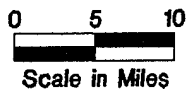
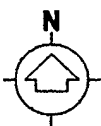
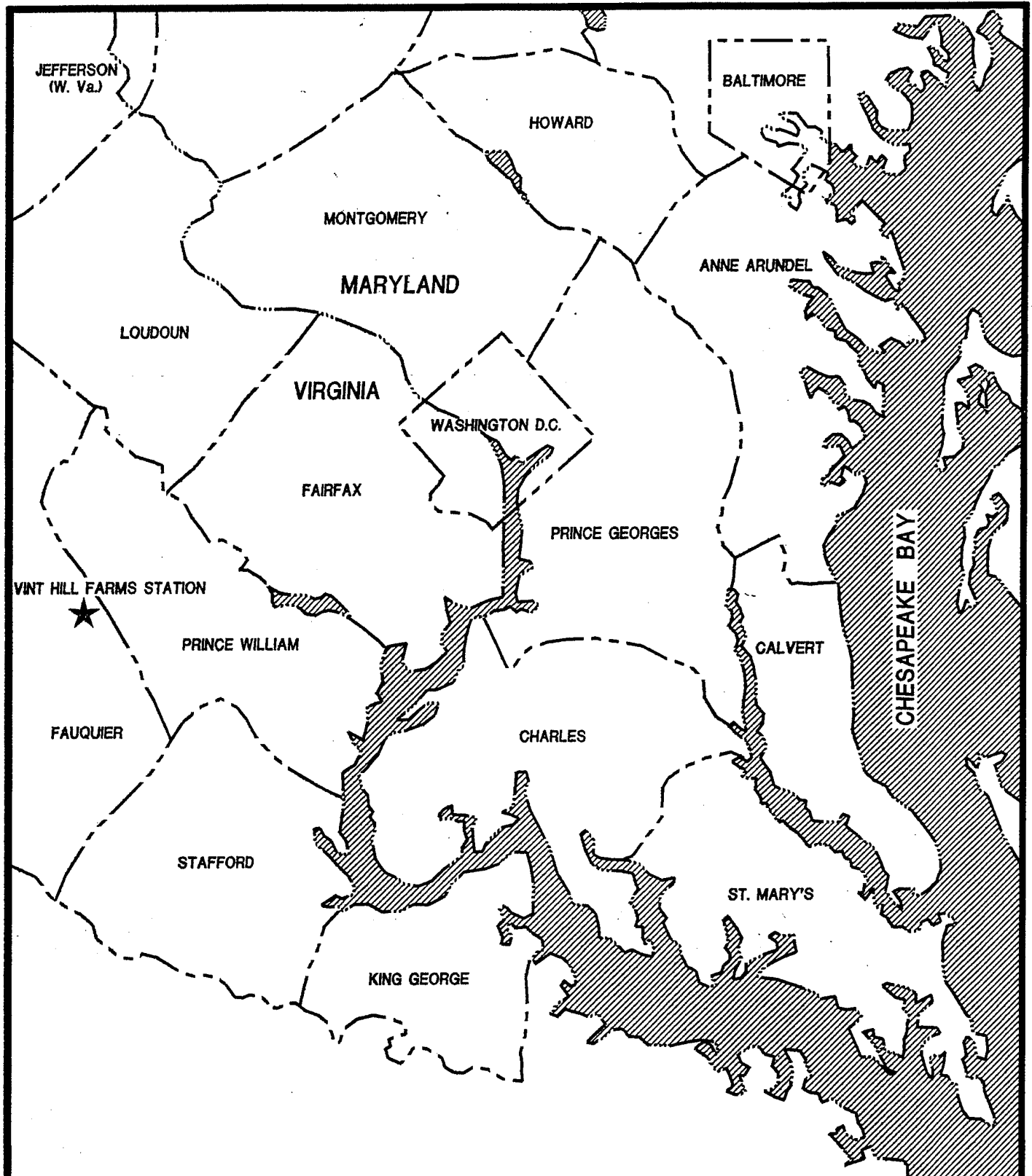
### **1.3 GEOGRAPHICAL/ENVIRONMENTAL SETTING**


VHFS covers 701 acres and is located in the north-central portion of Virginia, within the east-central portion of rural Fauquier County (see Figure 1-1). The southern portion of the property consists of approximately 150 acres of improved grounds used for industrial operations, administration buildings, and residential housing. East of this area are 94 acres of mature hardwood forest. The majority of the remaining 116 unimproved and 341 semi-improved acres in the northern portion of the property are used for operations mission activities (i.e., stationary and mobile antenna operation sites).

#### ***1.3.1 Demographics and Land Use***

Approximately 7,000 people live within 4 miles of VHFS (Weston 1990). In addition, there are 244 family housing units (FHUs) and a number of barracks for enlisted personnel at VHFS. The residential population at VHFS is 400. Land use in the immediate vicinity of VHFS consists of mainly agriculture (mostly horse farms) and residential areas. With the exception of a few residences to the north, the majority of residential development is located south of VHFS. A small county recreation park is located adjacent to VHFS along South Run. Other land uses that are more commercial and industrial are located closer to the population centers of Warrenton to the southwest and Manassas to the east. According to the U.S. Bureau of the Census data, the population in these centers and in Fauquier County has been increasing as shown in Table 1-1. Public access areas at Lake Brittle and Lake Manassas are within 1 mile of VHFS (ESE 1986).





 Science Applications International Corporation			
<b>Vint Hill Farms Station</b> <b>Warrenton, Virginia</b> <b>CERFA Investigation</b>			
<b>GENERAL LOCATION OF VHFS</b>			
Figure: 1-1	Project: 01-0827-03-6521-002	File: 93064\DWGS\515LOC2	Date: 10\26\93

**Table 1-1. Fauquier County Census Data**

Census Designated Area	1980 Census	1990 Census
Warrenton	3,907	4,830
Manassas	15,438	27,957
Manassas Park	6,524	6,734
Fauquier County	35,889	48,741

Sources: Rand McNally 1986 and 1992.

### ***1.3.2 Climate and Meteorology***

The climatic conditions at VHFS are variable, with influences from the Atlantic Ocean to the east and the Appalachian Mountains to the west. Summers are characterized by maritime-tropical winds from the south and southwest, which bring warm, humid air to the region. High-pressure systems often stagnate over the area, creating air pollution episodes several times during the summer. Winter is characterized by cold, dry, continental polar winds from the northwest.

Average temperatures at VHFS vary from a monthly low of 1.5°C in January to a mean monthly high of 24.3°C in August. The average annual rainfall is 104.8 cm, while snowfall averages 61 cm annually.

### ***1.3.3 Hydrology***

VHFS is located in the Occoquan watershed. Most of the facility drains to South Run via intermittent tributaries and drainage ditches. South Run is a small Class III Virginia stream that begins in Fauquier County and flows northeast into Prince William County where it discharges into Lake Manassas, a recreation and drinking water reservoir built on Broad Run for the city of Manassas. Lake Manassas discharges to Broad Run.

South Run's upper reaches were inundated by the construction of the Lake Brittle reservoir, whose dam lies approximately ½ mile west of VHFS. The dam controls the flow into South Run, which can be quite low, as seen during a site visit conducted in September 1993. The installation has a permit (Virginia Pollutant Discharge Elimination System [VPDES] permit

VA 0020460) to discharge effluent from the sewage treatment plant (STP) into South Run. The STP adds approximately 220,000 gallons per day (GPD) to the natural streamflow of 4,900,000 GPD.

Drainage for the southern part of the installation flows south and east to Kettle Run. Kettle Run eventually joins Broad Run approximately 10 miles downstream from Lake Manassas.

#### *1.3.4 Physiography*

VHFS is located near the border between the Coastal Plain and Piedmont Physiographic Provinces in Virginia. Locally, the topography suggests that VHFS is at the edge of the Piedmont, in the Culpeper Basin of Triassic Age (195 to 230 million years ago). The basin is characterized by rolling terrain with moderate to thin residual soil cover above structurally complex rock strata consisting of folded layers of sedimentary and metamorphic rocks containing zones of igneous intrusion (ESE 1986).

Localized topography at VHFS is composed of gently rolling hills with slopes generally less than 10 percent. Elevations on the installation vary from 335 to 430 feet above mean sea level (MSL).

#### *1.3.5 Soils*

The two major soil associations in the VHFS vicinity are the Montalto and Penn-Croton-Bucks associations, as determined by the 1956 U.S. Department of Agriculture (USDA) Soil Survey of Fauquier County, Virginia. The Montalto soil association has developed predominantly on undulating land from fine-grained Triassic diabase. The moderately shallow phase of Montalto soils is the predominant soil series in the VHFS vicinity. However, smaller areas of Elbert, Zion, Iredell, and recent colluvial and alluvial soils occur (USDA 1956). The Montalto unit is best suited for agricultural and woodland uses. High coarse fragment content and depth to rock are typical limiting factors of this unit.

The Penn-Croton-Bucks association is the most common in Fauquier County (over 19 percent of the county) and contains the greatest number of soils. It occurs in the Culpeper Basin and is underlain by shale and sandstone. The Penn soils are the predominant soils in the association. The Croton, Kelly, Wadesboro, Calverton, and Bucks soils are less extensive but make up an important part of the association. Minor areas of Catlett soils occur in the uplands, terrace, and first bottom soils along the streams. The soils of the association are evenly distributed throughout the county, with the exception of the Wadesboro, which is predominantly found near Greenville. The Penn-Croton-Bucks association is well-suited for most agricultural uses. The major use limitations with this soil association are depth to bedrock, droughtiness, and seasonal water tables.

### *1.3.6 Geology and Hydrogeology*

VHFS is situated in the Culpeper Basin (Lee 1979), which was formed during the Jurassic and/or Triassic period. This basin is located near the border of the Coastal Plain and Piedmont physiographic provinces and is one of a series of tensionally faulted, graben-like trenches that extend from Nova Scotia to Georgia along the Appalachian mountain system. The series of trench systems or Triassic Basins was formed by downfaulting as a result of fracturing associated with the Triassic-Jurassic continental split of North America.

Geologic material underlying VHFS consists of shale, siltstone, basalt, and diabase. Metamorphosed hornfels, granite, and quartzite also can be found. Basalts comprise the predominant near-surface rock in the western portion of the installation, whereas the sedimentary red beds are common on the eastern side. Regional faulting has resulted in three mafic intrusions at VHFS. Residual soils have developed from the weathering of underlying bedrock. Bedrock is encountered at depths ranging from a few feet below land surface (BLS) on the northern side of the installation to 39 feet BLS on the southern side of the installation (ESE 1986).

Current data suggest that the groundwater system in the area of VHFS is a single aquifer system. As defined by EPA, VHFS is not located over a sole-source aquifer; however, this system is used as the drinking water source for 400 VHFS residents and the working

population of 2,000 personnel (Weston 1990). Currently, three production wells on VHFS provide potable water for the 400 VHFS residents. Two hundred and fifty private wells within a 4-mile radius provide a water source for 2,000 residents. In addition, there also are seven public wells within a 4-mile radius of VHFS that provide a water source for 700 residents.

### ***1.3.7 Sensitive Environments***

No plant or wildlife species listed by the U.S. Fish and Wildlife Service (USFWS) or the Commonwealth of Virginia Endangered Species Act as threatened or endangered are known to occur at VHFS (ESE 1986). The southern bald eagle (*Haliaeetus leucocephalus*), an endangered species, is occasionally observed at nearby Lake Manassas. Approximately 5 acres of VHFS property are within the 100-year floodplain of South Run. Dump #1 and the Pistol Range are within the floodplain (FEMA 1982). The western tributary of South Run is considered a palustrine wetland and is the only wetland on the VHFS property (USDOI 1977). Approximately 20 acres of wetlands are within a 4-mile radius of the property.

## 2. SCOPE OF INVESTIGATION

Under the Community Environmental Response Facilitation Act (CERFA) (Public Law 102-426), there are seven required sources of information that are to be reviewed prior to parcel categorization. These sources are as follows: Federal Government records pertaining to the property, records of adjacent property, employee interviews, visual inspection of the facility, inspection of adjacent property, title documents, and aerial photographs. The scope of Science Applications International Corporation's (SAIC's) investigation included a review of all required sources of information regarding current and previous uses of the real property as well as record searches at state and local agencies. The sources reviewed are described below.

### 2.1 FEDERAL GOVERNMENT DOCUMENTS

A variety of previous assessments, surveys, and investigations have been conducted at Vint Hill Farms Station (VHFS). The following documents were reviewed to obtain information on the property:

- *Draft Enhanced Preliminary Assessment for Vint Hill Farms Station*, November 1993
- *Concept Design and Field Investigation Report, Management/Testing/Upgrade of Underground Storage Tanks, Vint Hill Farms Station*, June 1993
- *Preliminary Assessment Report Addendum for Vint Hill Farms Station*, March 1992
- *Vint Hill Farms Station Spill Prevention Control and Countermeasures (SPCC) Plan and Installation Spill Contingency Plan (ISCP)*, March 1992
- *Building 268 (IMMC) Neutralization Pit Site Investigation Report*, April 1991
- *Vint Hill Farms Station, Chesapeake Bay Program, FY 91 Progress Report*, 1991
- *Preliminary Assessment Report for Vint Hill Farms Station*, October 1990
- *Phase II Contamination Assessment (Auto Craft Shop UST), Vint Hill Farms Station Military Reservation*, October 1990.
- *Vint Hill Farms Station, Chesapeake Bay Program, FY 90 Progress Report*, 1990
- *Report of Annual Preventative Maintenance at Vint Hill Farms Station*, June 1989
- *Environmental Contamination Survey of Vint Hill Farms Station*, March 1986
- *Solid Waste Management Survey, Vint Hill Farms Station*, June 1983

- *Installation Assessment (Aerial Photograph Interpretation), Vint Hill Farms Station, Virginia, February 1983*
- *Installation Assessment of Vint Hill Farms Station, October 1981.*

In addition to these documents, the CERFA investigators also reviewed the hazardous waste manifests from fiscal years (FY) 1991, 1992, and 1993; environmental survey inspection results; correspondence from Federal and state regulators; site plans and details maps; and U.S. Army Environmental Hygiene Agency (USAEHA) records pertaining to radioactive materials use. The remainder of these investigation documents are presented in Section 6.

## **2.2 FEDERAL, STATE, AND LOCAL GOVERNMENT REGULATORY RECORDS**

Relevant information was obtained from Federal, state, and local records and from Federal and state environmental data bases. Records were searched or obtained from the following agencies:

- U.S. Environmental Protection Agency (EPA) Region 3, Superfund Division
- Virginia Department of Environmental Quality (DEQ), Hazardous Waste Division
- Virginia Department of Health (VDH), Office of Water Programs
- Virginia State Water Control Board (SWCB), UST Division
- Virginia State Water Control Board, National Pollutant Discharge Elimination System (NPDES) Division
- Virginia Air Pollution Control Board (APCB), Region IV
- Fauquier County, Environmental Health Division.

## **2.3 FEDERAL AND STATE RECORDS REGARDING ADJACENT PROPERTY**

The following environmental data bases were searched for information on surrounding properties in a 2-mile radius of VHFS (see Appendix A):

- *U.S. EPA: NPL*—The National Priorities List (NPL) is EPA's data base of uncontrolled or abandoned hazardous waste sites identified for priority remedial action under the Superfund Program. To be included on the NPL, a site must either

meet or surpass a predetermined hazard ranking systems score, or be chosen as a state's top-priority site, or meet all three of the following criteria:

- The U.S. Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure.
  - EPA determines that the site represents a significant threat.
  - EPA determines that remedial action is more cost-effective than removal action.
- **U.S. EPA: CERCLIS**—The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) data base is a compilation of the sites that EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to CERCLA.
  - **U.S. EPA: RCRIS/HWDMS**—EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The Resource Conservation and Recovery Information System/Hazardous Waste Data Management System (RCRIS/HWDMS) data base is a compilation by EPA of reporting facilities that generate, transport, treat, store, or dispose of hazardous waste.
  - **ERNS**—The Emergency Response Notification System (ERNS) is a national data base used to collect information on reported releases of oil and hazardous substances. The data base collects information from spill reports made to Federal authorities, including the EPA, U.S. Coast Guard, National Response Center (NRC), and U.S. Department of Transportation (DOT).
  - **Virginia: SPL**—The Active Sites Cleanup Program data base is maintained by the Virginia DEQ to track facilities on the State Priority List (SPL). These sites are considered to be actually or potentially contaminated and presenting a possible threat to human health and the environment. The sites are generally listed by the DEQ to warn the public or as a part of an investigation and cleanup program managed by the DEQ.
  - **Virginia: LUST**—The Pollution Remediation Program data base maintained by the Virginia SWCB contains information on known or suspected leaking underground storage tanks (LUST).
  - **Virginia: UST**—The underground storage tank (UST) Program data base maintained by the Virginia SWCB contains information on registered underground storage tanks.
  - **Virginia: SWMF**—The Solid Waste Management Facilities (SWMF) data base maintained by the Virginia Department of Health tracks solid waste landfills, incinerators, and transfer stations.



## **2.4 INTERVIEWS**

Various individuals were interviewed to provide information for the CERFA investigation. Current and former employees, and Federal, state, and local government personnel were interviewed to supplement information found in the existing investigation documents. These individuals, with their titles and dates of employment, are listed in Appendix B.

## **2.5 VISUAL INSPECTIONS OF VHFS AND ADJACENT PROPERTY**

A visual inspection of the buildings, structures, equipment, and aboveground piping was performed for the property in September and October 1993. An automobile survey was performed by driving over all paved roads on the property. Suspected hazardous releases identified by the automobile survey were verified by a walking inspection. The walking inspection included all areas not able to be seen by the automobile inspection (e.g., through the woods in the antenna fields).

The adjacent properties were inspected by an automobile survey of all roads in a 1-mile radius of VHFS and a visual inspection through the boundary fence. No walking inspections were performed on surrounding properties.

## **2.6 TITLE DOCUMENTS**

SAIC conducted a review of tract maps and transfer documents on October 19, 1993, to identify the prior property owners of the Base Realignment and Closure (BRAC) portion of VHFS 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 SAIC's review of the title documents, all prior owners of the property were individuals. Previous ownership and the date of transfer to the Army are indicated in Figure 5-2.

## 2.7 AERIAL PHOTOGRAPHS

The EPA aerial photographs provided in the *Installation Assessment* were reviewed to obtain information regarding prior uses of VHFS property. The photographs provided were from 1937, 1950, 1958, 1965, 1974, 1977, and 1978.

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### 3. PROPERTY BACKGROUND INFORMATION

#### 3.1 GENERAL DESCRIPTION

Vint Hill Farms Station (VHFS) is part of the Communications-Electronics Command (CECOM), a Major Subordinate Command of the Army Materiel Command (AMC). The Installation is host to a variety of activities and tenants with varying missions. The two main activities involve the Intelligence Materiel Management Center (IMMC) and the Intelligence Electronic Warfare Directorate (IEWD). IMMC provides integrated wholesale and specialized logistics support to the Army, Department of Defense (DOD) customers, and foreign allies for assigned Signals Intelligence/Electronics Warfare (SI/EW) weapons systems and equipment. IEWD provides effective signals intelligence, communications jamming, and intelligence fusion material capability to the Army. Pertinent information regarding VHFS is listed in Table 3-1. The general site map of VHFS is shown in Figure 3-1.

#### 3.2 PROPERTY HISTORY

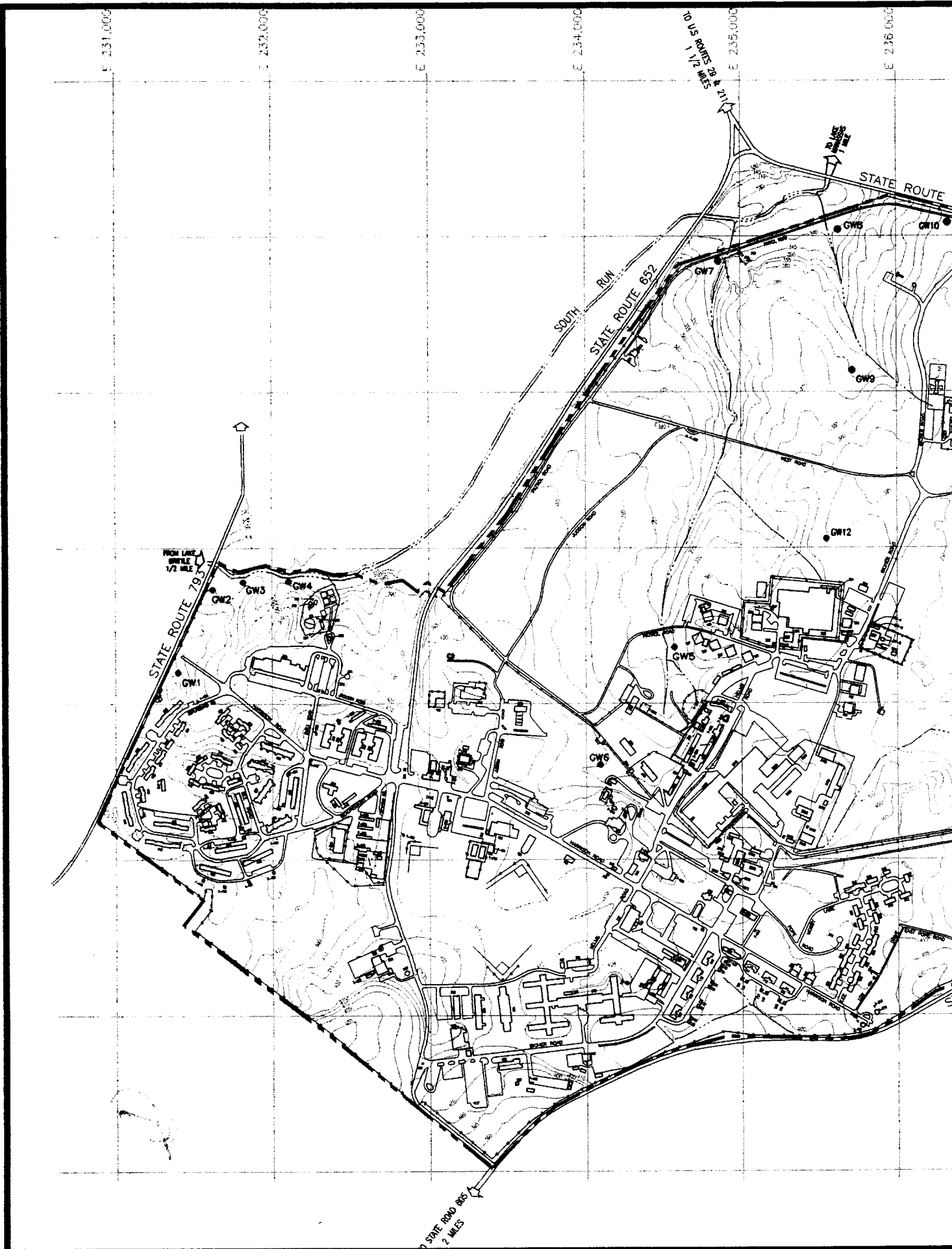
The earliest recorded ownership of the property now known as VHFS was a deed transferring land from Charter Carter to Thomas and Sarah Foster in 1783. A portion of property was deeded to William Herndon in 1783. In 1803, administrator's of Mr. Herndon's estate sold the property to Thomas Hooe. The property was willed to Bernard Hooe, but subsequently was turned over to Richard and Lucy Buckner as the result of a lawsuit. Ms. Buckner gave the land to Virginia Brooks in 1853. The farmland, which totaled 729 acres at that time, was sold by Ms. Brooks to Andrew Low in 1860.

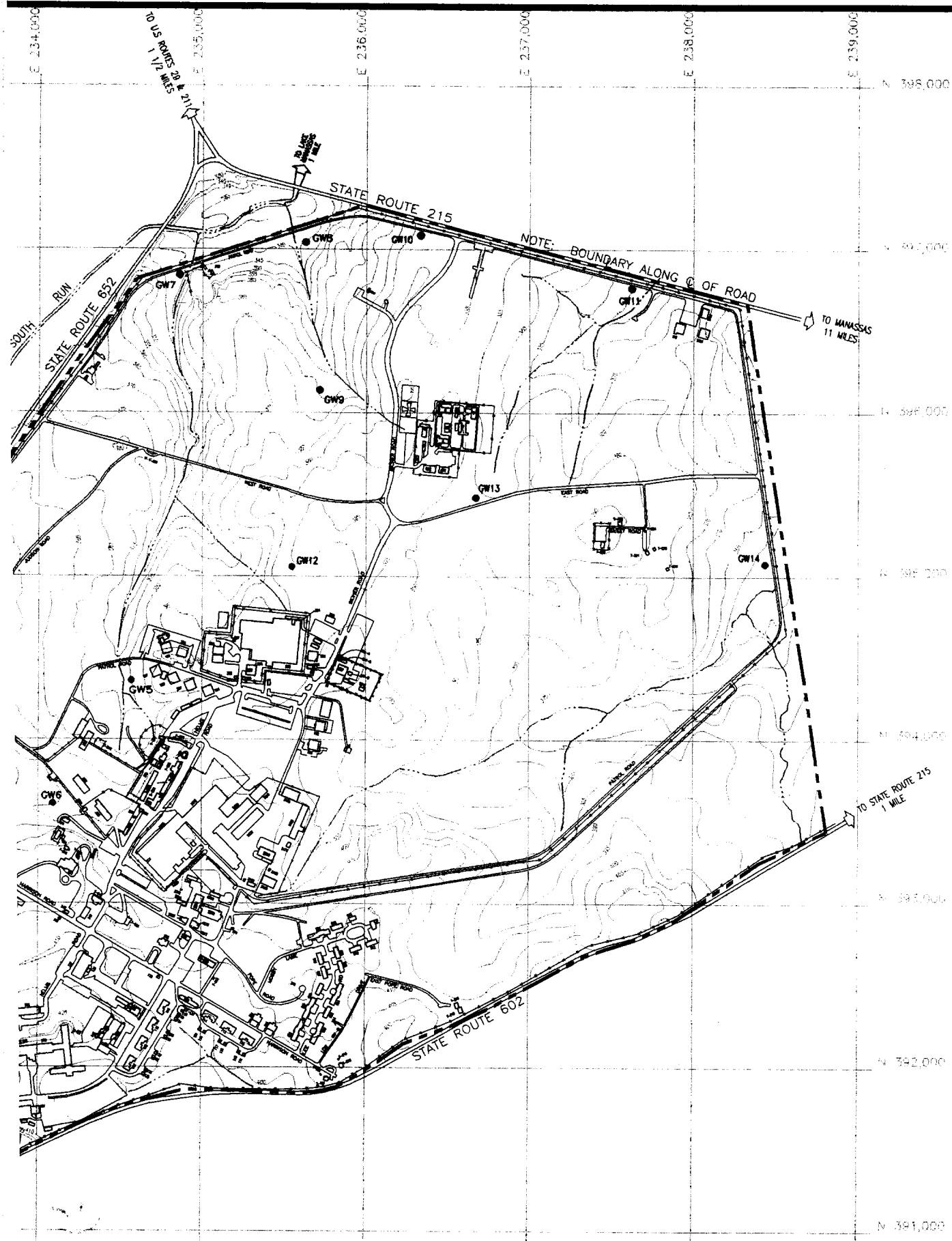
Mr. Low began construction of a residence on the site, which still stands, and serves as the Officers Club (Building 247). The construction was halted during the Civil War, but was completed in the late 1860s. In 1910, Mr. Low sold 600 acres to O. Johnston and the remaining acres to Herbert Carneal. Both land parcels were sold to Martin Kohler in the spring of 1911. The farm was purchased by Mitchell Harrison in July 1911. The property ultimately was passed on to Margaret Janet Harrison and John Kearsley Mitchell Harrison, who used it as a dairy farm. The War Department surveyed Vint Hill in May 1942 as possible land for establishing a new military installation. The land, which totaled 721 acres at this time, was purchased by

**Table 3-1. Identifying Information for VHFS**






Property Address:	Vint Hill Farms Station State Route 652 Warrenton, Virginia 22186-5013
Installation Coordinates:	38°44' N; 77°40' W
County:	Fauquier County, Virginia
Size:	701 acres
Federal Facility ID#:	VA211220931
Property Description:	VHFS is located 30 miles west of Washington, D.C. This facility is bounded by Prince William County to the east and South Run to the north.
Command:	U.S. Army Materiel Command
Installation Commander:	Colonel Cornwell
Mission:	To research, develop, produce, and sustain new signals warfare technology for military intelligence.
Operations:	The Installation is host to a variety of activities and tenants with varying missions. The two main activities involve the Intelligence Materiel Management Center (IMMC) and the Intelligence Electronic Warfare Directorate (IEWD).

Sources: Weston 1992 and Reisch 1993.

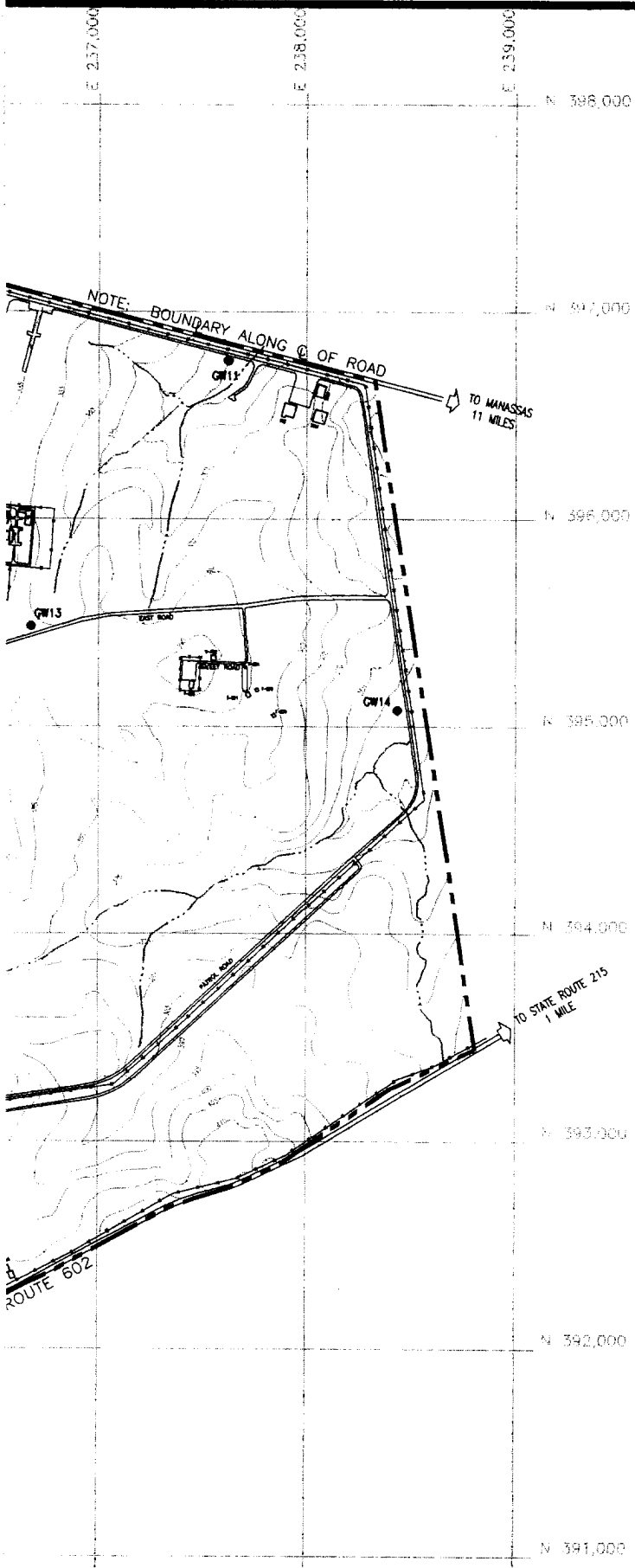




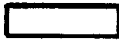
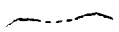

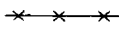


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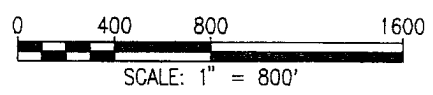
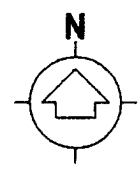
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**LEGEND:**

-  BUILDING
-  SITE DRAINAGE
-  PAVED ROAD
-  FENCE
-  GROUNDWATER WELL
-  INSTALLATION BOUNDARY



<b>SAC</b> <i>Science Applications International Corporation</i>			
<b>VINT HILL FARMS STATION</b> Warrenton, Virginia CERFA Investigation			
<b>GENERAL SITE MAP</b>			
Figure: 3-1	Project: 01-0827-03-6521-001	File Name: /93064/DWGS/515S2	Date: 10-28-93

3



the Federal Government for \$127,500 and transfer of the title was passed from the Harrisons on July 7, 1942.

U.S. Army personnel arrived at Vint Hill during June 1942, while the Harrisons and the Federal Government were negotiating the purchase price. The installation was named VHFS at that time. Construction of temporary buildings began, and troops were transferred to VHFS from Fort Monmouth and Hancock, New Jersey. Lt. Robert Pope was assigned as the first Post Commander.

During World War II, VHFS served as a training center for signal corps personnel, and as a refitting station for signal units returning from combat before overseas deployment. These training activities were transferred from VHFS to Carlisle Barracks, Pennsylvania, in March 1949.

Permanent housing for troops and dependents was built and improved upon during the late 1940s. During and after the Korean conflict, VHFS expanded its facilities in support of military intelligence and communication activities. In addition, significant improvements were made in the areas of living and recreational buildings. The gymnasium, theater, service club, post exchange, and bowling alley were built during the early 1950s.

Since the Korean conflict, various activities and tenants have been present at VHFS. In 1961, the U.S. Army Electronic Materiel Readiness Activity was moved to VHFS. In 1973, EPA took over operation of the photographic interpretation center from the Defense Intelligence Agency. In 1974, the mission of VHFS refocused to a research and development role, with production of new signals warfare technology for military intelligence. The AMC became the major command for VHFS in 1987. VHFS is currently under the Major Subordinate Command of CECOM.

In October 1976, 10.48 acres along the northern boundary and 3.88 acres along the northeast boundary of VHFS were excedded to Fauquier County, Virginia. The 10.48-acre parcel, which is at the corner of State Routes 215 and 652, serves as a county park. In

August 1979, 5.41 acres of VHFS land were sold to the Commonwealth of Virginia, Department of Highways for a right-of-way at the northwest boundary. VHFS is currently comprised of 701.11 acres.

### **3.3 INDUSTRIAL OPERATIONS**

Three major industrial operations exist at VHFS; two are operated by the Army and one by a Government tenant agency (i.e., the U.S. Environmental Protection Agency [EPA]). The first industrial operation is within the Electronic Equipment Facility. This facility is used for metal etching, photographic development, and sandblasting, and contains a dry filter painting booth. The liquid waste products of these processes are filtered, neutralized, and then discharged to the sanitary sewer.

The second industrial operation is within the Vehicle Maintenance Area. Minor vehicle repairs are performed in this area. The wash racks in the maintenance shops drain to the storm sewer system after passing through sediment traps. The floor drains, sinks, and other drains in the service bays discharge directly to the sanitary sewer.

The third industrial operation is operated by EPA within the Environmental Photographic Interpretation Center (EPIC) Building. This facility develops film and interprets photographs of environmental interest. Both color and black and white film are processed. An ion-exchange system is used to recover silver and regenerate ferric cyanide bleach before discharge to the sanitary sewer.

### **3.4 HAZARDOUS MATERIALS STORAGE AND DISPOSAL**

VHFS is a RCRA large quantity generator (LQG) because more than 1,000 kg of hazardous wastes are generated each month. These hazardous wastes are disposed of using the RCRA identification number VA3211220931. Various satellite accumulation areas and central storage areas are used to store hazardous wastes before disposal. Satellite accumulation areas for hazardous wastes are found in the Electrical Equipment Facility, Auto Craft Shop, EPIC Building, Vehicle Maintenance Area, and AAFES Service Station. Currently, many of these wastes are transferred to a central storage area, the Hazardous Waste Storage Building. The

Hazardous Waste Storage Building has been used since 1990 for less than 90-day storage of hazardous wastes. Dump #1, the Former Photographic Wastewater Lagoon, and the Sludge Disposal Area formerly were used for hazardous waste disposal.

### **3.5 UNDERGROUND STORAGE TANKS**

Information on the active underground storage tanks (USTs) at VHFS is provided in Table 3-2. In February 1993, all of these USTs and their distribution lines passed a vacuum pressure leak test. Currently, the only tank in conformance to Federal standards for leak detection, corrosion protection, and overfill protection is the 10,000-gallon fiberglass gasoline tank in the Vehicle Maintenance Area, which was replaced in 1990. The remainder of the tanks will have to receive monthly monitoring and annual tank tightness tests to conform to the leak detection regulations. All USTs will have to be upgraded or replaced by December 1998 to conform to corrosion protection and overfill protection guidelines.

Information on all known removed, replaced, and abandoned USTs is provided in Table 3-3. The condition of these tanks at the time of their removal, replacement, or abandonment is unknown. However, due to the construction (steel) and ages (most are more than 20 years old) of the tanks, they could have leaked.

### **3.6 NON-CERCLA HAZARDS**

VHFS contains various hazardous materials and safety hazards that are not listed as Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances or petroleum derivatives. These include radon gas, asbestos, PCBs, lead paint, radioactive materials, and UXO. Appendix C lists all VHFS buildings with lead paint, asbestos, radon, and PCBs.

#### **3.6.1 Radon**

An extensive radon survey was performed in June 1990 using alpha track monitors (ATMs) on all of the office buildings and a sampling of the family housing units (FHUs). Most of the office buildings and FHUs were below the 4 pCi/L level (national average). No action

**Table 3-2 Active Underground Storage Tanks at VHFS**

Location	Capacity (gallons)	Construction	Contents	Installation Date
Bldg 287: Vehicle Maintenance Area	2,000	Steel	Diesel	1982
	2,000	Steel	Diesel	1982
	10,000	Fiberglass	Unleaded Gasoline	1990
Bldg 238: AAFES Service Station	10,000	Steel	Unleaded Gasoline*	1969
	10,000	Steel	Unleaded Gasoline*	1969
	10,000	Steel	Unleaded Gasoline*	1969
	550	Steel	Waste Oil	1969
Bldg 248: Engineering Compound Fuel Point	1,000	Steel	Unleaded Gasoline	Unknown (1944?)
	1,000	Steel	Unleaded Gasoline	Unknown (1944?)
Bldg 261: IEWD Emergency Generators	15,000	Steel	Diesel	1967
	8,000	Steel	Diesel	1951
	2,000	Steel	Diesel	1985
Bldg 260: IEWD Emergency Generator	5,000	Steel	Diesel	1944
Bldg 227: Power Plant Emergency Generator	2,000	Steel	Diesel	1985
Bldg 398: STP Emergency Generator	550	Steel	Diesel	1978
Bldg 205: Lift Station Emergency Generator	550	Steel	Diesel	1978

\* May have contained leaded gasoline previously.

Sources: USACE 1993, ESE 1981, and Reisch 1993.

**Table 3-3. Removed, Replaced, and Abandoned USTs at VHFS**

Location	Capacity (gallons)	Construction	Contents	Installation Date	Status
Bldg 161: Former Steam Plant	30,000	Steel	Fuel Oil	Unknown (1978?)	Removed in 1990
	30,000	Steel	Fuel Oil	Unknown (1978?)	Removed in 1990
Bldg 306: Auto Craft Shop	1,000	Steel	Waste Oil*	Unknown	Removed in 1992
Bldg 220: Former Service Station	Unknown	Steel	Gasoline	Unknown	Abandoned in 1983
	Unknown	Steel	Gasoline	Unknown	Abandoned in 1983
Bldg 287: Vehicle Maintenance Area	12,000	Steel	Gasoline	1982	Replaced in 1990
Bldg 261: IEWD Emergency Generator	2,000	Steel	Diesel	1951	Replaced in 1985
Bldg 227: Emergency Generator	1,000	Steel	Diesel	1944	Replaced in 1985

\* Contained diesel fuel previously.

Sources: USACE 1993 and ESE 1981.

is necessary for these buildings according to the EPA Guidelines for Corrective Action. However, four buildings were in the 4-20 pCi/L (above average) range: the Electronic Equipment Facility (Building 2400) at 19.4 pCi/L, the Officers Club (Building 247) at 9.4 Pci/L, the STP Laboratory (Building 398) at 4.9 pCi/L, and Building 2300 at 5.3 pCi/L. Resampling in March 1993 confirmed these results. Although not required by EPA, VHFS is considering abatement options for the Officers Club and Electronic Equipment Facility (e.g., sealing the crawl space in Building 247 and installing an air/air exchanger).

### **3.6.2 Asbestos**

An asbestos survey was performed in December 1990 on all of the office buildings and a sampling of the FHUs. Most of the buildings in the survey (74 out of 119) were found to contain asbestos in pipe insulation, floor tile, and wallboard (see Appendix C). Since only about 10 percent of the FHUs were inspected, survey results for the housing units represent only partial information. However, because most of the FHUs were constructed prior to 1971, it is possible that asbestos construction materials were used. In addition, asbestos cement piping is present throughout the facility in the water and sewer lines.

The facility has an Asbestos Management and Control Program (AMCP) to monitor the asbestos containing materials (ACMs) found in most of the buildings. Warnings are placed in areas with friable asbestos (e.g., the boiler room of the EPIC Building). According to the AMCP, removal of asbestos is not necessary unless the ACM is damaged or undergoing renovation. Annual updates of the condition of the ACM are performed.

Asbestos removals have occurred in various buildings (e.g., the EPIC Building [Building 166] wallboard and the Administration Building [Building 160] crawl space). Asbestos wastes are currently sent to the Fauquier County Landfill or the HAM Sanitary Landfill in Peterstown, West Virginia. Both landfills are licensed asbestos landfills. However, before 1973, asbestos wastes were burned with other solid wastes and buried in Dump #1. In accordance with the U.S. Army Environmental Center (USAEC) guidelines for this investigation, any building constructed before 1985 may be assumed to contain ACM.

### 3.6.3 PCBs

During the Installation Assessment performed in May 1981 by Environmental Science and Engineering, Inc. (ESE), three in-service transformers were observed to be leaking. Their nameplates identified them as containing Askarel, a fluid defined as polychlorinated biphenyl (PCB) liquid by EPA. VHFS contracted to complete repairs on these transformers and all PCB-contaminated materials were removed offsite by the contractor (ESE 1981).

In 1981, a survey of the identification nameplates was performed by the Directorate of Facilities and Engineers on most of the transformers located within VHFS. These transformers were located outside various buildings across the installation. The survey identified 45 out of 113 transformers as containing PCB fluid, such as Askarel. Samples of various groups of transformer oils were performed in 1981 by Versar and in 1983 and 1987 by Emmorton Electrical Testing. However, according to VHFS, the test results were not reliable (Reisch 1993).

In 1989, all of the transformers within VHFS were tested for PCB content. The tests determined that most of the transformer oils contained PCBs. The eight transformers that were above 500 parts per million (ppm) were removed from service and taken to the Transformer Storage Area in November 1989. These transformers had up to 910,000 ppm PCBs (i.e., dielectric fluid). The eight transformers and other PCB-contaminated transformers were removed from the Transformer Storage Area by Aptus Environmental Services in two shipments on August 16, 1990 and October 29, 1990. According to hazardous waste manifests, the shipments contained 2,068 kg of >500 ppm PCB oil, 700 kg of 50 to 500 ppm PCB oil, and 950 kg of <50 ppm PCB oil. The PCB oils were disposed of in a Toxic Substance Control Act (TSCA) incinerator in Coffeyville, Kansas.

Currently, the facility is trying to retrofit all 50 to 500 ppm PCB-contaminated transformers to less than 50 ppm PCBs. The facility also plans to resample all of the transformers by 1994 to determine the accuracy of the 1989 survey and to mark all transformers currently without labels or ones that may be currently mislabeled as containing PCBs (Reisch 1993).

### ***3.6.4 Lead Paint***

Lead-based paint was applied in the FHUs and office buildings extensively in the 1940s and 1950s. Use of lead-based paint continued at a lesser pace after this time. However, as the most recent FHU construction was 1970-71, all FHUs are suspected of containing lead-based paint.

A Lead Exposure Risk Assessment (LERA) survey was completed in September 1991 of most of the buildings on the facility (a total of 282) to categorize them into high, medium, or low risk categories. The risk level is based on the usage of the building and the condition of the paint. The high risk homes were sampled in March and May 1993, and the medium and low risk homes will be sampled in the future. The lead-based paint was mainly used on the front door and window sills of the brick residences. Buildings with at least 0.5 percent lead (by weight) include Buildings 122B, 110B, 116A, 316A, 425B, and 411G. The maximum concentration of lead in paint was 16.1 percent.

Lead-based paint removals have been performed in some of the high-risk FHUs. However, in accordance with USAEC guidelines for this investigation, any building constructed before 1978 may be assumed to contain lead-based paint.

### ***3.6.5 Radioactive Materials***

The Health Clinic (Building 137) has three diagnostic x-ray machines that contain a small amount of low-level radioactive material. During a 1976 inspection, the U.S. Army Environmental Health Agency (USAEHA) found no radiation hazard associated with these units (ESE 1981). The only other known radioactive materials are the tritium sources located in the emergency exit signs installed in the 1950s (Reisch 1993).

### ***3.6.6 Unexploded Ordnance***

Currently, there is no known unexploded ordnance (UXO) on the Vint Hill property. The ammunition magazine only holds fresh rounds for small caliber weapons and the skeet range and pistol range are used exclusively for shotgun and pistol target practices. However, an



unused bazooka round was found on the VHFS property in October 1992 and subsequently was detonated in the pistol range with plastic explosives (Reisch 1993).

### **3.7 CHANGES TO REAL PROPERTY ENVIRONMENTAL CONDITION SINCE THE ENHANCED PRELIMINARY ASSESSMENT**

No installation expansions, mission alterations, or significant incidents (e.g., fires, spills, or explosions) have occurred since the Enhanced Preliminary Assessment (ENPA) was distributed because the ENPA and CERFA activities were conducted concurrently.

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#### 4. INVESTIGATION RESULTS

The Enhanced Preliminary Assessment (ENPA) team from SAIC identified 42 areas requiring environmental evaluation (AREEs) at Vint Hill Farms Station (VHFS) as a result of a thorough review of existing VHFS documents and regulatory records, interviews, and visual inspections. Table 4-1 lists each of the AREEs; the locations of the AREEs are shown in Figure 4-1.

This section summarizes the Community Environmental Response Facilitation Act (CERFA) investigation results. Each of the AREEs, all buildings, and any other potential releases to the environment (such as spills) were evaluated according to the parcel definitions and guidelines for satisfying CERFA. Portions of the installation were then identified and labeled according to the following criteria:

***CERFA Parcel***—A portion of the installation real property for which investigation reveals no evidence of storage for 1 year or more, release, or disposal of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. CERFA parcels include areas where polychlorinated biphenyl- (PCB-) containing equipment is in operation, but there is no evidence of release. CERFA parcels also include any portion of the Installation that 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 Parcel with Qualifier(s)***—A portion of the installation real property for which investigation reveals no evidence of storage for 1 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 UXO located on firing ranges or impact areas, radon, radionuclides contained within products being used for their intended purposes, asbestos contained within

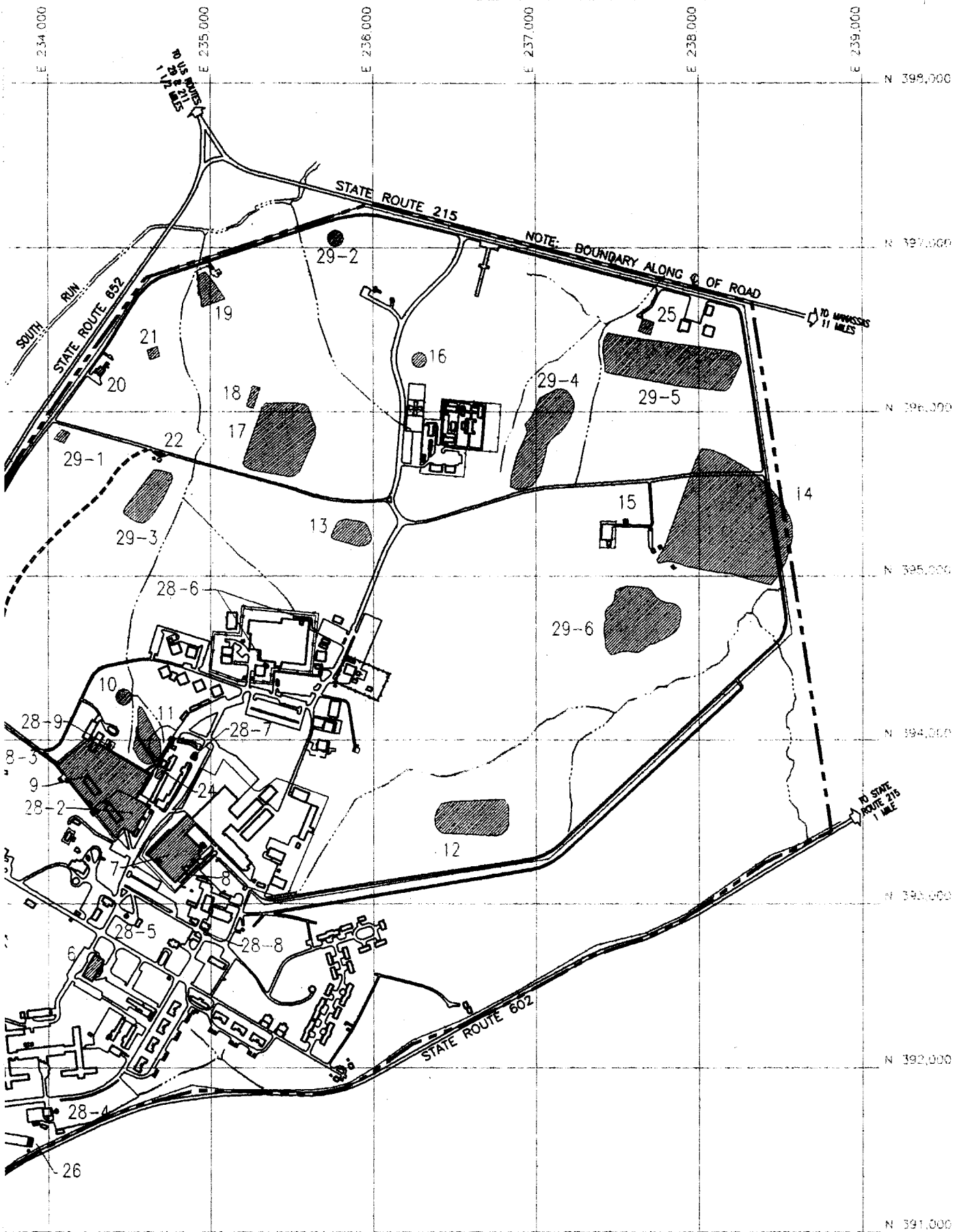
**Table 4-1. Areas Requiring Environmental Evaluation (AREEs)  
Vint Hill Farms Station**

AREE 1	Dump #1
AREE 2	Sewage Treatment Plant
AREE 3	Warehouse
AREE 4	Auto Craft Shop
AREE 5	EPIC Building
AREE 6	Health Clinic
AREE 7	Electrical Equipment Facility
AREE 8	IMMC Neutralization Pit
AREE 9	Vehicle Maintenance Area
AREE 10	Former Photographic Wastewater Lagoon
AREE 11	Former Sewage Treatment Plant
AREE 12	Dump #2
AREE 13	Sludge Disposal Area
AREE 14	Skeet Range
AREE 15	Hazardous Waste Storage Building
AREE 16	Firefighter Training Pit
AREE 17	Dump #3
AREE 18	Grease Pit
AREE 19	Pistol Range
AREE 20	Incinerator
AREE 21	Sand Filter Beds
AREE 22	Fixed Ammunition Magazine
AREE 23	Transformers
AREE 24	Transformer Storage Area
AREE 25	Sugar Tree
AREE 26	Outdoor Wash Racks
AREE 27	AAFES Service Station
AREE 28-1	Auto Craft Shop UST
AREE 28-2	Vehicle Maintenance Area USTs
AREE 28-3	AAFES Service Station USTs
AREE 28-4	Former Steam Plant USTs
AREE 28-5	Former Service Station Abandoned USTs
AREE 28-6	IEWD Emergency Generator USTs
AREE 28-7	Engineering Compound USTs
AREE 28-8	Power Plant UST
AREE 28-9	STP Emergency Generator USTs
AREE 29-1	Salvage Yard
AREE 29-2	Possible Sludge Disposal Area
AREE 29-3	Possible Disposal Area
AREE 29-4	Disposal Area
AREE 29-5	Liquid Impoundment Area
AREE 29-6	Possible Burn Pile



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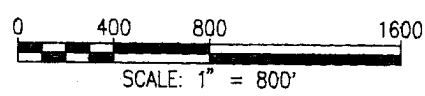
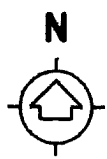
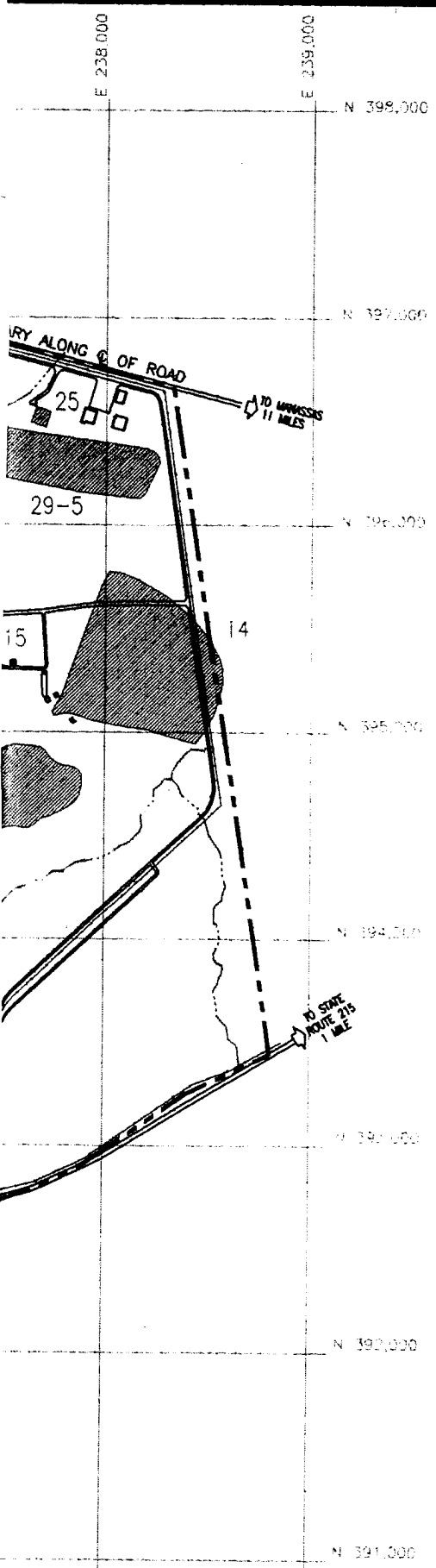
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Figure: 4-1	Project: 01-01

# AREEs LOCATIONS

1. .... DUMP #1
2. .... SEWAGE TREATMENT PLANT
3. .... WAREHOUSE
4. .... AUTO CRAFT SHOP
5. .... EPIC BUILDING
6. .... HEALTH CLINIC
7. .... ELECTRICAL EQUIPMENT FACILITY
8. .... IMMC NEUTRALIZATION PIT
9. .... VEHICLE MAINTENANCE AREA
10. .... FORMER PHOTOGRAPHIC WASTEWATER LAGOON
11. .... FORMER SEWAGE TREATMENT PLANT
12. .... DUMP #2
13. .... SLUDGE DISPOSAL AREA
14. .... SKEET RANGE
15. .... HAZARDOUS WASTE STORAGE BUILDING
16. .... FIREFIGHTER TRAINING PIT
17. .... DUMP #3
18. .... GREASE PIT
19. .... PISTOL RANGE
20. .... INCINERATOR
21. .... SAND FILTER BEDS
22. .... FIXED AMMUNITION MAGAZINE
23. .... TRANSFORMERS (LOCATED THROUGHOUT PROPERTY)
24. .... TRANSFORMER STORAGE AREA
25. .... SUGAR TREE
26. .... OUTDOOR WASH RACKS
27. .... AAFES SERVICE STATION
- 28-1. .... AUTO CRAFT SHOP USTs
- 28-2. .... VEHICLE MAINTENANCE AREA USTs
- 28-3. .... AAFES SERVICE STATION USTs
- 28-4. .... FORMER STEAM PLANT USTs
- 28-5. .... FORMER SERVICE STATION ABANDONED USTs
- 28-6. .... IEWD EMERGENCY GENERATOR USTs
- 28-7. .... ENGINEERING COMPOUND USTs
- 28-8. .... POWER PLANT UST
- 28-9. .... STP EMERGENCY GENERATOR USTs (2 LOCATIONS)
- 29-1. .... SALVAGE YARD
- 29-2. .... POSSIBLE SLUDGE DISPOSAL AREA
- 29-3. .... POSSIBLE DISPOSAL AREA
- 29-4. .... DISPOSAL AREA
- 29-5. .... LIQUID IMPOUNDMENT AREA
- 29-6. .... POSSIBLE BURN PILE



**SAC**  
Science Applications International Corporation

**Vint Hill Farms Station  
Warrenton, Virginia  
CERFA Investigation**

**GENERAL LOCATION OF AREEs**

Figure: 4-1	Project: 01-0827-03-6521-002	File Name: /94019/DWGS/672-AR1	Date: 04-25-94
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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 1 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 (DOD), and therefore, not explicitly investigated for CERFA. CERFA Excluded Parcels also include any portions of the installation that have already been transferred by deed to a party outside the Federal Government, or by transfer assembly to another Federal agency.

A description of the parcel labeling is contained in Section 1.2 of this report. If any parcel has a history resulting in its labeling as a CERFA Disqualified Parcel or a CERFA Parcel with Qualifiers, but this history is unverified by sampling and analysis, this possibility is indicated by a (P) in the label. For both CERFA Disqualified Parcels and CERFA Parcels with Qualifiers that have more than one reason for disqualification or qualification, all attributes are indicated.

Each of the CERFA parcel categories is described in the following subsections. A description of each parcel is provided, which includes a summary of each AREE within the parcel, all CERFA qualifier information, and any other pertinent information used to label the parcel. Table 4-2 provides information pertaining to the disqualified and qualified parcels; this information includes the parcel number and label, the CERFA category, the size of each parcel,



Table 4-2. Summary of CERFA Investigation Results, VHFS

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
1D-HR/A/L(P) Disqualified	1 acre	Building 412 Storm Sewer	A/L(P) HR
2D-HR/HR(P)/HS/PR/PS/A/A(P)/L/L(P)/R Disqualified	15 acres	AREE 1 - Dump #1 AREE 2 - Sewage Treatment Plant (STP) AREE 28-9 - STP Emergency Generator UST	HR/PR/A/L HR/HR(P)/HS/A(P)/L(P)/R PS
3D-HR/HS/PR/PS/A/A(P)/L(P) Disqualified	4 acres	AREE 3 - Warehouse AREE 4 - Auto Craft Shop AREE 28-1 - Auto Craft Shop UST Other buildings	HS HR/HS/PR/PS/A/A(P)/L(P) PR/PS A(P)/L(P)
4D-PR Disqualified	1 acre	Building 102 - Parking Lot	PR
5D-HR(P)/HS/A/L(P) Disqualified	2 acres	AREE 5 - EPIC Building	HR(P)/HS/A/L(P)
6D-HR/A(P)/L(P) Disqualified	1 acre	Building 162 Building 163 - Storm Drain	A(P)/L(P) HR

Key to designations:

- A - Asbestos
- L - Lead
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible
- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 4-2. Summary of CERFA Investigation Results, VHFS (continued)

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
7D-HR(P)/A(P)/L(P) Disqualified	7 acres	EPIC Sewerline Building 163	HR(P) A(P)/L(P)
8D-HR(A(P))/L(P) Disqualified	1 acre	Building 188	HR/A(P)/L(P)
9D-HR(P) Disqualified	4 acres	EPIC Sewerline	HR(P)
10D-HR(HR(P)/HS/PR/PS/A(A(P))/L(P)/P/R) Disqualified	70 acres	AREE 7 - Electrical Equipment Facility AREE 8 - IMMC Neutralization Pit AREE 9 - Vehicle Maintenance Area AREE 10 - Former Photographic Wastewater Lagoon AREE 11 - Former Sewage Treatment Plant AREE 19 - Pistol Range AREE 20 - Incinerator AREE 21 - Sand Filter Beds AREE 24 - Transformer Storage Area AREE 27 - AAFES Service Station	HR/HS/A(P)/L(P)/P/R HR HR/HS/PR/PS/A(P)/L(P) HR HR(P) HR(P)/A(P)/L(P) HR(P)/A/L(P) HR(P) P HR/HS/PR/PS/A(P)/L(P)

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- A - Asbestos
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- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 4-2. Summary of CERFA Investigation Results, VHFS (continued)

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
10D-HR/HR(P)/HS/PR/PS/A/A(P)/L(P)/P/R (continued)		AREE 28-2 - Vehicle Maintenance Area USTs AREE 28-3 - AAFES Service Station USTs AREE 28-7 - Engineering Compound USTs AREE 28-8 - Power Plant UST AREE 28-9 - STP Emergency Generator UST Building 2410 Building 2490 Other Buildings	PS PR/PS PS PS PS P PR A/A(P)/L(P)
11D-HR/PR/PS/A(P)/L(P) Disqualified	3 acres	AREE 26 - Outdoor Wash Racks AREE 28-4 - Former Steam Plant USTs Steam Plant	HR/PR PS A(P)/L(P)
12D-HR(P)/PR(P) Disqualified	1/2 acre	Former Outdoor Wash Racks	HR(P)/PR(P)
13D-PS Disqualified	1 acre	AREE 28-5 - Former Service Station Abandoned USTs	PS

Key to designations:

- A - Asbestos
- L - Lead
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 4-2. Summary of CERFA Investigation Results, VHFS (continued)

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
14D-HR/PS/A(P)/L(P)/P Disqualified	6 acres	AREE 28-6 - IEWD Emergency Generator USTs Building 260 Building 261 Other Buildings	PS HR P A(P)/L(P)
15D-HR(P)/PR(P)/L(P) Disqualified		AREE 17 - Dump #3 AREE 18 - Grease Pit	HR(P)/L(P) PR(P)
16D-HR/L(P) Disqualified	2 acres	AREE 13 - Sludge Disposal Area	HR/L(P)
17D-HR(P) Disqualified	2 acres	AREE 29-2 - Possible Sludge Disposal Area	HR(P)
18D-HR/PR Disqualified	2 acres	AREE 16 - Firefighter Training Pit	HR/PR
19D-HR(P)/PS Disqualified	4 acres	AREE 25 - Sugar Tree	HR(P)/PS
20D-HR(P)/HS/A(P)/L(P)/P Disqualified	17 acres	AREE 14 - Skeet Range AREE 15 - Hazardous Waste Storage Building	HR(P)/A(P)/L(P)/P HS

Key to designations:

- A - Asbestos
- L - Lead
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible
- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 4-2. Summary of CERFA Investigation Results, VHFS (continued)

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
21Q-A/A(P)/L/L(P) CERFA Parcel with Qualifiers	51 acres	Housing units and other buildings	A/A(P)/L/L(P)
22Q-A(P)/L(P) CERFA Parcel with Qualifiers	4 acres	Buildings	A(P)/L(P)
23Q-A(P)/L(P) CERFA Parcel with Qualifiers	1 acre	Building 169	A(P)/L(P)
24Q-A/A(P)/L/L(P)/R/RD CERFA Parcel with Qualifiers	61 acres	AREE 6 - Health Clinic Housing Units and Other Buildings Building 247	A(P)/L(P)/RD A/A(P)/L/L(P) A(P)/L(P)/R
25Q-A(P)/L(P) CERFA Parcel with Qualifiers	1 acre	AREE 22 - Fixed Ammunition Magazine AREE 29-3 - Possible Disposal Area	A(P)/L(P) None
26Q-A(P)/L(P) CERFA Parcel with Qualifiers	1 acre	Building 296	A(P)/L(P)
27Q-A(P) CERFA Parcel with Qualifiers	1 acre	Building 298	A(P)
28Q-A(P)/L(P) CERFA Parcel with Qualifiers	3 acres	Buildings	A(P)/L(P)

Key to designations:

- A - Asbestos
- L - Lead
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 4-2. Summary of CERFA Investigation Results, VHFS (continued)

Parcel Number and Category	Parcel Size	Areas in Parcel	Designation
29Q-A(P) CERFA Parcel with Qualifiers	2 acres	Buildings	A(P)
30Q-A(P) CERFA Parcel with Qualifiers	7 acres	Buildings	A(P)
31Q-A/A(P)/L(P) CERFA Parcel with Qualifiers	2 acres	Housing Units	A/A(P)/L(P)
32Q-A/L(P) CERFA Parcel with Qualifiers	1 acre	Building 283	A/L(P)

Key to designations:

- A - Asbestos
- L - Lead
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible
- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

and the CERFA labels associated with each individual AREE, building, or other spill or release. Appendix C is a list of all VHFS buildings and their qualifiers, if applicable.

#### **4.1 CERFA DISQUALIFIED PARCELS**

This section summarizes each of the CERFA disqualified parcels and the AREEs contained in each parcel.

##### **4.1.1 Parcel 1D**

Parcel 1D consists of approximately 1 acre located on the western boundary of VHFS. This parcel is disqualified because of releases of hazardous substances to the environment. In August 1993, a VHFS maintenance person discovered a solvent spill in a storm sewer south of one of the southwestern family housing units (FHUs) (Building 414). The solvent and water were drummed and disposed of as hazardous waste. Although not confirmed, VHFS personnel believe that the release may have been caused by the lead paint abatement contractors disposing of their waste solvents into the storm sewer.

In addition, a portion of a housing unit is present in this parcel that has the possible presence of lead paint and the definite presence of asbestos.

##### **4.1.2 Parcel 2D**

Parcel 2D consists of 15 acres located on the western boundary of VHFS. This parcel is disqualified because of releases and storage of hazardous substance, possible releases of hazardous substances, and releases and storage of petroleum products/derivatives. The following AREEs are present in Parcel 2D:

- AREE 1 - Dump #1
- AREE 2 - Sewage Treatment Plant
- AREE 28-9 - STP Emergency Generator Underground Storage Tank (UST).

Brief descriptions of the AREEs are provided in the following subsections. In addition, this parcel contains buildings with definite and possible presence of asbestos, possible presence of lead-based paint, and the presence of radon.

#### **4.1.2.1 AREE 1 - Dump #1**

This landfill was used for general refuse and installation waste disposal from 1942 to 1973. During this period, approximately 9,000 gallons of paint, 1,800 gallons of solvents, 15,000 pounds of sandblasting wastes containing lead paint, and 90,000 tons of household garbage were burned and buried in the trenches. These quantities are based on documented disposal rates from 30 years of operation. Kitchen grease, waste oil, pesticides, and herbicides also were disposed of in trenches within the 5-acre dump. Open burning of asbestos sheeting also had occurred until 1973 when open burning was restricted and the Incinerator (AREE 20) was completed.

Monitoring and sampling have been conducted in the groundwater beneath and downgradient from the landfill, the leachate entering South Run, and the surficial soils in the landfill area. Groundwater, surface water, and sediment sampling results have not detected significant contamination or compounds at concentrations above Virginia water quality standards (ESE 1986). Soil samples collected in the landfill area indicated that releases of hazardous substances have occurred (ESE 1986).

#### **4.1.2.2 AREE 2 - Sewage Treatment Plant**

The Sewage Treatment Plant (STP) has been in service since 1952 and serves 400 VHFS permanent residents and 2,000 daily employees. The plant treats and discharges industrial and sanitary wastewaters from VHFS operations. The facility has received sanitary wastewater (from kitchens, sinks, and bathrooms), industrial wastewater (from photographic, painting, laboratory, vehicle washing, and metal etching operations), and surface water runoff (through infiltration and inflow). Current treatment includes primary, coagulation, biological, and ultraviolet (UV) disinfection. The sludges from the treatment plant are aerobically digested and then discharged to one of four sand drying beds. Before 1980, sludges were stored in piles onsite near South Run. From 1980 to 1990, the sludge was taken to the Sludge Disposal Area



(AREE 13). Currently, the dried sludges are removed every 3 weeks and disposed of in the Fauquier County Landfill.

The facility discharges an average of 220,000 gallons/day of treated effluent to South Run. There have been several documented instances of nondisinfected treated effluent discharging from the Sewage Treatment Plant to South Run and an unnamed tributary of South Run. Flood conditions and operational problems also have caused several instances of sewage overflow. Cyanide-contaminated wastewater was discharged to the STP from the EPIC operation and was released to South Run. Another hazardous release from this AREE was an anhydrous ammonia leak that was detected at Building 398 (STP Laboratory).

Chemicals stored at this AREE include liquid chlorine, chlorine gas in canisters, sodium hexametaphosphate and sodium fluoride in bags, and aluminum sulfate (alum). The STP laboratory stores small amounts of hazardous materials for analytical purposes. These industrial chemicals and small amounts of toxic wastes (e.g., mercuric sulfate from the chemical oxygen demand [COD] analysis) are disposed of in the sink, which leads to the head of the plant.

#### **4.1.2.3 AREE 28-9 - STP Emergency Generator USTs**

Parcel 2D contains one of the two 550-gallon diesel storage tanks included in AREE 28-9. This tank was installed in 1978 to serve the emergency generator at the Sewage Treatment Plant (Building 398). This steel tank has no corrosion or overfill protection. Leak test results on the tank determined that the tank was not leaking.

#### **4.1.3 Parcel 3D**

This CERFA disqualified parcel consists of 4 acres located in the southwestern part of the installation. The parcel is disqualified because of storage and releases of hazardous substances and storage and releases of petroleum products/derivatives. The AREEs present in the parcel include:

- AREE 3 - Warehouse
- AREE 4 - Auto Craft Shop
- AREE 28-1 - Auto Craft Shop UST.

Descriptions of the AREEs are provided in the subsections below. In addition, this parcel contains asbestos and possible lead-based paint in Building 307 and possible asbestos and possible lead-based paint in all other buildings.

#### **4.1.3.1 AREE 3 - Warehouse**

The Warehouse (Building 309) was built in 1943 and reportedly was used to store drums of oil, grease, solvent, paint, acid, and industrial organic chemicals (Weston 1990). The ENPA site visit noted only storage of industrial cleaners and soaps, spray paint cans, and copier supplies (i.e., toner) and that no known spills have occurred in the area. At one time, the Warehouse was used as a vehicle maintenance area. The probable dates for such usage would coincide with the timeframe during which the Auto Craft Shop was used as the VHFS Motor Pool (1943 to 1967). Two sets of concrete capped pits exist in the Warehouse floor. These pits may have been used as hydraulic lifts and fluid changing pits. No records exist to indicate whether the pits were cleaned out prior to being capped. One floor drain, approximately 2 by 3 feet, exists at the south end of the building. The top of the drain is currently sealed off with a wooden board. No records exist to indicate when the drain was sealed at the floor level. The Warehouse sink and water fountain drain pipes run underneath the floor into the floor drain. An outflow pipe runs south from the drain basin to the field south of the Auto Craft Shop and Warehouse, according to the VHFS sewer map.

#### **4.1.3.2 AREE 4 - Auto Craft Shop**

The Auto Craft Shop (Buildings 306 and 308) is where military personnel perform maintenance on their private vehicles. The buildings are used to store oil, solvents, and lubricants for these activities. The buildings have concrete floors with no curbs or floor drains to prevent the spreading of spills. Various gasoline and oil spills that were cleaned up using absorbents have been recorded in this area. The Auto Craft Shop was used from 1943 to 1967 as the VHFS Motor Pool. A 500-gallon steel, double-walled aboveground storage tank (AST) is present and used to store waste oil and used antifreeze. The AST is located under a roof and within a steel containment dike. An outdoor vehicle wash rack is adjacent to Building 308. Drain lines for the wash rack are connected to the storm sewer, which discharges to the field south of the Auto Craft Shop.

No previous sampling activities have been conducted in this area to determine if spills from the Auto Craft Shop have impacted the surrounding soils. It has been reported that the grass downslope from the Auto Craft Shop has an oily sheen after a storm event (Hitt 1993).

#### **4.1.3.3 AREE 28-1 - Auto Craft Shop UST**

The Auto Craft Shop UST was a 1,000-gallon waste oil tank located near the Auto Craft Shop (AREE 4). The tank was installed during the 1940s (ESE 1986). Numerous oil spills on the surrounding pavement have been reported (Hitt 1993).

Program Resources Inc. (PRI) removed and disposed of the waste oil tank and surrounding soil in 1990. The excavation was then refilled with gravel and covered with asphalt. Soil sampling in August 1990 detected petroleum contamination, including total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylene (BTEX). Free product (1 inch of waste oil) was detected in the groundwater during a 1990 sampling event. Currently, a site characterization and remediation plans are underway at this AREE.

#### **4.1.4 Parcel 4D**

This CERFA disqualified parcel consists of 1 acre located on the southwestern portion of VHFS. The parcel is disqualified due to a petroleum release. In April 1994, a track vehicle spilled a small quantity of diesel fuel in the Building 102 parking lot. The spill was fully remediated (Reisch 1994).

#### **4.1.5 Parcel 5D**

This CERFA disqualified parcel consists of 2 acres located near the southern border of VHFS. The parcel is disqualified because of possible hazardous substance release and hazard substance storage. AREE 5, the Environmental Photographic Interpretation Center (EPIC) Building, is present in this parcel. The following section describes this AREE. The EPIC Building also contains asbestos and possibly lead paint.

*AREE 5 - EPIC Building*—The U.S. Air Force (USAF) Aeronautical Chart and Information Center (ACIC) used this building (Building 166) from 1958 to 1963 for photographic development. In 1966, the Defense Intelligence Agency (DIA) reactivated the laboratory and used it until 1971. The U.S. Environmental Protection Agency (EPA) began photographic operations in July 1973 and have used the building until the present. Currently, the facility develops, enlarges, and prints aerial photographs in color and black and white for EPA using the Kodak EA5 and R-3 processes.

In the past, wastewater containing silver was discharged to the Former Photographic Wastewater Lagoon (AREE 10) through a 6-inch industrial sewerline. After a silver recovery unit was installed for pretreatment, the influent was diverted directly into the western tributary of South Run by way of the industrial sewerline. Recently (1973) an ion-exchange system was installed to pretreat the photographic wastewater. Effluent from this system is discharged into the sanitary sewerline.

The EPIC operation is a small quantity generator (SQG) of hazardous wastes and has its own RCRA generator identification number. The hazardous wastes include fixing solution containing silver and bleach cleaner containing ferric cyanide, which are treated in the resin columns and discharged through the sanitary sewer. Raw hazardous materials, nonhazardous color developer, and other hazardous wastes are stored in the EPIC Hazardous Waste Storage Building. In the past, drums of hazardous wastes had been stored on the loading dock without containment. There also is a bermed satellite storage area within the chemical storage room of the EPIC Building, which is used to store hazardous materials.

The EPIC Building has released photographic wastewaters containing silver and ferrocyanide to the Photographic Wastewater Lagoon (AREE 10) and the western tributary of South Run through the industrial sewerline from 1958 to 1983. Due to the age of the pipeline and the nature of the acidic wastewaters, leakage from the pipeline is suspected. In 1984, the pretreatment system failed and cyanide-containing wastewater was released from the Sewage Treatment Plant to South Run.

Monitoring activities along the former industrial sewerline have included an electromagnetic (EM) survey of the pipeline, soil borings along the pipeline, and groundwater monitoring in the vicinity of the pipeline. The EM survey did not detect any contamination associated with the pipeline (ESE 1986). One bedrock groundwater monitoring well was installed in 1984 adjacent to the sewerline in a location where the EM survey found a ground conductivity anomaly. No contaminants above Federal maximum contaminants levels (MCLs) have been detected in this bedrock monitoring well or the two nearby drinking water supply wells (ESE 1986).

#### ***4.1.6 Parcel 6D***

This CERFA disqualified parcel consists of 1 acre located on the southern portion of VHFS. This parcel is disqualified because of a hazardous substance release. This disqualified parcel also contains buildings with the possible presence of asbestos and lead-based paint. A description of the hazardous substance release follows.

***Methylene Chloride Spill at DEL Building 163***—On March 30, 1989, between 2 and 5 gallons of methylene chloride were allegedly illegally dumped near Building 163 into a storm drain inlet. The storm drain flows to Kettle Run. The storm drain system was flushed and pumped out into a tanker truck to remediate the spill. The National Response Center (NRC) was notified of the spill.

#### ***4.1.7 Parcel 7D***

This CERFA disqualified parcel consists of 7 acres located in the southwestern portion of VHFS. This parcel is disqualified because of possible hazardous substance releases through the EPIC sewerline. A discussion of the sewerline, which begins at the EPIC Building and outfalls at the western South Run tributary is contained in Section 4.1.5 of this report. This disqualified parcel also contains a building with the possible presence of asbestos and lead-based paint.

#### **4.1.8 Parcel 8D**

This CERFA disqualified parcel consists of 1 acre located in the southwestern portion of VHFS. This parcel is disqualified because of a hazardous substance release at Building 188 (Post Theater). This building also contains the possible presence of asbestos and lead-based paint. A discussion of the release follows.

*Post Theater PCB Spill*—On November 7, 1989, between 1 and 6 gallons of dielectric fluid containing 600,000 ppm of PCBs leaked from a transformer in the equipment room in the Post Theater (Building 188). The NRC and EPA were notified of the spill. The spill was contained within the building and cleaned up by a contractor. All transformers in the equipment room were drained. Wipe tests indicated that the spill was properly remediated.

#### **4.1.9 Parcel 9D**

This CERFA disqualified parcel consists of 4 acres located in the southwestern portion of VHFS. This parcel is disqualified because of possible hazardous substance releases through the EPIC sewerline. A discussion of the sewerline, which begins at the EPIC Building and outfalls at the western South Run tributary is contained in Section 4.1.5 of this report.

#### **4.1.10 Parcel 10D**

This CERFA disqualified parcel consists of approximately 70 acres located, north to south, across the central portion of VHFS. The parcel is disqualified because of hazardous substance storage and releases, possible hazardous substance releases, and releases and storage of petroleum products/derivatives. The AREEs present in this parcel include:

- AREE 7 - Electrical Equipment Facility
- AREE 8 - Intelligence Materiel Management Center (IMMC) Neutralization Pit
- AREE 9 - Vehicle Maintenance Area
- AREE 10 - Former Photographic Wastewater Lagoon
- AREE 11 - Former Sewage Treatment Plant
- AREE 19 - Pistol Range

- AREE 20 - Incinerator
- AREE 21 - Sand Filter Beds
- AREE 24 - Transformer Storage Area
- AREE 27 - Army, Air Forces Exchange Service (AAFES) Service Station
- AREE 28-2 - Vehicle Maintenance Area USTs
- AREE 28-3 - AAFES Service Station UST
- AREE 28-7 - Engineering Compound USTs
- AREE 28-8 - Power Plant UST
- AREE 28-9 - STP Emergency Generator UST.

The following subsections briefly describe the AREEs. This parcel also contains buildings with the following CERFA qualifiers: asbestos, possible asbestos, possible lead-based paint, PCBs, and radon.

#### **4.1.10.1 AREE 7 - Electrical Equipment Facility**

The Electrical Equipment Facility (Building 2410) has been used since 1965 for various classified military activities within the IMMC. The facility used several hazardous paints, photographic chemicals, and metal-cleaning liquids during the operational period, which were drained to a network that leads to a concrete-lined impoundment (i.e., pretreatment tank). The floor drains in the building also lead to the pretreatment tank.

Chemicals stored in the Electrical Equipment Facility building include chemical agent resistant coating (CARC) paint, thinners, iridite (used in acid etching and metal cleaning), deoxidizer, aluminum etch #2, cleaning solvents, waste solvent, and residue from sandblasting. Used solvents and other hazardous wastes also are stored in 55-gallon drums outside the building in a hazardous materials satellite accumulation area. The holding area is a concrete containment building with berms to prevent spills and leaks from reaching the surrounding soils. Unused hazardous materials are stored in a fireproof building (Building 292) outside of the Electrical Equipment Facility. These materials include assorted paints, thinner, ammonia, ferric chloride, methyl ethyl ketone, toluene, aluminum etching powder, hydraulic fluid, and cylinders of argon and oxygen.

Hazardous releases have occurred from this AREE. Surface water and sediment sampling was conducted in April 1978 at the outlet of the floor drains from IMMC to the western tributary of South Run (Outfall 401). Metals and cyanide were detected in the surface water and metals were detected in the sediments.

#### **4.1.10.2 AREE 8 - IMMC Neutralization Pit**

The IMMC Neutralization Pit was used as a waste management unit for photographic developing waste from 1964 to May 1990. It was connected to two photographic developing sinks inside the Electrical Equipment Facility. The Neutralization Pit has concrete sides and an unlined earthen bottom. An underdrain pipe carried the filtered and neutralized wastewater to a pretreatment tank. In the event of an emergency, an overflow pipe in the pit allowed the acidic, silver-bearing photographic wastewater to flow directly to the sanitary sewer. In 1990, it was discovered that the bottom of the Neutralization Pit was not concrete. Subsequently, all sinks leading to the Neutralization Pit were plugged and the IMMC Neutralization Pit was taken out of service. Concentrations of metals and volatile organic compounds (VOCs) above background levels were detected in the soils and perched groundwater during an April 1991 sampling event.

#### **4.1.10.3 AREE 9 - Vehicle Maintenance Area**

The VHFS vehicles are maintained at the Civilian Motor Pool (Building 288) and the vehicles for the 201st Military Intelligence Battalion are maintained in the Military Motor Pool (Building 290). The two maintenance areas have been used since 1967. Both buildings have wash and grease racks for vehicle maintenance activities. Drains from the wash racks lead to grit chambers, which discharge to the western tributary of South Run, and drains from the grease racks discharge directly to the sanitary sewer. The Vehicle Maintenance Area has a bermed concrete pad area that is designated for storage of hazardous wastes and materials. Storage is designated for waste oil, transmission fluid, dry cleaning solvent, and used antifreeze in individual polyethylene aboveground storage tanks (ASTs). Storage of used oil filters, used batteries, oils, solvents, and antifreeze also occurs in this AREE.



The VHFS fire department has reported numerous releases of hazardous substances and petroleum products (including hydraulic oil, fuel, and  $DS_2$ ) in this area and many stains were observed on the asphalt during the site visit. However, most spills reportedly were contained before they reached the stormwater drain.

#### **4.1.10.4 AREE 10 - Former Photographic Wastewater Lagoon**

The Former Photographic Wastewater Lagoon was an earthen holding pond that received photographic wastewaters from the EPIC Building (AREE 5) from 1958 to 1968. The black and white photographic wastewater was acidic and contained significant amounts of silver. The overflow from the lagoon discharged to the western tributary of South Run. In 1968, the lagoon was dredged to recover silver from the sediments and backfilled. The wastewater flow from the EPIC Building was then diverted directly into the South Run tributary. Currently, the former lagoon area is covered by an asphalt parking lot, two warehouses, and grass.

During its operational period, silver entered the lagoon at a rate of 100 kg/year (ESE 1981). Results from sampling in the tributary of South Run have shown that hazardous releases have occurred from this AREE. Concentrations of silver were detected in the surface water and sediments.

#### **4.1.10.5 AREE 11 - Former Sewage Treatment Plant**

The Former Sewage Treatment Plant was constructed in 1943 to treat sanitary wastewater at VHFS. The plant consisted of sedimentation and chlorination, and treated water was discharged to the western South Run tributary. Sludges from the treatment system were stored onsite in piles before drying and disposal. The treatment plant was closed in 1981 and is currently used as a storage lot for vehicles and construction materials.

#### **4.1.10.6 AREE 19 - Pistol Range**

The Pistol Range is approximately 100 by 200 feet and is partially surrounded by a fence. The firing fan is directed southward toward a horseshoe-shaped dirt bank, which captures most of the bullets. Spent ammunition is not recovered, but shell casings are collected and returned

to the Fixed Ammunition Magazine (AREE 22). The facility was used once for detonation of a bazooka round. However, no other known instances of open detonation of bazooka rounds have occurred.

Metallic lead found in bullets will not leach to the surrounding soils under normal circumstances (NRA 1990). However, lead fragments and dust may form more soluble and toxic compounds (i.e., organometallic compounds) (Berc 1989). Hazardous releases from this AREE are possible, as soluble lead could migrate with infiltrating rainwater to the groundwater or with surface runoff to the western South Run tributary.

#### **4.1.10.7 AREE 20 - Incinerator**

The Incinerator (Building 282) was used from 1973 to 1985, and in 1987 to burn household and office garbage. Medical wastes from the Medical Clinic also were accepted at the facility until April 1983. The facility received nonflammable materials, including auto parts, hazardous household refuse (e.g., car batteries, solvents, pesticides) and all types of metal. Most of the nonflammable materials were removed before incineration, although some may have inadvertently entered the furnace. The ash and nonflammables were disposed of at the Fauquier County Landfill. A 500-gallon septic tank and 135-foot absorption field lies north of the facility. There is no record of hazardous wastes having been disposed of in the septic system.

#### **4.1.10.8 AREE 21 - Sand Filter Beds**

The Sand Filter Beds received the ash wastewaters from the Incinerator (AREE 20) wet scrubber. The two beds are unlined and are each 10 feet by 25 feet with 12-inch thick concrete walls (USACE 1973). The deep beds have a layer of coarse sand and a layer of filter gravel, which filtered particulates from the wastewater. An underdrain system in the gravel captured the filtered particulates from the ash wastewater and drained it to a distribution box, which discharged through perforated pipe to a leach field north of the Sand Filter Beds. The leach field drains into the western South Run tributary. Currently, the beds are uncovered and filled with weeds. According to facility personnel, the beds have never been cleaned out to remove the ash particulate (Reisch 1993). The incinerator ash contains lead and other heavy metals.

Unknown levels of contaminants are present in the sand beds, distribution box, piping, and leach field, which received the Incinerator ash.

#### **4.1.10.9 AREE 24 - Transformer Storage Area**

The Transformer Storage Area is located west of Building 272 in the Engineering Compound. This unbermed asphalt area was used to store PCB transformers (i.e., PCBs in oil greater than 500 ppm) and PCB-contaminated transformers (i.e., PCBs in oil between 50 and 500 ppm) before removal by Aptus Environmental Services in 1990. The area is currently used for general storage of materials on pallets, including new "non-PCB" transformers. There are no documented spills of PCB fluid in this area. The area also has been used to store drums containing motor oil and fuel filters (Reisch 1992). A 1989 environmental survey noted that six of the drums in this area were leaking and saturating the surrounding soil. A 400-gallon, used-oil storage tank is located nearby, inside a covered containment pad.

#### **4.1.10.10 AREE 27 - AAFES Service Station**

The AAFES Service Station (Building 238) was constructed in 1969 to provide fuel for VHFS vehicles. The Service Station contains pumps for three grades of gasoline and a service area with two lifts. In addition, a fenced storage area is located in the rear of the facility for tires, batteries, and drums. The area has had many spills of gasoline and oil and one instance of a battery acid spill in the service bay area. Oil stains were observed in aerial photographs on the asphalt and in the surrounding vegetation (EPIC 1983).

#### **4.1.10.11 AREE 28-2 - Vehicle Maintenance Area USTs**

This AREE contains two 2,000-gallon steel diesel storage tanks (installed in 1982) and one 10,000-gallon fiberglass gasoline tank (installed in 1990). The fiberglass tank contains leak detection wells and overfill protection. All three tanks have been vacuum pressure tested for leaks and were found to be tight. Monthly inventories are conducted on the tanks.

A 12,000-gallon steel gasoline tank was removed from the area in 1990 and replaced with the fiberglass tank. No soil samples were obtained during the tank removal. However, most

of the soil surrounding the tank was removed to make room for the new 10,000-gallon tank. No visible petroleum contamination was observed in the soils (Reisch 1993).

#### **4.1.10.12 AREE 28-3 - AAFES Service Station USTs**

The AAFES Service Station USTs are located southeast of the AAFES Service Station (AREE 27). Three 10,000-gallon tanks are used to store three grades of unleaded gasoline and one 550-gallon tank is used to store waste oil from the vehicle servicing operations. The steel tanks were all installed in 1969. Previous documentation states that one of the tanks contained leaded gasoline, although all gasoline tanks currently contain unleaded gasoline. Pressure testing conducted on the distribution piping in April 1993 determined that one of the lines was leaking. The surrounding area was excavated and approximately 15 gallons of free product and four 55-gallon drums of contaminated soil and sand were collected and disposed of as hazardous waste. The corroded pipe was repaired and the excavated area was backfilled and resurfaced. A plume of petroleum contamination was detected downgradient (northeast) from the USTs and measures approximately 700 feet long by 200 feet wide. A site characterization and corrective action plan are currently in progress for this facility.

#### **4.1.10.13 AREE 28-7 - Engineering Compound USTs**

This AREE contains two 1,000-gallon USTs of unleaded gasoline located in the Engineering Compound outside Building 248. The date of installation is unknown and the tanks have no corrosion or overfill protection. The tanks have been tightness tested and were not found to be leaking.

#### **4.1.10.14 AREE 28-8 - Power Plant UST**

The Power Plant UST is a 2,000-gallon steel tank that contains diesel fuel and serves the emergency generator within the Power Plant (Building 227). In 1985, the tank was installed to replace a 1,000-gallon steel tank that was installed in 1944. The tank has no corrosion or overfill protection, but was tested for leaks and found to be tight.

#### **4.1.10.15 AREE 28-9 - Sewage Treatment Plant Emergency Generator UST**

Parcel 10D contains one of the two 550-gallon steel diesel storage tanks that were installed in 1978 to serve the emergency generators for the STP. This tank has no corrosion or overfill protection, but leak test results on the tank determined that the tank was not leaking.

#### **4.1.10.16 Other Releases in Parcel 10D**

In 1989, all of the transformers within VHFS were tested for PCB content. The tests determined that most of the transformer oils contained PCBs. A transformer located near Building 2410 was determined to be leaking oil that contained high concentrations of PCBs. The transformer was removed from service, taken to the Transformer Storage Area in November 1989, and then removed from the storage area in 1990. The PCB oils were disposed of in a Toxic Substance Control Act (TSCA) incinerator.

In January of 1994, a generator located in the IMMC compound, near Building 2490, leaked a small quantity of diesel fuel onto the asphalt. The spill was fully remediated and the state was notified.

#### **4.1.11 Parcel 11D**

Parcel 11D consists of approximately 3 acres of property located on the southern boundary of VHFS near Bicher Road. This parcel is disqualified due to releases of hazardous substances and releases and storage of petroleum products/derivatives. The AREEs present in this parcel include AREE 26 - Outdoor Wash Racks and AREE 28-4 - Former Steam Plant USTs. The following subsections briefly describe the AREEs. This disqualified parcel also contains buildings with the possible presence of asbestos and lead-based paint.

##### **4.1.11.1 AREE 26 - Outdoor Wash Racks**

The two Outdoor Wash Racks are concrete and were used by VHFS personnel to clean their vehicles. The wash racks were constructed in April 1982 to replace two wash racks that had previously occupied the area. Each wash rack has 12-inch concrete berms to prevent runoff and a ramped entrance to prevent run-on. Drains from the racks lead to a grit chamber, which

discharges the effluent to the sanitary sewer. The grit chamber and adjacent sewage lift station have been saturated with oil due to vehicle maintenance activities performed while on the racks (Reisch 1993). In February 1992, the grit chamber and the sewage lift station were steam cleaned and all liquids and sediments were drummed. Laboratory analyses of the materials tentatively identified releases of petroleum products and hazardous substances, such as antifreeze. The liquids and sediments were then removed by the Defense Reutilization Management Office (DRMO) for disposal as hazardous wastes.

#### **4.1.11.2 AREE 28-4 - Former Steam Plant USTs**

The Former Steam Plant USTs were installed in February 1978 to store fuel oil for the generators in the Steam Plant (Building 161). The two 30,000-gallon tanks were constructed of steel. The Steam Plant has been inactive since 1988 and the tanks were subsequently removed in December 1990. As part of the Closure Plan for the USTs, five soil borings were drilled adjacent to the USTs and four confirmatory soil samples were collected from under the USTs after their removal. No VOCs were detected in the soils and TPH concentrations were at or below the method detection limit.

#### **4.1.12 Parcel 12D**

Parcel 12D consists of 1/2 acre of real property located on the southern boundary of VHFS. This parcel is disqualified due to the possible release of hazardous substances and petroleum derivatives. This parcel is the former location of the outdoor wash racks (now AREE 26). The wash racks were located near the southeast corner of what is now a paved parking lot. The new wash rack location was established in April 1982. It is possible that antifreeze and motor oils may have been released during the period of time that the former outdoor wash racks were in use.

#### **4.1.13 Parcel 13D**

Parcel 13D consists of 1 acre located in the south-central portion of VHFS, near the intersection of Helms and Harrison Roads. This parcel is disqualified due to storage of

petroleum products. AREE 28-5, the Former Service Station Abandoned USTs, is located in this parcel.

The Former Service Station Abandoned USTs are located underneath the Former Service Station (Building 220) parking lot. The date of installation and size of the tanks are unknown. The two steel tanks were in service until 1983 and had contained an unknown quantity of gasoline. Upon closure, the tanks were emptied of petroleum product and filled with sand and concrete. The tanks were never leak tested.

#### ***4.1.14 Parcel 14D***

Parcel 14D is located in the central portion of the installation near the intersection of Patrol and Bicher Roads and consists of 6 acres of real property. The parcel is CERFA disqualified because of releases of hazardous substances and storage of petroleum products/derivatives. AREE 28-6 - Intelligence Electronic Warfare Directorate (IEWD) Emergency Generator USTs is located in this parcel and is described below. Buildings containing possible lead and possible asbestos are present in Parcel 14D. A leaking PCB transformer also was located in this parcel.

##### **4.1.14.1 AREE 28-6 - IEWD Emergency Generator USTs**

This AREE contains four steel tanks used to store diesel oil for the emergency generators of the IEWD. Pertinent information on the tanks is as follows:

- A 2,000-gallon tank was installed in 1985, which replaced a former 2,000-gallon that was installed in 1951.
- A 5,000-gallon tank was installed in 1944.
- An 8,000-gallon tank was installed in 1951.
- A 15,000-gallon tank was installed in 1967.

The tanks recently have passed vacuum pressure leak tests. However, the tanks have no corrosion protection or overfill protection. No irregularities in the tank inventories have been found, with the exception of the 8,000-gallon tank, which contained 2 inches of water due to

infiltration of surface water through the below-grade fill pipe (Acree 1993). The water was removed and a 2-foot stickup pipe was installed in 1992. No water has been reported in the tank since this time.

#### **4.1.14.2 Other Releases in Parcel 14D**

*Lithium Battery Explosion in Building 260*—On November 20, 1989, a lithium battery exploded in Building 260 (IEWD). The explosion occurred on a concrete floor, and was contained entirely within the building.

*Leaking Transformer Near Building 261*—In 1989, all of the transformers within VHFS were tested for PCB content. The tests determined that most of the transformer oils contained PCBs. A transformer located near Building 261 was determined to be leaking oil that contained high concentrations of PCBs. The transformer was removed from service, taken to the Transformer Storage Area in November 1989, and then removed from the storage area in 1990. The PCB oils were disposed of in a TSCA incinerator.

#### **4.1.15 Parcel 15D**

This CERFA disqualified parcel consists of 6 acres located in the north-central portion of VHFS west of the intersection of West and Bicher Roads. The parcel is CERFA disqualified because of possible releases of hazardous substances and petroleum products/derivatives. Dump #3 also had possible disposal of sandblasting waste containing lead-based paints. The following AREEs, identified during the ENPA, are present in Parcel 15D:

- AREE 17 - Dump #3
- AREE 18 - Grease Pit.

Descriptions of the AREEs are provided in the subsections below.



#### **4.1.15.1 AREE 17 - Dump #3**

Dump #3 is approximately 3 acres and has been used to dispose of compost materials (i.e., leaves, branches, grass, and tree stumps) and construction debris (i.e., "clean fill" such as soil, asphalt, and concrete) since 1958 (EPIC 1983). Some household waste and empty insecticide bottles were observed in the dump during the first visual inspection. Small amounts of sandblasting waste containing lead paint from the Electrical Equipment Facility (AREE 7) also may have been disposed of in this area (O'Neill 1993). No records of sampling or investigation activities conducted in this area exist.

#### **4.1.15.2 AREE 18 - Grease Pit**

The Grease Pit was reportedly 50 feet long, 2 feet wide, and 4 feet deep (Weston 1990). The Grease Pit was used to dispose of kitchen grease and oily rags until 1981. Motor oils also may have been disposed of in the trench. The pit was covered in 1981 and has not been used for oil or grease disposal since this time. Currently, ground scars cover a 25- by 70-foot area within which the Grease Pit was contained. Two USTs, used to store diesel oil for the Manassas Family Housing Site, were placed on the covered trench in 1988 (Reisch 1993). In addition, some debris from a trickling filter, fiberglass insulation, rusted ductile iron pipe, and a tank fill pipe with attached concrete were found near the pit during the visual inspection. Most of the oils should have been eliminated through natural biodegradation. However, used motor oils often contain metals, which would persist in the subsurface environment.

#### **4.1.16 Parcel 16D**

This CERFA disqualified parcel consists of approximately 2 acres located in the north-central portion of VHFS near the intersection of West and Bicher Roads. The parcel is CERFA disqualified because of releases of hazardous substances. In addition, it is possible that sandblasting waste containing lead-based paint was disposed of in this area. This parcel contains AREE 13, the Sludge Disposal Area.

The Sludge Disposal Area is located in the antenna fields in the north-central portion of the installation. The area was used during the 1980s to dispose of sludge from the Sewage

Treatment Plant (AREE 2) and the Former Sewage Treatment Plant (AREE 11), and sand filter sludge and possibly sandblasting waste from Electrical Equipment Facility (AREE 7). In June 1992, by order of the Virginia State Water Control Board (SWCB), the area was dredged and closed. Surficial soil and groundwater samples were collected from the area. Metals above background concentrations were not detected in the surficial soil samples. Cyanide, phenols, and ammonia were detected in 1984 in three monitoring wells downgradient of the area (ESE 1986). Sources could include this AREE, in addition to the Former Photographic Wastewater Lagoon or the western South Run tributary. Cyanide and phenols were not detected in the two subsequently collected groundwater samples.

#### ***4.1.17 Parcel 17D***

This CERFA disqualified parcel consists of approximately 2 acres on the northern boundary of VHFS. The parcel is disqualified because of possible hazardous substance releases from AREE 29-2 - Possible Sludge Disposal Area.

The Possible Sludge Disposal Area was identified from aerial photographs and is located near the far northernmost boundary of VHFS, near State Route 215. Review of 1977 and 1978 aerial photographs indicated scarred ground and a pile of gray material, possibly sludge, to be present in the areas. The site walk-through revealed a stand of trees in the area that may be 10 to 15 years old. The ground within the treed area was extremely uneven indicating that material had been piled on the ground in the past. Based on the aerial photographs and the walk-through, a hazardous release from this area is possible.

#### ***4.1.18 Parcel 18D***

Parcel 18D is located in the northern portion of VHFS and consists of 2 acres. The parcel is disqualified because of releases of hazardous substances and petroleum products/derivatives. AREE 16 - Firefighter Training Pit is located in this AREE.

The Firefighter Training Pit was formerly used by the VHFS Fire Department for training once each month during the mid-1970s (Hitt 1993). The 56-foot unlined pit was approximately 3 feet deep. During training activities, the pit was partially filled with petroleum

and natural gas odorant and then ignited. Solvents and other burnables also may have been used in the pit. During its operational period, up to fifty 55-gallon drums of waste oil and two 1,500-gallon tanks of JP-4 were stored on an unbermed area south of the pit. These materials were removed in 1981 and donated to the Carlett County Fire Department (ESE 1981). Firefighting activities ceased in the late 1970s.

#### **4.1.19 Parcel 19D**

This parcel consists of approximately 4 acres of property located on the northeastern boundary of the installation. The parcel is disqualified because of petroleum storage and possible hazardous substance releases from AREE 25 - Sugar Tree.

Small amounts of paints and solvents may have been disposed of in the area; however, no stressed vegetation or other evidence was observed. During the site visit, nine 5-gallon gas tanks and a 200-gallon diesel AST with plastic sheeting for secondary containment were observed near the area.

#### **4.1.20 Parcel 20D**

Parcel 20D is located on the eastern boundary of VHFS and consists of approximately 17 acres. The parcel is CERFA disqualified due to possible hazardous substance release and hazardous substance storage. AREE 14 - Skeet Range and AREE 15 - Hazardous Waste Storage Building are located in this parcel and are described below. This parcel also contains buildings with possible presence of asbestos and possible presence of lead-based paint. The parcel also contains a building where a leaking PCB transformer was located.

##### **4.1.20.1 AREE 14 - Skeet Range**

The outdoor Skeet Range has been used since 1961 for shotgun target practice. The Skeet Range firing fan is oriented north and eastward in an 800-foot radius. The spent ammunition (i.e., lead shotgun pellets) is spread out over the range and is not recovered.

Metallic lead in shotgun pellets will not leach to the surrounding soils under normal circumstances (NRA 1990). However, lead fragments and dust may form more soluble and toxic compounds containing lead (i.e., organometallic compounds) (Berc 1989). Soluble lead could migrate with infiltrating rainwater to the groundwater. Hazardous releases from this AREE are possible because of the potential presence of soluble lead.

#### **4.1.20.2 AREE 15 - Hazardous Waste Storage Building**

The hazardous waste storage building (Building 700), which is a less-than-90-day accumulation area, was constructed in 1990 and is used to store hazardous and nonhazardous wastes and hazardous substances. The building is not a RCRA-permitted facility. Before 1990, hazardous wastes were stored at the facility that generated the wastes. Materials are stored on a roofed and fenced concrete pad with no floor drains or curbs. The hazardous materials are stored in drums (55- and 25-gallon), on containment pallets, and in a hazardous waste storage cabinet. Salvageable hazardous materials (e.g., partially used toluene containers) are sent to the Property Disposal Office (PDO) at Fort Belvoir while nonsalvageable hazardous wastes and substances are removed by the DRMO.

#### **4.1.20.3 Other Releases in Parcel 11D**

*Leaking Transformer Near Building 294*—In 1989, all of the transformers within VHFS were tested for PCB content. The tests determined that most of the transformer oils contained PCBs. A transformer located near Building 294 was determined to be leaking oil that contained high concentrations of PCBs. The transformer was removed from service, taken to the Transformer Storage Area in November 1989, and then removed from the storage area in 1990. The PCB oils were disposed of in a TSCA incinerator.

### **4.2 CERFA PARCELS WITH QUALIFIERS**

This section summarizes each of the parcels that have been designated as CERFA Parcels with Qualifiers. CERFA Parcels with Qualifiers for the VHFS installation have been designated as such due to possible and definite lead-based paint presence and possible and definite asbestos presence. One CERFA parcel with qualifiers also has the presence of radon gas and in-use

radionuclides. Information regarding lead-based paint and asbestos is provided in Section 3.6. Asbestos and lead-based paint survey data were used to label those buildings with the definite presence of qualifiers. Buildings that were constructed before 1978 were classified as having possible lead-based paint presence. Buildings that were constructed before 1985 were classified as having possible asbestos presence.

#### ***4.2.1 Parcel 21Q***

Parcel 21Q consists of approximately 51 acres on the western boundary of the installation. This parcel contains FHUs and other buildings with definite and possible presence of asbestos and lead-based paint. A list of VHFS buildings and their qualifiers is presented Appendix C.

#### ***4.2.2 Parcel 22Q***

Parcel 22Q is a 4-acre parcel and is located in the southwestern corner of the Installation on State Route 652. This parcel contains buildings with possible presence of asbestos and lead-based paint.

#### ***4.2.3 Parcel 23Q***

Parcel 23Q contains Building 169, which is located near the southern border of VHFS on State Route 652. It is 1 acre and is CERFA qualified because of possible presence of asbestos and lead-based paint.

#### ***4.2.4 Parcel 24Q***

This parcel is located in the south central portion of VHFS and is approximately 61 acres. It contains buildings and FHUs with the possible presence of asbestos and lead-based paint and definite presence of asbestos and lead-based paint.

This parcel also is qualified due to the presence of radon, which was detected in Building 247. An extensive radon survey was performed in June 1990 using alpha track monitors (ATMs) on all of the office buildings and a sampling of the FHUs. Results indicated

that Building 247 (the Officers Club) contained radon in the range of 4 to 20 pCi/L. Resampling in March 1993 confirmed these results.

Parcel 24Q also contains AREE 6 - Health Clinic, which was identified in the ENPA. The Health Clinic (Building 137) has been used since 1965 for medical and dental services for Installation and other military personnel. Since 1983, the medical wastes have been sent to the Fort Belvoir MEDDAC incinerator. This building houses x-ray equipment which contains radionuclides that are being used for their intended purpose.

#### *4.2.5 Parcel 25Q*

This parcel is located in the north-central part of the installation, east of Judson Road. It is 1 acre and contains AREE 22 - Fixed Ammunition Magazine. This parcel also contains AREE 29-3 - Possible Disposal Area which does not contain any CERFA qualifiers. Because of its location, it is discussed in this qualified parcel. This parcel is CERFA qualified because of the possible presence of asbestos and lead-based paint at AREE 22.

AREE 22 - Fixed Ammunition Magazine (Building 285) is a 20- by 10-foot cinder block building used for ammunition storage. This building is CERFA qualified because, due to the building's age, it is possible that it contains asbestos and lead-based paint.

AREE 29-3 - Possible Disposal Area is listed as site number 7 in the EPIC aerial photographs. This site is located southeast of the Fixed Ammunition Magazine (AREE 22). The area may have been used for disposal of inert construction debris. Review of the 1950 aerial photographs indicated possible disposal activities due to ground scarring and the presence of mounds of material and possible equipment. Review of the 1958 photographs indicated that the area was revegetated and the ammunition storage building had been constructed nearby. The aerial photography review primarily notes ground scarring as the basis for classifying this area as a possible disposal area. The walk-through revealed no evidence of dumping; and no evidence exists to indicate that any hazardous materials were disposed of at AREE 29-3.

#### ***4.2.6 Parcel 26Q***

This parcel is located in the central portion of VHFS and is 1 acre. Building 296, which possibly contains asbestos and lead-based paint, is located in this parcel.

#### ***4.2.7 Parcel 27Q***

This parcel is located in the central portion of VHFS and is 1 acre. Building 298, which possibly contains asbestos, is located in this parcel.

#### ***4.2.8 Parcel 28Q***

Parcel 28Q is located in the central portion of VHFS near Bicher Road. It is 3 acres and contains buildings with the possible presence of asbestos and lead-based paint.

#### ***4.2.9 Parcel 29Q***

This parcel is located in the north-central part of VHFS near Bicher Road. It is 2 acres and contains two unnumbered buildings that possibly contain asbestos.

#### ***4.2.10 Parcel 30Q***

Parcel 30Q is located in the northeast corner of VHFS, east of Bicher Road, and contains 7 acres of CERFA qualified property. Buildings are present in this parcel that possibly contain asbestos.

#### ***4.2.11 Parcel 31Q***

Parcel 31Q is located in the southeast part of the installation near East Pope Road. It contains approximately 2 acres of CERFA qualified property. Two FHUs are present in this parcel: Building 216 possibly contains asbestos and lead-based paint, and Building 219 contains asbestos and possibly lead-based paint.

#### **4.2.12 Parcel 32Q**

Parcel 32Q is located on the eastern side of VHFS, south of East Road, and is 1 acre. Building 283 is located in this parcel; the building contains asbestos and possibly lead-based paint.

#### **4.3 CERFA EXCLUDED PARCELS**

A CERFA Excluded Parcel is a portion of the installation's real property that has an existing mandate for retention by the Federal Government, or has already been transferred by deed. At present, no areas exist within the VHFS installation boundary that the Army has specified that they will retain.

#### **4.4 CERFA PARCELS**

Seventeen CERFA parcels are located on the VHFS property. The parcels are between 1 and 287 acres and are numbered from 33P to 49P. These parcels have no evidence of any release or storage of hazardous or petroleum-based substances. In addition, no known environmental, hazard, or safety issues that are not explicitly regulated under CERCLA, are present in these parcels, with the exception of asbestos concrete piping and PCB-contaminated oil in currently operational transformers.

The CERFA parcels contain asbestos concrete piping, which is used throughout the facility in the water and sewer lines. The presence of buried asbestos concrete piping is not considered to be a CERFA qualifier.

According to a 1987 survey by Emmorton Electric Testing, there are 131 active Transformers (AREE 23) located throughout VHFS. Twenty of these Transformers contain PCBs in their cooling oil at concentrations between 50 and 500 ppm. The remainder of the Transformers contain less than 50 ppm PCBs. VHFS is currently instituting a program to resample all of their Transformers and retrofill any PCB-contaminated Transformers until they contain less than 50 ppm of PCBs. The Installation also plans to resample all of the Transformers by 1994 to determine the accuracy of the previous surveys. These Transformers



are located throughout the facility, including within the CERFA parcels; they are in use and are not known to be leaking. The presence of in use, nonleaking PCB-contaminated equipment is not considered to be a CERFA qualifier according to USAEC guidelines.

There are no numbered buildings in any of the parcels, with the exception of Parcels 38P and 45P. These two parcels contain AREEs 12, 29-1, 29-3, 29-5, and 29-6, in addition to AREE 23 (Transformers). No other AREEs are located in the CERFA parcels. Parcels 38P and 45P are detailed below.

*Parcel 38P*—Parcel 38P consists of approximately 60 acres along the west-central border of VHFS. AREE 29-1, Salvage Yard, is located within this parcel. Review of 1974 aerial photographs identified a small fenced salvage yard containing drums and debris. In 1977, the ground in the enclosure was scarred and two mounds of material were identified inside the area. Review of 1982 aerial photographs showed that the facility had been removed. Neither aerial photographs nor discussions with Installation personnel showed evidence indicating that hazardous materials were stored or released in this area. The October 1993 walk-through did not reveal any signs of salvage yard activity.

There is not sufficient evidence of a release or storage of hazardous or petroleum-based substances to classify this area as CERFA Disqualified. In addition, all buildings in this area were constructed after 1985, and thus, should not contain asbestos or lead paint materials.

*Parcel 45P*—Parcel 45P consists of approximately 287 acres of land in the eastern and central portions of VHFS. AREEs 12, 29-4, 29-5, and 29-6 are located within Parcel 45P. AREE 12 - Dump #2 was used as a construction debris disposal area since 1958. Solid Waste Disposal Facility Permit #423 was obtained in 1983 from the Virginia Department of Waste Management to dispose of inert construction debris in Dump #2. The dump was closed in 1985. There is no evidence that suggests that any hazardous materials or petroleum products were disposed of in the dump. In addition, there is no record of lead paint or asbestos disposal other than in conjunction with construction debris.

AREE 29-4 - Disposal Area also is located in this parcel. The Disposal Area is listed as site number 14 in the EPIC aerial photographs and review of aerial photographs of this area showed signs of disposal activities as early as 1958. These signs were visible to various extents as late as 1977. By 1982, the area was grass-covered with the exception of two groves of trees at the end of the site. Construction debris disposal was evident during the site walk-through. There is no evidence indicating that hazardous materials were stored or released in this area.

AREE 29-5, Liquid Impoundment Area, is located in the antenna fields in the northeast portion of VHFS. Aerial photographs taken in 1965 showed a large rectangular area of ground scarring along with a liquid impoundment area in the southwestern corner. By 1974, no activity was indicated in the photographs. However, slight soil discoloration, possibly natural in origin, was observed. Bare soil areas persisted within this site in the 1977 and 1982 photographs. The ground scarring was probably the result of the ongoing antenna field construction and maintenance. The liquid impoundment area was only active in the 1965 photograph, and no evidence exists from either the aerial photography review or interviews to indicate that hazardous materials were stored or released in the impoundment area. The walk-through revealed no evidence of previous activity in this area, other than the construction of antenna fields.

AREE 29-6, the Possible Burn Pile, is located in the southeast corner of the installation, south of the Skeet Range. In 1977, a large area of ground scarring was observed, with a sizable pile of dark material on the west side of the site that was noted as a possible burn pile. Some ground scarring remained in 1978, with most of the area having been revegetated. No changes were noted after that date. The ground scarring was possibly the result of the antenna array construction. The burn pile was only evident in the 1977 photograph, and no evidence exists from either the aerial photography review or interviews to indicate that contaminants were released to the environment from the burn pile. The walk-through revealed no evidence of a burn pile; however, patches of ground scarring remain in the area.

None of these AREEs has confirmed or evidence indicating possible hazardous or petroleum-based material release or storage. In addition, all numbered buildings in this area were constructed after 1985, and thus, should not contain asbestos or lead-based paint materials.

#### 4.5 NEW AREEs IDENTIFIED BY CERFA INVESTIGATION

No new AREEs were identified during the CERFA investigation because the ENPA and the CERFA reports were submitted concurrently.

#### 4.6 POTENTIAL OFFSITE SOURCES

The surrounding properties were inspected by an automobile survey and a visual inspection through the boundary fence. No walking inspections were performed on surrounding properties because no potential offsite sources were identified as a result of the automobile survey and visual inspections through the fence. The closest potential source of contamination is Mayhugh's Gas Station, which is located 1 mile east of VHFS on Route 215. The gas station has recently upgraded its USTs to conform to Federal standards and there were no records identified during the search of Virginia SWCB files to indicate spills or leaks from the USTs. In addition, the facility is located downgradient from VHFS. For these reasons, the potential for contaminant migration onto VHFS from this site is not probable.

All properties within a 2-mile radius of the center of VHFS were investigated through a search of Federal and state data bases for actual and potential Superfund sites; hazardous waste generators; hazardous waste treatment, storage, and disposal facilities; petroleum and hazardous substance spills; USTs (within a 1¼-mile radius of the center of VHFS); and solid waste landfills and incinerators. The results of the search are shown in Appendix A. No offsite sources were identified within a 2-mile radius of VHFS.

#### 4.7 AREAS UNDER REMEDIATION

Additional site investigations and environmental characterizations are currently being conducted in areas of known soil and groundwater contamination. These areas include:

- **AREE 28-1 - Auto Craft Shop UST**—High levels of petroleum hydrocarbons and volatile organics were detected in the soil during the tank removal in July 1990. These levels are in excess of the state-mandated level for remedial action.

Subsequent soil sampling in August 1990 detected petroleum and solvent contamination in the surrounding soils and groundwater. Eleven soil borings were drilled and three flush-mounted monitoring wells were installed in the area.

VHFS submitted a site characterization report to the Virginia SWCB in 1990. The SWCB requested a revised site characterization plan, which required the extent of soil and groundwater contamination, aquifer properties, effects of fractures on groundwater flow, and potential receptors surrounding the site. VHFS submitted a revised site characterization report to the Virginia SWCB in 1992 to remediate the groundwater plume using an OWS, air stripper, and carbon filter before discharge to the STP. Currently, the SWCB has not approved the revised site characterization plan.

- **AREE 8 - IMMC Neutralization Pit**—A site characterization is currently in progress to determine the extent of soil and groundwater contamination from the Neutralization Pit. The site characterization will be completed by mid-1994.

Four soil borings, one groundwater well, and one sample from the Neutralization Pit were collected from 1989 to 1990. Concentrations of metals and VOCs above background levels were detected in the soils and perched groundwater. Arsenic was detected above soil action levels, while cyanide, mercury, nitrate, methylene chloride, trichloroethene, and tetrachloroethene were above Federal MCLs in the perched groundwater.

- **AREE 28-3 - AAFES Service Station USTs**—A plume of petroleum contamination with a gas chromatography/mass spectrometry (GC/MS) "fingerprint" for leaded gasoline was detected in the monitoring wells downgradient from the USTs. The contamination plume has travelled in a northeast direction from the station and is approximately 700 feet long by 200 feet wide. A site characterization report and corrective action plan are currently in progress to determine the extent of the groundwater contamination and remedial actions required.

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## 5. SITE PARCELIZATION

After concluding the review of investigation documents, regulatory records, personnel interviews, and visual inspections, Science Applications International Corporation (SAIC) identified parcels on the installation as CERFA Parcels, CERFA Parcels with Qualifiers and CERFA Disqualified Parcels in accordance with the definitions in Section 1.2. The parcels are delineated on a map of the installation using a 1-acre square grid for boundary definition. The entire 1-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 disqualifying and qualifying circumstances were discovered in the same acre square, that square is identified and shaded as a CERFA disqualified parcel. Labels for any such overlapped parcels also indicate the presence of the qualifying hazards. 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.

SAIC's investigation and subsequent parcelization of Vint Hill Farms Station (VHFS) installation determined that approximately 416.5 acres of the facility fall within the CERFA Parcel category. Approximately 135 acres of the facility are categorized as CERFA Parcels with Qualifiers. One-hundred forty-nine and one-half (149½) acres constitute the CERFA Disqualified portion of the installation. There are no CERFA Excluded Parcels at VHFS. The CERFA Parcels are located predominantly in the eastern portion of the installation.

In determining the applicable parcel categories for the installation property, SAIC 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 1 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.
- Nonleaking 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 Parcel with Qualifier 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.
- 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.

### **5.1 PARCEL DESIGNATION MAP**

Table 5-1 and Figure 5-1 identify the breakdown of the VHFS property according to the criteria for parcel identification under CERFA.

### **5.2 TRACT MAP**

The property boundaries and all property transfers since 1942 including prior ownership information are shown in Figure 5-2.

### **5.3 SUMMARY CERFA MAP**

Figure 5-3 summarizes the breakdown of the VHFS property according to the criteria for parcel identification under CERFA.

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
1D-HR/A/L(P)	Coordinates E-12 1 acre	CERFA Disqualified	Solvent spill in storm sewer near Building 414 in August 1993. Housing units with definite asbestos and possible lead paint. Appendix C lists buildings and qualifiers.	ENPA	Solvent and water were drummed and removed.
2D-HR/HR(P)/HS/PR/ PS/A/A(P)/L(P)/R	Coordinates I-19 15 acres Dump 1 (AREE 1) Sewage Treatment Plant (STP) (AREE 2) Sewage Treatment Plant UST (AREE 28-9)	CERFA Disqualified	AREE 1 - Unlined landfill used from 1942 to 1973. Grease, lead paint residue, organic solvents, oil, pesticides, and household garbage were dumped and burned in trenches. Asbestos sheeting burned in June 1972. AREE 2 - Pretreatment system at EPIC failed in July 1984. Cyanide-contaminated wastewater was discharged to the STP. Sludge was stored on ground before 1980. Chlorine is stored near the commissary. Anhydrous ammonia leak at Building 398. Radon gas detected in Building 398. Buildings with definite and possible asbestos and possible lead paint. Appendix C lists buildings and qualifiers. AREE 28-9 - one 550-gallon diesel tank at Building 398.	ENPA	AREE 2 - Anhydrous ammonia leak was remediated.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage



Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
3D-HR/HS/PR/PS/A/A(P)/L(P)	Coordinates L-12 4 acres Warehouse (AREE 3)  Auto Craft Shop (AREE 4)  Auto Craft Shop UST (AREE 28-1)	CERFA Disqualified	AREE 3 - Previous storage of oil, grease, solvents, paint, acid, and industrial organic chemicals. Current storage of industrial cleaners, spray paint, and copier toner. AREE 4 - Storage of petroleum products. Various gasoline, antifreeze, and oil spills in this area. Asbestos wastes generated from brake work. AREE 5 - Leaking 1,000-gallon waste oil UST; removed in July 1990. Asbestos and possible lead in Building 307. Possible asbestos and lead in all other buildings. Appendix C lists buildings and qualifiers.	ENPA	AREE 5 - UST removed in July 1990. Monitoring wells installed. Site characterization conducted. Corrective action planned.
4D-PR	Coordinates 0-12 1 acre	CERFA Disqualified	Diesel fuel spill in the Building 102 parking lot in April 1994.	R. Reisch	Spill was fully remediated.
5D-HR(P)/HS/A/L(P)	Coordinates 0-5 2 acres EPIC Building and Sewerline (AREE 5)	CERFA Disqualified	AREE 5 - Hazardous substance and waste storage facility outside EPIC Building. Satellite storage facility within building. Possible industrial sewerline leaks. Cyanide contamination of South Run tributary due to wastewater release.  Building has asbestos and possible lead paint.	ENPA	AREE 5 - EM survey of sewerline. Groundwater monitoring well installed.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
6D-HR/A(P)/L(P)	Coordinates P-7 1 acre	CERFA Disqualified	Methylene chloride dumped into storm drain near Building 163 in March 1989. Building has possible asbestos and lead paint.	Preliminary Assessment (PA)	Storm drain system pumped out to remediate methylene chloride spill.
7D-HR(P)/A(P)/L(P)	Coordinates P-9 7 acres	CERFA Disqualified	EPIC sewerline has possible leaks. Building with possible asbestos and lead paint.	ENPA	EM survey of sewerline. Groundwater monitoring well installed.
8D-HR/A(P)/L(P)	Coordinates Q-12 1 acre	CERFA Disqualified	Building 188 had spill of PCB fluid in November 1989 and possible asbestos and possible lead paint.	PA	PCB spill was remediated.
9D-HR(P)	Coordinates R-13 4 acres	CERFA Disqualified	EPIC sewerline has possible leaks.	ENPA	EM survey of sewerline. Groundwater monitoring well installed.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
10D-HR/HR(P)/ HS/PR/PS/A/ A(P)/L(P)/P/R	Coordinates U-16 70 acres Electrical Equipment Facility (AREE 7) IMMC Neutralization Pit (AREE 8) Vehicle Maintenance Area (AREE 9)	CERFA Disqualified	AREE 7 - Pretreatment tank outside the facility treats waste chromic acid from metal etching, painting wastewaters, and photographic wastewaters. Possible corrosion of drain lines and pretreatment tank. Chemical storage in the building. Has a satellite storage area outside the building. AREE 8 - Unlined pit formerly connected to two photographic developing sinks. Soil and groundwater contamination present. AREE 9 - Numerous spills of petroleum products in this area. Storage of waste oil, antifreeze, and used solvent.	ENPA	AREE 8 - Site investigation conducted in January 1991. Groundwater monitoring well installed.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
10D-HR/HR(P)/ HS/PR/PS/A/ A(P)/L(P)/P/R (continued)	Former Photographic Wastewater Lagoon (AREE 10)  Former Sewage Treatment Plant (AREE 11)  Pistol Range (AREE 19)  Incinerator (AREE 20)  Sand Filter Beds (AREE 21)		AREE 10 - Received acidic photographic wastewaters containing silver from EPIC Building. AREE 11 - Sludge storage in piles on the ground during plant operation. AREE 19 - Lead dust from unrecovered spent ammunition. AREE 20 - Possible incineration of batteries, solvents, and pesticides with normal garbage. Floor drains lead to septic tank leach field. AREE 21 - Unlined beds received wastewater from incinerator wet scrubber. Possible heavy metals contamination. Filtered water discharged through absorption field.		AREE 10 - Lagoon was dredged and filled in 1968.

Parcel Number Key:

- Labels  
P - CERFA parcel  
Q - CERFA parcel with qualifiers  
D - CERFA disqualified parcel  
E - CERFA excluded parcel

- Qualifiers  
A - Asbestos  
L - Lead paint  
P - PCBs  
R - Radon  
RD - Radionuclides  
(P) - Possible

- Disqualifiers  
PR - Petroleum release/disposal  
PS - Petroleum storage  
HR - Hazardous release/disposal  
HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
10D-HR/HR(P)/ HS/PR/PS/A/ A(P)/L(P)/P/R (continued)	Transformer Storage Area (AREE 24) AAFES Service Station (AREE 27) Vehicle Maintenance Area USTs (AREE 28-2) AAFES Service Station UST (AREE 28-3) Engineering Compound USTs (AREE 28-7) Power Plant UST (AREE 28-8) STP Emergency Generator UST (AREE 28-9)		<p><b>AREE 24</b> - Used for storage of transformers with greater than 50 ppm PCBs. Leaking waste motor oil drums were noted near Building 253 in 1989.</p> <p><b>AREE 27</b> - Numerous spills of gasoline and a battery acid spill.</p> <p><b>AREE 28-2</b> - Two 2,000-gallon diesel USTs; one 10,000-gallon gasoline UST. Gasoline UST replaced 12,000-gallon steel UST.</p> <p><b>AREE 28-3</b> - Three 10,000-gallon gasoline USTs; one 550-gallon waste oil UST. Distribution line leak in 1993. Plume of leaded gasoline detected by monitoring well.</p> <p><b>AREE 28-7</b> - Two 1,000-gallon gasoline USTs.</p> <p><b>AREE 28-8</b> - One 2,000-gallon diesel UST.</p> <p><b>AREE 28-9</b> - One 550-gallon diesel tank at Building 205. Buildings 2300 and 2400 contain radon gas. Building 2410 had a leaking PCB transformer outside in 1989. Building 2490 had a diesel fuel leak from a generator in January 1994. Buildings contain possible asbestos, lead paint. Appendix C lists buildings and qualifiers.</p>	R. Reisch	<p><b>AREE 24</b> - Transformers containing PCB oils were removed.</p> <p><b>AREE 28-2</b> - 12,000-gallon UST replaced by 10,000-gallon tank in 1990.</p> <p><b>AREE 28-3</b> - Distribution line repaired. Site characterization in process.</p> <p><b>AREE 28-8</b> - In 1985, the tank replaced an older tank that was installed in 1944. Transformer was taken out of service. Leak was corrected. Spill was fully remediated.</p>

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
11D-HR/PR/PS/ A(P)/L(P)	Coordinates S-5 3 acres Outdoor Wash Racks (AREE 26) Former Steam Plant USTs (AREE 28-4)	CERFA Disqualified	AREE 26 - Minor spills of motor oil and antifreeze. AREE 28-4 - Two 30,000-gallon fuel oil tanks. Buildings contain possible asbestos and lead paint. Appendix C lists buildings and qualifiers.	ENPA	AREE 28-4 - Tanks removed in 1990. Closure Report accepted by SWCB.
12D-HR(P)/PR(P)	Coordinates U-5 ½ acre	CERFA Disqualified	Former outdoor wash rack location. Possible minor spills of antifreeze and motor oil.	R. Reisch	None.
13D-PS	Coordinates U-11 1 acre Former Service Station Abandoned USTs (AREE 28-5)	CERFA Disqualified	AREE 28-5 - Two gasoline USTs of unknown capacity.	ENPA	AREE 28-5 - Tanks emptied and filled with sand in 1983.

Parcel Number Key:

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Qualifiers

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- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
14D-HR/PS/ A(P)/L(P)/P	Coordinates Z-19 6 acres  IEWD Emergency Generator USTs (AREE 28-6)	CERFA Disqualified	AREE 28-6 - Four diesel oil USTs of 2,000; 5,000; 8,000; and 15,000 gallons.  Lithium battery exploded in Building 260 in November 1989.  Building 261 had a leaking transformer outside in 1989.  Buildings contain possible lead and asbestos.	ENPA	AREE 28-6 - The 2,000-gallon tank replaced a similar 2,000-gallon tank in 1985.  Battery explosion was remediated.  Transformer leak was repaired.
15D-HR(P)/PR(P)/L(P)	Coordinates Z-25 6 acres  Dump 3 (AREE 17)  Grease Pit (AREE 18)	CERFA Disqualified	AREE 17 - Household waste and pesticide bottles noted during site visit. Interviews noted that lead contaminated sandblasting waste may have been disposed of here. AREE 18 - Kitchen grease, oily rags, and possibly motor oil disposed of in trench. Two diesel USTs placed in trench.	ENPA Interview with S. O'Neill	AREE 18 - Tanks were recently removed.
16D-HR/L(P)	Coordinates AB-22 2 acres  Sludge Disposal Area (AREE 13)	CERFA Disqualified	AREE 13 - Sludge disposal from STPs. Lead contaminated sandblasting waste and used neutralization pit filters are possibly disposed of here.		AREE 13 - Area dredged and closed in June 1992.

Parcel Number Key:

Labels

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Qualifiers

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- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
17D-HR (P)	Coordinates AB-31 2 acres Possible Sludge Disposal Area (AREE 29-2)	CERFA Disqualified	AREE 29-2 - Possible disposal of sludge from STPs.	ENPA	None.
18D-HR/PR	Coordinates AD-28 2 acres Firefighter Training Pit (AREE 16)	CERFA Disqualified	AREE 16 - Release of petroleum products and solvents, which were ignited for firefighter training.	ENPA	AREE 16 - Pit closed and filled with stones in mid-1980's.
19D-HR(P)/PS	Coordinates AJ-29 4 acres Sugar Tree (AREE 25)	CERFA Disqualified	AREE 25 - Small quantities of paints and solvents may have been disposed of in the area. One 200-gallon diesel AST.	ENPA	None.

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- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage



Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
20D-HR(P)/HS/A(P)/L(P)/P	Coordinates AL-23 17 acres Skeet Range (AREE 14) Hazardous Waste Storage Building (AREE 15)	CERFA Disqualified	AREE 14 - Lead dust from spent ammunition. AREE 15 - Hazardous waste and substance storage area. Building 294 had a leaking PCB transformer outside in 1989. Buildings contain possible asbestos and lead paint. Appendix C lists the buildings and qualifiers.	ENPA	Transformer leak was repaired.
21Q-A/A(P)/L(L)(P)	Coordinates K-14 51 acres	CERFA Parcel with Qualifiers	Housing units and other buildings with definite and possible asbestos and lead paint. Appendix C lists buildings and qualifiers.	Asbestos and lead surveys	None.
22Q-A(P)/L(P)	Coordinates L-8 4 acres	CERFA Parcel with Qualifiers	Buildings with possible asbestos and lead paint. Appendix C lists buildings and qualifiers.	Asbestos and lead surveys	None.
23Q-A(P)/L(P)	Coordinates N-5 1 acre	CERFA Parcel with Qualifiers	Building number 169 with possible asbestos and lead paint.	Asbestos and lead surveys	None.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
24Q-A/A(P)/L(L(P)/R/RD	Coordinates V-8 61 acres Health Clinic (AREE 6)	CERFA Parcel with Qualifiers	AREE 6 - Possible asbestos and lead paint in Building 137. In-use radionuclides. Buildings with possible and definite asbestos and lead paint. Building 247 has radon gas. Appendix C lists buildings and qualifiers.	ENPA Asbestos and lead surveys	None.
25Q-A(P)/L(P)	Coordinates V-24 1 acre Fixed Ammunition Magazine (AREE 22) Possible Disposal Area (AREE 29-3)	CERFA Parcel with Qualifiers	AREE 22 - Possible asbestos and lead paint. AREE 29-3 - Construction debris only.	ENPA Asbestos and lead surveys	None.
26Q-A(P)/L(P)	Coordinates X-19 1 acre	CERFA Parcel with Qualifiers	Building 296 contains possible asbestos and lead paint.	Asbestos and lead surveys	None.
27-A(P)	Coordinates AA-20 1 acre	CERFA Parcel with Qualifiers	Building 298 contains possible asbestos.	Asbestos and lead surveys	None.
28Q-A(P)/L(P)	Coordinates AB-18 3 acres	CERFA Parcel with Qualifiers	Buildings with possible asbestos and lead paint. Appendix C lists buildings and qualifiers.	ENPA	None.
29Q-A(P)	Coordinates AC-29 2 acres	CERFA Parcel with Qualifiers	Two buildings with possible asbestos. Buildings are not numbered.	CERFA Guidance	None.

Parcel Number Key:

Labels

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
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- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

**Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)**

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
30Q-A(P)	Coordinates AE-25 7 acres	CERFA Parcel with Qualifiers	Buildings with possible asbestos. Appendix C lists buildings and qualifiers.	CERFA Guidance	None.
31Q-A/A(P)/L(P)	Coordinates AE-9 2 acres	CERFA Parcel with Qualifiers	Building 216 has possible asbestos and lead paint. Building 219 has asbestos and possible lead paint.	Asbestos and lead survey	None.
32Q-A/L(P)	Coordinates AI-22 1 acre	CERFA Parcel with Qualifiers	Building 283 has asbestos and possible lead paint.	Asbestos and lead survey	None.
33P	Coordinates D-13 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
34P	Coordinates F-17 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
35P	Coordinates H-17 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
36P	Coordinates L-10 46 acres	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
37P	Coordinates J-16 2 acres	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.

**Parcel Number Key:**

**Labels**

- P - CERFA parcel
- Q - CERFA parcel with qualifiers
- D - CERFA disqualified parcel
- E - CERFA excluded parcel

**Qualifiers**

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

**Disqualifiers**

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
38P	Coordinates Q-20 60 acres Salvage Yard (AREE 29-1)	CERFA Parcel	AREE 29-1 - No evidence of hazardous or petroleum release or storage, or presence of qualifiers in this AREE or elsewhere within the parcel.	ENPA and CERFA Investigation	None required.
39P	Coordinates R-9 5 acres	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
40P	Coordinates S-4 ½ acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
41P	Coordinates T-5 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
42P	Coordinates U-6 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
43P	Coordinates U-10 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
44P	Coordinates V-29 1½ acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.

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- E - CERFA excluded parcel

Qualifiers

- A - Asbestos
- L - Lead paint
- P - PCBs
- R - Radon
- RD - Radionuclides
- (P) - Possible

Disqualifiers

- PR - Petroleum release/disposal
- PS - Petroleum storage
- HR - Hazardous release/disposal
- HS - Hazardous storage

Table 5-1. Parcel Designation Map, CERFA Analysis, Vint Hill Farms Station (continued)

Parcel Number	Location and Size	Category	Basis	Source of Evidence	Remediation Efforts Conducted or Planned
45P	Coordinates AE-21 287 acres Dump #2 (AREE 12) Disposal Area (AREE 29-4) Transformers (AREE 23) Liquid Impoundment Area (AREE 29-5) Possible Burn Pile (AREE 29-6)	CERFA Parcel	AREEs 12, 23, 29-4, 29-5, and 29-6 - No evidence of hazardous or petroleum release or storage, or presence of qualifiers in these AREEs or elsewhere within the parcel.	ENPA and CERFA Investigation	None required.
46P	Coordinates X-6 2 acres	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
47P	Coordinates Z-10 5 acres	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
48P	Coordinates AA-19 1 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.
49P	Coordinates AB-6 1/2 acre	CERFA Parcel	No evidence of hazardous or petroleum release or storage, or presence of qualifiers.	CERFA Investigation	None required.

Parcel Number Key:

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D - CERFA disqualified parcel  
E - CERFA excluded parcel
- Qualifiers  
A - Asbestos  
L - Lead paint  
P - PCBs  
R - Radon  
RD - Radionuclides  
(P) - Possible
- Disqualifiers  
PR - Petroleum release/disposal  
PS - Petroleum storage  
HR - Hazardous release/disposal  
HS - Hazardous storage

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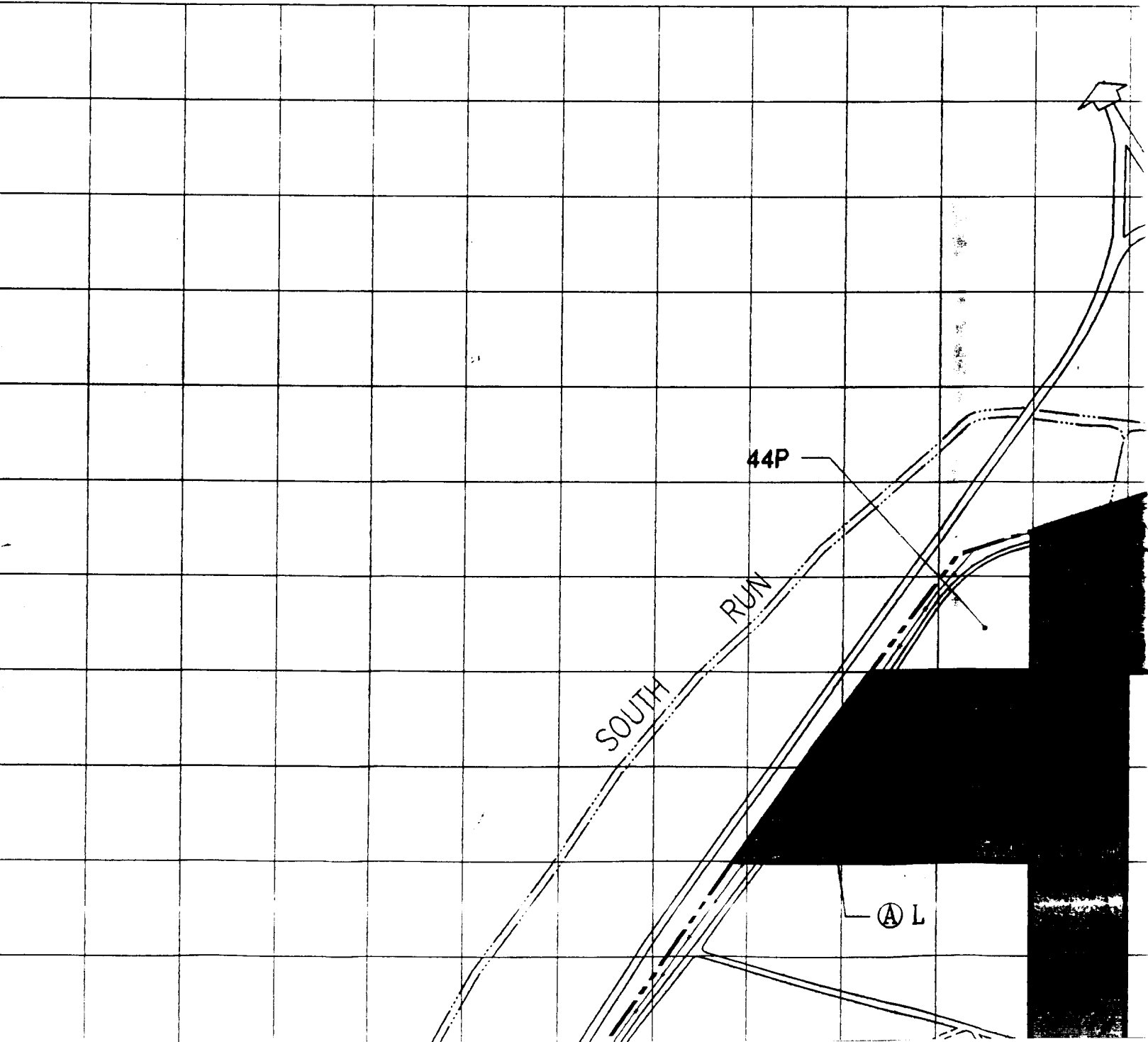
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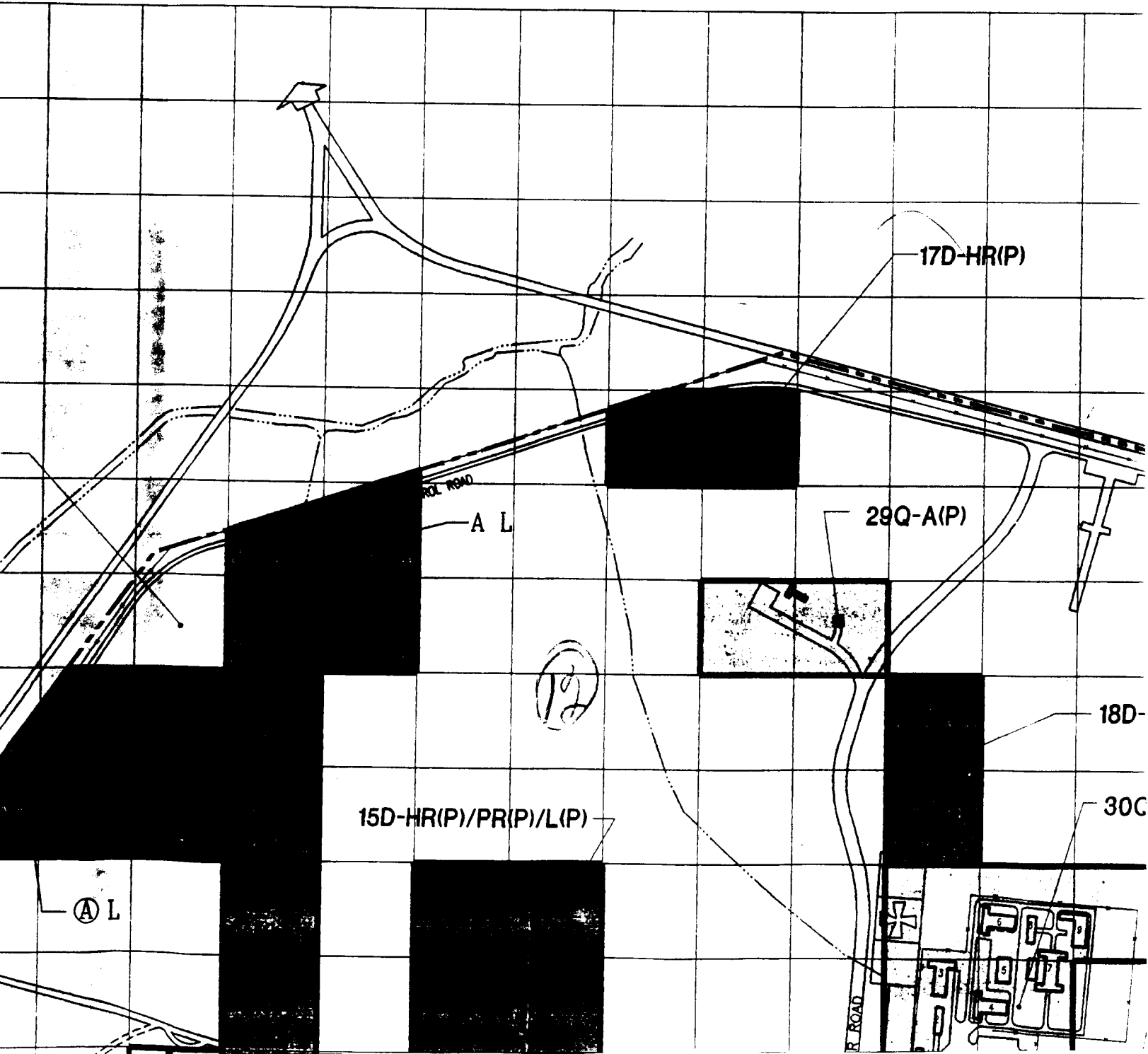


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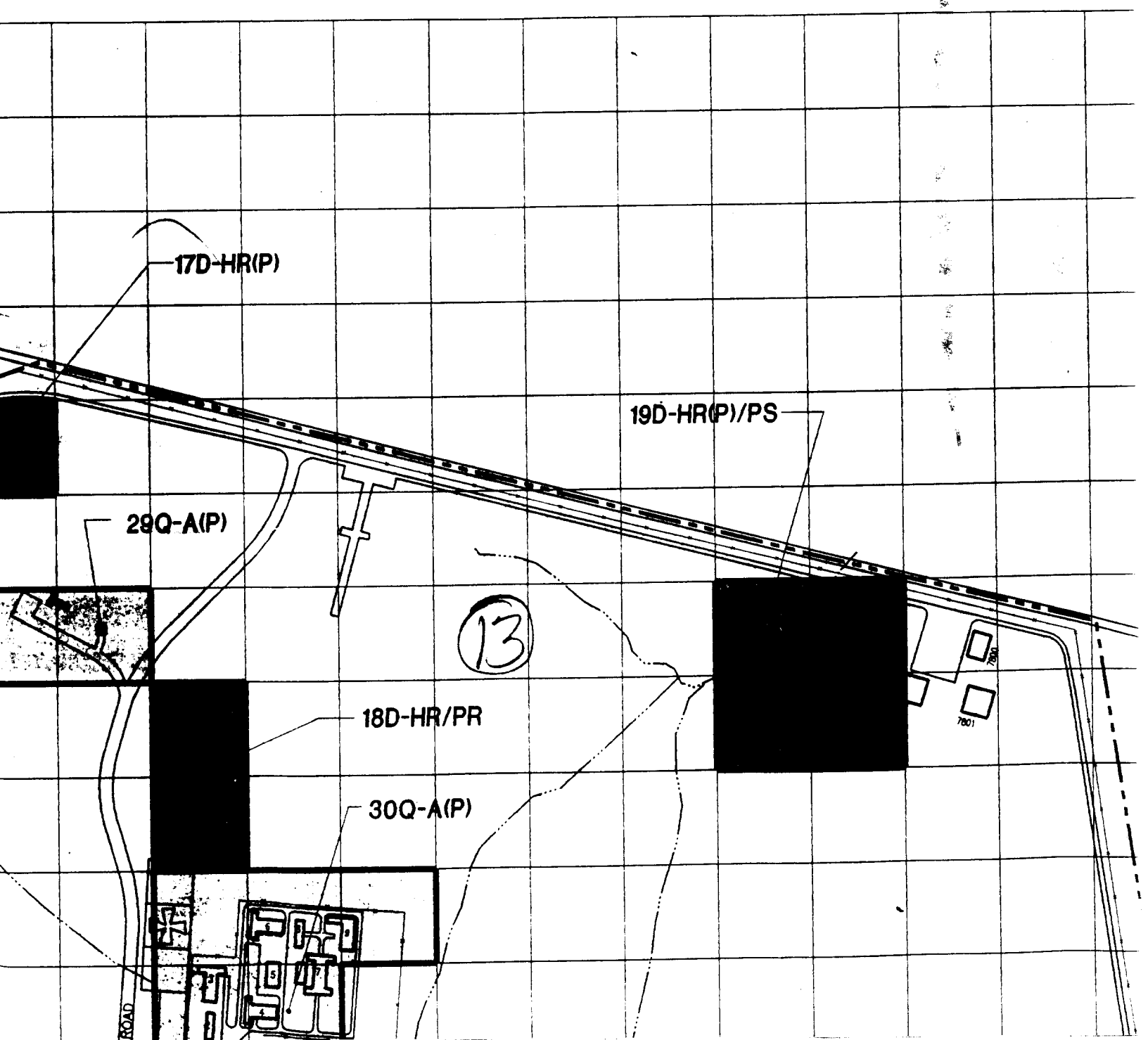


5

(11)



6



17D-HR(P)

19D-HR(P)/PS

29Q-A(P)

13

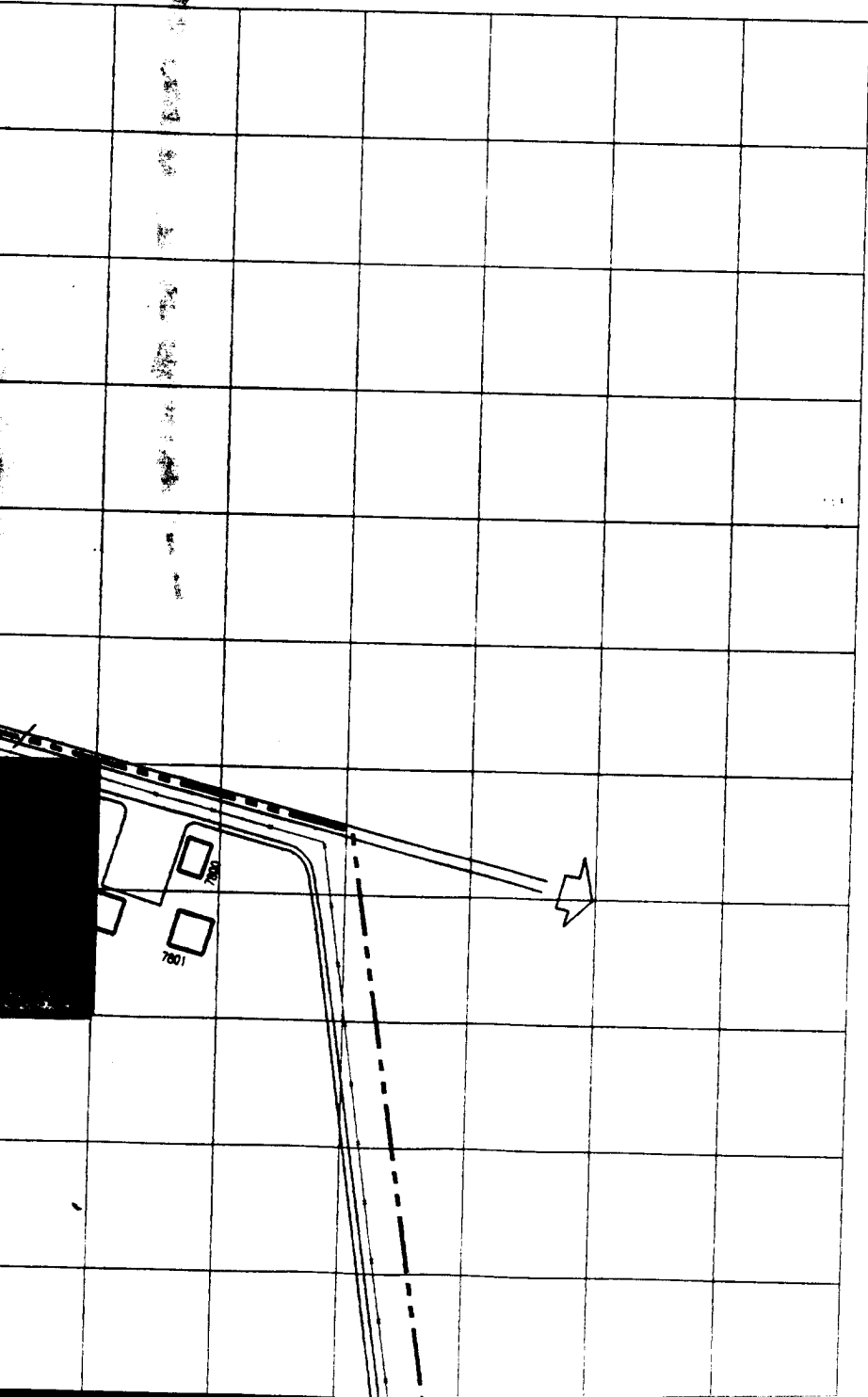
18D-HR/PR

30Q-A(P)

ROAD


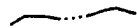

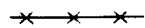









7601  
7602




⑦



8

# LEGEND:

-  ..... BUILDING
-  ..... CREEK
-  ..... PAVED ROAD
-  ..... FENCE
-  ..... INSTALLATION BOUNDARY
-  ..... PREVIOUSLY REMOVED UNDERGROUND STORAGE TANK(S)
-  ..... UNDERGROUND STORAGE TANK(S)
-  ..... ASBESTOS
-  ..... POSSIBLE ASBESTOS
-  ..... LEAD
-  ..... POSSIBLE LEAD
-  ..... RADON
-  ..... PCBs

-  ..... CERFA DISQUALIFIED PARCEL
-  ..... CERFA PARCEL WITH QUALIFIERS
-  ..... CERFA PARCEL

## PARCEL LABEL DEFINITIONS

### 17D-HR/PR

- A = ASBESTOS
- L = LEAD PAINT
- P = PCBs
- R = RADON
- X = UXO
- RD = RADIONUCLIDES
- PS = PETROLEUM STORAGE
- PR = PETROLEUM RELEASE/DISPOSAL

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2D-HR/HR(P)/HS/PR/PS/A/A(P)/L/L(P)/R

19

18

35P

17

34P

16

37P

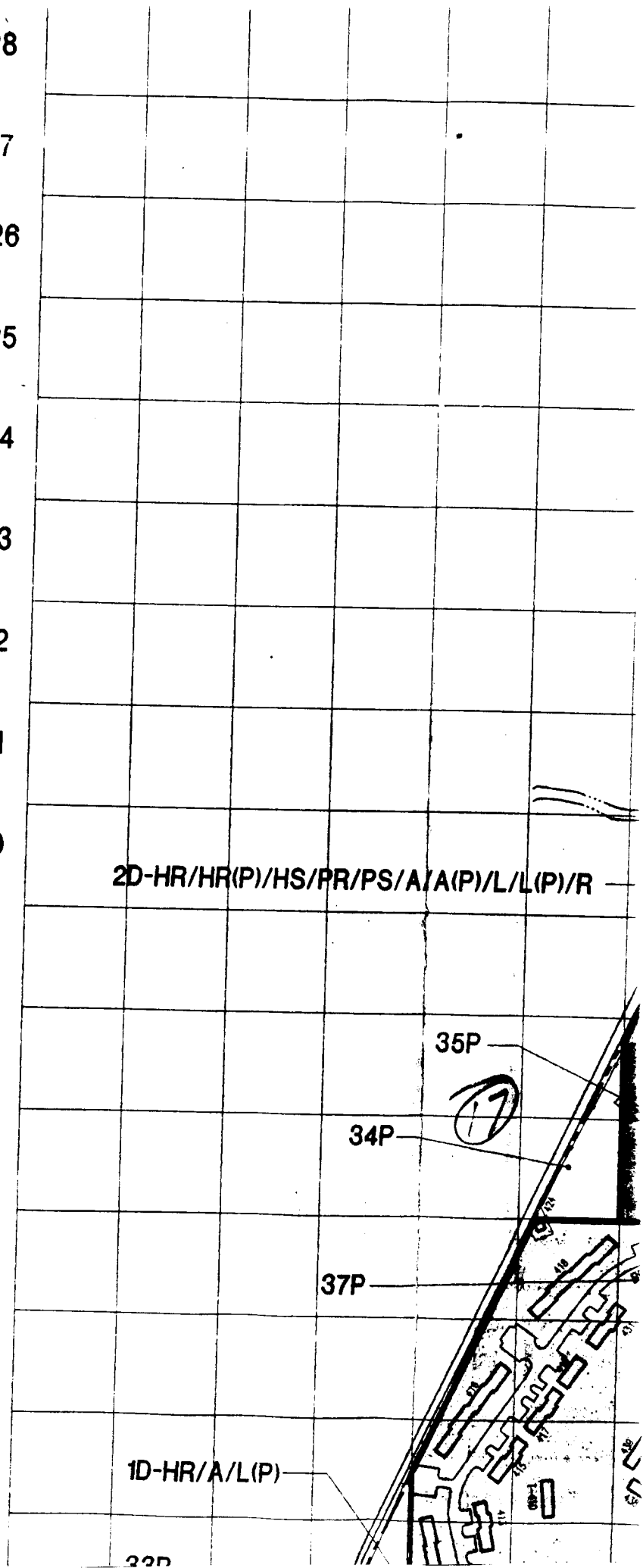
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14

1D-HR/A/L(P)

13

32D



10



38P

HS/PR/PS/A(A(P))/L/L(P)/R

A L

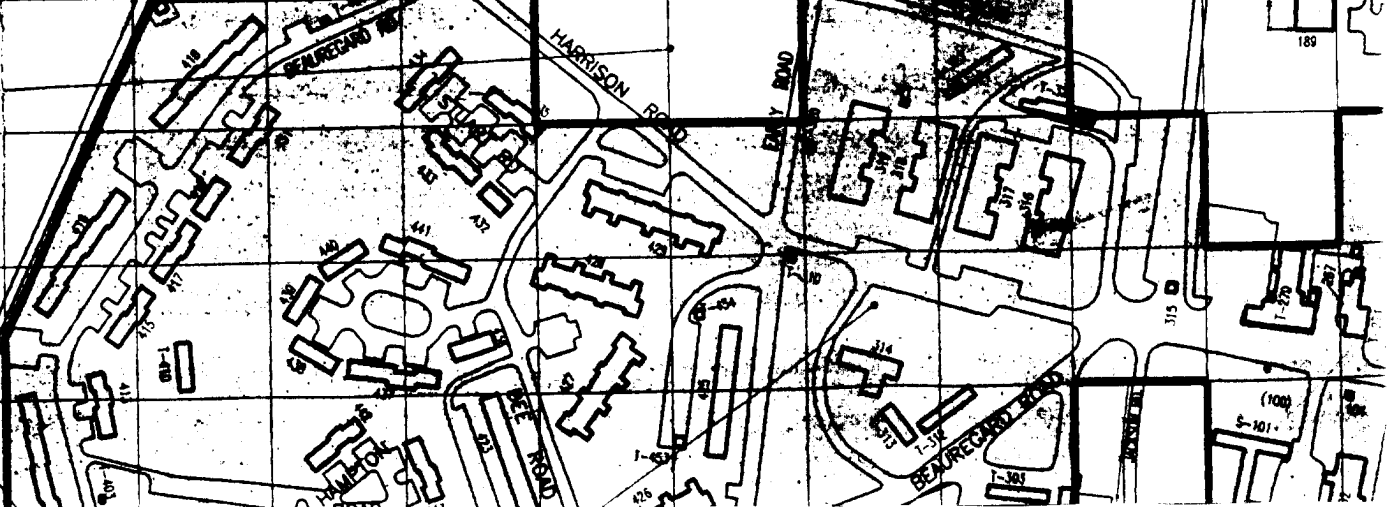
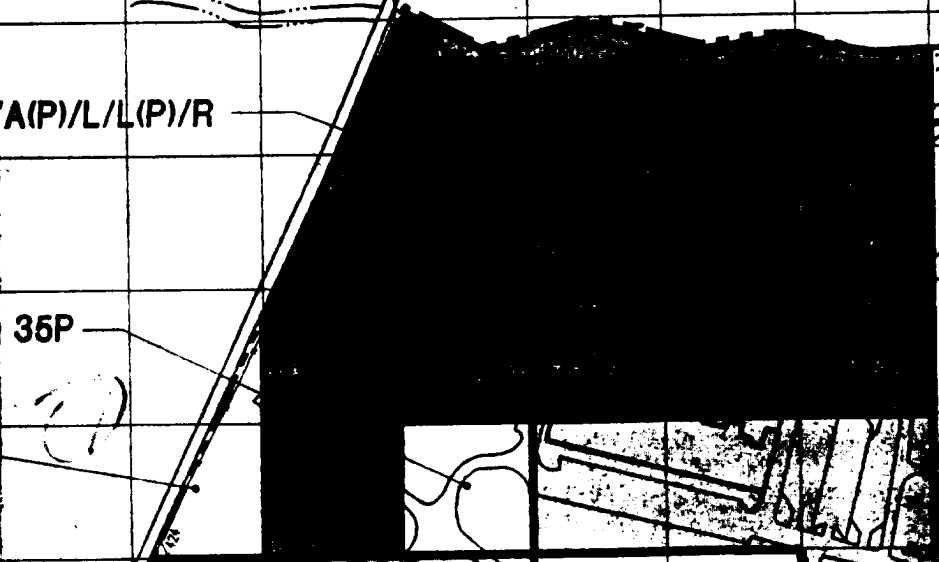
A (R)

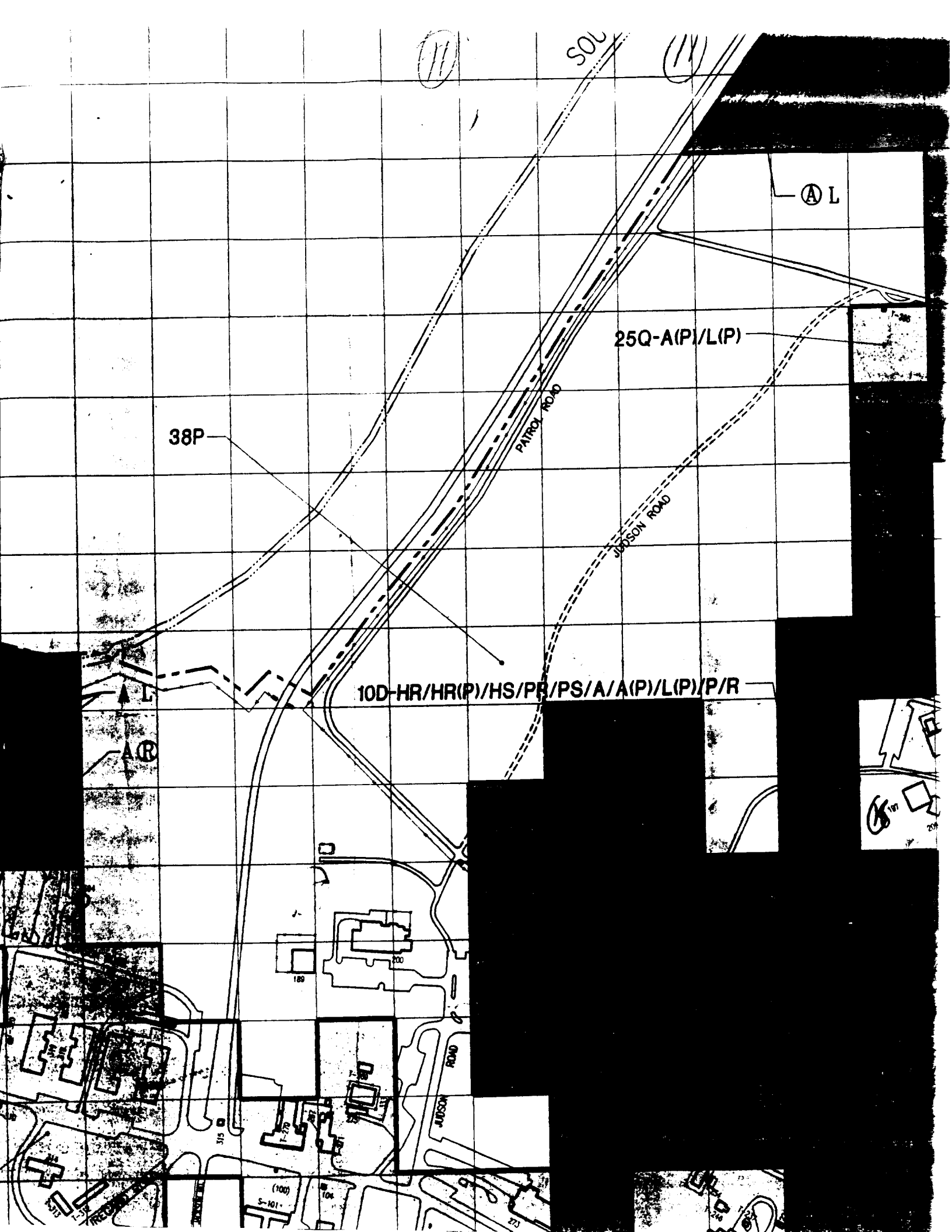
35P

34P

37P

(P)







19

15D-HR(P)/PR(P)/L(P)

Ⓐ L

Q-A(P)/L(P)

BICHER ROAD

ROAD

27Q-A(P)

26Q-A(P)/L(P)

16D-HR/L(P)

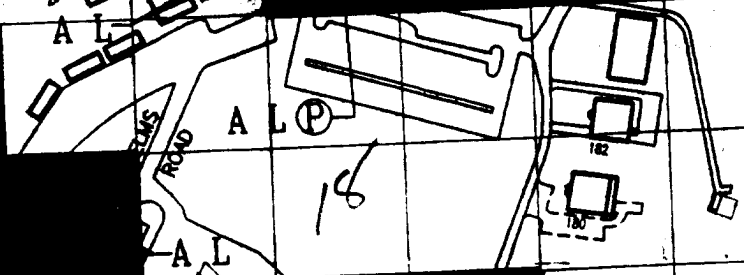
14D-HR/PS

P)/L(P)/P/R

A L

48P

2

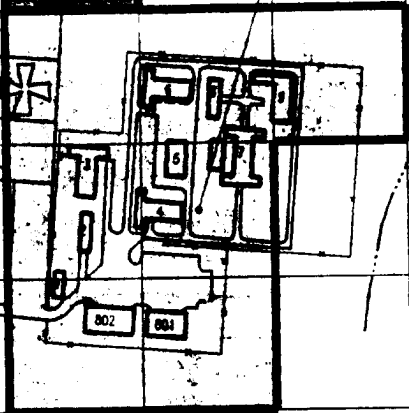


18

L.P.

(12)

30Q-A(P)



BICHER ROAD

EAST ROAD

SKEET ROAD



T-201

A L ⊕

32Q-A/L(P)

16D-HR/L(P)

14D-HR/PS/A(P)/L(P)/P

A L

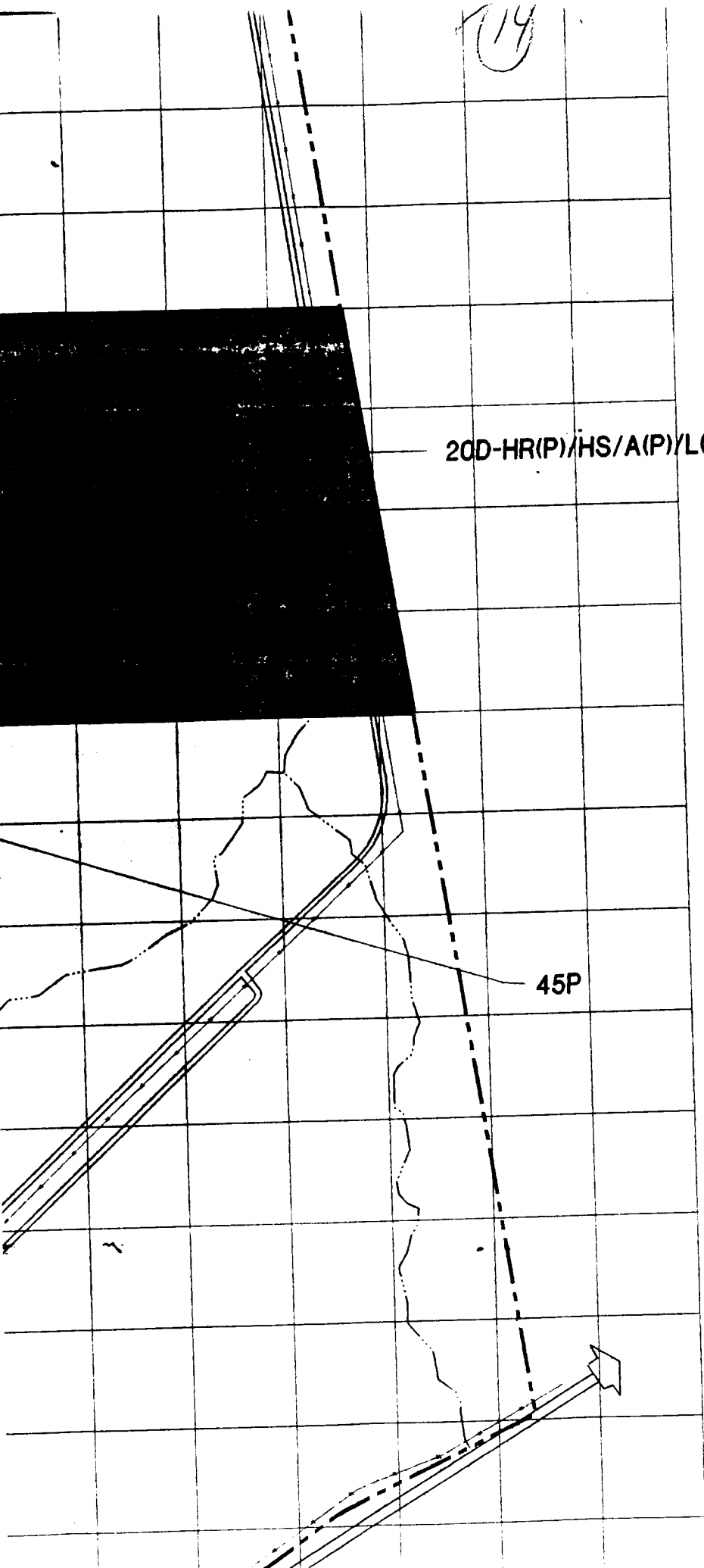
48P

28Q-A(P)/L(P)



PATROL ROAD

14



20D-HR(P)/HS/A(P)/L(P)/P

45P

# PARCEL LABEL DEFINITIONS

15

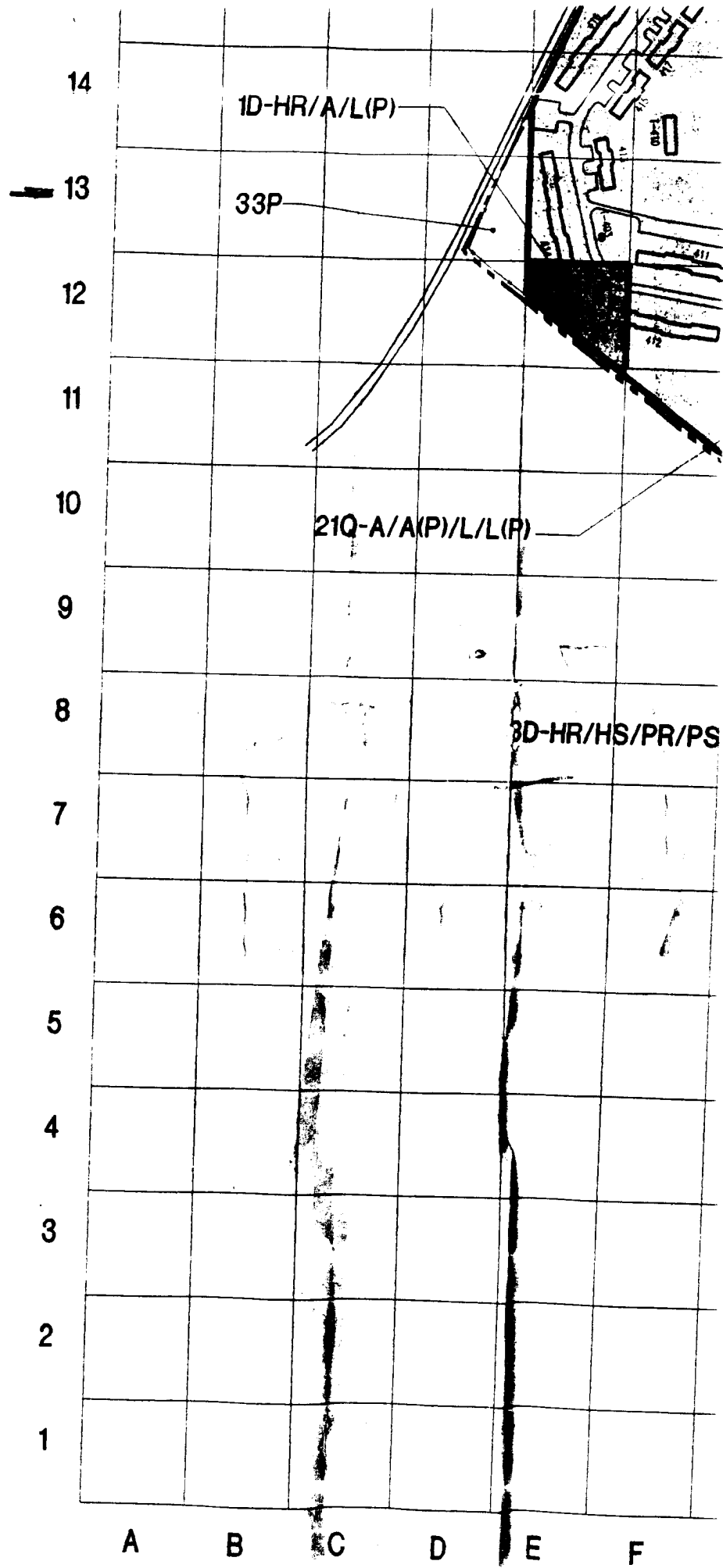
## 17D-HR/PR

A = ASBESTOS  
L = LEAD PAINT  
P = PCBs  
R = RADON  
X = UXO  
RD = RADIONUCLIDES  
PS = PETROLEUM STORAGE  
PR = PETROLEUM RELEASE/DISPOSAL  
HS = HAZARDOUS MATERIAL STORAGE  
HR = HAZARDOUS MATERIAL RELEASE/DISPOSAL  
(P) = POSSIBLE BUT UNVERIFIED

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

PARCEL NUMBER

16



17

(P)

Q-A/A(P)/L/L(P)

D-HR/HS/PR/PS/A/A(P)/L(P)

36P

22Q-A(P)/L(P)

A L

(A) L

4D-PR

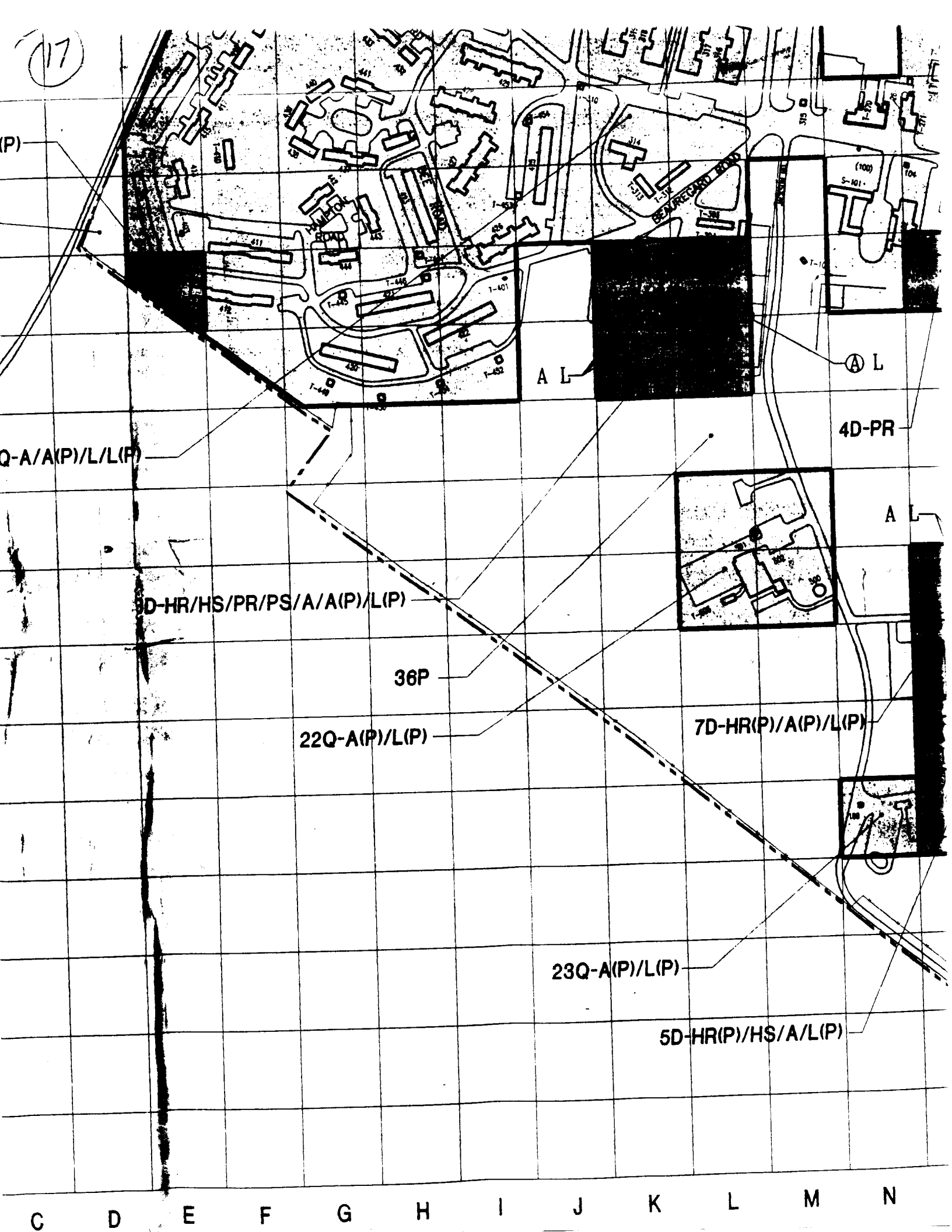
A L

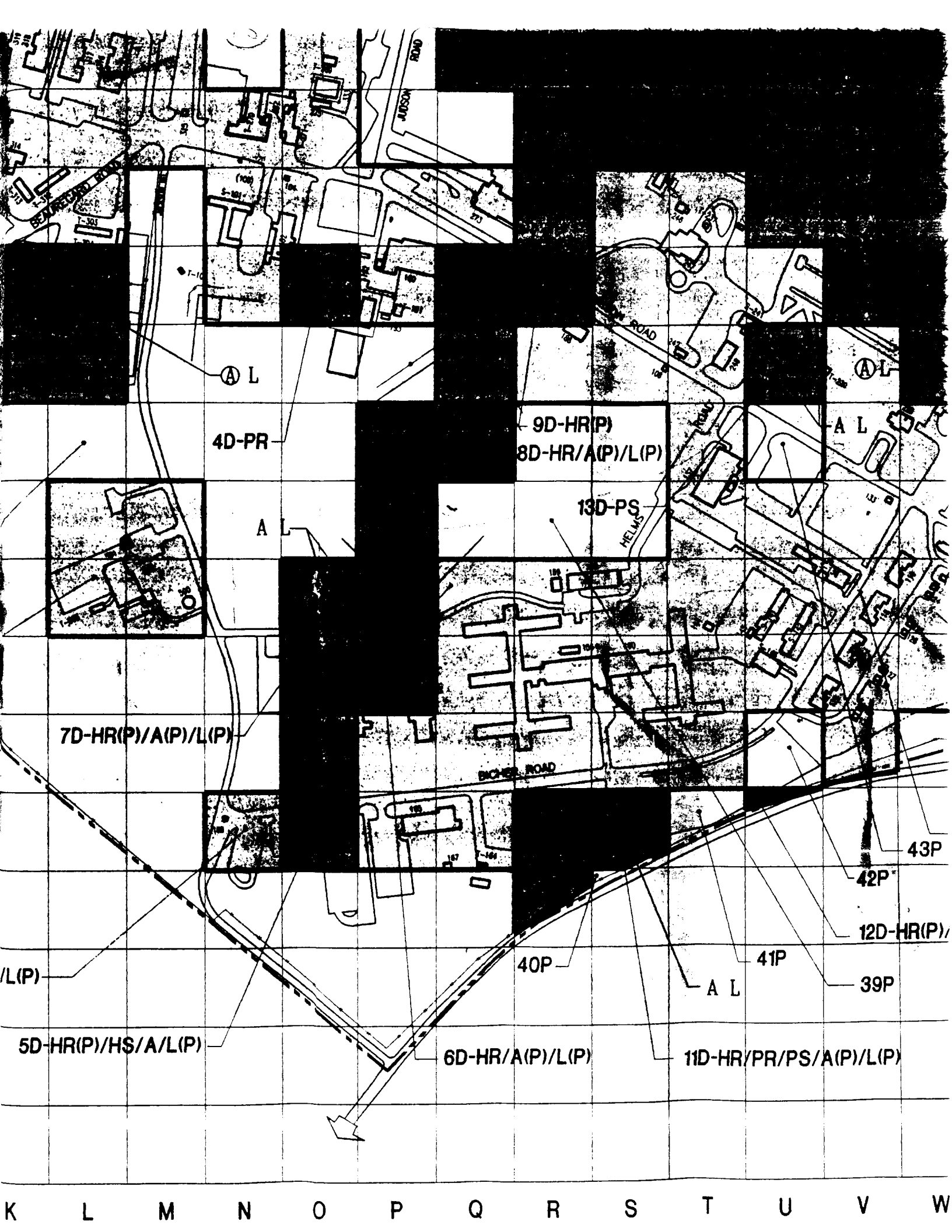
7D-HR(P)/A(P)/L(P)

23Q-A(P)/L(P)

5D-HR(P)/HS/A/L(P)

C D E F G H I J K L M N





Ⓐ L

4D-PR

9D-HR(P)  
8D-HR/A(P)/L(P)

Ⓐ L

Ⓐ L

A L

13D-PS

7D-HR(P)/A(P)/L(P)

BICHER ROAD

43P

42P

12D-HR(P)

/L(P)

40P

A L

41P

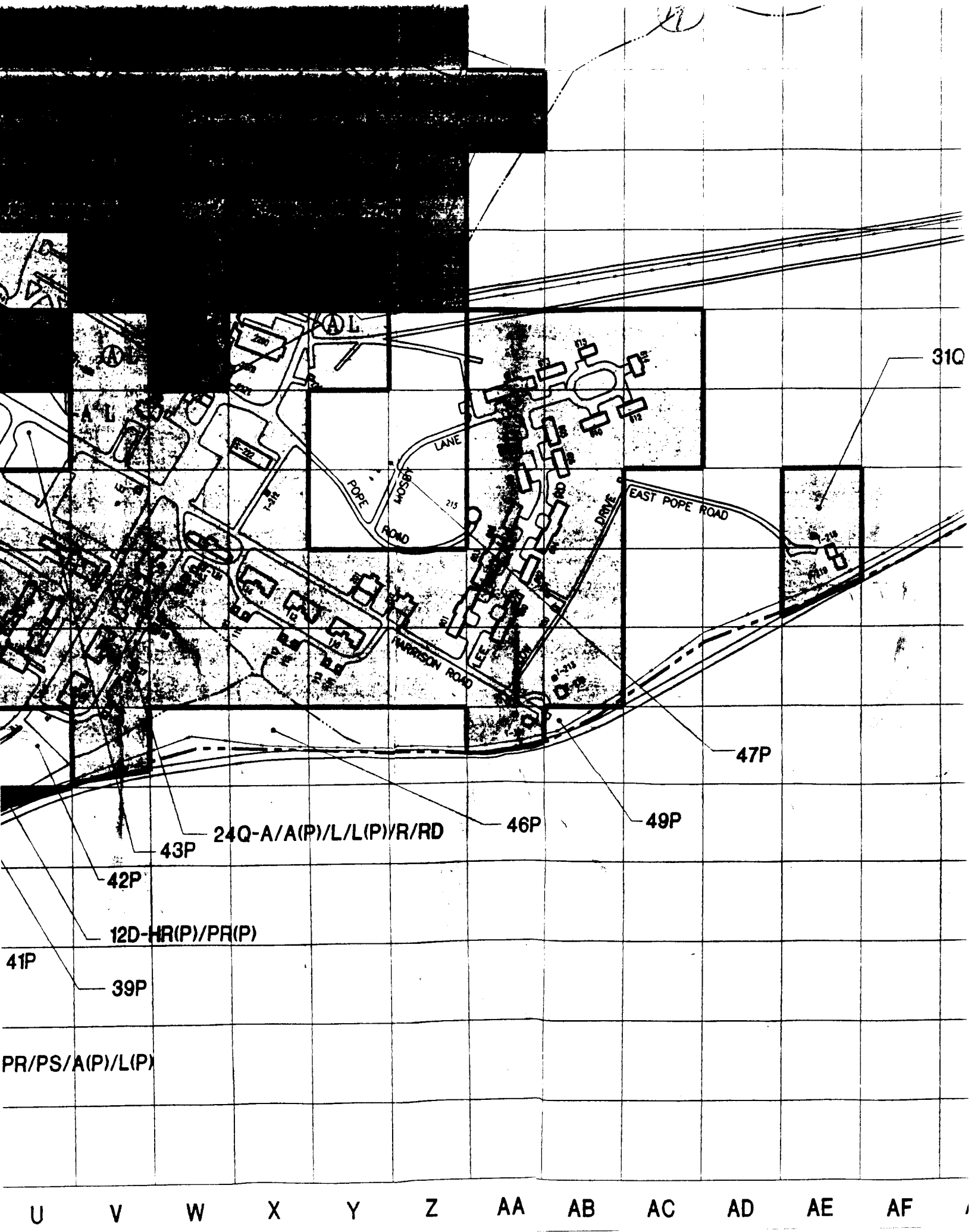
39P

5D-HR(P)/HS/A/L(P)

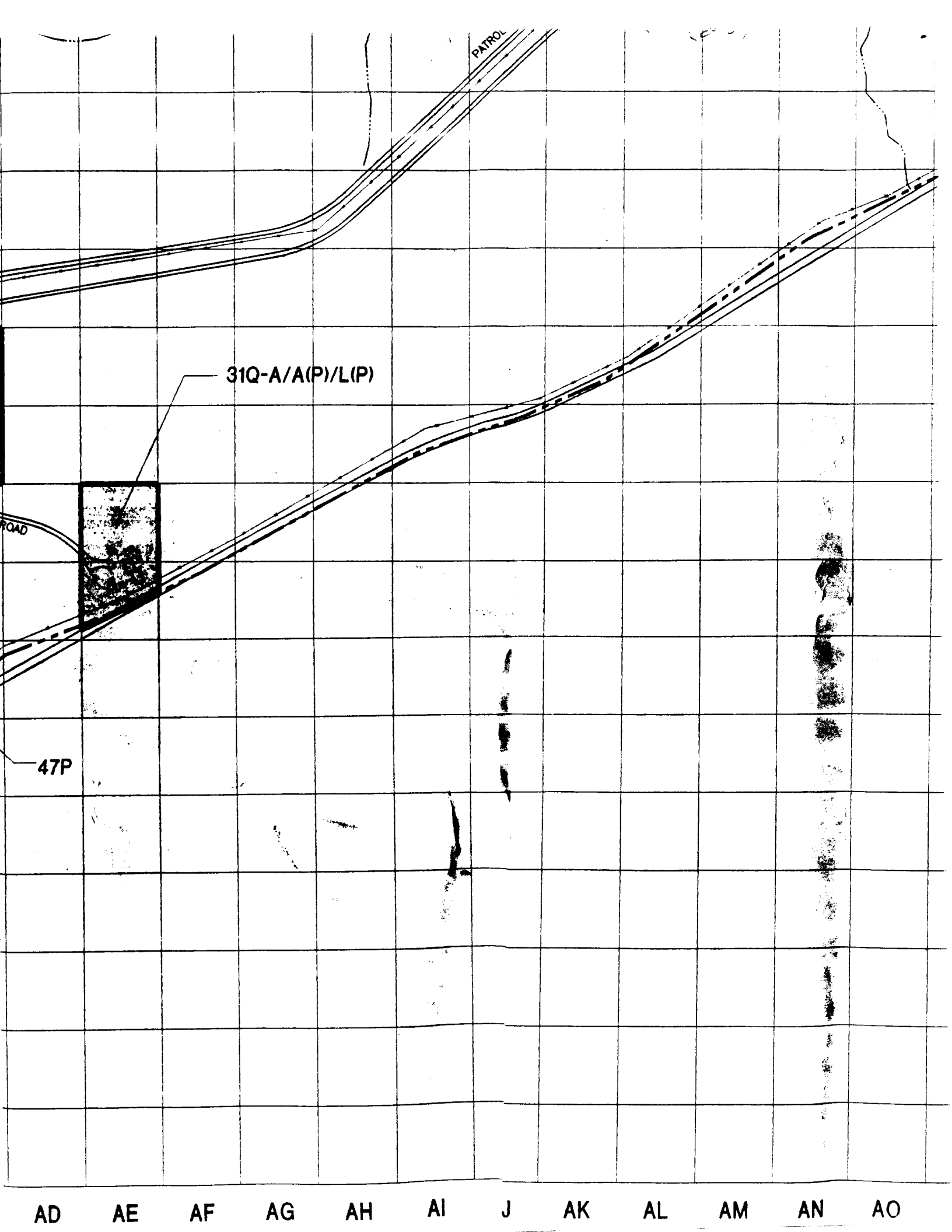
6D-HR/A(P)/L(P)

11D-HR/PR/PS/A(P)/L(P)

K L M N O P Q R S T U V W







PATROL

31Q-A/A(P)/L(P)

ROAD

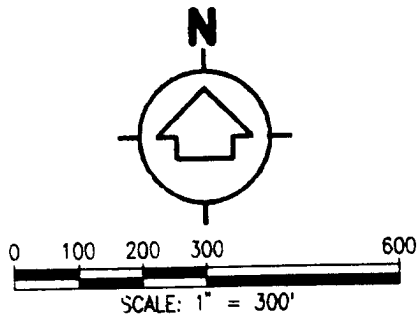
47P

AD AE AF AG AH AI J AK AL AM AN AO

21



22



Science Applications International Corporation

**Vint Hill Farms Station  
Warrenton, Virginia  
CERFA Investigation**

**PARCEL DESIGNATION MAP**

Figure:  
5-1

Project:  
01-0827-03-6521-002

File Name:  
/94001/DWGS/515BIG

Date: 05/05/94  
**REVISION 1**

1

E 231,000

E 232,000

E 233,000

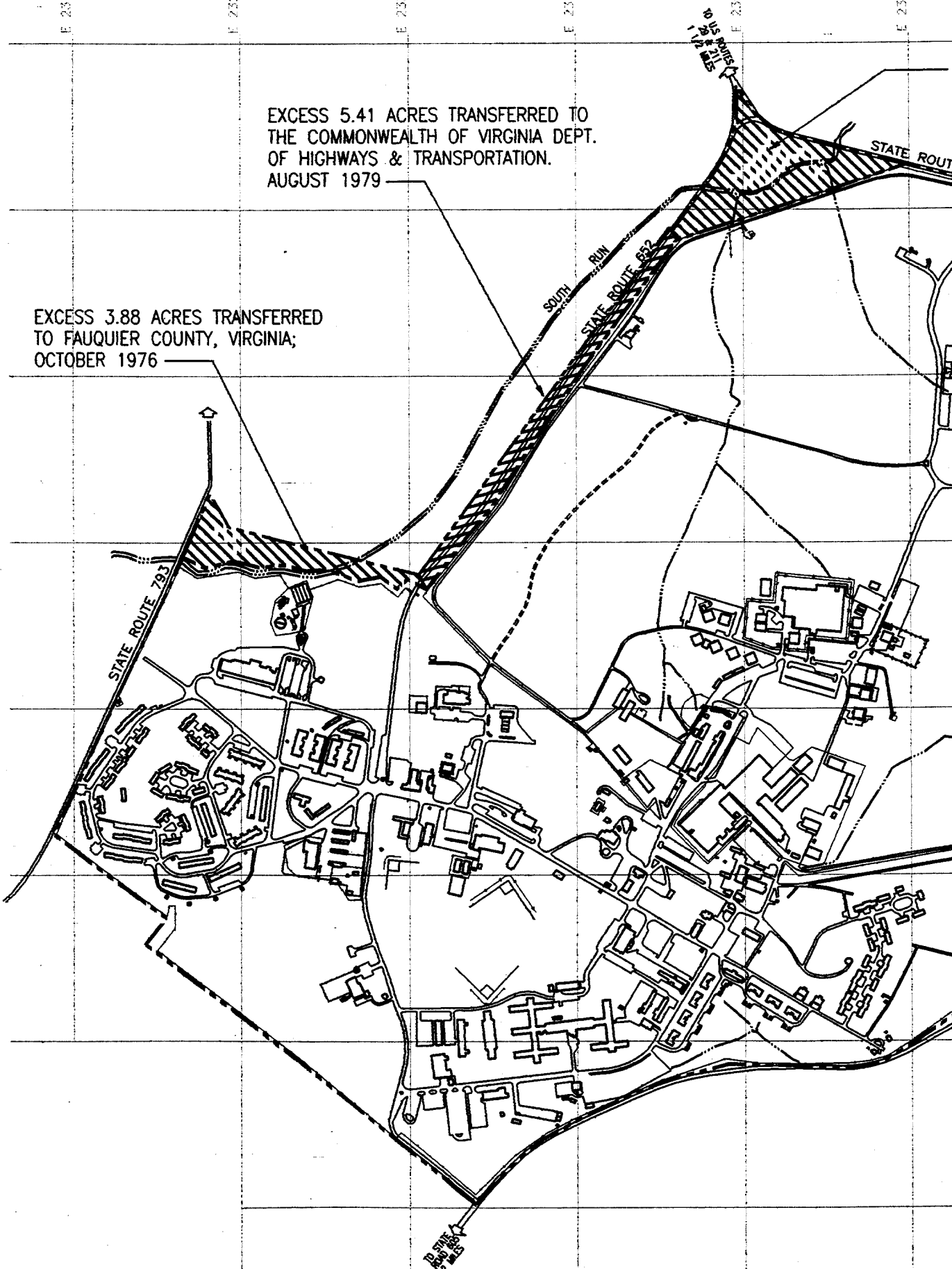
E 234,000

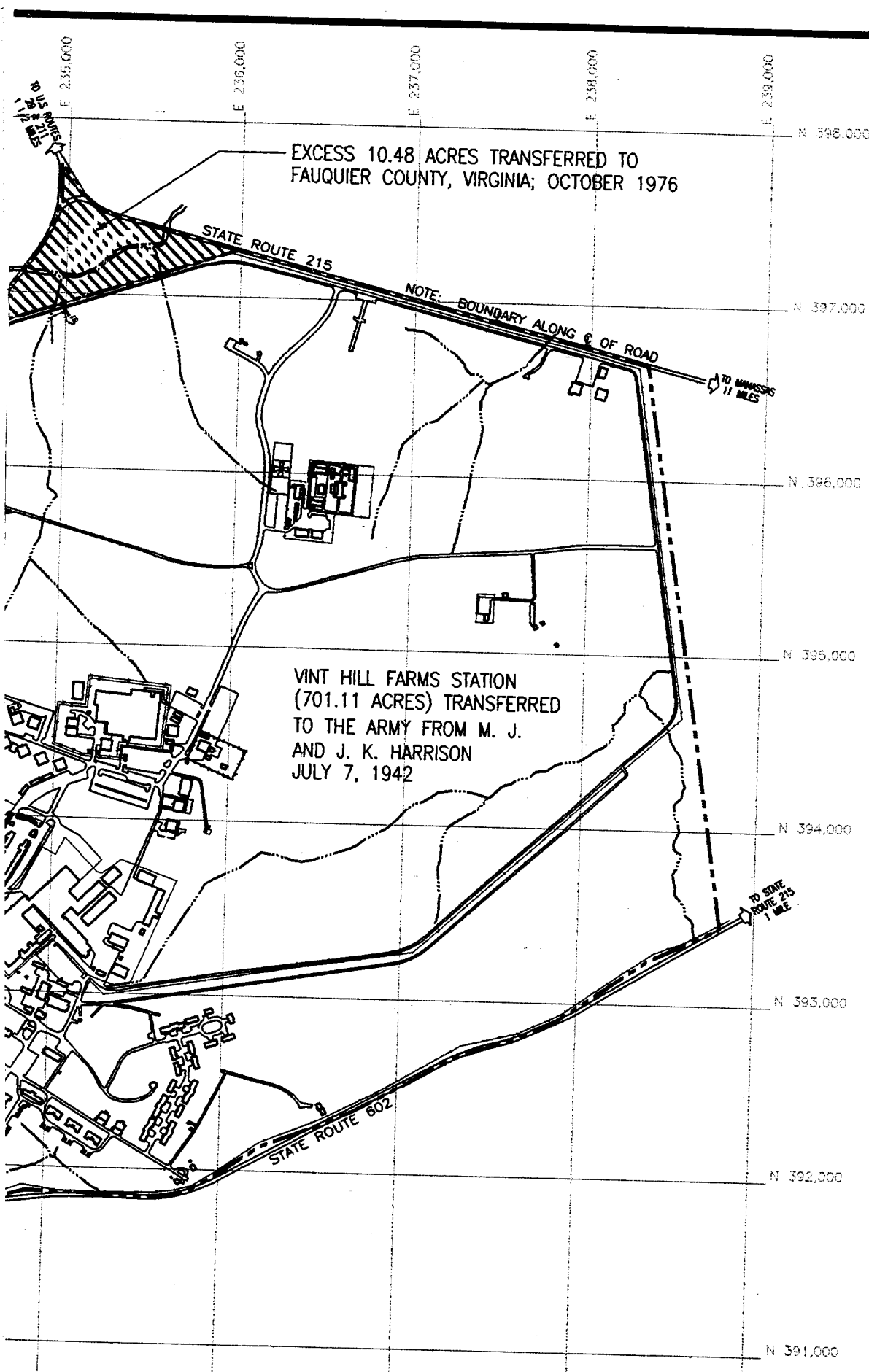
E 235,000

E 236,000


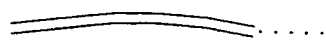
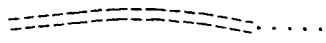
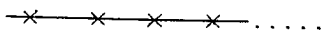
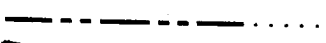
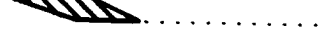
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THE COMMONWEALTH OF VIRGINIA DEPT.  
OF HIGHWAYS & TRANSPORTATION.  
AUGUST 1979

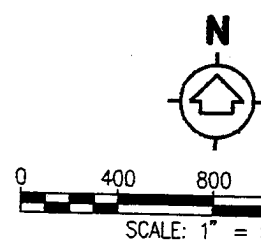
EXCESS 3.88 ACRES TRANSFERRED  
TO FAUQUIER COUNTY, VIRGINIA;  
OCTOBER 1976





# LEGEND:

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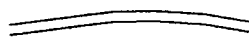
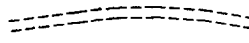
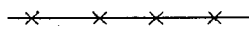


**SA**  
Science Applications Int'l

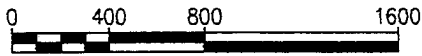
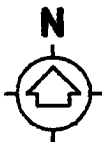
**Vint Hill Farm  
Warrenton,  
CERFA Inve**

**Tract M**

Figure: 5-2	Project: 01-0827-03-6521-002	File No: /940
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# LEGEND:

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-  .....
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-  .....
-  .....
-  .....



SCALE: 1" = 800'

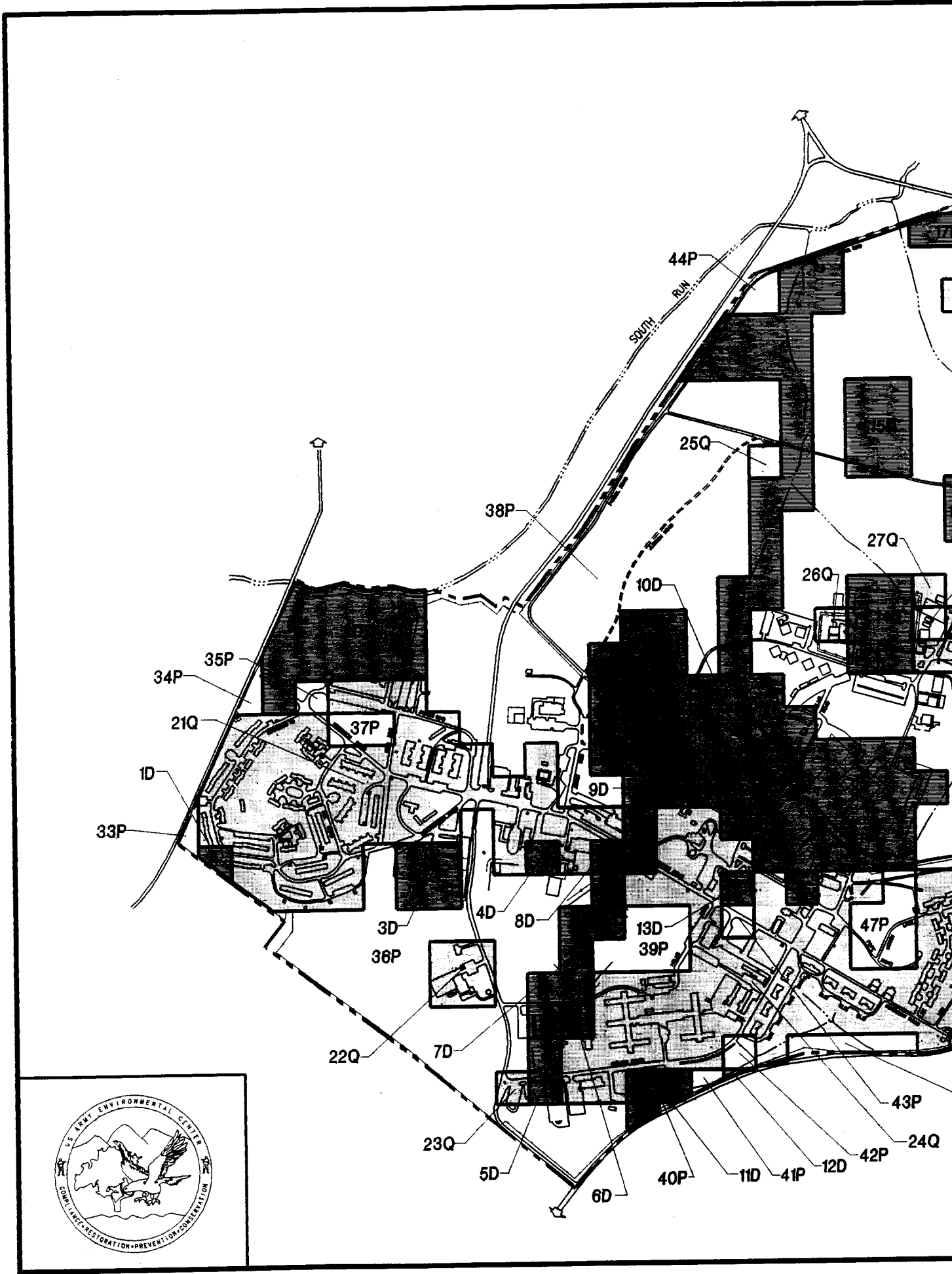


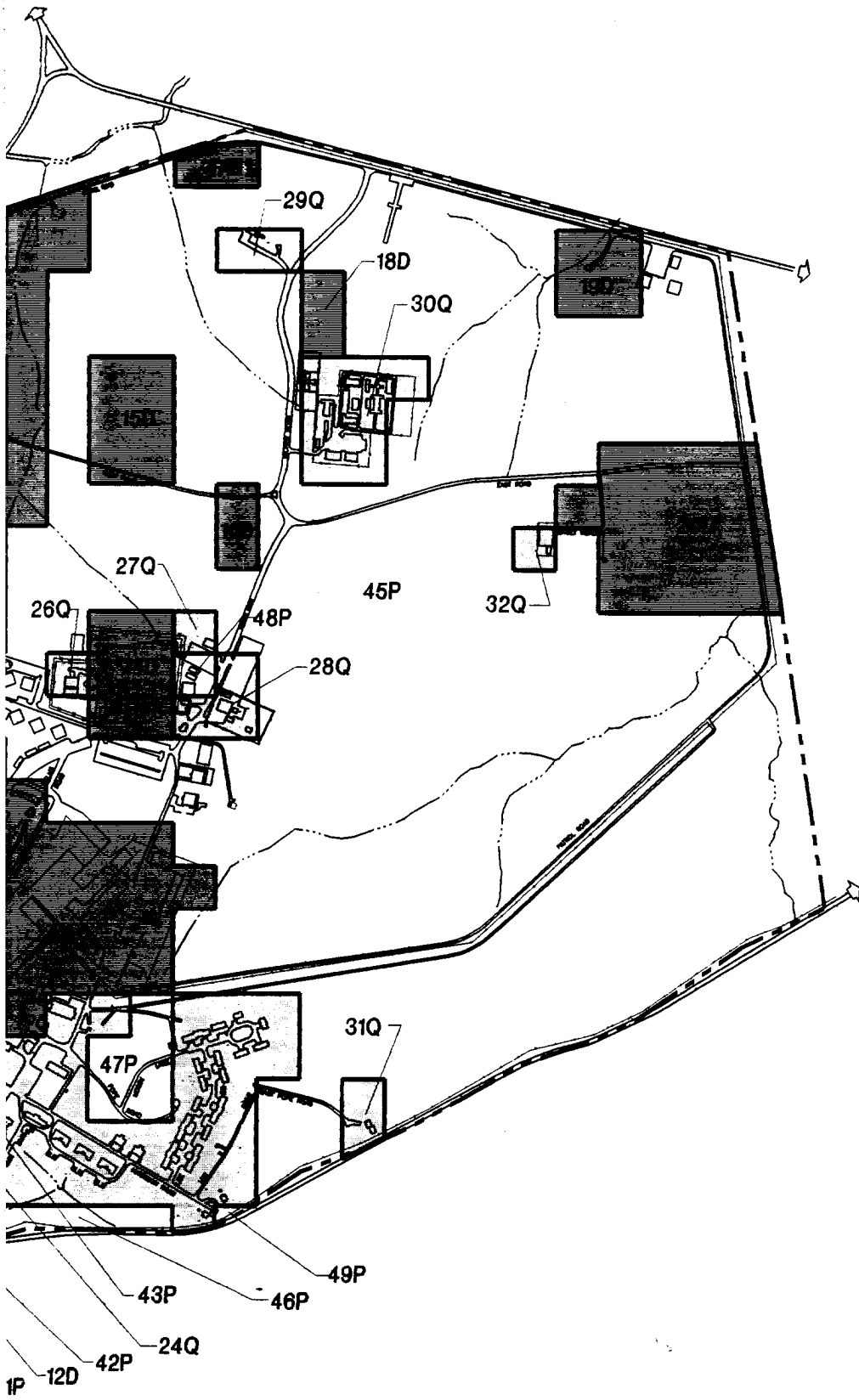
Science Applications International Corporation

**Vint Hill Farms Station  
Warrenton, Virginia  
CERFA Investigation**

## Tract Map

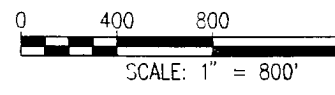
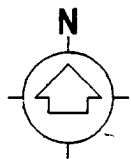
Figure:	Project:	File Name:	Date:
5-2	01-0827-03-6521-002	/94019/DWGS/672F5-2	04-25-94





**LEGEND:**

- ..... S
- .....
- .....
- ..... INSTALLATION
- ..... CERFA DISQUALIFICATION
- ..... CERFA PARCEL WITH
- ..... C



**SAC**  
 Science Applications International Corporation

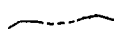

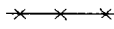



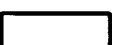
**VINT HILL FARMS STATION**  
 Warrenton, Virginia  
 CERFA Investigation

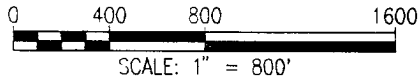
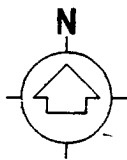
**SUMMARY CERFA MAP**

Figure: 5-3	Project: 01-0827-03-6521-002	File Name: 94001/DWGS/5
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**LEGEND:**

-  ..... SITE DRAINAGE
-  ..... PAVED ROAD
-  ..... FENCE
-  ..... INSTALLATION BOUNDARY
-  ..... CERFA DISQUALIFIED PARCEL
-  ..... CERFA PARCEL WITH QUALIFIERS
-  ..... CERFA PARCEL



Science Applications International Corporation

**VINT HILL FARMS STATION**  
Warrenton, Virginia  
CERFA Investigation

**SUMMARY CERFA MAP**

Figure: 5-3	Project: 01-0827-03-6521-002	File Name: 94001/DWGS/515PARSM	Date: 05-11-94
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**APPENDIX A: RESULTS OF FEDERAL AND STATE DATA BASE SEARCH**

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# VISTA NATIONAL RADIUS PROFILE

VISTA Report #: 6/028730-001

Date of Report: 10/26/93

Ref/Loan #: VINT HILL FARMS STATION  
 Client: JOHN WHELPLEY, SAIC - MCLEAN  
 1710 GOODRIDGE DR, MCLEAN, VA 22102  
 Subject  
 Property: SR 652  
 WARRENTON, VA 22186

## SUMMARY OF FEDERAL RECORDS FOUND

Database & Date	Agency and Type of Records	0 to 1/4 mi	1/4 to 1/2 mi	1/2 to 1 1/4 mi	1 1/4 to 1 1/2 mi	1 1/2 to 2 mi	TOTAL
NPL 06/93	US EPA Superfund Sites	0	0	0	0	0	0
CERCLIS 09/93	US EPA Potential Superfund Sites	0	0	0	0	--	0
RCRA-LgGen 07/93	US EPA RCRA Large Quantity Generators	0	0	0	--	--	0
RCRA-SmGen 07/93	US EPA RCRA Small and Very Small Quantity Generators	0	0	0	--	--	0
RCRA-TSD 07/93	US EPA RCRA Treatment, Storage, and/or Disposal Sites	0	0	0	0	0	0
RCRA-Transp 07/93	US EPA RCRA Transporters	0	0	0	--	--	0
ERNS 09/93	US EPA	0	0	0	0	0	0
FEDERAL RECORDS Sub-total:		0	0	0	0	0	0

Note: 1) A dash (--) indicates the list is not searched at that distance.  
 2) Sites often have a record in more than one database.



# VISTA NATIONAL RADIUS PROFILE

VISTA Report #: 6/028730-001

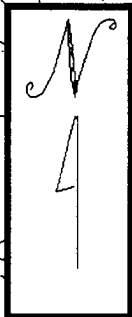
Date of Report: 10/26/93

Ref/Loan #: VINT HILL FARMS STATION  
 Client: JOHN WHELPLEY, SAIC - MCLEAN  
 1710 GOODRIDGE DR, MCLEAN, VA 22102  
 Subject  
 Property: SR 652  
 WARRENTON, VA 22186

### SUMMARY OF STATE RECORDS FOUND

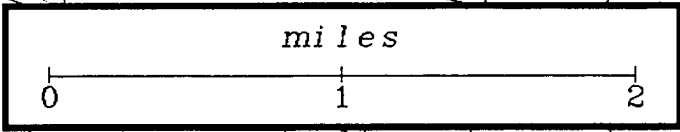
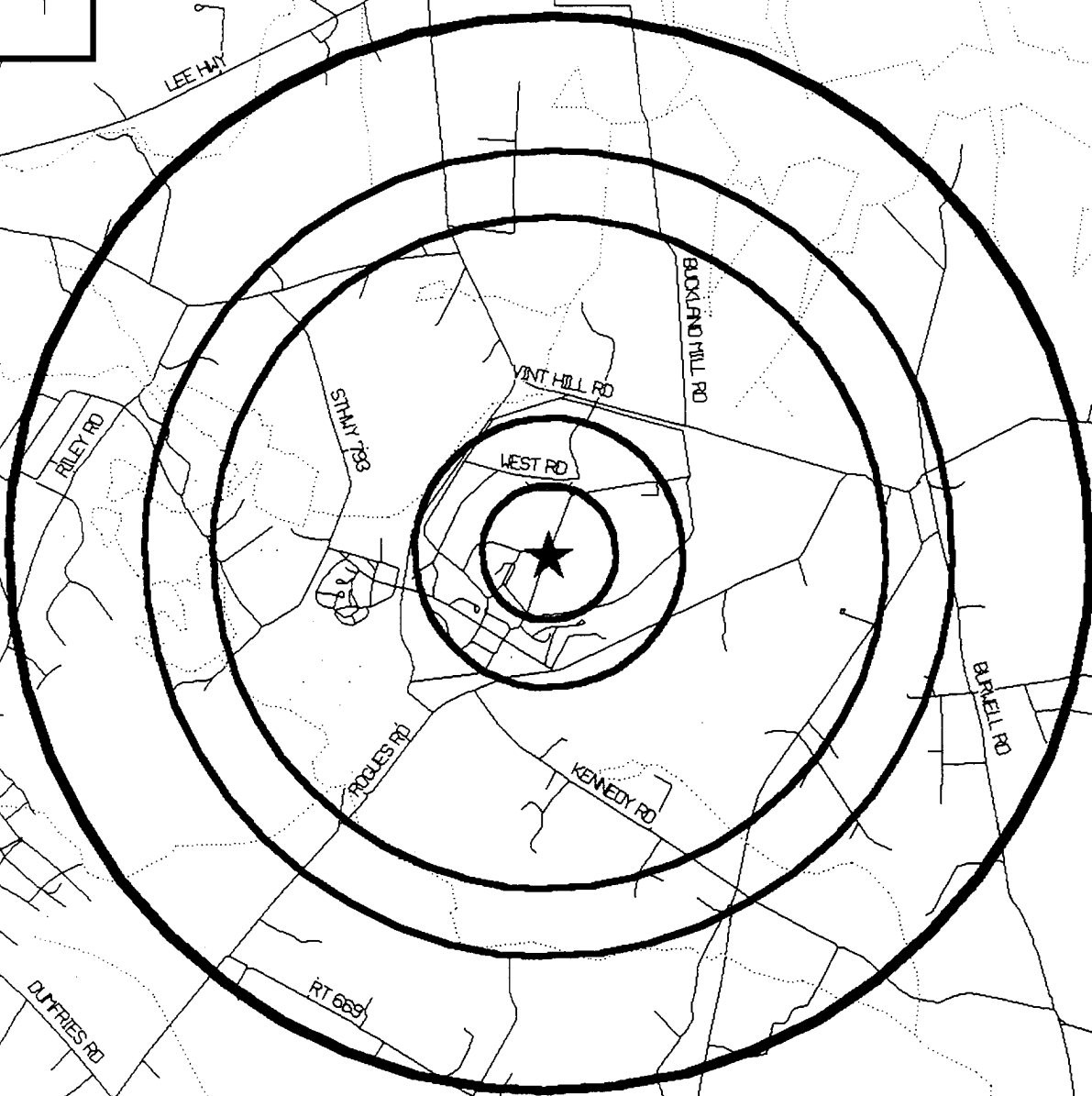
Database & Date	Agency and Type of Records	0 to 1/4 mi	1/4 to 1/2 mi	1/2 to 1 1/4 mi	1 1/4 to 1 1/2 mi	2 mi	TOTAL
SPL 07/90	Department of Environmental Control Active Sites Cleanup Program	0	0	0	0	0	0
LUST 03/93	DEQ-Water Division Pollution Remediation Program - LUST Sites	0	0	0	0	--	0
SWLF 06/93	Department of Environmental Control Solid Waste Management Facilities	0	0	0	0	--	0
UST's 10/92	Department of Environmental Control Underground Storage Tank Program Database	0	0	0	--	--	0
STATE RECORDS Sub-total:		0	0	0	0	0	0
TOTAL:		0	0	0	0	0	0

Note: 1) A dash (--) indicates the list is not searched at that distance.  
 2) Sites often have a record in more than one database.



**VISTA NATIONAL RADIUS PROFILE**

- ★ Subject Property
- Agency Records
- ..... Railroads and Water Features



# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 1

CERCLIS

SITE NAME AND ADDRESS

VISTA ID

EPA ID /  
AGENCY ID

-----  
USA VINT HILL FARMS STATION: UNOBTAINABLE, WARRENTON 22186

-----  
3167199

-----  
Status : NOT PROP/CURR/DELE NPL  
Site Ownership : FEDERALLY OWNED  
Lead Agency : NO DETERMINATION  
Site Events :  
Event Type : PRELIMINARY ASSESSMENT  
Event Type : DISCOVERY  
Lead Agency : FUND LEAD  
-----

-----  
VA8210020931

# VISTA NATIONAL RADIUS PROFILE

VISTA Report #: 6/028730-001

Date of Report: 10/25/93

## UNMAPPABLE SITES

Unmappable sites are environmental risk sites that cannot be geocoded, but can be located by zip code or city name.

In general, a site cannot be geocoded because of inaccurate or missing locational information in the record provided by the agency. For many of these records, VISTA has corrected or added locational information by using U.S. Postal address validation files and proprietary programming that adds locational information from private industry address files. However, many site addresses cannot be corrected using these techniques and those sites cannot be mapped.

Of the sites that cannot be mapped, VISTA identifies those that have complete zip code or city name information. All ungeocoded sites that have a ZIP code in the radius are considered for inclusion. Ungeocoded sites that do not have a ZIP code but do have a street name are considered for inclusion if they have a city in the radius. An ungeocoded record may be excluded if it can be determined to be outside the relevant radius searched for a particular database.

# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 2

RCRA-LgGen

SITE NAME AND ADDRESS

VISTA ID

EPA ID /  
AGENCY ID

HUNT, RICK FORD: RT 6 BOX 2, WARRENTON 22186

203226

Generator Class :Generators who generate at least 1000 kg./month of non-acutely hazardous waste ( or 1 kg./month of acutely hazardous waste).

VAD063206130

# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 3

RCRA-SmGen

SITE NAME AND ADDRESS

VISTA ID

EPA ID /  
AGENCY ID

=====

E P A ENVIRONMENTAL PHOTO INTERP CTR: BLDG 166 VINT HILL FARMS STA, WARRENTON 22186

3968827

Generator Class :Generators who generate 100 kg./month but less than 1000 kg./month of  
non-acutely hazardous waste

VA7690590024

-----

CARTER MACHINERY CO INC - WARRENTON: WARRENTON INDUSTRIAL PK, WARRENTON 22186

3968845

Generator Class :Generators who generate 100 kg./month but less than 1000 kg./month of  
non-acutely hazardous waste

VAD981741739

# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 4

SWLF

SITE NAME AND ADDRESS

VISTA ID

EPA ID /  
AGENCY ID

\* VINT HILL FARMS STATION LF: FAUQUIER, WARRENTON 22186

455085

Facility Type : SANITARY LANDFILL  
Facility Status : CLOSED  
Owner Name : US ARMY  
Owner Address :

0475072

# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 5

UST's

SITE NAME AND ADDRESS =====	VISTA ID =====	EPA ID / AGENCY ID =====
RICKS AUTO BODY: RT. 6 BOX 289, WARRENTON 22186  Number of Underground Tanks: 1 Contents:KEROSENE,	684606	9306
-----		
ROUND HILL TEXACO: RT. 7, WARRENTON 22186  Number of Underground Tanks: 3 Contents:GASOLINE (UNSPECIFIED),	686706	8918
-----		
NORTH WALES: RT. 2 BOX 78, WARRENTON 22186  Number of Underground Tanks: 9 Contents:DIESEL,GASOLINE (UNSPECIFIED),	688083	2723
-----		
JARRENTON FACILITY: RT. 5 BOX 1, WARRENTON 22186  Number of Underground Tanks: 5 Contents:DIESEL,GASOLINE (UNSPECIFIED),OIL(NOT SPECIFIED),	690155	1915
-----		
NEAL JAMES S: RT. 2 BOX 915, NOKESVILLE 22123  Number of Underground Tanks: 1 Contents:KEROSENE,	694020	7882
-----		
NEW BALTIMORE GARAGE: P.O. BOX 986, WARRENTON 22186  Number of Underground Tanks: 2 Contents:GASOLINE (UNSPECIFIED),OIL(NOT SPECIFIED),	695973	8891
-----		
PORTER S PRENTICE: P.O. BOX 1126, WARRENTON 22186  Number of Underground Tanks: 3 Contents:DIESEL,GASOLINE (UNSPECIFIED),	696305	8723
-----		



# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 6

UST's

SITE NAME AND ADDRESS =====	VISTA ID =====	EPA ID / AGENCY ID =====
POLAND HELEN M D V M: P.O. BOX 1107, WARRENTON 22186  Number of Underground Tanks: 1 Contents:GASOLINE (UNSPECIFIED),	697791	8694
RENT A CAR CO INC: RT. 6 BOX 301, WARRENTON 22186  Number of Underground Tanks: 2 Contents:DIESEL,GASOLINE (UNSPECIFIED),	698302	9217
MEADOWS MEL V: RT. 1 BOX 469-A "OLD WATERLOO R, WARRENTON 22186  Number of Underground Tanks: 2 Contents:GASOLINE (UNSPECIFIED),DIESEL,	699952	7349
TRIBLE EQUIPMENT INC: RT. 3 BOX 239, WARRENTON 22186  Number of Underground Tanks: 3 Contents:GASOLINE (UNSPECIFIED),DIESEL,OIL(NOT SPECIFIED),	700404	11309
MID-ATLANTIC COCA-COLA BOTTLING: RT. 3 BOX 1260, GAINESVILLE 22065  Number of Underground Tanks: 5 Contents:KEROSENE,DIESEL, Number of Underground Tanks: 1 Contents:GASOLINE (UNSPECIFIED),	702745	12799
THOMAS A GREENLAND: RT. 1 BOX 226, WARRENTON 22186  Number of Underground Tanks: 1 Contents:GASOLINE (UNSPECIFIED),	702753	3582
MRS PAUL BOWDEN: RT. 2 BOX 86, WARRENTON 22186  Number of Underground Tanks: 1 Contents:GASOLINE (UNSPECIFIED),	702787	3582

# VISTA NATIONAL RADIUS PROFILE

10/25/93

VISTA Report #: 6/028730-001

## UNMAPPABLE SITES

Page: 7

UST's

SITE NAME AND ADDRESS =====	VISTA ID =====	EPA ID / AGENCY ID =====
#6 WARRENTON CO RESCUE UNIT: , WARRENTON 22186  Number of Underground Tanks: 1	3382308	14119
-----	-----	-----
FAUQUIER AUTO PARTS: BY PASS, WARRENTON 22186  Number of Underground Tanks: 1	3382309	2054
-----	-----	-----
FAUQUIER SPRINGS COUNTRY CLUB: BOX 666, WARRENTON 22186  Number of Underground Tanks: 1 Contents:GASOHOL,	3382310	13563
-----	-----	-----
HAZEL ELECTRIC: , WARRENTON 22186  Number of Underground Tanks: 2 Contents:GASOLINE (UNSPECIFIED),	3382311	3009
-----	-----	-----
* VINT HILL FARMS STATION: VARIOUS BUILDINGS, WARRENTON 22186  Number of Underground Tanks: 13 Contents:GASOLINE (UNSPECIFIED),DIESEL,	3391439	11624

CUSTOMER USE LIMITATIONS - Customer proceeds at its own risk in choosing to rely upon VISTA services, in whole or in part, prior to proceeding with any transaction. VISTA assumes no responsibility for the accuracy of government records, for errors occurring in conversion of data, or for customer's use of VISTA services. VISTA's obligation regarding data is solely limited to providing portions of data existing in government records as of the date of each government update received by VISTA.

**\***

**Although the unmappable record marked with an asterisk contains site name or address information similar to that of your subject property, the information contained in the agency data is insufficient to map the site. If you have any questions, please contact Customer Service at (800) 733-7606.**

## DESCRIPTION OF DATABASES SEARCHED

Below are general descriptions of the federal and state databases that VISTA searches for the National Radius Profile.

### FEDERAL DATABASES

Please check the "Summary of Federal Records Found" to determine the specific dates of the federal databases searched for this profile.

#### U.S. EPA: NPL

The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial action under the Superfund Program. A site, to be included on the NPL, must either meet or surpass a predetermined hazard ranking systems score, or be chosen as a state's top-priority site, or meet all three of the following criteria:

- 1) The US Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure.
- 2) The EPA determines that the site represents a significant threat.
- 3) The EPA determines that remedial action is more cost-effective than removal action.

#### U.S. EPA: CERCLIS

The CERCLIS List is a compilation by the EPA of the sites which the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund Act).

#### U.S. EPA: RCRA (RCRIS/HWDMS)

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of reporting facilities that generate, transport, treat, store or dispose of hazardous waste.

### STATE DATABASES

Please check the "Summary of State Records Found" to determine if the following type of databases are available from VISTA for the state in which the subject property of this report is located. Please note that if the Summary does not list one of the following databases, it is not currently available. You may also determine the specific names and dates of the databases searched for this profile in the summary.

#### STATE: SPL

The State Priority List is a generic name for databases maintained by many states that contain sites considered to be actually or potentially contaminated and presenting a possible threat to human health and the environment. These sites are generally listed by the state to warn the public or as a part of an investigation and cleanup program managed by the state.

#### STATE: LUST

This is a database maintained by state or local agencies of known or suspected leaking underground storage tanks.

#### STATE: UST

This is a database maintained by state or local agencies of registered underground storage tanks.

#### STATE: SWLF

This is a database maintained by state or local agencies of Solid Waste Landfills, Incinerators, and transfer stations.

## VISTA ENVIRONMENTAL INFORMATION

### FEDERAL REPORT

Client Project/P.O. No.: 010827036521      VISTA Report No.: 028730001  
Client Reference Name:      Date of Report: Oct. 20, 1993

Subject Property: VINT HILL FARMS STATION  
Street Address: SR 652  
City: WARRENTON  
State: VA  
Zip: 22186  
County: FAUQUIER

#### SITES IN THE AREA

Agency/Database	Date of Data	# of Sites In Zip Code	# of Sites In Area
US,EPA,ERNS	10/92	12	0

For a description of this report please turn to the last page.

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FOR MORE INFORMATION CALL (619)450-6100

5060 Shoreham Place, Suite 300, San Diego, CA 92122

## VISTA ENVIRONMENTAL INFORMATION

<b>ERNS Sites</b>	
Client Project/P.O. No.: 010827036521	VISTA Report No.: 028730001
Client Reference Name:	Date of Report: Oct. 20, 1993
<b>Site Description</b>	
Subject Property:	VINT HILL FARMS STATION
Address:	SR 652
City:	WARRENTON
State:	VA
Zip:	22186
County:	FAUQUIER

The ERNS database has many sites with incomplete zip code information. For this reason, the search includes not only sites within the zip code(s) but any sites within the city which contain the street name of the subject property or any other client specified street name.

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of transportation. A search of the database records for the period of 1987-1991 revealed the following information regarding reported spills of oil or hazardous substances in the stated zip code area(s).

A search of the 10/92 ERNS database revealed the following sites within the zip code area of the subject property.

### SITES IN THE AREA

#### ERNS Spill Details

Spill Date	:	/0/7//1989	Vista ID#:	200107147
Spill Time	:	10:45 AM	Case Number:	
Spill Location	:	N/A		
Spill City	:	WARRENTON		
Spill State	:	VA		
Spill Zip	:			
VISTA Enhanced Zip	:	22186		
Spill County	:	FAUQUIER		
Source/Agency	:			

**N/A Continued**

Discharger Name :  
 Discharger Org : USA - VINT HILL FARMS STATION  
 Discharger Addr :  
 Discharger Phone : 703-349-5111  
 Discharger County :  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 22186-  
 Material Spilled : PCB (60%) , 2.00, GAL  
 Medium Affected : Land  
 Water Way Affected : CONCRETE AREA IN VAULT ONLY.

**ERNS Spill Details**

Spill Date : 03/30/1989 Vista ID#: 200116699  
 Spill Time : : AM Case Number:  
 Spill Location : N/A  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :  
 Discharger Name :  
 Discharger Org : USA - VINT HILL FARMS STATION  
 Discharger Addr :  
 Discharger Phone : 7033476433  
 Discharger County :  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 22186  
 Material Spilled : WHITE CORROSIVE GEL , 50.00, GAL  
 Medium Affected : Water  
 Water Way Affected : N/A

**ERNS Spill Details**

Spill Date : /1/0//1987 Vista ID#: 200143080  
 Spill Time : 7:00 AM Case Number:

Spill Location : N/A  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :  
 Discharger Name :  
 Discharger Org : HARKAWAY FARM  
 Discharger Addr : ROUTE 628 NORTH  
 Discharger Phone : 0  
 Discharger County :  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 221860000  
 Material Spilled : BURNING DEBRIS AND POISON IVY , 0.00, UNK  
 Medium Affected : Land  
 Water Way Affected : GROUND AND AIR RELEASE

**ERNS Spill Details**

Spill Date : 09/25/1990 Vista ID#: 200092756  
 Spill Time : 09:00 AM Case Number: 41020  
 Spill Location : 310 BROADVIEW AVE  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :  
 Discharger Name : UNKNOWN,  
 Discharger Org :  
 Discharger Addr :  
 Discharger Phone :  
 Discharger County :  
 Discharger City :  
 Discharger St/Zip : ,  
 Material Spilled : GASOLINE: AUTOMOTIVE (4.23G PB/G, 00000000.00 , UNK  
 Medium Affected : Water  
 Water Way Affected : SEWER LINES



**ERNS Spill Details**

Spill Date : /2/3//1988 Vista ID#: 200171191  
 Spill Time : : AM Case Number:  
 Spill Location : CANTERBURY VILLAGE  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAQUIER  
 Source/Agency :  
 Discharger Name :  
 Discharger Org :  
 Discharger Addr :  
 Discharger Phone : 0  
 Discharger County :  
 Discharger City :  
 Discharger St/Zip : ,  
 Material Spilled : GASOLINE , 0.00, UNK  
 Medium Affected : Ground Water  
 Water Way Affected : WELL WATER

**ERNS Spill Details**

Spill Date : 08/09/1990 Vista ID#: 200087993  
 Spill Time : 09:45 AM Case Number: 34715  
 Spill Location : 731 FROST AVE, RT 211 W  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAQUIER  
 Source/Agency :  
 Discharger Name : STODDARD, WILLIAM  
 Discharger Org : TOWN OF WARRENTON  
 Discharger Addr : PO DRAWER 341  
 Discharger Phone : 703-347-1104  
 Discharger County :  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 22186

**731 FROST AVE, RT 211 W Continued**

Material Spilled : CHLORINE , 00000001.00 , LBS  
 Medium Affected : Air  
 Water Way Affected : ATMOSPHERE

**ERNS Spill Details**

Spill Date : /1/3//1989 Vista ID#: 200188176  
 Spill Time : 9:24 AM Case Number:  
 Spill Location : LAKE OFF OF NORDIX DR.  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :  
 Discharger Name :  
 Discharger Org : UNKNOWN  
 Discharger Addr :  
 Discharger Phone : 0  
 Discharger County :  
 Discharger City :  
 Discharger St/Zip : ,  
 Material Spilled : OILY MILKY LIQUID , 400.00, GAL  
 Medium Affected : Water  
 Water Way Affected : WARRINGTON LAKE

**ERNS Spill Details**

Spill Date : /1/1//1989 Vista ID#: 200182136  
 Spill Time : 6:30 AM Case Number:  
 Spill Location : OFF RTE 29 BY ERLICH RD  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :

**OFF RTE 29 BY ERLICH RD Continued**

Discharger Name :  
 Discharger Org : VIRGINIA STATE HIGHWAY DEPT  
 Discharger Addr :  
 Discharger Phone : 0  
 Discharger County :  
 Discharger City :  
 Discharger St/Zip : ,  
 Material Spilled : ROAD TAR , 250.00, GAL  
 Medium Affected : Water  
 Water Way Affected : UNNAMED CREEK

**ERNS Spill Details**

Spill Date : 10/11/1990 Vista ID#: 200094234  
 Spill Time : 09:00 AM Case Number: 43140  
 Spill Location : RTE 771  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip :  
 VISTA Enhanced Zip : 22186  
 Spill County : FAUQUIER  
 Source/Agency :  
 Discharger Name : UNKNOWN,  
 Discharger Org : US ARMY  
 Discharger Addr :  
 Discharger Phone :  
 Discharger County :  
 Discharger City :  
 Discharger St/Zip : ,  
 Material Spilled : QUAKER COAT SOLVENT , 00000000.00 , UNK  
 Medium Affected : Land  
 Water Way Affected : SOIL

**ERNS Spill Details**

Spill Date : 02/28/1992 Vista ID#: 200011716  
 Spill Time : 12:00 AM Case Number: VA92314

Spill Location : U.S. ARMY WARRENTON TRAINING CENTER  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip : 21286-  
 VISTA Enhanced Zip : 22186  
 Spill County : FACQUIER  
 Source/Agency :  
 Discharger Name : GREG SICKLER  
 Discharger Org : US ARMY, WARRENTON TRAIN. CTR.  
 Discharger Addr : P.O. BOX 700  
 Discharger Phone : 703-347-8122 -  
 Discharger County : FACQUIER  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 21286-  
 Material Spilled : WOOD, TREE STUMPS, DEBRIS , 00000000.00 , UNK  
 Medium Affected : Land  
 Water Way Affected : NONE

**ERNS Spill Details**

Spill Date : 02/28/1992 Vista ID#: 200013534  
 Spill Time : 12:00 AM Case Number: VA92314  
 Spill Location : U.S. ARMY WARRENTON TRAINING CENTER  
 Spill City : WARRENTON  
 Spill State : VA  
 Spill Zip : 21286-  
 VISTA Enhanced Zip : 22186  
 Spill County : FACQUIER  
 Source/Agency :  
 Discharger Name : GREG SICKLER  
 Discharger Org : US ARMY, WARRENTON TRAIN. CTR.  
 Discharger Addr : P.O. BOX 700  
 Discharger Phone : 703-347-8122 -  
 Discharger County : FACQUIER  
 Discharger City : WARRENTON  
 Discharger St/Zip : VA, 21286-  
 Material Spilled : WOOD, TREE SLUMPS, DEBRIS , 00000000.00 , UNK  
 Medium Affected : Land  
 Water Way Affected : NONE

**ERNS Spill Details**

Spill Date : 07/03/1990 Vista ID#: 200084081  
Spill Time : 11:55 PM Case Number: 29418  
Spill Location : US ROUTE 29 5 MILES SOUTH OF WARRENTON, VA  
Spill City : WARRENTON  
Spill State : VA  
Spill Zip :  
VISTA Enhanced Zip : 22186  
Spill County : FAUQUIER  
Source/Agency :  
Discharger Name : UNK,  
Discharger Org : QUARLES TRUCKING CO.  
Discharger Addr :  
Discharger Phone :  
Discharger County :  
Discharger City :  
Discharger St/Zip : ,  
Material Spilled : OIL: DIESEL , 00000075.00 , GAL  
GASOLINE: AUTOMOTIVE (4.23G PB/G, 00000025.00 , GAL  
Medium Affected : Land  
Water Way Affected : PAVEMENT

12 site(s) found in the zip code area(s)



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY ENVIRONMENTAL CENTER  
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

April 5, 1994



Base Closure Division

Mr. Durwood Willis  
Virginia Department of Environmental Quality  
Water Division, OERS  
4900 Cox Road  
Glen Allen, Virginia 23060

Dear Mr. Willis:

Thank you for your letter of February 4, 1994, regarding the review of the draft Community Environmental Response Facilitation Act (CERFA) Report for Vint Hill Farms Station (VHFS). Your response within the 90-day review period is appreciated. Your letter indicates that the Virginia Department of Environmental Quality (VDEQ) is unable to concur at this time with the draft CERFA document until sampling results, specifically those to be obtained under the planned site inspection, are available.

During our recent phone conversation of March 22, 1994, you requested additional information regarding the U.S. Army's position on what is required to fulfill CERFA and, specifically, this Center's position on the need for sampling to support a parcel's CERFA categorization. In response to this request, we are pleased to provide the following comments:

a. The Army has undertaken to fulfill the requirements of Public Law 102-426 which amended provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(h), by identifying real property on Base Realignment and Closure (BRAC) installations "on which no hazardous substances and no petroleum products or their derivatives, were stored for one year or more, known to have been released or disposed of." To achieve this, an investigation was performed following the requirements specifically outlined in CERCLA § 120(h)(4). These statutorily-mandated requirements consist of a seven step protocol to comprehensively review sources of information concerning the current and previous uses of the real property (see highlighted section in enclosure). All CERFA reports prepared by the U.S. Army Environmental Center's (CERFA's) contractors followed the seven-step protocol as defined in CERCLA § 120(h)(4).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

January 10, 1994

Mr. Glen Boldt  
Department of the Army  
U.S. Army Environmental Center  
Aberdeen Proving Ground, MD 21010-5401

Dear Mr. Boldt:

The U.S. Environmental Protection Agency has reviewed the "Draft Community Response Facilitation Act (CERFA) Report" and found it to be acceptable. Thank you for the opportunity to review this document. If you have any questions, feel free to call me at (215) 597-0984.

Sincerely,

A handwritten signature in cursive script that reads "Stacie Morekas".

Stacie Morekas  
Remedial Project Manager

cc: Erica Dameron, VDEQ

Lt. Col. Paul E. Wojciechowski  
Page Two

This non-concurrence with the proposed CERFA parcels is being provided within the 90-day deadline specified in 42 U.S.C. Section 9620 (h) (4) (B) which expires on February 26, 1994.

As you may know, Mr. Durwood H. Willis is the new BRAC Manager, and as such, all future correspondence should be directed to him. He may be reached at (804) 527 4104.

Sincerely,

*K. C. Das*  
K. C. Das, Director  
Office of the Superfund Program

/sjj

cc: James C. Adams  
Erica S. Dameron  
Durwood H. Willis





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Richard N. Burton  
Director

P. O. Box 10009  
Richmond, Virginia 23240-0009  
(804) 762-4000  
TDD # (804) 762-4021

February 4, 1994

DO 28 FEB 94

Lt. Col. Paul E. Wojciechowski  
U. S. Army  
Department of the Army  
U. S. Army Environmental Center  
Aberdeen Proving Ground, Maryland, 21010-5401

Re: Vint Hill Farms Station

Dear Col. Wojciechowski:

The Virginia Department of Environmental Quality (VDEQ) has reviewed the draft Community Environmental Response Facilitation Act (CERFA) report which was received on November 29, 1993. This report identified the real property at Vint Hill Farms Station, Warrenton, Virginia, on which no hazardous substances and no petroleum products, or their derivatives, were stored for one year or more, or are known to have been released or disposed.

As stated on page ES-2 of the report, "The CERFA parcel designation and delineation could change after completion of the site investigations". In 42 U.S.C. Section 9620 (h) (4) (A), it is indicated that "Such identification shall also be based on sampling, if identification shall be proved immediately to Administrator, and State and local government officials, and made available to the public."

In order for the Commonwealth to concur with your recommendations, and in order to satisfy CERFA requirements relative to the identification of uncontaminated parcels, such documentation is necessary to be received and reviewed. At this time, the Commonwealth can not concur with the CERFA document for the designation of clean parcels as presently identified. Please incorporate the above mentioned information into the CERFA report, and forward the revised document to VDEQ for review.



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY ENVIRONMENTAL CENTER  
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

April 5, 1994



Base Closure Division

Mr. Durwood Willis  
Virginia Department of Environmental Quality  
Water Division, OERS  
4900 Cox Road  
Glen Allen, Virginia 23060

Dear Mr. Willis:

Thank you for your letter of February 4, 1994, regarding the review of the draft Community Environmental Response Facilitation Act (CERFA) Report for Vint Hill Farms Station (VHFS). Your response within the 90-day review period is appreciated. Your letter indicates that the Virginia Department of Environmental Quality (VDEQ) is unable to concur at this time with the draft CERFA document until sampling results, specifically those to be obtained under the planned site inspection, are available.

During our recent phone conversation of March 22, 1994, you requested additional information regarding the U.S. Army's position on what is required to fulfill CERFA and, specifically, this Center's position on the need for sampling to support a parcel's CERFA categorization. In response to this request, we are pleased to provide the following comments:

a. The Army has undertaken to fulfill the requirements of Public Law 102-426 which amended provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(h), by identifying real property on Base Realignment and Closure (BRAC) installations "on which no hazardous substances and no petroleum products or their derivatives, were stored for one year or more, known to have been released or disposed of." To achieve this, an investigation was performed following the requirements specifically outlined in CERCLA § 120(h)(4). These statutorily-mandated requirements consist of a seven step protocol to comprehensively review sources of information concerning the current and previous uses of the real property (see highlighted section in enclosure). All CERFA reports prepared by the U.S. Army Environmental Center's (CERFA's) contractors followed the seven-step protocol as defined in CERCLA § 120(h)(4).

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**APPENDIX D: REGULATORY COMMENTS AND USAEC RESPONSES**

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**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
1	(P)				
2	(P)				
3	(P)				
4	(P)				
5	(P)				
6	(P)				
7	(P)				
8	(P)				
9	(P)				
103	(P)				
108	(P)	(P)			
110	(P)	X			
111	(P)	(P)			
112	(P)	(P)			
113	(P)	(P)			
114	(P)	(P)			
115	(P)	(P)			
116	(P)	X			
117	(P)	(P)			
118	(P)	(P)			
119	(P)	(P)			
120	(P)	(P)			
121	(P)	(P)			
122	(P)	X			
123	(P)	(P)			
124	(P)	(P)			
125	(P)	(P)			
126	(P)	(P)			
127	(P)	(P)			
128	(P)	(P)			

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
129	(P)	(P)			
130	(P)	(P)			
131	(P)	(P)			
133	(P)	(P)			
135	(P)				
136	(P)	(P)			
137	(P)	(P)			X (in use)
141	(P)	(P)			
142	(P)	(P)			
144	(P)	(P)			
145	(P)	(P)			
146	(P)	(P)			
150	(P)	(P)			
151	X	(P)			
152	(P)	(P)			
153	(P)	(P)			
158	(P)	(P)			
159					
160	(P)	(P)			
161	(P)	(P)			
162	(P)	(P)			
163	(P)	(P)			
164					
165	(P)	(P)			
166	X	(P)			
167	(P)	(P)			
168					
169	(P)	(P)			
180					
181					

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
182					
186		(P)			
188	(P)	(P)			
189					
190	(P)	(P)			
197					
199					
200					
201	X	(P)			
203	X	(P)			
208					
209					
210					
211	(P)				
212	(P)				
213	(P)	(P)			
216	(P)	(P)			
218	X	(P)			
219	X	(P)			
220	(P)	(P)			
222	(P)	(P)			
224	(P)				
225	(P)	(P)			
226	(P)	(P)			
237	(P)	(P)			
238	(P)	(P)			
240	(P)	(P)			
241	(P)	(P)			
242	(P)				
244	(P)	(P)			

X Definite presence  
(P) Possible presence



**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
246	(P)	(P)			
247	(P)	(P)	X		
249	(P)	(P)			
250	X	(P)			
251	X	(P)			
252	X	(P)			
253	(P)	(P)			
254	(P)	(P)			
255	(P)				
256	X	(P)			
257	X	(P)			
258	(P)				
260	(P)	(P)			
261	(P)	(P)		leaking transformer outside	
262	(P)	(P)			
263	(P)				
264	(P)	(P)			
265	(P)	(P)			
272	(P)	(P)			
273	(P)	(P)			
274	(P)	(P)			
277	(P)				
278	(P)	(P)			
279	(P)	(P)			
280	(P)	(P)			
281	(P)	(P)			
281	(P)	(P)			
282	X	(P)			
283	X	(P)			
284	(P)	(P)			

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
285	(P)	(P)			
286	(P)	(P)			
287	(P)	(P)			
288	(P)	(P)			
290	(P)	(P)			
291	(P)	(P)			
294	(P)	(P)		leaking transformer outside	
295	(P)	(P)			
296	(P)	(P)			
297	(P)	(P)			
298	(P)				
299	(P)	(P)			
302					
303	(P)	(P)			
304	(P)	(P)			
305	(P)	(P)			
306	(P)	(P)			
307	X	(P)			
308	(P)	(P)			
309	(P)	(P)			
310	(P)				
312	(P)	(P)			
313	X				
314	(P)	(P)			
315	X	(P)			
316	(P)	X			
317	(P)	(P)			
318	(P)	(P)			
319	(P)	(P)			
320	(P)	(P)			

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
321	(P)	(P)			
322		(P)			
323	(P)	(P)			
391	(P)	(P)			
392	(P)	(P)			
393	(P)	(P)			
395	(P)	(P)			
396	(P)	(P)			
398	(P)		X		
399	(P)	(P)			
401	(P)	(P)			
403	(P)	(P)			
405	(P)	(P)			
410	X	(P)			
411	X	X			
412	X	(P)			
413	X	(P)			
414	X	(P)			
415	X	(P)			
416	X	(P)			
417	X	(P)			
418	X	(P)			
419	X	(P)			
420	X	(P)			
421	X	(P)			
422	X	(P)			
423	X	(P)			
424	(P)	(P)			
425	X	X			
426	X	(P)			

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
427	(P)	(P)			
428	(P)	(P)			
429	(P)	(P)			
431	X	(P)			
432	X	(P)			
433	X	(P)			
434	X	(P)			
435	X	(P)			
436	X	(P)			
437	X	(P)			
438	X	(P)			
439	X	(P)			
440	X	(P)			
441	X	(P)			
442	X	(P)			
443	X	(P)			
444	X	(P)			
445	(P)	(P)			
446	(P)	(P)			
447	(P)	(P)			
449	(P)	(P)			
450	(P)	(P)			
451	(P)	(P)			
452	(P)	(P)			
453	(P)	(P)			
454	(P)	(P)			
501	(P)				
502	(P)	(P)			
503	(P)	(P)			
600	X	(P)			

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
601	X	(P)			
602	X	(P)			
603	X	(P)			
604	X	(P)			
605	X	(P)			
606	X	(P)			
607	X	(P)			
608	X	(P)			
609	X	(P)			
610	X	(P)			
611	X	(P)			
612	X	(P)			
613	X	(P)			
614	X	(P)			
615	X	(P)			
700					
750					
801	(P)				
802	(P)				
2272	X	(P)			
2280	X	(P)			
2290	X	(P)			
2300	X	(P)	X		
2310	X	(P)			
2312	(P)	(P)			
2320	X	(P)			
2340	(P)	(P)			
2400	(P)	(P)	X		
2410	(P)	(P)		leaking transformer outside	
2420					

X Definite presence  
(P) Possible presence

**Table C-1. CERFA Qualifiers for VHFS Buildings,  
Vint Hill Farms Station, Warrenton, Virginia (continued)**

Building Number	Asbestos	Lead	Radon	PCBs	Radionuclides
2430					
2450					
2460					
2470	(P)	(P)			
2472					
2480	(P)				
2485	(P)	(P)			
2490					
2492	(P)	(P)			
7800					
7801					
No number (Parcel 29Q)	(P)				
No number (Parcel 29Q)	(P)				

X Definite presence  
(P) Possible presence

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**APPENDIX C: VHFS BUILDINGS WITH ASBESTOS,  
RADON, LEAD PAINT, AND PCBs**



Greg Clayton, Region IV Director  
Virginia Air Pollution Control Department

John Largent, Supervisor  
Fauquier County Environmental Health Department

Chuck Thompson, Fire Chief  
Fauquier County Emergency Services

Stacy Morekas  
U.S. EPA Region 3, Superfund Compliance Division

Michelle Monte  
Virginia Department of Environmental Quality, Hazardous Waste Division

## **INVESTIGATORS**

Al Wickline  
Program Manager

Connie Samson  
Project Manager

Nand Kaushik, P.E.  
Senior Engineer

John Whelpley, E.I.T.  
Environmental Engineer

Lisa Jones-Bateman  
Environmental Scientist

Wayne Stoner  
Geologist

Linda Meredith  
Toxicologist