

DTIC FILE COPY

2

Report No. CETHA-BC-CR-89048

USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

AD-A218 985

Task Order 2 Enhanced Preliminary Assessment

NIKE BATTERY KANSAS CITY 30
PLEASANT HILL, MISSOURI

Contract Number DAAA15-88-D-0007

December 1989

DTIC
ELECTE
MAR 08 1990
S E D

Original contains color
plates; All DTIC reproductions
will be in black and
white

Prepared for

U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland 21010-5401

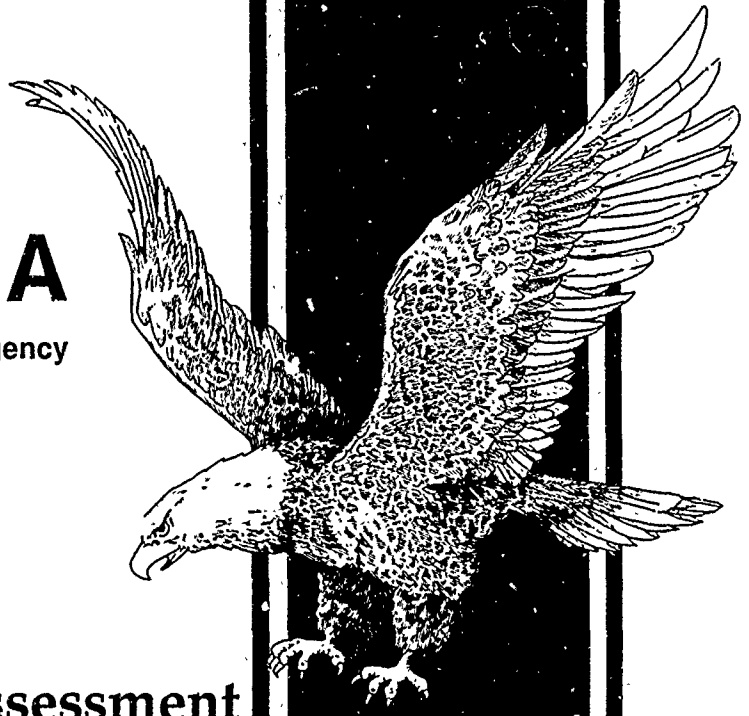
Prepared by

WESTON
WESTON CONSULTANTS

Roy F. Weston, Inc.
West Chester,
Pennsylvania 19380

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

90 03 05 043



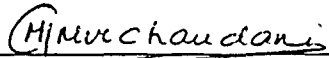


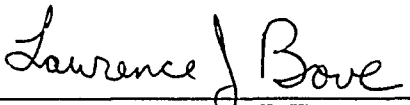
Report No. CETHA-BC-CR-89048

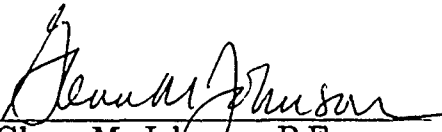
USATHAMA Task Order 2
ENHANCED PRELIMINARY ASSESSMENT

NIKE BATTERY KANSAS CITY 30
PLEASANT HILL, MISSOURI

Contract Number DAAA15-88-D-0007


Mukesh G. Mirchandani, P.E.
Project Engineer


Lawrence J. Bove, P.E.
Project Manager


Glenn M. Johnson, P.E.
Program Manager

December 1989

Prepared By:
Roy F. Weston, Inc.
Weston Way
West Chester, Pennsylvania 19380

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3 DISTRIBUTION/AVAILABILITY OF REPORT Distribution Unlimited	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 2281-09-02-1200		5. MONITORING ORGANIZATION REPORT NUMBER(S) CETHA-BC-CR-89048	
6a. NAME OF PERFORMING ORGANIZATION Roy F. Weston, Inc.	6b. OFFICE SYMBOL (if applicable)	7a. NAME OF MONITORING ORGANIZATION U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)	
6c. ADDRESS (City, State, and ZIP Code) 1 Weston Way West Chester, PA 19380		7b. ADDRESS (City, State, and ZIP Code) Attn: CETHA-BC-B Aberdeen Proving Ground (Edgewood Area) Maryland 21010-5401	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION USATHAMA	8b. OFFICE SYMBOL (if applicable) CETHA-BC-B	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER DAAA 15-88-D-0007 Task No. 2	
8c. ADDRESS (City, State, and ZIP Code) Attn: CETHA-BC-A Aberdeen Proving Ground (Edgewood Area) Maryland 21010-5401		10. SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Enhanced Preliminary Assessment Report			
12. PERSONAL AUTHOR(S) (1) Mukesh G. Mirchandani, P.E. (2) Lawrence J. Bove, P.E. (3) Glenn M. Johnson, P.E.			
13a. TYPE OF REPORT Final	13b. TIME COVERED FROM TO	14. DATE OF REPORT (Year, Month, Day) 1989, December	15. PAGE COUNT 71
16. SUPPLEMENTARY NOTATION			
17. CC CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	
		Base Closure Program; Preliminary Assessment	
		NIKE KC-30 Sampling	
		Environmentally significant operations, Asbestos	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) An enhanced preliminary assessment (PA) was conducted at the Nike Battery Kansas City 30 (Nike KC-30) site under the Base Closure Program. The property was used as a Nike missile battery installation from 1958 until the late 1960's when the Nike-Hercules mission was discontinued. From 1969 to 1988 the site was occupied by the Missouri National Guard. Currently the site is unoccupied. Based on information obtained during the onsite visit and from available drawings and reports, twenty environmentally significant operations (ESO's) have been identified. No immediate action is required at any location. For twelve ESO's, site investigations are recommended. These include asbestos and air sampling in the various buildings; leak testing underground storage tanks; sampling transformer oil; and soil, sediment and groundwater sampling at various locations.			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL Alan Freed		22b. TELEPHONE (Include Area Code) (301) 671-3461/3261	22c. OFFICE SYMBOL BC-B



DISCLAIMER

This Enhanced Preliminary Assessment report is based primarily on the environmental conditions observed at the Nike Battery Kansas City 30 site in Pleasant Hill, Missouri, on 10 October 1989. Past site conditions and management practices were evaluated, based on readily available records and the recollections of people interviewed. Every effort was made, within the scope of the task, to interview all identified site personnel, especially those personnel with a historical perspective of site operations.

No environmental sampling was conducted as part of the assessment. The findings and recommendations for further action are based on WESTON's experience and technical judgment, as well as current regulatory agency requirements. Future regulations as well as any modifications to current statutes may affect the compliance status of this site.

WESTON does not warrant or guarantee that the property is suitable for any particular purpose or certify any areas of the property as "clean." A more thorough investigation, including intrusive sampling and analysis for specific hazardous materials, is recommended prior to reporting this property as excess.

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



Color
black
white
yellow



TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	DISCLAIMER	iii
	EXECUTIVE SUMMARY	ES-1
1	INTRODUCTION	1-1
1.1	Background	1-1
1.2	Objectives	1-1
1.3	Procedures	1-2
1.4	Report Format	1-2
2	PROPERTY CHARACTERIZATION	2-1
2.1	General Property Description and History	2-1
2.2	Description of Facilities	2-1
2.3	Permitting Status	2-6
2.4	Surrounding Environment and Land Use	2-7
2.4.1	Demographics and Land Use	2-7
2.4.2	Climate	2-7
2.4.3	Surface Water and Physiography	2-10
2.4.4	Soils	2-11
2.4.5	Groundwater and Hydrogeology	2-11
2.4.6	Sensitive Environments	2-11
3	ENVIRONMENTALLY SIGNIFICANT OPERATIONS	3-1
3.1	Oil Disposal Area	3-1
3.2	Waste Oil Storage Area	3-3
3.3	Storage Shed	3-3
3.4	Building S3006 - Mess Hall	3-4
3.5	Vehicle Wash Area	3-5
3.6	Maintenance Shop	3-5
3.7	Underground Storage Tanks	3-6
3.8	Former Aboveground Storage Tank	3-7
3.9	Former CONEX Shed Area	3-7
3.10	Transformers	3-8
3.11	Small Arms Practice Range	3-9
3.12	Building S3003: Administration Building	3-9
3.13	Building S3004: NCO and Officers Quarters	3-10
3.14	Building S3005: Barracks and NCO Quarters	3-10
3.15	Paint Locker	3-11
3.16	Ammo Storage Vault and Unidentified Building	3-11
3.17	Ammo Storage Shed for Small Arms Range	3-11
3.18	Sewage Treatment Plant	3-12
3.19	Debris Area	3-13
3.20	Asbestos Water Piping	3-13



TABLE OF CONTENTS
(continued)

<u>Section</u>	<u>Title</u>	<u>Page</u>
4	HUMAN AND ENVIRONMENTAL RECEPTORS	4-1
4.1	Groundwater	4-1
4.2	Surface Water	4-1
4.3	Soil	4-1
4.4	Air	4-2
4.5	Direct Contact	4-2
4.6	Drinking Water	4-2
5	CONCLUSIONS AND RECOMMENDATIONS	5-1
5.1	Summary of Conclusions	5-1
5.1.1	Oil Disposal Area	5-1
5.1.2	Waste Oil Storage Area	5-1
5.1.3	Vehicle Wash Area and Antifreeze Disposal Area	5-2
5.1.4	Underground Storage Tanks	5-2
5.1.5	Transformers	5-2
5.1.6	Small Arms Practice Range	5-2
5.1.7	Asbestos in Structures	5-2
5.1.8	White Powder in Bucket (Building S3003)	5-2
5.1.9	Ammo Storage Vault and Unidentified Building	5-2
5.1.10	Sewage Treatment Plant	5-3
5.1.11	Debris Area	5-3
5.1.12	Asbestos Water Piping	5-3
5.2	Recommendations for Further Action	5-3
5.2.1	Oil Disposal Area	5-3
5.2.2	Waste Oil Storage Area	5-7
5.2.3	Vehicle Wash Area and Antifreeze Disposal Area	5-7
5.2.4	Underground Storage Tanks	5-7
5.2.5	Transformers	5-7
5.2.6	Small Arms Practice Range	5-7
5.2.7	Asbestos in Structures	5-8
5.2.8	White Powder in Bucket (Building S3003)	5-8
5.2.9	Ammo Storage Vault and Unidentified Building	5-8
5.2.10	Sewage Treatment Outfall Sediments	5-8
5.2.11	Debris Area	5-8
5.2.12	Asbestos Water Piping	5-8
6	REFERENCES	6-1
6.1	Direct Interviews	6-1
6.2	Telephone Interviews	6-1
6.3	Reports and Other Documents	6-2



TABLE OF CONTENTS
(continued)

<u>Section</u>	<u>Title</u>	<u>Page</u>
7	PHOTOGRAPHS	7-1
	APPENDIX A - WARRANTY DEEDS	
	APPENDIX B - PRELIMINARY REPORT OF EXCESS (ROE) DATED 5 APRIL 1989	
	APPENDIX C - CITY OF PLEASANT HILL - COMMUNITY PROFILE	
	APPENDIX D - RELEVANT PORTIONS OF THE ASBESTOS STUDY	
	APPENDIX E - ADDITIONAL INFORMATION	



LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
ES-1	Property Information Composite	ES-4
2-1	Property Location Map	2-2
2-2	Site Plan with Topography	2-8
2-3	Wind Rose	2-9
3-1	Environmentally Significant Operations	3-2
5-1	Recommended Sampling Locations	5-4



LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
ES-1	ESOs Identified at Nike KC-30 and Recommendations for Further Action	ES-6
2-1	Property Information Summary	2-3
2-2	Description of Buildings	2-5
5-1	ESOs Identified at Nike KC-30 and Recommendations for Further Action	5-5

Executive Summary

Executive Summary
Introduction
Background
Methodology
Results
Conclusions
References



EXECUTIVE SUMMARY

BACKGROUND AND OBJECTIVES

This Enhanced Preliminary Assessment (PA) report has been prepared by Roy F. Weston, Inc. (WESTON) at the request of the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) pursuant to Contract DAAA15-88-D-0007, Task Order 2. The purpose of the PA report is to present WESTON's findings concerning the environmental conditions at the Nike Battery Kansas City 30 (Nike KC-30) site located in Pleasant Hill, Missouri, and to provide recommendations for further action.

The objectives of the PA were to:

- Identify and characterize environmentally significant operations (ESOs) associated with the historical and current use of the Nike KC-30 property.
- Identify and characterize possible impacts of the ESOs on the surrounding environment.
- Identify additional environmental actions, if any, that should be implemented for the ESOs identified.

Information contained in this enhanced PA report was obtained through:

- Visual inspection of the facility.
- Review of available Army documentation.
- Review of related regulatory agency files at the state and federal levels.
- Interviews with former employees.

GENERAL PROPERTY DESCRIPTION

The Nike KC-30 site is a sub-installation of Fort Leavenworth, Kansas. The site, consisting of 23.82 acres of land, is located 35 miles southeast of Kansas City, in Cass County, Missouri. Most of the land was acquired in August 1958; a smaller portion was acquired in December 1963. In addition to the Nike Battery KC-30 site, the Army also owned the Nike Launch Control Area (LCA). The LCA was less than a mile southeast of the Nike KC-30 site and contained the silos from which the missiles were launched. This land was sold in April 1970 and is not included in this PA.

The site was used as a Nike missile battery installation from 1958 until the late 1960s when the Nike-Hercules mission was discontinued. The site was then inactivated and declared excess by the U.S. Army on 31 January 1968. From January 1969 to February 1988 the site was under license to the Missouri National Guard (MONG). The site has been inactive since February 1988.

Most of the buildings are more than 29 years old. The floors and exterior and interior walls appear to be structurally sound, although extensive painting and repair work is needed in most buildings.

ESOs identified on the property include:

- Oil Disposal Area. Waste oils and possibly waste solvents were dumped in this area over the years.
- Waste Oil Storage Area. Waste oils were stored here in 55-gal drums and later in an aboveground tank. There is some evidence of staining in the area.
- Storage Shed. Paint cans and small cans of oil were stored here.
- Building S3006: Mess Hall. Asbestos is present in the building. One room was used as a battery room by MONG. Batteries and containers of battery acid and paints were stored here.
- Vehicle Wash Area. Vehicles were washed outside maintenance shop. Runoff drained into surrounding grassy area.
- Maintenance Shop. Various maintenance activities were performed. Waste antifreeze was reportedly discarded outside, where it drained into the surrounding grassy area.
- Underground Storage Tanks (USTs). Seven tanks are located on the property.
- Former Aboveground Storage Tank. A 500-gal diesel tank was located adjacent to a MOGAS UST.
- Former CONEX Shed Area. Small quantities of oil and grease were stored in the shed.
- Transformers. There are 18 Army-owned transformers: 11 are pole-mounted, six are on concrete pads, and one is located in a grassy area.
- Small Arms Practice Range. The range was used for the discharge of rifles and hand guns.
- Building S3003: Administration Building Asbestos is present in the building. Also, there is a bucket containing an unknown white powder.
- Building S3004: NCO and Officers Quarters. Asbestos is present in the building.
- Building S3005: Barracks and NCO Quarters. Asbestos is present in the building.
- Paint Locker. Small quantities of paint and grease were stored here.

- Ammo Storage Vault and Unidentified Building. Unknown degree of hazard; access could not be gained.
- Ammo Storage Shed for Small Arms Range. Ammunition was reportedly stored here.
- Sewage Treatment Plant. This plant was used as a septic tank since 1969.
- Debris Area. There is a possible source of asbestos in Transite piping.
- Asbestos Water Piping. Part of underground water distribution system is made up of Transite pipes.

A composite property summary is presented in Figure ES-1.

HUMAN AND ENVIRONMENTAL RECEPTORS

The Nike KC-30 site is located on relatively flat farmland. There are no known endangered species, sensitive environments, or high quality wetlands within 5 miles of the site.

Relief across the property is less than 10 ft, with the slope generally down toward the northeast. Surface water drainage across the site is generally to the northeast. All of the surface drainage appears to eventually flow to a perennial creek located approximately one-quarter mile north of the northern fence of the site. Surface water runoff to the perennial stream is a potential exposure pathway for environmental receptors. Humans may also be exposed if receiving streams are used for recreation or fishing. Downgradient surface water is not known to be used for drinking water.

Groundwater in this region typically varies from 20 to 100 ft deep, depending on the season of the year and the local geology. Typically, water wells are not used for domestic supply in this region because shallow wells tend to produce little volume and water quality is generally poor. Nevertheless, drinking water wells potentially exist within a 3-mile radius of the Nike KC-30 site. The potential also exists for groundwater discharge to surface waters, although areas of groundwater discharge have not been identified.

The only known potential airborne risk is from the various sources of asbestos. The asbestos currently contained in the buildings and possibly in the debris pile could pose a risk to human receptors entering or working in the buildings. The only items that could pose a risk to human receptors through direct contact are the numerous transformers onsite and the 5-gal bucket of white powder.

The contents of the transformers and USTs could present an explosion or fire hazard under certain conditions, although the risk at this facility is not anticipated to be higher than at other similar public facilities.

RECOMMENDED SAMPLING METHODS

- SB Soil Boring
- SD Sediment
- GW Groundwater
- A Asbestos

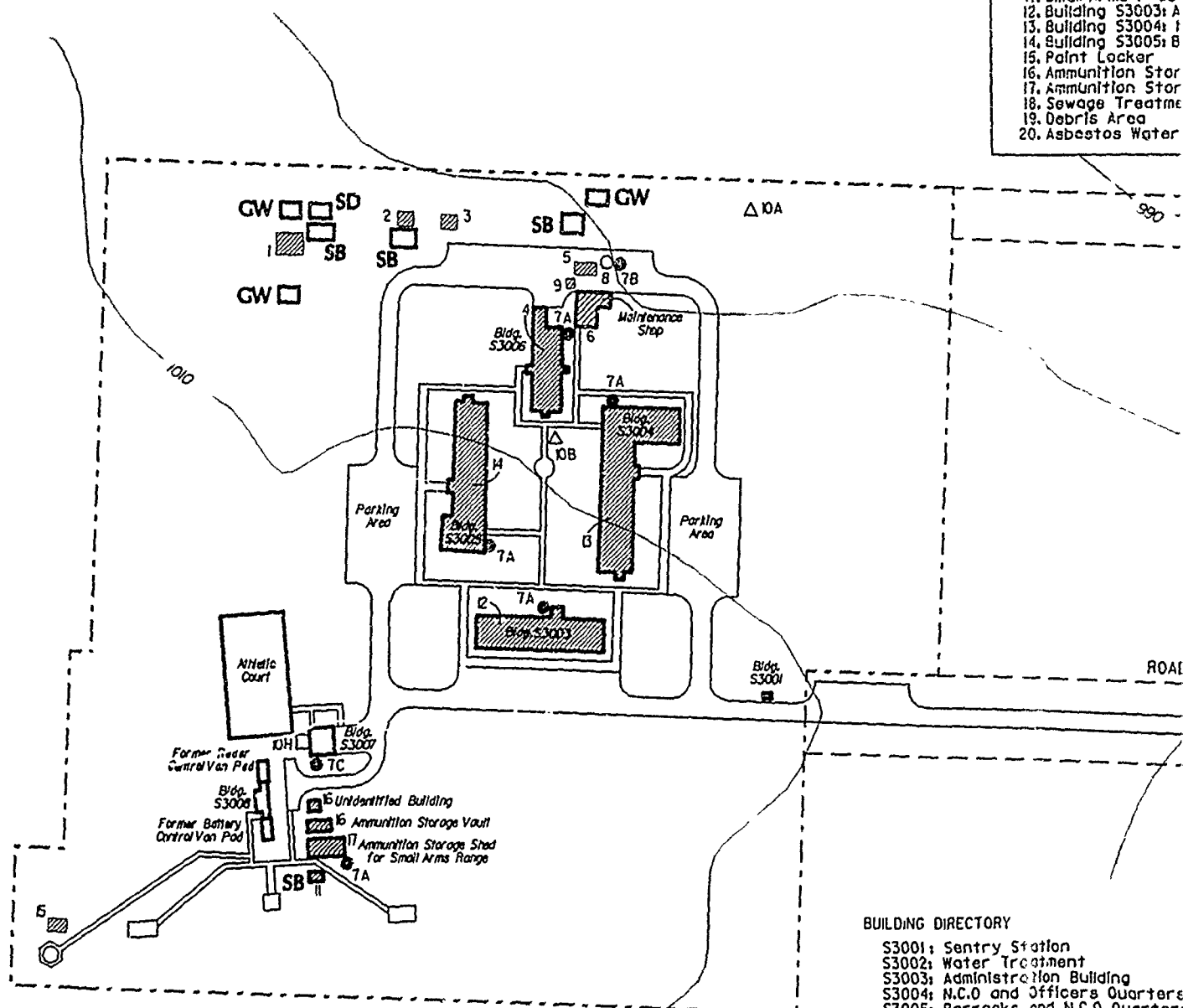
NOTE:

- i) Comprehensive asbestos sampling is recommended throughout site
- ii) All 18 Army owned transformers should be tested for PCB's in transformer oil

ENVIRONMENTALLY SIGN

- △ On-pole Trans
- ▲ Transformer
- Transformer
- ⊙ Underground
- Former Above
- ▨ Buildings With
- ▩ Other Envir

- 1. Oil Disposal Area
- 2. Waste Oil Storage
- 3. Storage Shed
- 4. Building S3006: M
- 5. Vehicle Wash Ar
- 6. Maintenance Sho
- 7A. Fuel-oil Undergr
- 7B. MOGAS Undergro
- 7C. Diesel Undergro
- 8. Former Above G
- 9. Former Conex S
- 10A-F. On-pole Transf
- 10G. Transformer
- 10H. Transformer Ar
- 11. Small Arms Prac
- 12. Building S3003: A
- 13. Building S3004: I
- 14. Building S3005: B
- 15. Paint Locker
- 16. Ammunition Stor
- 17. Ammunition Stor
- 18. Sewage Treatme
- 19. Debris Area
- 20. Asbestos Water



- BUILDING DIRECTORY
- S3001: Sentry Station
 - S3002: Water Treatment
 - S3003: Administration Building
 - S3004: N.C.O and Officers Quarters
 - S3005: Barracks and N.C.O. Quarters
 - S3006: Mess Hall
 - S3007: Generator
 - S3008: Interconnecting Corridor



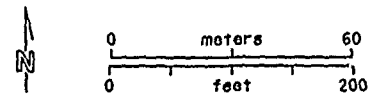
USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

Figure ES-1
Property Information
Composite

(Contour Interval 10 feet)

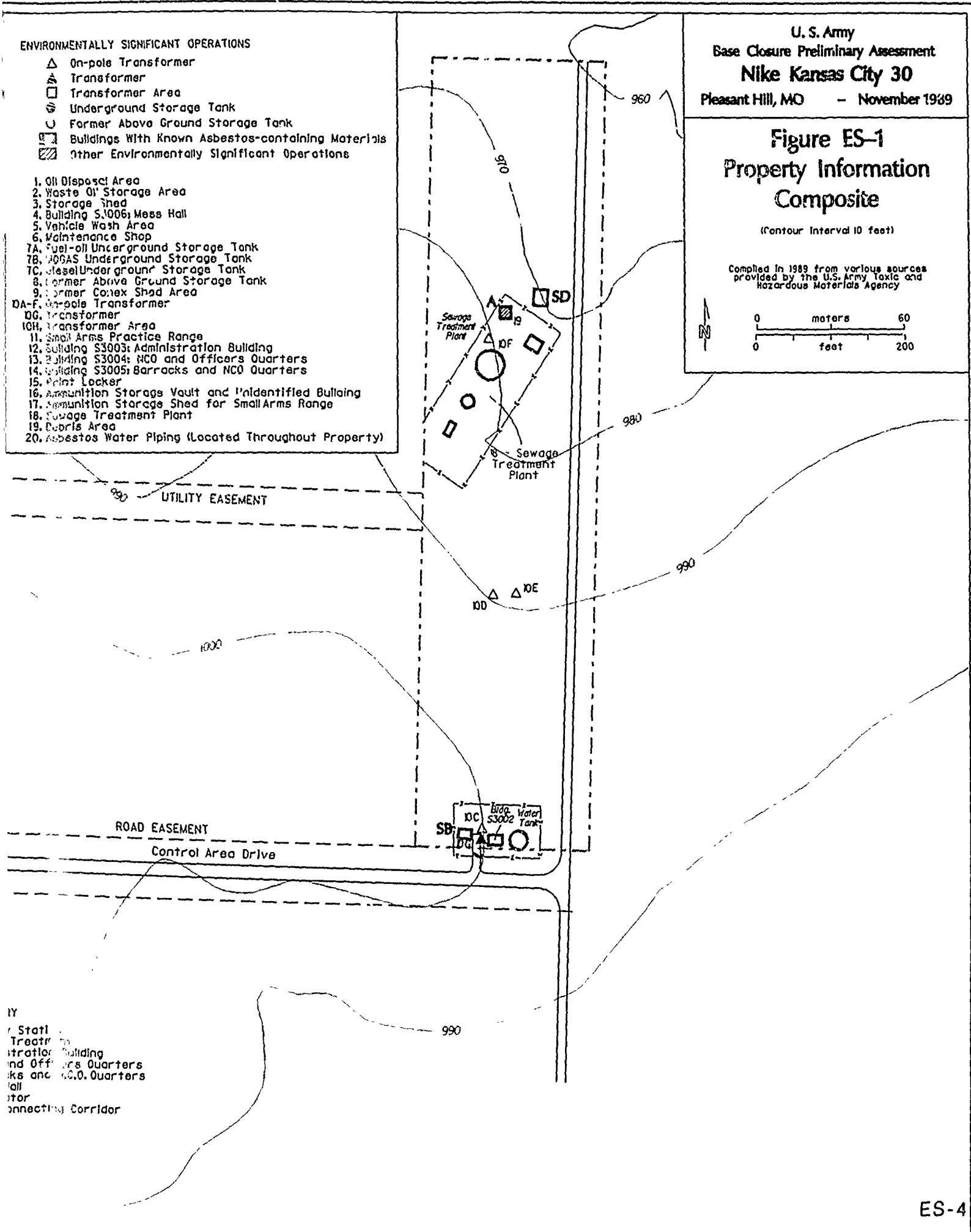
Compiled in 1989 from various sources
 provided by the U.S. Army Toxic and
 Hazardous Materials Agency



ENVIRONMENTALLY SIGNIFICANT OPERATIONS

- △ On-pole Transformer
- ▲ Transformer
- Transformer Area
- Underground Storage Tank
- ⊖ Former Above Ground Storage Tank
- ▣ Buildings With Known Asbestos-containing Materials
- ▨ Other Environmentally Significant Operations

1. Oil Disposal Area
2. Waste Oil Storage Area
3. Storage Shed
4. Building S3006; Mess Hall
5. Vehicle Wash Area
6. Maintenance Shop
- 7A. Fuel-oil Underground Storage Tank
- 7B. Propane Underground Storage Tank
- 7C. Diesel Underground Storage Tank
8. Former Above Ground Storage Tank
9. Former Conex Shed Area
- DA-F. On-pole Transformer
- DG. Transformer
- IGH. Transformer Area
11. Small Arms Practice Range
12. Building S3003; Administration Building
13. Building S3004; NCO and Officers Quarters
14. Building S3005; Barracks and NCO Quarters
15. Paint Locker
16. Ammunition Storage Vault and Unidentified Building
17. Ammunition Storage Shed for Small Arms Range
18. Sewage Treatment Plant
19. Debris Area
20. Asbestos Water Piping (Located Throughout Property)



11. Small Arms Practice Range
 12. Building S3003; Administration Building
 13. Building S3004; NCO and Officers Quarters
 14. Building S3005; Barracks and NCO Quarters
 15. Paint Locker
 16. Ammunition Storage Vault and Unidentified Building
 17. Ammunition Storage Shed for Small Arms Range
 18. Sewage Treatment Plant
 19. Debris Area
 20. Asbestos Water Piping (Located Throughout Property)

The underground Transite piping poses a minimal risk to the drinking water from the potential presence of asbestos fibers in the water.

CONCLUSIONS AND RECOMMENDATIONS

No conditions were observed on the property that appear to present an immediate substantial threat to human health or the environment. However, the ESOs identified have the potential to affect human health or the environment. The ESOs and recommendations for action are summarized in Table ES-1. Figure ES-1 shows recommended sampling locations.

OIL DISPOSAL AREA

It is not known to what extent petroleum hydrocarbons and metals from solvents and waste oil are distributed in soils and groundwater around the source area.

Three monitoring wells, one upgradient and two downgradient of the pit, are recommended to measure the extent of constituents entering the groundwater and the potential for a pathway to surface water discharge. Water samples from the monitoring wells will be analyzed for total petroleum hydrocarbons (TPHs), RCRA metals, and volatile organic compounds (VOCs).

It is recommended that the surrounding area be manually excavated to determine the lateral extent of the disposal area. Depending on the extent of the area, between two and four soil borings are recommended to characterize the extent of contamination of soils in the area. Samples should be taken at depths of 0 to 6 in. and between 3 and 4 ft and analyzed for TPHs, VOCs, and RCRA metals. During collection of the soil samples, the disposal area may prove to be a pit containing porous material. If so, the sample depths will have to be adjusted in order to obtain samples at least 1 ft below the bottom of the pit.

Sediments should be collected from the ditch leading to the nearby culvert and from the ravine to test for potential TPH and RCRA metals migration.

WASTE OIL STORAGE AREA

Soil samples should be collected at depths of 0 to 6 in. and 2 to 3 ft in the drainage pathway toward north of the waste oil and analyzed for TPH and RCRA metals.

VEHICLE WASH AREA AND ANTIFREEZE DISPOSAL AREA

Soil samples should be collected at depths of 0 to 6 in. and 2 to 3 ft and at two locations in the grassy area behind the maintenance shop. The 0 to 6-in. sample should be analyzed for RCRA metals and TPH. The sample between 2 to 3 ft should be analyzed for VOCs in addition to RCRA metals and TPH. In addition, a groundwater monitoring well should be installed and the groundwater tested for ethylene glycol, VOCs, RCRA metals, and TPH.

Table ES-1

ESOs Identified at Nike KC-30 and Recommendations for Further Action

ESOs	Concern	Recommended Activity	Number and Type of Samples Recommended	Analysis
Oil Disposal Area	Soil, surface water, and GW contamination	Install three GW monitoring wells. Soil sampling. Sediment sampling.	3 GW 3 sediments 2 to 4 soil (ea. at 0-6 in. and 3-4 ft)	RCRA metals, TPH, VOCs for GW and soils. RCRA metals, TPH for sediments.
Waste Oil Storage Area	Soil contamination	Soil sampling.	2 soil (each at 0-6 in. and 2-3 ft)	RCRA metals, TPH
Vehicle Wash Area and Antifreeze Disposal Area	Soil and GW contamination	Install 1 GW monitor well. Soil sampling.	1 GW 2 soil (ea. at 0-6 in. and 2-3 ft)	Ethylene glycol, VOCs, RCRA metals, TPH for GW. RCRA metals, TPH for all soil samples. VOCs at 2 to 3 ft depth soil sample.
Underground Storage Tanks	TPH contamination of soil and GW	Leak test. Remove leaking tanks. Empty non-leaking tanks and leave in place in conformance with state and federal regulations.	NA	NA
Transformers	Potential spill at location ESO 10G Potential leaks	Soil sampling. Oil sampling.	1 soil 18 oil	PCBs PCBs
Small Arms Practice Range	Lead, other metals	Remove soil comprising target area; sample and dispose as appropriate. Sample remaining soil.	2 (in soil to be removed) 2 (in remaining soil)	EP Tox EP Tox, RCRA metals, and antimony.
Asbestos in Structures	Inhalation	Remove or encapsulate known exposed friable asbestos. Test other suspected asbestos-containing materials (insulation, walls, ceiling panels, etc.) throughout site. Action on nonexposed asbestos depends on disposition of site. Ambient air sampling in 4 main buildings and in smaller buildings as required.	As required (estimated order of magnitude 100 samples)	Asbestos

Table ES-1
 ESOs Identified at Nike KC-30 and Recommendations for Further Action
 (continued)

ESOs	Concern	Recommended Activity	Number and Type of Samples Recommended	Analysis
White Powder in Bucket (Building S3003)	Unknown hazard	Identify powder and dispose appropriately.	NA	NA
Ammo Storage Vault and Unidentified Building	Ammunition	Buildings should be entered and inspected and any suspected hazardous materials sampled and removed.	NA	NA
Sewage Treatment Plant Outfall	Residual wastes not fully treated by STP	Obtain sediment samples. Clean Imhoff tank.	3	RCRA metals, TPH
Debris Area	Airborne risk of asbestos	Obtain samples of pipe lining. If asbestos containing, have waste pile removed and disposed of appropriately.	2	Asbestos
Asbestos Water Piping	Asbestos	Test water at taps. Evaluate condition of water distribution system and take appropriate action.	3	Asbestos
Storage Shed	Paints	No further investigation.	NA	NA
Battery Room in Building S3006	Battery acid	No further investigation.	NA	NA
Former Aboveground Storage Tank	Diesel fuel	No further investigation.	NA	NA
Former CONEX Shed	Paints and oils	No further investigation.	NA	NA
Paint Locker	Paints	No further investigation.	NA	NA
Ammo Storage Shed for Small Arms Range	Ammunition	No further investigation.	NA	NA



UNDERGROUND STORAGE TANKS

The seven USTs should be leak tested and the water pollution control section at Missouri's DNR notified accordingly. (This section administers the state's RCRA/UST program.) Any tanks found leaking should be removed. The remaining tanks should be emptied and left in place in conformance with state and federal regulations.

TRANSFORMERS

The oil in the transformers should be tested to verify the presence or absence of polychlorinated biphenyls (PCBs). A surface soil sample should be collected to determine if any PCBs have been spilled onto the soil near transformer location ESO 10G.

SMALL ARMS PRACTICE RANGE

The target area of the small arms range can be assumed to contain lead and may also be contaminated with barium and antimony. A relatively small amount of soil and timber constitutes the target area. Removal of this soil to an appropriate landfill may be the simplest response for the soil. The soil to be removed should be tested for EP Toxicity to determine appropriate disposal methods. Also the soil remaining should be tested for RCRA metals, antimony, and EP Toxicity.

ASBESTOS IN STRUCTURES

Asbestos has been confirmed in various buildings onsite. It is recommended that all known exposed friable asbestos be removed or encapsulated. A comprehensive site-wide asbestos sampling program should be undertaken to test other suspected ACMs (insulation, wall panels, ceiling panels, etc.). Action on nonexposed asbestos will depend on the disposition of the site. Ambient air sampling is recommended in the four main buildings that are known to contain asbestos and in the small buildings if ACMs are found to be present.

WHITE POWDER IN BUCKET (BUILDING S3003)

The 5-gal bucket of white powder is an unknown risk. The powder should be identified and disposed appropriately.

AMMO STORAGE VAULT AND UNIDENTIFIED BUILDING

These buildings pose an unknown degree of hazard. These buildings should be entered and inspected, and any suspected hazardous materials sampled and removed.

SEWAGE TREATMENT OUTFALL SEDIMENTS

The outfall area may have been contaminated with acid, solvent, oil, and heavy metals from the various operations throughout the facility. Sampling for RCRA metals and TPH is recommended for these sediments at three locations. In addition, it is recommended that the Imhoff tank be cleaned.



DEBRIS AREA

The possible asbestos present in the discarded piping in the waste pile located near the sewage treatment plant could present an airborne risk. Sampling should be conducted to determine whether asbestos is present. If the presence of asbestos is confirmed, the piping should be removed for proper disposal.

ASBESTOS WATER PIPING

Part of the underground water distribution system is made up of Transite pipes which are reportedly leaking. The water at the taps should be tested for asbestos. Also, the condition of the water distribution system should be evaluated and the necessary repairs made. If any Transite pipe is removed, it should be done in compliance with OSHA regulations.

Section 1 Introduction

Introduction



SECTION 1

INTRODUCTION

1.1 BACKGROUND

Roy F. Weston, Inc. (WESTON) has been retained by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) to conduct waste site characterizations of specific Department of Army properties under the authority of Contract DAAA15-88-D-0007, Task Order 2. This work is being performed within the scope of the U.S. Army Installation Restoration Program (IRP). As part of this contract, WESTON has also been asked to prepare enhanced preliminary assessment (PA) reports of selected properties destined to be included as part of the Base Closure Program. The purpose of the reports is to present WESTON's findings concerning the environmental conditions at the properties and to provide recommendations for further action. These recommendations will serve as a guide to the U.S. Army in prioritizing the activities necessary to report these properties as excess.

This report discusses the enhanced preliminary assessment of the property known as the Nike Battery Kansas City 30 site (Nike KC-30) located 6 miles east of Pleasant Hill in Cass County, Missouri. A site visit was performed on 10 October 1989.

1.2 OBJECTIVES

This enhanced PA report was prepared using existing information obtained from property records and interviews with the few available former employees of this property. No sampling activities were completed as part of the assessment.

The objectives of the PA were as follows:

- Identify and characterize environmentally significant operations (ESOs) associated with the historical and current use of the property.
- Identify and characterize possible impacts of the ESOs on the surrounding environment.
- Identify additional environmental actions, if any, that should be implemented for the ESOs identified.

Certain issues have been excluded from consideration as ESOs for the purposes of this report. First, painted surfaces will not be identified as ESOs solely because there is a potential for their containing lead. Second, drinking water will not be designated as an ESO solely because there is a potential for lead contamination due to piping solder or piping materials. Third, the presence of radon gas in buildings will not be considered as an ESO. A radon survey of all buildings will be performed utilizing the guidelines set forth in the Army Radon Program.



1.3 PROCEDURES

The information contained in this PA report is based on the following information:

- Visual inspection of facility.
- Review of available Army documentation.
- Review of U.S. Environmental Protection Agency (EPA) Region VII files.
- Contacts with the various sections within the Missouri Department of Natural Resources.
- Interviews with former employees.

No sampling or analysis was conducted as part of the investigation.

1.4 REPORT FORMAT

This enhanced PA report presents an evaluation of the relevant data for the Nike KC-30 site.

Section 2 describes the property and surrounding environment and land uses. Section 3 identifies and characterizes all environmentally significant operations related to known and suspected releases to the environment. The potential impact of these operations on the local environment and human receptors is discussed in Section 4. Section 5 summarizes the findings and conclusions, discusses the quality and the reliability of the supporting information, identifies areas requiring further action, and suggests how such actions may be accomplished. Section 6 lists pertinent materials reviewed and the agencies that were contacted. Photographs taken during the site visit are provided in Section 7. Supporting documentation is provided in Appendices A through E.

References are presented throughout this report, where appropriate, by means of a letter and number designation in brackets, as follows: I refers to direct interviews; T refers to telephone conversations; and R refers to reports or other written documents. The number following the letter refers to the specific item in the respective lists provided in Section 6.

Section 2
Property Characterization

Property Characterization



SECTION 2

PROPERTY CHARACTERIZATION

2.1 GENERAL PROPERTY DESCRIPTION AND HISTORY

The Nike KC-30 site is a sub-installation of Fort Leavenworth, Kansas. The site, consisting of 23.82 acres of land, is located 35 miles southeast of Kansas City and 6 miles east of Pleasant Hill in Cass County, Missouri. Figure 2-1 presents a site location map.

The property was acquired as a series of tracts, Tract A-100, Tract A-100-2, Tract 100-3 and Tracts A-100E-1, A-100E-2, A-100E-3, A-100E-4 and A-100E-5. The road, water line, and drainage easements are located in Tracts A-100E-1, A-100E-3 and A-100E-5. The water tank and water treatment building are on Tract A-100-2. The two barracks buildings, mess hall, administration building, generator building, corridor building and the tracking and radar tower are located on Tracts A-100 and 100-3 and were used by the Army. The maintenance shop and ammunition storage vault were added later in Tracts A-100 and 100-3 when the site was under license to the Missouri National Guard (MONG).

The property was reported as excess by Fort Leavenworth in April 1988. However, the Report of Excess (ROE) was returned by the Department of the Army, Headquarters U.S. Army Training and Doctrine Command at Fort Monroe, Virginia, to the installation pending an environmental assessment by USATHAMA. The property has generated potential acquisition interest from the Lone Jack School District, Lone Jack, Missouri, and the Swope Park Community Church, Peculiar, Missouri. Further details can be found in the Preliminary Report of Excess, portions of which are included in Appendix B [R-2].

In addition to the Nike KC-30 site, the Army also owned the Nike Launch Control Area (LCA). The LCA was less than a mile southeast of the Nike KC-30 site and contained the silos from which the missiles were launched. This land was sold to W. R. Gibson Development Co. by quit claim deed dated 10 April 1970. The LCA is not included in this preliminary assessment.

Table 2-1 summarizes the identifying information for the Nike KC-30 site.

2.2 DESCRIPTION OF FACILITIES

The Nike KC-30 site contains 19.8 acres of fee simple owned land and 4.02 acres of easement. Most of the land, Tracts A-100, A-100-2, A-100E-1, A-100E-2, and A-100E-3, were acquired in 1958 from John W. Robertson and Sarah H. Robertson under deed dated August 5, 1958. An additional 0.34 of an acre in fee simple deed, together with clearance and flowage easements

U.S. Army
Base Closure Preliminary Assessment
Nike Kansas City 30
Pleasant Hill, Missouri — November 1989

FIGURE 2-1
PROPERTY LOCATION

 100-Year Flood Plain  500-Year Flood Plain

Property boundary shown in red. Base map image is from the USGS 7 1/2' Series quadrangle Strasburg, Mo., 1954 (PR 1975).

Scale 1:30,000 0 Feet 3000 N
0 Meters 1000

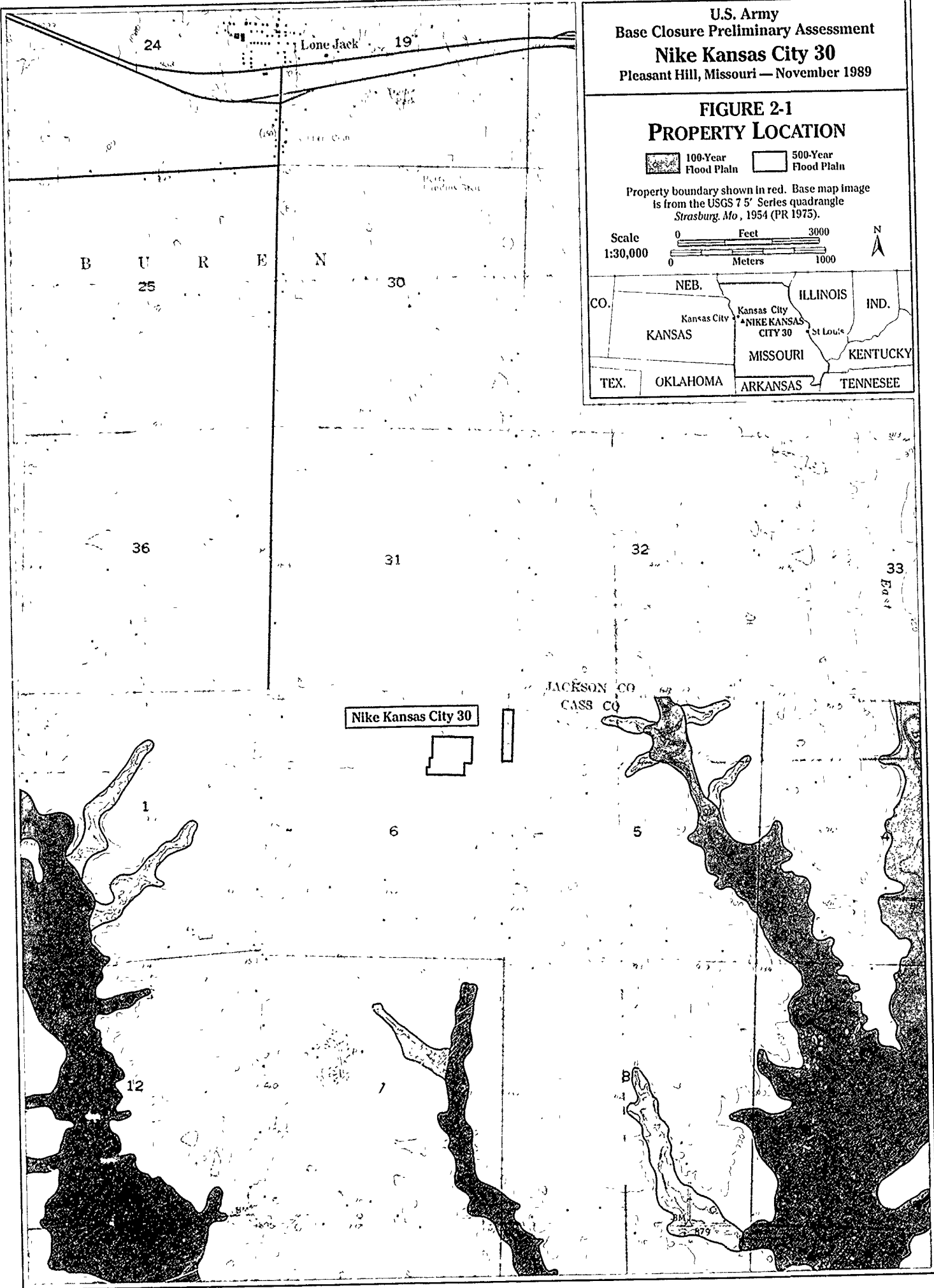
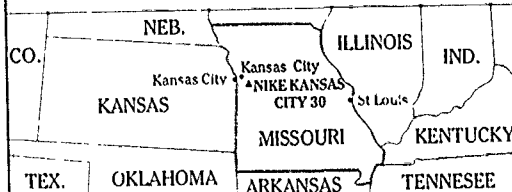




Table 2-1

Property Information Summary
Nike KC 30 Site

Name: Nike Kansas City 30 (Nike KC-30)

FFIS: MO-213722331

Property Number: 29630

Facility Address: Nike Kansas City 30 site
State Route KK
Pleasant Hill, Missouri

Commanding Officer: None (Inactive site)

Location: 35 miles southeast of Kansas City, Missouri, situated in Section 6, Township 46 North, Range 29 West in Cass County.

Installation Coordinates: 38°52'N 94°12'W

Size: Approximately 19.8 acres of fee simple owned land and 4 acres of easements.

Mission: Property was used as a Nike Battery Control Area until 1969. From 1969 to 1988 it was occupied by the Missouri National Guard (MONG).

Operations: There are no present operations at this property.



over 3.67 acres, comprise Tracts A-100-3, A-100E-4, and A-100E-5, which were acquired under deed executed by George Robertson and Grace J. Robertson on 19 December 1963 [R-1]. These transactions are documented in Appendix A. The land was used as a Nike missile battery installation from 1958 until the late 1960s when the Nike-Hercules mission was discontinued. The site was inactivated and declared excess by the U.S. Army on 31 January 1968.

From 2 January 1969 to February 1988, the site was under license to the Adjutant General, Missouri National Guard (MONG), 1717 Industrial Drive, Jefferson City, Missouri 65101-1468. The site was used by the MONG until February 1988, at which time the site was vacated. The five full-time civilian employees, as well as the MONG units who utilized the site, were transferred to a new armory in Harrisonville, Missouri. It should be noted that, according to a MONG employee assigned to this facility, MONG occupied the site from 1964 to 1969 together with the U.S. Army [T-2].

Table 2-2 lists the various buildings at the site. The water treatment building is located adjacent to the water tank in the southeast portion of the property. Photo 1 shows the outside conditions of the water treatment building and the water tank. Photo 2 shows the fiberglass insulation on the pipes located inside the water treatment building (Building S3002).

The four main buildings located on the property are:

- Building S3003 - Administration Building
- Building S3004 - NCO and Officers Quarters
- Building S3005 - Barracks and NCO Quarters
- Building S3006 - Mess Hall

Each of these buildings has a fuel oil UST located adjacent to it (see Section 3).

The generator building (Building S3007) had four diesel generators. Currently only the pads on which the generator was located are in the building (photo 3). A diesel fuel UST and six transformers are located adjacent to this building (see Section 3).

The interconnecting corridor (Building S3008) has concrete pads on either side. Semi-mobile control vans were placed on these pads which opened into the interconnecting corridor. The control vans were not present during the site visit. The interconnecting corridor is still present and has masonry wall construction with drywall inside and tiled floors (photo 6).

Building S3028 is identified in the ROE as a radar building. No information could be obtained about the status of this building. Based on the size and construction of this building, it is believed to be the ammo storage shed for the small arms range that was used by MONG.

The maintenance shop was installed by the State of Missouri during the time that MONG occupied this site. There is also an 8 ft by 8 ft concrete ammo storage vault and an unidentified building adjacent to the storage vault that was also used by MONG.



Table 2-2

Description of Buildings
Nike KC 30 Site

Building	Age (yrs)	Structure Type	Size (sq ft)	No. of Floors	Current Use
S3001 (Sentry Station)	29	Masonry, gypsum board	39.0	1	Unused
S3002 (Water Treatment Building)	29	Masonry	317.0	1	Unused
S3003 (Admin/Rec/Storage Building)	29	Concrete block	4,165	1	Unused
S3004 (Barracks/NCO and Off Qtrs)	29	Concrete block, hardboard	6,958	1	Unused
S3005 (Barracks and NCO Qtrs)	29	Masonry, hardboard	5,297	1	Unused
S3006 (Mess Hall)	29	Concrete	2,713	1	Unused
S3007 (Generator Building)	29	Masonry	734	1	Unused
S3008 (Former Radar Maint. Shop/Interconnecting Corridor)	29	Masonry	367	1	Unused
S3028 (Former Radar Building)	28	Prefab steel	480	1	Unused
Maintenance Shop	19 (est)	Corrugated metal siding	1,500 (est)	1	Unused
Ammo Storage Vault	19 (est)	Concrete	64	1	Unused
Unidentified Building	19 (est)	Concrete	64 (est)	1	Unused

Source: Preliminary Report of Excess (Appendix B)



In addition to the 12 buildings, four radar stations were located onsite. Currently, only one station structure has an aboveground radar monitoring structure (photo 4). The remaining three have only the concrete pads left (photo 5).

Water to the facility was obtained from the Pleasant Hill Water District via a water main extension; water supply to the site currently has been cut.

Solid wastes generated at Nike KC-30 were collected in dumpsters and disposed of by a contractor. There is a small pile of debris consisting of wooden and concrete blocks and pipe flanges, possibly containing asbestos materials, located in the northeast portion of the property.

Wastewater from Nike KC-30 discharged to the onsite sewage treatment plant. However, the plant has not been in operation since approximately 1969. The launch control area (LCA) was served by a separate septic tank. From a 1959 drawing for the LCA, there is no indication of the LCA and the Nike KC-30 site being interconnected by buried sewer lines [R-11].

In 1986, the Nike KC-30 site was included in a statewide asbestos study conducted by the State of Missouri [R-9]. The four main buildings (Buildings S3003, S3004, S3005, and S3006) were surveyed and asbestos was found in all of them. In addition, the underground water distribution system is made up partly of 4-in. to 6-in. diameter Transite pipe, which is composed of asbestos fibers and portland cement molded under hydraulic pressure. The hot water tanks and the heating and hot water piping in all of the buildings are insulated with asbestos products.

There are 21 transformers located throughout the facility. Three of these form a stepdown bank for the incoming power and are owned by Missouri Public Service Electricity Utility (MPSEU). According to MPSEU, these three transformers do not contain PCB-contaminated oils. The remaining 18 transformers are owned by the Army. No information on their contents was available.

2.3 PERMITTING STATUS

The following agencies were contacted to obtain information regarding the environmental status and existing permits for Nike KC-30:

- U.S. Environmental Protection Agency (EPA) Region VII
- Missouri Department of Natural Resources (DNR), Solid and Hazardous Waste Program
- Missouri DNR, Water Pollution Program
- Missouri DNR, Air Pollution Control Program

No information has been filed and no environmental permits have been identified for this site by the EPA or the Missouri Department of Natural Resources [T-4 to T-8].



The Hazardous and Solid Waste Amendments to RCRA of 1987 require notification of the existence of USTs. In Missouri, the Department of Natural Resources administers this program. The Water Pollution Control Section at Missouri's DNR checked its database and could not find any USTs that had been registered for Nike KC-30. However, there are several USTs located onsite [I-4]. These tanks should have been registered with the DNR, because they were used after 1974.

2.4 SURROUNDING ENVIRONMENT AND LAND USE

The property is located 35 miles southeast of Kansas City, Missouri, within relatively flat farmland (Figure 2-2).

2.4.1 DEMOGRAPHICS AND LAND USE

The Nike KC-30 site is located 6 miles east of Pleasant Hill, Missouri. The 1989 population of Pleasant Hill is 4,000. The major employers within the city include the Pleasant Hill School District, Pleasant Hill Veneer, and A.D. Mohe Greenhouses, Inc. [R-3]. To the north of the site is Lone Jack, Missouri, and to the south is Strasburg, Missouri. A detailed community profile for Pleasant Hill is included in Appendix C.

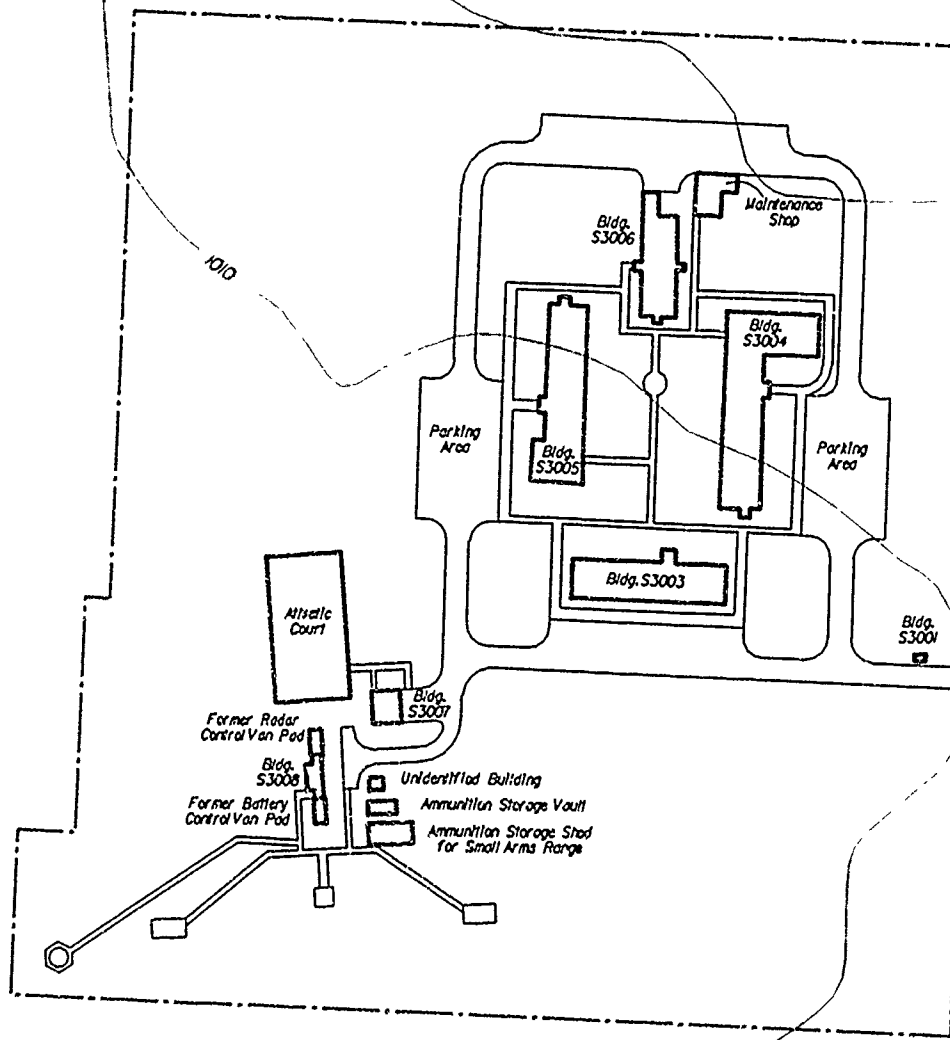
The surrounding area is mainly farmland. There are two houses across the road from the site, one of which was under construction at the time of the site visit.

2.4.2 CLIMATE

Kansas City is located very near the geographical center of the United States. Because of this inland position, the climate is continental in nature. Continental climate is characterized by frequent changes in weather from day to day and season to season. The position of Kansas City places it in line with cold air moving down from Canada, warm moist air coming up from the Gulf of Mexico, and dry air from the west.

Figure 2-3 is a wind rose for Kansas City for the year 1988. The normal prevailing winds are from a southerly direction. During 1988, south winds occurred most frequently with a secondary maximum of south-southeast winds.

The majority of precipitation falls during the April through September period. This precipitation occurs as a result of showers and thundershowers. Normal yearly precipitation is 35.16 inches. June is the wettest month with 4.66 inches; January is the driest month with normal precipitation of 1.08 inches. Average yearly snowfall is 20.3 inches. The 24-hour maximum snowfall recorded was 12.8 inches during January 1958. The maximum monthly snowfall recorded was 30.5 inches during January 1962. Because of the rapidly changing temperatures, snow does not stay on the ground for more than one or two weeks.



- BUILDING DIRECTORY**
- S3001: Sentry Station
 - S3002: Water Treatment
 - S3003: Administration Building
 - S3004: N.C.O and Officers Quarters
 - S3005: Barracks and N.C.O. Quarters
 - S3006: Mess Hall
 - S3007: Generator
 - S3008: Interconnecting Corridor



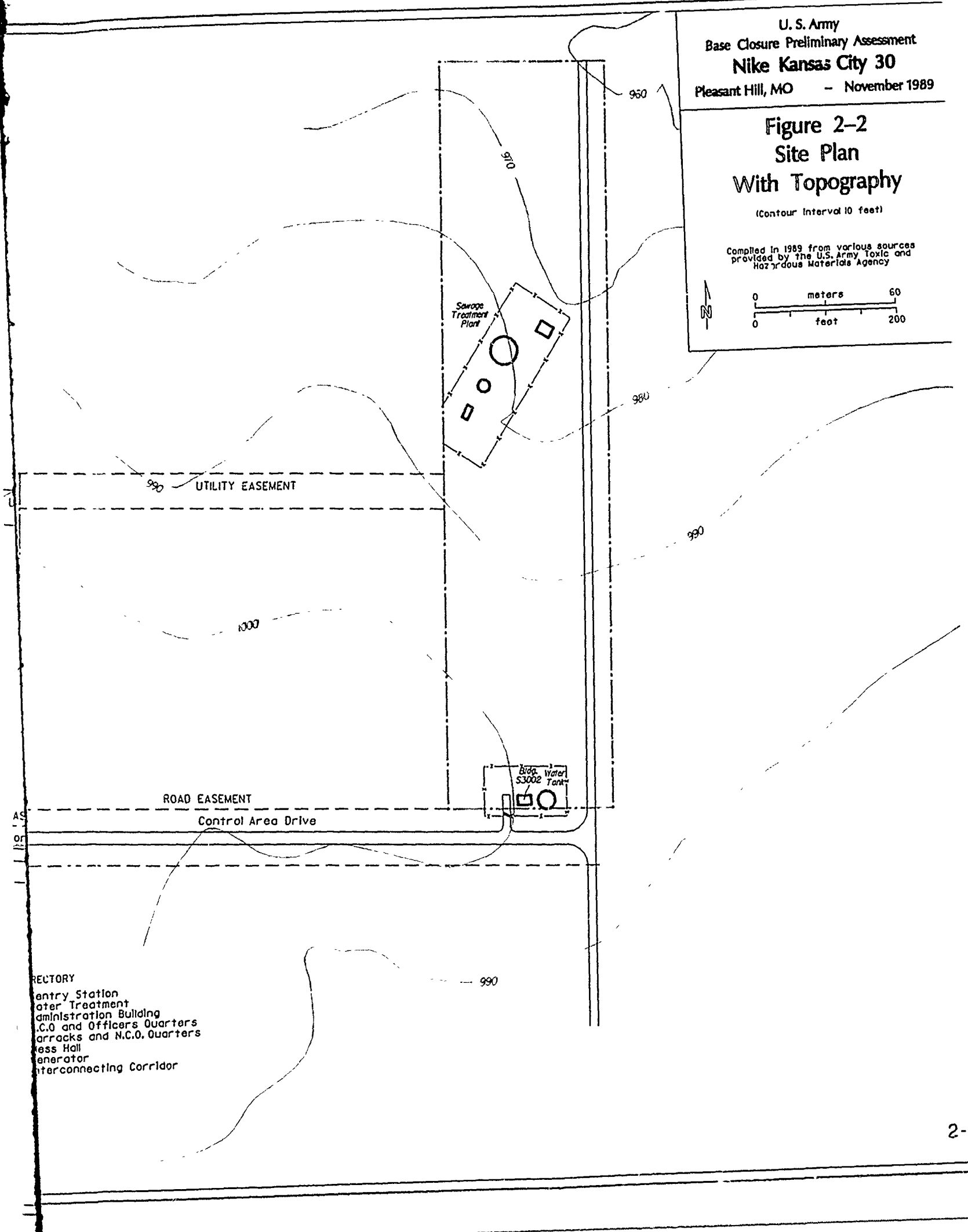
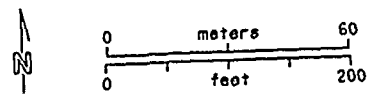
USATHAMA
 U.S. Army Toxic and Hazardous Materials Agency

U. S. Army
 Base Closure Preliminary Assessment
Nike Kansas City 30
 Pleasant Hill, MO - November 1989

Figure 2-2
Site Plan
With Topography

(Contour Interval 10 feet)

Compiled in 1989 from various sources
 provided by the U.S. Army Toxic and
 Hazardous Materials Agency



- RECTORY
- entry Station
- ater Treatment
- Administration Building
- N.C.O and Officers Quarters
- arracks and N.C.O. Quarters
- ess Hall
- enerator
- interconnecting Corridor

KANSAS CITY INTERNATIONAL AIRPORT, MISSOURI
 YEAR: 1988
 CALMS INCLUDED

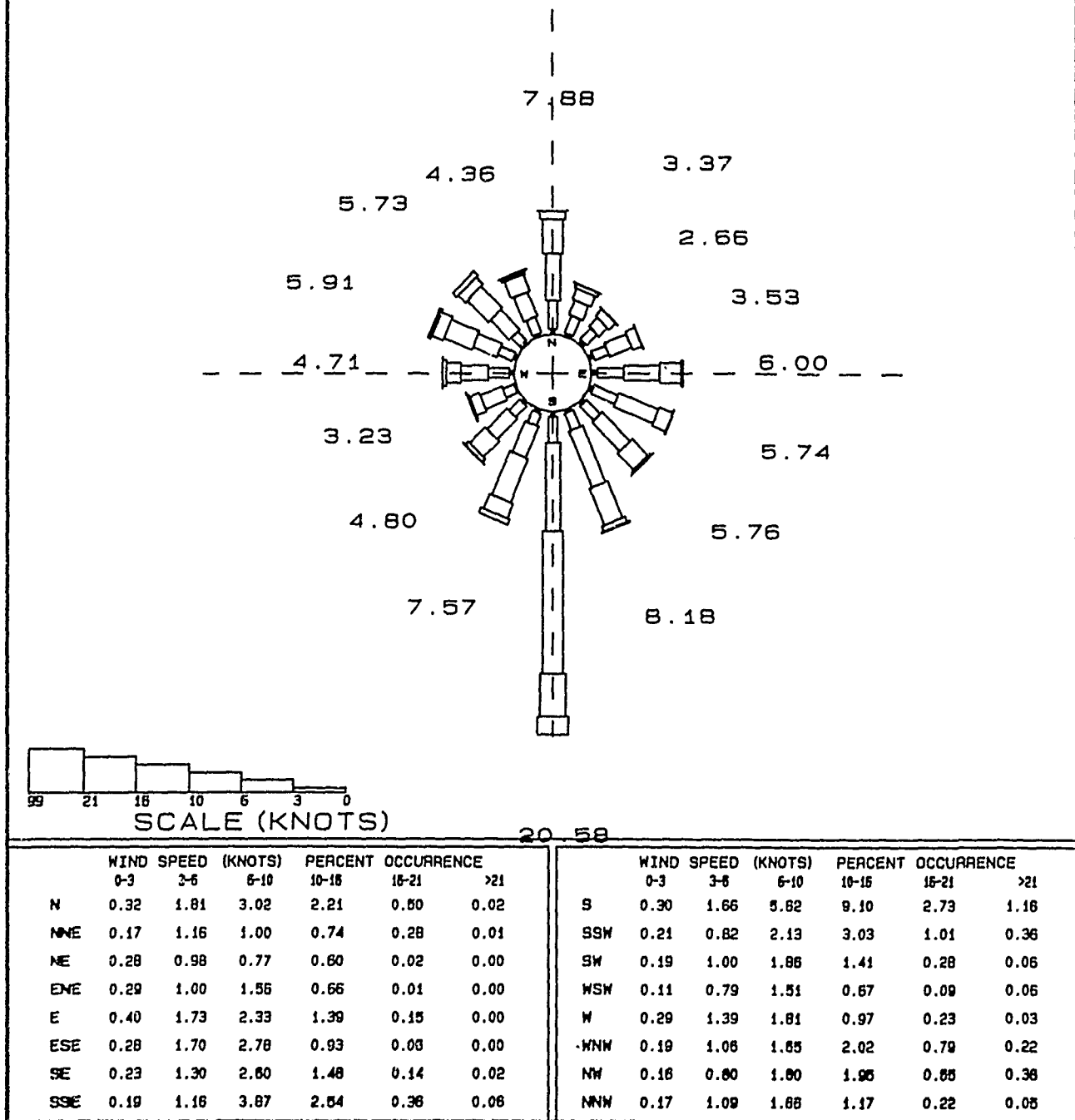


FIGURE 2-3 WIND ROSE

Kansas City is subject to frequent changes in temperature. Temperatures vary moderately from season to season. The coldest month is January with a normal monthly temperature of 25.9°F, normal daily maximum of 34.5°F and normal daily minimum of 17.2°F. July is the warmest month with a normal monthly temperature of 78.5°F, a normal daily maximum of 88.5°F, and a normal daily minimum of 68.5°F. Temperatures of 90°F and above normally occur, on the average, 39 days per year, although occurrences of 60 days have been recorded.

Because of the inland location of Kansas City and the frequent clash of warm, moist Gulf of Mexico air with cold dry air from Canada, tornadoes can occur in Missouri every month of the year. However, the majority of tornadoes occur from March through June.

2.4.3 SURFACE WATER AND PHYSIOGRAPHY

The Nike KC-30 site is situated within relatively flat farmland. Relief across the property is less than 10 ft with the slope generally down toward the northeast. A sewage treatment plant is located in the extreme northeast portion of the property and was designed to receive flow entirely by gravity. The Nike KC-30 site is outside the 500-year floodplain. Figure 2-1 shows the area floodplain for Cass County.

Surface water drainage across the site is generally to the northeast. Surface drainage from the area west and southwest of the main buildings, which includes the area of the athletic court and some radar facilities, drains to a culvert. This culvert passes under the fence and drains into a ravine, which drains to the northeast. Surface drainage from the area of the main buildings is by a system of storm drains that empty into a basin located south of the maintenance shop. The basin then drains via a pipe under the northeast corner of the driveway to a surface drainage trench. Surface drainage from the balance of the radar area and the area east of the main buildings drains to the northeast via a surface drainage trench located along the eastern fenced border. All of the surface drainage appears to eventually flow to a perennial creek located approximately 1/4 mile north of the northern fence of the site. The unnamed perennial creek flows east and passes beneath State Highway KK approximately 1 mile north of the Nike site entrance. The unnamed creek flows east to the east branch of Crawford Creek, which joins the west branch of Crawford Creek southeast of the town of Strasburg, approximately 4 miles south of the Nike KC-30 site.

The nearest town known to be using surface water is the town of Holden. Holden obtains water from the Blackwater Creek and from a reservoir located approximately 1 mile northeast of Kingsville. Neither of these sources appears to receive surface water from the Nike KC-30 area which is at least 6 miles away. The Holden City water system supplies approximately 4,000 people.

Drinking water is supplied by Missouri Public Water District 5. The source of the water is in Kansas City, approximately 35 miles away, and is drawn largely from surface sources.

2.4.4 SOILS

The Nike KC-30 area is primarily underlain by the Haig-Hartwell-Deepwater soil association category, which is found in the Cherokee Prairies region of the state.

Haig is a deep, poorly drained soil formed in loess on upland divides. It has a silt loam surface soil overlying a slowly permeable silty clay subsoil. Slopes range from 0 to 2 percent.

Hartwell is a deep, somewhat poorly drained soil formed in loess and shale residuum on ridges and side slopes. It has a silt loam surface soil overlying a slowly permeable clay subsoil. Slopes range from 0 to 5 percent.

Deepwater is a deep, moderately well-drained upland soil formed in loess and shale residuum. It has a silt loam surface soil overlying a moderately permeable silty clay loam subsoil. Slopes range from 1 to 10 percent.

Haig is the soil most commonly found at the highest elevation at this location and Deepwater is the soil at the lowest elevation [R-7].

2.4.5 GROUNDWATER AND HYDROGEOLOGY

Groundwater in this region typically varies from 20 to 100 ft deep, depending on the season of the year and the local geology. Local faults and variations of the sands, shales, and limestone subsurface can affect local groundwater depth and hydrogeology.

Typically, water wells are not used for domestic supply in this region because shallow wells tend to produce little volume (e.g., 1 to 2 gpm) and water quality is generally poor (e.g., high chloride content). Deep wells, greater than 400 ft deep, generally produce greater volumes of water, but the water quality at these depths is almost uniformly not of drinking quality due to salt content. Nevertheless, drinking water wells potentially exist within a 3-mile radius of the Nike KC-30 site. Conversations with local water districts, County and State health department officials, and the Missouri Department of Natural Resources all indicate that probably there are wells in the area. There is no registration of wells maintained, however, so that individual wells have not been identified. If subsequent environmental studies indicate a problem with groundwater, these wells should be identified.

2.4.6 SENSITIVE ENVIRONMENTS

Information obtained from the Missouri Department of Conservation indicates that there are no endangered species, sensitive environments, or high quality wetlands within 5 miles of the facility. However, there may be low quality wetlands in the area because the Missouri Department of Conservation's database does not inventory wetlands of low quality. A letter summarizing the findings of the search conducted by the Department of Conservation is included in Appendix E [R-8].

Section 3

Environmentally Significant Operations



SECTION 3

ENVIRONMENTALLY SIGNIFICANT OPERATIONS

The objective of this section is to document areas where hazardous materials were managed and to identify their known or potential releases into the environment. The likely migration pathways and potential receptors for these hazardous materials will be discussed in Section 4.

The locations of all identified ESOs at the Nike KC-30 site are shown in Figure 3-1.

3.1 OIL DISPOSAL AREA

3.1.1 DESCRIPTION

During the site inspection conducted 10 October 1989, an area of stained soil was discovered in the northwest portion of the facility. An area of approximately 20 sq ft of black stained soil surrounded by grass was noted at the time of this visit. There was an empty, corroded 55-gal drum and an empty 5-gal container present in this area.

According to MONG personnel, this area was used in the past for disposing waste oils generated when the facility was used by the Army as a Nike Battery Control Area. Several thousand gallons of oil could have been disposed here over the years. The area may also have been initially used for disposing of oil after the National Guard occupied the facility. This practice may have continued until approximately 1975. There is a possibility that this area is a pit containing sand or some other porous medium [I-4].

After 1975, the practice of dumping waste oils in this area was discontinued. MONG personnel assigned to this site after 1975 do not recall disposing of oil in this area [T-3]. Waste oils were reportedly collected in 55-gal drums and stored in the waste oil storage area discussed in Subsection 3.2 [T-2, T-3].

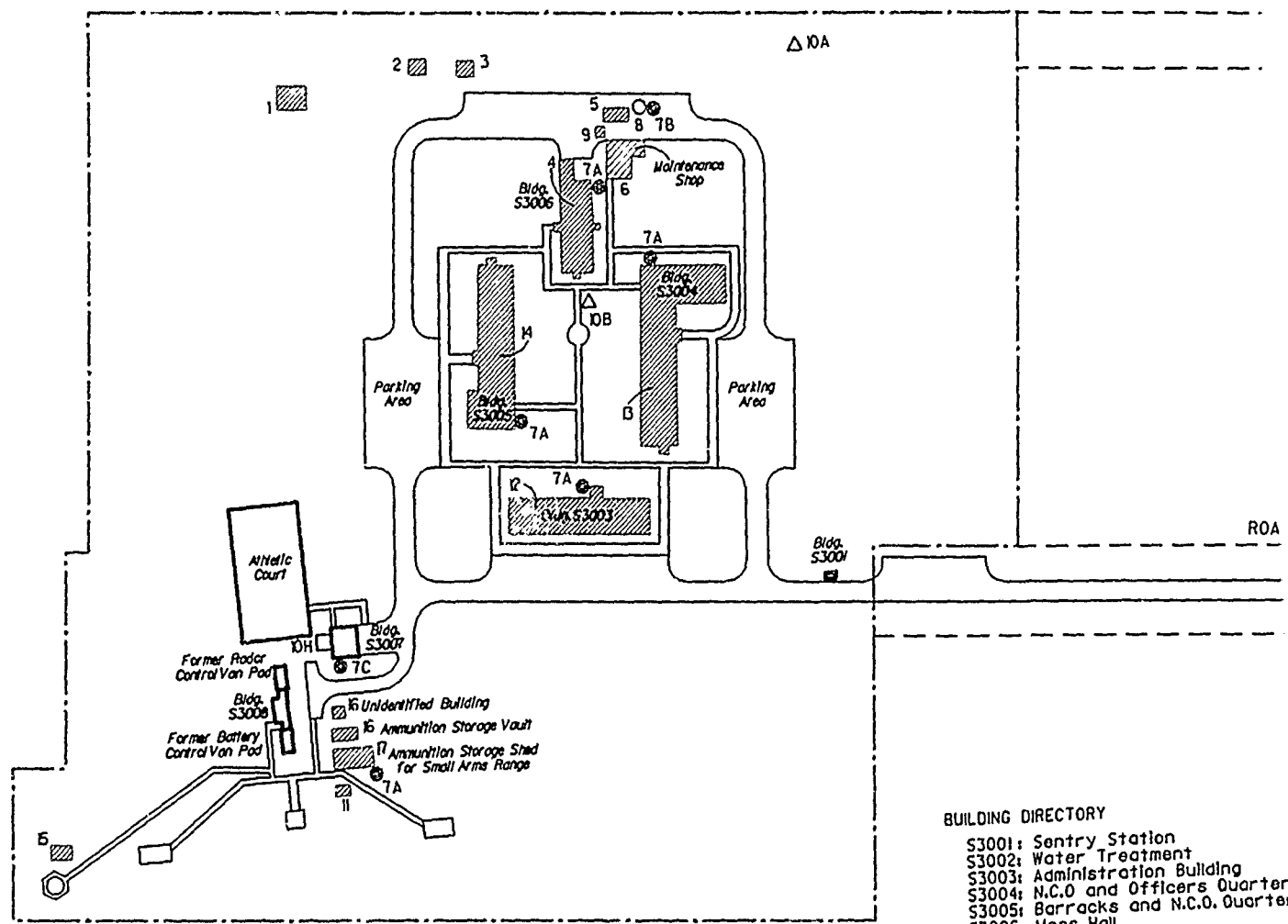
3.1.2 KNOWN AND SUSPECTED RELEASES

Visible surface soil staining and verbal reports of past oil pit disposal practices indicate release of oil to the soil and potentially to surface water. There is a possibility of groundwater contamination caused by the suspect waste oil management practices prior to 1975. The potential exists for waste solvents typically found in motor pool operations or solvents typically associated with Nike sites also having been disposed in the oil disposal area.

There is a culvert within 30 ft of this oil-stained area. The culvert was found to be dry during the site visit. Runoff from the oil disposal area would appear to flow to the culvert, which drains north off the property and then flows in an easterly direction. There are no visible stains in the area.

- ENVIRONMENTALLY SIG
- △ On-pole Trc
 - ▲ Transforme
 - Transforme
 - ⊗ Undergroun
 - Former Abo
 - ▨ Buildings WI
 - ▩ Other Envlr

- 1. Oil Disposal Area
- 2. Waste Oil Storage
- 3. Storage Shed
- 4. Building S3006
- 5. Vehicle Wash Area
- 6. Maintenance Shop
- 7A. Fuel-oil Undergr
- 7B. MORGAS Undergr
- 7C. Diesel Undergr
- 8. Former Above
- 9. Former Conex
- 10A-F. On-pole Transf
- 10G. Transformer
- 10H. Transformer Ar
- 11. Small Arms Prac
- 12. Building S3003
- 13. Building S3004
- 14. Building S3005
- 15. Paint Locker
- 16. Ammunition Stor
- 17. Ammunition Stor
- 18. Sewage Treatm
- 19. Debris Area
- 20. Asbestos Water



- BUILDING DIRECTORY
- S3001: Sentry Station
 - S3002: Water Treatment
 - S3003: Administration Building
 - S3004: N.C.O and Officers Quarter
 - S3005: Barracks and N.C.O. Quarter
 - S3006: Mess Hall
 - S3007: Generator
 - S3008: Interconnecting Corridor

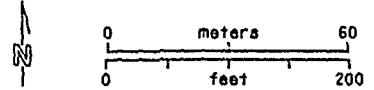


USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

Figure 3-1
Environmentally Significant
Operations

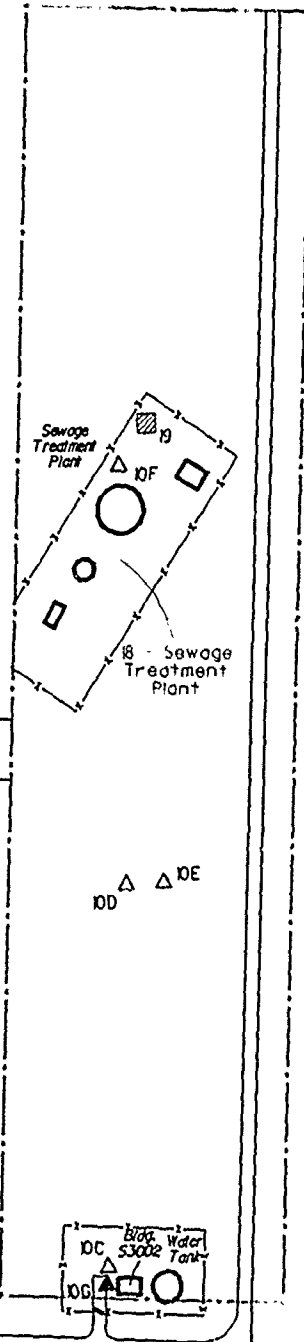
Compiled in 1989 from various sources
 provided by the U.S. Army Toxic and
 Hazardous Materials Agency



ENVIRONMENTALLY SIGNIFICANT OPERATIONS

- △ On-pole Transformer
- ▲ Transformer
- Transformer Area
- ⊙ Underground Storage Tank
- Former Above Ground Storage Tank
- ▨ Buildings With Known Asbestos-containing Materials
- ▩ Other Environmentally Significant Operations

1. Oil Disposal Area
2. Waste Oil Storage Area
3. Storage Shed
4. Building S3006; Mess Hall
5. Vehicle Wash Area
6. Maintenance Shop
- 7A. Fuel-oil Underground Storage Tank
- 7B. MORGAS Underground Storage Tank
- 7C. Diesel Underground Storage Tank
8. Former Above Ground Storage Tank
9. Former Conex Shed Area
- 10A-F. On-pole Transformer
- 10G. Transformer
- 10H. Transformer Area
11. Small Arms Practice Range
12. Building S3003; Administration Building
13. Building S3004; NCO and Officers Quarters
14. Building S3005; Barracks and NCO Quarters
15. Paint Locker
16. Ammunition Storage Vault and Unidentified Building
17. Ammunition Storage Shed for Small Arms Range
18. Sewage Treatment Plant
19. Debris Area
20. Asbestos Water Piping (Located Throughout Property)



CTORY
 ntry Station
 ter Treatment
 ministration Building
 .O and Officers Quarters
 rrracks and N.C.O. Quarters
 .ss Hall
 nerator
 rreconnecting Corridor

There is no documented release to the air due to this operation. However, there may have been some unquantifiable release to the air from the volatile compounds. This release is not suspected to be significant.

3.2 WASTE OIL STORAGE AREA

3.2.1 DISCUSSION

According to information obtained from MONG personnel, this area was in use from approximately 1975 to 1988 by the Missouri National Guard. The area is approximately 50 sq ft. Initially, 55-gal drums of waste oil and solvents were stored on wooden pallets in a graveled area northwest of the maintenance shop. Aerial photographs taken in May 1983 indicate a cylindrical object with a stain adjacent to it in the vicinity of this area [R-4].

This area had a maximum of three 55-gal drums of waste oil and solvents, and up to three 55-gal drums of fresh oil stored on wooden pallets. Reportedly, waste solvent and oil were mixed in the drums [T-3]. A maximum estimated quantity of 150 gals of waste oils was generated per year. The wastes were sent to the National Guard Armory in Jefferson City.

According to MONG personnel, during the early 1980s, a 250-gal tank was installed on stands at this location [T-3]. Waste oils were emptied into this tank instead of the 55-gal drums because, in the past, a few drums had toppled over, spilling waste oil. From 1981 to 1988, the 250-gal tank was pumped out twice for disposal by a private contractor.

At the time of the site visit, only a wooden pallet remained at this location. The 250-gal tank was removed by MONG when the facility was vacated in 1988. Visible stains were noted in the area during the site visit.

3.2.2 KNOWN AND SUSPECTED RELEASES

The stained ground adjacent to the pallet indicates that spills may have occurred during transfer or storage operations. These stains may contain waste oil or solvents used for vehicle maintenance. No documentation is available to determine the amount of product spilled. Spills from this area stained soils and may have entered the groundwater.

3.3 STORAGE SHED

3.3.1 DESCRIPTION

The storage shed contains about 30 sq ft of storage area. The shed is constructed of metal material and is located outside and northwest of the maintenance shop. Currently, the shed is empty. There are no floor drains in the shed. In the past, it was used to store paint cans, small cans of oil, and possibly paint-related solvents. The paints would freeze in winter and were thrown away in a dumpster, which was removed by a private contractor [I-4]. In the late 1970s or early 1980s, the practice of storing paints here was discontinued. The paints were stored in the northwest corner room of the mess hall, as discussed in Subsection 3.4.

3.3.2 KNOWN OR SUSPECTED RELEASES

There is no documented evidence of any past or present spills in this area. However, considering the use of this shed to store paints and oils and possibly paint-related solvents, the potential for spills in the area exists.

3.4 BUILDING S3006 - MESS HALL

3.4.1 DESCRIPTION

The mess hall is a single-story building of cinder block construction. It is heated by perimeter steam radiators served by the boiler in the boiler room. In the early- to mid-1970s, the heating source was converted from fuel oil to natural gas [I-4]. The piping is suspected to be insulated by asbestos, although it has been wrapped and painted [R-9]. No friable asbestos was visible in the pipes inside the building.

The building is divided into a kitchen area and a dining area. The kitchen area has a concrete floor with floor drains discharging to the sewage treatment plant. There is a large hood in the kitchen area which is poorly maintained. The kitchen ceiling appears to have asbestos hardboard panels. The dining area has a tiled floor and the ceiling is of dry wall construction with fiberglass insulation. Photographs 7 through 9 show the kitchen and dining area, respectively. Photo 9 shows the dining area with the fiberglass insulation hanging from the ceiling.

There are two areas of concern in this building. The first involves asbestos. An asbestos study conducted by Hall-Kimbrell Environmental Services found asbestos in pipe covering/fittings and boiler/reservoir packing [R-9; Appendix D]. The mess hall is referred to as Building 56144 in the study. It should be noted that access could not be gained into the boiler room during the site visit because there was no available key to the room. In any case, safety considerations would have precluded entry.

The second area of concern is a room located in the northwest corner of the building. Until approximately 1963, this room was used by the Army to clean mess equipment. From 1963 to 1988, MONG started using this area as a battery room [T-2]. At the time of the visit, the room was empty and there were no batteries or battery acid containers present. The room has a concrete floor, an emergency shower, and a floor drain that flows to the onsite sewage treatment plant. Between 25 and 30 vehicles were assigned to this armory. Each vehicle had two batteries that were replaced as needed. There were mainly new batteries stored here. A few old batteries, awaiting disposal at the National Guard Headquarters in Jefferson City, were also occasionally stored here. At a given time, it was estimated that the room contained a maximum of 10 batteries and 12 1-gal containers of battery acid which were stored in wax-coated cardboard containers [T-2]. Both the batteries and the acid containers were stored on wooden shelves.

According to the shop foreman, who served in this Armory from 1981 to 1988, this room was also used during that time period for storing paints [T-3].



The paints were stored in flammable lockers; the lockers are no longer present in the room. This room was electrically heated.

3.4.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present spills in this building. MONG personnel did not remember any leaking batteries or acid containers in the room [T-2]. Any potential acid spill would, in all likelihood, flow into the floor drain rather than leave the room.

There has been no documented release of asbestos to the surrounding air. All insulation is covered and painted. The boiler room is reported to contain friable asbestos piping insulation but was inaccessible at the time of the site visit [R-9].

3.5 VEHICLE WASH AREA

3.5.1 DESCRIPTION

Vehicles were washed outside the maintenance shop in a graveled parking area, and the washwater allowed to drain into the surrounding grass. An average of 75 to 90 vehicles were reportedly washed annually between 1963 and 1988. Washwater would be expected to seep into the surrounding ground, although there is a drainageway in the area that drains surface water in a northeasterly direction. The potential also exists for the presence of solvents in the area from engine cleaning operation.

3.5.2 KNOWN AND SUSPECTED RELEASES

Oil and grease from the vehicle washwater is suspected of contaminating the soil around the wash area and runoff area. In addition, the potential exists for groundwater contamination in the runoff area.

3.6 MAINTENANCE SHOP

3.6.1 DESCRIPTION

The maintenance shop was installed at the Nike site in the mid 1960s (possibly in 1964) for use by MONG. The building construction consists of metal walls and a suspended ceiling with fiberglass insulation, concrete floor, and wooden partitions. The garage doors are the roll-up type with either styrofoam or fiberglass insulation. The building is heated by natural gas. Photo 10 shows the maintenance bay area.

Maintenance shop activities were performed here from the mid 1960s to 1988 and included routine vehicle maintenance such as oil, antifreeze, and brake changes. Waste oil was initially dumped outside on the ground as discussed earlier in Subsection 3.1. Later the waste oil was stored outside in drums and then in a 250-gal tank in the waste oil storage area discussed in Subsection 3.2. The waste antifreeze was reportedly disposed of by throwing it outside the maintenance shop and allowing it to drain into the surrounding grassy area, which also received runoff from the vehicle wash area, described in Subsection 3.5



There was no parts cleaner until approximately 1975 when a portable 20 to 30-gal container was procured. No information was available on the type of solvents used or how the waste solvents were disposed during that time period. However, during interviews with former MONG personnel it was suggested that waste solvent was possibly disposed of in a manner similar to the waste oil [I-4; T-2]. It should be noted that the floor drain in the maintenance shop flows to the sewage treatment plant, which was not operational during the period that MONG occupied this site. Since the early 1980s, Safety Kleen, Inc. has been contracted to handle the waste solvent. The company services the parts cleaner every 5 weeks [T-3].

No special precautions, such as rinsing of brake pads or high removal efficiency vacuum, were used during brake changing operations until the early 1980s. At that time, the pads were water rinsed to minimize the potential of asbestos exposure. During the late 1980s, brakes were rinsed with solvent and the waste solvent disposed through Safety Kleen, Inc.

3.6.2 KNOWN AND SUSPECTED RELEASES

No documented releases to the groundwater, surface water, or air have been noted. Suspected releases to the environment include soil and possible groundwater and surface water contamination due to the reported methods of disposal of oil, solvent, and antifreeze.

3.7 UNDERGROUND STORAGE TANKS

3.7.1 DESCRIPTION

There is a total of seven underground storage tanks (USTs) throughout the facility. Five USTs contain fuel oil. These were used until the early-to-mid 1970s to supply heating fuel to the buildings. After the National Guard took over the site, gas heat was gradually installed. Limited drawings are available indicating the size of the tanks [T-1]. Information obtained from drawings indicate that the tank serving the mess hall is 2,500 gal and the tanks serving buildings S3004 and S3005 are 1,500 gal each. The drawings do not show tank size for building S3003, which is the administration, recreation, and storage building. However, the capacity of this tank is estimated at 1,500 gal based on information obtained from the National Guard Armory in Harrisonville [T-12]. These four tanks still contain fuel oil. The fifth fuel oil UST is a 500-gal tank serving the ammunition storage shed. The exact location and contents of this tank could not be verified during the site visit [T-12].

These tanks were probably installed in 1959 when the land was purchased by the Army from Mr. and Mrs. Robertson to be used as a Nike-Hercules site. There is no information available to indicate that these tanks have been leak tested.

A motor-vehicle gasoline (MOGAS) tank is located in an area north of the maintenance shop. There is no information available indicating the tank size. However, the tank still contains some gasoline, as verified during the



site visit. The age and construction of this tank are not known, and there is no information available to indicate whether the tank has been leak tested. Photo 11 shows the area where this tank is located.

In addition to the six tanks already discussed, there is a diesel tank that was used to serve the four generators in Building S3007. Information obtained during interviews with MONG personnel assigned to this site indicates a tank size of 3,000 gal [T-12]. It is not known whether the tank has been leak tested. The tank is not currently used, but does contain residual liquid.

3.7.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present spills in the underground tank areas. The tanks are estimated to be at least 25 years old and have never been leak tested. At least six of these tanks still contain fuel and fuel residuals.

3.8 FORMER ABOVEGROUND STORAGE TANK

3.8.1 DESCRIPTION

According to the shop foreman who worked at this National Guard Armory from 1964 to 1969 and 1970 to 1976, there was a diesel fuel tank, estimated at 500 gal, located west of the MOGAS underground storage tank [T-2]. The exact period of operation was not known, but reportedly the tank was installed in 1970 and removed by the National Guard when they vacated the premises in 1988.

3.8.2 KNOWN AND SUSPECTED RELEASES

There is no documentation of any past or present spills in this area. No information is available on the tank condition at the time it was removed.

3.9 FORMER CONEX SHED AREA

3.9.1 DESCRIPTION

There was a metal CONEX shed located on a gravel area at the northwest corner of the maintenance shop. The CONEX shed was used to store transmission, hydraulic and engine oil, and grease. The maximum quantity of oils and grease in the CONEX shed was estimated as 30 gal [T-3]. The largest container size was 5 gal. MONG removed the CONEX shed when they moved from the site in 1988.

3.9.2 KNOWN AND SUSPECTED RELEASES

At the time of the site visit, there was no evidence of any spills in this area. The exact location of the CONEX shed is not known, but the general area of its location was identified by the shop foreman [T-3].

3.10 TRANSFORMERS

3.10.1 DESCRIPTION

A total of 21 transformers are located in eight areas throughout the site. The following is a discussion of each of the eight areas:

- 10A: Consists of a single on-pole transformer with an estimated quantity of less than 50 gal of oil. It is located at the northern boundary of the property. The transformer is owned by the Army and no information is available on whether it has been tested for PCBs [T-11].
- 10B to 10D: There are three on-pole transformers at each of these four locations. Estimated quantity of oil is less than 100 gal at locations 10B, 10C and 10D. Photo 12 shows the on-pole transformers near the water tank. All of these transformers are owned by the Army and no information on any PCB testing is available [T-11].
- 10E: The three transformers at location 10E form the stepdown bank for the incoming power and are located on a platform. These transformers are owned by the Missouri Public Service Electricity Utility (MPSEU). According to MPSEU, these transformers were installed between 1984 and 1985 and are rated at 100 KVA each. None of the three transformers have PCB-contaminated oils according to MPSEU test results [T-11].
- 10F: Consists of a single on-pole transformer with an estimated quantity of less than 50 gal of oil. It is located in the vicinity of the sewage treatment plant and is owned by the Army [T-11]. No information is available on any PCB testing of this transformer.
- 10G: This transformer is located in a grassy area outside the water treatment building, as shown in photo 13. It is approximately 20-in. in height and 15-in. in diameter and is about 75 percent filled with oil. It is owned by the Army, but no information on PCB testing is available [T-11]. The cap is not securely fastened, and it appears the fluid would leak if the transformer were toppled.
- 10H: There are three 50 KVA and three 15 KVA transformers elevated on approximately 2-in. high metal rails that are located on an uncurbed concrete pad behind the generator building (Building S3007). The area around the transformers is grassy. The larger transformers are manufactured by General Electric and the smaller ones are manufactured by Westinghouse. These transformers are owned by the Army and no information on any PCB testing is available. No visible stains were present on the concrete pad during the site visit.

3.10.2 KNOWN AND SUSPECTED RELEASES

Of the 21 transformers located onsite, 18 have the potential of containing PCB-contaminated oils. All 18 transformers are Army-owned [T-11]. During the site visit, no staining was observed in the immediate area of any of the transformers, and none of the transformers seemed to be in deteriorated condition. The transformer that has the greatest potential for release is Transformer 10G. Although no evidence of any past or present releases or spills was found, if this transformer were to topple over, the oil would be released into the surrounding grassy area.

3.11 SMALL ARMS PRACTICE RANGE

3.11.1 DESCRIPTION

This practice range was constructed by MONG and was used for small arms firing practice. Soil was trucked into the area between the ammo storage shed and the acquisition radar pad. A berm was built and railroad ties were used to hold the soil behind the impact area (photo 14). Most bullets and spent ammo were removed when MONG vacated the facility [T-2]. However, bullet fragments probably remain because the area was not completely cleared out. The soil and wooden railroad ties could contain lead bullets from past rifle practice.

3.11.2 KNOWN AND SUSPECTED RELEASES

Soil in the impact area is expected to be contaminated with spent ammunition. Surface drainage from the area flows in an easterly direction and then flows north off the property.

3.12 BUILDING S3003: ADMINISTRATION BUILDING

3.12.1 DESCRIPTION

This is the old administration, recreation, and storage building. The building was heated by fuel oil before it was converted to natural gas during the mid 1970s. The building has tiled floors and masonry walls with 3- to 4-ft wooden panel inserts on the lower portion of the walls. One room in this building was formerly used as a small weapons vault but presently there are no weapons inside. In another room, there was a bucket containing dry white powder, shown in photo 15. The total quantity of the powder is estimated at 5 gal. Photo 16 shows the general exterior condition of this building.

The major area of concern in this building involves asbestos. The building was referred to as Building 56136 in the asbestos report completed by Hall-Kimbrell Environmental Services, Inc. [R-4]. Asbestos was found in the pipes located in the boiler room and throughout the building. The asbestos found during tests ranged between 8 and 23 percent.



3.12.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present releases or spills in this building. Insulation on pipes in the building and boiler room could be a source of release of asbestos to the environment if their current good condition were to deteriorate.

3.13 BUILDING S3004: NCO AND OFFICERS QUARTERS

3.13.1 DESCRIPTION

Building S3004 was used as both NCO and officers quarters. It is an L-shaped building and was heated by fuel-oil. Unlike the other three main buildings, this building was never converted to natural gas heat.

Asbestos was found in the pipes located throughout the building and at various locations in the furnace room, including the tank and water lines. The asbestos found during tests ranged between 4 and 23 percent. This building is referred to as Building 56135 in the Hall-Kimbrell asbestos report [R-4].

3.13.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present spills in this building. Asbestos insulation on pipes in the building and boiler room appear in good condition. Asbestos could be a source of environmental release if the condition of the current insulation should deteriorate or is damaged during future activities.

3.14 BUILDING S3005: BARRACKS AND NCO QUARTERS

3.14.1 DESCRIPTION

This building has three major areas: a large barracks hall, offices, and the rest room/bathroom area. Photos 17 and 18 show the barracks hall and one office. Parts of this building have deteriorated due to a leaking roof with gaping holes. Ceiling and fiberglass insulation damage and dead sparrows are visible in the photos. There are indications of roof leakage throughout the building. A small boiler is located in the boiler room, which was served by an underground fuel oil storage tank located just outside.

This building was referenced as Building 56145 in the asbestos report [R-4]. Asbestos was found throughout the building pipes and in the tank in the boiler room. The asbestos found during tests ranged between 28 and 51 percent.

3.14.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of past or present spills in this building. Asbestos insulation on pipes in the building has deteriorated. As the condition of the building and the asbestos insulation on pipes continues to deteriorate, releases of asbestos can be expected.

3.15 PAINT LOCKER

3.15.1 DESCRIPTION

This is an old paint locker that was used by the Army to store touch-up paints and small cans of grease for use on the radars. The locker was reportedly not used from 1981 to 1988 [T-3]. This locker was located west of the interconnecting corridor from 1969 to 1974. At the time of the site visit the locker was found near the western-most radar pad. The locker doors were wide open at the time of the inspection and no materials were found inside. No residues or spills were noted on the locker floor, which may have acted as containment.

3.15.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present spills in this area. Potential spills may have been contained within the locker but no evidence was apparent of past spills.

3.16 AMMO STORAGE VAULT AND UNIDENTIFIED BUILDING

3.16.1 DESCRIPTION

An approximately 8-ft by 8-ft aboveground storage vault constructed of reinforced concrete is located onsite. The vault was reportedly used by the Army between 1968 and 1988 [I-4]. Access to the vault could not be gained during the site visit. It is not known whether any ammunition is still stored here.

In addition, there is an unidentified, yellow-colored building located adjacent to and north of the ammo storage vault. No information was available on this building. However, because it is located near the ammo storage vault, it may have been used to store ammunition.

3.16.2 KNOWN AND SUSPECTED RELEASES

There is no evidence outside the vault of any past or present releases in this area. However, this structure was not accessible at the time of the field visit.

3.17 AMMO STORAGE SHED FOR SMALL ARMS RANGE

3.17.1 DESCRIPTION

The ammo storage shed is about 15 ft by 18 ft and consists of corrugated steel walls and roof on a concrete slab floor. It is in a dilapidated condition. The door is missing and most of the window panes are broken. The building has a tiled floor, but most of the tiles were found to be damaged during the site inspection. Photo 19 shows the ammo storage shed; to the left of the shed is the ammo storage vault. Photo 20 shows the inside of the ammo storage shed. There are wooden pallets and wood blocks lying inside the shed. There is also a Lennox oil furnace in the southeast corner of the building. The ceiling is wooden with fiberglass insulation that is in poor condition.

Ammunition was stored in this shed in the past, and the windows in the southern wall of the building were used to fire small arms into the outdoor small arms practice range discussed in Subsection 3.11 [I-2, I-3].

3.17.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present releases or spills in this area.

Asbestos has not been surveyed in this building.

3.18 SEWAGE TREATMENT PLANT

3.18.1 DESCRIPTION

The sewage treatment plant (STP) consisted of an Imhoff tank for primary treatment and a trickling filter-final settling tank for secondary treatment. A bar screen chamber was provided at the inlet of the plant to remove solids of large size that might clog or damage piping or pumps in the treatment plant. The Imhoff tank is a two-story tank. The upper tank removed settleable solids from raw sewage, and the lower tank was used for sludge digestion. A dosing siphon provided a means for storing the effluent from the primary settling unit until sufficient volume had been collected at an adequate head to rotate the trickling filter distribution arm and properly distribute the sewage over the filter. Final discharge was to a ditch along State Road KK which drained to the unnamed creek flowing to the east branch of Crawford Creek.

The final settling tank, consisting of a circular tank, was used to remove the solids in the trickling filter effluent. The sludge from this tank was then pumped to the Imhoff tank for primary settling and digestion.

The sewage treatment plant was operated until 1969 when the Army left this property and closed down all operations. After 1969, the plant was used only as a septic tank. The overflow discharged to the outfall without further treatment. Approximately 6 to 8 people occupied this site from 1969 to 1988. On one weekend per month, up to 120 MONG people could be present. During the time period that the plant was operational, it was serviced by a private contractor.

The Imhoff tank still contained either raw sewage, rainwater, or a mixture of the two at the time of the site visit. The trickling filter was completely dry. Photos 21 and 22 show the sewage treatment plant area. The sewage treatment plant received wastewater potentially contaminated with acids, solvents, oils, and heavy metals from the various operations throughout the facility. Potentially, materials such as acids, heavy metals, solvents, and oils passed through the STP to the outfall with little or no effect from the treatment plant.

3.18.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present spills in the area. However, it is suspected that over the years some potential contaminants, such as ethylene

glycol and wastes from lead-acid vehicle batteries, could have been discharged to the STP. Heavy metals, such as lead and petroleum hydrocarbons, could potentially be found in the soils of the outfall area defined above.

3.19 DEBRIS AREA

3.19.1 DESCRIPTION

In the northwest corner of the STP, there is a small pile of debris consisting of concrete and wooden blocks and pipe flanges, possibly containing asbestos materials. Some of the wastes appear to be old broken Transite type piping parts which implies the presence of asbestos. The pile covers an area of approximately 20 sq ft and is less than 2 ft high.

3.19.2 KNOWN AND SUSPECTED RELEASES

There appears to be the potential for release of asbestos to the air from this waste pile.

3.20 ASBESTOS WATER PIPING

3.20.1 DESCRIPTION

In addition to the presence of asbestos in the buildings, part of the underground water distribution system is made up of 4 in. to 6 in. Transite pipe, which is composed of asbestos fibers and portland cement molded under hydraulic pressure [R-2]. Reportedly, much of this underground system is leaking [T-14].

3.20.2 KNOWN AND SUSPECTED RELEASES

There is no evidence of any past or present releases to the air from this site. It should be noted that the Transite piping runs underground.

Section 4

Human and Environmental Receptors



SECTION 4

HUMAN AND ENVIRONMENTAL RECEPTORS

In this section the pathways by which human and environmental receptors may be exposed to site-related contaminants are discussed.

4.1 GROUNDWATER

Contaminants from the site, such as oil and lead, may have entered the groundwater. The potential exists for wells supplying drinking water to be located within a 3-mile radius of the site. However, domestic use of groundwater in the region is limited due to the poor water quality (high dissolved solids) and/or the low yield of groundwater generally available from wells. The potential also exists for groundwater discharge to surface water, although areas of groundwater discharge have not been identified.

4.2 SURFACE WATER

Surface water runoff to the perennial stream described in Subsection 2.4.3 is a potential exposure pathway for environmental receptors. Humans may also be exposed if receiving streams are used for recreation or fishing. Downgradient surface water is not known to be used for drinking water. Residual compounds in site soil and drainage way sediment, if present, could enter the surface water runoff and affect receptors downstream. Past discharges (such as the waste oils and solvents, if any, which were disposed in the previously identified oil disposal area located in the northwest portion of the facility) could be mobilized by surface water runoff. Similarly, heavy metals and asbestos in the sediments downstream of the STP outfall, if any are present, could be transported downgradient by surface water.

4.3 SOIL

Currently the Nike KC-30 site is entirely surrounded by a security fence and is abandoned. Although there has been evidence of intrusion by trespassers, potential human receptors cannot easily obtain access to onsite environmental risk areas, such as the former oil disposal area. However, there is no restriction to access for the drainage trenches or ravine sediments, which may potentially contain heavy metals, asbestos, or organic compounds as described previously.

Some site surface soils, which would become accessible to potential human receptors in the event of a transfer of the property, are suspected to contain heavy metals or organic constituents (primarily oil). These soils include the area of former oil disposal, small arms range, and potentially the drainage areas of the former vehicle wash, trash storage, and waste oil drum staging. In addition, PCBs may have been spilled onto the soil from a transformer outside the water treatment building, and soil in the target area may be contaminated with spent ammunition.

4.4 AIR

The only known potential airborne risk is from the various sources of asbestos. Most of the known asbestos is found inside buildings, is sealed and painted over, and, therefore, may not be a present risk. Some asbestos insulation around the boilers has been noted to be in poor condition with friable asbestos evident. While the site remains inactive and in good repair, there is limited substantial pathway to human receptors. If the property is transferred, the asbestos currently contained in the buildings could become a risk to human receptors entering or working in the buildings.

The debris area in the northwest corner of the STP may pose a current risk of airborne asbestos. However, asbestos in the form of Transite is not as friable as free asbestos, so exposure potential is reduced.

4.5 DIRECT CONTACT

Hazardous materials may be contained inside the numerous transformers found onsite. These items could pose a risk to human receptors in a direct contact scenario.

The contents of the transformers and USTs could present an explosion or fire hazard under certain conditions, although the risk at this facility would not be anticipated to be higher than at other similar public facilities.

The 5-gal bucket of white powder in the administration building may present a direct contact hazard.

4.6 DRINKING WATER

The underground Transite piping poses a risk to the drinking water due to the potential presence of asbestos fibers in the water. If portions of the deteriorating and leaking underground transite piping are proposed for use, water samples should be taken to compare to EPA draft criteria. EPA's Drinking Water Draft Criteria sets a proposed drinking water maximum contaminant level goal (MCLG) of 7.1×10^6 fibers/liter associated with a 1×10^{-6} risk. The criteria is limited to fibers greater than 10 microns in length.

Section 5

Conclusions and Recommendations



SECTION 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF CONCLUSIONS

The Nike Battery Kansas City 30 site is an abandoned Nike-Hercules site which was active from 1958 through the late 1960s. From the mid 1960s to 1988 the Missouri National Guard used the facility as an armory. The buildings onsite are mostly masonry with wooden framed flat roofs with "built-up" roofing systems. Two of the buildings have corrugated metal walls and roofs. All buildings are built on concrete slabs; there are no basements. Other materials of construction typically include dry wall inside walls and ceilings, tiled floors, painted woodwork and pipe coverings, fiberglass batt insulation in ceilings, and asbestos products in pipe insulation and potentially in painted fire and moisture resistant panels in the kitchen and bathrooms.

All buildings are empty. No furniture and very little extraneous material is in the buildings. The four main buildings generally appear to be in good repair with the exception of the NCO quarters building, which has a deteriorating roof.

The facility is surrounded by farmland and is located in a rural area. Only two residences are visible from the site, and one of these houses was an incomplete new residence at the time of the site visit.

Drinking water is supplied to the facility and surrounding homes by the Missouri Public Water District No. 5, which obtains water from Kansas City. Surface drainage is generally to the northeast to a perennial stream located approximately 1/4 mile north of the northern perimeter fence of the facility. Past operations that could adversely affect local and environmental receptors are mostly related to vehicle maintenance and building space heating. These are summarized in the following subsections.

5.1.1 OIL DISPOSAL AREA

The oil disposal area located in the northwestern part of the property was used for dumping used oil from vehicle maintenance. Solvents may also have been co-disposed here. This area may have been a pit that was filled with sand or some other porous medium.

5.1.2 WASTE OIL STORAGE AREA

From about 1975, when the practice of dumping used oil on the oil disposal area was discontinued, through 1988, when MONG vacated the property, waste oils were stored first in 55-gal drums and later in an aboveground tank for eventual disposal offsite. When the drums were in use, leaks and spills reportedly occurred. There is some evidence of staining on the gravel in this area and in the drainage pathway leading to the drainage culvert located near the oil disposal area.



5.1.3 VEHICLE WASH AREA AND ANTIFREEZE DISPOSAL AREA

Behind the maintenance shop, vehicles were washed and waste antifreeze was disposed of by throwing it outside. Runoff was allowed to drain into the surrounding grassy area.

5.1.4 UNDERGROUND STORAGE TANKS

The seven underground storage tanks onsite are potential environmental release sources. Each of the tanks examined appears to contain some quantity of residual fuels. There is no record of leak testing or even UST registration of these tanks. The age of these tanks makes them suspect for leaks. Because the possibility exists for groundwater in the area to be used for drinking, there would be potential human receptors in case of any releases.

5.1.5 TRANSFORMERS

A total of 21 transformers are onsite, all of which contain oil. No tests have been performed to determine PCB content of these transformers (except for three transformers at location 10E). No leaks or stains indicating previous leaks were noted on or around these transformers. The three transformers at location ESO 10E are owned by Missouri Public Service Electric and reportedly do not contain PCBs. The transformer at location ESO 10G is on the ground and the cap is not securely fastened. This transformer is about 75 percent filled with oil. Transformer oil could potentially have been spilled in this area.

5.1.6 SMALL ARMS PRACTICE RANGE

The small arms range was used for the discharge of rifles and hand guns. Accordingly, the soil of the target area is likely to contain bullets and fragments.

5.1.7 ASBESTOS IN STRUCTURES

Various forms of asbestos exist on the site. Asbestos in certain hot water pipes is friable, although most of the asbestos containing materials (ACMs) are in good condition at this time.

5.1.8 WHITE POWDER IN BUCKET (BUILDING S3003)

There is a 5-gal bucket with an unknown white powder located in the administration building. This presents an unknown degree of hazard.

5.1.9 AMMO STORAGE VAULT AND UNIDENTIFIED BUILDING

A small, aboveground concrete building was reportedly used to store small arms ammunition. An unidentified concrete building (painted yellow) is located adjacent to it. Access could not be gained into these buildings and there is an unknown degree of hazard associated with these buildings.



5.1.10 SEWAGE TREATMENT PLANT

The sewage treatment plant (STP) consisted of an Imhoff tank for primary treatment and a trickling filter final settling tank for secondary treatment. The STP received wastewater potentially contaminated with acid, solvent, oil, and heavy metals from the various operations throughout the facility. The plant has not been in operation since 1969, except as a septic tank. The overflow discharged to the outfall without further treatment and may have contaminated the outfall area.

5.1.11 DEBRIS AREA

There appears to be a possible source of asbestos in the form of discarded Transite piping in a waste pile near the sewage treatment plant. While not highly friable, this could be a source of airborne asbestos because it is not contained in any way.

5.1.12 ASBESTOS WATER PIPING

Part of the underground water distribution system is made up of 4-in. to 6-in. Transite pipe and is reportedly leaking. This poses a hazard to the potable water system because of the potential for asbestos fibers.

5.2 RECOMMENDATIONS FOR FURTHER ACTION

No conditions were observed on the property that appear to represent an immediate substantial threat to human health or the environment. The ESOs discussed in Subsection 5.1 have the potential to affect human health or the environment. Further action at the property is recommended as follows. Figure 5-1 shows the recommended sampling locations. Table 5-1 shows a summary of specific sampling recommendations.

5.2.1 OIL DISPOSAL AREA

5.2.1.1 GROUNDWATER

It is not known to what extent petroleum hydrocarbons and metals from waste oil are distributed in soils and groundwater around the source area. Also, there is the possibility that solvents could have been disposed of along with the waste oil. Local area spread of constituents to groundwater and subsurface soils is not a major concern because the groundwater is not generally usable for drinking water supplies, although potential for wells exist within 3 miles. The potential for discharge of constituents to surface water bodies via percolation of rainwater through the soil, then discharging to the nearby ravine, is not known.

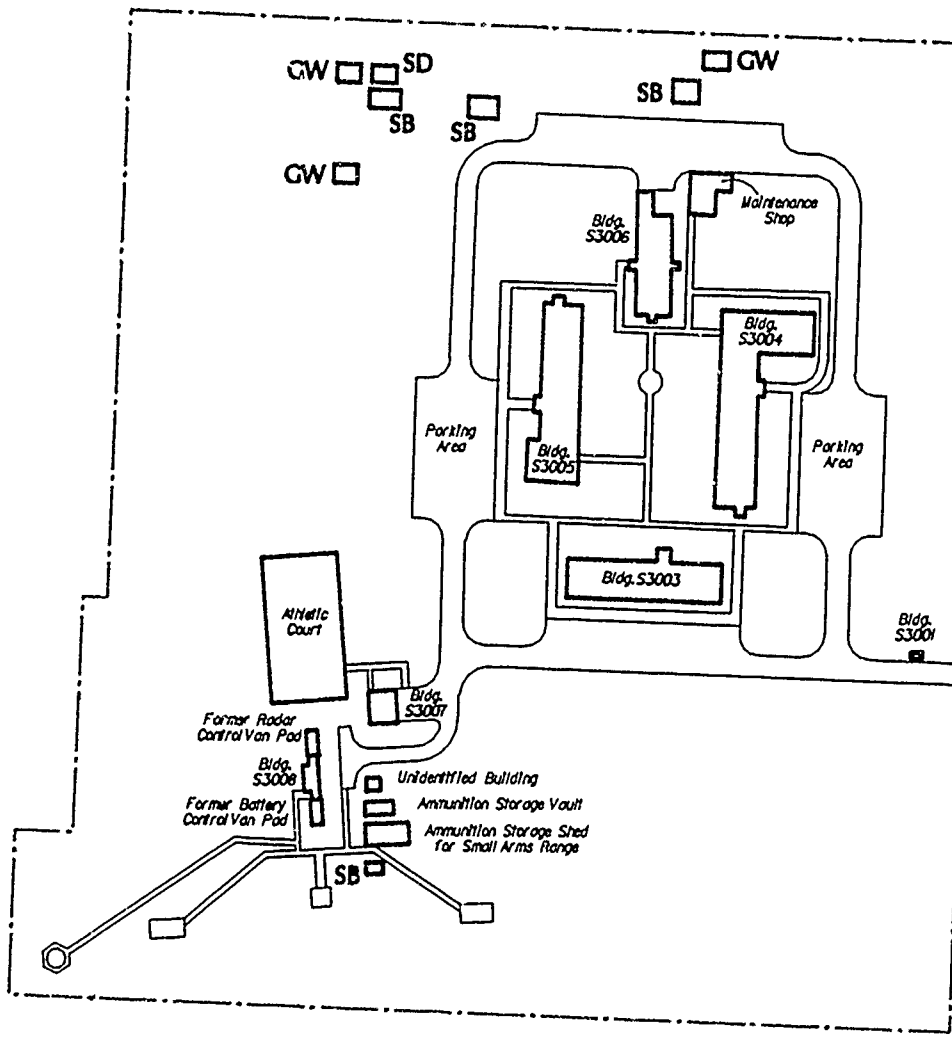
Three monitoring wells, one upgradient and two downgradient of the pit, are recommended to measure the extent of constituents entering the groundwater and potential for a pathway to surface water discharge. Water samples from the monitoring wells should be analyzed for TPHs, RCRA metals, and VOCs.

RECOMMENDED SAMPLING METHODS

- SB** Soil Boring
- SD** Sediment
- GW** Groundwater
- A** Asbestos

NOTE:

- i) Comprehensive asbestos sampling is recommended throughout site
- ii) All 18 Army owned transformers should be tested for PCB's in transformer oil



BUILDING DIRECTORY

- S3001: Sentry Station
- S3002: Water Treatment
- S3003: Administration Building
- S3004: N.C.O and Officers Quarters
- S3005: Barracks and N.C.O. Quarters
- S3006: Mess Hall
- S3007: Generator
- S3008: Interconnecting Corridor

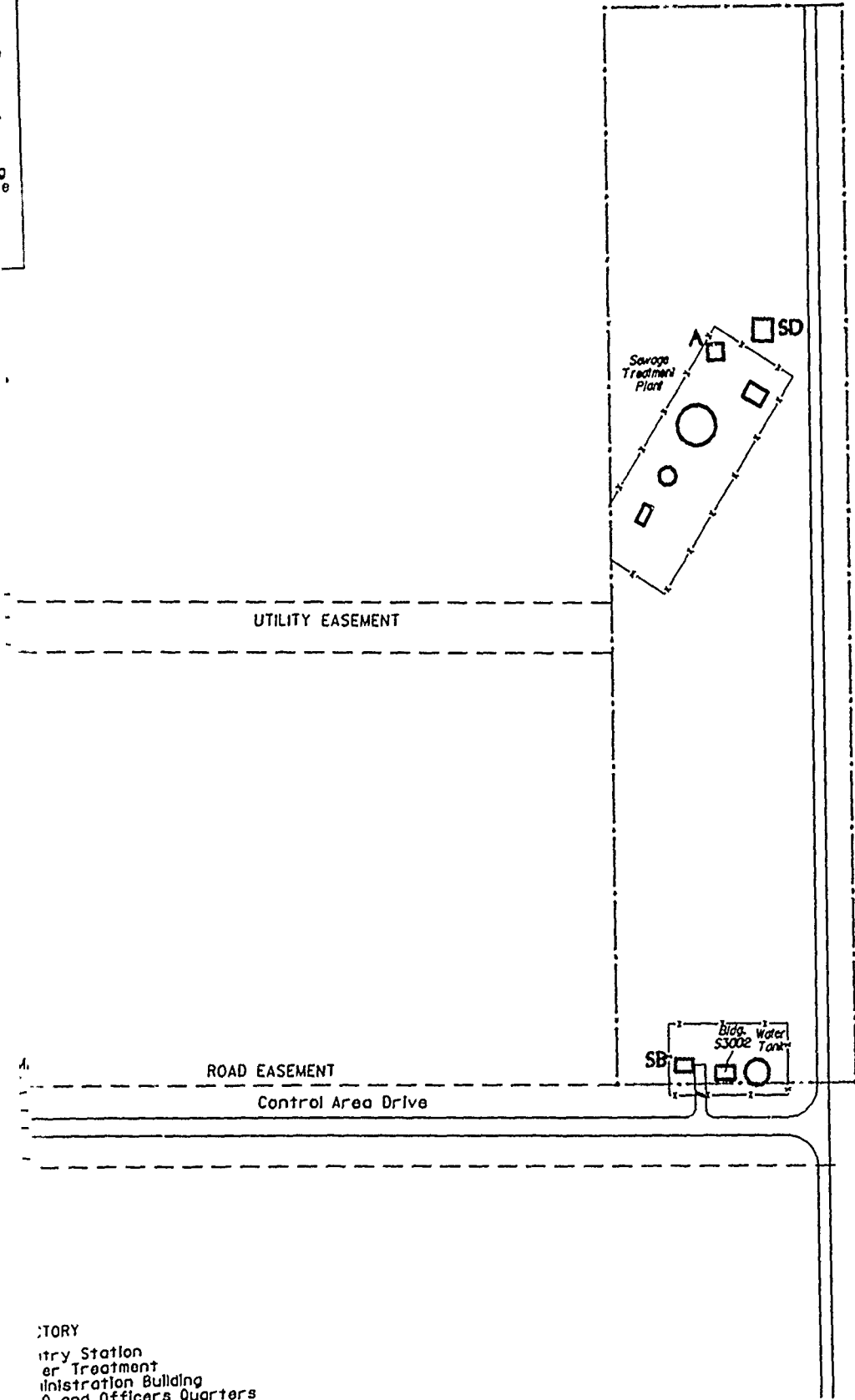


USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

Figure 5-1
Recommended Sampling
Locations

Compiled in 1989 from various sources
provided by the U.S. Army Toxic and
Hazardous Materials Agency



STORY
etry Station
er Treatment
inistration Building
0 and Officers Quarters
racks and N.C.O. Quarters
s Hall
erator
erconnecting Corridor

Table 5-1

ESOs Identified at Nike KC-30 and Recommendations for Further Action

ESOs	Concern	Recommended Activity	Number and Type of Samples Recommended	Analysis
Oil Disposal Area	Soil, surface water, and GW contamination	Install three GW monitoring wells. Soil sampling. Sediment sampling.	3 GW 3 sediments 2 to 4 soil (ea. at 0-6 in. and 3-4 ft)	RCRA metals, TPH, VOCs for GW and soils. RCRA metals, TPH for sediments.
Waste Oil Storage Area	Soil contamination	Soil sampling.	2 soil (each at 0-6 in. and 2-3 ft)	RCRA metals, TPH
Vehicle Wash Area and Antifreeze Disposal Area	Soil and GW contamination	Install 1 GW monitor well. Soil sampling.	1 GW 2 soil (ea. at 0-6 in. and 2-3 ft)	Ethylene glycol, VOCs, RCRA metals, TPH for GW. RCRA metals, TPH for all soil samples. VOCs at 2 to 3 ft depth soil sample.
Underground Storage Tanks	TPH contamination of soil and GW	Leak test. Remove leaking tanks. Empty non-leaking tanks and leave in place in conformance with state and federal regulations.	NA	NA
Transformers	Potential spill at location ESO 10G Potential leaks	Soil sampling. Oil sampling.	1 soil 18 oil	PCBs PCBs
Small Arms Practice Range	Lead, other metals	Remove soil comprising target area; sample and dispose as appropriate. Sample remaining soil.	2 (in soil to be removed) 2 (in remaining soil)	EP Tox EP Tox, RCRA metals, and antimony.
Asbestos in Structures	Inhalation	Remove or encapsulate known exposed friable asbestos. Test other suspected asbestos-containing materials (insulation, walls, ceiling panels, etc.) throughout site. Action on nonexposed asbestos depends on disposition of site. Ambient air sampling in 4 main buildings and in smaller buildings as required.	As required (estimated order of magnitude 100 samples)	Asbestos

Table 5-1

ESOs Identified at Nike KC-30 and Recommendations for Further Action
(continued)

ESOs	Concern	Recommended Activity	Number and Type of Samples Recommended	Analysis
White Powder in Bucket (Building S3003)	Unknown hazard	Identify powder and dispose appropriately.	NA	NA
Ammo Storage Vault and Unidentified Building	Ammunition	Buildings should be entered and inspected and any suspected hazardous materials sampled and removed.	NA	NA
Sewage Treatment Plant Outfall	Residual wastes not fully treated by STP	Obtain sediment samples. Clean Imhoff tank.	3	RCRA metals, TPH
Debris Area	Airborne risk of asbestos	Obtain samples of pipe lining. If asbestos containing, have waste pile removed and disposed of appropriately.	2	Asbestos
Asbestos Water Piping	Asbestos	Test water at taps. Evaluate condition of water distribution system and take appropriate action.	3	Asbestos
Storage Shed	Paints	No further investigation.	NA	NA
Battery Room in Building S3006	Battery acid	No further investigation.	NA	NA
Former Aboveground Storage Tank	Diesel fuel	No further investigation.	NA	NA
Former CONEX Shed	Paints and oils	No further investigation.	NA	NA
Paint Locker	Paints	No further investigation.	NA	NA
Ammo Storage Shed for Small Arms Range	Ammunition	No further investigation.	NA	NA

5.2.1.2 SOILS

It is recommended that the surrounding area be manually excavated to determine the lateral extent of the disposal area. Depending on the extent of the area, between two and four soil borings are recommended to characterize the extent of contamination of soils in the area. Samples should be taken at depths of 0 to 6", and between 3 and 4 ft and analyzed for TPHs, VOCs, and RCRA metals. During collection of the soil samples, the disposal area may prove to be a pit containing porous material. If so, the sample depths will have to be adjusted in order to obtain samples at least 1 ft below the bottom of the pit.

5.2.1.3 SEDIMENTS

Sediments should be collected from the ditch leading to the nearby culvert and from the ravine to test for potential TPH and RCRA metals migration.

5.2.2 WASTE OIL STORAGE AREA

Soil samples should be collected at depths of between 0 to 6 in. and between 2 to 3 ft in the drainage pathway toward the north of the waste oil and analyzed for TPH and RCRA metals.

5.2.3 VEHICLE WASH AREA AND ANTIFREEZE DISPOSAL AREA

Soil samples should be collected at depths of between 0 to 6 in. and between 2 to 3 ft and at two locations in the grassy area behind the maintenance shop. The 0 to 6 in. sample should be analyzed for RCRA metals and TPH. The sample between 2 to 3 ft should be analyzed for VOCs in addition to RCRA metals and TPH. In addition, a groundwater monitoring well should be installed and the groundwater tested for ethylene glycol, VOCs, RCRA metals, and TPH.

5.2.4 UNDERGROUND STORAGE TANKS

The seven USTs should be leak tested and a notification made to the water pollution control section at Missouri's DNR. This section administers the state's RCRA/UST program. Any tanks that are found to be leaking should be removed. The remaining tanks should be emptied and left in place in conformance with state and federal regulations.

5.2.5 TRANSFORMERS

The oil in the transformers should be tested to verify the presence or absence of PCB oils. A surface soil sample should be collected to determine if any PCBs have been spilled onto soil near transformer location ESO 10G.

5.2.6 SMALL ARMS PRACTICE RANGE

The target area of the small arms range can be assumed to contain lead and may also be contaminated with barium and antimony. A relatively small amount of soil and timber constitutes the target area. Removal of this soil to

an appropriate landfill may be the simplest response for the soil. The soil to be removed should be tested for EP Tox to determine appropriate disposal methods. Also the soil remaining should be tested for RCRA metals, antimony, and EP Toxicity.

5.2.7 ASBESTOS IN STRUCTURES

Asbestos has been confirmed in various buildings onsite. It is recommended that all known, exposed friable asbestos be removed or encapsulated. A comprehensive site-wide asbestos sampling program should be undertaken to test other suspected asbestos containing materials (ACMs) (insulation, wall panels, ceiling panels, etc.). Action on nonexposed asbestos will depend on the disposition of the site. Ambient air sampling is recommended in the four main buildings that are known to contain asbestos and in the small buildings if ACMs are found to be present.

5.2.8 WHITE POWDER IN BUCKET (BUILDING S3003)

The 5-gal bucket of white powder is an unknown risk. The powder should be identified and disposed appropriately.

5.2.9 AMMO STORAGE VAULT AND UNIDENTIFIED BUILDING

These buildings pose an unknown degree of hazard. These buildings should be entered and inspected, and any suspected hazardous materials sampled and removed.

5.2.10 SEWAGE TREATMENT OUTFALL SEDIMENTS

The outfall area may have been contaminated with acid, solvent, oil, and heavy metals from the various operations throughout the facility. Sampling for RCRA metals and TPH is recommended for these sediments at three locations. In addition, it is recommended that the Imhoff tank be cleaned.

5.2.11 DEBRIS AREA

The possible asbestos present in the discarded piping in the waste pile located near the sewage treatment plant could represent an airborne risk. Sampling should be conducted to determine whether asbestos is present in this uncontained pile. If the presence of asbestos is confirmed, the piping should be removed for proper disposal.

5.2.12 ASBESTOS WATER PIPING

Part of the underground water distribution system is made up of Transite pipes which are reportedly leaking. The water at the taps should be tested for asbestos. Also, the condition of the water distribution system should be evaluated and the necessary repairs made. If any Transite pipe is removed, it should be done in compliance with OSHA regulations.

Section 6 References



SECTION 6

REFERENCES

6.1 DIRECT INTERVIEWS

- I-1 Chief of Management and Disposal Branch
Real Estate Division, Kansas City COE
11 October 1989
- I-2 Realty Specialist
Real Property Administration Section, Kansas City COE
11 October 1989
- I-3 Asst. Chief of Management and Disposal Branch, Real Estate Division,
Kansas City COE
October 10, 1989
- I-4 Former Battery Officer at Nike KC-30 from 1969 to 1973
Missouri National Guard (MONG), Raytown, Missouri
11 October 1989

6.2 TELEPHONE INTERVIEWS

- T-1 Realty Specialist, Fort Leavenworth, Kansas.
- T-2 General Shop Mechanic at MONG, Raytown, Missouri, assigned to Nike KC-30 site from 1968 to 1969 and 1970 to 1976.
- T-3 Shop Foreman at MONG, Harrisonville, Missouri, assigned to Nike KC-30 site from 1981 to 1988.
- T-4 EPA Region VII.
- T-5 Missouri Department of National Resources (DNR), Air Pollution Control Program.
- T-6 Missouri DNR, Solid and Hazardous Waste Program.
- T-7 Missouri DNR, Water Pollution Program.
- T-8 Missouri DNR, Kansas City Office.
- T-9 Missouri DNR, Parks and Historical Sites Division.
- T-10 Missouri Department of Conservation.
- T-11 Missouri Public Service Electricity Utility.
- T-12 MONG, Harrisonville.

- T-13 Kansas City Water Department.
- T-14 Pleasant Hill Water Department.
- T-15 Missouri DNR, Division of Geology and Land Survey.
- T-16 Holden Water Department.
- T-17 E.T. Archer Engineers.
- T-18 Kansas City, Missouri, Department of Health.
- T-19 Missouri State Health Department.

6.3 REPORTS AND OTHER DOCUMENTS

- R-1 Warranty Deed for all Tracts, from Kansas City COE - Division of Real Estate (included in Appendix A).
- R-2 Preliminary Report of Excess - Nike Battery KC-30 Site, Ft. Leavenworth, Kansas, 5 April 1989 (relevant portions are included in Appendix B).
- R-3 Pleasant Hill Community Profile, City of Pleasant Hill, Missouri, 5 October 1989 (included in Appendix C).
- R-4 Interim Report by the Bionetics Corp. and EPIC on analysis of historical aerial photographs, August 1989.
- R-5 Climate of the States 2, Western States, Water Information Center, Inc., 1974.
- R-6 1988 Local Climatological Data, Annual Summary with Comparative Data, Kansas City, Missouri, International Airport, National Oceanic Atmospheric Administration, Asheville, North Carolina.
- R-7 Missouri General Soil Map and Soil Association Descriptions, U.S. Department of Agriculture Soil Conservation Service in cooperation with Missouri Agricultural Experiment Station, 1979.
- R-8 Letter from Missouri Department of Conservation to WESTON, 6 November 1989 (included in Appendix E).
- R-9 Prioritization Asbestos Assessment Study, Hall-Kimbrell Environmental Services, 1 July 1986 (relevant portions are included in Appendix D).
- R-10 Fact Sheet, Nike KC-30, Pleasant Hill, Missouri, USATHAMA Base Closure Division, March 1989 (included in Appendix E).
- R-11 Water and Sewerage Facilities, General Layout - KC-30 Launching Area, Prepared under Contract No. DA23-028-ENG 3547, 6 December 1959.

Section 7
Photographs



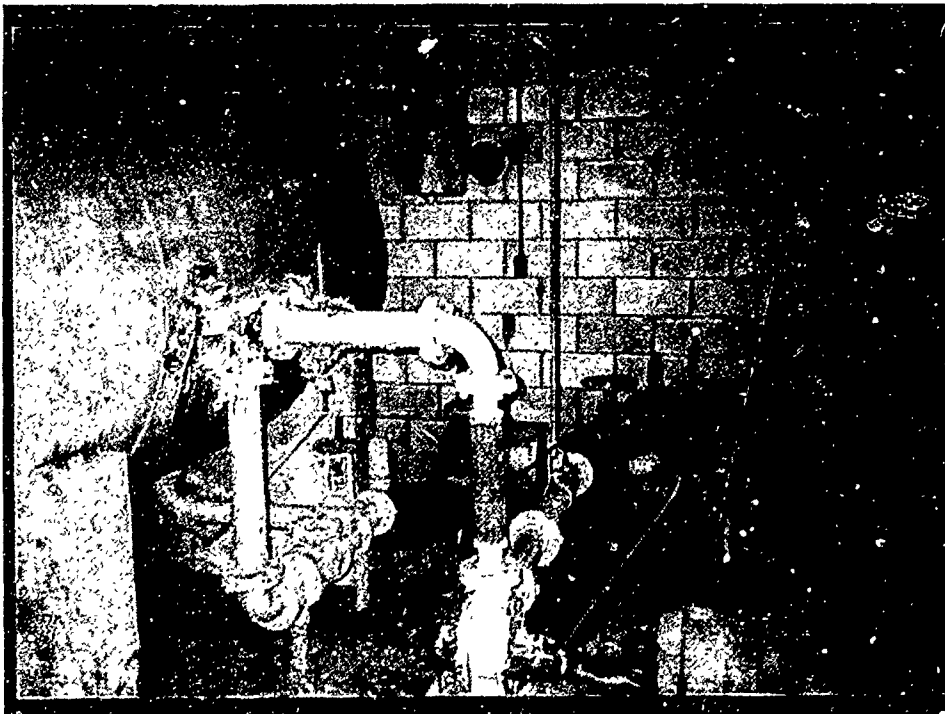
SECTION 7

PHOTOGRAPHS

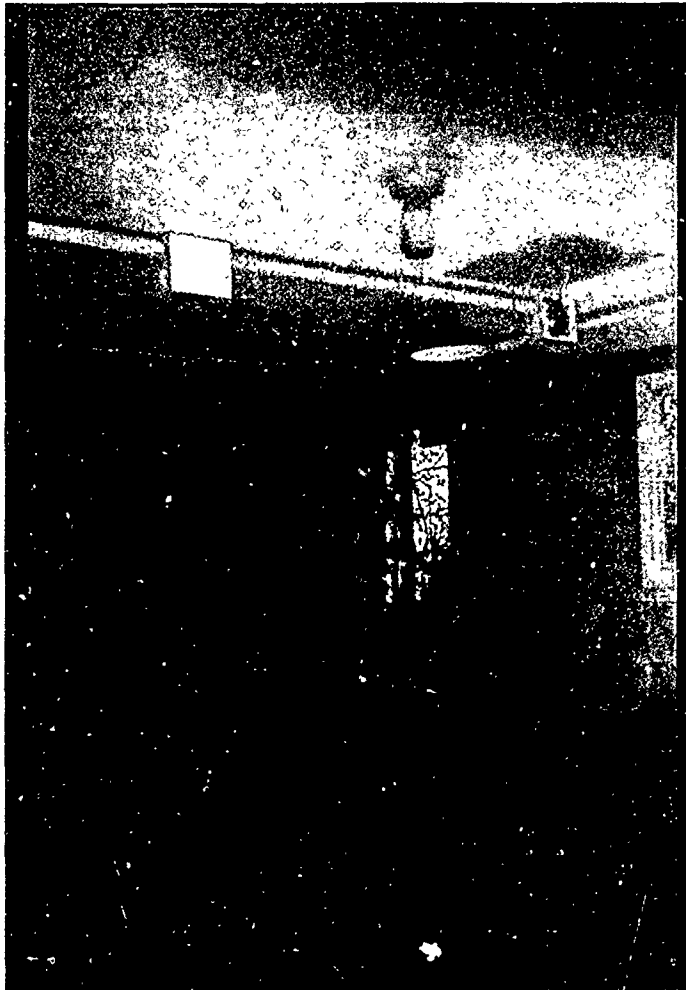
Photographs of ESOs taken during WESTON's site visit are provided in this section.



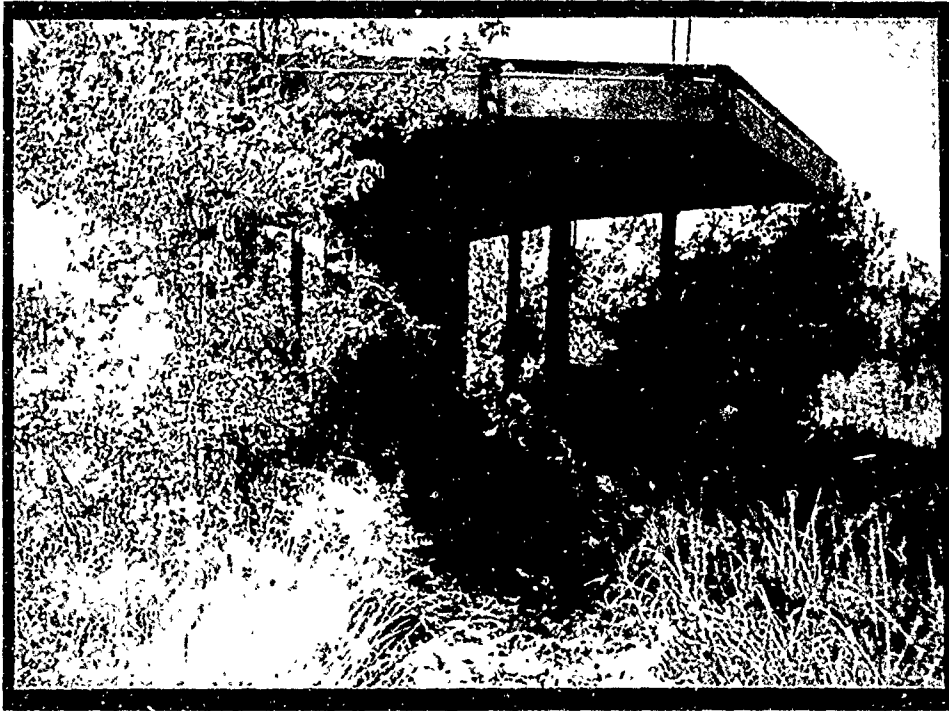
**1. GENERAL CONDITIONS OUTSIDE WATER
TREATMENT BUILDING AND WATER TANK**



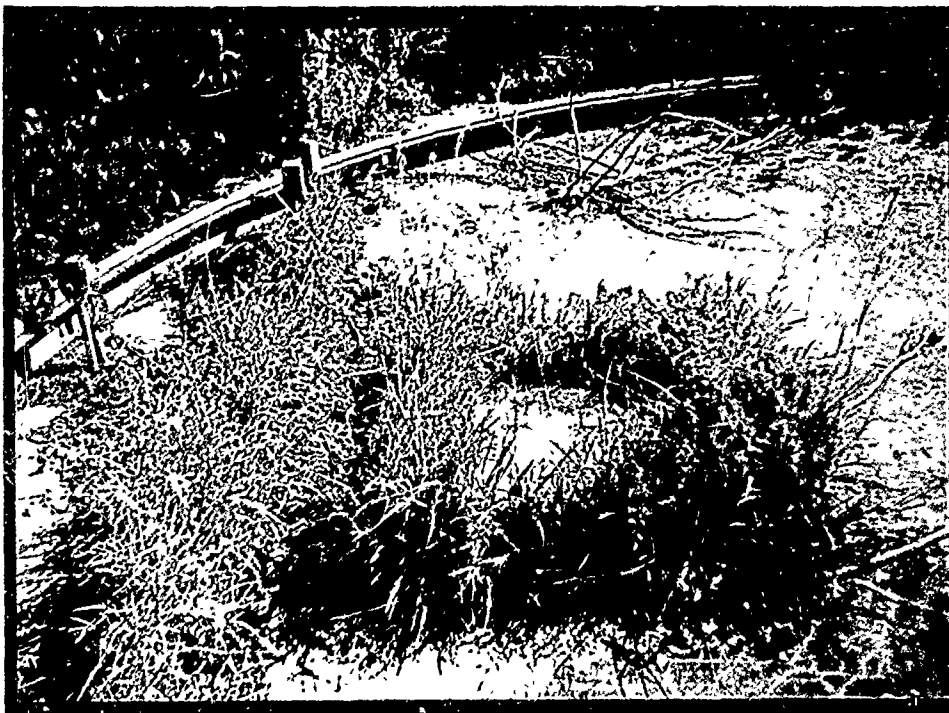
**2. GENERAL CONDITIONS INSIDE WATER
TREATMENT BUILDING**



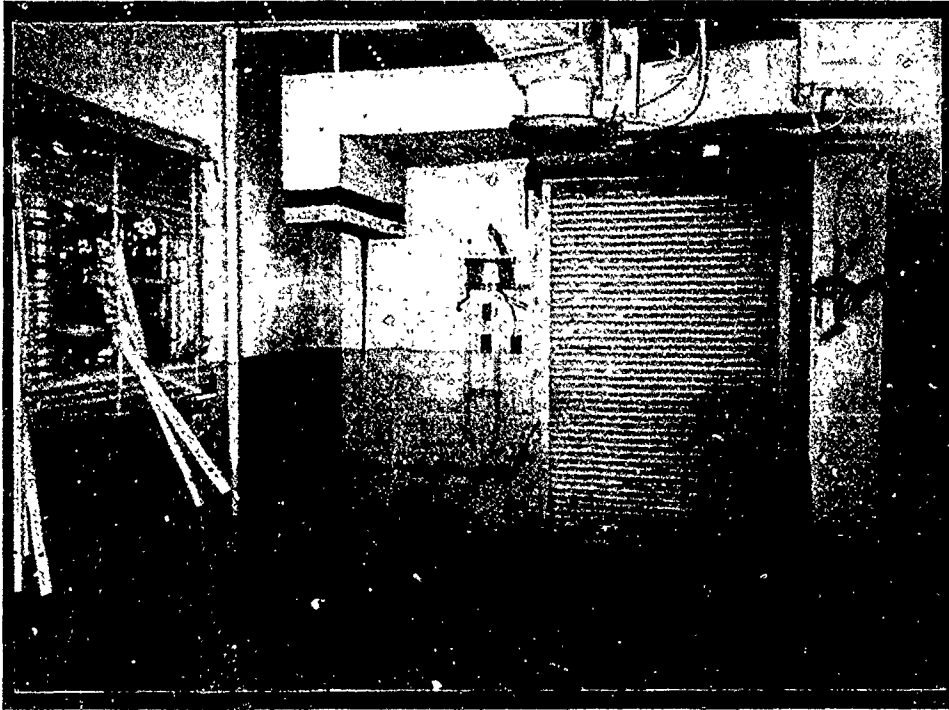
**3. GENERAL CONDITIONS INSIDE
GENERATOR BUILDING**



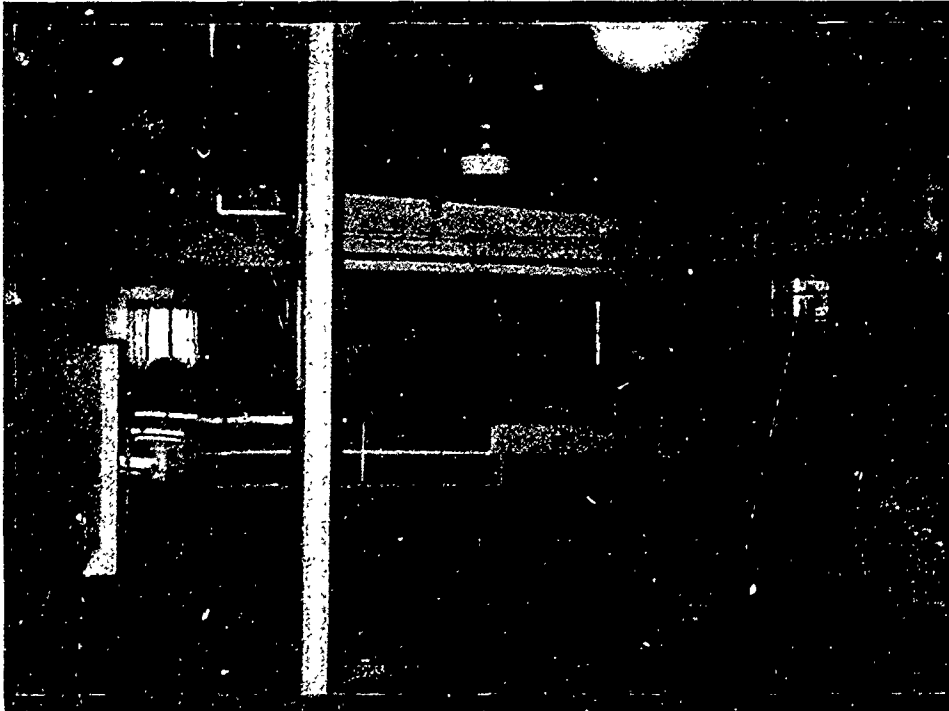
4. FORMER RADAR STATION LOCATIONS



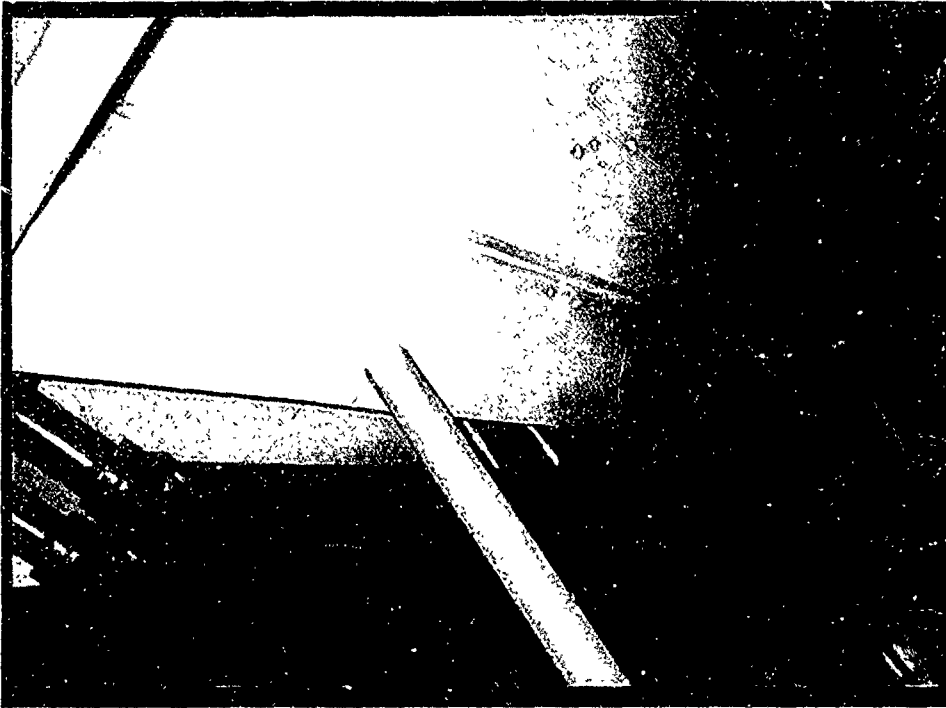
5. FORMER RADAR STATION LOCATIONS



**6. GENERAL CONDITIONS INSIDE
INTERCONNECTING CORRIDOR**



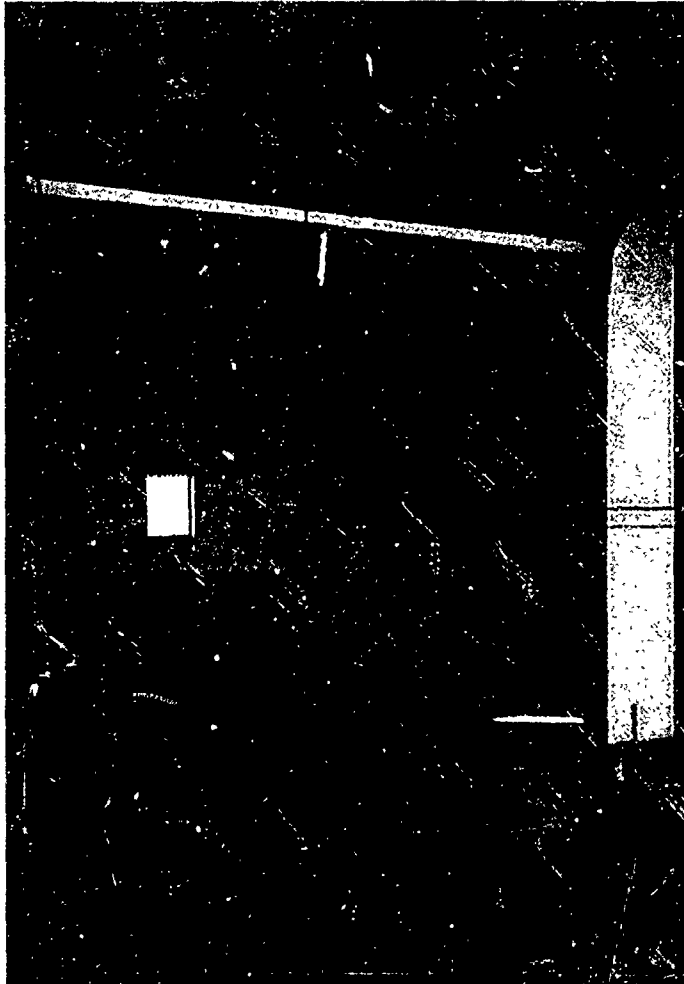
**7. GENERAL CONDITIONS INSIDE KITCHEN
AREA (BUILDING S3006)**



**8. SUSPECTED ASBESTOS HARDBOARD PANELS
IN KITCHEN CEILING (BUILDING S3006)**



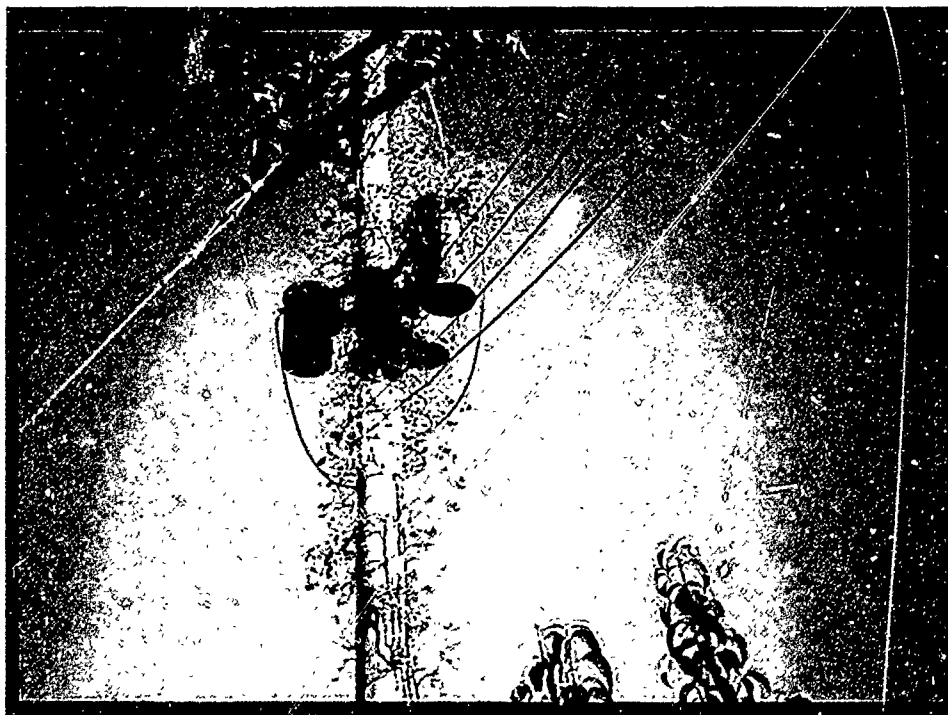
**9. GENERAL CONDITIONS INSIDE DINING
AREA (BUILDING S3006)**



**10. GENERAL CONDITIONS INSIDE
MAINTENANCE SHOP**



11. GENERAL LOCATION OF MOGAS UST



**12. POLE-MOUNTED TRANSFORMERS
LOCATED IN THE VICINITY OF
WATER TREATMENT BUILDING**



**13. TRANSFORMER LOCATED OUTSIDE
WATER TREATMENT BUILDING**



14. SMALL ARMS PRACTICE RANGE



**15. BUCKET WITH DRY WHITE POWDER
INSIDE BUILDING S3003**



16. GENERAL CONDITIONS OUTSIDE
BUILDING S3003



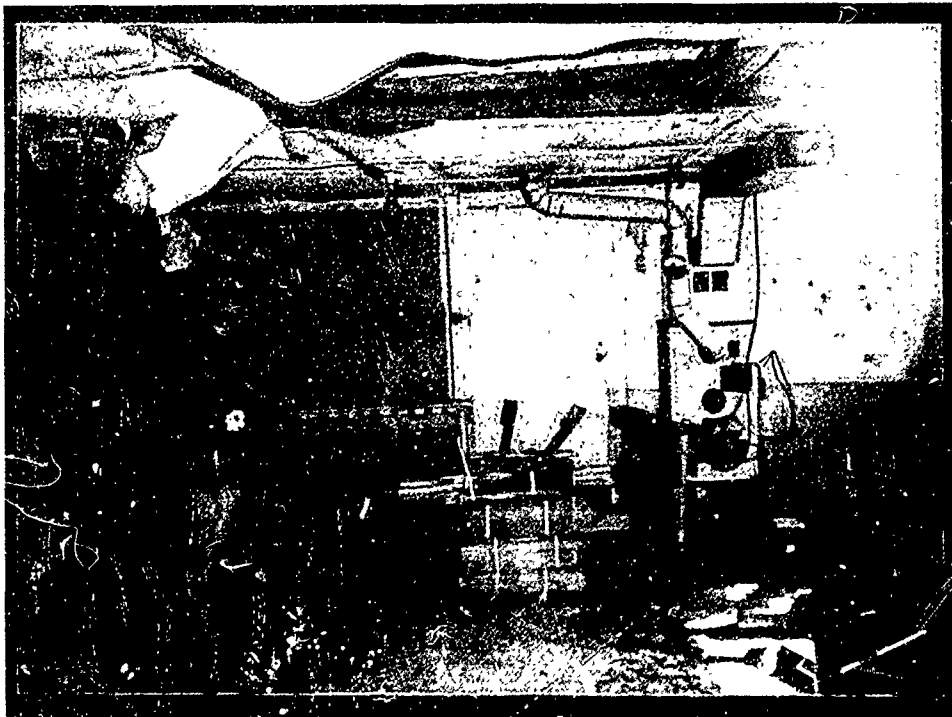
17. GENERAL CONDITIONS INSIDE
BARRACKS HALL - BUILDING S3005



18. GENERAL CONDITIONS INSIDE OFFICE -
BUILDING S3005



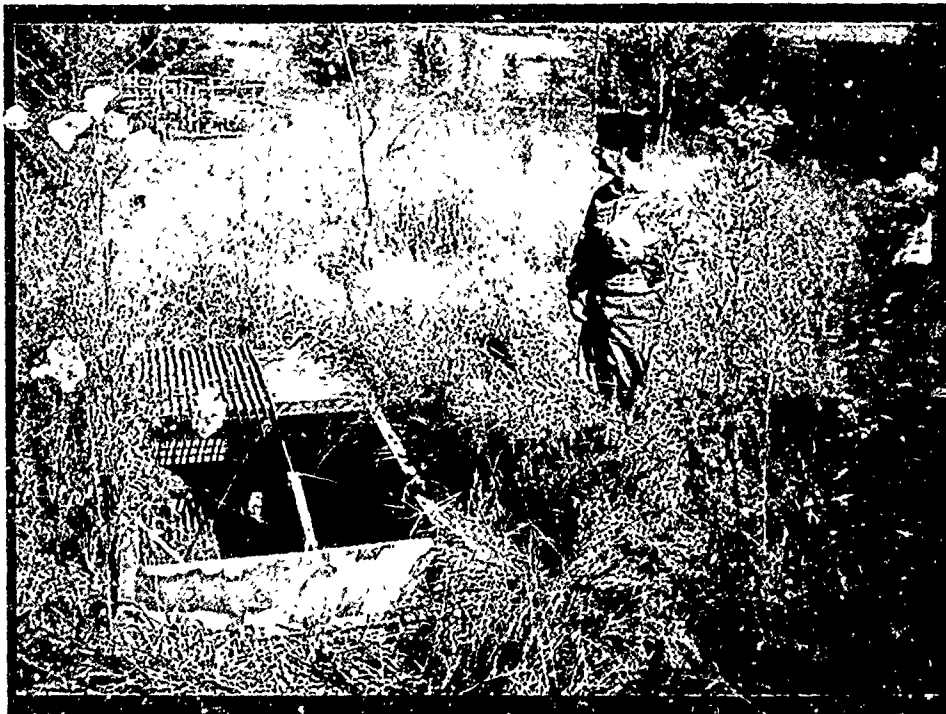
19. GENERAL CONDITIONS OUTSIDE OF INTERCONNECTING CORRIDOR, UNIDENTIFIED YELLOW BUILDING, AMMO STORAGE VAULT AND AMMO STORAGE SHED FOR SMALL ARMS RANGE



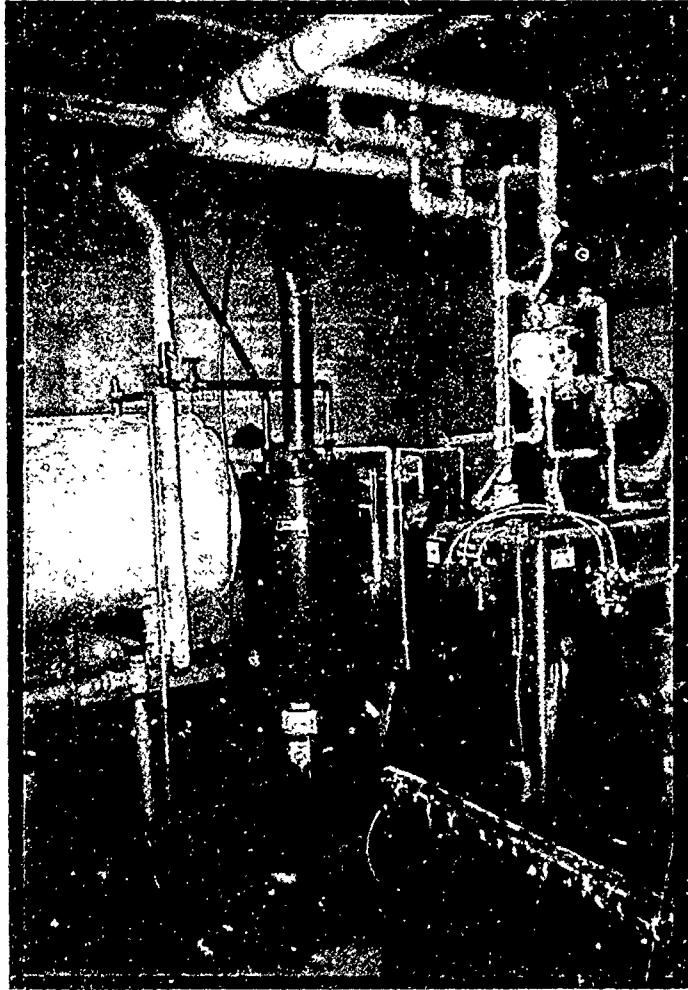
20. GENERAL CONDITIONS INSIDE AMMO STORAGE SHED



21. SEWAGE TREATMENT PLANT AREA



22. SEWAGE TREATMENT PLANT AREA



23. TYPICAL BOILER ROOM

Appendices



APPENDIX A
WARRANTY DEEDS
(as received)

RJL-WMG

mb

33-26-401-1

January 15, 1959

Honorable Wilber H. Drucker
Secretary of the Army
Washington 25, D. C.

My dear Mr. Secretary:

A re-examination has been made of the title data relating to 24.20 acres of land, more or less, Tracts Nos. A-100, A-100-2 and A-100E-1, 2 and 3, Kansas City Defense Area, Nike Battery 30 Project in Cass County, Missouri. This land and easement were conveyed to the United States of America under the provisions of existing legislation, by John W. Robertson and Sarah H. Robertson, also known as Sarah Robertson, his wife, under deed dated August 5, 1958, filed for record on August 22, 1958, and recorded among the land records of the county in Book 425 at page 17. Your reference is No. MEMO 601.1, and the file number of this Department is 33-26-401-1.

601.1 (KCD) Army
On A-100, A-100-2 & A-100E1, 2 & 3

The land and easement were described in the aforesaid deed, which recites a consideration of \$5,730.00.

The title insurance policy, No. US-NIKE-EAR-1, dated as of September 23, 1958, was prepared by the Title Insurance Corporation of St. Louis and is satisfactory.

The policy, recorded deed, and accompanying data disclose valid title to be vested in the United States of America, subject to:

1. Easements for public roads, railroads, pipe lines, rights of way and utilities, if any, not shown of record.
2. Taxes for the year 1958, for the payment of which provision has been made.

Your Department has advised that objections 1 will not interfere with the contemplated use of the land.

A100, A100-2, A100E1, A100E2, A100E3.

A-100 Nike Battery 30

The title insurance policy, deed and related papers are enclosed.

Sincerely yours,

Attorney General

Enclosures

WARRANTY DEED

THIS INDENTURE, made this 5th day of August, A. D.,
1958, between John W. Robertson and Sarah H. Robertson, also known as Sarah
Robertson, his wife, of Jackson County, State of Missouri,
of the first part, and the United States of America of the second part.

WITNESSETH, that said parties of the first part in consideration of
the sum of FIVE THOUSAND SEVEN HUNDRED THIRTY AND NO/100 DOLLARS (\$5,730.00),
the receipt whereof is hereby acknowledged, do by these presents, grant, bar-
gain, sell, and convey unto said party of the second part, and its assigns,
all the following described REAL ESTATE, situated in the County of Cass, State
of Missouri, to-wit:

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North,
Range 29 West of the Fifth Principal Meridian, Cass County, Missouri,
more particularly described as follows:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; ¹¹⁰⁰ 14.30
thence S 2°43'12" W along the east line of said NE $\frac{1}{4}$, 1337.43 feet; ^{ac.}
thence N 88°07' W, 817.23 feet to the point of beginning of the tract
of land herein described; thence continuing N 88°07' W, 130.00 feet;
thence S 1°53' W, 333.33 feet; thence N 88°07' W, 693.34 feet; thence
N 1°53' E, 809.33 feet; thence S 88°07' E, 823.34 feet; thence S 1°53'
W, 476.00 feet to the point of beginning; and

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46
North, Range 29 West of the Fifth Principal Meridian, Cass County,
Missouri, more particularly described as follows:

Beginning at a point on the east line of said NE $\frac{1}{4}$ of Section 6,
said point being S 2°43'12" W, 321.32 feet from the northeast corner
thereof; thence S 2°43'12" W along said east line of the NE $\frac{1}{4}$, 1016.11 ¹⁷⁰⁰ 5.22
feet; thence N 88°07' W, 216.57 feet; thence N 1°53' E, 1016.00 feet; ^{ac.}
thence S 88°07' E, 231.40 feet to the point of beginning, together with
all right, title, and interest of the parties of the first part in and
to any alleys, streets, ways, strips, or gores abutting or adjoining the
land here described, containing, in the aggregate, 19.52 acres, more or
less.

Together with a perpetual and assignable easement and right-of-
way to construct, maintain, repair, operate, patrol, replace and/or
remove an access roadway, power transmission lines, water pipeline,
and communications cable, and including the rights hereinafter de-
scribed in, upon, under, over, and across that certain tract of land
in Cass County, State of Missouri, together with the right to trim,
cut, fell, and remove therefrom all trees and underbrush and obstructions
and any other vegetation, structures or obstacles within the limits of
the right-of-way and for such distance beyond said limits and adjacent
thereto as is necessary to provide adequate clearance and to eliminate
interference with, or hazards to the structures or utilities placed or
constructed on, over, or under said land within the limits of said
easement, more particularly described as follows:

A100, A100-2, A100E1, A100E2, A100E3.

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, more particularly described as follows:

Beginning at a point on the east line of said NE $\frac{1}{4}$ of Section 6, said point being S 2 $^{\circ}$ 43' 12" W, 1337.43 feet from the northeast corner thereof; thence S 2 $^{\circ}$ 43' 12" W along said east line of the NE $\frac{1}{4}$, 80.01 feet; thence N 88 $^{\circ}$ 07' W, 946.06 feet; thence N 1 $^{\circ}$ 53' E, 80.00 feet; thence S 88 $^{\circ}$ 07' E, 947.23 feet to the point of beginning, containing 1.77 acres, more or less. A100E-1

Together with a perpetual and assignable easement and right-of-way to construct, maintain, repair, operate, patrol, replace and/or remove a power transmission lines and sewer pipelines, and including the rights hereinafter described in, upon, under, over, and across that certain tract of land in Cass County, State of Missouri, together with the right to trim, cut, fell, and remove therefrom all trees and underbrush and obstructions and any other vegetation, structures or obstacles within the limits of the right-of-way and for such distance beyond said limits and adjacent thereto as is necessary to provide adequate clearance and to eliminate interference with, or hazards to the structures or utilities placed or constructed on, over, or under said land within the limits of said easement, more particularly described as follows:

A strip of land 50 feet in width situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, lying 25 feet on each side of the following described center line:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; thence S 2 $^{\circ}$ 43' 12" W along the east line of said NE $\frac{1}{4}$, 321.32 feet; thence N 88 $^{\circ}$ 07' W, 231.40 feet; thence S 1 $^{\circ}$ 53' W, 565.69 feet to the point of beginning of said center line of the strip of land herein described; thence N 88 $^{\circ}$ 07' W, 600.66 feet to a point on the east line of the tract of land first hereinabove described, said point being S 1 $^{\circ}$ 53' W, 25.00 feet from the northeast corner thereof; being the end of said strip of land herein described, containing 0.69 acres, more or less. A100E-3

For the consideration recited above, the parties of the first part, their heirs, administrators, successors, and assigns, agree to abide by the following covenants which shall run with the land:

(c) That the Government and its assigns may grant, convey, transfer, or assign, or permit the use and occupation of, by grant of easement, lease, license, permit, or otherwise, all and any part of the rights granted herein, to any individual, partnership, corporation, or political body, for either commercial or non-commercial purposes.

(b) That the payment of consideration named herein by the Government shall constitute full fair value, and full compensation to the parties of the first part, for the rights granted herein, whether such rights shall be exercised by the Government or by any of its assignees, transferees, grantees, lessees, licensees, or permittees as described in the foregoing subsection (c) of this paragraph and the parties of the first part expressly release and relinquish any and all claims against any of the forenamed for further or future payment of consideration for the aforesaid rights, privileges, and uses granted herein.

Together with a line of sight easement over the following-described tract of land:

That portion of the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, which, with line of sight easement requirements, is more particularly described as follows, level datum being mean sea level:

Beginning at a point on the south line of said NE $\frac{1}{4}$ of Section 6, said point being N 87°57'38" W, 952.90 feet from the southeast corner of said NE $\frac{1}{4}$, with ground elevation of 995 feet, line of sight elevation of 1020 feet and clearance of approximately 25 feet above ground; thence N 87°57'38" W along said south line of the NE $\frac{1}{4}$, 142.78 feet to a point with ground elevation of 996 feet, line of sight elevation of 1020 feet and clearance of approximately 24 feet above ground; thence N 19°45' W, 730.90 feet to a point with ground elevation of 1012 feet, line of sight elevation of 1020 feet and clearance of approximately 8 feet above ground; thence continuing N 19°45' W, 463.43 feet to a point on the south line of the tract of land first hereinabove described, said point being S 88°07' E, 83.80 feet from the southwest corner thereof, with ground elevation of 1015 feet, line of sight elevation of 1024 feet and clearance of approximately 9 feet above ground; thence S 88°07' E along said south line of the tract of land first hereinabove described, 8.51 feet to a point with ground elevation of 1015 feet, line of sight elevation of 1024 feet and clearance of approximately 9 feet above ground; thence S 25°28'34" E, 461.52 feet to a point with ground elevation of 1011 feet, line of sight elevation of 1020 feet and clearance of approximately 9 feet above ground; thence continuing S 25°28'34" E, 788.00 feet to the point of beginning; also,

Beginning at said point on the south line of said NE $\frac{1}{4}$ of Section 6, said point being N 87°57'38" W, 952.90 feet from the southeast corner of said NE $\frac{1}{4}$, with ground elevation of 995 feet, line of sight elevation of 1019 feet and clearance of approximately 24 feet above ground; thence N 25°28'34" W, 180.00 feet to a point with ground elevation of 999 feet, line of sight elevation of 1020 feet and clearance of approximately 21 feet above ground; thence continuing N 25°28'34" W, 1069.52 feet to a point on said south line of the tract of land first hereinabove described, said point being S 88°07' E, 92.31 feet from the southwest corner thereof, with ground elevation of 1015 feet, line of sight elevation of 1024 feet and clearance of approximately 9 feet above ground; thence S 26°25' E, 1069.38 feet to a point with ground elevation of 999 feet, line of sight elevation of 1020 feet and clearance of approximately 21 feet above ground; thence continuing S 26°25' E, 191.09 feet to a point on the south line of said NE $\frac{1}{4}$ of Section 6, said point being S 87°57'38" E, 23.33 feet from the point of beginning, with ground elevation of 995 feet, line of sight elevation of 1018 feet and clearance of approximately 23 feet above ground; thence N 87°57'38" W along said south line of the NE $\frac{1}{4}$, 23.33 feet to the point of beginning, containing, in the aggregate, 2.22 acres, more or less.

The easement and rights hereby granted consist of the following rights over the above-described land:

(a) The continuing perpetual right to cut to ground level and remove trees, bushes, shrubs, or any other perennial growth or undergrowth infringing upon or extending into or above the line of sight clearance surface hereinabove described.

(b) The right to remove, raze, or destroy those portions of buildings, other structures, and land infringing upon or extending into or above the line of sight clearance surface hereinabove described, and

(c) The right to prohibit the future construction of buildings or other structures infringing upon or extending into or above the line of sight clearance surface hereinabove described.

The parties of the first part covenant and agree to pay all taxes and assessments on the above-described property promptly when due and to warrant and defend the title to said easements and rights against the lawful claims of all persons whatsoever for the full term of this easement and rights.

As incident to the acquisition of the above-listed easements the right of ingress and egress will be acquired.

Subject to existing easements for public roads and highways, for public utilities, for railroads and pipelines.

TO HAVE AND TO HOLD the premises aforesaid with all and singular the rights, privileges, appurtenances, and immunities thereto belonging or in anywise appertaining unto the said party of the second part and unto its assigns forever; the said parties of the first part hereby covenanting that they are lawfully seized of an indefeasible estate in fee of the premises herein conveyed; that they have good right to convey same; that the said premises are free and clear from any incumbrance done or suffered by them or those under whom they claim; and that they will warrant and defend the title to the said premises unto the said party of the second part and unto its assigns forever, against the lawful claims and demands of all persons whomsoever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year above written.

A TRUE COPY
Albert L. Detmer
 ALBERT L. DETMER
 Closing Attorney

L. S.
 Can.

/s/ John W. Robertson (SEAL)
 JOHN W. ROBERTSON

/s/ Sarah H. Robertson (SEAL)
 SARAH H. ROBERTSON

STATE OF MISSOURI)
 COUNTY OF JACKSON) SS.

On this 5th day of August, A. D., 1958, before me,
 Ernest S. Phillips, a Notary Public, personally
 appeared John W. Robertson and Sarah H. Robertson, also known as Sarah
 Robertson, his wife, to me known to be the persons described in and who exe-
 cuted the foregoing instrument, and acknowledged that they executed the same
 as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official
 seal at my office in _____, the day and year
 last above written.

My commission expires Feb. 8-1962 /s/ Ernest S. Phillips
 Notary Public

COMPARED
INDEXED

95080

STATE OF MISSOURI)
COUNTY OF CASS)

RECORDER'S OFFICE

I hereby certify that this instrument of writing was filed for record on this 22 day of August 1958 at 11 o'clock 55 Minutes A.M., and recorded in Book 425 Page 17 given under my hand and official seal.

W. D. Russell Recorder
By /s/ Geneva Van Camp

STATE OF MISSOURI)
COUNTY OF CASS)

SS. IN THE RECORDER'S OFFICE

I. W. D. Russell, Recorder of said County, do hereby certify that the within instrument of writing was, at 11 o'clock 55 minutes A. M., on the 22 day of August, A. D. 1958, duly filed for record in my office, and is recorded in the records of this office in book 425, at page 17.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at Harrisonville, Missouri, this 22 day of August, A. D. 1958.

W. D. Russell Recorder

By /s/ Geneva Van Camp Deputy

(NAME) _____

(NAME) _____

[Handwritten signature]
RECORDER

() _____
() _____

On this 22 day of August, 1958, before me, a Notary Public, personally appeared _____
and acknowledged to me that he executed the foregoing instrument and acknowledged that he executed the same for the purposes and consideration therein expressed.

Notary Public

HSR-WNG
33-26-401-13

RE-A
RE-AP
Job

July 20, 1964

*Received
J. Edgar Hoover
2-1-1964*

Honorable Stephen Ailes
Secretary of the Army
Washington 25, D. C.

My dear Mr. Secretary:

Re: File No. 33-26-401-13
Tract No. A-100-3; A-100E-4 and A-100E-5
County Cass State Missouri

An examination has been made of the title evidence and related papers pertaining to certain land in which interests have been acquired under authority of existing legislation. The land and estate acquired by the United States are more particularly described in the enclosed deed.

The title evidence and accompanying data disclose valid title to be vested in the United States of America subject to the rights and easements noted in Schedule A attached hereto which your Department has advised will not interfere with the proposed use of the land.

The title evidence and related papers are enclosed.

Sincerely yours,

Attorney General

A-100-3 and A-100E-4 and E-5

SCHEDULE A

23-26-401-13

Tracts Nos. A-100-3; A-100E-4 and A-100E-5

Project: Kansas City Defense Area NIKE Battery 30, located in
Case County, Missouri

Acreage: 0.34 of an acre in fee and clearance and flowage
easements over 3.67 acres

Total consideration: \$500.00

The deed to the United States of America was
executed by George McCune Robertson and Grace J. Robertson,
his wife, on December 19, 1963, filed for record on
January 2, 1964, and recorded in Book 473 at page 51.

The certificate of title No. N-1 was prepared as
of January 2, 1964, by Title Insurance Corporation of St. Louis.

The title is subject to the following:

1. Existing easements for public roads and
highways, rights of way for railroads,
pipelines and public utilities.

Kansas City Defense Area
NIKE Battery 30
Tracts Nos. A-100-3,
A-100E-4, and A-100E-5

MISSOURI WARRANTY DEED

THIS INDENTURE, made this 19 day of December, A. D., 1963,

by and between George McCune Robertson, also known as George M. Robertson,
and Grace J. Robertson, his wife, of the County of Jackson, State
of Missouri, parties of the first part, and the United States of
America, party of the second part.

WITNESSETH: That the said parties of the first part in consideration
of the sum of FIVE HUNDRED AND NO/100 DOLLARS (\$500.00), to them paid
by said party of the second part (the receipt of which is hereby acknowledged),
do by these presents, grant, bargain, sell, convey, and confirm unto the said
party of the second part and its assigns, the following-described lots,
tracts, or parcels of land lying, being, and situate in the County of Cass,
State of Missouri, to-wit:

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46
North, Range 29 West of the Fifth Principal Meridian, Cass County,
Missouri, more particularly described as follows:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; thence
S 2°43'12" $\frac{1}{2}$ along the east line of said NE $\frac{1}{4}$, 1337.43 feet; thence
N 88°07' W, 247.23 feet to the easterly boundary of that 14.30-acre
tract owned by the United States of America; thence S 1°53' W along the
easterly boundary of said 14.30-acre tract, 333.33 feet to the south-
east corner thereof; thence N 88°07' W along the southerly boundary of
said 14.30-acre tract, 693.34 feet to the southwest corner thereof,
said southwest corner being the point of beginning of the tract of land
herein described; thence continuing N 88°07' W 70 feet; thence N 1°53'
E, 160 feet; thence S 88°07' E, 50 feet; thence N 1°53' E, 180 feet;
thence S 88°07' E, 20 feet to the west boundary of said 14.30-acre tract;
thence S 1°53' W along the west boundary of said 14.30-acre tract, 340
feet to the point of beginning, together with all right, title and in-
terest of the parties of the first part in and to any alleys, roads,
streets, ways, strips, gores or railroad rights-of-way abutting or ad-
joining said land and in any means of ingress or egress appurtenant
thereto, containing 0.34 acres, more or less.

RS
Cancelled

A-100-3

Together with a perpetual and assignable line-of-sight easement
consisting of certain rights in the following-described tract of land,
lying immediately below the line-of-sight clearance surface for the con-
tinuing perpetual right to cut to ground level and remove trees, bushes,
shrubs, or any other perennial growth or undergrowth infringing upon
or extending into or above the line-of-sight clearance surface; the
right to remove, raze, or destroy those portions of buildings, other
structures, and land infringing upon or extending into or above the
line-of-sight clearance surface; the right to prohibit the future con-
struction of buildings or other structures infringing upon or extending
into or above the line-of-sight clearance surface; and the right of
ingress to and egress from the land for the purpose of exercising the

A-10

Kansas City Defense Area
NIKE Battery 30
Tracts Nos. A-100-3,
A-100E-4, and A-100E-5

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, which, with line-of-sight easement requirements, is more particularly described as follows, level datum being mean sea level;

Beginning at a point on the south line of said NE $\frac{1}{4}$ of Section 6, said point being N 87°57'38" W, 745.12 feet from the southeast corner of said NE $\frac{1}{4}$, with a ground elevation of 987 feet, line-of-sight elevation of 1021 feet, with a clearance of approximately 34 feet above ground; thence N 87°57'38" W along the south line of said NE $\frac{1}{4}$, 154.61 feet to a point with a ground elevation of 993 feet, line-of-sight elevation of 1022 feet, with a clearance of approximately 29 feet above ground; thence N 17°05'43" W, 1173.7 feet to a point on the south boundary of that 14.30-acre tract owned by the United States of America, said point being N 88°07' W, 355.34 feet from the southeast corner of said 14.30-acre tract, with a ground elevation of 1009 feet, line-of-sight elevation of 1029 feet, with a clearance of approximately 20 feet above ground; thence S 88°07' E along the south boundary of said 14.30-acre tract, 11 feet to a point with a ground elevation of 1009 feet, line-of-sight elevation of 1029 feet, with a clearance of approximately 20 feet above ground; thence S 23°26'12" E, 1228.32 feet to the point of beginning, containing 2.11 acres, more or less.

A-100E-4

Together with the perpetual right, power, privilege, and easement permanently to overflow, flood, and submerge the following-described tract of land, in connection with the operation and maintenance of the Kansas City Defense Area NIKE Battery 30 Project, as authorized by the Act of Congress approved 10 August 1949 (Public Law 86-149), together with all right, title, and interest in and to the timber, structures, and improvements situate on the land, and the continuing right to clear and remove any brush, debris, and natural obstructions which, in the opinion of the representative of the United States in charge, may be detrimental to the project; provided that no structures for human habitation shall be constructed or maintained on the land, and provided further that no other structures shall be constructed or maintained on the land except as may be approved in writing by said representative of the United States in charge of the project; RESERVING, HOWEVER, to the parties of the first part, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with or abridging the rights and easement herein described.

A strip of land 50 feet in width situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, lying 25 feet on each side of the following-described center line:

Beginning at the point of intersection of a ditch and the north boundary of that 14.30-acre tract owned by the United States of America, said point being S 88°07' E, 248 feet from the northwest corner of said 14.30-acre tract; thence in a northerly direction along the center of said ditch, approximately 135 feet; thence in an easterly direction along the center of said ditch, approximately 1150 feet to the west boundary of that 5.22-acre tract owned by the United States of America;

Also, a strip of land 30 feet in width situated in said NE $\frac{1}{4}$ of Section 6, lying 15 feet on each side of a center line described as beginning at the point of intersection of a ditch and the north boundary of said 14.30-acre tract owned by the United States of America, said point being S 88°07' E, 628 feet from the northwest corner of said

Kansas City Defense Area
NIKE Battery 30
Tracts Nos. A-100-3,
A-100E-4, and A-100E-5

A-100E-5

14.30-acre tract; thence in a northeasterly direction along the center of said ditch, approximately 125 feet to the point of intersection with the above-described strip; containing, in the aggregate, 1.56 Acres, more or less.

Subject to existing easements for public roads and highways, for public utilities, for railroads and pipelines.

TO HAVE AND TO HOLD the premises aforesaid with all and singular the rights, privileges, appurtenances, and immunities thereto belonging or in anywise appertaining unto the said party of the second part and unto its assigns forever; the said parties of the first part hereby covenanting that they are lawfully seized of an indefeasible estate in fee of the premises herein conveyed; that they have good right to convey same; that the said premises are free and clear from any incumbrance done or suffered by them or those under whom they claim; and that they will warrant and defend the title to the said premises unto the said party of the second part and unto its assigns forever, against the lawful claims and demands of all persons whomsoever.

IN WITNESS WHEREOF, the said parties of the first part have hereunder set their hands and seals the day and year above written.

/s/ George McCune Robertson (SEAL)
GEORGE McCUNE ROBERTSON

/s/ Grace J. Robertson (SEAL)
GRACE J. ROBERTSON

STATE OF Missouri)
COUNTY OF Jackson) SS.

On this 19th day of December, A. D., 19 63, before me,

Mary Curd, a Notary Public, personally appeared George McCune Robertson, also known as George M. Robertson, and Grace J. Robertson, his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at my office in Buckner, Missouri, the day and year last above written.

My commission expires 2/26/66
(SEAL)

/s/ Mary Curd
Notary Public

B. TRUE COPY
Francis H. Moore
Francis H. Moore
General Attorney
Buckner

14399

COMPARED
INDEXED

STATE OF MISSOURI)
COUNTY OF CASS) Recorder's Office

I hereby certify that this instrument of writing was filed for record on this 2 day of Jan., 1964 at 3:00'clock minutes P.M. and recorded in book 473 page 51 given under my hand and official seal.

/s/ Mason Fall Recorder

/s/ Patty Hubble Deputy Recorder
(SEAL)

(The following text is mirrored and appears to be bleed-through from the reverse side of the page)
TO HAVE AND TO HOLD the premises described with all and singular the rights and appurtenances thereto in anywise by any means whatsoever unto the said party of the second part and unto the heirs, assigns and lawful successors of the said party of the second part unto the full and complete effect of the premises hereinafter expressed; that they have good right to convey and to grant the same unto the said party of the first part and to bind the same by their oaths and solemn promises and to be bound by them in all things touching the same as if they were their own and lawful property; and that they will warrant and defend the title to the said premises unto the said party of the second part and unto the heirs, assigns and lawful successors of the said party of the second part forever, against the lawful claims and demands of all persons whatsoever.

(The following text is mirrored and appears to be bleed-through from the reverse side of the page)
IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year above written.

/s/ George McGinn Robertson
(SEAL) GEORGE MCGINN ROBERTSON

/s/ Grace J. Robertson
(SEAL) GRACE J. ROBERTSON

STATE OF Missouri
COUNTY OF Jackson

On this 12th day of December, A. D., 19 63, before me, _____ a Notary Public, personally appeared _____ George McGinn Robertson, also known as George H. Robertson, and Grace J. Robertson, his wife, as he known to me the Notary described in and who executed the foregoing instrument, and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and mixed my official seal at my office in Jackson, Missouri, the day and year above written.

/s/ Mary Gurd
(SEAL) MARY GURD

2 TRUE COPY
Notary Public
Mary Gurd



APPENDIX B

**PRELIMINARY REPORT OF EXCESS (ROE)
DATED 5 APRIL 1989**

(Note: Does not include all tabs of the report. Complete report can be obtained from Department of Engineering and Housing, Ft. Leavenworth, KS.)

(as received)



DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
FORT MONROE, VIRGINIA 23651-5000

REPLY TO
ATTENTION OF

ATEN-CI (405-90)

03 MAY 1989

MEMORANDUM FOR HQDA (DAEN-ZCI-A), WASH DC 20310-2604

SUBJECT: Preliminary Report of Excess (ROE), NIKE Battery KC-30 Site, Installation No. 29630, Pleasant Hill, MO

1. Reference memorandum, HQDA, DAEN-ZCI-A/CERE-MM, 3 Mar 89, subject: Base Closure, Real Estate Coordination.
2. This memorandum forwards subject ROE (encl 1) for approval and continuance of action pursuant to reference.
3. NIKE Battery KC-30 Site contains 19.8 acres of fee owned land and 4.02 acres of easements. The site is improved with a number of facilities. A list of these facilities is provided as part of TAB F of ROE. The site was used by the Missouri National Guard (MONG) between January 1969 and February 1988 at which time it became excess to MONG needs. The property was reported excess by Fort Leavenworth in April 1988; however, the ROE was returned by this headquarters to the installation pending an environmental study by USATHMA. To date, this study has not been performed.
4. An asbestos survey of the site has been conducted by the State of Missouri as supported by TAB H of the ROE. However, as indicated above, additional environmental documentation must be prepared in accordance with AR 200-2 and processed pursuant to DA guidance as it pertains to the Base Closure action.
5. The property has generated interest from the Lone Jack School District, Lone Jack, MO and the Swope Park Community Church, Peculiar, MO. Congressman Ike Shelton has inquired about the site on behalf of the Lone Jack School District (see paragraph 9 of the report).
6. The Department of Housing and Urban Development Checklist required for screening the property in support of the homeless is at TAB O of the ROE.

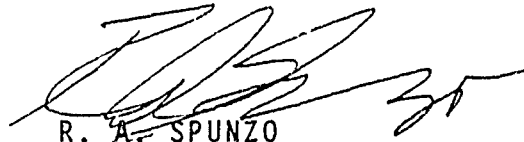
ATEN-CI (405-90)

SUBJECT: Preliminary Report of Excess (ROE), NIKE Battery KC-30
Site, Installation No. 29630, Pleasant Hill, MO

7. Headquarters TRADOC point of contact is Mr. Lennie
Blanchard, AV 680-2569.

FOR THE COMMANDER:

Encl



R. A. SPUNZO
Assistant Deputy Chief of Staff,
Engineer

CF:

Cdr, USA CA Cen & Ft Leavenworth, ATTN: ATZL-GEH-R (wo/encl)

HQ, USACE, ATTN: CERE-MM (w/encl)

Cdr, USAED, Missouri River, ATTN: CEMRD-RE-M (w/encl)

Cdr, USAED, Kansas City, ATTN: CEMRK-RE-M (w/encl)

PRELIMINARY
REPORT OF EXCESS
NIKE BATTERY KC-30 SITE
(INSTALLATION NO. 29630)
PLEASANT HILL, MO

PREPARED BY:
FORT LEAVENWORTH, KS
5 APRIL 1989



DEPARTMENT OF THE ARMY
U.S. ARMY COMBINED ARMS CENTER AND FORT LEAVENWORTH
FORT LEAVENWORTH, KANSAS 66027-5000



ATZL-GEH-R (420-17h)

5 APR 1989

MEMORANDUM FOR Commander, US Army Training and Doctrine Command,
ATTN: ATEN-CI, Fort Monroe, VA 23651-5000

SUBJECT: Recommendation to Excess Property

1. Recommend excessing of the real estate known as NIKE Battery KC-30 Site (hence identified as SITE), Installation #29630, Pleasant Hill, Missouri; License No. DACA41-3-87-504. This land is no longer needed to support current missions, authorized future missions, or mobilization.

2. Background:

a. The SITE, acquired in 1958, was used as a NIKE missile battery installation. When the NIKE-Hercules mission was discontinued, the SITE was inactivated and declared excess by the US Army on 31 Jan 69 (Tab A). From 2 Jan 69 to Feb 88, the SITE was under license to the Adjutant General, Missouri National Guard, 1717 Industrial Drive, Jefferson City, MO 65101-1468.

b. The Missouri National Guard (MONG) vacated in Feb 88. Their intent to vacate was communicated to the Kansas City District, Corps of Engineers (COE) through a 24 Nov 87 letter (Tab B).

c. On 28 Dec 87, KCD, COE requested that the support installation, Ft. Leavenworth, initiate a report recommending excess of the SITE (Tab C).

d. On 31 Dec 87, the KCD, COE requested that the MONG coordinate the turnover of physical control of the SITE with the DEH, Ft. Leavenworth, KS (Tab D).

e. In Apr 88, we forwarded a recommendation to excess the SITE. Our Request for Excess was returned until an environmental study could be conducted. In Mar 89, we received telephonic notification from USATHMA that they had been tasked with performing preliminary environmental assessments on all bases affected by the base closure/realignment action. They also indicated they are to receive special funding for this purpose. The NIKE Site preliminary assessment is tentatively scheduled for FY 89.



ATZL-GEH-R

SUBJECT: Recommendation to Excess Property

f. In Mar 89, we received notification that the Department of Housing and Urban Development (HUD) had identified nine facilities on the SITE as suitable facilities to assist the homeless.

g. In Mar 89, we received a memorandum from Department of the Army, US Army Corps of Engineers, that indicated a preliminary Report of Excess should be prepared by all installations affected by base realignments and closures. The memorandum states that "no new environmental documentation is required at this time and environmental documentation could be limited to information readily available at the installation". Therefore, this recommendation to excess property has been prepared and forwarded without complete environmental documentation.

3. SITE Description:

a. The installation, consisting of 23.82 acres of land, is located 35 miles southeast of Kansas City, MO, in Cass County, MO, and is 6 miles east of Pleasant Hill, MO. (See Tab E, Nike Vicinity Map, Drawing Number 15-06-02, Sheet 1).

b. A history of the acquisition and disposal of the land and easements which comprise Installation #29630 is at Tab F. The United States Government interest in the 23.82 acres of land is:

Fee owned land	19.8 acres
Government easements land	<u>4.02 acres</u>
TOTAL	23.82 acres

c. The facilities include: Tract #A-100 (containing two barracks buildings, a mess hall, administration building, generator building, corridor building and various concrete and asphalt parking areas); Tract #A-100-2 (with water tank and pumping station), Tract #100-3 (tracking and radar tower) and Tracts #A-100E-1, #A-100-E-3, and #A-100E-5 (consisting of road, water line, and drainage easements). A motor vehicle maintenance building, ammunition storage vault and small arms range with ammunition storage shed, built by the State of Missouri, are also included.

d. The legal description of the SITE is at Tab G.

ATZ1-GEH-R

SUBJECT: Recommendation to Excess Property

4. Environmental Concerns:

a. In 1986, the SITE was included in a statewide asbestos study conducted by the State of Missouri (Tab H). Asbestos was found in several of the buildings (please see paper clipped pages of study). In addition, the underground water distribution system is made up partly of 4" to 6" transite pipe which is composed of asbestos fibers and portland cement molded under hydraulic pressure. The hot water tanks and heating and hot water piping in all of the buildings are insulated with asbestos products. It is unknown if the power transformers contain PCB.

b. There is the possibility of land contamination, as well, since the SITE was used as a NIKE missile battery and the State of Missouri built a small arms range complete with ammunition storage shed and ammunition storage vault. We requested the US Army Toxic and Hazardous Materials Agency (USATHMA) to conduct an appropriate survey (Tab I). In Mar 89, we received telephonic notification from USATHMA that they had been tasked with performing preliminary environmental assessments on all bases affected by the base closure/realignment action. The NIKE Site is tentatively scheduled for an environmental survey this fiscal year, if USATHMA receives special funding for this purpose. We have requested confirmation of the USATHMA tasking and funding, but it has not been received.

5. Care and Custody: On 21 Jan 88, a team from DEH, Fort Leavenworth, inspected the SITE. They were accompanied by representatives of the MONG. The following responsibilities were identified and agreed upon by both parties:

a. Security. The MONG installed an alarm system at the SITE. The lateral transfer of the system was made from the MONG to DEH (Tab J). In addition, we have a contract in place for security service to include telephone line to monitor the alarm system.

b. Maintenance and Cleanliness. The MONG restored the premises to a condition clean and free of debris and removed all combustible fuels, oils, lubricants, and other chemical materials.

c. Utilities. On 1 Feb 88, DEH made arrangements to continue electrical service to the SITE primarily for the alarm system.

ATZL-GEN-R

SUBJECT: Recommendation to Excess Property

6. No cemetery, government or private, is located within the SITE. No public domain land is involved in this action.

7. The United States Government does not anticipate any impact on the local civilian population. The facility is in an agricultural area. The five full-time civilians, as well as the MONG units who utilized the SITE, have been transferred to a new armory in Harrisonville, MO.

8. There is no proposed disposal of improvements on the SITE. The SITE contains two barracks, a mess hall, an administrative building, a generator building, a corridor building, concrete and asphalt parking areas, a water tank and pumping station, a tracking and radio tower, a vehicle maintenance building, ammunition storage shed, a road, water line, and drainage easements.

9. Congressional Interests. Congressman Ike Skelton, 4th Congressional District, Missouri, has expressed an interest in plans for the SITE. Chronological events concerning the Congressional interest follow:

a. In Sep 87, Missouri State Senator Harry Wiggins, 18th District, contacted Mr. Skelton on behalf of the Lone Jack School District, Lone Jack, MO. The school district wishes to acquire the SITE (Tab K).

b. A Congressional inquiry by Congressman Skelton was initiated; in Nov 87, an initial response was provided by the Missouri River Division, Corps of Engineers (Mr. Badders, Tab L). Mr. Badders' reply states "the matter (Lone Jack School District acquiring the SITE) should be coordinated with the using Command the National Guard Bureau."

c. In Dec 87, Mr. Badders was subsequently contacted telephonically by Mr. Art Graham, Army National Guard Bureau. Mr. Graham did not concur with Mr. Badders' recommendation. Moreover, Mr. Graham suggested that the Commander, Ft. Leavenworth, was responsible for the excessing action (Tab M).

d. The Kansas City District, Corps of Engineers, also responded to the Congressional Inquiry in Dec 87. They explained that after the SITE is declared excess by the Department of the

AT71-GFH-R

SUBJECT: Recommendation to Excess Property

Army, the General Services Administration will ultimately release the SITF for sale to state and local government agencies. At that time, the Lone Jack School District could submit a bid on the SITF (Tab N).

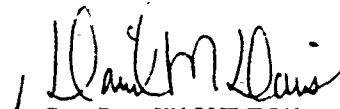
10. Additional Interest. In Mar 89, Mrs. Louise Herod, representing Swope Park Community Church, Route 3, Peculiar, MO 64078, phone (816) 758-5744, telephonically expressed an interest in the property for use as a church camp. She indicated the church might be willing (depending on the cost involved) to assume responsibility for the property and perform the necessary steps to remove any toxic and hazardous materials. She was advised that if the SITE was released for sale, the Swope Park Community Church could submit a bid.

11. To complete this preliminary Report of Excess packet, the completed Department of Housing and Urban Development (HUD) checklist is at Tab O.

12. Please contact Ms. Sherry Schwegler, (913) 684-5648 or AV 552-5648, if additional information is required.

FOR THE COMMANDER:

Encl


C. D. KNOWLTON
LTC, EN
Dir, Engr & Hsg

LOG/IM-RPB 11758 (28 Oct 68) 3rd Ind
SUBJECT: Declaration of Excess for Installation No 26630, NIKE Kansas
City 30, Pleasant Hill, Missouri

DA, ODCSLOG, Washington, D. C. 20310 31 JAN 1969

TO Chief of Engineers, Washington, D. C. 20315

Report of excess for NIKE Hercules Site KC-30, Pleasant Hill, Missouri is approved. Request necessary action be taken to dispose of the excess real property pursuant to applicable laws and regulations.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

1 Incl
nc

WILLIAM M. LOCKWOOD
Chief, Operations
Management Division

CF:
CGUSCONARC
CG, Fifth US Army
CG, Ft. Leavenworth
CG, ARADCOM

John Ashcroft
Governor

Charles M. Kiefner
Major General, MOARNG
The Adjutant General

DEPARTMENT OF PUBLIC SAFETY

HEADQUARTERS MISSOURI NATIONAL GUARD

Office of the Adjutant General

1717 Industrial Drive

Jefferson City, Missouri 65101-1466

Phone 314 - 751-9500



REPLY TO
ATTN OF

Facilities

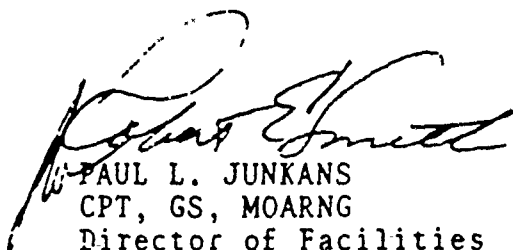
24 November 1987

MEMORANDUM FOR: Department of the Army, Kansas City District,
Corps of Engineers, ATTN; CEMRK-RE-MR (Mr. E. Bahl), 700
Federal Building, Kansas City, MO 64106-2896

SUBJECT: Nike Battery KC-30 Site, Installation Number 29630,
Pleasant Hill, Missouri; License No. DACA41-3-87-504

1. Please be advised that the Missouri National Guard has constructed a new armory at Harrisonville, Missouri and will vacate the above site during the month of February 1988.
2. We request that your office take the necessary steps to cancel this license effective 1 March 1988.
3. Please advise us if we are required to take any additional action.

FOR THE ADJUTANT GENERAL:


PAUL L. JUNKANS
CPT, GS, MOARNG
Director of Facilities

B-10



Tah "A"



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF

CEMRK-RE-MR (405-90a)

28 December 1987

MEMORANDUM FOR: Commander, Combined Arms Center and Fort
Leavenworth, ATTN: ATZL-GEH-R, Fort Leavenworth, Kansas 66027-5020

SUBJECT: NIKE Battery KC-30 Site, Installation No. 29630,
Pleasant Hill, Missouri; License No. DACA41-3-87-504

1. Enclosed is Missouri National Guard (MONG) letter dated
24 Nov 87, SAB.
2. As indicated in referenced letter, the MONG has requested
termination of License No. DACA41-3-87-504, effective 1 Mar 88.
Please take appropriate action to initiate a report recommending
excess of the subject facility, as prescribed by AR 405-90. In
addition, please make arrangements to assume the protection and
maintenance of the site after the MONG vacates the premises, in
order to preclude potential vandalism and to preserve real estate
values pending final disposition of the property.

FOR THE COMMANDER:

Janie C. Cavitt
JANIE C. CAVITT
Acting Chief
Real Estate Division

Encl

John Ashcroft
Governor

Charles M. Kiefner
Major General, MOARNG
The Adjutant General

DEPARTMENT OF PUBLIC SAFETY

HEADQUARTERS MISSOURI NATIONAL GUARD

Office of the Adjutant General

1717 Industrial Drive

Jefferson City, Missouri 65101-1468

Phone 314 - 751-9500



REPLY TO
ATTN OF

Facilities

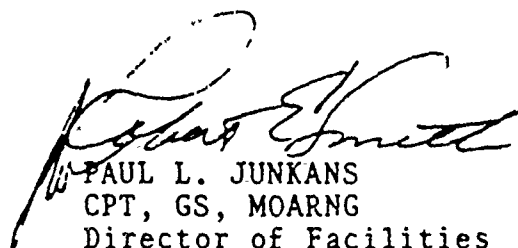
24 November 1987

MEMORANDUM FOR: Department of the Army, Kansas City District,
Corps of Engineers, ATTN; CEMRK-RE-MR (Mr. E. Bahl), 700
Federal Building, Kansas City, MO 64106-2896

SUBJECT: Nike Battery KC-30 Site, Installation Number 29630,
Pleasant Hill, Missouri; License No. DACA41-3-87-504

1. Please be advised that the Missouri National Guard has constructed a new armory at Harrisonville, Missouri and will vacate the above site during the month of February 1988.
2. We request that your office take the necessary steps to cancel this license effective 1 March 1988.
3. Please advise us if we are required to take any additional action.

FOR THE ADJUTANT GENERAL:


PAUL L. JUNKANS
CPT, GS, MOARNG
Director of Facilities

B-12



Tab C.

Dave A



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

Sullivan/jh/3544

REPLY TO
ATTENTION OF

CEMRK-RE-MR (405-90a)

31 December 1987

MEMORANDUM FOR: The Adjutant General, Missouri National Guard,
ATTN: FAC, 1717 Industrial Drive, Jefferson City, Missouri
65101-1468

SUBJECT: NIKE Battery KC-30 Site, Installation No. 29630,
Pleasant Hill, Missouri; License No. DACA41-3-87-504

1. Receipt is acknowledged of your letter dated 24 Nov 87. SAB, requesting termination of License No. DACA41-3-87-504, effective 1 Mar 88.
2. Prior to the Missouri National Guard (MONG) vacating the licensed premises, you are requested to coordinate the following actions with Mr. Dave Anaya, Directorate of Engineering and Housing, Fort Leavenworth, Kansas, telephone (913) 684-5648/49:
 - a. Transmittal of building keys, record drawings, and pertinent documentation pertaining to the subject facility from the MONG to Fort Leavenworth.
 - b. Restoration of premises to a condition which is clean and free of debris.
 - c. Winterization of those buildings provided with water utility service.
 - d. Transfer of the necessary utility services required to maintain and protect the property.
3. Your cooperation in this matter is appreciated.

FOR THE COMMANDER:

CF:
Cdr, CAC & Ft. Leavenworth,
ATTN: ATZL-GEH-R

JANIE C. CAVITT
Acting Chief
Real Estate Division

TAB "D"

LEGAL DESCRIPTION

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, more particularly described as follows:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; thence S 2°43'12" W along the east line of said NE $\frac{1}{4}$, 1337.43 feet; thence N 88°07' W, 817.23 feet to the point of beginning of the tract of land herein described; thence continuing N 88°07' W, 130.00 feet; thence S 1°53' W, 333.33 feet; thence N 88°07' W, 693.34 feet; thence N 1°53' E, 809.33 feet; thence S 88°07' E, 823.34 feet; thence S 1°53' W, 476.00 feet to the point of beginning: and

A-100

14.30 AC.

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, more particularly described as follows:

Beginning at a point on the east line of said NE $\frac{1}{4}$ of Section 6, said point being S 2°43'12" W, 321.32 feet from the northeast corner thereof; thence S 2°43'12" W along said east line of the NE $\frac{1}{4}$, 1016.11 feet; thence N 88°07' W, 216.57 feet; thence N 1°53' E, 1016.00 feet; thence S 88°07' E, 231.40 feet to the point of beginning, together with all right, title, and interest of the parties of the first part in and to any alleys, streets, ways, strips, or gores abutting or adjoining the land here described, containing, in the aggregate, 19.52 acres, more or less.

A-100-2

5.22 AC.

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, more particularly described as follows:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; thence S 2°43'12" W along the east line of said NE $\frac{1}{4}$, 1337.43 feet; thence N 88°07' W, 947.23 feet to the easterly boundary of that 14.30-acre tract owned by the United States of America; thence S 1°53' W along the easterly boundary of said 14.30-acre tract, 333.33 feet to the southeast corner thereof; thence N 88°07' W along the southerly boundary of said 14.30-acre tract, 693.34 feet to the southwest corner thereof, said southwest corner being the point of beginning of the tract of land herein described; thence continuing N 88°07' W 70 feet; thence N 1°53' E, 16. feet; thence S 88°07' E, 50 feet; thence N 1°53' E, 180 feet; thence S 88°07' E, 20 feet to the west boundary of said 14.30-acre tract; thence S 1°53' W along the west boundary of said 14.30-acre tract, 340 feet to the point of beginning, together with all right, title and interest of the parties of the first part in and to any alleys, roads, streets, ways, strips, gores or railroad rights-of-way abutting or adjoining said land and in any means of ingress or egress appurtenant thereto, containing 0.34 acres, more or less.

A-100-3

A tract of land situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, more particularly described as follows:

Beginning at a point on the east line of said NE $\frac{1}{4}$ of Section 6, said point being S 2 $^{\circ}$ 43'12" W, 1337.43 feet from the northeast corner thereof; thence S 2 $^{\circ}$ 43'12" W along said east line of the NE $\frac{1}{4}$, 80.01 feet; thence N 88 $^{\circ}$ 07' W, 946.06 feet; thence N 1 $^{\circ}$ 53' E, 80.00 feet; thence S 88 $^{\circ}$ 07' E, 947.23 feet to the point of beginning, containing 1.77 acres, more or less.

A strip of land 50 feet in width situated in the NE $\frac{1}{4}$ of Section 6, Township 46 North, Range 29 West of the Fifth Principal Meridian, Cass County, Missouri, lying 25 feet on each side of the following described center line:

Commencing at the northeast corner of said NE $\frac{1}{4}$ of Section 6; thence S 2 $^{\circ}$ 43'12" W along the east line of said NE $\frac{1}{4}$, 321.32 feet; thence N 88 $^{\circ}$ 07' W, 231.40 feet; thence S 1 $^{\circ}$ 53' W, 565.00 feet to the point of beginning of said center line of the strip of land herein described; thence N 88 $^{\circ}$ 07' W, 600.66 feet to a point on the east line of the tract of land first hereinabove described, said point being S 1 $^{\circ}$ 53' W, 25.00 feet from the northeast corner thereof; being the end of said strip of land herein described, containing 0.69 acres, more or less.

A strip of land 30 feet in width situated in said NE $\frac{1}{4}$ of Section 6, lying 15 feet on each side of a center line described as beginning at the point of intersection of a ditch and the north boundary of said 14.30-acre tract owned by the United States of America, said point being S 88 $^{\circ}$ 07' E, 628 feet from the northwest corner of said 14.30-acre tract; thence, in a northeasterly direction along the center of said ditch, approximately 125 feet to the point of intersection with the above-described strip, containing, in the aggregate 1.56 acres, more or less.



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

CEMRK-RE-M (405)

2 August 1989

MEMORANDUM FOR Commander, U.S. Army Toxic and Hazardous
Materials Agency, ATTN: CETHA-BC, Allan Freed, Aberdeen Proving
Ground, Maryland 21010-5401

SUBJECT: NIKE Battery KC-30 Site, Pleasant Hill, Missouri

1. In accordance with your telephone conversation on 28 July 1989, with Mrs. Jacqueline Whipple, of my staff, enclosed are the preliminary report of excess for subject installation, together with enclosures (enclosure 1), and the Real Estate Project Map of the present installation (enclosure 2). Tab F to enclosure 1 depicts the installation prior to disposal of a portion thereof. Enclosure 2 depicts the present installation formerly occupied by the Missouri Army National Guard.

2. If further information is needed, please contact Mrs. Whipple, telephone no. 816-426-5050 or ~~Michelle~~ ^Nickie Perry, telephone no. 816-426-3544.

FOR THE COMMANDER:

2 Encls


JAMES V. SIMMS
Chief, Real Estate Division



APPENDIX C
CITY OF PLEASANT HILL - COMMUNITY PROFILE
(as received)



City of Pleasant Hill

203 Paul Street Pleasant Hill, MO 64080 (816) 987-3135

October 5, 1989

Mr. Murkesh Mirchandani
Roy F. Weston, Inc.
Weston Way
Westchester, PA 19380

Dear Mr. Mirchandani,

I have been informed by our City Finance Director, Sandi Beatty, that you would like some information about Pleasant Hill. I am therefore sending you a copy of our community profile. If we can provide any additional information, please let me know. Thank you for your interest in our community.

Yours Truly,

MARK RANDALL, City Administrator
City of Pleasant Hill, Mo.

MR:nh

COMMUNITY PROFILE

Pleasant Hill, Missouri Cass County



Population

	1980	1970	1960
★City	3,301	3,396	2,689
★County	51,029	39,448	29,702
	1986	1989	
City	3,380	4,000	

Taxes

Assessed value of city property: \$ 8,400,000

Basic property tax levy for latest year (per \$100 assessed value):

City \$ 1.20 County \$.16 School \$ 3.75

Jr. College \$ _____ State \$.03 Other \$.80

Total \$ 5.94

Sales tax: City \$.015 County \$.005 State \$.04

Government

Type of local government: Mayor-City Council - Administrator

Comprehensive city plan: yes no _____

City zoning: yes no _____

County zoning: yes no _____

Subdivision ordinance with design standards: yes no _____

Number of fire department personnel: _____ full-time 25 volunteer

Fire insurance rating: In city 7 Outside city 10

Number of full-time policemen: 6 City 20 County

City engineer employed: yes no _____

Garbage service provided: () public (X) private () none

Industrial Development Authority with bonding capacity: (X) city () county

Commercial Services

Financial:

	Number	Assets
Banks	<u>1</u>	\$ <u>28,205,000</u>
Savings & Loan Associations	<u>1</u>	\$ <u>305,000,000</u>

Communications

Telephone service company: United Telephone

Newspapers: _____ Daily 1 Weekly

Number of radio stations: _____

Number of TV channels received: 20

Cable Television serves city: yes no _____

Post office: 1st (class)

Industrial: ^{*}Numerous in Kansas City Area

★ Number of machine shops within 30 mi /48 km: * _____

★ Number of tool & die services within 30 mi./48km: * _____

★ Number of electric motor repair services within 30 mi./48 km: * _____

Other industrial services: yes no _____

Names: 30 mi/48 Km to Kansas City

Community Facilities:

Number of motels: _____ Total rooms _____

Number of hotels: 1 Total rooms 14

Capacity or largest banquet room: 125 persons

Number of churches in city: Synagogue _____ Protestant 14

Catholic 1 Other _____

Number of shopping centers: 3

Public libraries: 1 Volumes 12,000

★ Questions Found On The Missouri Computerized Site Selection

Industrial Sites

Site Name	Site No. 1	Site No. 2		
★ Total Acreage: Acres/Hectares	42/17	73/29.2		
★ In City or distance from: miles/km	In City	In City		
Owner	Jack Mainprize	E. Gross & E.B. Famuliner		
Option - Local I.D. Group	Yes	NO		
★ Railroad Access	None	Yes		
Highway Access	Hwy. 7	Hwy. 58		
★ Navigable River at Site	None	None		
★ Electricity at Site	Yes	Yes		
★ Size (in /cm.) of Water Main at Site	Yes	Yes		
★ Size (in./cm.) of Gas Main at Site	Yes	Yes		
★ Size (in./cm.) of Sewer Lines at Site	Proposed	Yes		
Zoning Classification	C-1	R-1		
Fire Department Service	Yes	Yes		
★ Fire Insurance Rating	7	7		
Tax Rate/\$ 100 Assessed Valuation	\$5.94	\$5.94		

Utilities

Water:

Water supplied by: municipal private

Name of supplier: City of Pleasant Hill

Address: 203 Paul, Pleasant Hill

For rate information contact: Sandi Beatty

Phone: (816) 987-3135

Source of city water: Lee's Summit, MO

Water supply approved by State Board of Health: yes no
gallons/minute liters/minute

Capacity of water plant: _____
gallons/day liters/day

Capacity of water plant: _____

Average consumption: 300,800 1,143,040

Peak consumption: 700,000 2,660,000

Storage capacity 2,065,000 gallons 7,847,000 liters

Natural Gas:

Natural gas serves city: yes no

New hookups available: yes no

Name of supplier: Gas Service Co.

Address: Lee's Summit, MO

For rate information contact: _____

Phone: (_____) _____

Sanitation:

Type of sewage treatment plant: Sewage Lagoon

Treatment plant certified by state: yes no

★ Characteristics of waste treatment plant:

	Measurement	Capacity	Present Load
★ Gallons per day	<u>600,000</u>	<u> </u>	<u>205,000</u>
Liters per day	<u>2,280,000</u>	<u> </u>	<u>779,000</u>
Population equivalent	<u>6,460</u>	<u> </u>	<u> </u>
Sewer use charge: yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			

Electricity:

Supplier: municipal private co-op

Name of company: Missouri Public Service

Address: Raytown, MO

For rate information contact: _____

Phone: (_____) _____

Name of company: City of Pleasant Hill

Address: City Hall, Pleasant Hill, MO

For rate information contact: Sandi Beatty

Other Fuel Distributors:

Fuel oil Central Cooperatives

Phone: (816) 987-2196

Coal: _____

Phone: (_____) _____

LP gas Central Cooperatives

Phone: (816) 987-2196

Labor

County/SMSA: Kansas City SMSA
 Civilian labor force: (Oct, 1983) * 666,285
 Total employment 621,152
 Unemployed 45,133
 Unemployed as % of work force 6.8%
 Nonagricultural employment 1982 Avg. 603,500
 Manufacturing employment 110,400
 Nonmanufacturing employment 493,100

* Formularized estimate-Missouri Division of Employment Security

Health Services

★ Hospital (s): _____ Number of beds: _____
 ★ If no hospital, distance to nearest facility: 10/16 mi /km
 Clinic in community: yes X no _____
 Medical personnel: MD(s) 1 DO(s) 3 DC(s) 1
 Dentist(s) 3 DVM(s) 1
 Nurses: Registered 10 Practical 10

Major Employers

* Includes only those in the City Limits with 20 or more employees.

Name	Product /Service	Employment Male-Female	Union Affiliation
<u>A.D. Mohe Greenhouses, Inc.</u>	<u>Plants</u>	<u>60</u>	<u>None</u>
<u>Pleasant Hill Veneer</u>	<u>Oak, Walnut & other Veneers</u>	<u>70</u>	<u>None</u>
<u>Johnson Cabinets</u>	<u>Cabinet makers</u>	<u>25</u>	<u>None</u>
<u>Central Coop</u>	<u>Farmers Cooperative</u>	<u>20</u>	<u>None</u>
<u>City of Pleasant Hill</u>	<u>Municipal Government</u>	<u>30</u>	<u>None</u>
<u>P.H. School District</u>	<u>Educational Institution</u>	<u>115</u>	<u>NEA</u>
<u>National Weather Service Radar Station</u>	<u>Radar Station/River Forecast- ing Center</u>	<u>50</u>	<u>None</u>
<u>Pleasant Hill Bank</u>	<u>Banking</u>	<u>20</u>	<u>None</u>
<u>International Paper</u>	<u>Paper Plant</u>	<u>40</u>	<u>None</u>
<u>Gerbes Supermarket</u>	<u>Grocery Store</u>	<u>45</u>	<u>Various</u>

Work stoppage occurrences within the last five years affecting five percent or more of the labor force in the area: None

Climate

Temperature:

Coldest month: January Normal 35 °F 1.7 °C
 Hottest month: July Normal 88 °F 31.1 °C

Precipitation:

Driest month: February Normal 1.3 in 3.3 cm
 Wettest month: July Normal 5.6 in 14 cm
 Annual average: Rain 37 in 93 cm
 Snow 14.2 in 36 cm

Recreation Facilities

Number of recreation facilities in city or within 10 mi./16 km:

1 Public swimming pool(s); 2 Public tennis court(s),
3 Public park(s); _____ Public golf course(s).

1 County club(s); YMCA/YWCA _____

Movie theatre(s): _____ Indoor _____ Outdoor

Nearest public access lake or river: 4 mi. 6 km

Activities allowed: Swimming - yes _____ no X;

Fishing - yes X no _____; Motor boating - yes _____ no X,

Water skiing - yes _____ no X

Other recreation facilities or special features: Big Creek
Country Music Theater, Two Community

Centers, Restored Depot, Museum, Baseball/

Softball Complex, Antique Centers

Transportation

Rail:

★Railroad(s) serving community: Union Pacific

Number of freight stops per day: Freight and AMTRAC stops as scheduled.

★Distance to nearest piggy back service: 40 mi. 64 km

Air:

Distance to nearest public airport: 5 mi. 8 km

★Longest runway: _____ ft _____ meters

★Surface: sod _____ hard X, Runway lighted: yes X no _____

Private aircraft storage available: yes X no _____

Aircraft maintenance available: yes _____ no X

Fuel available: yes _____ no _____

Nearest commercial air transportation: 60 mi 97 mi./km.

Location and name of airline(s) serving point: All airlines

Serving Kansas City Intl.

Nearest air freight service: 60 mi. 97 km

Barge:

★Name of adjoining navigable river(s): None mi./ki.

★Barge dock available: Public _____ Private _____

Channel depth: _____ ft./meters; Length of season: _____ month(s)

Motor Carrier:

Package delivery service: yes X no _____

Highway bus service available: yes _____ no X

No. of highways serving city: Interstate _____ U.S. _____ Mo. 2

★Distance to nearest Interstate interchange: 17 mi. 27 km

★Motor freight carriers serving community:

Name	Terminal Facilities (or mi./km to nearest)
<u>UPS</u>	<u>Kansas City, KS</u>

Distance to Major Metropolitan Areas:

City	Miles	Kilometers	Days by Railroad	Days by Motor Freight
Atlanta	<u>790</u>	<u>1,271</u>	<u>4</u>	<u>3</u>
Chicago	<u>520</u>	<u>836</u>	<u>3</u>	<u>2</u>
Cleveland	<u>855</u>	<u>1,376</u>	<u>3</u>	<u>4</u>
Dallas	<u>480</u>	<u>772</u>	<u>3</u>	<u>3</u>
Denver	<u>625</u>	<u>1,006</u>	<u>3</u>	<u>2</u>
★Kansas City	<u>23</u>	<u>37</u>	<u>same day</u>	
Los Angeles	<u>1,620</u>	<u>2,607</u>	<u>7</u>	<u>3</u>
Memphis	<u>425</u>	<u>684</u>	<u>3</u>	<u>1-2</u>
Minneapolis	<u>475</u>	<u>764</u>	<u>4</u>	<u>1-2</u>
New Orleans	<u>805</u>	<u>1,295</u>	<u>4</u>	<u>3</u>
New York	<u>1,240</u>	<u>1,996</u>	<u>7</u>	<u>7</u>
★St. Louis	<u>250</u>	<u>402</u>	<u>2</u>	<u>1</u>

Education

Public Schools: Classification AAA

Type	Number	Teachers	Enrollment
Elementary	<u>1</u>	<u>18</u>	<u>325</u>
Junior High	<u>1</u>	<u>22</u>	<u>395</u>
High School	<u>1</u>	<u>33</u>	<u>520</u>

★Area vocational school utilized: Cass County Area Vo-Tech,
Harrisonville

★Distance to nearest college or university: Longview Comm. College,
Lee's Summit; Central Missouri State Univ., Warrensburg;
Univ. of Missouri, Kansas City

Private Schools

Type	Number	Teachers	Enrollment
Elementary	<u>Catholic Elementary School 15 mi.</u>		<u>away in Lee's Summit</u>
High School			
Colleges or universities:			

Local Development Organizations

Economic Development:

Name of group: Pleasant Hill Ind. Devel. Auth.

Person to contact: Dr. R.C. Ebert

Street address: 601 N. Hwy #7

Pleasant Hill, MO 64080

Phone number: Business: (816) 987-2164

Home: (816) 987-2715

Chamber of Commerce:

Chamber of Commerce: yes X no _____

Full-time manager: yes _____ no X

Or contact City Hall at 203 Paul St., Pleasant Hill, Mo., 64080, (816)987-3135.

Legislative Districts

Missouri Senate District 31st

Missouri House District 115th

U.S. Congressional District 4th

Date December 19 83

Published by
Missouri Division of Community & Economic Development
P.O. Box 118, Jefferson City, Missouri 65102

TOP 25 AREA FASTEST GROWING MUNICIPALITIES

(Ranked by percentage growth from 1980 to 1988)

1981 Rank	City and Telephone	Percentage Growth	Absolute Change	1980 Population	1988 Population	Mayor	No. of Square Miles	Total Budgeted Expenditures	Total Assessed Taxable	Year Incorporated
1.	Lenexa 12350 W. 87th St. Parkway 492 8800	74.5%	13,894	32,533	46,427	Rich Becker	27.2	\$27,851,778	\$201,000,000	1907
2.	Blue Springs 903 Main St. 228 0110	54.9	14,261	40,187	54,448	John Michael	15.4	18,428,950	263,000,000	1904
3.	Lee's Summit 207 S. W. Market St. 251 2300	53.6	18,000	43,000	61,000	Robert Jones	64.7	\$22,248,844	\$244,418,430	1868
4.	Olathe 100 W. Santa Fe St. 782 2600	50.7	19,700	58,500	78,200	Ray Barnby	44.5	50,472,175	169,010,069	1857
5.	Gardner 120 E. Main St. 864 7535	51.1	8,146	15,816	23,962	Phyllis Thomas	8.8	4,844,838	7,897,257	1887
6.	Shawnee 11110 Johnson Drive 631 2500	31.8	9,203	38,100	47,303	Thomas Soelaert	45	12,873,288	96,264,054	1856
7.	Lee's Wood 8917 Lee Blvd. 842 5555	51.4	4,320	18,018	22,338	Marcia Pfenhöl	14.8	11,040,461	78,151,382	1948
8.	Harrisonville 300 E. Pearl St. 331 9582	25.5	1,628	8,000	9,628	Ray White	7	7,919,390	53,814,420	1849
9.	Overland Park 8500 Santa Fe Drive 381 5252	24.2	19,818	101,802	121,620	Ed E. Hart	55	83,610,000	422,458,689	1960
10.	Belton 506 Main St. 331 4331	22.2	2,819	15,527	18,346	Gary Maloney	18	7,918,424	75,770,535	1872
11.	Liberty 101 E. Kansas St. 781 7100	19.95	3,248	18,500	21,748	Glenn Todd	25	13,568,558	145,821,540	1881
12.	Platte City P.O. Box 920 431 2012	19.25	369	2,500	2,869	Dennis Orutt	1.1	1,277,000	18,950,784	1853
13.	Dak Grove 1300 Broadway 625 4012	16.8	643	4,750	5,393	Hoy Meier	2.5	3,544,045	20,474,383	1881
14.	Bonner Springs 205 E. Second St. 422 1020	10.2	641	6,880	7,521	Reece Kuhn	17	5,566,434	20,156,195	1898
15.	Richmond 303 S. Thurston St. 776 5304	9.1	601	6,000	6,601	Monroe Ever	3.7	1,800,000	22,550,690	1827
16.	Riverside 4500 N.W. High Drive 741 3993	9.1	294	3,500	3,794	Betty Burch	8	1,130,000	27,532,804	1951
17.	Grandview 1200 Main St. 783 3900	7.8	1,850	26,352	28,202	Harry Wilson	16	13,708,822	155,998,300	1912
18.	Gladstone 7010 N. Holmes St. 436 2200	8.8	1,858	28,550	30,408	Lawrence Whitson	9	7,711,371	180,694,358	1952
19.	Merriam 6000 W. 62nd St. 722 3330	8.4	878	11,178	12,056	Irene French	4.4	8,855,910	80,721,057	1950
20.	Pleasant Hill 203 Paul St. 987 3135	8.0	189	3,500	3,689	Clarence Hall	8	3,174,090	15,300,575	1858
21.	Excelsior Springs 201 E. Broadway 637-0750	7.8	478	10,900	11,378	Don Wilson	8	7,429,431	63,300,317	1880
22.	Basehor 2620 N. 155th St. 724 1370	3.8	60	1,560	1,620	Anna Mary Landauer	4	481,487	2,771,353	1965
23.	Independence 111 E. Maple St. 836 8300	3.4	3,830	115,836	119,666	Barbara Potts	79	100,832,792	800,574,432	1849
24.	Fairway 5252 Belinder Road 282 0350	1.3	81	4,600	4,681	Neale Peterson	1	1,494,563	14,023,539	1949
25.	Sugar Creek 103 S. Sterling Road 252 4400	0.58	25	4,300	4,325	John Q. Ranick	8	2,318,008	28,484,374	1920



APPENDIX D
RELEVANT PORTIONS OF THE ASBESTOS STUDY
(as received)

UPI JUNKY
ADJUTANT GENERAL'S OFFICE

Revised Final Prop Sa
for MO NC, 0 m g
19 Dec 88
Blm

STATEWIDE ASBESTOS STUDY
PART 55
DEPARTMENT OF
PUBLIC SAFETY

Excerpt From Report No. 0546
By
Hall-Kimbrell Environmental Services

PREPARED FOR

STATE OF MISSISSIPPI
JEFFERSON CITY, MISSISSIPPI
VOLUME II OF III
ASSISTANT ATTORNEY GENERAL
DEPT. 55 - PUBLIC SAFETY

July 1, 1986

Report No. 0546

Ball-Cimberlin ENVIRONMENTAL SERVICES

NEW YORK

•

KANSAS CITY

•

LOS ANGELES

BU. NO.	BUILDING NO.	DESCRIPTION	LOCATION	PROB. OR SYMPT.	SWR. METER NO.	SWR. METER DESCRIPTION	TOR. (PROG. PRIORITY)	TOR. NUMBER	LEVEL	QUANTITY	DISPOSITION	DATE	TOR. NO.	DATE
5113	5113	EXPANDED PIPING (S&S)	throughout	10701 pipe covering	23	12	6	310.0	ft. 6 in. 0.0	206.00	1703.00	4541.00		
				10701	23	12	6	15.0	ft. 6 in. 0.0	114.00	71.25	183.25		
				10702 welded joint fittings	12	21	6	120.0	ft. 0 in. 0.0	23.7500	74.75	276.25		
				10703	12	21	6	5.0	ft. 0 in. 0.0	71.50	74.75	156.25		
				10704	6	8	7	20.0	ft. 0 in. 0.0	22.00	142.00	306.00		
				10705	6	8	7	7.0	ft. 0 in. 0.0	10.01	21.18	103.18		
				10706 pipe covering	23	8	7	45.0	ft. 6 in. 0.0	22.20	177.24	449.20		
				10707	23	8	7	10.0	ft. 6 in. 0.0	14.00	24.24	49.24		
				10708 bellier/reservoir packing	21	6	3	87.0	sq. ft.	124.10	1741.20	2307.20		

ESTIMATED AREA TOR. \$ 3747.74

ESTIMATED AREA TOR. \$ 103.18

ESTIMATED AREA TOR. \$ 1187.15

REPAIRS TO THE WATER MAINS

EXPANDED PIPING (S&S)

throughout

10701 pipe covering

10702 welded joint fittings

10703

10704

10705 pipe covering

10706

10707

10708 bellier/reservoir packing

EQUIPMENT 25--PUBLIC SAFETY

SITE NO	BUILDING NO	BUILDING NAME	AREA DESCRIPTION	ROBEIR OR SCARLE LOCATION	SCALE OR SCARLE NUMBER DESCRIPTION	TOTAL EXPOSURE #	PRIORITY LEVEL	QUANTITY	DIVISION	TOTAL APPROX.	TOTAL ESTIM.	TOTAL COST
---------	-------------	---------------	------------------	---------------------------	------------------------------------	------------------	----------------	----------	----------	---------------	--------------	------------

12000 sq. ft. from prior page)
 5213 2413 MCO & Officers
 Furnace room (251315)
 Wash water line
 boiler/reservoir packing

2013	2413	Old Basin, Bldg West, Hill Army	Exposed Pipes in Boiler Room (251315)	pipes at wall inside of door	14711 pipe covering	23	10	6	24.0 ft. x 1 in. O.D.	1018.00	6579.75	11548.25
					14711	23	18	6	10.0 ft. x 6 in. O.D.	134.00	31.00	254.00
					14712 welded joint fittings	0	0	0	12.0 x 1 in. O.D.	2.00	0.00	0.00
					14712	0	0	0	7.0 x 5 in. O.D.	0.00	0.00	0.00

			Exposed Piping Throughout (251315)	In boiler room	14711 pipe covering	23	10	6	307.0 ft. x 1 in. O.D.	1719.20	1074.50	2793.70
					14712 welded joint fittings	0	0	0	77.0 x 1 in. O.D.	0.00	0.00	0.00

ESTIMATED BUILDING TOTALS											1018.00	6579.75	11548.25
ESTIMATED AREA TOTALS											231.60	181.50	477.10
ESTIMATED AREA TOTALS											1719.20	1074.50	2793.70

HALL & HOWELL ENGINEERING SERVICES

IT	NO	MAPPER	BUILDING NAME	DESCRIPTION	MATERIAL OR SAMPLE LOCATION	SAMPLE BAR CODE NUMBER DESCRIPTION	TOUR (SAMPLE DENSITY) S. W. N. NUMBER LEVEL	TOUR #	TOUR	TOUR
				Leased piping in boiler	In boiler roomside of			1919	1919	1919
				Open top pipe (prior pipe)				1919	1919	1919
				24136 Old Admin. ers				1919	1919	1919

added joint filling

ESTIMATED BUILDING TOTALS 212.00 122.00 278.00

ESTIMATED SITE TOTALS 2011.00 2011.00 14419.00

PELL-KRUEGER ENVIRONMENTAL SERVICES

STATE OF MISSOURI
 STATEWIDE ASBESTOS ASSESSMENT STUDY
 DEPARTMENT 55—PUBLIC SAFETY

May 27, 1986

SITE NO.	BUILDING NUMBER	BUILDING NAME	AREA DESCRIPTION	MATERIAL OR SAMPLE LOCATION	SAMPLE NUMBER	SAMPLE DESCRIPTION	TOTAL EXPOSURE % ASBL	PRIORITY LEVEL	CUMULATIVE DIMENSION	TOTAL REMOVAL	TOTAL REMOVAL COST		
9813	56144	Mess Hall Bldg-Pl east. Hill Armory	Debris on floor of Boiler Rm (56144)	on floor	14774	wrapped paper pipe covering	64	78	2	9.8 sq. ft.	100.00	0.00	100.00
			Exposed Piping -Dining Rm, Boiler(56144)	left rear of room next to floor	14785	exposed joint fittings	51	38	4	12.0 x in. O.D.	151.20	64.00	235.20
					14785		51	38	4	0.0 x in. O.D.	119.20	78.00	187.20
					14786	pipe covering	0	0	0	33.8 ft. x in. O.D.	0.00	0.00	0.00
					14785		0	0	0	18.0 ft. x in. O.D.	0.00	0.00	0.00
			Exposed Piping -Dining/Kitchen (56144)	heavy screen cloth on pipe	14787	pipe covering	39	10	6	4.0 ft. x in. O.D.	22.48	14.00	36.48
				in mechanical room	14785	exposed joint fittings	51	10	6	91.0 x in. O.D.	1146.60	637.00	1783.60
					14786	pipe covering	0	0	0	253.0 ft. x in. O.D.	0.00	0.00	0.00
ESTIMATED AREA TOTALS										278.48	154.00	432.48	

HULL-KIMBELL ENVIRONMENTAL SERVICES

STATEWIDE ASBESTOS ASSESSMENT STUDY
DEPARTMENT 35-PUBLIC SAFETY

May 27, 1986

SITE NO.	BUILDING NUMBER	BUILDING NAME	AREA DESCRIPTION	MATERIAL OR SAMPLE LOCATION	SAMPLE BULK SAMPLE NUMBER DESCRIPTION	TOTAL EXPOSURE PRIORITY \$ PER NUMBER LEVEL	QUANTITY	DIMENSION	TOTAL REMOVAL	TOTAL RETAINEL	TOTAL COST
(Break keys from prior page)											
2813	56144	Mass Hall	Exposed Piping - Dining	In mechanical room on pipe	pipe covering/fittings				1153.00	531.00	1828.00
ESTIMATED AREA TOTALS											
9813	56144	Mass Hall Bldg-Pleasant Hill Armory	Tank (56144)	front end of tank facing door	14784 boiler/reservoir packing	64	72	2	6778.00	1627.55	3737.50
ESTIMATED BUILDING TOTALS											
56145	MOO	Quarters-Pleasant Hill Armory	Exposed Piping in Boiler Room (56145)	In front of tank	14718 welded joint fittings	32	14	6	289.00	161.00	450.00
					14718	32	14	6	74.50	43.75	118.25
				underneath tank	14789 pipe covering	28	14	6	196.00	122.50	318.50
					14789	28	14	6	152.00	93.00	247.00
ESTIMATED AREA TOTALS											
						28	12	6	1468.00	873.00	2273.00
						28	12	6	256.0	148.0	273.00
ESTIMATED AREA TOTALS											
						28	12	6	712.30	422.25	1134.55

HILL-HIMRELL ENVIRONMENTAL SERVICES

STATEWIDE ASBESTOS ASSESSMENT STUDY
DEPARTMENT 35—PUBLIC SAFETY

May 27, 1966

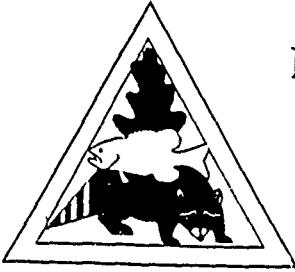
SITE NO.	BUILDING NUMBER	BUILDING NAME	AREA DESCRIPTION	MATERIAL OR SAMPLE LOCATION	SAMPLE NUMBER	BULK SAMPLE DESCRIPTION	TOTAL % FSBL	EXPOSURE NUMBER	PRIORITY LEVEL	QUANTITY	DIMENSION	TOTAL REMOVAL	TOTAL REINSEL.	TOTAL COST	
		Quarters-Plasst. Hill Army	Throughboot (56143)												
9013	56145	ACD Quarters-Plasst. Hill Army	Exposed Piping Throughboot (56143)	In boiler room	14718	welded joint fittings	32	12	6	62.8	4 in. O.D.	781.20	434.00	1215.20	
												ESTIMATED AREA TOTALS	2181.20	1389.00	3490.20
		NCO Quarters-Plasst. Hill Army	Tank in Boiler Room (56143)	right end of tank	14718	boiler/reservoir packing	51	18	6	85.0	sq. ft.	1530.00	1232.50	2762.50	
												ESTIMATED BUILDING TOTALS	4421.50	2963.75	7297.25
												ESTIMATED SITE TOTALS	8112.90	5430.25	15549.15

HILL-KIMMELL ENVIRONMENTAL SERVICES



APPENDIX E
ADDITIONAL INFORMATION
(as received)

1077M2-2



MISSOURI DEPARTMENT OF CONSERVATION

MAILING ADDRESS
P.O. Box 180
Jefferson City, Missouri 65102-0180

STREET LOCATION
2901 West Truman Boulevard
Jefferson City, Missouri

Telephone: 314/751-4115
JERRY J. PRESLEY, Director

November 6, 1989

Mr. Mukesh G. Mirchandani, P.E.
Senior Project Engineer
Weston Designers/Consultants
Weston Way
West Chester, PA 19380

Re: Nike Missile Site

Dear Mr. Mirchandani:

Thank you for your letter of October 9, 1989 regarding threatened and endangered species within the proposed project area.

Department staff examined map files and data storage and determined that no sensitive species or communities are known to occur on the immediate site or surrounding area. The lack of records, however, does not mean that such species or communities do not exist on this tract of land. Only an on-site inspection could verify their absence or existence.

Thank you for the opportunity to review and comment.

Sincerely,

DAN F. DICKNEITE
ENVIRONMENTAL ADMINISTRATOR

E-1

COMMISSION

JERRY P. COMBS
Kennett

ANDY DALTON
Springfield

JAY HENGES
St. Louis

JOHN POWELL
Rolla

FACT SHEET

U.S. Army Toxic & Hazardous
Materials Agency
Base Closure Division
Mr. Kenneth Wiggins
AUTOVON 584-3460
March 1989

SUBJECT: Nike Kansas City 30, Pleasant Hill, MO

1. PURPOSE: To provide a summary of the current status of the Nike Kansas City 30 installation.

2. FACTS:

a. The Nike Kansas City 30 site, a sub-installation of Ft. Leavenworth, Kansas, is located just southeast of Kansas City, MO near the town of Pleasant Hill, and consists of 8 buildings on approximately 20 acres of land.

b. The facility operated as a Nike Defense site from around 1958 to 1972. Based on the number and type of buildings, this particular site appears to have been a battery control area (i.e., typically administration, barracks, mess hall, radar, and motor pool areas). Following the phase out of the Nike mission, the facility was used by the Missouri National Guard (MNG) from 1972 to 1988. Currently, the facility is inactive and unoccupied.

c. Preliminary indications are that no site specific environmental studies have been performed at the facility. Reportedly, the MNG performed an asbestos survey during their use of the facility. Typical past activities of the Nike defense mission and the MNG (e.g., motor pool and maintenance) may have caused environmental contamination. However, this determination will have to be made after a thorough preliminary investigation.

d. As a result of the Nike Kansas City 30 facility being identified for closure and release in the December 1988 Base Realignment and Closure Report, a preliminary assessment and follow on studies, as required, are scheduled to be performed by US:THMA.

Activity	FY89	FY90-FY91	FY92	FY93	FY94
Enhanced PA	\$ 50K				
S & A		\$ 400K			
RAP			\$ 75K		
RA				\$ 100K	
Statement of Clearance					\$ 50K