

APPENDIX A

REFERENCES

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9800 TSU-CE

1954

Report of Clearance dated 7 October 1954. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

9800 TSU-CE

1956

Certificate of Clearance dated 26 January 1956. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

General Services Administration

1955

Request for Clearance Map, dated 18 November 1955. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

Twin Parks Estates

1984

Letter from Twin Parks Estates to the U.S. Army Engineering Division, dated 1984. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

United States Army Corps of Engineers

1984

Alternatives Evaluation for DERP Project, dated 29 June 1984. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

United States Army Corps of Engineers

1998

Trip Report to Five Points Field, dated 17 February 1998. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

9800 TSU-CE
1954

Report of Clearance dated 7 October 1954. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

1000 TROOP DETACHMENT NO. 4
ENGINEER RANGE CLEARANCE TEAM "A"
GENERAL DELIVERY
MILANO, TEXAS

7 October 1954

SUBJECT: Report of Clearance of Navy outlying field
Five Points Arlington, Texas

TO: Corps of Engineers, U. S. Army
Office of The Division Engineers
Southwestern Division
1114 Commerce Street
Dallas 2, Texas

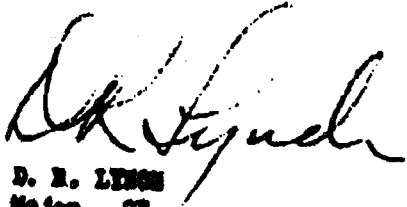
1. Per direction received from Mr. George, Earl Rotato, Southwestern Division, this Unit arrived Arlington, Texas at 1600 hrs Monday 4 October 1954 for the purpose of clearing the subject range area.

2. The foot & vehicle search of the 162 acre area was completed and all duds destroyed by 1700 hrs 5 October 1954. Bombs recovered from the range totaled 75, M-47 chemical bombs, 27, M1 2) Model 1 Navy bombs & 23, M38 practice bombs. Of the above bombs 22 contained explosive & were destroyed. The 25.6 acre impact area, has Certificate of Clearance, is recommended against sub surface use.

3. Approximate costs for the project as outlined above are as follows.

a. Three (3) days for men one (1) Officer & seven (7) enlisted men.	\$216.00
b. Travel to & from Arlington, Texas.	\$130.00
c. Rental on Tractor Newer two (2) days.	\$40.00
d. Two (2) 3/4 ton trucks & One (1) sedan three (3) days approximately 700 miles each.	\$142.00 \$553.00
	\$928.00

1 Incl
9 Copies Certificate
of Clearance


D. H. LYNN
Major.. CE
Commanding

9800 TSU-CE
1956

Certificate of Clearance dated 26 January 1956. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

EXHIBIT A

GSA DISPOSAL NO. GSA-R-271

9800 TSU-CE DETACHMENT NO. 4
ENGINEER RANGE CLEARANCE TEAM "A"
GENERAL DELIVERY
SNYDER, TEXAS

26 January 1956

CERTIFICATE OF CLEARANCE

NAVY OUTLYING FIELD
FIVE POINTS
ARLINGTON, TEXAS

All lands included in the 162 acre field known as Five Points located approximately eight (8) miles South of Arlington, Texas on Farm Road #157 has been given careful visual inspection and cleared of all dangerous and/or explosive material reasonably possible to detect. The 17.5 acre impact area as outlined in attached sketch is recommended for any above surface use to which the land is suited. The remainder of the field is recommended for any use to which the lands suited. This certificate supersedes, certificate of clearance dated 7 October 1954.

/s/ D. R. LYNCH
Major., CE
Commanding

C O P Y

General Services Administration

1955

Request for Clearance Map, dated 18 November 1955. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

GENERAL SERVICES ADMINISTRATION



Region 7
Dallas 2, Texas

November 18, 1955

IN REPLY REFER TO: 7PS

AIR MAIL

Major Dallas H. Lynch
General Delivery
Port Angeles, Washington

Re: Outlying Field 22913 to NAS
Dallas, Texas (5 Points Field)
N-Tex-533

Dear Sir:

The Department of the Navy has reported excess to its needs subject property, consisting of approximately 162.06 acres, located in Tarrant County, Texas. The Navy enclosed a copy of the Certificate of Clearance dated October 7, 1954, over your signature, together with a pencil sketch delineating an area recommended for above surface use only. Copies of the certificate and sketch are enclosed. We also enclose a copy of a map of the field which we secured from the Naval Air Station, Dallas, on which the runway layout is shown.

We are preparing to sell this property and will sell the land subject to a restriction to surface use only with regard to the 25.6 acre impact area. Since the dimensions of the restricted area are not shown on your sketch and since the runway configuration does not correspond to that as shown on the Navy map, we are unable to locate the restricted area specifically with a sufficient degree of accuracy to permit it to be described by notes and bounds in our specifications of sale and conveyance instruments.

It is requested that the restricted area be delineated on the enclosed map to the scale of one inch equals four hundred feet, and that dimensions of the area be shown as well as distances from the boundaries of the area to established points.

It is considered possible that there may be a market for the gravel and asphalt comprising the runway surfacing, and if so, we would be interested in offering it for sale for removal from the site. We would appreciate receiving your comments and recommendations as to whether removal of the runway surfacing material would be hazardous from the viewpoint of possible contamination.

We will appreciate your early attention to this matter and prompt reply since our disposal action must be withheld until this matter has been resolved.

Very truly yours,

J. L. Winsor
J. L. Winsor

Real Property Disposal Officer

Encl.

Twin Parks Estates
1984

Letter from Twin Parks Estates to the U.S. Army Engineering Division, dated 1984. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

revised
Twin Parks Estates
1708 South Cooper St.
Arlington, TX 76013
Tel: 817/274-2521

Mr. Frank Shearer
U.S. Army Engineering Division
P.O. Box 1600
Huntsville, AL 35807

Dear Sir:

I am writing in regard to the conversation you had with Dan Gould this date.

Twin Park Estates purchased 165 acre tract, survey enclosed, March 25, 1983. At this time subject developers were not aware that property was previously a bomb site.

Construction commenced on September 1, 1983. November 16, 1983 construction was halted due to finding of a subsurface bomb by a city inspection. Approximately 25 bombs were uncovered by city police. The 47th Ordnance Detachment, Fort Hood, took possession of those bombs.

December 16, 1983 Jet Research Center was employed by developers to sweep and extract bombs from development site. Work completed 10 days after and some 600 bombs were located and removed from initial 35 acre first phase of development. The 47th Ordnance Detachment also took possession of those bombs.

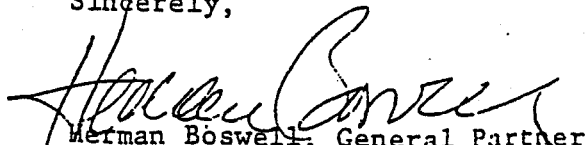
April 9, 1984 a backhoe operator from Lone Star Gas Company began to find several bombs. Bombs were found on same area that was cleared by Jet Research Center. Depth was approximately 3 feet.

Thereafter developers began to search for systems that would clear proposed development.

Developed property to be used as Mobile Home Park. Construction to be completed by June 1, 1984.

Your urgent help is needed.

Sincerely,


Herman Boswell, General Partner

HB/ce

Mr. Shearer,

Attached is a corrected copy of the letter mailed to your

Herman Boswell

SUBJECT:

Subsurface bombs located in city limits of Arlington, Texas.
More particularly, 165 acre tract located at the southwest corner T.O. Harris
and Matlock Roads.

BACKGROUND:

Subject property partially zoned by city of Arlington mobile home park
November, 1982. Subsequently purchased in March, 1983 by Twin Parks
Estates partnership, Herman Boswell, General Partner. Construction
commenced on or about September 1, 1983. On or about November 16, 1983
construction was halted due to the finding of a bomb by a city worker.
Approximately 25 subsurface bombs were removed by city police at that
time. Those bombs were disposed of by the 47th Ordnance Detachment,
Fort Hood, Texas under the direction of Sergeant Noble. Further efforts
for military assistance followed. Jet Research Center was employed on
December 15, 1983. Jet Research Center used commercial mine detectors
in locating bombs. Said work was completed on or about 10 days thereafter.
Some 600 bombs were located and removed. Fort Hood 47th Ordnance
Detachment again took possession of bombs. April 9, 1984 a backhoe
operator from Lone Star Gas Company began to unearth several more bombs in
digging a 3 foot gas line on property supposedly previously cleared by
Jet Research Center. Further investigation revealed that due to soil
conditions some subsurface bombs may be at a depth of from 3-5 feet.

Subject property was utilized by the Naval Air Station from 1940 to 1943
as a bomb practice range. Type of bomb believed to be Mark 23-MOD-1.
Bombs carry from 5 oz. of explosive black powder and or phosphorus.
Army estimates that from 10-15% of said bombs dropped were duds. Further
it is estimated that well over a 1,000 bombs may be located on site. Over
700 bombs have already been extracted.

ACTIONS AND FINDINGS BY DEVELOPERS:

Developers had several conversations with Sergeant Noble, 47th Ordnance
Detachment, Fort Hood. Developers were told that there is a Army ordnance
detachment system available and also were given name of Mr. Jim Hersey,
Electronic Engineering Division, Indianhead, Maryland. Mr. Jim Hersey is
said to have knowledge of detachment system but developers were unable to
contact. Were referred by Sergeant Noble to Captain Mike Finn, Staff Judge
Advocate, Fort Hood. Captain Mike Finn also tried to contact Mr. Hersey,
he was unable to do so. Were informed by Captain Mike Finn that Army will
not extract bombs. But was very helpful in referring us to
Defense Restoration Program, Pentagon, Washing, D.C., Mr. David Palmer.
Referred from Defense Restoration office to Mr. Frank Shearer, U.S. Army
Engineering Division, Huntsville, AL. Informed by Mr. Shearer that Army
did have program available for restoration of property possible by

Department of Defense. Informed that subject program and clean-up will take between 2-4 years.

STATUS OF PROPERTY:

Initial 35 acre increment 90% developed (250 lots).
Scheduled completion date June 15, 1984.
Project cost 3.1 million dollars.

COPIES ENCLOSED:

Deed of Warranty
Deed Twin Parks
Contract with Jet Research Center
Survey
Preliminary Plat - Twin Parks Estates
Location map of subject property.

2 July 1984

WHD:1

TRIP REPORT

1. Inclusive Trip Dates: 28-29 June 1984
2. Location: Twin Parks Estates, ERDA Project # K06TX002800, Arlington, TX
3. Purpose: To conduct a preliminary site survey and obtain information for developing a plan of action for ERDA Project # K06TX002800.
4. Names of Travelers: Robert Dempsey ED-SO
Garry Hudson ED-CS

5. Persons Contacted:

- | | | |
|-------------------------|--|----------------|
| a. Mr. J.B. West | SWFED-M | FTS 334-2237 |
| b. Mr. Bernard Hamilton | SWFED-MF | FTS 334-2750 |
| c. Mr. Paul Krebs | SWFED-MF | (817) 334-2721 |
| d. Mr. Herman Boswell | Century 21, Herman Boswell, Inc.
& Twin Parks Estates Partnership | (817) 274-2521 |
| e. Mr. Dan Gould | Century 21, Herman Boswell, Inc.
& Twin Parks Estates Partnership | (817) 274-2521 |

6. Narrative:

a. Travelers met initially with representatives of Fort Worth District (SWF) to familiarize them with project information available and with the potential involvement of SWF in this project. Mr. Hamilton, SWFED-MF, was provided a copy of HND's file material on Twin Parks Estates. The travelers were notified that Mr. Mel Green, SWFED-FG, (817) 334-2223 has been designated as the ERDA Coordinator for SWF.

b. Mr. Krebs and Mr. Hamilton, SWFED-MF, accompanied the HND travelers to meet with representatives of the owners and to visit the site. The property owners have been pursuing the detection and removal of the bombs from the site. Mr. Boswell has been to the NAVEODTCHCTR, Indian Head, Maryland to discuss the problem with them and to seek support for his clean-up efforts. NAVEODTCHCTR referred Mr. Boswell to Institut Dr. Forster GmbH and Co., KG with offices in Pittsburgh, PA. Forster loaned him one of their FEREX 4.021 Model KL&W metal detectors. Contract employees working for Mr. Boswell have recovered another 400 or more bombs buried at depths of up to 6 feet using the FEREX detector. None of the 1600 or so bombs recovered have exploded or burned as a result of Mr. Boswell's clean-up operations. The 47th EOD Team from Ft. Hood, Texas has been periodically picking up and disposing of the bombs. A telephone conversation with SGT. Noble of the 47th indicated that some of the bombs were hazardous.

c. Mr. Boswell and his partners own 74.5 acres of the 165 acre tract that was previously used by the Navy as the 5 Points Bombing Range. The rest of the acreage is currently owned by Mr. James Knapp, 201 West Front Street, Arlington, Texas 76010, (817) 274-6891. Mr. Knapp could not be contacted during the site survey.

d. A site visit was made with all parties. Results of this visit are documented in the inclosed ERDA Inventory Report and Hazardous Ranking System Evaluation.

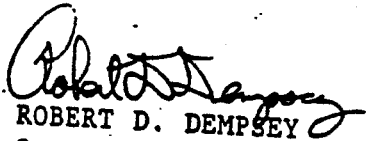
7. Discussion and Action Items:

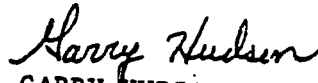
a. The owners of Twin Parks Estates would like to gain EOD support using the FEREX or other equipment with similar capabilities to assure that they have cleared all bombs and ordnance to a depth of at least 3 feet. HNDED-SO has action to try to obtain this support.

b. Mr. Boswell raised the question of the potential for funding under ERDA to cover his clean-up expenses. The travelers told him that they were unaware of the DOD position on this, but that we would have the appropriate people get in touch with him. HNDED-PM and HNDOC need to take action on this item.

c. Mr. James Knapp, the owner of the rest of the property, needs to be contacted and another ERDA subproject documented to cover the rest of this Ordnance and Explosive Waste site. HNDED-PM needs to take action on this item.

1 Incl
as


ROBERT D. DEMPSEY
Supv. Safety Engineer


GARRY HUDSON
Civil Engineer

CF:
ED-CS, w/Incl
ED-PM, w/Incl
ED-SO FILE, w/Incl
OC, w/o Incl
AD-E, w/o Incl
CDR, Ft. Worth District. ATTN: SWFED-MF


HNDED-SO


HNDED-CS


HNDED-PM


HNDED

Rockets or Missiles
Other

5
0-25 (5)

Describe BOMBS, PRACTICE, MARK 1, MOD 0 EACH CONTAINS A DETONATOR
WITH THE EXPLOSIVE FORCE OF A 45 CAL. ROUND AND LESS THAN ONE POUND OF BLACK
POWDER OR PYROTECHNIC MIX.

d. Pyrotechnics Yes 3 (No) 0

Flares 3

White phosphorus 3

Other 3

Describe _____

e. Chemical Weapons/Agents Yes (No) 0

Toxic Chemical warfare Agent (GB VX, H, HD, BZ) 25

Vomiting Agents (DA, DM, DC) 10

Tear Agents (CNS, CNB, BBC, CS) 5

Other .5

Describe _____

3. Extent of Contamination Yes No 0

a. Locations Max 5

Mixed or buried in the soil (5)

Within tanks, pipes, etc 5

Inside structures 5

Other 5

Describe _____

31. Site status: Active

Inactive

32. Years of operation in current status 1

33. Type(s) of problems found by inspection team

H&T

OEW UNEXPLODED PRACTICE BOMBS

Debris

34. Are there buildings or other structures on the site?

Yes

No

Number

Describe BUT MOBILE HOMES WILL BE MOVED ONTO PROPERTY WITHIN
2-6 WEEKS.

35. What is the major land use for a one mile radius around the site?

FARMING WITH A CONCENTRATION OF COMMERCIAL/INDUSTRIAL PROPERTIES TO
THE WEST OF THE PROPERTY.

36. What is the estimated population within a one mile radius around the site? 250 - 500

37. Describe the security of the site NONE - OPEN LAND ON DEVELOPED
ROAD SYSTEM.

38. Describe the best access to the site from the nearest public road.

3.4mi SOUTH ON FARM ROAD 157 (COOPER ST. FROM I-20)

0.9mi EAST ON I.O. MILLER ROAD, SOUTH ON SUNNYSIDE DRIVE INTO PROPERTY

39. List current and/or past pollution abatement permits

NONE

PERMIT INFORMATION				
01 TYPE OF PERMIT ISSUED (NAME OF THE ACT)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
A. NPDES <u>PAST and/or PRESENT</u>				
B. UIC				
C. AIR				
D. RCRA				
E. RCRA INTERIM STATUS				
F. SPCC PLAN				

TO HARRIS ROAD →

Knapp

J. Knapp

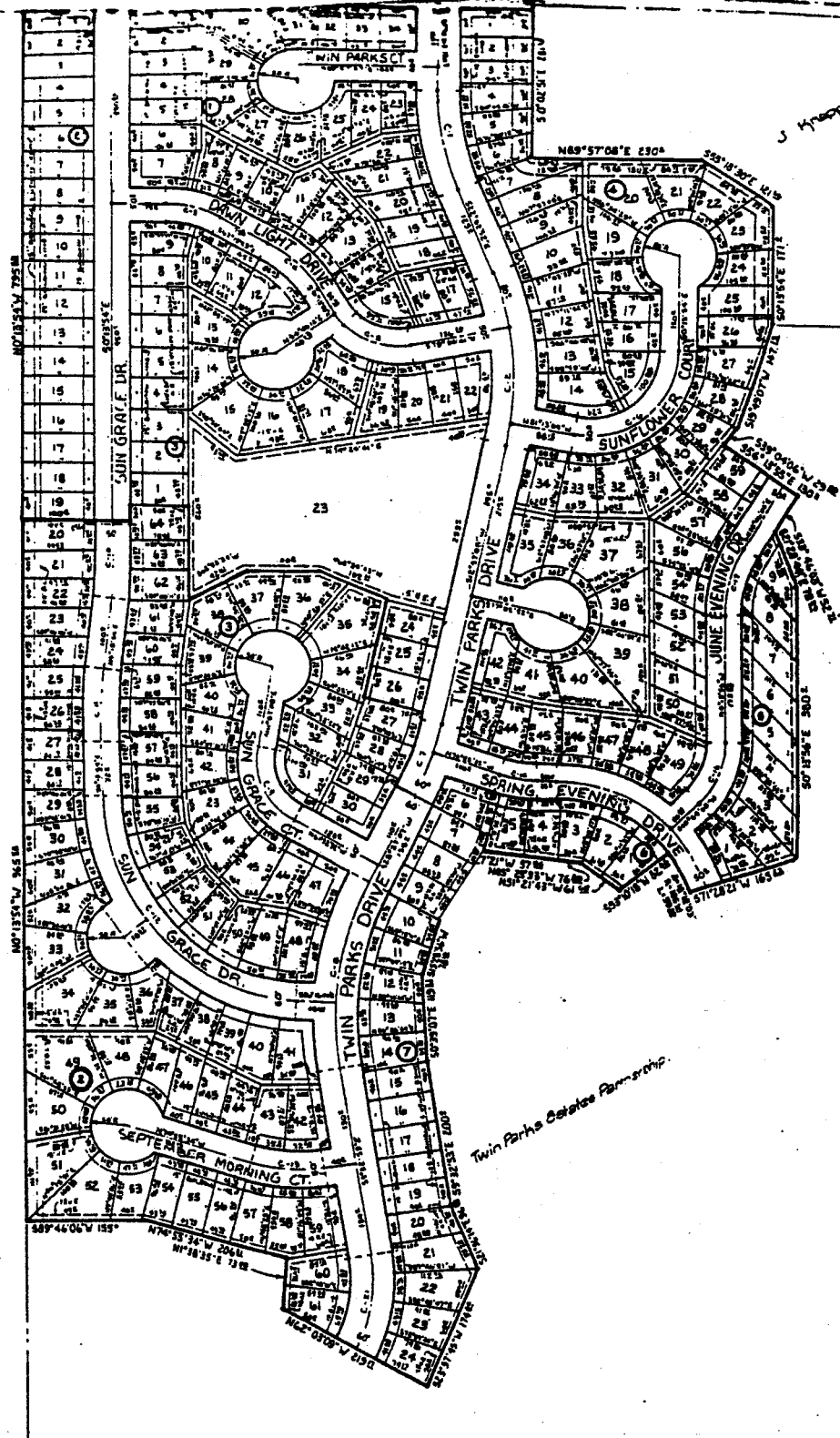
Graphic Scale
1" = 100'

Final Plat
Section Two

Twin Parks Estates

Owner/Developer

Twin Park Estates Partnership



United States Army Corps of Engineers

1984

Alternatives Evaluation for DERP Project, dated 29 June 1984. U.S.
Army Corps of Engineers, Fort Worth District, Fort Worth, TX.

ALTERNATIVES EVALUATION
FOR
DERP PROJECT K06TX002800
TWIN PARKS ESTATES
(NAVY FIVE POINTS BOMBING FIELD)
ARLINGTON, TEXAS

1. Background Information. The site was used as an impact area of a bombing range by the Navy during World War II and the years immediately thereafter. The site was identified as a potential DERP project at the request of one of the current owners, Mr. Herman Boswell of Twin Parks Estates Partnership. A site survey was made of the property by representatives of USACE's Huntsville Division and Ft. Worth District on 28-29 June 1984.

2. Real Estate Information.

a. A complete real estate evaluation of the property has been requested but not completed. A ^{copy} of the deed which transferred the property from the US Government to Gordon and Pope Supply Co., Inc. of Fort Worth, Texas was obtained from Mr. Herman Boswell.

b. The property consists of approximately 162 acres located alongside T.O. Harris Road in Arlington, Tarrant County, Texas at Latitude 32 degrees, 37 minutes, 26 seconds and Longitude 97 degrees, 07 minutes, 25 seconds.

c. The deed that transferred the property to Gordon and Pope Supply Co. Inc. clearly identified the property's former use as an impact area of a bombing range and stated that the property was subject to contamination by unexploded and dangerous bombs, shells, rockets, mines, and charges. The deed contains a clause by which Gordon and Pope assumed for itself, its successors or assigns, all risk for all personal injuries and property damages arising out of ownership, maintenance, use, and occupation of the property and agreed to indemnify and save harmless the United States of America against any and all liability, claims, or suits due to or resulting from the possibly contaminated condition of the property. An Engineer Range Clearance Certificate recorded with the deed indicated that the property was recommended for above surface use.

d. The property was transferred to Gordon and Pope Supply Co. on 19 July 1956. Since that time there have been nine subsequent owners of all or part of the property. These are:

- (1) Paul Barkley
- (2) Oak Cliff Savings & Loan
- (3) The 8.8 Corporation
- (4) Fred H. Timberlake
- (5) D.J. Williams
- (6) Ward Hunt
- (7) The 8.8 Corporation
- (8) James H. Knapp (initially owned all of the property but currently retains title to approximately 87.43 acres of the site).
- (9) Twin Parks Estates - Partnership (74.59 acres)

Subsequent transactions are not yet available. The deed that transferred the 74.59 acres from James H. Knapp to Twin Parks Estates Partnership did not identify the potential contamination of the site nor the recommended restriction to above surface use. Approximately thirty-seven of 74.59 acres held by Twin Parks Estates is currently under development as a mobile home park.

3. Contamination Information. Direct evidence of the contamination at the site was uncovered during the initial construction of the streets for the mobile home park. The developers have been conducting their own restoration program to remove the bombs using Jet Research Center, Inc. and other contractors and borrowed detection equipment. Over 2000 Mark 1 MOD 0 Practice Bombs have been removed from the soil by Twin Parks Estates and turned over to the 47th EOD Detachment at Ft. Hood, Texas for disposal. Each Mark 1, MOD 0, Practice Bomb contains a detonator with the explosive force of a 45 caliber round and less than one pound of black powder or pyrotechnic mix. These unexploded practice bombs could be very dangerous to children or untrained personnel. While no other items of unexploded ordnance have been recovered the 1956 deed indicated possible contamination by rockets, mines, and shells. This further contamination would only increase the hazard potential for the site.

4. Restoration Alternatives.

a. Alternative 1. Buy back the land from the current owners Twin Parks Estates Partnership and Mr. James Knapp. Build an FE-6 security fence around the 162 acres. Post unexploded ordnance signs around the property. Maintain the property in the DOD active property inventory indefinitely. The estimated cost for this alternative is estimated to be _____.

b. Alternative 2. Buy back the 125 acres of land that is not being developed as a mobile home park. Build an FE-6 security fence around it and post unexploded ordnance signs. Maintain the property in the DOD active property inventory indefinitely. The cost of this alternative is estimated to be _____.

c. Alternative 3. Have a contractor remove the top 4 to 6 feet of soil from the property. Haul it to a secure landfill and dispose of it as a reactive waste in accordance with RCRA. Replace the removed soil with clean soil from an off-site borrow area. The cost of this alternative is estimated to be _____.

d. Alternative 4. Have a contractor use a "potato picker", plow, scraper/conveyor or other farm or earthwork machinery to process the soil to a depth of 4 to 6 feet. Use an EOD Detachment to detect ordnance materials in the processed soil and remove those potentially hazardous ordnance materials for disposal at Fort Hood, Texas or other active Army disposal site. Have the contractor regrade the site with the cleaned soil. The cost of this alternative is estimated to be _____.

e. Alternative 5. Have an EOD Detachment use the Ferex or other detection instrument capable of detecting to 4 to 6 feet to locate all potential ordnance items. Have a contractor dig up detected items using a back-hoe or similar equipment. Have the EOD detachment remove all ordnance materials for disposal at Fort Hood, Texas or other active Army disposal site. Have the contractor refill the holes and regrade the site. The cost of this alternative is estimated to be _____.

I have examined the records of the County Clerk's office, Tarrant County, Texas, as pertains to 162.06 acres out of the T. O. Harris Survey, Abstract No. 645 and the Wm. W. Warnell Survey, Abstract No. 1613 and find the following:

a. The United States conveyed by deed, without warranty, on July 19, 1956, the said tract to Gordon and Pope Supply Co., Inc., and deed is of record in Volume 3015 at Page 85, Deed Records of Tarrant County, Texas. A copy is attached.

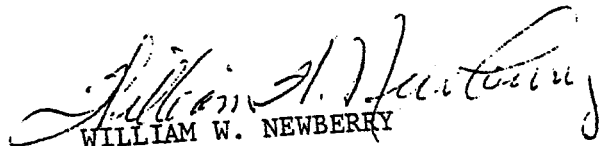
b. By various deeds the said tract was conveyed finally from the 8.8 Corporation to James Knapp, Jr., Trustee, by deed dated October 31, 1977, recorded in Volume 6356 at Page 354 of the Deed Records of Tarrant County, Texas.

c. By deed dated March 25, 1983, James H. Knapp, Individually and as Independent Executor of Estate of James H. Knapp, Jr., deceased, and Sandra G. Knapp conveyed 74.59 acres out of the 162.06 acres to Twin Parks Estate Partnership. The deed recites that the partners are Herman Boswell, Carl Mincer, Monty Thomason and Jewell Enterprises (T. R. Jewell, A. V. Jewell, and Harold Nash). Recorded in Volume 7475, Page 2101, Deed Records of Tarrant County, Texas, and copy of description is attached.

d. By plat and field notes recorded in Volume 388-168, Page 29, Plat Records of Tarrant County, Texas, 35.48 acres out of the 74.59 acres was subdivided into a subdivision known as Twin Parks Estate and a copy of field notes is attached.

Based on the records, it now appears that the original 162.06 acres are owned by James H. Knapp, Estate of James H. Knapp, Jr., Sandra G. Kanpp, and Twin Parks Estate Partnership, 1708 S. Cooper, Arlington, Texas 76010. The original address given for James Knapp, Jr., Trustee, was 201 West Front Street, Arlington, Texas 76011.

The conveyance by the United States of America contained a number of recitals, conditions and covenants. Anyone purchasing the land would be on notice of such as they are of record. The grantee specifically accepted the covenants and conditions in writing. There is also a save harmless clause in the deed. The covenants run with the land.


WILLIAM W. NEWBERRY

Attorney

Real Estate Division

United States Army Corps of Engineers

1998

Trip Report to Five Points Field, dated 17 February 1998. U.S. Army
Corps of Engineers, Fort Worth District, Fort Worth, TX.

1. Date: 17 February 1998
2. Location: Former Five Point Field (Twin Park Estate), Boswell and Morris Properties, Texas K06TX002801
3. Purpose: Expanded Site Inspection (ESI) to determine if a Time Critical Removal Action (TCRA) is warranted based on the past history of children getting onto the property, finding MK 23, 3 lb., Practice Bombs, and taking the Black Powder out and lighting it.
4. Name of Travelers: Richard Pike and Billy McPherson.
5. Persons Contacted On-site: David W. Scotto, Fort Worth District, Messrs Boswell and Morris, Property owners, and two individuals that are prospective land buyers.
6. Narrative: The Inventory Project Report for this site (attached) states that in the past children found MK 23 Practice Bombs on the surface and were known to take the cartridge out, spill the Black Powder and light it. The land in question is undeveloped with Mesquite Trees and tall weeds and grass. The property owners felt that there might still be bombs left on the surface. If this were true, this situation would warrant a TCRA. We visited the site to find out the current situation. Discussion with Mr. Boswell during this ESI revealed that the time frame of the children incident occurred during the 1940's.
7. Discussion: We performed a visual and magnetometer survey of the area without any intrusive investigations. We found an abundance of metal scrap on the surface but none relating to any unexploded ordnance (UXO). We detected numerous subsurface metallic anomalies with the majority of them near the former target center and detecting less the further out we went. The potential for subsurface presence of practice bombs exists. The landowner has built a new wooden fence to separate the property from the mobile home park.
8. Recommendations/Actions to be Taken: Based on the results of this ESI, a TCRA is not warranted and we recommend the Archives Search Report be completed for this site and a Non-TCRA be

CEHNC-OE-DC

Trip Report - Former Five Point Field (Twin Park Estate), Boswell
and Morris Properties, Texas K06TX002801

19 February 1998

scheduled. The property owners were advised to hire a UXO
contractor if they had intentions of developing the site.

Encl

Richard L. Pike
RICHARD L. PIKE
QASAS

Billy D. McPherson
BILLY D. MCPHERSON
Safety Specialist

CF:

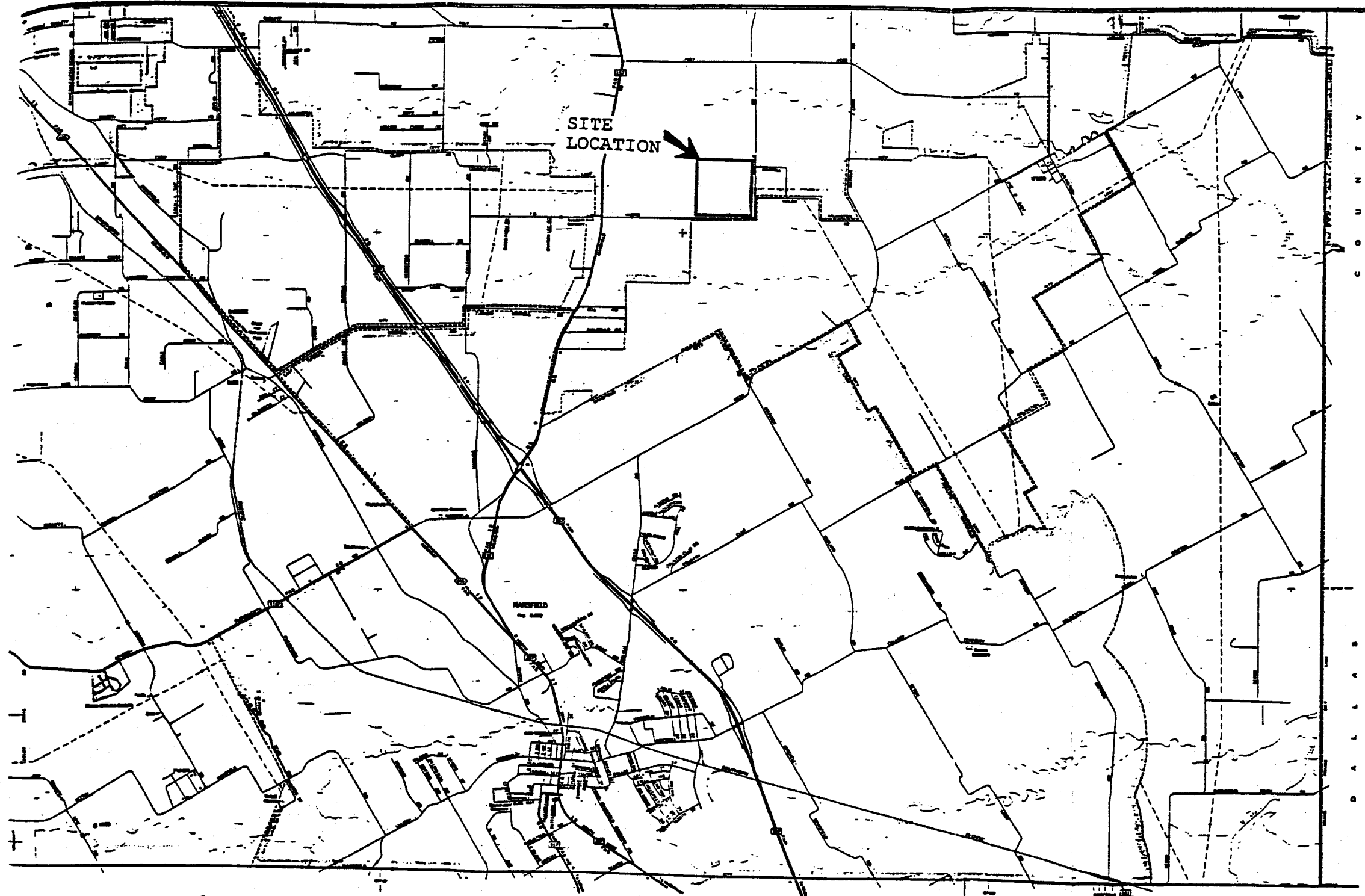
Commander, U.S. Army Corps of Engineers, Fort Worth District,
ATTN: CESWF-PM-J (David Scotto), P.O. Box 17300, Ft. Worth, TX
76102-0300

OE Read

OE-DC Pike/Read

OE-S McPherson/Read

ED File



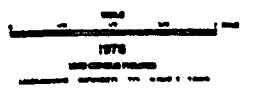
BOSWELL AND MORRIS PROPERTIES

FORMERLY

FIVE POINTS FIELD

SITE NO. K06TX002800

TARRANT COUNTY TEXAS 220



APPENDIX B

GLOSSARY & ACRONYMS

APPENDIX B

GLOSSARY AND ACRONYMS

AAF	Army Airfield
AA	Anti-Aircraft
AEC	Army Environmental Center
AGO	Adjutant General's Office
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Antipersonnel
APT	Armor Piercing with Tracer
ASR	Archives Search Report
Aux	Auxiliary
BAR	Browning Automatic Rifle
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BE	Base Ejection
BGR	Bombing and Gunnery Range
BLM	Bureau of Land Management
BRAC	Base Realignment And Closure
CADD	Computer-Aided Design/Drafting
Cal	Caliber
CBDA	Chemical and Biological Defense Agency
CBDCOM	Chemical and Biological Defense Command
CE	Corps of Engineers
CEHNC	Corps of Engineers, Huntsville Engineering and Support Center
CEMVS	Corps of Engineers, St. Louis
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
COE	Chief of Engineers
COMP	Composition
CTG	Cartridge
CSM	Chemical Surety Material
CSM	Command Sergeant Major
CWM	Chemical Warfare Material
CWS	Chemical Warfare Service

CX	Center of Expertise
DA	Department of the Army
DARCOM	Development and Readiness Command
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DERP-FUDS	Defense Environmental Restoration Program- Formerly Used Defense Sites
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ERDA	Environmental Restoration Defense Account
FDE	Findings and Determination of Eligibility
FFMC	Federal Farm Mortgage Corporation
FS	Feasibility Study
FUDS	Formerly Used Defense Sites
GIS	Graphic Information System
GSA	General Services Administration
HE	High Explosive
HEAT	High Explosive Anti-Tank
HEI	High Explosive Incendiary
HEP	High Explosive Plastic
HTRW	Hazardous Toxic and Radioactive Waste
HTW	Hazardous and Toxic Waste
IAS	Initial Assessment Study
ILLUM	Illuminating
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
MG	Machine Gun
MG	Major General
mm	Millimeter
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NARA	National Archives and Records Administration
NAS	Naval Air Station
NCDC	National Climatic Data Center
NCP	National Contingency Plan
NDAI	No DoD Action Indicated

NFS	National Forest Service
NG	National Guard
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
OE	Ordnance and Explosives
OEW	Ordnance and Explosive Waste
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PAE	Preliminary Assessment of Eligibility
PD	Point Detonating
PIBD	Point Initiating, Base Detonating
PL	Public Law
QASAS	Quality Assurance Specialist Ammunition Surveillance
RA	Removal Action
RAC	Risk Assessment Code
RD	Remedial Design
RG	Record Group
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SARA	Superfund Amendments and Reauthorization Act
SCS	Soil Conservation Service
SLD	St. Louis District, Corps of Engineers
SSHO	Site Safety and Health Officer
SSHP	Site Specific Safety and Health Plan
SWMU	Solid Waste Management Units
TECOM	Test Evaluation Command
TEU	Technical Escort Unit
TNT	Trinitrotoluene
TP	Target Practice
USA	United States of America
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAED	U.S. Army Engineer District
USAESCH	U.S. Army Engineering and Support Center, Huntsville, Alabama
USATHMA	U.S. Army Toxic and Hazardous Materials Agency
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance

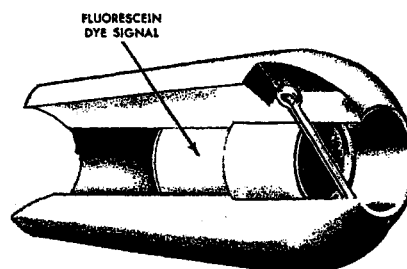
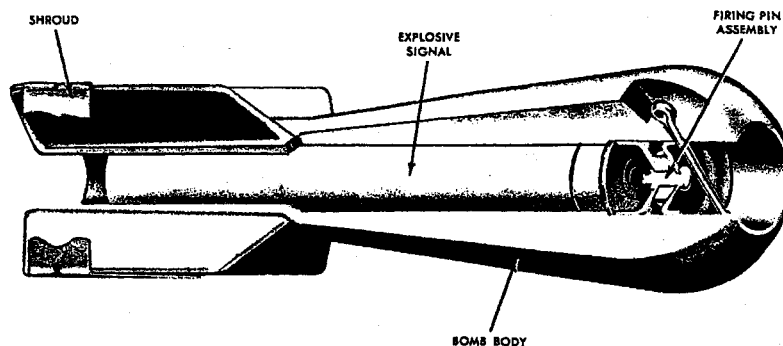
WAA	War Assets Administration
WD	War Department
WNRC	Washington National Records Center

APPENDIX C

ORDNANCE SHEETS

MINIATURE PRACTICE BOMBS

AN-Mk 5 Mod 1, AN-Mk 23, AN-Mk 43



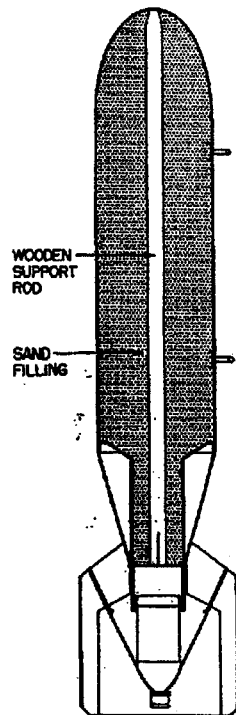
ORD D1160

Description. These bombs are used for low-altitude horizontal, or dive bombing practice. The three bombs are similar in physical appearance, but differ basically in the metal used to cast the body. Bombs are used with the AN-Mk 4 practice bomb signal which is a blank 10 gauge shotgun shell (extended length). Signals contain a black powder expelling charge and a red phosphorous pyrotechnic mixture. These bombs also are used with the MK5 signal which contains a fluorescein dye and is actuated by impact on water. When the Mk5 signal is installed, the firing pin assembly is not used.

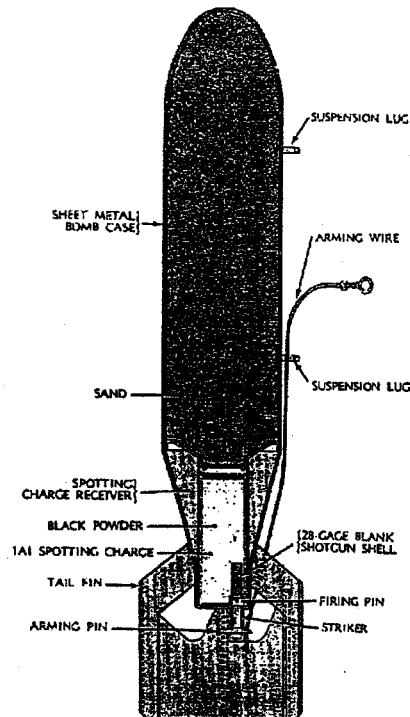
Over-all length	8.25 inches
Body Diameter	2.18 inches
Fin Dimension	2.5 inches
Weight	AN-Mk 5 Mod 1 - 2 lb. 11 oz. \pm 1 oz
	AN-Mk 23 - 3 lb. \pm 2 oz
	AN-Mk 43 - 4 lb. 7 oz. \pm 2 oz.
Signal	AN-Mk 4, Black powder/pyro-technic charge Mk 5, Fluorescein dye

Reference: OP 1280, *Aircraft Bombs*, February 1945; TM 9-1325-200, *Bombs and Bomb Components*, April 1966

BOMB, PRACTICE, 100 POUND, M38A2



with M5 spotting charge



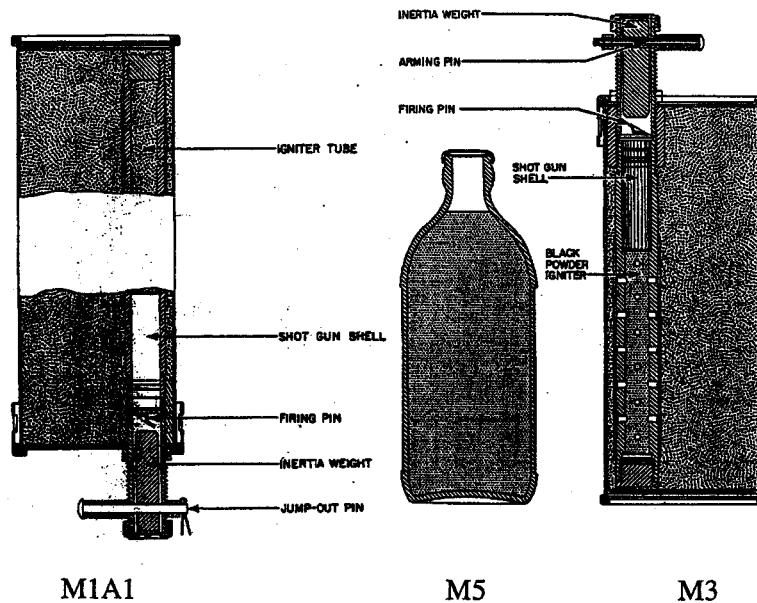
with M1A1 spotting charge

Description. This bomb simulates a General Purpose bomb of the same size. It is constructed of light sheet metal, approximately 22-gage, formed by rolling a rectangular sheet of metal into the form of a cylinder approximately 8 inches in diameter, and spot-welding the seam. The rounded nose is pressed from the same metal, as is the tail, which is formed in the shape of a cone. The tail portion ends in box type fins, which is welded to the cone. Inside of the smaller end of the conical tail section is welded the spotting charge receiver. The spotting charge is assembled in a sleeve at the base of the bomb, within the fin box. Authorized spotting charges are the M1A1, M3, and M5. When using the M5 spotting charge a wooden support rod is installed in the bomb. Two suspension lugs are bolted to the bomb body during fabrication. The Suspension Band M1 is provided for single suspension. The band is a separate component. The over-all length of the bomb body is 47.2 inches. When empty, the bomb body weighs approximately 14 pounds. When completely loaded with sand and spotting charge, the weight of the bomb is approximately 100 pounds.

Over-all length.....	47.5 inches
Diameter	8.13 inches
Weight empty	15.7 pounds
Weight sand loaded & spotting charge	100 pounds

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944; NAVSEA OP 1664 Volume 2, *U.S. Explosive Ordnance*, February 1954; *Complete Round Chart #5981*, October 1944

SPOTTING CHARGES, M1A1, M3, M5



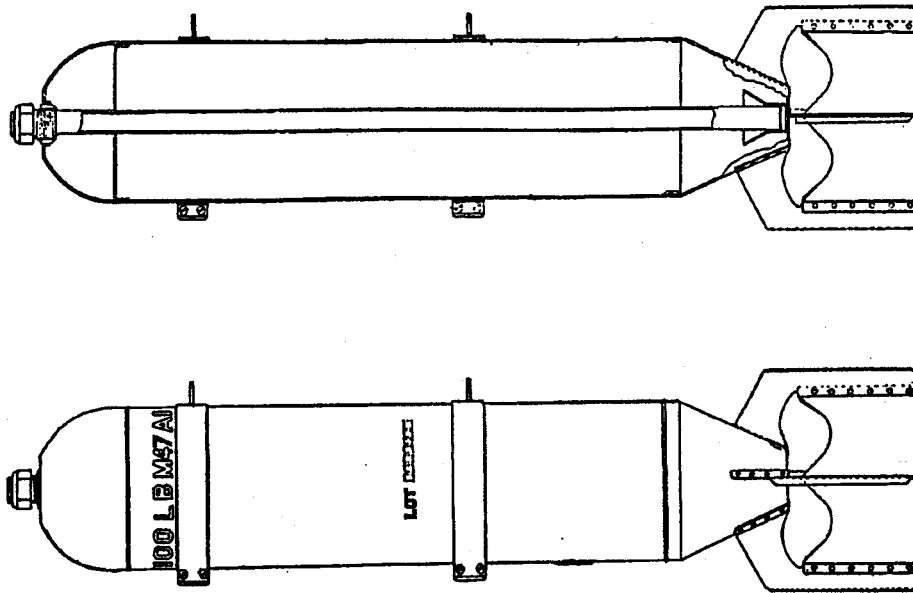
M1A1 Spotting Charge. This type of spotting charge fits in the after end of the 100-pound Practice Bomb M38A2. It produces a flash of flame and white smoke for observation of bombing accuracy. It is made from a large tin can, 11.18-inches long, 3.43-inches diameter, weighing 4.25-pounds. At the top of the can is a cover, which has a hole in it for the insertion of a 28-gage blank shotgun shell and firing mechanism. Upon impact, the inertia weight drives the firing pin into the shotgun-type primer, igniting the 3-pounds of black powder.

M3 Spotting Charge. The spotting charge has a 2 1/3-pound dark smoke filling and a black-powder igniter. It is 5/8 of an inch longer than the Spotting Charge M1A1, but otherwise similar. The M3, with its dark smoke filler, is well adapted for bombing practice over snow-covered terrain. The black-powder igniter charge contains approximately 425 grains. It is used in the M38A2 Practice bomb.

M5 Spotting Charge. The spotting charge consists of a glass bottle filled with FS smoke mixture. An ordinary bottle cap seals the mixture. The bottle is held to the Practice Bomb M38A2 by a wire twisted around the neck of the bottle and attached to the tail vanes. The charge assembly weighs 2.54 pounds.

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944; NAVSEA OP 1664 Volume 2, *U.S. Explosive Ordnance*, February 1954

BOMB, CHEMICAL, 100-POUND M47 SERIES



General. The bomb was developed to meet the requirements of the Air Forces for a chemical bomb for "bombardment" purposes. It is a thin case bomb whose design and construction is such as to provide maximum efficiency after release from the plane.

Description. The body of this bomb is made of 1/32-inch sheet metal rolled and lap welded into a cylindrical shape 8-inches in diameter. The nose is hemispherical and welded to the body as is the box type tail fin assembly, which forms the tail taper of the bomb body. The over-all length of the bomb is 45 inches excluding the fuze. The burster well is screwed into the bomb body by means of pipe threads to make a gas-tight seal at the nose. It is held in place at the tail of the bomb body by an attached cone in the inner side of the fin assembly. It is internally threaded to receive a sleeve, which has a groove in its lower portion to seat the fuze, which is pressed in place. Around the bomb body are two suspension bands 14-inches apart which provide suspension lugs for horizontal suspension. One blade of the fixed box type tail assembly is in line with the suspension lug. The bomb utilizes the Bomb Fuze M108 (Nose) in conjunction with the M4 Burster, which has a charge of tetryl when used with a White Phosphorous (WP) or Mustard (H) filler. The H filler has been found to leak when loaded into this bomb. At the date of publication, the M47 and M47A1 were not allowed to be loaded. When loaded with H, the entire weight of the bomb is 93 pounds, of which 73 pounds is chemical agent.

The Bomb may be loaded with an incendiary filler of rubber and gasoline in the field. The base filling is gasoline supplemented by one of the four different incendiary ingredients as follows:

1. LA-60. Consists of crude latex or sap in combination with caustic soda, coconut oil, and water
2. Crepe rubber (CR). This is crude latex but is reduced to a solid by precipitation and kneading.
3. LA-100. This is crude latex dried until it is approximately 100 percent solid.
4. Smoked rubber sheets (SR) a crude latex, which has been dried over a smoky fire until it is approximately 100 percent solid.

When loaded with the incendiary filler the Bomb Fuze M108 (Nose) with a 1-pound black powder Burster Charge M7 is used. This burster charge bursts the bomb and scatters and ignites the filler. When filled, the body weighs 85 pounds of which 65 pounds is incendiary filler. This is a typical example of the scatter type of incendiary filler.

Painting. The bomb is painted as other chemical ammunition with a blue-gray base color. If loaded with H, it will have two green bands and will be stenciled in green. If loaded with WP, it will have one yellow band and will be stenciled in yellow. If loaded with incendiary filler, it will have one purple band and will be stenciled in purple. The stenciling for the incendiary bomb will indicate the type of rubber filling such as "incendiary oil, LA-60" or "incendiary oil SR".

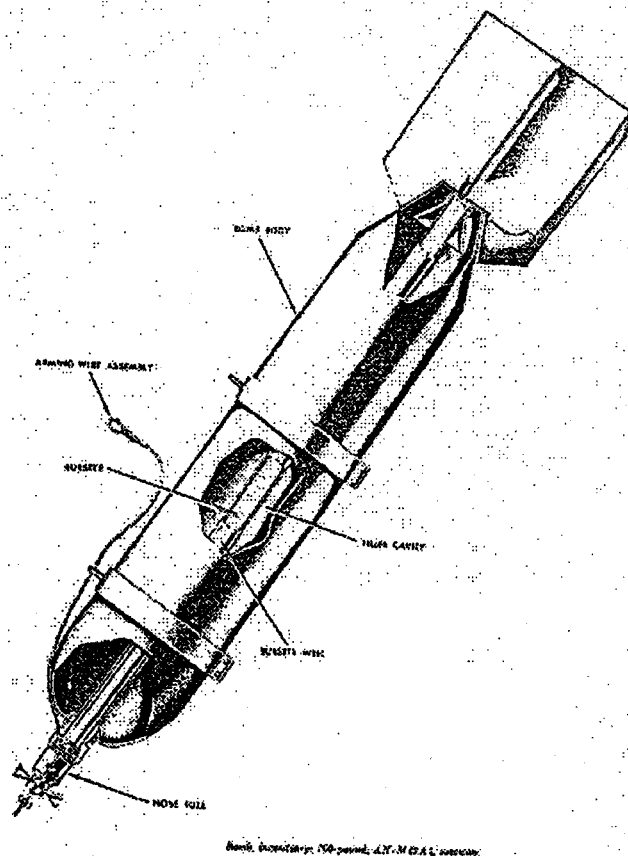
Comparison. The M47A1 was designed to replace the 100-pound M47. The M47 was found to have too thin a wall section, and in handling and storage, it developed leaks due to corrosion and rough treatment. Consequently, the wall thickness was increased from 1/32 inch to 1/16 inch, and coating inside with acid-proof black paint protected the case. This special inside coat of paint was to provide a resistance of 100-pound pressure. However, chemical agent was still found to leak from the bomb case as with the previous bomb and is not to be loaded in empty 100-pound M47A1 Bomb Cases. In design, it is similar to the 100-pound M47. It is however, approximately 9 pounds heavier and weighs, when loaded with H, 102 pounds, of which 73 pounds is H. When loaded with Incendiary Oil, it weighs 94 pounds, of which 65 pounds is incendiary oil. An additional fuze, which may be found used with this chemical bomb, is Fuze Bomb M126 (Nose).

The M47A2 was designed to be able to receive the chemical filler mustard (H) without leaking. It was coated on the inside with special oil, which provided in theoretical tests too are resistant to filler pressure having a resistance of 400-pounds pressure. It does not differ from the 100-pound M47A1 in any appreciable way. It was found, however, that this bomb was also subject to leaking, but not to such an extent as its predecessors.

The chemical agent H is still to be loaded into this bomb as temporary emergency filler. The fuze is the Nose Bomb Fuze M108 or Fuze Bomb M126 (Nose). When the M126 Fuze is used, the special adapter for the M108 Fuze is removed, as the M126 Fuze can screw directly in the burster well. In all other components, the bomb is exactly the same.

Reference: TM 9-1904, *Ammunition Inspection Guide*, and March 1944

BOMB, INCENDIARY, 100-POUND, M47 SERIES



Description. This bomb can be found in four modifications, A1 through A4. The bomb body is sheet-steel tube with a longitudinal seam weld. The nose end is hemispherical. A base plate at the rear end is welded to the tube. Several bursters may be used interchangeably. The burster runs the length of the bomb. The burster AN-M12 is a tube containing a 50-50 mixture of black powder and magnesium. The burster AN-M13 is a tube containing TNT and tetryl pellets at each end, and is used in conjunction with the Igniter AN-M9 (WP or NA). Four vanes are welded to a truncated cone with box-type interior struts to form the tail

Over-all length.....	51.7 inches
Diameter.....	8.1 inches
Weight Loaded.....	70-72 pounds
Weight empty.....	29.0 pounds
Filler.....	Gasoline, gasoline gel, gasoline/waste, rubber
Filler Weight.....	45-48 pounds
Fuze.....	AN-M126 or AN-M126A1A1 (impact)
Burster.....	AN-M12 or AN-M13

Reference: *Aircraft Munitions Versus Specific Targets, Vol 1*, May 1945

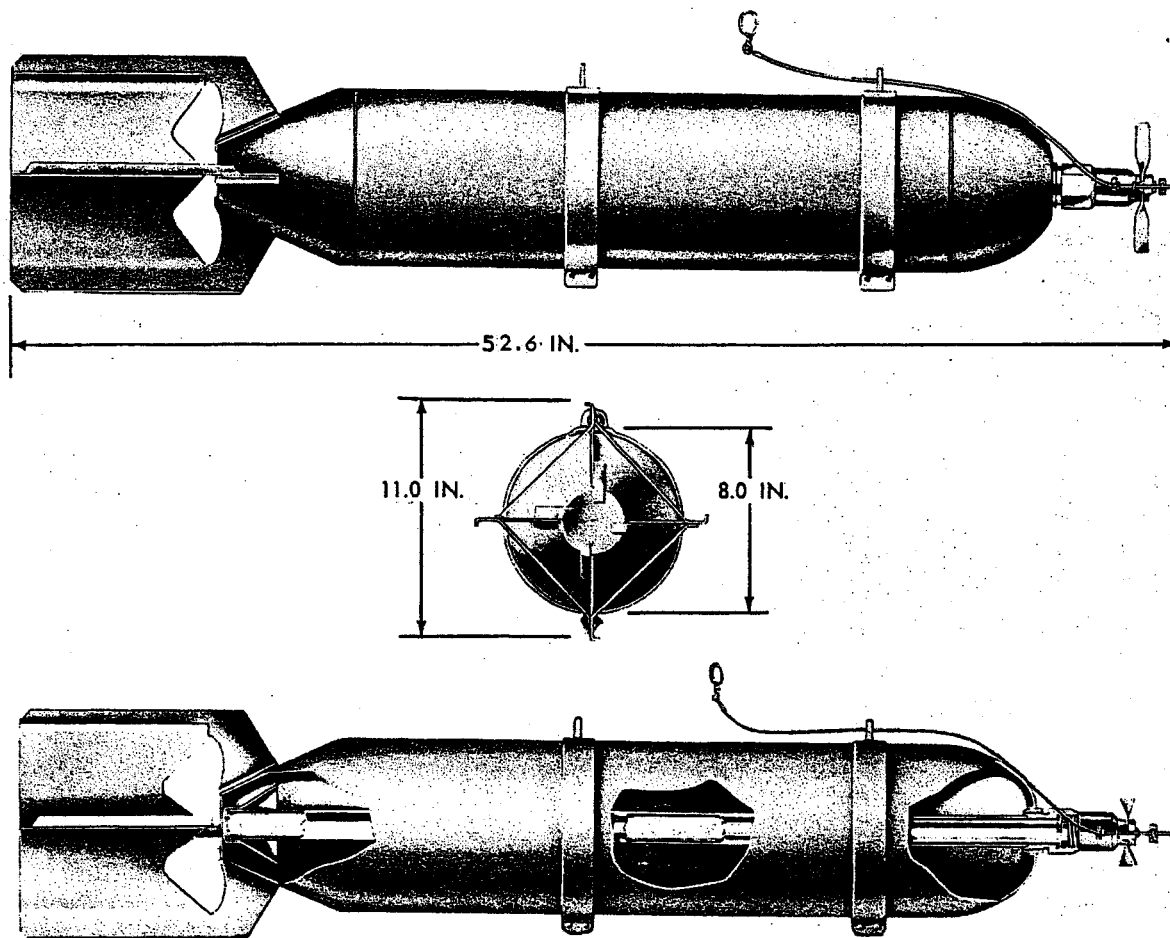
Section VI. SMOKE BOMBS

2-32. General

Smoke bombs are generally used for screening purposes to conceal combat areas, the movement of troops and ships, for marking targets, and for anti-personnel effect. The standard filling for these bombs is plasticized white phosphorus (PWP),

which is a smoke-producing agent. White phosphorus (WP) has a mild incendiary effect and will set fire to materials having a low kindling point, such as clothing, dry brush, paper, canvas, etc.

2-33. Bomb, Smoke: PWP or WP, 100-Pound, AN-M47A4



ORD D1146

Figure 2-40. Bomb, Smoke: PWP or WP, 100-pound, AN-M47A4

Table 2-36i. Bomb, Smoke: PWP or WP, 100-Pound,
AN-M47A4

Model.....	AN-M47A4
Length of Assembled Bomb (in.).....	52.6
Diameter of Body (in.).....	8.0
Weight of Assembled Bomb (lb):	
Filled with PWP.....	105.0
Filled with WP.....	131.0
Filler Weight (lb):	
PWP.....	74.0
WP.....	100.0
Fuze.....	AN-M159
	AN-M126A1
Burster:	
PWP.....	AN-M20
WP.....	M18
Arming-Wire Assembly.....	C5 or M2

a. *Description.* Smoke bomb AN-M47A4 (fig. 2-40 and table 2-36) is approximately 52.56 inches long and weighs approximately 105 pounds when filled with PWP and approximately 131 pounds when filled with WP. It is approximately 8.50 inches in diameter and has a rounded nose, a truncated conical tail section, and a fixed tail fin. The complete round consists of a bomb body, filler, a burster, a fuze, and an arming wire. Smoke bomb AN-M47A4 is essentially the same as incendiary bomb AN-M47A3 except for the filler, the burster, and the suspension lugs, which are of heavier construction in bomb AN-M47A4.

- (1) *Body.* The bomb body is made of sheet steel. A burster well, which is a metal tube closed at one end, extends the full length of the bomb. It is installed in the bomb during manufacture. A threaded

hole in the nose end of the bomb receives the fuze. During shipment, the hole is closed by a nose plug. Two suspension bands with suspension lugs at the top are clamped around the body by machine screws. The tail fin, which has four vanes, is welded to the tail section during manufacture.

- (2) *Filler.* The bomb is filled during manufacture with either 74 pounds of PWP or 100 pounds of WP.
- (3) *Burster.* A burster AN-M29 is used in a bomb filled with PWP; a burster M18 is used in a bomb filled with WP. The burster is installed in the bomb during assembly.
- (4) *Fuze.* The preferred fuze is nose bomb fuze AN-M159. Nose bomb fuze AN-M126A1 is an authorized alternate. The fuze is shipped separately and is installed in the bomb during assembly.
- (5) *Arming wire.* Arming wire C5 is used with this bomb.

b. *Functioning.* Functioning of a fuze and a burster shatters the bomb on impact, dispersing the agent in burning particles over a wide area. The particles are ignited spontaneously by atmospheric oxygen and produce a dense white smoke.

c. *Differences.* An earlier model of bomb AN-M47A4 was the AN-M47A3. The two bombs are identical except that the AN-M47A3 has more lightly-constructed suspension lugs and is authorized for filling with PWP only.

APPENDIX D

REPORTS/STUDIES

Inventory Project Report (INPR)

1996

Defense Environmental Restoration Program, Formerly Used Defense Sites (DERP-FUDS), Inventory Project Report, dated October 1996, for site K06TX002800, former Five Points Field Bombing Range; Findings and Determination of Eligibility, dated 4 December 1996; Property Survey Summary Sheet, dated October 1996; Project Summary Sheet, dated October 1996; RAC Form dated 30 September 1996.

John



US ARMY CORPS OF ENGINEERS

Fort Worth District

Hazardous Waste Management Section

FACSIMILE TRANSMITTAL HEADER SHEET

COMMAND/
OFFICENAME/
OFFICE SYMBOLOFFICE
PHONE NO.

FAX NO.

FROM

Fort Worth District
US Army Corps of EngineersRANDY NIEBUHR
CESWF-EV-DI(817)978-3223
Ext. - 1642

(817) 978-2991

TO

ST. LOUIS
DISTRICT

ELEANOR REYNARDMAN (314) 331-8103 (314) 331-8828

CLASSIFICATION

PRECEDENCE

NO. PAGES
(incl Header)

DATE-TIME

MONTH YEAR

RELEASER'S SIGNATURE

Unclassified

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MARCH 98 Randy Niebuhr

REMARKS

Transmittal of Twin Park Estates INPR, K06TX002800.

**PROPERTY SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. K06TX002800
BOSWELL AND MORRIS PROPERTIES
OCTOBER 1996**

*SA-15 N-14
FHE-1002
IN Tarrant Co.*

PROPERTY NAME: Boswell and Morris Properties, formerly Five Points Field.

LOCATION: The site is located at the corner of Harris Road and Matlock Road, Arlington, Tarrant County, Texas.

PROPERTY HISTORY: The U.S. Government acquired 162.06 fee acres in 1940. The site was used as a practice bombing range by personnel from the Naval Air Station at Grand Prairie, Texas. The site was developed and designated Five Points Field. Improvements constructed at the field included target bull's-eye rings and a boundary fence. It is not known when the military ceased use of the site. Engineer Range Clearance Team A, 9800 TSU-CE Detachment Number 4, swept and cleared the range of all dangerous and/or explosive material, possible to detect, in January 1956. The 1956 Clearance Certificate superseded a Certificate of Clearance dated 7 October 1954. At an unknown date, the Navy transferred the range to the General Services Administration (GSA) for disposal. The GSA conveyed the former range, 162.06 fee acres, to Gordon and Pope Supply Company on 19 July 1956. Following the initial GSA conveyance, ownership of the former range changed several times. On 31 October 1977, the 8.8 Corporation conveyed the former site, 162.06 fee acres, to the James Knapp Estate. The Knapp Estate conveyed 74.59 fee acres to the Twin Park Estate Partnership (Messrs. Herman Boswell, Carl Mincer, Monty Thompson, and Jewel Enterprises) on 25 March 1983. On or about 1982, the Knapp Estate conveyed 84 fee acres of the former range to Mr. Rob Morris. The Knapp Estate currently owns approximately 5 fee acres of the former range. A portion of the Twin Parks Estate Partnership acreage, 35 acres, was developed into a mobile home park. The remainder of the former range is covered with mesquite trees and is not in use at the present time.

PROPERTY VISIT: A site visit was conducted on 26 September 1996, by Mr. Randy Niebuhr, CESWF-ED-E. Mr. Niebuhr met with Messrs. Herman Boswell and Rob Morris and they drove through the mobile home park. No evidence of hazardous waste or unsafe debris, as a result of Department of Defense activity, was found at the site. Mr. Niebuhr returned to the site following the meeting with Messrs. Boswell and Morris, and inspected a portion of the Morris property. No evidence of unexploded ordnance was found during the site visit; however, approximately 3,000 practice bombs were removed from the adjacent mobile home park in 1983 and 1984.

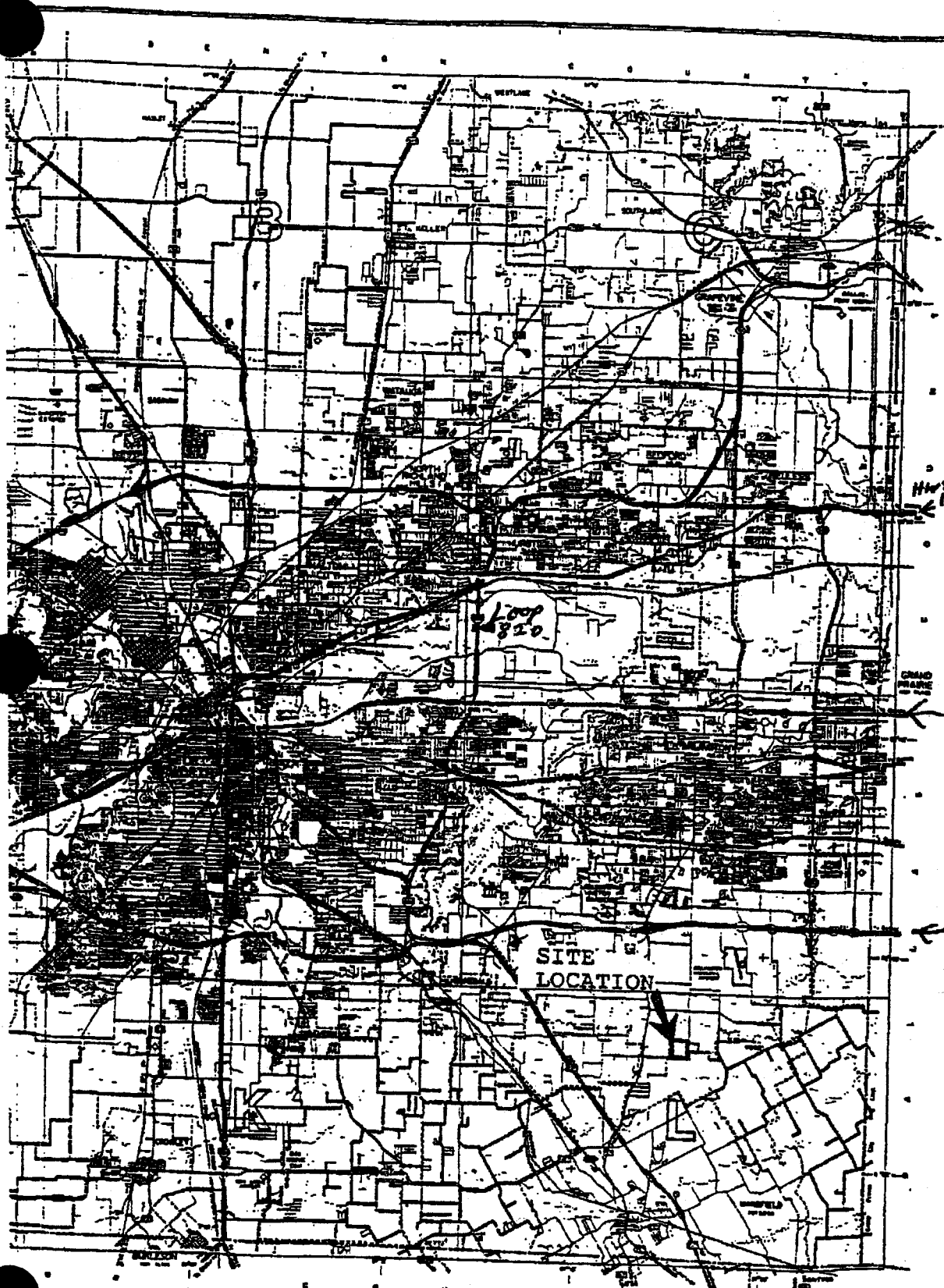
CATEGORY OF HAZARD: The category of hazard is ordnance and explosive waste (OEW).

**PROPERTY SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. K06TX002800
BOSWELL AND MORRIS PROPERTIES
OCTOBER 1996**

PROJECT DESCRIPTION: OEW contamination has been found at this site. The Fort Worth District recommends an engineering evaluation and cost analysis be conducted for this range, followed by a removal action. The potential OEW project is described under Project No. K06TX002801.

AVAILABLE STUDIES AND REPORTS: None.

FORT WORTH DISTRICT POC: Mr. Randy Niebuhr, 817/978-3223, EXT 1642.



also known as
Airport Freeway
BOSWELL AND

FIVE P

SITE NO.

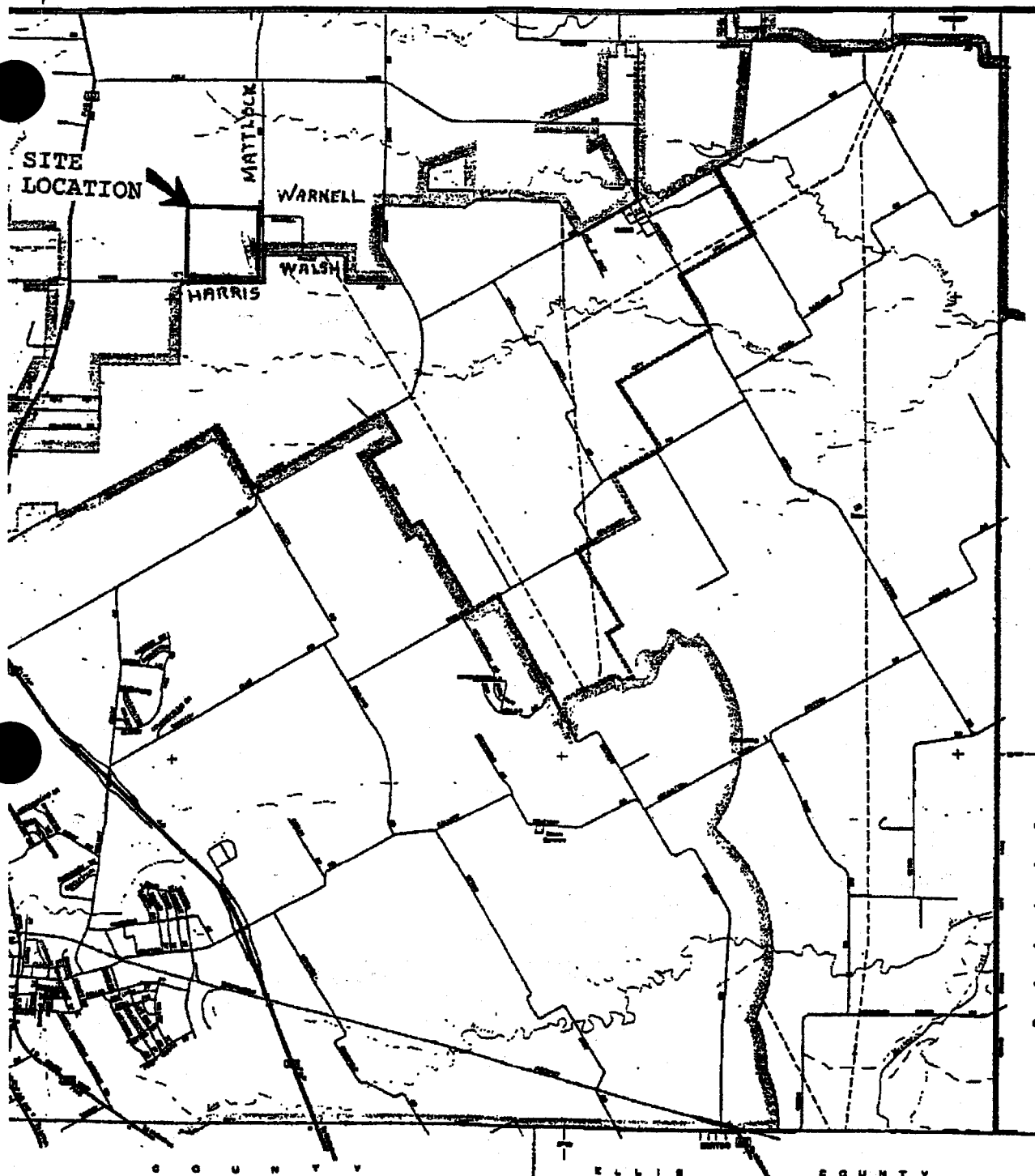
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F-20

SITE
LOCATION

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200 70 SUPPLEMENTARY SHEET



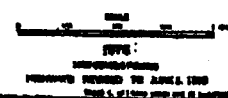
BOSWELL AND MORRIS PROPERTIES

FORMERLY

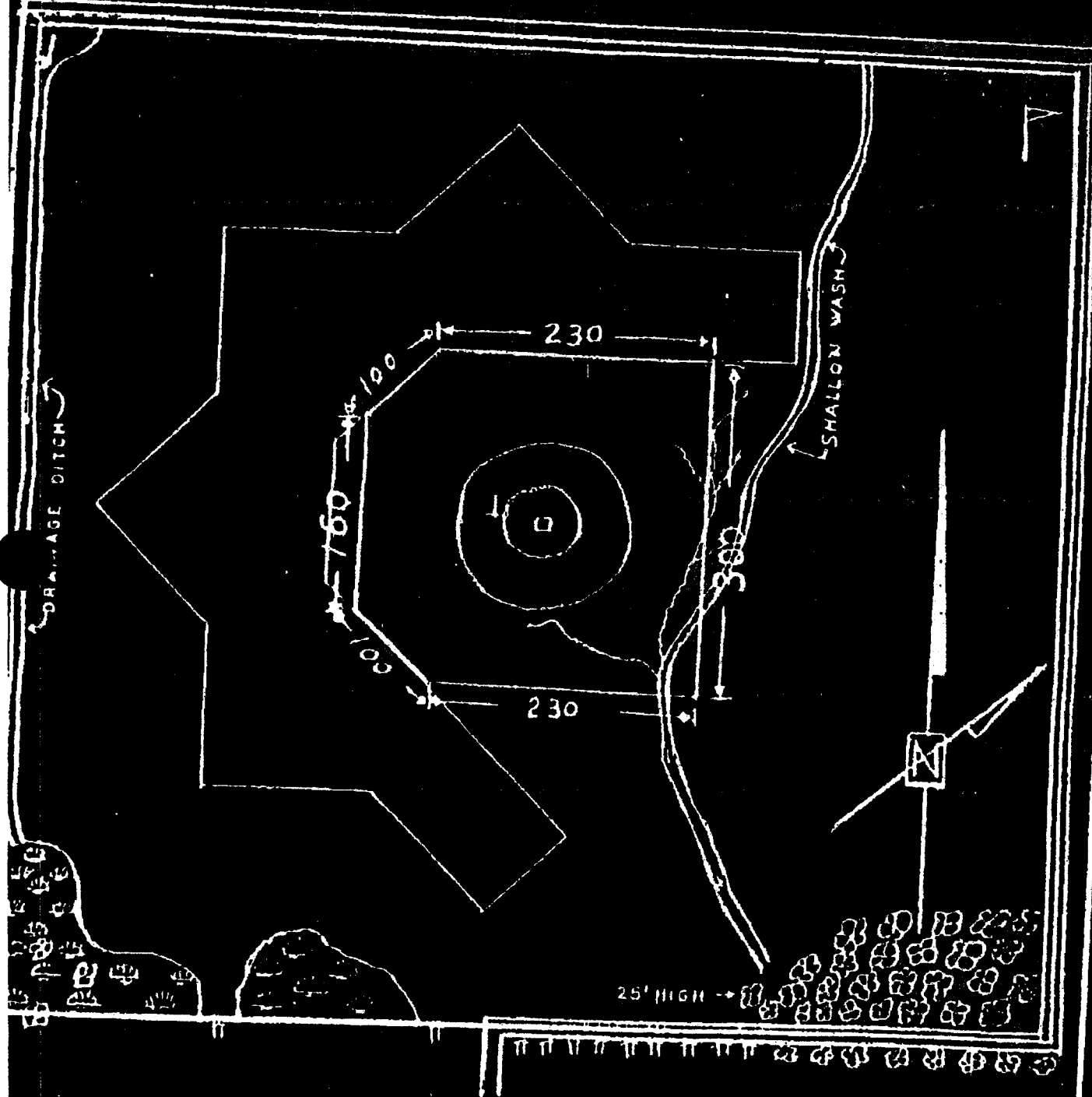
FIVE POINTS FIELD

TARRANT COUNTY TEXAS 220

SITE NO. K06TX002800



ATTACHMENT TO EXHIBIT A
G S A DISPOSAL NO. GSA-R-271



FIVE POINTS FIELD

FIELD NO. 22913
LONG. 97° 07' 25"
LAT. 32° 37' 26"

LEGEND
DRAIN

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES PROGRAM
FINDINGS AND DETERMINATION OF ELIGIBILITY
BOSWELL AND MORRIS PROPERTIES
SITE NO. K06TX002800

FINDINGS OF FACT

1. The U.S. Government acquired 162.06 fee acres in 1940 for a practice bombing range. The site is located at the corner of Harris Road and Matlock Road, Arlington, Tarrant County, Texas. The property was developed, and designated Five Points Field.
2. Five Points Field was used by the Navy as a practice bombing range by personnel from the nearby Naval Air Station at Grand Prairie, Texas. Improvements constructed at the field included target bull's-eye rings and a boundary fence. It is not known when the military ceased use of the site. The range was never subject to other than Department of Defense (DOD) control during the period of DOD interest.
3. The Navy declared the range, 162.06 fee acres, excess at an undetermined date. At an unidentified date, the Navy transferred the range to the General Services Administration (GSA) for disposal. In January 1956, Engineer Range Clearance Team A, 9800 TSU-CE Detachment Number 4, swept and cleared the range of all dangerous and/or explosive material possible to detect. The Clearance Certificate issued in 1956 superseded a Certificate of Clearance dated 7 October 1954. The GSA conveyed the former range, 162.06 fee acres, to Gordon and Pope Supply Company on 19 July 1956. Following the initial GSA conveyance, ownership of the former range changed several times. On 31 October 1977, the 8.8 Corporation conveyed the former site, 162.06 fee acres, to the James Knapp Estate. The Knapp Estate conveyed 74.59 fee acres to the Twin Park Estate Partnership (Messrs. Herman Boswell, Carl Mincer, Monty Thompson, and Jewel Enterprises) on 25 March 1983. On or about 1982, the Knapp Estate conveyed 84 fee acres of the former range to Mr. Rob Morris. The Knapp Estate currently owns approximately 5 fee acres of the former range. A portion of the Twin Parks Estate Partnership acreage, 35 acres, was developed into a mobile home park. The remainder of the former range is covered with mesquite trees and is not in use at the present time. There is no record in the real estate files of any restoration or recapture clauses. The deed did restrict 17.5 acres of the former range to surface use only. The deed also contained a statement absolving the U.S. Government of all liability, claims, or suits arising from Navy use of the property.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES PROGRAM
FINDINGS AND DETERMINATION OF ELIGIBILITY
BOSWELL AND MORRIS PROPERTIES
SITE NO. K06TX002800

DETERMINATION

Based on the foregoing Findings of Fact, the site has been determined to be formerly used by DOD. It is, therefore, eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites established under 10 USC 2701 et seq.

4 Dec 1996
DATE

Henry S. Miller, Jr.
HENRY S. MILLER, JR.
Brigadier General, USA
Commanding

PROJECT SUMMARY SHEET
DERP-FUDS OEW PROJECT K06TX002801
BOSWELL AND MORRIS PROPERTIES
SITE NO. K06TX002800
OCTOBER 1996

(AN-23) Mark 23
Navy and back

PROJECT DESCRIPTION: The site was the former Five Points Field bombing range. Personnel from the nearby Naval Air Station at Grand Prairie, Texas, dropped practice and smoke bombs on the range during World War II. It is not known when the military ceased use of the site. The type of bomb used at the site is believed to be a Mark 23-MOD-1, which contained approximately 5 ounces of black powder and/or phosphorus. Engineer Range Clearance Team A, 9800 TSU-CE Detachment Number 4, swept and cleared the range of all dangerous and/or explosive material, possible to detect, in January 1956. The Clearance Certificate issued in 1956 superseded a Certificate of Clearance dated 7 October 1954. Ordnance was discovered at the site in 1983 and 1984 when the Twin Park Estate Partnership started clearing 35 acres of the former range for a mobile home trailer park. The Department of Defense (DOD) declined to remediate the site under the Environmental Restoration Defense Account (ERDA). After DOD refusal to render assistance, the partnership hired Jet Research Center to clear the trailer park site of ordnance. Jet Research Center removed approximately 3,000 bombs from the 35 acres. Ordnance was found as deep as 6 feet, which may indicate that the ordnance found during previous sweeps was buried in-place. The 47th Ordnance Detachment at Fort Hood took possession of the ordnance recovered by Jet Research Center for proper disposal. It appears that the center of the range is further to the west on the Morris property.

PROJECT ELIGIBILITY: Records and site maps indicate that the former bombing range was established and used by the Navy. Any ordnance contamination at the site is the result of Department of Defense (DOD) activities and is, therefore, eligible for removal under DERP-FUDS. This project has been evaluated in accordance with Appendix A, CEMP-RT memorandum, 5 April 1990, subject: Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS -- Program Execution Policy and Criteria for Explosive Ordnance (EXO)).

POLICY CONSIDERATIONS: This project will cover the 127 acres which have not been subject to recent bomb removal. It is reported that children in the past have poked holes in the back end of the bombs, strung out the black powder along the ground, and lit the powder to watch it burn. The former bombing range is in an area of Arlington, Texas, which is growing.

PROJECT SUMMARY SHEET
DERP-FUDS OEW PROJECT K06TX002801
BOSWELL AND MORRIS PROPERTIES
SITE NO. K06TX002800
OCTOBER 1996

PROPOSED ACTIVITIES: This INPR should be referred to CEHNC for a determination of further action. The Fort Worth District recommends an engineering evaluation and cost analysis be conducted for this range, followed by a removal action.

RAC: This site was assigned a risk assessment code of 2.

FORT WORTH DISTRICT POC: Mr. Randy Niebuhr, 817/978-3223,
Extension 1642.

EXHIBIT A

GSA DISPOSAL NO. GSA-R-271

9800 TSU-CE DETACHMENT NO. 4
ENGINEER RANGE CLEARANCE TEAM "A"
GENERAL DELIVERY
SNYDER, TEXAS

26 January 1956

CERTIFICATE OF CLEARANCE

NAVY OUTLYING FIELD
FIVE POINTS
ARLINGTON, TEXAS

All lands included in the 162 acre field known as Five Points located approximately eight (8) miles South of Arlington, Texas on Farm Road #157 has been given carefull visual inspection and cleared of all dangerous and/or explosive material reasonably possible to detect. The 17.5 acre impact area as outlined in attached sketch is recommended for any above surface use to which the land is suited. The remainder of the field is recommended for any use to which the lands are suited. This certificate supersedes, certificate of clearance dated 7 October 1954.

/s/ D. R. LYNCH
Major, CR
Commanding

COPY

RISK ASSESSMENT PROCEDURES FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name: Boswell & Morris Prop. s Rater's Name: Randy Niebuhr
 Site Location: Arlington, Tx. Phone No. 817/978-3223,1642
 DERP Project # K06TX002801 Organization: CESWF-ED-E
 Date Completed 30 September 1996 RAC Score 2

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE (Circle all values that apply)

A. Conventional Ordnance and Ammunition

	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuses, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	⑥
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	<u>6</u>

What evidence do you have regarding conventional OEW? Recovery of
approximately 3,000 practice bombs in 1983 and 1984

B. Pyrotechnics (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators	4

Pyrotechnics (Select the largest single value)0What evidence do you have regarding pyrotechnics? None.C. Bulk High Explosives (Not an integral part of conventional ordnance;
uncontainerized.)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10

Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HBX, HMX Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosives, Explosives D, etc.)	3
<u>High Explosives</u> (Select the largest single value)	<u>0</u>
What evidence do you have regarding bulk explosives?_____	
None.	

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
<u>Propellants</u>	<u>0</u>
What evidence do you have regarding bulk explosives?_____	
None.	

E. Radiological/Chemical Agent/Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear, Incendiary, and Smoke)	5
<u>Radiological/Chemical Agent</u> (Select the largest single value)	<u>0</u>
What evidence do you have of chemical /radiological OEW?_____	
None.	

Total Hazard Severity Value 6
 (Sum of Largest Values for A through E [Maximum of 61])
 Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1
HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥ 21
CRITICAL	II	$\geq 10 < 21$
MARGINAL	III	$\geq 5 < 10$
NEGLIGIBLE	IV	$\geq 1 < 5$
NONE		0

* Apply Hazard Severity to Table 3.

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Locations of OEW Hazards

On the surface

VALUE
⑤

Within Tanks, Pipes, Vessels
or Other confined locations.

4

Inside walls, ceilings, or other
parts of Buildings or Structures.

3

Subsurface

②

Location (Select the single largest value).

5

What evidence do you have regarding location of the OEW? OEW
found to a depth of 6 feet.

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

VALUE

Less than 1250 feet

⑤

1250 feet to 0.5 miles

4

0.5 miles to 1.0 miles

3

1.0 mile to 2.0 miles

2

Over 2.0 miles

1

Distance (Select the single largest value).

5

What are the nearest inhabited structures? Twin Parks Estate
mobile home trailers on land formerly Five Points Field Bombing
Range

C. Numbers of Buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

VALUE

26 and over

⑤

16 to 25

4

11 to 15

3

6 to 10

2

1 to 5

1

0

0

Number of Buildings (Select the single largest number) 5

Narrative: Over 200 trailers, and a new housing subdivision just
east of Matlock Road

D. Types of Buildings (within a 2 mile radius)

VALUE

Educational, Child Care, Residential,
Hospitals, Hotels, Commercial,
Shopping Centers

⑤

Industrial, Warehouse, etc.

④

Agricultural, Forestry, etc.

3

Detention, Correctional

2

No Buildings

0

Types of Buildings (Select the largest single value). 5

Describe types of buildings in the area. Homes, mobile home
trailers, light industry, new middle school

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to site.	③
Security guard, but no barrier	2
Isolated site	1

A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).

Accessibility (Select the single largest value)

3

Describe the site accessibility. Boundary fence

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

VALUE

Expected

⑤

None Anticipated

0

Site Dynamics Value (Select the largest value).

5

Describe the site dynamics. More housing developments, and/or light industry. Population growth from city of Arlington is expanding in this direction.

Total Hazard Probability Value.
(Sum of largest values for A through F
Maximum of 30)

28

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2
HAZARD PROBABILITY

Description	Level	Value
<u>FREQUENT</u>	A	≥ 27
PROBABLE	B	$\geq 21 < 27$
OCCASIONAL	C	$\geq 15, 21$
REMOTE	D	$\geq 8 < 15$
IMPROBABLE	E	> 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:					
CATASTROPHIC I	1	1	2	3	4
CRITICAL II	1	2	3	4	5
MARGINAL III	2	3	4	4	5
NEGLIGIBLE IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 202-955-4968 or DSN 645-4968.
- RAC 2** High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

PART IV. Narrative: Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

Children have reported played with practice bombs in the past. Approximately 3,000 practice bombs were recovered from 35 acres of the former range in 1983 & 1984. City of Arlington is expanding in the direction of the former range.

APPENDIX E

LETTERS/MEMORANDA/MISCELLANEOUS ITEMS (Not Used)

APPENDIX F

REAL ESTATE DOCUMENTS

Special
DEED WITHOUT WARRANTY

COUNTY OF TARRANT

KNOW ALL MEN BY THESE PRESENTS THAT:

WHEREAS, the property hereinafter described was declared surplus to the needs of the United States of America pursuant to the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended; and

WHEREAS, the property hereinafter described was formerly used by the Department of Defense as an impact area of a bombing range; and

WHEREAS, such property was subject to contamination by the introduction of unexploded and dangerous bombs, shells, rockets, mines and charges, either upon or below the surface thereof; and

WHEREAS, the United States of America, by and through the Corps of Engineers, Department of the Army, has caused the property to be inspected and has decontaminated the same to the extent deemed reasonably necessary in the opinion of the United States, and consistent with economic limitations, and has made certain recommendations pertaining to the use to which the land may be devoted; and

WHEREAS, the said recommendations are contained in a Certificate, copy of which is attached hereto and made a part hereof; and

WHEREAS, the United States by attaching such Certificate does not intend to make, nor shall it be construed to have made, any representations or warranties pertaining to the condition of the land; and

WHEREAS, the GORDON & POPE SUPPLY CO., INC., Grantee herein, has evidenced its desire to purchase said property with full knowledge of, and notwithstanding, the foregoing.

NOW, THEREFORE, the UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended, and rules, orders and regulations issued pursuant thereto, in consideration of the premises and all of the terms, covenants and conditions hereinafter contained, and the sum of THIRTY FOUR THOUSAND FIVE HUNDRED SIX AND NO/100 (\$34,506.00) DOLLARS, to it duly paid by GORDON & POPE SUPPLY CO., INC., a Texas corporation, with principal offices in the City of Fort Worth, Texas, the receipt of which

...sell, grant and convey, with-
...plied, unto the said GORDON & POPE SUPPLY CO., INC., its
successors and assigns, the following described property, situate, lying and being
the County of Tarrant, State of Texas, to-wit:

Beginning at an iron pipe S. 80° 42' 30" W. 236 feet from the SE
corner of the T. O. Harris Survey, Abstract No. 645, and the SW
corner of the Wm. Warnell Survey, Abstract No. 1613, said beginning
point being the SE corner of the J. S. Bates 59.3 acre tract and
the SW corner of the A. S. Mayfield 102.76 acre tract;

Thence S 89° 28' 30" W. 990 ft. to an iron pipe corner;

Thence N 0° 30' E 2,640.26 ft. to a point in the north line of
the T. O. Harris Survey, from which a 1" iron pipe bears S 0°
30' W 30.56 ft.;

Thence N 89° 45' E 990 ft., the northwest corner of the Wm. W.
Warnell Survey, from which a 3/4" iron pipe bears S 0° 29' 30"
W 25 ft., said corner being also the northwest corner of the
A. S. Mayfield tract and the northeast corner of the J. S. Bates
tract;

Thence N 89° 45' E 1741.8 ft. to the northeast corner of said
Warnell Survey, said corner being 27.25 ft. northerly and 25 ft.
easterly from the northeast corner of said A. S. Mayfield tract
as fenced;

Thence S 0° 33' W with the east line of said Warnell Survey
2632.37 ft. to its southeast corner being also the southeast
corner of said Mayfield tract;

Thence S 89° 42' 30" W 1764.0 to the place of beginning and
containing 162.06 acres exclusive of that portion heretofore
dedicated by public roadways,

...g the same property acquired by the United States of America by condemnation in
...case of United States of America vs. 162.06 acres of land, more or less, in Tarrant
...nty, Texas, and J. S. Bates, et al., No. 433 Civil, in the District Court of the
...ed States for the Northern District of Texas, Fort Worth Division,

This conveyance is subject to all existing easements, servitudes or rights-
...ay, if any.

Said property transferred hereby was duly determined to be surplus and was
...igned to the Administrator of General Services for disposal pursuant to the Federal
...erty and Administrative Services Act of 1949 (63 Stat. 377), as amended, and
...licable rules, orders and regulations.

premises, together with all
privileges and appurtenances thereunto in anywise belong-
ing unto the said GORDON & POPE SUPPLY CO., INC., its successors and assigns, forever.

By the acceptance of this instrument, GORDON & POPE SUPPLY CO., INC.,
admits and confesses to full knowledge with respect to the facts contained in the
foregoing recitals as to the possible contaminated condition of the property.

By the acceptance of this instrument and as a further consideration for
this conveyance, GORDON & POPE SUPPLY CO., INC., herein covenants and agrees for
itself, its successors or assigns, to assume all risk for all personal injuries and
property damages arising out of ownership, maintenance, use and occupation of the
foregoing property; and further covenants and agrees to indemnify and save harmless
the General Services Administration and the United States of America, their servants,
agents, officers and employees, against any and all liability, claims, causes of
action or suits due to, arising out of, or resulting from, immediately or remotely,
the possible contaminated condition, ownership, use, occupation or presence of
GORDON & POPE SUPPLY CO., INC., its officers, agents or employees or any other person
on the property, lawfully or otherwise.

IN WITNESS WHEREOF, the UNITED STATES OF AMERICA has caused these presents
to be executed this 19th day of July, 1956.

WITNESSES:

Joseph M. Jackson
Sam A. Hughes



UNITED STATES OF AMERICA
Acting by and through the
Administrator of General Services

By *Karl E. Wallace*
KARL E. WALLACE
Regional Commissioner, Region 7
General Services Administration
Dallas, Texas

The foregoing instrument, together with all the covenants and conditions
contained therein is hereby accepted.

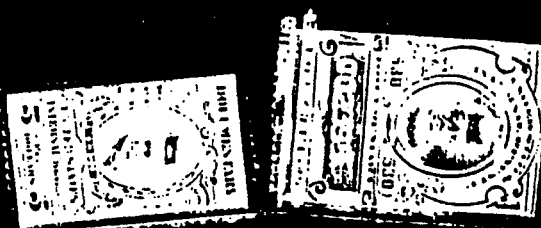
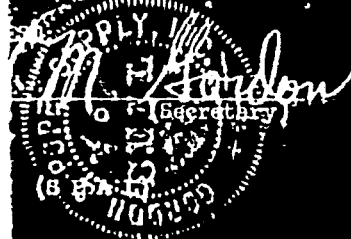
GORDON & POPE SUPPLY CO., INC.

WITNESSES:

Petty Lane Cham
P.C. James



By *W. B. Pope*
W. B. Pope
President
(Title)



BEFORE ME, a Notary Public in and for Dallas County, State of Texas, on this day personally appeared KARL E. WALLACE, known to me to be the person whose name is subscribed to the foregoing instrument, and known to me to be the Regional Commissioner, Region 7, General Services Administration, Dallas, Texas, and acknowledged to me that the same was the act and deed of the United States of America and of the Administrator of General Services, and that he executed the same as the act of the United States of America and of the Administrator of General Services for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE at Dallas, Texas, this 19th day of July, 1956.

Commission Expires:

June 1, 1957

(S.E.A.L.)

Mary L. Patton
Notary Public in and for Dallas
County, Texas

STATE OF TEXAS

COUNTY OF TARRANT

BEFORE ME, the undersigned authority in and for said County and State, on this day personally appeared W. E. Pope known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said Gordon & Pope Supply Co., a corporation, and that he executed the same as the act of such corporation for purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 25 day of July, 1956.

Commission Expires:

June 1, 1957

Rachel W. Bessick
Notary Public in and for Tarrant
County, Texas



EXHIBIT A

GSA DISPOSAL NO. GSA-R-271

9800 TSU-CE DETACHMENT NO. 4
ENGINEER RANGE CLEARANCE TEAM "A"
GENERAL DELIVERY
SNYDER, TEXAS

26 January 1956

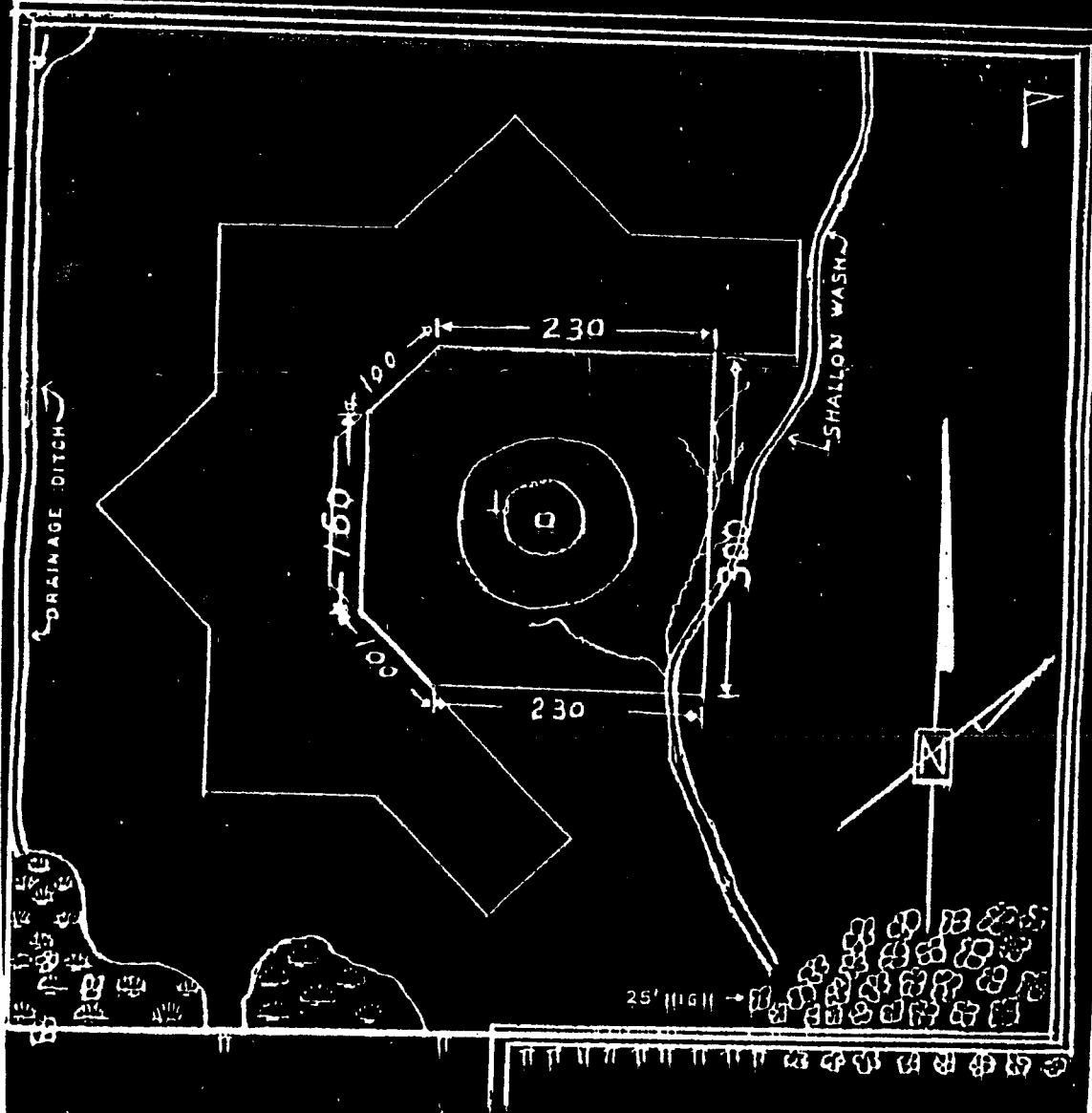
CERTIFICATE OF CLEARANCE

NAVY OUTLYING FIELD
FIVE POINTS
ARLINGTON, TEXAS.

All lands included in the 162 acre field known as Five Points located approximately eight (8) miles South of Arlington, Texas on Farm Road #157 has been given carefull visual inspection and cleared of all dangerous and/or explosive material reasonably possible to detect. The 17.5 acre impact area as outlined in attached sketch is recommended for any above surface use to which the land is suited. The remainder of the field is recommended for any use to which the lands are suited. This certificate supersedes, certificate of clearance dated 7 October 1954.

/s/ D. R. LYNCH
Major., CE
Commanding

C O P Y



FIVE POINTS FIELD

FIELD NO. 22913
 LONG. 97° 07' 25"
 LAT. 32° 37' 26"
 162.06 ACRES
 SCALE 1" = 400'
 JULY 1944

LEGEND
 DRAIN
 MARSH
 BRUSH
 TREES
 ROAD

Appx. 17.5 acres
 Target Impact Area
 outlined 24 Jan 56
 distances in yards

Dallas R. Lynch
 May C.E.

APPENDIX G
NEWSPAPER/JOURNALS
(Not Used)

APPENDIX H

INTERVIEWS


Memorandum For the Record

Subject: Five Points Outlying Field in the City of Arlington, Tarrant County, Texas


The Five Point Outlying Field is an old practice bombing site located in south Arlington. In approximately 1974, when I was approximately 14 years old, I hunted this area. During these hunts I often picked up old practice bombs. The area was regularly plowed and usually I only found rusted broken pieces of the bombs. However, sometimes I found unexploded bombs. On one occasion I carried two five-gallon buckets of bombs and pieces from the site. Many of the bombs were highly rusted, broken, detonated, or waterlogged. If the bombs were detonated the inside of the bomb would be empty or partially filled with mud. All of the bombs were of the same size and basic appearance. Many possessed serial numbers and a MK 23 Mod 1 marking on the side. I never found any other types of bombs on the site.

One of the bombs was in really good condition and I took it home, drilled out the pins that held the shell charge and removed the black powder and red smoke charge. The rust on the bomb appeared to have sealed off the internal area of the bomb and the powder and smoke charge were dry and appeared to be in good condition. Seizing the opportunity (remember I was a teenage boy), I separated a small portion of the powder and smoke charge, and ignited it with a match. Although the powder did not explode it did burn and the result was a small intense fire that generated a large cloud of red-white smoke. This was the only bomb I ever found that was in good enough condition to remove and ignite the powder or smoke charge. Typically, if the bombs were unexploded the powder and smoke charges were waterlogged and highly degraded.

Name:


Barry G. Osborn

Date:



APPENDIX I

PRESENT SITE PHOTOGRAPHS



Figure #1
Area being re-graded for sub-division.



Figure # 2
Road construction in Target Area.

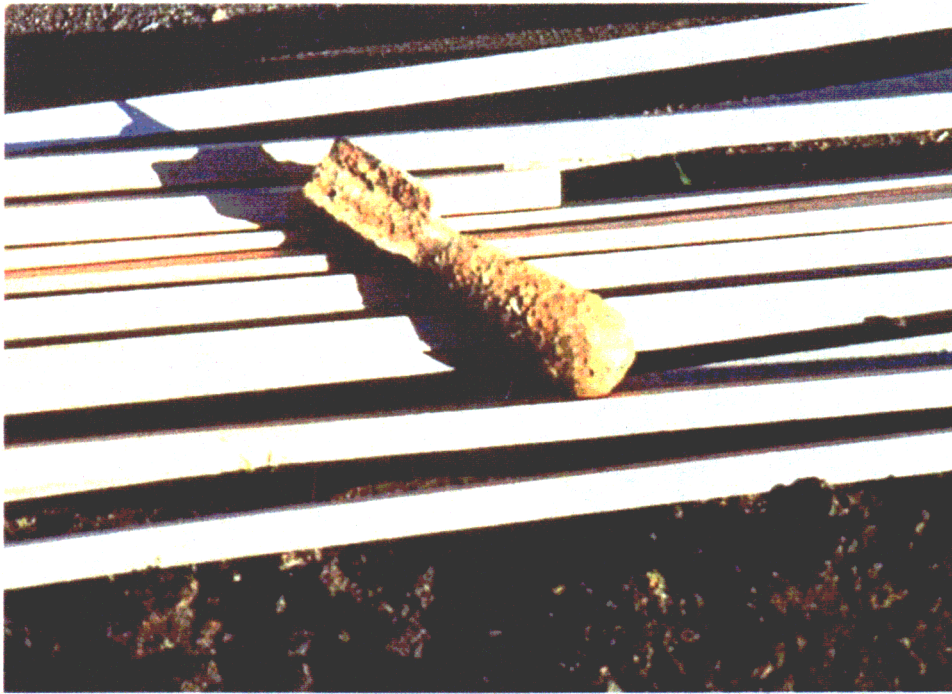


Figure # 3
Navy Practice Bomb found by construction workers.



Figure # 4
Second expended Navy Practice Bomb found by workers.

APPENDIX J

HISTORICAL PHOTOGRAPHS (Not Used)

APPENDIX K

HISTORICAL MAPS/DRAWINGS (Not Used)

APPENDIX L

SITE SPECIFIC SAFETY AND HEALTH PLAN

SITE SAFETY AND HEALTH PLAN (SSHP)

**Twin Parks Estates
Tarrant County, TX
K06TX002801**

The purpose of this site visit is to reconnoiter, document, and photograph areas suspected to be contaminated with unexploded ordnance and/or toxic chemical munitions.

PREPARED BY:

Gregg E. Kocher

OFFICE

USACE, CEMVS-ED-P

ADDRESS

1222 Spruce St. St. Louis, MO

PHONE

(314) 331-8790

DATE PREPARED

13 December 1999

REVIEWED/APPROVED BY:


SSHO

NOTE: This SSHP is to be used only for non-intrusive site visits and must be approved by safety prior to the start of the field visit. All team members must read and comply with the SSHP, and attend the safety briefings. The Site Safety and Health Officer (SSHO) shall ensure that the Safety Briefing Checklist and the SSHP acceptance form (Appendix C) are filled out prior to the start of the site visit.

I. SITE DESCRIPTION AND PREVIOUS INVESTIGATIONS

A. Site Description: The former Grand Prairie Naval Air Station Bombing Range is situated at the corner of Harris and Matlock Roads, Arlington, TX. Acquired in 1940, the site consisted of 162.06 acres. Aircraft from the Grand Prairie NAS used the site as a practice bombing range. Twin Parks Estates purchased the land in 1983 for a mobile home park. Construction was halted when a miniature practice bomb was unearthed. Today, homes are being built on the site.

1) **Size** approximately 165 acres (total)

2) **Present Usage** (check all that apply)

<input type="checkbox"/> Military	<input type="checkbox"/> Recreational	<input type="checkbox"/> Other (specify)
<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Commercial	
<input type="checkbox"/> Natural Area	<input type="checkbox"/> Industrial	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Landfill	
<input type="checkbox"/> Secured	<input type="checkbox"/> Active	<input type="checkbox"/> Unknown
<input checked="" type="checkbox"/> Unsecured	<input checked="" type="checkbox"/> Inactive	

B. Past Uses: None identified.

C. Surrounding Population (check all that apply)

<input type="checkbox"/> Rural	<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Other (specify)
<input checked="" type="checkbox"/> Urban	<input type="checkbox"/> Industrial	
<input checked="" type="checkbox"/> Commercial		

D. Ordnance/Explosives (OE) Potential: Practice bombs (MK23 miniature 3-lb, as well as an older MKI type).

II. DESCRIPTION OF ON-SITE ACTIVITIES (check all that apply)

<input checked="" type="checkbox"/> Walk-through	<input type="checkbox"/> Drive-through	<input type="checkbox"/> Other (specify)
<input checked="" type="checkbox"/> On-Path	<input type="checkbox"/> On-road	
<input checked="" type="checkbox"/> Off-Path	<input type="checkbox"/> Off-road	

III. SITE PERSONNEL AND RESPONSIBILITIES

A. Responsibilities

1. **Project Manager** The Corps of Engineers Project Manager (PM) is overall responsible for the site visit. He/She will assign a Team Leader, (in most situations this will be the PM). The PM will ensure that the SSHP is completed along with coordinating and executing the site visit.

2. **Site Safety and Health Officer** The SSHO is designated to conduct safety, enforce the SSHP, conduct safety briefings and ensure that the team leader can safely fulfill his objectives. The SSHO will maintain the safety gear and monitor on-site operations. The SSHO is responsible for identifying, marking and reporting any unexploded ordnance and explosives.

B. Team Members

NAME	POSITION	ADDRESS	PHONE
Thomas Murrell	PM	CEMVS-ED-P	314-331-8787
Gregg Kocher	SSHO	CEMVS-ED-P	314-331-8790

IV. OVERALL HAZARD EVALUATION (check one)

☐ High ☐ Moderate ☒ Low ☐ Unknown

This assessment was developed using the Site Investigation Hazard Analysis and Risk Assessment Code Matrix.

V. GENERAL PRECAUTIONS Prior to the on-site visit, all team members are required to read this SSHP and sign the form acknowledging that they have read and will comply with it. In addition, the SSHO shall hold a brief tailgate meeting in which site specific topics regarding the day's activities will be discussed. If unanticipated hazardous conditions arise, team members are to stop work, leave the immediate area and notify the SSHO. The buddy system is enforced at all times.

VI. STANDARD OPERATION SAFETY PROCEDURES, ENGINEERING CONTROLS AND WORK PRACTICES

A. Site Rules/Prohibitions At any sign of unanticipated hazardous conditions, stop tasks, leave the immediate area and notify the SSHO. Smoking, eating and drinking allowed in designated areas only.

B. Material Handling Procedures Do not handle.

C. Drum Handling Procedures Do not handle.

D. Confined Space Entry An area identified as a Permit Required Confined space will not be entered. All confined spaces shall be considered permit required confined spaces until the pre-entry procedures demonstrate otherwise. Confined spaces may be entered without a written permit or attendant provided the space is determined not to be a permit required confined space as specified in 29 CFR 1910.146.

E. Electrical Protection Overhead power lines, downed electrical wires and buried cables pose a danger of shock and electrocution. In addition, buildings may contain exposed wiring that may hold a potential load. Workers should avoid contact with any and all exposed wire and cables

F. Spill Containment N/A

G. Excavation Safety Do not enter trenches/excavations.

H. Illumination Site visits will be conducted during daylight hours only.

I. Sanitation Use existing sanitary facilities.

J. Buddy System Individuals will maintain constant contact with other personnel at all times. No one will work alone at any time during the site visit.

K. Engineering Controls N/A

L. Insects Wearing light colored clothing and tucking in the pant legs can reduce contact. In severely infested area it may be necessary to tape all openings. Apply repellents to both clothing and bare skin. Diethyltoluamide (DEET) is an active ingredient in many repellents, which are effective against ticks and other insects. Repellents containing DEET can be applied on exposed areas of skin and clothing. However, repellents containing permethrin should be used on only clothing. For more information on insect bites, refer to Appendix B.

M. Poisonous Vegetation Recognition and avoidance is the best protection. Cover all exposed skin. If it is known or suspected that an individual has been exposed, wash the effected area with soapy water.

N. Inclement Weather When there are warnings or indications of impending severe weather (heavy rains, strong winds, lightning, tornadoes, etc.), weather conditions shall be monitored and appropriate precautions taken to protect personnel and property from the effects of the severe weather.

O. Hot Weather In hot environments, cool drinking water shall be made available and workers shall be encouraged to frequently drink small amounts, e.g., one cup every 15 - 20 minutes; the water shall be kept reasonably cool. In those situations where heat stress may impact worker safety and health, work regimens shall be established. Environmental monitoring of the Wet Bulb Globe Temperature Index shall be conducted and work loads and work regimens categorized as specified in the American Conference of Governmental Industrial Hygienist (ACGIH) publication "Threshold Limit Values and Biological Exposure Indices". For more information on Heat Stress refer to Appendix A of this SSHP.

P. Cold Weather Cold injury (frost bite and hypothermia) and impaired ability to work are dangers at low temperatures and when the wind-chill factor is low. To guard against them; wear appropriate clothing; have warm shelter readily available; carefully schedule work and rest periods, and monitor workers' physical conditions.

Q. Off-Road Driving Ensure all emergency equipment is available with the vehicle i.e. tire changing equipment. Drivers shall familiarize themselves with the procedures for engaging four-wheel drive systems before the need for added traction arises. Vehicles will not be driven into an environment that is unknown, such as deep water, or an unstable surface. Vehicles will not be driven into a suspected ordnance impact area.

R. Ordnance

1. General Information

- a.** The cardinal principle to be observed involving explosives, ammunition, severe fire hazards or toxic materials is to limit the exposure to a minimum number of personnel, for the minimum amount of time, to a minimum amount of hazardous material consistent with a safe and efficient operation.
- b.** The age or condition of an ordnance item does not decrease the effectiveness. Ordnance that has been exposed to the elements for extended periods of time may become more sensitive to shock, movement, and friction, because the stability agent in the explosives may be degraded.
- c.** When chemical agents may be present, further precautions are necessary. If the munition item has green markings leave the area immediately, since it may contain a chemical filler.
- d.** Consider ordnance that has been exposed to fire as extremely hazardous. Chemical and physical changes may have occurred to the contents, which render it more sensitive than it was in its original state.

2. On-Site Instructions

- a.** DO NOT TOUCH or MOVE any ordnance items regardless of the markings or apparent condition.
- b.** DO NOT conduct a site visit during an electrical storm or an approaching electrical storm. If a storm approaches during the site visit leave the site immediately and seek shelter.
- c.** DO NOT use a radio or cellular phone in the vicinity of a suspect ordnance item.

- d. DO NOT walk across an area where the ground cannot be seen.
- e. DO NOT drive a vehicle into a suspected OE area; use clearly marked lanes.
- f. DO NOT carry matches, cigarettes, lighters or other flame producing devices into a OE site.
- g. DO NOT rely on color code for positive identification of ordnance items or their contents.
- h. Approach ordnance items from the side; avoid approaching from the front or rear.
- i. Always assume ordnance items contain a live charge until it can be determined otherwise.
- j. Dead vegetation and animals may indicate potential chemical contamination. If a suspect area is encountered, personnel should leave the immediate area and evaluate the situation before continuing the site visit.

3. Specific Action Upon Locating Ordnance

- a. DO NOT touch, move or jar any ordnance item, regardless of its apparent condition.
- b. DO NOT be misled by markings on the ordnance item stating "practice", "dummy" or "inert". Practice munitions may contain an explosive charge used for spotting the point of impact. The item may also be mislabeled.
- c. DO NOT roll the item over or scrape the item to read the markings.
- d. The location of any ordnance items found during site investigations should be clearly marked so it can be easily located and avoided.
- e. Reporting will be conducted in accordance with CELMS-PM-M, Standard Operating procedure for Reporting Ordnance and Unexploded Ordnance (UXO), dated 19 January 1995.

VI. SITE CONTROL AND COMMUNICATIONS

- A. **Site Map** Any maps will be maintained by the PM or Safety Officer.
- B. **Site Work Zones** N/A

C. Buddy System Individuals will maintain constant contact with other personnel at all times. No one will work alone at any time during the site visit.

D. Communications

1. **On-Site** Verbal communications will be used among team members.

2. **Off-Site** Communications shall be established on every site. Communications may be established by using a cellular, public or private phone which may be readily accessible. (specify below)

☐ Cellular phone

☒ Public/private phone

☐ Other

3. **Emergency Signals** In the case of small groups, a verbal signal for emergencies will suffice. An emergency signal for large groups (i.e. air horn, whistle) should be incorporated at the discretion of the SSHO. (specify below)

☐ Verbal

☒ Nonverbal (specify) - whistle

VII. EMERGENCY RESPONSE Team members are to be alert to the dangers associated with the site at all times. If an unanticipated hazardous condition arises, stop work, evacuate the immediate area and notify the SSHO. A First Aid Kit and emergency eye wash (if applicable) will be located in the field vehicle. If qualified persons (i.e. fire department, medical facility or physician) are not accessible within five minutes of the site, at least two team members shall be qualified to administer first aid and CPR.

A. Emergency/Important Telephone Numbers

Emergencies	911
Tarrant County Sheriff.....	(817) 884-1212
Arlington Medical Center	(817) 465-3241
79th Ord Bn (EOD), Ft. Sam Houston, TX	(210) 221-2457/0476
797th Ord Co (EOD), Ft. Sam Houston, TX	(210) 221-2906/9541
Huntsville Safety Office	(256) 895-1598/1596
Huntsville Safety (after hours).....	(256) 895-1180
On-site cellular phone.....	
St. Louis Corps of Engineers	(314) 331-8036

B. Hospital/Medical Facility Information

Name: Arlington Medical Center
Address: 3301 Matlock Road, Arlington, TX (817) 465-3241

Distance to hospital: approximately 1.5 miles
Route to Hospital: refer to the site map included with this SSHP.

VIII. MONITORING EQUIPMENT AND PROCEDURES

A. Exposure Monitoring For non-intrusive on-site activities such as site visits, air monitoring is typically not required. However, if the site situation dictates the need for monitoring, complete the following information on a separate page and attach the page to the SSHP.

1. Monitoring Equipment To Be Utilized N/A

2. Equipment Calibration Results N/A

3. Action Levels N/A

B. Heat/ Cold Stress Monitoring

1. Heat Stress monitoring criteria published in Chapter 8 of the NIOSH/OSHA/USCG/EPA "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" shall be followed.

2. Cold Stress monitoring shall be conducted in accordance with the most current published American Conference of Governmental Industrial Hygienists (ACGIH) cold stress standard.

IX. PERSONAL PROTECTIVE EQUIPMENT Typically, for non-intrusive site visits, Level D is required. If a higher level of protection is to be used initially or as contingency, a brief discussion will be attached. At a minimum personnel shall wear clothing suitable for the weather and work condition. The minimum for field work shall be short sleeve shirt, long trousers, and leather or other protective work shoes or boots. If a higher level of protection is to be used initially or as contingency, a brief discussion will be attached.

A. Footwear Footwear providing protection against puncture shall meet the applicable requirements as stated in EM 385-1-1, paragraph 05.A.08. All activities which personnel are potentially exposed to foot hazards will be identified and documented in a hazard analysis. As an exception to wearing steel-toed boots, GSA-approved protective-sole boots are authorized.

B. Hand Protection Persons involved in activities that subject the hands to injury (e.g., cuts, abrasions, punctures, burns, etc.) shall use leather gloves.

D. Head Protection Hardhats shall be worn when personnel are subject to potential head injury. The identification and analysis of head hazards will be documented in a hazard analysis.

E. Eye Protection Personnel will wear eye protection when activities present potential injuries to the eyes. All eye protection equipment shall meet the requirements as stated in EM 385-1-1, paragraph 05.B.

X. DECONTAMINATION PROCEDURES Decontamination procedures are not anticipated for this site investigation. Team members are cautioned not to walk, kneel or sit on any surface with potential leaks, spills or contamination.

XI. TRAINING All site personnel shall have completed the training required by EM 385-1-1 and 29 CFR 1910.120 (e). The U.S. Army Corps of Engineer (USACE) Project Manager shall ensure, and the SSHO shall verify, that all on-site personnel have completed appropriate training. Additionally, the SSHO shall inform personnel before entering of any potential site-specific hazards and procedures.

XII. MEDICAL SURVEILLANCE PROGRAM The USACE Project Manager shall ensure, and the SSHO shall verify, that all on-site personnel are on the Medical Surveillance Program meeting the requirements of 29 CFR 1910.120, and ANSI Z-88.2, as appropriate, depending on the personnel protective equipment (PPE) and site specific tasks.

NAME	HAZWOPER DATE	PROVIDER	MEDICAL DATE
Thomas Murrell	21 DEC 99	Corps of Engineers	JAN 99
Gregg Kocher	21 DEC 99	Corps of Engineers	JUL 99

XIII. LOGS, REPORTS AND RECORD KEEPING Site logs are maintained by the Project Manager and SSHO. This is to include historical data, personnel authorized to visit the site, all records, standard operating procedures, air monitoring logs and the SSHP.

XIV. GENERAL The number of personnel visiting the site shall be a limited to a minimum of two, maximum of eight. The more personnel on-site, the greater potential for an accident. The SSHO may modify this SSHP if site conditions warrant it and without risking the safety and health of the team members. This modification will be coordinated with the team members. The SSHO shall notify Corps of Engineers Safety Office in Huntsville, AL. of the change as the situation allows.

APPENDIX A

HEAT- RELATED INJURIES

Once the signals of a heat-related illness begin to appear, the victim's condition can quickly get worse. A heat related illness can result in death. If you see any of the signals of sudden illness, and the victim has been exposed to extremes of heat, suspect a heat-related illness.

People at risk for heat-related illness include those who work or exercise outdoors, elderly people, young children, and people with health problems. Also at risk are those who have had a heat-related illness in the past, those with medical conditions that cause poor blood circulation, and those who take medications to get rid of water from the body (diuretics).

People usually try to get out of extreme heat before they begin to feel ill. However, some people do not or can not. Those that work outdoors often keep working even after they begin to feel ill. Many times, they might not even recognize that they are in danger of becoming ill.

Heat cramps, heat exhaustion, and heat stroke are conditions caused by overexposure to heat. You can help prevent heat-stress emergencies by recognizing and properly treating symptoms. Below is a quick reference guide to heat-related emergencies:

HEAT CRAMPS Heat cramps are the least severe, and often are the first signals that the body is having trouble with the heat. *Symptoms* include: muscle twitching; painful spasms in the legs, arms or abdomen.

WHAT TO DO:

- Have the individual rest in a cool place.
- Give cool water or a commercial sports drink.
- Lightly stretch the muscle and gently massage the area.

HEAT EXHAUSTION Heat exhaustion is a more severe condition than heat cramps. *Symptoms* include: cool, moist, pale, or flushed skin, headache, nausea, dizziness, weakness, and exhaustion.

HEAT STROKE Heat stroke is the least common but most severe heat emergency. It most often occurs when people ignore the signals of heat exhaustion. Heat stroke develops when the body systems are overwhelmed by heat and begin to stop functioning. **Heat stroke is a serious medical emergency.** *Symptoms* include: red, hot, dry skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing.

WHAT TO DO: When you recognize a heat-related illness in its early stages, you can usually reverse it.

- Get the victim out of the heat.
- Loosen any tight clothing and apply cool, wet cloths, such as towels or sheets.

If the victim is conscious, give cool water to drink. Do not let the conscious victim drink too quickly. Give about 1 glass (4 ounces) of water every 15 minutes.

Let the victim rest in a comfortable position, and watch carefully for changes in his or her condition. The victim should not resume normal activities the same day.

Refusing water, vomiting, and changes in consciousness mean that the victim's condition is getting worse. Call for an ambulance immediately if you have not already done so.

If the victim vomits, stop giving fluids and position them on their side.

Watch for signals of breathing problems.

Keep the victim lying down and continue to cool the body any way you can. If you have ice packs or cold packs, place them on each of the victim's wrists and ankles, on the groin, in each armpit, and on the neck to cool the large blood vessels.

APPENDIX B

BITES AND STINGS

Scorpions, Bees and Spiders

Bee stings are painful, but rarely fatal. Some people however, have a severe allergic reaction to an insect sting. This allergic reaction may result in a breathing emergency. If an insect stings someone, remove the stinger. Scrape it away with from the skin with your fingernail or plastic card, such as a credit card, or use tweezers. If you use the tweezers, grasp the stinger, not the venom sac. Wash the site with soap and water. Cover it to keep it clean. Apply a cold pack to the area to reduce the pain and swelling. Watch the victim for signals of an allergic reaction.

Scorpions live in dry regions of the southwestern United States and Mexico. They live under rocks, logs, and the bark of certain trees and are most active at night. Only a few species of scorpions have a sting that can cause death.

There are only two spiders in the United States whose bite can make you seriously sick or be fatal. These are the black widow spider and the brown recluse. The black widow is black with a reddish hourglass shape on the underside of its body. The brown recluse is light brown with a darker brown, violin-shaped marking on the top of its body. Both spiders prefer dark, out of the way places. Often, the victim will not know that he or she has been bitten until he or she starts to feel ill or notices a bite mark or swelling.

Symptoms: include nausea and vomiting, difficulty breathing or swallowing, sweating and salivating much more than normal, severe pain in the sting or bite area, a mark indicating a possible bite or sting, and swelling of the area.

First Aid: if someone has been stung by a scorpion or bitten by a spider he or she thinks is a black widow or brown recluse, wash the wound, apply a cold pack to the site, and get medical help immediately.

REPTILES

Venomous snakes exist in all parts of the continental United States. The pit viper family represents the greatest hazard in the field. This group includes the rattlesnakes and moccasins (copperhead and cottonmouth). Consider wearing snake chaps in areas of known infestation. Walking in grasses and shrubs that prevent seeing exactly where you are stepping, should be avoided. Extreme caution should be exercised in areas where alligators are present, particularly during the nesting season. Consulting a local resident or authority, such as a fish and wildlife or park ranger, is prudent before entering such areas.

First Aid: Often, a venomous snake will strike without injecting any venom into the wound. This is known as a dry bite. In any event, whenever bitten by a snake, especially if positive identification cannot be made, medical help should be sought immediately. Reassure and keep the victim calm. Keep limbs below the level of the heart. Clean the bite area, and get the person

to a medical facility. Do not make incisions or suck the poison with the mouth. If medical help is many hours away, place a constricting band between the wound and the heart (it should be at least two inches wide and be able to slip a finger underneath).

Ticks - Lyme Disease

Transmission:

Lyme Disease (LD) is most commonly transmitted by a tick bite (usually painless). The tick vectors include *Ixodes scapularis* (Deer Tick), *Ixodes dammini* (Deer tick), *Amblyomma americanum* (Lone Star Tick) and *Ixodes pacificus*. *Ixodes dammini* was thought to be the only species responsible for transmission until it was shown to be the same as *Ixodes scapularis* in 1993. The ticks prefer to live in wooded areas, low growing grassland, seashores and yards. Depending on the location, anywhere from less than 1% to more than 90% of the ticks are infected with spirochetes.

The Deer tick has a 2 year life cycle and must feed 3 times. In the larvae stage, it is tan, the size of a pin head and feeds on small animals like the mouse where it can pick up the spirochete. During the nymph stage the tick is the size of a poppy seed, beige or partially transparent and feeds on larger animals such as cats, dogs and humans. The adult ticks are black and/or reddish and feed on cattle, deer, dogs and humans. The Lone Star tick is gray with a white dot. April through October is considered the "tick season" even though Lyme disease is a year round problem. Ticks are very active in the spring and early summer.

Location:

Cases of Lyme disease have been reported in virtually every state, although the Northeastern, Great Lakes, and Pacific Northwest areas are particularly endemic.

Symptoms:

Lyme disease is called the "Great Imitator" because it can mimic many other diseases, which makes diagnosis difficult. A rash can appear several days after infection, or not at all. It can last a few hours or up to several weeks. The rash can be very small or very large (up to twelve inches across). A "bulls-eye" rash is the hallmark of LD. It is a round ring with central clearing. Unfortunately, this is not the only rash associated with Lyme. Various other rashes associated with LD have been reported. One bite can cause multiple rashes. The rash can mimic such skin problems as hives, eczema, sunburn, poison ivy, flea bites, etc. The rash can itch or feel hot or may not be felt at all. The rash can disappear and return several weeks later. For those with dark skin the rash will look like a bruise. If you notice a rash, take a picture of it. Some physicians require evidence of a rash before prescribing treatment.

Early Symptoms: Several days or weeks after a bite from an infected tick, a patient usually experiences "flu-like" symptoms such as aches and pains in their muscles and joints, low grade fever, and/or fatigue.

Other Possible Symptoms -- No organ is spared:

- Jaw -- pain, difficulty chewing
- Bladder -- frequent or painful urination, repeated "urinary tract infection"
- Lung -- respiratory infection, cough, asthma, pneumonia
- Ear -- pain, hearing loss, ringing, sensitivity to noise
- Eyes -- pain due to inflammation, sensitivity to light, scleritis drooping of eyelid, conjunctivitis, blurring or double vision
- Throat -- sore throat, swollen glands, cough, hoarseness, difficulty swallowing
- Neurological -- headaches, facial paralysis, seizures, meningitis, stiff neck, burning, tingling, or prickling sensations, loss of reflexes, loss of coordination, MS like syndrome
- Stomach -- pain, diarrhea, nausea, vomiting, abdominal cramps, anorexia
- Heart -- weakness, dizziness, irregular heart-beat, myocarditis, pericarditis, palpitations, heart block, enlarged heart, fainting inflammation of muscle or membrane, shortness of breath, chest pain
- Joint -- arthralgias or arthritis, muscle inflammation and pain
- Other Organs -- liver infection, elevated liver enzymes, enlarged spleen, swollen testicles, irregular or ceased menses
- Neuropsychiatric -- mood swings, irritability, poor concentration, cognitive loss, memory loss, loss of appetite, mental deterioration, depression, disorientation, sleep disturbance
- Pregnancy -- miscarriage, premature birth, birth defects, stillbirth
- Skin -- single or multiple rash, hives

The above is a list of possible symptoms. They can occur in any combination. You may have one or several symptoms but not everyone will experience every symptom. Lyme affects each host in a different way. Having one or many of these symptoms does not indicate that you have Lyme disease. Diagnosis for Lyme is a clinical one and must be made by a physician experienced in recognizing LD. Serological testing is not reliable.

Lyme Disease Prevention:

- Dress properly, wear long-sleeved shirts that button at the wrist, long pants tucked into socks, and closed shoes. Choose light-colored fabric so you can spot and brush off ticks.

- Apply approved tick repellent and use only as directed. Products that contain DEET are tick repellents. They do not kill the tick and are not 100% effective in discouraging a tick from feeding on you. Products like Permanone contain permethrin and are known to kill ticks. However, they are not to be sprayed on the skin. Permanone can be sprayed on clothing. Once it is dry it is assumed to be safe. Ticks are anti-gravitational. They are generally seeking the highest point. If they get on your body below the clothes line, one hopes they will travel up and die once they come in contact with treated clothing.

- Always do regular tick checks when outdoors.

- Shower after all outdoor activities are over for the day. If the tick is still wandering it may wash off. Check all body parts that bend. Run fingers gently over skin. If there is a tick and it is

attached, it will feel like the last piece of scab left before a cut completely heals. Remove ticks promptly and properly from yourself.

Proper Tick Removal:

Using fine-tipped tweezers, grasp tick close to the skin. Apply gentle, steady straight upward pressure to remove. Disinfect the bite site. Do not squeeze the body, apply Vaseline, use a burnt match, or clean with alcohol while the tick is attached. Any of these actions could cause transmission of the bacteria. Save the tick for testing. Put it in a vial or zip lock bag with a blade of grass. Contact your doctor for further instructions.

The best defense against LD is education. Know your facts.

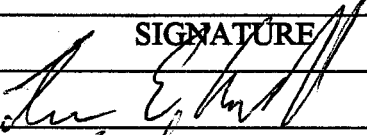
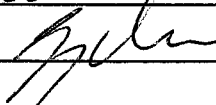
APPENDIX C

**SSHP ACCEPTANCE FORM
ABBREVIATED SITE SAFETY AND HEALTH PLAN
FOR**

Twin Parks Estates

Tarrant County, TX

I have read and agree to abide by the contents of the Site Safety and Health Plan.

NAME	OFFICE	SIGNATURE	DATE
Thomas Murrell	CEMVS-ED-P		11 JAN 00
Gregg Kocher	CEMVS-ED-P		11 JAN 00

SITE SURVEY SAFETY BRIEFING

(Check subjects discussed)

Date: 11 JAN 00

GENERAL INFORMATION


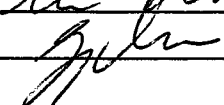
- ☒ Purpose of Visit
- ☒ Identify Key Site Personnel

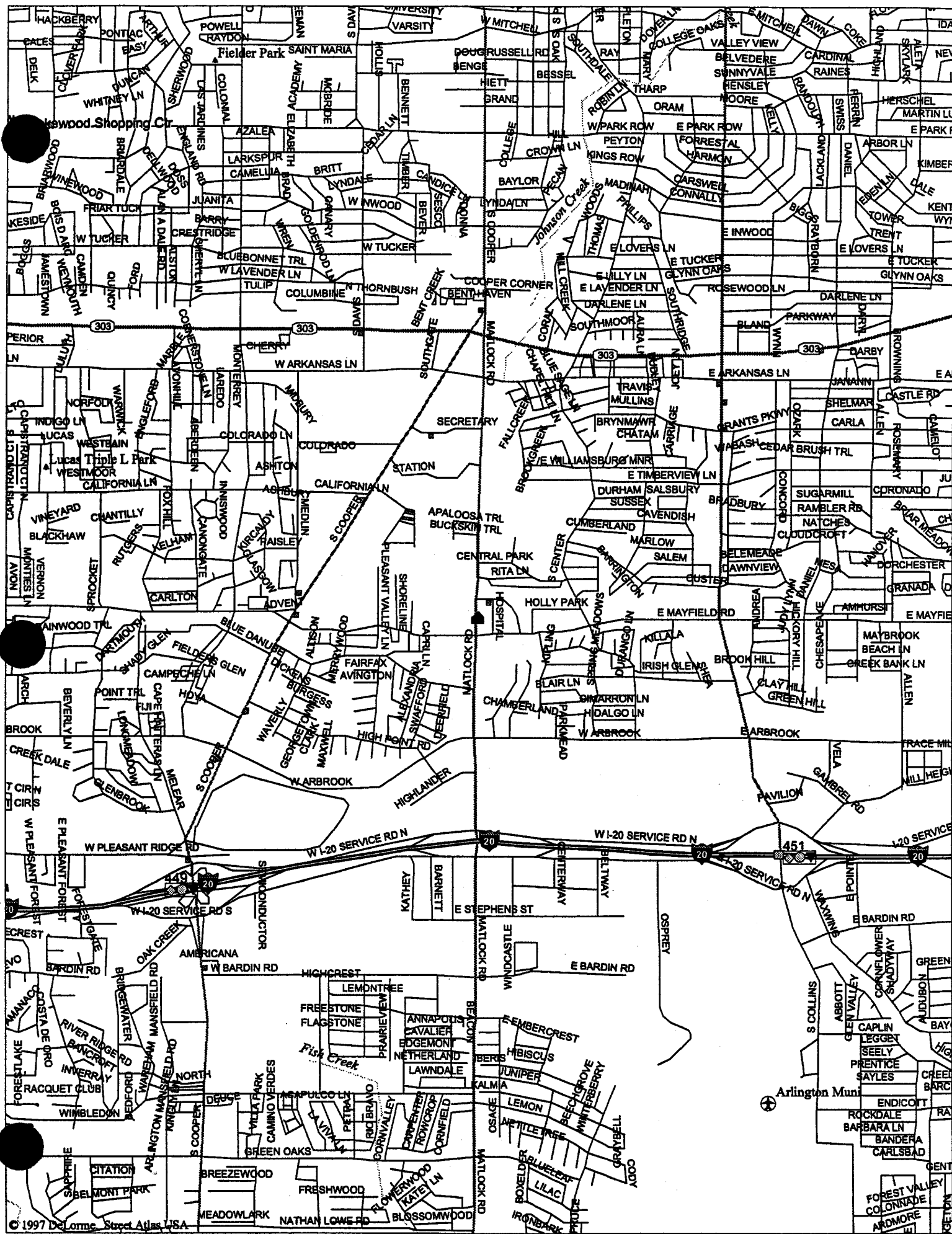
SITE SPECIFIC INFORMATION

- ☒ Site Description/Past Use
- ☒ Results of Previous studies
- ☒ Potential Site Hazards
- ☒ OE Safety Procedures
- ☒ Site SOP
- ☒ Site Control and Communications
- ☒ Emergency Response
 - () Location of First aid Kit
 - () Emergency Phone Numbers
 - () Map to Facility
- ☒ PPE
- ☒ Weather Precautions
 - () Cold/Heat
 - () Severe Weather

Safety Briefing Attendance

All team members and any accompanying personnel will be briefed and sign this form.

NAME (Print)	ORGANIZATION	SIGNATURE
Thomas Murrell	USACE-CEMVS-ED-P	
Gregg Kocher	USACE-CEMVS-ED-P	

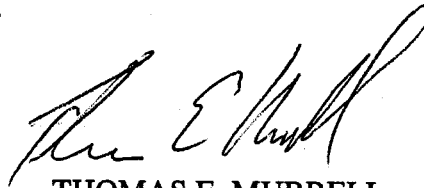


17 Jan 00

MEMORANDUM FOR RECORD

SUBJECT: Site Visit for Twin Parks Estates, Project Number K06TX002801

1. On 11 Jan 00, Gregg Kocher and myself conducted an ordnance site visit at the Twin Oaks Estates (former Navy bombing Target). Construction workers at the site were able to identify areas where practice bombs had previously been found.
2. Two practice bombs were inspected, which were expended. Open areas of the site were walked and no additional bombs were found. Construction workers indicated that when digging occasionally practice bombs will be uncovered. Much of the area has been re-graded for a new sub-division. No surface indications of burials of ordnance were found.
3. POC is the undersigned at 314-331-8787.



THOMAS E. MURRELL
Project Manager

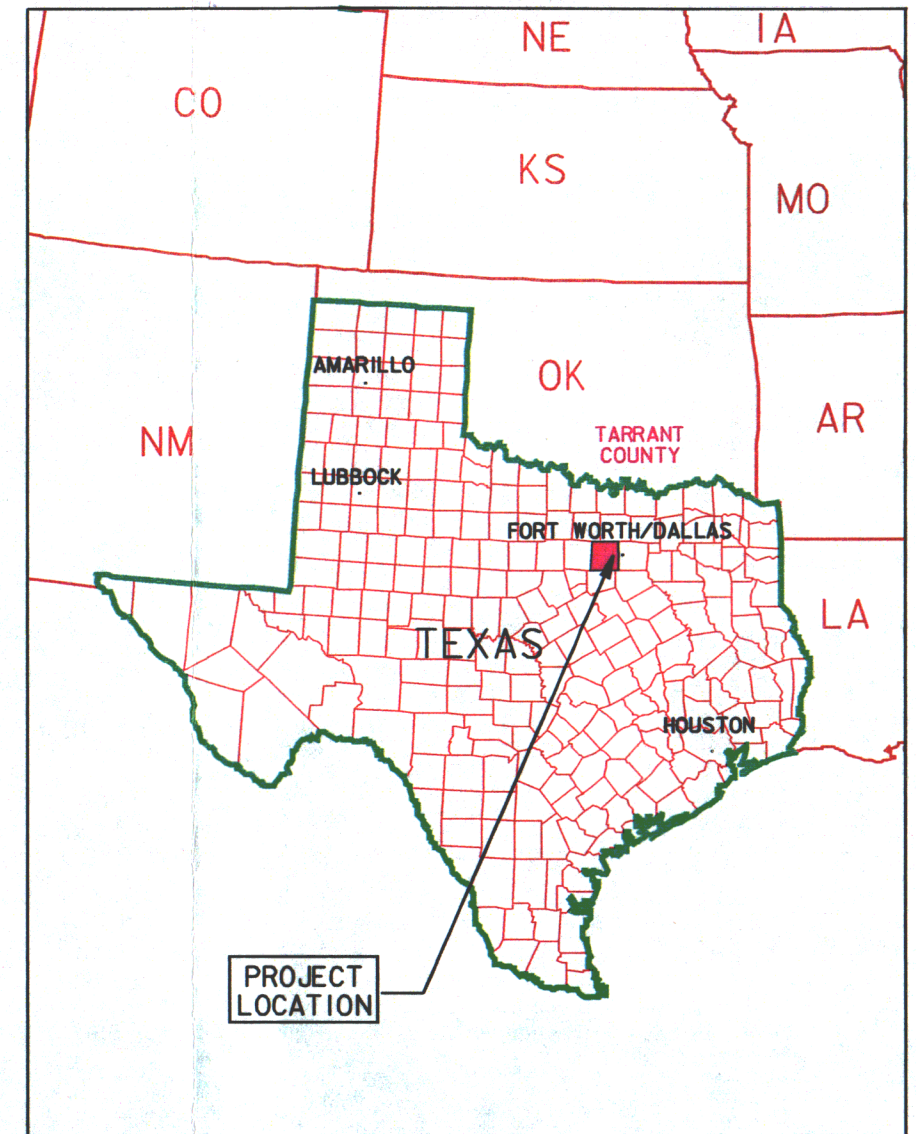
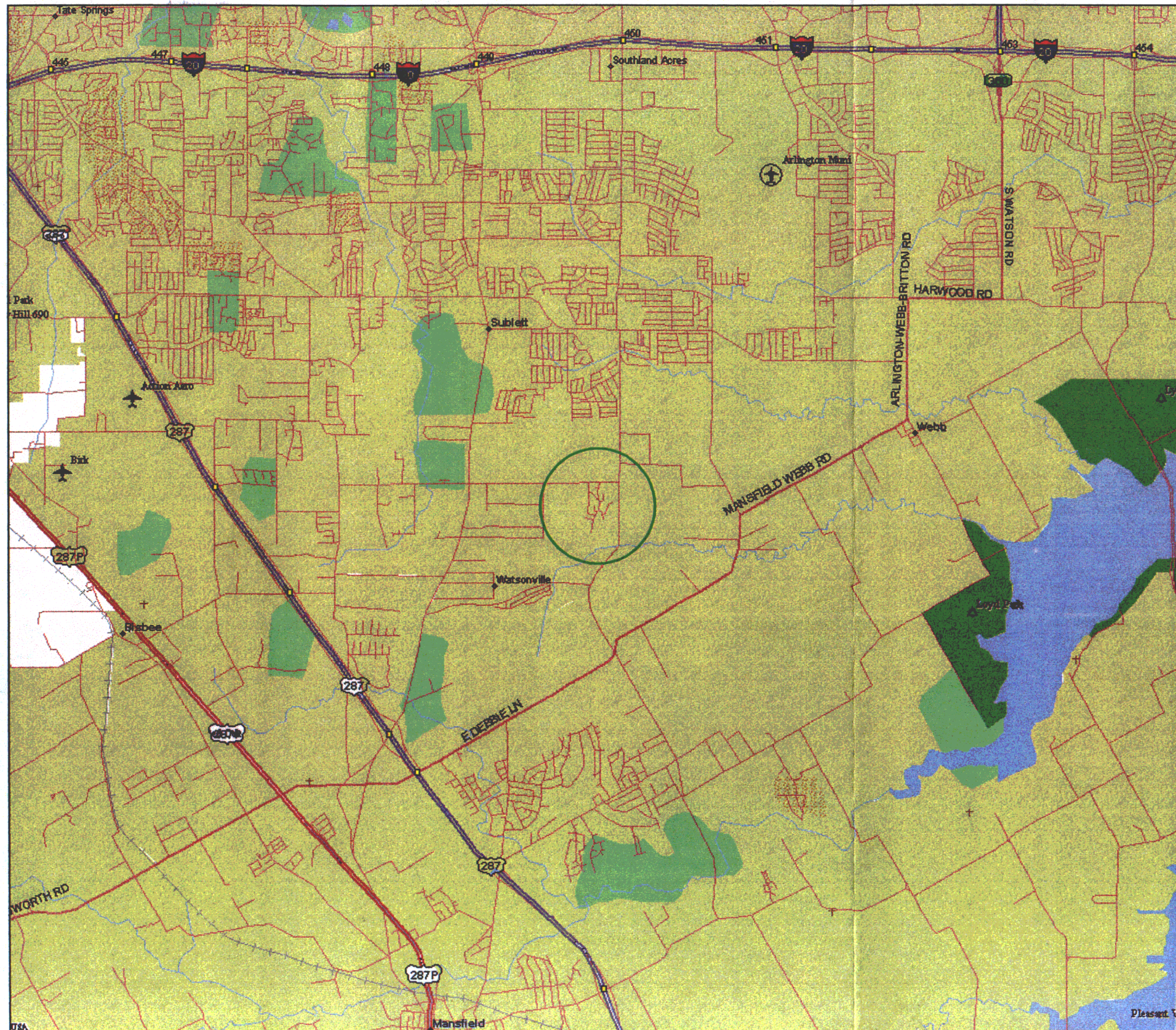
APPENDIX M

REPORT DISTRIBUTION LIST

APPENDIX M
REPORT DISTRIBUTION LIST

Addressee	Copies
Commander, U.S. Army Engineering and Support Center, Huntsville ATTN: CEHNC-ED-SY P.O. Box 1600 Huntsville, Alabama 35807-4301	2
Project Manager Chemical Demilitarization, Non-Stockpile ATTN: SFAE-CD-N Building E-4585 Aberdeen Proving Ground, Maryland 21010-5401	1
Commander, U.S. Army Soldier, Biological and Chemical Command ATTN: AMSSB-CIH Building E-5027 Aberdeen Proving Ground, Maryland 21010-5424	1
Defense Ammunition Center ATTN: SMAAC-ESM 1C Tree Road, Building 35 McAlester, Oklahoma 74501-9053	1
Commander, U.S. Army Engineer District, Fort Worth ATTN: CESWF-PM-J P.O. Box 17300 Fort Worth, Texas 76102-0300	15

REPORT PLATES



LEGEND

 SITE LOCATION



U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

FIVE POINTS OUTLYING FIELD
ARLINGTON, TEXAS
TARRANT COUNTY
PROJECT #K06TX002801

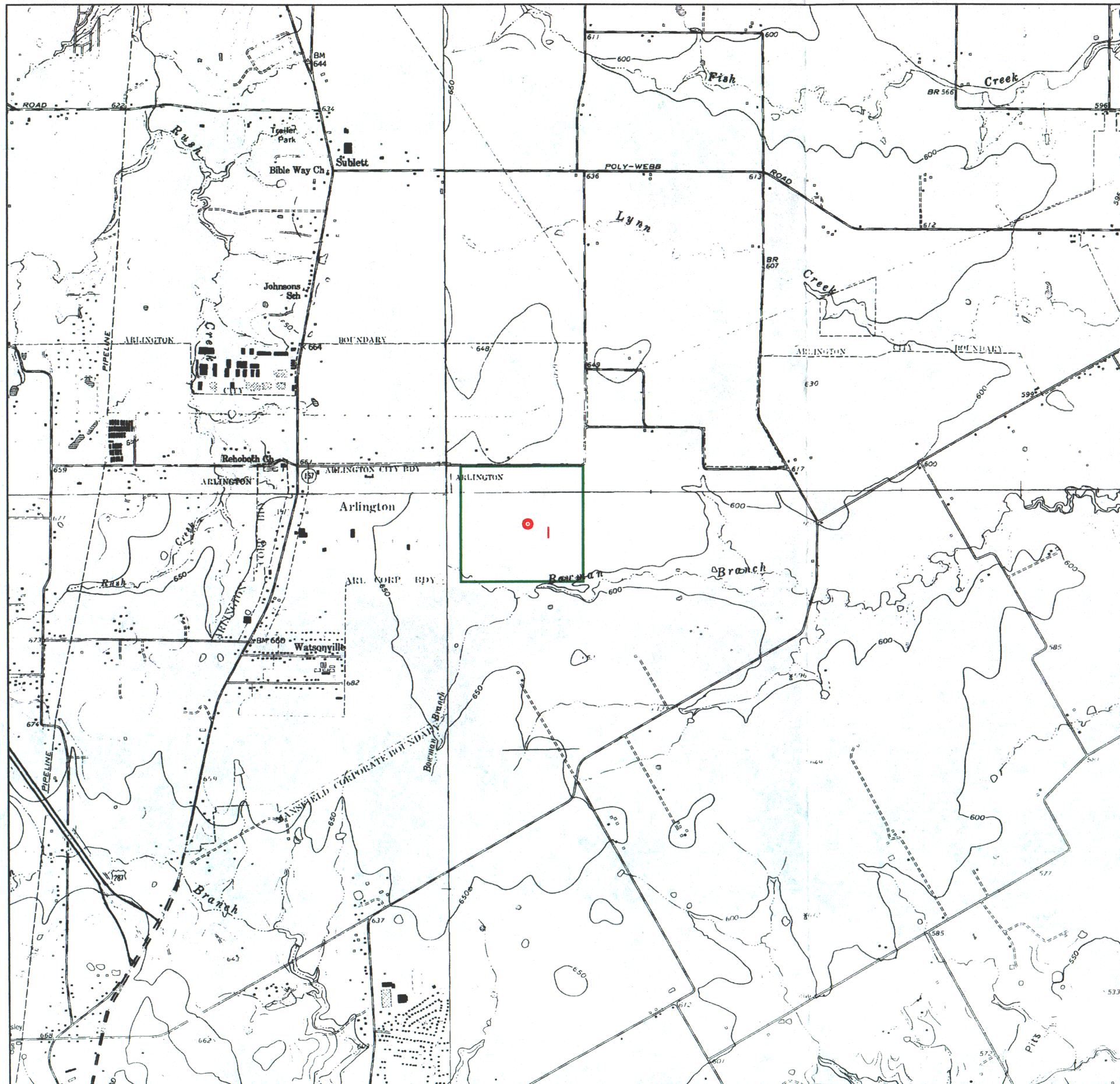
VICINITY MAP

PROJ. DATE: MARCH, 2001
24-JAN-2002 09:41

DATE OF MAP: 1996

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PLATE NO. 1



KEY TO FEATURES:

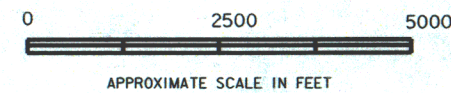
FEATURE
NUMBER

FEATURE
DESCRIPTION

LOCATION OF FORMER BOMBING TARGET
(NOT SEEN ON PHOTO) WITH TRAILER PARK

LEGEND

-  SITE LOCATION
-  FEATURE LOCATION



U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

FIVE POINTS OUTLYING FIELD
ARLINGTON, TEXAS
TARRANT COUNTY
PROJECT #K06TX002801

SITE MAP



KEY TO FEATURES:

**FEATURE
NUMBER**

**FEATURE
DESCRIPTION**

1

LOCATION OF FORMER BOMBING TARGET
(NOT SEEN ON PHOTO) WITH TRAILER PARK

LEGEND



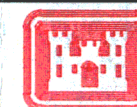
SITE LOCATION



FEATURE LOCATION

0 1000 2000

APPROXIMATE SCALE IN FEET



U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

**FIVE POINTS OUTLYING FIELD
ARLINGTON, TEXAS
TARRANT COUNTY
PROJECT *K06TX002801**

1990 AERIAL PHOTO

PROJ. DATE: MARCH, 2001

DATE OF PHOTO: 1990

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