



**US Army Corps
of Engineers**
HUNTSVILLE ENGINEERING
AND SUPPORT CENTER

Defense Environmental Restoration Program
for
Formerly Used Defense Sites
Ordnance and Explosives

ARCHIVES SEARCH REPORT

FINDINGS

San Felipe Bombing Target #67

Kane Springs, California

Project Number - J09CA014301

MAY 1998

Prepared by
US ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

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C TEXT / MANUALS Not Used

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1 San Felipe Bombing Target #67 - Vicinity Map
2 San Felipe Bombing Target #67 - Aerial Photograph-1953

1.0 INTRODUCTION

1.1 AUTHORITY

In 1986, Congress established the Defense Environmental Restoration Program (DERP) at 10 United State Code (USC) 2701 et seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."

In March 1990, the Environmental Protection Agency (EPA) issued a revised National Contingency Plan (NCP). Under 40 Code of Federal Regulations (CFR) 300.120, EPA designated the Department of Defense (DoD) to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD.

Since the beginning of this program, the U.S. Army Corps of Engineers has been the agency responsible for environmental restoration at Formerly Used Defense Sites (FUDS). Since 1990, the U.S. Army Engineering and Support Center, Huntsville (CEHNC) has been the Center of Expertise (CX) and Design Center for Ordnance and Explosives.

1.2 SUBJECT

San Felipe Bombing Target #67 consisted of 640 acres near Kane Springs, California located in Imperial County. Military use began with the Navy's lease of this property for use as a dive bombing target on 1 November 1944. The ordnance and explosives associated with use of the bomb target include caliber .50 small arms, 20mm ammunition and practice bombs. On 9 November 1945, the Navy approved the disposal of the site and cancelled its lease on 15 December 1945. Plate 1 in the report plates section shows the general location of the site.

1.3 PURPOSE

The Archives Search Report (ASR) compiles information obtained through historical research at various archives and records holding facilities, interviews with persons associated with San Felipe Bombing Target #67 or its operations and a team inspection of the site. The search directs efforts towards determining possible use or disposal of ordnance and explosives (OE) and chemical warfare materials (CWM) on the site. The research places particular emphasis on establishing the types, quantities and areas of disposal. This process obtains information for use in developing recommendations for further action at the former San Felipe Bombing Target #67.

1.4 SCOPE

This investigation focuses on potential OE and/or CWM contamination remaining on the former San Felipe Bombing Target #67. The DERP-FUDS project number is J09CA014301. This report presents the following:

- A brief history of San Felipe Bombing Target #67
- Description and characteristics of the immediate surrounding area
- A review of related site investigations
- An aerial photography and map analysis of the site
- Real estate information, past and present
- Findings of the site inspection
- Description of the OE and/or CWM identified with the site

These factors represent the basis for the evaluation of potential OE and CWM contamination and associated risks at San Felipe Bombing Target #67.

2.0 PREVIOUS SITE INVESTIGATIONS

2.1 CORPS OF ENGINEERS DOCUMENTS

The Los Angeles District of the Corps of Engineers prepared the following investigation of San Felipe Bombing Target #67 in support of the DERP for FUDS (see Appendix D-1):

Inventory Project Report (INPR) for project no. J09CA0143, *San Felipe Bombing Target #67*, Kane Springs, California, dated 31 August 1993.

During the site inspection on 6 May 1993, the contractor found several practice bombs, multiple 50 caliber belt clips, 50 caliber shells and casings at the site. The INPR identified only OE as a potential hazard at the former San Felipe Bombing Target #67. The INPR assigned a Risk Assessment Code (RAC) of 4.

2.2 OTHER REPORTS

The archive search did not locate any additional environmental investigations or reports concerning San Felipe Bombing Target #67.

3.0 SITE DESCRIPTION

3.1 LAND USE

3.1.1 Location

San Felipe Bombing Target #67 consisted of 640 acres in Imperial County, California (see Plate #1). This site lies approximately eight miles southwest of Kane Springs, near the intersection of California State highways 78 and 86 southeast of the Salton Sea. El Centro is about twenty miles to the southeast.

3.1.2 Prior Site Use

Prior to the Eleventh Naval District's operation of San Felipe Bombing Target #67, the land remained undeveloped.

3.1.3 Present Site Use

Currently the former San Felipe Bombing Target #67 remains undeveloped.

3.2 CLIMATIC DATA

The site lies along the eastern side of the Coast Range and is protected from ocean influences and experiences a more desert climate. The sky is generally clear year around with a high percentage of sunshine. The summers are long and hot with temperatures reaching at least 100 degrees, on the average, from June through September. Extremes over 120 degrees have occurred. Precipitation is sparse with an average annual precipitation of about 3 inches. The precipitation pattern is predominately influenced by the semi-permanent high pressure area of the north Pacific Ocean. The Pacific high tracks north during the summer and deflects storms further north. In the winter the Pacific high loses intensity and drops further south allowing storms to move into and across California. When changes in the circulation pattern permit, storms from the southwest approach California carrying more moisture and often produce heavy rains. The wettest years have produced less than 12 inches at the site and the driest years less than 1 inch. The heaviest 24 hour rainfall of 3.4 inches occurred in the month of August. Snow is rare and any snow fall of consequence has only been recorded during the month of December. The prevailing wind direction is north except between June to September when it is SSE. The wind is strongest in the summer reaching speeds up to 13 mph. The nearest source of climatological data is the NOAA station at Yuma, Arizona, about 40 miles SE of the site. Climatological data are summarized in Table 3-2.

TABLE 3-2 - CLIMATOLOGICAL DATA FOR YUMA, ARIZONA

<i>Month</i>	<i>Temperature</i>		<i>Precipitation</i>	<i>Wind</i>	
	<i>Average Minimum ('F)</i>	<i>Average Maximum ('F)</i>		<i>Average Speed Miles/Hour</i>	<i>Average Direction</i>
<i>January</i>	44	69	0.4	9	N
<i>February</i>	47	74	0.3	9	N
<i>March</i>	51	79	0.2	9	W
<i>April</i>	57	87	0.1	9	W
<i>May</i>	64	94	0.0	8	S
<i>June</i>	72	103	T	10	SSE
<i>July</i>	80	107	0.2	11	SSE
<i>August</i>	80	106	0.5	10	SSE
<i>September</i>	74	102	0.3	9	SSE
<i>October</i>	63	91	0.3	7	N
<i>November</i>	51	78	0.2	8	N
<i>December</i>	44	69	0.4	8	N
<i>Average</i>	61	88	3.0	9	N

3.3 GEOLOGY AND SOILS

3.3.1 Geology and Physiology

The former bombing target is located in the Salton Trough section of the Basin and Range physiographic province. This section is characterized by desert alluvial slopes and deltaic plains. The site is located about one hundred miles to the north-northwest of the northern tip of the Gulf of California. The Salton Trough is a rift valley that owes its existence to the same tectonic forces that created the gulf.

Structurally, the Salton Trough section is a complexly faulted graben. There are three major northwest-trending fault systems in the southwestern portion of Imperial County. The faults are, from northeast to southwest, the San Andreas, San Jacinto, and Elsinore faults. These faults exhibit right-lateral and vertical movement.

The site is located on ancient lake beds of Cenozoic age. The sediments are of the ancient Lake Cahuilla and playa lakes. The formation is composed of tan and gray fossiliferous clay, silt, sand and gravel. Also found in the site area is Quaternary age alluvium. This formation consists of unconsolidated clay, silt, sand, and gravel occurring primarily as valley fill and stream wash deposits (Morton 1966).

3.3.2 Soils

Soils of the site are nearly level, somewhat excessively drained soils on flood plains and alluvial basin floors. The soils formed in alluvial sands from diverse sources. Typically the surface layer is stratified, pink and reddish yellow sand and coarse sand to a depth of 27 inches. The underlying material is pink fine sand to a depth over 60 inches. The soil may be gravelly in some layers and cobbly on the surface. In other areas the soil is reddish yellow fine sand to a depth over 60 inches. Table 3-3.2 shows a typical profile of the soil found at the site.

Table 3-3.2. Soil Profile						
DEPTH (in)	SOIL DESCRIPTION	PERCENTAGE PASSING SIEVE NUMBER			LIQUID LIMIT	PLAS- TICITY INDEX
		#4	#40	#200		
0-27	Sand	100	40-70	5-15	---	NP
27-60	Sand, fine sand	100	40-85	5-30	---	NP

Table modified from Soil Survey of Imperial County, CA.

Permeability of the soil rapid, and available water capacity is low. Surface runoff is slow, and hazard of erosion is slight. There is a high hazard of soil blowing and abrasion to young plants.

3.4 HYDROLOGY

3.4.1 Surface Water

Topography of the former bomb target from a low of about 50 feet below sea level north, to a high of about zero feet (sea level), west. Surface water drainage is north through the Carrizo Wash and other tributaries of San Felipe Creek. San Felipe Creek drains into the New Canal which flows north and empties into the Salton Sea. Carrizo Wash and its tributaries in the site area are normally dry and only carry water during times of precipitation, which is sparse in this area. Flooding would be unlikely due to the low annual rainfall and the sandy nature of the area. No stream gage data exists within or near the site boundaries. The USGS maintained a stream gage on San Felipe Creek near Westmorland

from 1961 through 1988. The maximum flow at the gage for the 28 years of record was 100,000 cfs.

3.4.2 Ground Water

This area is underlain by a regionally extensive system of desert basins. These desert or drainage basins receive the majority of their recharge from precipitation runoff from the surrounding mountains and the nearby Salton Sea. The water is absorbed and held by the coarse-grained Quaternary alluvial sediments. The water is therefore unconfined. The depth to groundwater fluctuates greatly due to the surplus or lack of precipitation in the area.

The land is dry and must be irrigated to be used for grazing or farm land. There are extensive irrigation systems throughout the surrounding areas for both domestic and farm use.

3.5 ECOLOGY

The U.S. Fish and Wildlife Service reported that the following federally listed species occur in Imperial County, California: desert pupfish (*Cyprinodon macularius*), endangered; Colorado squawfish (*Ptychocheilus lucius*), endangered; razorback sucker (*Xyrauchen texanus*), endangered; desert tortoise (*Xerobates agassizii*), threatened; Peninsular bighorn sheep (*Ovis canadensis cremnobates*), proposed endangered; Yuma clapper rail (*Rallus longirostris yumanensis*), endangered; and Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*), proposed endangered.

The California Department of Fish and Game Natural Diversity Data Base records report that the only state-listed species that occurs in the vicinity of the site is the endangered desert pupfish (*Cyprinodon macularius*).

No additional information on the occurrence of rare or endangered species or natural communities is known at this time. This does not mean that other state or federally-listed species may not be present within the areas of interest. An on site inspection by appropriate state and federal personnel may be necessary to verify the presence, absence or location of listed species, or natural communities if remedial action is recommended as part of the final ASR.

3.6 DEMOGRAPHICS

3.6.1 Centers of activity

The former bombing target is located in Imperial County, California approximately 15 miles west of the community of Westmoreland, south of the Salton Sea.

3.6.2 Business and Industry Profile

Based on a total of 2,264 establishments in Imperial County, the breakdown of industry is as follows:

- Manufacturing 2.6%
- Agriculture 3.0%
- Services 28.8%
- Trade and Finance 49.9%
- Other 15.7%

Of the people in the county employed by businesses, about 51.7 percent are employed by trade and finance businesses. Also prominent are services businesses at about 19.5 percent, manufacturing at 6.7 percent, and transportation and construction at 13.5 percent. Foregoing percentages are at mid-March 1993.

3.6.3 Population density

Location	Population	Area (Square Miles)	Population Density (Square Miles)
Westmoreland	1,380	n/a	n/a
Imperial County	128,972	4,175	30.9

3.6.4 Types of Housing

Housing in Westmoreland is composed of both single family and multi-family dwellings. The median value of the 213 specified owner-occupied housing units in Westmoreland is \$61,200.

3.6.5 New Development in the Area

There is no significant commercial or residential development in Westmoreland.

3.6.6 Typical Cross Sections of the Population

<u>Westmoreland</u>	<u>Percentages</u>
● White	79.9
● Black	1.7
● American Indian, Eskimo or Aleut	0.6
● Asian or Pacific Islander	0.8
● Other	17.0

Persons of Hispanic origin comprise 72.2 percent of the total population in the Westmoreland. Persons under the age of 18 encompass 37.0 percent and the population segment over the age of 65 constitutes 9.1 percent. The median age averages at 26.7 years.

4.0 SITE HISTORY

4.1 HISTORICAL SITE SUMMARY

4.1.1 General Site History

San Felipe Bombing Target # 67 was located at Section 16 of Township 13 South, Range 10 East. On 1 November 1944, the Bureau of Yards and Docks, Eleventh Naval District leased this property from the State of California for use as a dive bombing target site and assumably they activated it shortly there after (State of California 1944). Originally, simply designated as **San Felipe Bombing Target**, the Eleventh Naval District redesignated all its targets on 23 April 1945 with numbers. This site became **Bombing Target #67** (Eleventh Naval District 1945a).

The Naval Air Control Center San Diego assigned the bombing targets of the Eleventh Naval District to specific units or air stations, although that unit "may permit another unit to use such target" (Eleventh Naval District 1944). Therefore any Naval or Marine Corps facility in the Eleventh Naval District may have used the site. Bases comprising the Eleventh Naval District included:

NAS San Diego (North Island)	NAAS San Nicolas Island
NAS Terminal Island	NAAS Salton Sea
NAAS Los Alamitos	NAAS Ventura County Airport
NAAS Camp Kearney	NAAS Twentynine Palms
NAAS Brown Field	MCAS El Toro
NAAS Holtville	MCAS Mojave
MCAS El Centro	NAAS Ream Field
MCAS Santa Barbara	NAAS San Clemente Island
NAF Thermal	NAF Litchfield Park
MCAAF Camp Gillespie	

(Eleventh Naval District n.d.)

The unit controlling San Felipe Bombing Target # 67 could not be determined, although NAAS Salton Sea and MCAS El Centro were the closest. On 9 November 1945, the Navy approved the disposal of the site and cancelled its lease with the State of California on 15 December 1945 (U.S. Navy 1945; State of California 1945).

4.1.2 Summary of Ordnance and Explosives Activities

Investigation of historical records did not specifically indicate the types of ordnance used on site by the Naval and Marine air units of the Eleventh Naval District.

The ASR site inspection team identified the following OE debris, which concurs with INPR site inspection findings at the site:

3 pound practice bomb AN-MK 23, (cast iron)
100 pound practice bombs, MK VII or XV
caliber .50 cartridge cases, links and projectiles
20mm links and projectiles

The ASR inspection team did not find any evidence of the use of High Explosives (H.E.).

4.1.3 Summary of Chemical Warfare Material Activities

The archive search uncovered no documentation relating to CWM at San Felipe Bombing Target #67. The archive search team found no indication that San Felipe Bombing Target #67 conducted CWM training, storage, or disposal.

4.1.4 Certificates of Clearance

The archive search did not reveal any certificates of ordnance clearance, decontamination or dedudding associated with San Felipe Bombing Target #67. On 15 November 1945, the Eleventh Naval District stated that the ground would be leveled and target markers removed but did not make any references to clearance (Eleventh Naval District 1945b).

4.2 REVIEW OF HISTORICAL RECORDS

Appendix A contains full references of all in text citations along with the location of the copied document. Concentration in three areas directed the research methodology for this report:

- locating documentation concerning the military use of the site
- compiling the types, quantities and probable locations of OE and/or CWM used by the military
- collecting real estate information

The research team searched at the following locations for records relating to OE and CWM activities at San Felipe Bombing Target #67. At these repositories the research team used finding aids and records managers to assist in locating documents relevant to the research topic. The ASR team accumulated complementary documents reviewed on San Felipe Bombing Target #67 but not specifically used.

These complementary documents are stored with the original ASR documents. Appendix H contains a lists of additional repositories and personnel contacted which reported no pertinent information.

4.2.1 National Archives

**Eighth and Pennsylvania
Washington, D.C. 20408
POC: Rick Peuser
202-501-5671**

The research team reviewed finding aids for the site but found very little useful information since the records dealt with a time frame prior to government ownership.

4.2.2 National Archives at College Park
8601 Adelphi Road
College Park, MD 20740
POC: Rich Boylan
301-713-6800

The research team reviewed the finding aids for the applicable Record Groups and researched the following entries:

Record Group 18 (Records of the Army Air Forces)

Entry 1A Confidential and Secret Decimal Correspondence File, 1945-1948
Boxes 255-265, 288-293

Entry 1B Project Decimal File, 1945
Boxes 295-311

Entry 1E Project Decimal File, 1946-1947
Boxes 675-683

Entry 2 Air Adjutant General Decimal File, 1944-1946
Boxes 2255, 2256, 2257, 2277-2281, 2308-2312

Entry 2C Air Adjutant General Decimal File, 1947
Boxes 2797, 2798

Entry 2E Air Adjutant General Unclassified Decimal File, October 1942-1944
Boxes 1590, 3191, 3192

Entry 46 Office of the Air Inspector, Central Decimal Correspondence File-
Demobilization Inspections
Boxes 20, 30-32, 91, 92, 109-111, 174, 175, 185

Entry 292 Air Adjutant General Unclassified Decimal File, October 1942-1944
Boxes 1515, 1520, 1580, 1592

Entry 294 Air Adjutant General Formerly Security Classified Bulky Decimal Files,
1942-1944
Boxes 873, 881, 955, 976

Entry 299 Correspondence Relating to Foreign Bases, Air Forces, Misc. Commands,
Districts, Government-Owned Plants, National Guard and Schools, 1939-1942
Boxes 1140-1143, 1146, 1147, 1184-1189

Record Group 38 (Records of the Office of the Chief of Naval Operations)

Entry World War II War Diaries
Boxes 427, 428, 534

Record Group 40 (General Records of the Department of Commerce)

Entry UD68 Office of the Secretary, Office of Strategic Information
Box 1

Record Group 71 (Records of the Bureau of Yards and Docks)

Entry 74A Plans and Charts of Harbors, Naval Bases and Airfields, 1938-1954
Box 2

Entry 1001 Naval Property Case Files, 1941-1958
Boxes 46-62, 107-114, 119-121

Entry 1013 Minutes of Meetings of the Interdepartmental Air Traffic Control Board,
1943-1946
Boxes 1, 2

Entry 1017 Land Purchase Progress Reports, 1942-1945
Box 1

Entry 1018 Index Cards Showing Congressional Approval of Projects, 1943-1945
Boxes 1-4

Entry 1019 Miscellaneous Reports and Other Records Regarding Land Investigations
Boxes 1-4

Entry 1031 Correspondence with Naval Districts, 1947-1948
Boxes 1, 2, 8, 13, 14, 18, 22, 27, 31, 41

Entry 1037 Lease Files, 1941-1947
Boxes 4-6

Entry Correspondence with Naval Districts, 1947-1948
Boxes 55, 60, 64, 67

Record Group 72 (Records of the Bureau of Aeronautics)

Entry 62 General Correspondence, 1943-1945
Boxes 2320, 3415, 3418

Entry 67 Confidential Correspondence, 1922-1947
Boxes 273, 298

Entry 1001A Unclassified General Correspondence, 1948-1950
Boxes 364-368

Entry 1001F Unclassified General Correspondence, 1954
Boxes 211, 212

Entry 1001G Unclassified General Correspondence, 1955
Boxes 228, 229

Entry 1001H Unclassified General Correspondence, 1956
Box 216

Entry 1001I Unclassified General Correspondence, 1957
Box 222

Entry Records Relating to Inactive Air Stations, 1943-1949
Boxes 2, 3

Entry Unclassified General Correspondence, 1950
Boxes 192-194

Entry Unclassified General Correspondence, 1956
Box 220

Entry Unclassified General Correspondence, 1958
Box 144

Record Group 77 (Records of the Office of the Chief of Engineers)

Entry 106B General Correspondence, 1918-1945
Boxes 302-308, 704, 708, 709, 754, 824, 825

Entry 1011 Formerly Security-Classified Subject Files, 1940-1945
Boxes 214, 218, 219, 262, 263, 458, 483, 484, 495, 496, 588-590, 765-768,
770-772, 799, 850

Record Group 127 (Records of the U.S. Marine Corps)

Entry 237D War Diaries and Unit Histories
Boxes 1-12

Entry 238D Formerly Top Secret General Correspondence, 1944-1945
Boxes 1-3

Record Group 175 (Records of the Chemical Warfare Service)

Entry Historian's Background Files

Boxes 1-14

Record Group 237 (Records of the Federal Aviation Administration)

Entry 11 Specifications and Blueprints, 1941-1947

Boxes 6, 13

Record Group 270 (Records of the War Assets Administration)

Entry UD3 Subject File, 1946-1949

Box 113

Entry UD9 Subject File of Central Property Office, 1946-1947

Boxes 19, 20

Entry UD13 Office Files of Jess Larson, 1942-1953

Boxes 3, 4

Record Group 291 (Records of the Federal Property Resources Service)

Entry Records Relating to Excess Property, 1964-1965

Box 1

Entry Real Property Disposal Case Files, 1962

Boxes 20, 26, 28, 31

Record Group 334 (Records of Interservice Agencies)

Entry 8 Aeronautical Board History File, 1940-1948

Boxes 33, 34

Entry 9 Army-Navy Civil Committee

Boxes 47, 48

Record Group 335 (Records of the Secretary of the Army)

Entry 60 General Correspondence 1963-64-Assistant Secretary of the Army
(Installations and Logistics)

Box 93

Record Group 341 (Records of the Headquarters U.S. Air Force)

Entry 340 Air Coordination Committee, Civil

Boxes 35-55

Entry 340B Department Chief of Staff Operations ACC and Civil Aviation
Organization Documents, 1942-1953
Boxes 56-76

Record Group 407 (Records of the Adjutant General's Office 1917-)

Entry Unclassified Project Decimal File, 1940-1945
Boxes 4323, 4349, 4352, 4353, 4371, 4380, 4386, 4522, 4533

Still Pictures Branch

The research team reviewed the finding aids for the applicable Record Groups and researched the following entries:

Record Group 71 (Records of the Bureau of Yards and Docks)

Entry CP Construction and Aerial Views of Naval Public Works, Facilities, and
Utilities, 1941-1953
Boxes 36, 37, 68, 70, 71, 83, 84

Entry GS Lantern Slides: Photographs of U.S. and Foreign Naval Shore
Establishments, 1896-1944 (District 11)
Boxes 6, 7

Cartographic & Architectural Branch

The research team also consulted *Aerial Photographs in the National Archives-Special List 25*, dated 1990, for Imperial County. Using the indexes, the following imagery covers the site and was acquired:

Record Group 145 (Records of the U.S. Agricultural and Stabilization Conservation Service)

30 Sep 95 1:40,000 NAPP 6821 77-79

The research team also consulted the coverage overlays for the site in Record Group 373 (Records of the U.S. Defense Intelligence Agency) but did not find any imagery at a scale of 1:20,000 or better.

4.2.3 Washington National Records Center

4205 Suitland Road
Suitland, MD 20409
POC: Velecia Chance
301-457-7010

The research team reviewed the finding aids for the applicable Record Groups and researched the following entries:

Accession 77-A52-0259
Boxes 44, 66, 86, 92

Accession 77-A53-325
Boxes 32, 47, 63, 66

4.2.4 National Personnel Records Center
Military Records
9700 Page Avenue
St. Louis, MO 63132-5100
POC: Wilson Sullivan
314-538-4085

The research team reviewed the finding aids for the applicable Record Groups and researched the following entries:

Accession 342-50A-4003
Boxes 1-9

Accession 342-50C-4003
Box 1

Accession 342-50F-4003
Boxes 19, 20, 29

Accession 342-50H-4003
Box 1

Accession 342-57H-3001
Boxes 4-14

4.2.5 U.S. Army Center of Military History
1099 14th Street
Washington, D.C. 20005-3402
POC: Robert K. Wright
202-761-5416

The research team reviewed Historical Data Cards, Camp, Post and Station Files, and Historical Summaries.

4.2.6 U.S. Army Military History Institute
Carlisle Barracks, PA 17013
POC: Richard Summers
717-245-3601

The research team reviewed photographs at the photo archive, conducted a database search in the library, reviewed base newspaper reels and reviewed the post historical files.

4.2.7 Naval History Center Photographic Archive
Building 44, Washington Navy Yard
Washington, D.C. 20374-5059
POC: Jack Green, Archivist
202-433-2765

The research team reviewed finding aids for photographs on the site but found nothing useful.

4.2.8 Naval History Center Library
Building 44, Washington Navy Yard
Washington, D.C. 20374-5059
POC: Reference Librarian
202-433-4132

The team acquired a copy of the 11th Naval District Administrative History in World War II on microfiche.

4.2.9 Naval Aviation History Center
Building 157-1, Washington Navy Yard
Washington, D.C. 20374-5059
POC: Tod Baker
202-433-4355

Aviation History Files, Air/Ground Establishments
Folders 11th Naval District in World War II
San Diego Naval Air Station, CA
El Centro Naval Air Station, CA
Salton Sea Test Base, CA

4.2.10 U.S. Army Chemical-Biological Defense Command
Historical Office
Building E5183
Aberdeen Proving Ground, MD 21010-5423
POC: Jeff Smart
410-671-4430

The research team reviewed, the *Army Ordnance Magazine*, the *Chemical Warfare Service Bulletin* and the 9710 Technical Escort Files, copying applicable documents.

4.2.11 Naval Construction Battalion Center
History Office
1000 23rd Avenue
Port Hueneme, CA 93043-4301
POC: Carol Marsh
805-983-5913

The research team reviewed geographic files, photographs, and 11th and 12th Naval District map books.

4.2.12 Naval Construction Battalion Center
Civil Engineering Support Office (CESO) Building 1443
Port Hueneme, CA 93043
POC: Mona Leon-Guerroero
805-982-3057

The research team reviewed construction drawings for the 11th and 12th Naval Districts.

4.2.13 Defense Technical Information Center
8725 Kingman Road, Suite 944
Ft. Belvoir, VA 22060-6218

The research team conducted an on-line database search for reports associated with the site.

4.2.14 U.S. Army Corps of Engineers, Los Angeles, CA, District Office
Engineering Division, DERP POC
911 Wilshire Boulevard
Los Angeles, CA
POC: Jeff Armentrout
213-452-3720

The team reviewed and copied the applicable backup files for San Felipe Bombing Target #67, Kane Springs, CA, J09CA014301.

4.2.15 National Archives - Pacific Southwest Region
24000 Avila Road, P.O. Box 6719
Laguna Niguel, CA 92607-6719
POC: Suzanne Dewberry, Archivist
(714) 360-2641

The research team reviewed the finding aids for the applicable Record Groups and researched the following entries:

Record Group 49 (Records of the Bureau of Land Management)

Entry Riverside, CA Land Office
Books 32-36, San Bernardino Meridian

Record Group 77 (Records of the Office of the Chief of Engineers)

Accession 77-96-0133, Audit Files
Boxes 7, 11, 13

Accession 77-96-0134, Audit Files
Boxes 2, 3, 4, 6, 7, 8A, 9

Accession 77-96-0152
Box 2

Record Group 181 (Records of Naval Districts and Shore Establishments)

Entry 63A0589 11th Naval District Commandant's Office Correspondence
Boxes 196, 200, 210

Entry 63A600 11th Naval District Planning Officer Office Correspondence
Boxes 38, 39

4.2.16 **Naval Facilities Engineering Command**
Southwest Division-Cadastral Section
1220 Pacific Highway
San Diego, CA 92132
POC: Thomas H. Phelps
(619) 532-1169

The team researched the real estate files but found no applicable maps or documents.

4.2.17 **University of California-Riverside**
Library Building, P.O. Box 5900
Riverside, CA 92517
POC: reference librarian
760-787-3221

The team researched the on-line catalog and the Library Map Room.

4.2.18 **California State Archives Library**
1020 O Street
Sacramento, CA 95814
POC: reference Librarian
916-773-3000

The research team reviewed the Master Finding Aid and the card catalog but found no useful information.

4.2.19 California State Library-California History Room
Library and Courts Building II
900 N Street, Room 200
Sacramento, CA 95814
POC: reference librarian
916-654-0176

The research team reviewed the map card catalog file but found no useful information on the site.

4.2.20 San Diego Public Library
820 E Street
San Diego, CA 92101
POC: reference Librarian
(619) 236-5830

The team researched the on-line computer catalog and the Vertical Files from the California Room.

4.2.21 Borrego/Anza Desert State Park Visitor's Center
200 Palm Canyon Drive
Borrego Springs, CA 92004
POC: Fred Jee, Park Ranger
(760) 767-5311

The archive search team received information concerning former military operations in the Borrego desert near the site but not associated with it.

4.2.22 U.S. Department of Agriculture
Aerial Photography Field Office
2222 W 2300 S
Salt Lake City, Utah 84119-2020
POC: Sharron McGiff
801-975-3503

The research team reviewed photo-mosaics of available imagery using the county in which the installation is located and did not locate any pertinent coverage.

4.2.23 U.S. Geological Survey
EROS Data Center
Sioux Falls, South Dakota 57198
POC: Kimberly Kringen
605-594-6151 ext. 2075

The research team reviewed photo-mosaics of available imagery using the installation's geographic coordinates but did not identify any pertinent coverage for the site.

28 Mar 53	1:24,000	GS-YQ 7 140-142
27 Oct 78	1:32,500	02698 265-267 9"x18"

4.2.24 Whittier College

Fairchild Aerial Photography Collection
Department of Geology
Whittier, California 90608
POC: customer service
310-907-4220

The research team delineated the site's boundary on a USGS quad sheet requesting a list of available photo coverage and scale. The team did not acquire any imagery.

4.3 SUMMARY OF INTERVIEWS

The archive search team conducted telephone and personal interviews to assist in the collection of information for this report. Appendix H lists interviewees and copies of pertinent individual conversation records. The interviews corroborated much of the information uncovered from historical records and did not add any pertinent new information.

4.4 AIR PHOTO INTERPRETATION AND MAP ANALYSIS

4.4.1 General Area Map Analysis

San Felipe Bombing Target #67 is located in Imperial County in southern California, approximately fifteen miles west of the town of Westmoreland, California and ten miles southwest of the Salton Sea. Numerous dry washes cross the site from the Superstition Hills to the east and the Fish Creek Mountains to the south and eventually drain to the north. The U.S. Naval Air Facility is located just to the east of the bombing target in the Superstition Hills. A few unimproved trails cross the area surrounding the target.

4.4.2 Site Specific Map and Drawing Analysis

This archive search not locate any site specific layout plans for San Felipe Bombing Target #67 but it did locate the following regional map:

Naval Air Station San Diego

1950 *Status of Targets Naval Air Bases, 11 N.D.*, dated 30 June 1950. Record Group 181, Entry 11th Naval District, Box 38 General Correspondence 1925-52, National Archives - Pacific Southwest Region, Laguna Niguel, CA.
Appendix K-1 and detail

This regional map shows the bombing, strafing and rocket targets for the 11th Naval District covering Southern California. The targets are numbered 1 to 108, though many numbers do not have a target associated with them. The map only lists the targets in 11th Naval District and does not denote the Marine Corps Air Stations or the Naval Air Stations in this area. This map shows the T-67 San Felipe as a Dive Bombing target.

4.4.3 Air Photo Interpretation

Government and contractor personnel conducted an aerial photography database search. The aerial photography retrieved covered San Felipe Bombing Target #67 during the time period prior to, during and following military use. The imagery acquired is in photographic print format. The analyst performed the interpretation using the following source materials:

<u>Photo. Date</u>	<u>Approx. Scale</u>
28 Mar 53	1:24,000
27 Oct 78	1:32,500
30 Sep 95	1:40,000

The analyst delineated imagery containing important areas on hard copy plots and digitized it using Computer-Aided Drafting and Design (CADD) software. The digitized features overlay scanned aerial photography, resulting in the final plots (see Plate 2). The analysis involved using stereo viewing of photography which allows more accurate identifications than monoscopic interpretations. Resolution and scale of the imagery limited the identification of features discussed in this study. The analyst used the word "probable" when discussing features for which identification is reasonably accurate. The analysis used the term "possible" when identification was not positive, but the object/area matched known features/locations on other sources. Analysis of the aerial photographs referenced the site maps discussed in sections 4.4.1 and 4.4.2 above. The **bolded** numbers in parentheses referenced in the sub-paragraphs below refer to the feature descriptions on the annotated aerial photography plates. The sub-paragraphs below describe the relevant features identified on the imagery:

4.4.3.1 1953 Imagery (Plate 2) - The 1953 imagery shows the bombing target after its use as a target had ended. The bombing target is barely discernible and has concentric rings with diameters of 200 and 300 feet. The coordinates of the target center are: 33° 02' 24", 115° 56' 18".

4.4.3.2 1978 and 1995 Imagery - Aerial imagery reviewed from 1978 and 1995 revealed no additional information of possible ordnance or military related functions. The bombing target is no longer discernible in these photos.

5.0 REAL ESTATE

5.1 CONFIRMED DOD¹ OWNERSHIP

The former San Felipe Bombing Target #67 consisted of 640 acres of real estate. The site consisted of 1 square mile in Section 16, Township 13 South, Range 10 East. The Eleventh Naval District acquired use of this section by lease NOy(R)-36994 from the state of California on 1 November 1944. On 9 November 1945, the Navy approved the disposal of the site and cancelled its lease with the State of California on 15 December 1945 (U.S. Navy 1945; State of California 1945).

This real estate figure concurs with the acreage number stated in the INPR (Appendix D-1). Based on a review of available real estate documents, the Department of the Navy released San Felipe Bombing Target #67 with no restrictive covenants or land use restrictions.

5.2 POTENTIAL DOD OWNERSHIP

The archive search did not identify any additional areas of potential or undocumented military ownership or land use associated with San Felipe Bombing Target #67.

5.3 SIGNIFICANT PAST OWNERSHIP OTHER THAN DOD

This investigation did not reveal any significant past ownership of San Felipe Bombing Target #67 with relationship to OE or CWM.

5.4 PRESENT OWNERSHIP

Records reviewed indicate the current property owners of section 16 is Michael and Daniel Burke of Irvine, California.

¹ The National Security Act of 1947 created the Department of Defense. Hence, since San Felipe Bombing Target #67 was acquired in 1944 and released in 1945, technically it was never used or owned by the DOD, but rather the Department of the Navy. The term "DOD" in this section's sub-paragraph headings, refers to all branches of the United States military, both current and historic.

6.0 SITE INSPECTION

6.1 GENERAL PROCEDURES AND SCOPE

The ASR site inspection characterized OE and CWM potential based on a visual examination at San Felipe Bombing Target #67. Land owners granted verbal permission for right-of-entry on privately owned property prior to the inspection. This inspection included only visual and non-intrusive methods of inspection. The team followed a site safety and health plan (SSHP) prohibiting digging or handling of potential OE/CWM. The SSHP defined standard operating procedures to ensure safety and prevent accidents. Appendix L-1 contains a copy of the SSHP. The inspection team consisted of the following St. Louis District Corps of Engineers personnel: Jennifer J. James, William K. James and Randal S. Curtis. They performed a site survey of the former San Felipe Bombing Target #67 on 31 March 1998. Subsection 6.2 contains a synopsis of the site inspection and Appendix L-2 contains a detailed account. Appendix I includes current site photographs.

6.2 SITE INSPECTION SYNOPSIS

The team arrived in the vicinity of the San Felipe Bombing Target #67 on 31 March 1998 at 0930. From highway 78, the team took an unimproved Bureau of Land Management (BLM) power line access road, separating Range 9 East and Range 10 East. This road is about 7 miles west of highway 78's intersection with highway 86. The team drove about 6 miles south and hiked in about 2 miles into the target location from the west.

Crossing the arm of the Carrizo Wash, which delineates the western border of Section 16, the team located a single expended caliber .50 cartridge. The noted presence of OE debris became more prevalent about half way across the section mile at coordinates N 33° 02.466', W 117° 56.572'², with the discovery caliber .50 and 20mm links and debris from 100 pound practice bombs (i.e. suspension lug straps, nose cones and fins). The target consisted of 100, 200 and 300 feet diameter concentric circles defined by piles of broken concrete/cinder blocks centered around coordinates N 33° 02.408', W 117° 56.389'. The types of expended OE debris found in the area were:

- 3 pound practice bomb AN-MK 23, (cast iron)
- 100 pound practice bombs, MK VII or XV
- caliber .50 cartridge cases, links and projectiles
- 20mm links and projectiles

The site inspection team did not discover any fragmentation or cratering that would indicate the use of High Explosives (H.E.) on the target.

² All coordinates were taken with a Trimble Scout GPS (Global Positioning Satellite) receiver using mapping datum WGS 1984.

7.0 EVALUATION OF ORDNANCE POTENTIAL

7.1 CONVENTIONAL ORDNANCE CONTAMINATION

The archive search uncovered evidence that the Eleventh Naval District utilized conventional ordnance at San Felipe Bombing Target #67. The types of ordnance and explosives associated with the site included: 100 pound practice bombs, 3 pound miniature practice bombs, caliber .50 small arms and 20 mm ammunition. None of the reviewed information indicated any other ordnance related operations at San Felipe Bombing Target #67.

Aerial photography analysis located evidence of a bombing target. The site inspection confirmed the target center with 100, 200 and 300 feet diameter concentric circles. It also verified the presence of OE debris from caliber .50 small arms, 20 mm ammunition, 100 pound practice bombs and 3 pound miniature practice bombs. All the OE debris found by the inspection team appeared to be expended and no complete rounds of any type were found and they did not find any evidence of the use of H.E.

7.2 CHEMICAL WARFARE MATERIAL CONTAMINATION

Based on this investigation, no evidence surfaced of chemical warfare materials storage, usage, or disposal at San Felipe Bombing Target #67. Furthermore, the mission of San Felipe Bombing Target #67 does not imply the presence of CWM. Research discovered no historical records associating CWM with the site. Interviews did not disclose any correlation of CWM with the site. Additionally, the site inspection did not uncover any evidence of CWM hazards.

8.0 TECHNICAL DATA OF ORDNANCE AND EXPLOSIVES

8.1 POTENTIAL OE AND CWM ITEMS

The archive search identified the following ordnance related items associated with the San Felipe Bombing Target #67: 100 pound practice bombs, 3 pound miniature practice bombs, caliber .50 small arms and 20 mm ammunition. The Navy used these items on the bombing range.

The archive search did not uncover evidence of the use of chemical warfare materials at San Felipe Bombing Target #67. The Eleventh Naval District's activities at this site did not include the storage, the disposal, or the use of CWM in training.

8.2 DESCRIPTION OF CONVENTIONAL ORDNANCE

The following pages briefly show and discuss the technical details of typical examples of OE items identified with the San Felipe Bombing Target #67 based on this archive search³:

Cartridge, .50 caliber	8-2
Cartridge, 20mm, Ball, M55A1	8-3
Bombs, Miniature Practice, AN-MK 5 MOD 1, AN-MK 23, AN-MK 43	8-5
Bomb, Practice, 100-lbs, MK 15	8-6

8.3 DESCRIPTION OF CHEMICAL WARFARE MATERIALS

The archive search did not uncover evidence that any chemical warfare materials remain on the former San Felipe Bombing Target #67.

³ The displayed items are general descriptions and may not include all the specific variations of a particular OE item. Furthermore, presentation of this list should not be construed that these items actually remain on site or that the OE items identified is a comprehensive list of what might actually have been used.

CARTRIDGE .50 CALIBER

General. In general, a small-arms cartridge is identified as an assembly of a cartridge case, primer, a quantity of propellant within the cartridge case, and a bullet or projectile. Blank cartridges are sealed with paper closure disks in lieu of bullets. Dummy cartridges are composed of a cartridge case and a bullet.

Case. Although steel, aluminum, zinc and plastic materials have been used experimentally, brass, a composition of 70 % copper and 30% zinc, is the most commonly used material for cartridge cases.

Propellant. Cartridges are loaded with varying weights of propellant. This is to impart sufficient velocity to the projectile to obtain the required ballistic performance. These propellants are either of the single base (nitrocellulose) or double base (nitrocellulose & nitroglycerine) type. The propellant grain configuration may be cylindrical with a single, lengthwise perforation, spheroid (ball) or flake. Most propellants are coated with a deterrent (to assist in controlling the rate of combustion) and with a final coating of graphite (to facilitate flow of propellant and eliminate static electricity in loading cartridges).

Primer. Cartridges contain percussion primer. The percussion primer of brass or gliding metal cup that contains a pellet of sensitive explosive material secured by a paper disk and a brass anvil.

Bullets.

Ball: the bullet consists of three parts: a gliding metal jacket, a soft steel core, and a point filler of antimony-lead alloy. The bullet is unpainted.

Tracer: the bullet is the similar to the M1 with the addition of a tracer and igniter composition. The tip is painted orange.

Blank: No bullet

Incendiary: the bullet consists of four parts, a gliding metal jacket, a hollow steel cylindrical core, an incendiary composition, and a lead base filler. The tip is painted light blue.

Armor-Piercing: the bullet consists of three parts: a gliding metal jacket, a tungsten-chrome steel core, and a point filler of lead hardened with antimony. The tip is painted black.

Armor-Piercing Incendiary: the bullet is similar to the armor-piercing bullet, except that the point filler is incendiary mixture instead of lead. The tip is painted aluminum.

Armor-Piercing Incendiary Tracer: The bullet consists of a hard steel core with compressed pyrotechnic mixture in the cavity in the base of the core, The core is covered by a gliding-metal jacket with incendiary mixture between the core point and jacket. The tip is painted aluminum and red

Dummy: The complete cartridge is inert. The cartridge case is tin-coated, has three holes drilled in the side and an empty primer pocket. The bullet may be tin-coated.

High Pressure Test: The cartridge case is distinguished from other cartridges by the tinned cartridge case. The bullet consists of a gliding metal jacket and a core made up of 2 slugs, a front and rear slug.

References: TM 9-1900, Ammunition General, June 1956
TM 43-0001-27, Army Ammunition Data Sheets, Small Arms, June 1981

CARTRIDGE, 20MM, BALL, M55A1

Guns: The 20-mm guns M39 and M39A1 are automatic aircraft cannon for use against aircraft and ground or sea-borne targets. These guns are gas-operated, belt-fed, electrically fired weapons having a high rate of fire. The cartridge is a training round intended as a substitute for a service round to be used in target practice.

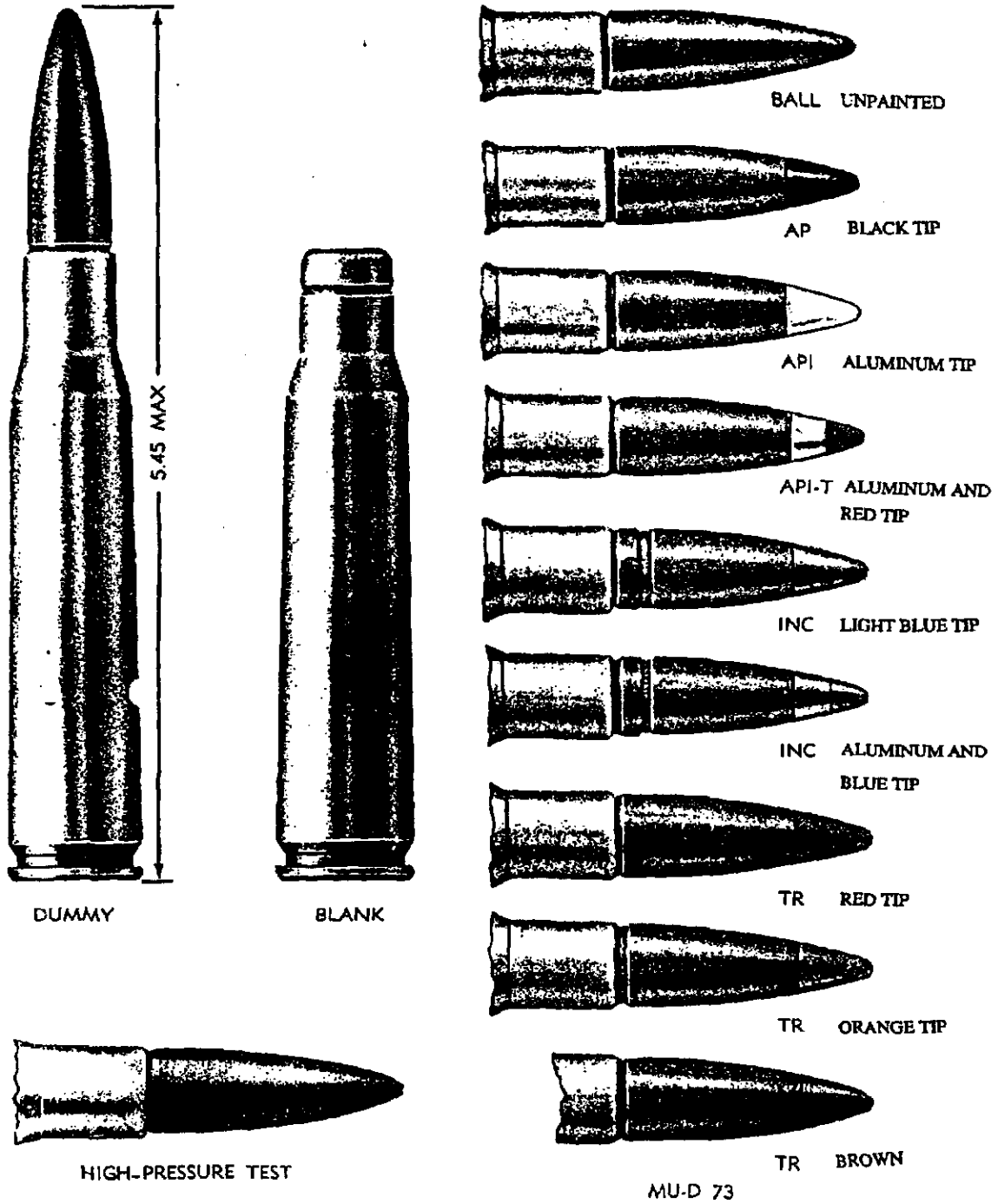
General: This cartridge is for use in practice firing; prior to standardization of the basic model, this type of cartridge was referred to as a target practice cartridge. The nomenclature has been changed to "ball" in order to have the designation conform to the small arms system. The projectile of this cartridge consists of body, nose, and rotating band. The body is made of steel; it is hollow and contains no filler. The nose, which may be assembled to the body with screw threads and a thermosetting resin or keyed to the body by swaging, is made of aluminum alloy and is solid. The cartridge case M103 loaded with approximately 0.084 pound of double-base propellant and the electric primer M52A3B1 are used in the cartridge.



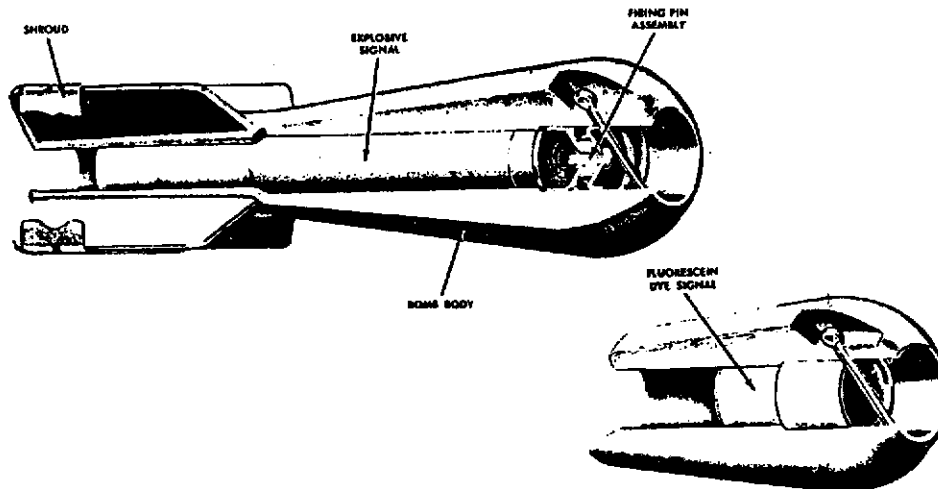
Tabulated Data:

Weight of complete round	0.56 lb.
Length of projectile, as fired	0.22
Length of complete round	6.165 in. (max)
Length of projectile	2.98 in.
Length of cartridge case	4.015 in.
Width of rotating band	0.203 in.
Color	Black with white markings

Reference: TM 9-1901-1, Ammunition for Aircraft Guns, December 1957



MINIATURE PRACTICE BOMBS AN-MK 5 MOD 1, AN-MK 23, AN-MK 43



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. ± 1 oz AN-MK 23 - 3 lb. ± 2 oz AN-MK 43 - 4 lb. 7 oz. ± 2 oz.
Signal:	AN-Mk 4, Black powder/pyro- technic charge MK 5, Fluorescein dye

Reference: OP 1280, Aircraft Bombs, Feb 45
 TM 9-1325-200, Bombs and Bomb Components, Apr 66

BOMB, PRACTICE, 100-POUND, MK15

2-52. Bomb, Practice: 100-Pound, MK15 Mods 2, 3 and 4

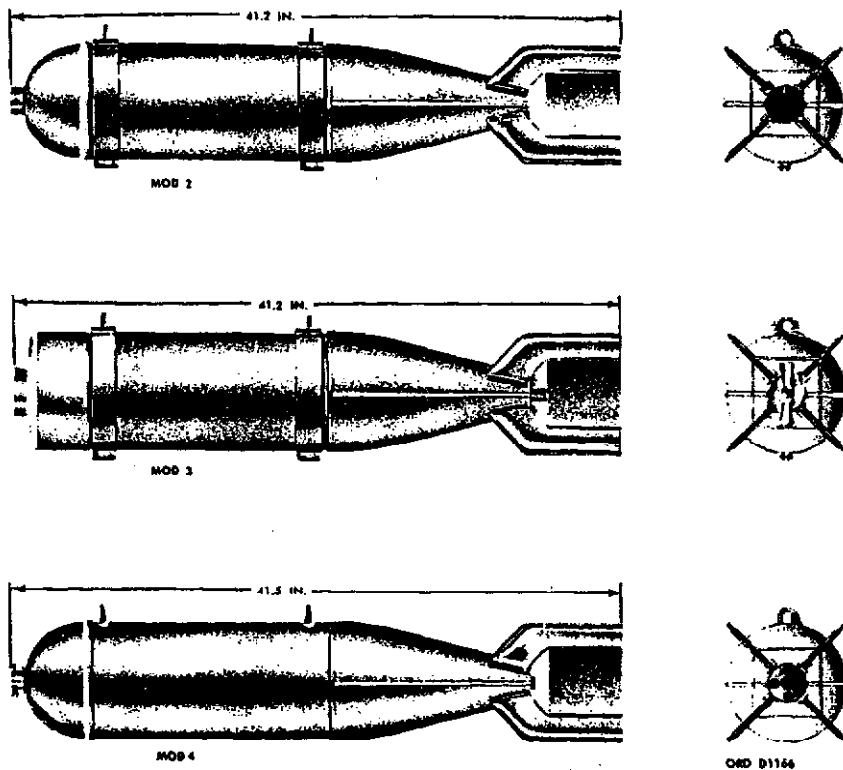


Figure 2-52. Bomb, practice: 100-pound, MK15 Mods 2, 3, and 4.

Table 2-50. Bomb, Practice: 100 pound, MK15 Mods 2, 3, and 4

Mark Mod	15 2	15 3	15 4
Length of Assembled bomb (in)...	41.2.....	41.2.....	41.5
Diameter of Body (in).....	8.0.....	8.0.....	8.0
Fin Span (in).....	.	.	11.24
Weight of Assembled Bomb (lb):	11.24.....	11.24.....	
Loaded with Wet Sand.....			97.0
Loaded with Water.....	100.0.....	100.0.....	60.0
	56.0.....	67.0.....	

Table 2-50. Bomb, Practice: 100 pound MK15 Mods 2, 3, and 4 - Continued

Mark Mod	15 2	15 3	15 4
Wet Sand Filler (lb).....	76.0.....	77.4.....	76.0
Water Filler (lb).....	39.0.....	40.0.....	39.0
Water Filler (gal).....	4.6.....	4.7.....	4.6
Signal.....	None.....	MK 7 Mod 0.....	MK 4 Mods 0,1,2,3,4
...	None.....	MK 247 Mod 0.....	None
Fuze.....	None.....	None.....	MK 1 Mod 0
....	MK 1 or AN-M6A2	MK 1 or AN-M6A2	No Arming Wire
Firing-Pin Assembly.....			
Arming-Wire Assembly.....			

a. *Description.* Practice bomb MK15 Mod 2 (fig. 2-62 and table 2-50) is identical to the Mod 3 except that it is not adapted for the use of a fuze and signal. It is filled with water or a mixture of sand and water (fig. 2-63) for spotting purposes. For training purposes, a small washer may be soldered to the nose of the bomb to simulate a fuze. The end of an arming wire (which is normally inserted in the fuze of service type bombs) is then secured to the washer. For armed releases, the washer is torn free of the bomb by the arming wire; for safe releases, the arming wire remains secured to the washer. When used against armored-deck target boats, it is filled with water and released from an altitude of less than 7,000 feet.

b. *Bomb, Practice: MK 15 Mod 3.* Practice bomb MK15 Mod 3 has a light cased, cylindrical body with a threaded filling hole in its rounded nose. A box-fin assembly consisting of four metal vanes attached to a cone is welded to the aft end of the body. The bomb has two metal suspension band assemblies (each consisting of a circular clamp, a suspension lug, and two cap screws) for tightening the band to the bomb. The bands may be adjusted for double suspension of the bomb by orienting to suit the rack or shackle to which the bomb is to be attached. A flat nose attachment that reduces ricochet of the bomb at entrance angles as low as 90 degrees is used during antisubmarine practice. The attachment is secured in place by a cap which threads onto the filling hose. The bomb is used with practice bomb signal MK7 Mod 0 and inert fuze MK247 Mod 0, both of which are secured to the aft end of the bomb.

c. *Bomb, Practice, 100-pound: MK15 Mod 4.* The practice bomb MK15 Mod 4 is a light-cased, cylindrical bomb with a round nose and an integral box fin and cone. A flash tube, extending throughout its transverse axis, housed a pyrotechnic signal and firing-pin assembly. Two suspension lugs are welded to the bomb body 14 inches apart. A filling hole is located off center on the bomb nose and is sealed by a filler cap similar to those used on automobile gas tanks. The firing-pin assembly consists of two shallow metal cups, separated by a spacer which housed the firing pin. A cotter-pin through the nose end of the flash tube and two recesses in the lip of the forward cup locks the firing-pin assembly and signal in place.

d. *Functioning.* Upon impact of the bomb with the target, the signal is detonated, producing a flash and a large puff of smoke, which permits observation of the bombing accuracy.

Reference:

TM 9-1325-200, Bombs and Bomb Components, April 1966

9.0 EVALUATION OF OTHER SITE INFORMATION

The archive search did not reveal any additional areas of potential environmental concern associated with the military use of San Felipe Bombing Target #67.

APPENDIX A
REFERENCES

The following list of references only represents the items cited in preparation of this report, and does not illustrate all the documents reviewed or copied for the backup files (see Records Review section 4.2 for further details). Source listings for locating each document are noted except where relatively widely available.

Section 2.0 PREVIOUS SITE INVESTIGATIONS

Corps of Engineers - Los Angeles District

1993 Inventory Project Report - project no. J09CA0143, *San Felipe Bombing Target #67*, Kane Springs, California, dated 31 August 1993.

Appendix D-1

Section 3.2 CLIMATIC DATA

Federal Climate Complex - Ashville, NC

Department of the Navy

Fleet Numerical Meteorology and Oceanography Detachment

National Oceanic and Atmospheric Administration

National Climatic Data Center

U.S. Air Force Environmental Technical Application Center

Sections 3.3 & 3.4.2 GEOLOGY, SOILS AND GROUND WATER HYDROLOGY

Morton, Paul K.

1966 *Geologic Map of Imperial county, California*. County Report 7, California Division of Mines and Geology, Sacramento, CA.

Zimmerman, Robert P.

1981 *Soil Survey of Imperial County, California, Imperial Valley Area*. US Department of Agriculture, Soil Conservation Service in cooperation with the University of California Agricultural Experiment Station and the Imperial Irrigation District.

Section 3.4.1 SURFACE WATER HYDROLOGY

U.S. Geological Survey

1992 HARPERS WELL, CA Quadrangle, California-Imperial County, 7.5 Minute Series (topographic), dated 1992.

1988 USGS stream gage station #10255885 on San Felipe Creek near Westmorland, California. The period of record for this gage was 28 years, 1961 through 1988.

Section 3.5 ECOLOGY

U.S. Fish and Wildlife Service

1997 Official correspondence dated 3 February 1997.

California Natural Heritage Data Base

1996 Computer software dated 23 September 1996.

Section 3.6 DEMOGRAPHICS

U.S Department of Commerce - Bureau of the Census

1990 *Census of Population and Housing - Westmoreland, California*, Summary Tape File 1A, from CD Rom

1994 *County and City Data Book, Land Area and Population - Imperial County, California*, Summary Tape File 1A, from CD Rom

1993 *County Business Patterns - Imperial County, California*, Summary Tape File 1A, from CD Rom

Section 4.1 HISTORICAL SITE SUMMARY (cited references only)

State of California

1944 Lease: *Lease Between State of California and U.S. Navy*, dated 1 November 1944. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

Appendix E-1

1945 Lease: *Special Release - Under Lease No. NOy(R)-36994*, dated 15 December 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

Appendix E-2

U.S. Navy

1945 Letter: *Targets, Gunnery and Rocket Ranges - Discontinuance of*, dated 9 November 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 3, Folder L5-7-2-TP, NOy(R) 39571 Twentynine Palms Auxiliary Field, CA. National Archives and Records Administration, Archives II, College Park, MD.

Appendix E-3

U.S. Navy, Eleventh Naval District

1944 Letter: *Bombing Targets in Southern California Sector, Western Sea Frontier*, dated 24 August 1944. Record Group 181, Entry 11th Naval District Correspondence, Box 38, Folder NAB 11. National Archives and Records Administration-Pacific Southwest Region, Laguna Niguel, CA.

Appendix E-4

1945a Letter: *Land and Water Targets - Numbering of*, dated 23 April 1945. Record Group 181, Entry 11th Naval District Correspondence, Box 38, Folder NAB 11. National Archives and Records Administration-Pacific Southwest Region, Laguna Niguel, CA.

Appendix E-5

1945b Letter: *Lease NOy(R)-36994 with State of California, Covering Section 16, Township 13, South, Range 10 East, S.B.M., Imperial County, CA for Bomb Target Site - Cancellation of*, dated 15 November 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

Appendix E-6

Section 4.4 AIR PHOTO INTERPRETATION AND MAP ANALYSIS

Naval Air Station San Diego

1950 *Status of Targets Naval Air Bases, 11 N.D.*, dated 30 June 1950. Record Group 181, Entry 11th Naval District, Box 38 General Correspondence 1925-52, National Archives - Pacific Southwest Region, Laguna Niguel, CA.

Appendix K-1 and detail

U.S. Geological Survey

1992 HARPERS WELL, CA Quadrangle, California-Imperial County, 7.5 Minute Series (topographic), dated 1992.

Section 5.0 REAL ESTATE

Same references as section 4.1 above.

Section 8.0 TECHNICAL DATA OF ORDNANCE AND EXPLOSIVES

U.S. Army

1956 *TM 9-1900 - Ammunition General*, dated June 1956.

1957 *TM 9-1901-1 - Ammunition for Aircraft Guns*, dated December 1957.

U.S. Army

1981 *TM 43-0001-27 - Army Ammunition Data Sheets, Small Arms*, dated June 1981.

U.S. Army, Air Force and Navy

1966 *TM 9-1325-200, NAVWEPS OP 3530 & TO 11A-1-64, Bombs and Bomb Components*, dated April 1966.

U.S. Navy-Bureau of Ordnance

1945 *OP 1280 - Aircraft Bombs*, dated 17 February 1945.

APPENDIX B

**ABBREVIATIONS, ACRONYMS,
AND BREVIETY CODES**

ABBREVIATIONS, ACRONYMS AND BREVITY CODES

AAF*	Army Air Field
AA	Anti-Aircraft
ACGIH	American Conference of Governmental Industrial Hygienist
AEC	Army Environmental Center
AFB	Air Force Base
AMC	Army Materiel Command
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Anti-personnel
AP-T	Armor Piercing-Tracer
ASR	Archive Search Report
aux	auxiliary
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CADD	Computer-Aided Drafting and Design
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, Mississippi Valley-St. Louis District
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
ctg	Cartridge
CWM	Chemical Warfare Material
CWS*	Chemical Warfare Service
DA	Department of the Army
DARCOM	Development and Readiness Command
DEET	Diethyltoluamide
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
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
FS	Feasibility Study
FUDS	Formerly Used Defense Sites
GIS	Geographic Information System
GPS	Global Positioning Satellite
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
IATCB	Interdepartmental Air Traffic Control Board
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NAC	Naval Air Center
NARA	National Archives and Records Administration
NAVSEA	Naval Sea Systems Command
NAS*	Naval Air Station
NCP	National Contingency Plan
NEW	Net Explosive Weight
NG	National Guard
NGVD	National Geographic Vertical Datum
NIMA	National Imagery and Mapping Agency
NIOSH	National Institute for Occupational Safety and Health
NMAS	National Map Accuracy Standards
NPL	National Priorities List
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
NWS	National Weather Service
OE	Ordnance and Explosives
OP	Ordnance Pamphlet
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PD	Point Detonating
PIBD	Point Initiating, Base Detonating
PL	Public Law
PPE	Personal Protective Equipment
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
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Units
TECOM	Test Evaluation Command
TEU	United States Army Technical Escort Unit
TM	Technical Manual
TNT	Trinitrotoluene
TP	Target Practice
U.S.	United States (of America)
USA	United States Army
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAESCH	U.S. Army Engineering and Support Center, Huntsville, AL
USAFHRA	U.S. Air Force Historical Research Agency
USATCES	U.S. Army Technical Center for Explosive Safety
USATHMA	U.S. Army Toxic and Hazardous Materials Agency
USC	United States Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WAA*	War Assets Administration
WD*	War Department
WNRC	Washington National Records Center

* designates a historic acronym

APPENDIX C
TEXT / MANUALS
NOT USED

APPENDIX D
REPORTS / STUDIES

REPORTS / STUDIES

D-1 Inventory Project Report for Project No. J09CA0143, *San Felipe Bombing Target #67*, Kane Springs, California, dated 31 August 1993.

APPENDIX D-1

**Inventory Project Report for Project No.
J09CA0143, *San Felipe Bombing Target #67*,
Kane Springs, California, dated 31 August 1993.**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HUNTSVILLE DIVISION, CORPS OF ENGINEERS
P. O. BOX 1600
HUNTSVILLE, ALABAMA 35807-4301

CEHND-PM-SO (200-1c)

19 January 1995

MEMORANDUM FOR Commander, HQUSACE, ATTN: CEMP-RF (Mr. Coppola),
20 Massachusetts Avenue, NW, Washington, DC 20314-1000

SUBJECT: DERP-FUDS Inventory Project Report (INPR) Requiring an Ordnance and
Explosive Waste (OEW) Engineering Evaluation and Cost Analysis (EE/CA)

1. The enclosed INPR has been submitted for further investigation or action by Huntsville Division. We have reviewed the INPR and recommend a phased EE/CA be scheduled for the following site:

DIVISION	PROJECT NO.	RAC	SITE NAME
SPD	J09CA014301	4	San Felipe Bombing Target #67 (encl)

2. A completed DD1391 cost estimate and RAC score is included with the enclosure. The POC is Mr. Robert Britton at commercial 205-895-1545.

FOR THE DIRECTOR OF PROGRAMS
AND PROJECT MANAGEMENT

Encl

LAWSON S. LEE, P.E.
Chief, Ordnance and Technical
Programs

CF:

Commander, U.S. Army Engineer Division, South Pacific, ATTN: CESP-ED-G,
630 Sansome Street, Room 720, San Francisco, CA 94111-2206

11-346



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
630 Sansome Street, Room 720
San Francisco, California 94111-2206

14 NOV '94

CESPD-ED-G (200-1c)

MEMORANDUM FOR

Commander, U.S. Army Corps of Engineers, 20 Massachusetts
Avenue, N.W., Washington, DC 20314-1000

Commander, U.S. Army Engineer Division, Huntsville,
P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: Defense Environmental Restoration Program For Formerly
Used Defense Sites (DERP-FUDS), Inventory Project Report (INPR)
for Bombing Target #67, Site No. J09CA014300

1. I am forwarding the INPR for Bombing Target #67 for appropriate action. The site is eligible for DERP-FUDS.
2. I recommend that CEHND determine the need for further investigation and action at this site regarding a potential project. Los Angeles District has calculated a RAC 4 on this project, but suggests that a RAC 3 might be more appropriate.

Encl

David E. Peixotto
DAVID E. PEIXOTTO
Colonel, EN
Commanding

CF:
CESPL-ED-MI (HTRW)



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2711

REPLY TO
ATTENTION OF

CESPL-ED-MI

09 September 1993

MEMORANDUM FOR Commander, South Pacific Division, CESP-D-ED-G
ATTN: Vince Del Greco

SUBJECT: DERP-FUDS Inventory Project Report's (INPR's) for Site
Nos: J09CA014800, J09CA029900, J09CA018800, J09CA018300,
J09CA018200, J09CA019400, J09CA019700, J09CA019300, J09CA014300,
J09CA036000, J09CA034800, J09CA055100, and J09CA053000

1. Enclosed are the INPR's for:

- J09CA014800 ACCESS ROAD FOR EL CENTRO ROCKET TARGETS
- J09CA029900 CARROLL CANYON DEMOLITION AREA
- J09CA018800 SALTON SEA BOMB TARGET #58
- J09CA018300 SALTON SEA BOMB TARGET #53
- J09CA018200 SALTON SEA BOMB TARGET #52
- J09CA019400 PROPOSED SALTON SEA BOMB TARGET #2
- J09CA019700 PRESUMED BOMBING SITE SAFETY AREA
- J09CA019300 PROPOSED SALTON SEA BOMB TARGET #1
- J09CA014300 BOMBING TARGET #67
- J09CA036000 FAMOSA AUXILIARY FIELD #3
- J09CA034800 DRY CANYON ARTILLIERY RANGE
- J09CA055100 POSO AUXILARY FIELD #6
- J09CA053000 OXNARD SEACOAST BATTERY

We determined that ordnance contamination eligible under DERP-FUDS may exist.

2. I recommend the following:

- a) Findings and Determination of Eligibility be approved and signed.
- b) Forward a copy of this report to Commander, Huntsville Division to determine if further action is appropriate.

13 Encl

R.L. Vanantwerp
for R.L. VANANTWERP
COL, EN
Commanding

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY

BOMBING TARGET (SAN FELIPE) NO. 67
IMPERIAL COUNTY, CALIFORNIA
SITE NO. J09CA014300


FINDINGS OF FACT

1. In 1944, the Eleventh Naval District leased one-square-mile section of land (640-acres) (Section 16, Township 13 South, Range 10 East) from the State of California.
2. The Navy acquired use of this "unimproved, undeveloped, rough desert" land for a bomb target for Fleet Unit training. No further information was available concerning DOD use of this site.
3. In 1946 the site was declared surplus, and according to historical records, was restored to its condition prior to Navy use, as with several other bomb target sites. Currently, Section 16 is privately owned by Michael and Daniel Burke of Irvine, California, and has remained undeveloped.

DETERMINATION

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

DATE



DAVID E. PEIXOTTO
Colonel, EN
Commanding

SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. J09CA014300
BOMBING TARGET (SAN FELIPE) NO. 67
31 August 1993

SITE NAME: BOMBING TARGET (SAN FELIPE) NO. 67, also known as San Felipe Target and Target 67.

LOCATION: The Bombing Target No. 67 site is located in Imperial County, California, approximately 7.9 miles south of Kane Springs at Highway 78. The site encompasses all of Section 16, Township 13 South, Range 10 East.

SITE HISTORY: In 1944, the Navy leased this property from the State of California for use as a practice bombing target. The bomb target site was declared surplus in 1946. Currently, the site is privately owned, and has remained undeveloped, rough desert land. During the onsite survey, the following evidence of former bombing and strafing was observed: practice bombs at multiple locations, multiple 50-caliber belt clips at various locations, and multiple 50-caliber shells and casings at the mid to southeast quarter.

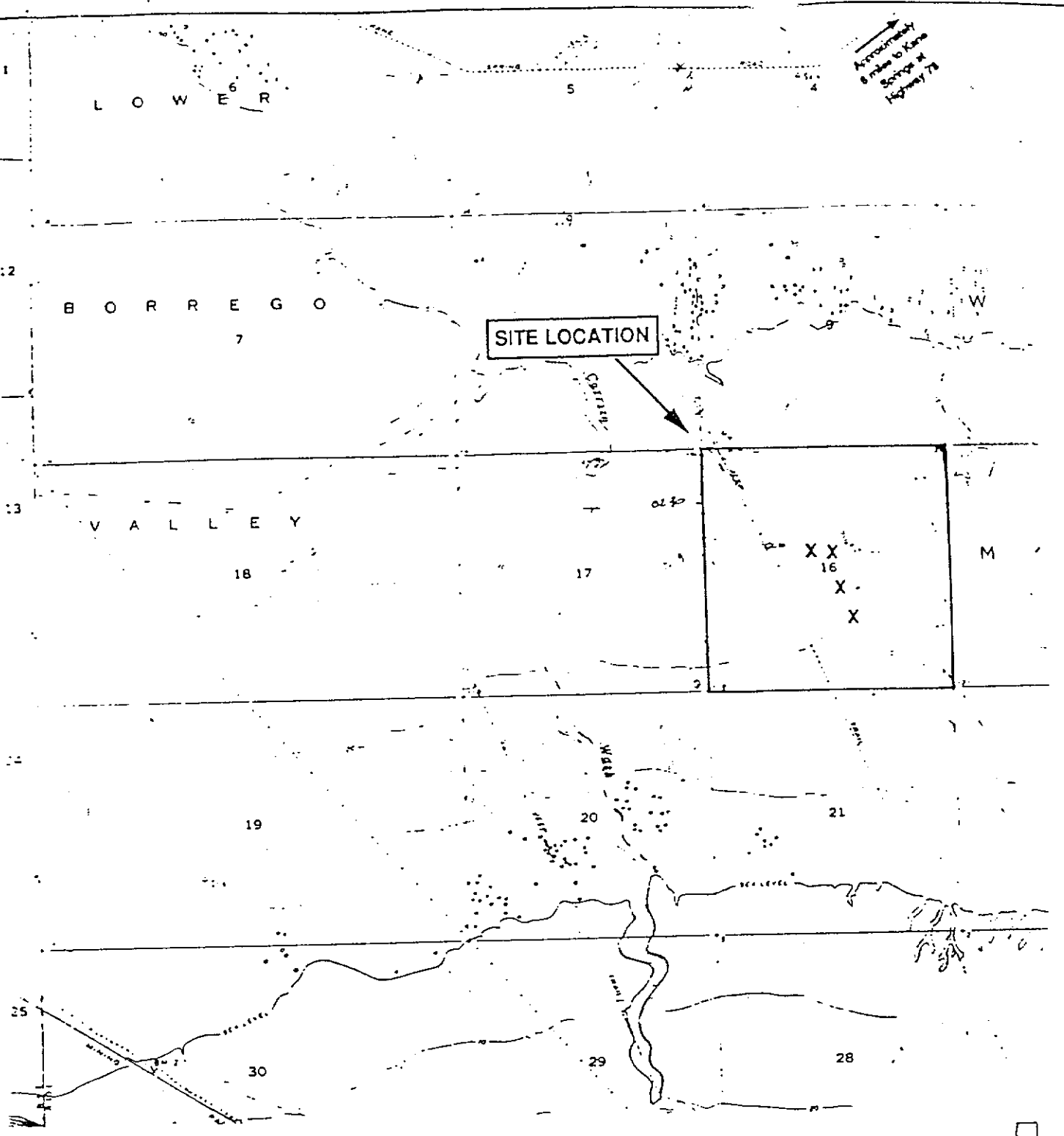
SITE VISIT: The site was visited on May 6, 1993, by Hunter Butler and Sandra Rehfeldt of Science Applications International Corporation, San Diego, California.

CATEGORY OF HAZARDS: OEW

PROJECT DESCRIPTION: Recommend the MCX for OEW at Huntsville Division make a determination regarding further investigation at this site.

AVAILABLE STUDIES AND REPORTS: Historical information on 11th Naval District bomb targets was obtained from the National Archives office in Laguna Niguel, California. Land acquisition and ownership records were obtained from the Bureau of Land Management, El Centro, California, and the Imperial County Assessor's Office, El Centro California.

DISTRICT POC: Jatin Desai, Los Angeles District, (213) 894-6266



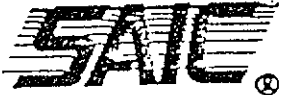
X Ordnance stings

Reference:
 USGS 7.5 Minute Quadrangle, Harpers Well, Calif. (124 000), 1956,
 Photosinspected 1978.



N
 Approximate Scale

1 Mile

 SAIC Science Applications International Corporation An Employee-Owned Company	SITE LOCATION BOMBING TARGET (SAN FELIPE) #67 J09CA014300 33° 02' 17"N 115° 56' 32"W Imperial County, CA		
	PROJECT NO. 01-0255-04-1869		
	DRAWN BY SR	CHECKED BY BCF	DATE 6-93

PROJECT SUMMARY SHEET
FOR
DERP-FUDS OEW PROJECT NO. J09CA014301
BOMBING TARGET (SAN FELIPE) NO. 67
SITE NO. J09CA014300

PROJECT DESCRIPTION: During World War II, this site was used by the Eleventh Naval District as a bomb target for Fleet Unit training. The following ordnance was observed on site during the survey: multiple practice bombs, multiple 50-caliber belt clips, and multiple 50-caliber shells and casings. However, neither the extent of such materials nor the potential health threat have been determined. The site is located in undeveloped desert with small sand mounds in the northern one-half of the section and grassy flats in the central and southern portions of the site. Ordnance may have been buried below the surface as a result of sand shifting in high wind. Due to the proximity of Carrizo Wash in adjacent Section 17, ordnance may have been widely distributed on Section 16 during high water conditions.

PROJECT ELIGIBILITY: This site was formerly used by the Eleventh Naval District.

POLICY CONSIDERATION: No policy considerations prevent the proposal of this project.

PROPOSED PROJECT: Recommend the Corps' Mandatory Center of Expertise (MCX) for OEW at Huntsville Division make a determination concerning further action.

RAC FORM: Attached.

DISTRICT POC: Request CEHND inform Mr. Jatin Desai at (213) 894-6266 when a determination is made regarding project status.

APPENDIX E

LETTERS / MEMORANDUMS
/ MISCELLANEOUS ITEMS

LETTERS / MEMORANDUMS / MISCELLANEOUS ITEMS

- E-1 State of California
Lease: *Lease Between State of California and U.S. Navy*, dated 1 November 1944. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.
- E-2 State of California
Lease: *Special Release - Under Lease No. NOy(R)-36994*, dated 15 December 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.
- E-3 U.S. Navy
Letter: *Targets, Gunnery and Rocket Ranges - Discontinuance of*, dated 9 November 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 3, Folder L5-7-2-TP, NOy(R) 39571 Twentynine Palms Auxiliary Field, CA. National Archives and Records Administration, Archives II, College Park, MD.
- E-4 U.S. Navy, Eleventh Naval District
Letter: *Bombing Targets in Southern California Sector, Western Sea Frontier*, dated 24 August 1944. Record Group 181, Entry 11th Naval District Correspondence, Box 38, Folder NAB 11. National Archives and Records Administration-Pacific Southwest Region, Laguna Niguel, CA.
- E-5 U.S. Navy, Eleventh Naval District
Letter: *Land and Water Targets - Numbering of*, dated 23 April 1945. Record Group 181, Entry 11th Naval District Correspondence, Box 38, Folder NAB 11. National Archives and Records Administration-Pacific Southwest Region, Laguna Niguel, CA.
- E-6 U.S. Navy, Eleventh Naval District
Letter: *Lease NOy(R)-36994 with State of California, Covering Section 16, Township 13, South, Range 10 East, S.B.M., Imperial County, CA for Bomb Target Site - Cancellation of*, dated 15 November 1945. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

APPENDIX E-1

State of California

Lease: *Lease Between State of California and U.S. Navy*, dated 1 November 1944. Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

Appropriation: AIR FORCE, 1945, Subhead 3.

All public bills for payment under this contract should include a reference to No. *May (R) 3699* ✓

L E A S E

This Lease, made and entered into this 1st day of NOVEMBER 1944, by and between the State of California, through Harry B. Riley, as Controller of the State of California, hereinafter called the Lessor and the United States of America, hereinafter called the Government.

WITNESSETH: The Parties hereto for the consideration hereafter mentioned agree as follows:

1. The Lessor hereby leases to the Government for use as a Bombing Target Site, the following described premises, located in the State of California, County of Imperial:

Section 16, Township 13 South, Range 10 East, S.B.M., 1931 Sale #1802, Imperial County.

2. To have and to hold the said premises with their appurtenances for the term beginning November 1st, 1944, and ending with June 30th, 1945; provided that unless and until the Government shall give notice of termination in accordance with paragraph 9 hereof, this lease shall be renewed from year to year without further notice; provided further that adequate appropriations are available for the payment of rentals to accrue under such renewals, and provided further that such renewals shall not extend beyond six months after the date of termination of the unlimited National Emergency as declared by the President of the United States in Proclamation 2487 dated May 27, 1941.

3. On June 30th of each year the Government shall pay the Lessor rent for the premises at the rate of \$16.70 per annum, except that for the period from the beginning of the term to June 30, 1945, the rent shall be \$11.14.

4. The Government shall have the right, during the existence of this lease to erect structures or signs in or upon the premises hereby leased which structures so placed in or upon the said premises shall be and remain the property of the Government and may be removed therefrom by the Government prior to the termination of this lease.

5. The Government shall surrender possession of the premises upon the expiration or termination of this lease in the same and as good condition as that existing at the time of entering upon the same under this lease, reasonable and ordinary wear and tear and damages by the elements, or by circumstances over which the Government has no control excepted; provided that upon the written consent of the Lessor the Government may have thirty (30) days or any other period mutually agreed upon after the expiration or termination of the lease within which to restore the premises to the same and as good condition as before set forth; and provided further that upon obtaining the written consent of the Lessor thereto prior to the expiration or termination of the lease the Government need not restore the premises as aforesaid.

6. In case any portion of the leased property shall, during the term of this lease, be redeemed from the sale thereof to the State for delinquent taxes, or the right to such redemption be initiated during the term of this lease so as to give the redemptioner the right to the immediate possession of said property upon such redemption, or the right to extend the period of redemption be exercised during the term of this lease, or the same be sold by the State during the term of this lease, the Controller is

See to Buckles etc RA 0117-41-10 Serial 1716-25 J

authorized to cancel this lease as to the portion affected respectively as of the date of redemption, as of the date of the initiation of said right to redeem, as of the date of the exercise of the said right to extend the period of redemption, or as of the date of sale by the State, and that the Lessee shall thereupon be entitled to no damages or reimbursements for the termination of this lease prior to the term provided for therein other than that the Controller is authorized thereupon to refund to the Lessee the unearned portion of any rental that may have been paid in advance out of any moneys that may have been appropriated therefor.

7. In the event of partial termination, as provided in Paragraph 6, this lease will not be affected as to the balance of the leased property.

8. No Member of Congress or Resident Commissioner shall be admitted to any share or part of this lease or to any benefit to arise therefrom. Nothing, however contained shall be construed to extend to any incorporated company, if the lease be for the general benefit of such corporation or company.

9. This lease may be terminated at any time by the Government by giving the Lessor thirty (30) days written notice.

IN WITNESS WHEREOF, the parties hereto have subscribed their names as of the date first above written.

STATE OF CALIFORNIA

By HARRY B. RILEY, STATE OF CALIFORNIA

By *Bert Foster*
Bert Foster, Deputy

UNITED STATES OF AMERICA
John J. Courtney

By *John J. Courtney*
By direction of the Chief of
Bureau Yards and Docks, acting
under the direction of the
Secretary of the Navy.

C. F. Proctor
Witness
C. F. Proctor, Chief
Division of Tax Deeded Lands
Payment to be made by
D. O. 11th Naval Dist.

6, 2nd
Q 2

APPENDIX E-2

State of California

Lease: *Special Release - Under Lease No. NOy(R)-36994*, dated 15 December 1945.
Record Group 71, Entry 1037 Lease Files, 1941-47, Box 4, Folder L5-7-SD-7 NOy(R) 36994 State of CA Site for Bombing Targets Fleet Units NABs, SD, CA. National Archives and Records Administration, Archives II, College Park, MD.

NAVDOKKS-762

SPECIAL RELEASE - Under Lease No. NOY(R)-36994

KNOW ALL MEN BY THESE PRESENTS, that:

STATE OF CALIFORNIA, through Harry B. Riley, as Controller of the State of California

WHEREAS, by lease dated November 1, 1944, and bearing number NOY(R)-36994 whose address is Sacramento, California as Lessor, leased to THE UNITED STATES OF AMERICA, as Lessee, premises:

Section 16, Township 13 South, Range 10 East, S.B.M., 1931 Sale #1802, Imperial County, California

more particularly described in said lease, and

WHEREAS, the United States of America, no longer requiring the use of said premises, has surrendered possession thereof to the Lessor on the 15th day of December, 1945, and the Lessor has accepted such surrender,

The undersigned, the Lessor under said lease, for and in consideration of the surrender of said premises, the return of which in good condition is hereby acknowledged, has remised, released and forever discharged, and by these presents does for itself remise, release and forever discharge the United States of America, its officers, agents and employees, of and from all manner of actions, claims or demands which against the United States of America, its officers, agents and employees, the undersigned ever had, now has, or ever will have upon, or by reason of any matter, cause or thing whatsoever arising out of said lease or the occupancy by the United States of America of said premises except rental for the period beginning June 30, 1945 and ending December 15, 1945.

IN WITNESS WHEREOF, the undersigned has signed and sealed these presents or caused these presents to be executed by its duly authorized officers and its seal to be affixed hereto this 17th day of December, 1945.

WITNESS:

Frances Goodsell

STATE OF CALIFORNIA

HARRY B. RILEY, STATE CONTROLLER

By W. J. Foster
Deputy Controller

NEGOTIATED LEASE CANCELLATION

1. Location (State & City):	San Diego, California
2. a. Description:	Harry B. Riley, Comptroller, State of California
b. Type of Property:	Vacant land
3. Lease No.:	NOy(4)-36994
4. File No.:	15-7-SD-7
5. Using Activity:	Bombing Target
6. Annual Rental:	\$16.70
7. Appropriation:	Aviation Navy
8. Cancellation Privilege:	30 days
9. Request for Cancellation	
a. Name:	ComHAB11
b. Date:	5 Oct 1945
10. Date of Commandant's Approval:	10 Nov. 1945
11. Cognizant Bureau	
a. Name:	Ruler
b. Date of approval:	22 Oct 1945
12. Date of CNO Approval:	10 Oct 1945
13. Estimated Time for Restoration:	None
14. Date of Cancellation Notice:	15 Nov 1945
15. Date of Cancellation:	15 Dec. 1945
16. Who Restores:	
17. Date of Completion:	
18. Release or Settlement Agreement sent for signature:	15 Nov 1945
19. Release or Settlement Agreement - Distributed:	7 Jan 1946
20. Effective date of release:	
21. Amount of Rent for Unexpired Term:	
22. Cancellation Report to SFB:	
23. Case Report to SFB:	
24. Restoration and Improvement Costs (Estimated):	
a. Original Cost:	
b. Value in Place:	
c. Removal Cost:	
d. Salvage Value:	
e. Restoration Cost:	
f. Value realized from Disposition of Improvements:	

NEGOTIATED LEASE CANCELLATION

1. Location (State & City): *San Diego, California*
2. a. Description: *(Harry B. Riley Comptroller St. California)*
- b. Type of Property: *Vacant Land*
3. Lease No.: *NOY(R) 36994*
4. File No.: *1 5-7-50-7*
5. Using Activity: *Bombing target*
6. Annual Rental: *\$16.⁷⁰*
7. Appropriation: *Aviation Navy*
8. Cancellation Privilege: *30 days*
9. Request for Cancellation
 - a. Name: *COMNAV II*
 - b. Date: *5 Oct 1947*
10. Date of Commandant's Approval:
11. Cognizant Bureau
 - a. Name: *BuAer*
 - b. Date of approval: *22 Oct. 1947*
12. Date of CNO Approval: *10 Oct 1947*
13. Estimated Time for Restoration:
14. Date of Cancellation Notice:
15. Date of Cancellation:
16. Who Restores:
17. Date of Completion:
18. Release or Settlement Agreement sent for signature:
19. Release or Settlement Agreement - Distributed:
20. Effective date of release:
21. Amount of Rent for Unexpired Term:
22. Cancellation Report to SPB:
23. Case Report to SPB:
24. Restoration and Improvement Costs (Estimated):
 - a. Original Cost:
 - b. Value in Place:
 - c. Removal Cost:
 - d. Salvage Value:
 - e. Restoration Cost:
 - f. Value realized from Disposition of Improvements:

APPENDIX E-3

U.S. Navy

Letter: *Targets, Gunnery and Rocket Ranges - Discontinuance of*, dated 9 November 1945.
Record Group 71, Entry 1037 Lease Files, 1941-47, Box 3, Folder L5-7-2-TP, NOy(R) 39571
Twentynine Palms Auxiliary Field, CA. National Archives and Records Administration, Archives II, College Park, MD.

Office Memorandum

UNITED STATES GOVERNMENT

JOH/ec

DATE: 9 November 1945

TO : F-5-3

FROM : F-5-5

SUBJECT: Targets, Gunnery and Rocket Ranges - Discontinuance of.

1. The attached is a list of targets, gunnery and rocket ranges to be disposed of. The necessary approvals from the Bureau of Aeronautics and the Chief of Naval Operations are in our file.

2. We have taken action on the following which are included in the list.

1. Target #17, Santa Catalina Island, Lease NOy(R)-36466.
2. Target #34, formerly Temecula #2 (no lease executed).
3. Target #67, San Felipe, Lease NOy(R)-36994.
4. Lease NOy(R)-38940 with State of California covering 4294 acres in San Diego and Imperial Counties (Vallecito-Carrizo, Pine Valley, Air-to-Air Gunnery Range).

3. It is noted that the balance of the facilities listed seem to be on a permit basis and the correspondence is forwarded for action.

APPENDIX E-4

**U.S. Navy, Eleventh Naval District
Letter: *Bombing Targets in Southern California
Sector, Western Sea Frontier*, dated 24 August
1944. Record Group 181, Entry 11th Naval
District Correspondence, Box 38, Folder NAB 11.
National Archives and Records Administration-
Pacific Southwest Region, Laguna Niguel, CA.**

AGC/F41-10
A2-11(wt)
Serial: 98

AIRCRAFT
SOUTHERN CALIFORNIA SECTOR
WESTERN SEA FRONTIER

Eleventh Naval District
San Diego, California

24 August, 1944

AIRCRAFT SOUTHERN CALIFORNIA SECTOR, WESTERN SEA FRONTIER
CIRCULAR LETTER NUMBER 20-44

From: Commander Aircraft, Southern California Sector, Western
Sea Frontier.
To : AIRCRAFT, Southern California Sector, Western Sea Frontier.
Subj: Bombing Targets in Southern California Sector, Western Sea
Frontier.

1. Enclosure (1) contains the position and description of all bombing targets in the Southern California Sector of the Western Sea Frontier, together with a statement of the type of bombing runs permitted and the type of ordnance permitted.
2. Certain bombing targets listed in enclosure (1) are not in commission as yet. A notam will be issued when such targets are commissioned.
3. The targets listed in enclosure (1) shall be used solely by the units to whom they are assigned by Joint Operations Center, San Diego (Naval Air Control Center). The unit to whom the target is assigned, however, may permit another unit to use such target. When such permission is given, Air Control Center shall be advised by teletype.
4. Where areas, targets, and landing fields are assigned by Joint Operations Center, San Diego, to more than one unit, the senior naval aviator of the units assigned the same areas, targets and landing fields shall coordinate the schedules except in cases where the assignments specify the hours a unit is to use such area, target or landing field.
5. It is frequently necessary to conduct air and surface firing and other surface operations in the same areas. All units must exercise caution. Aerial gunnery above an overcast is not permitted.
6. No dummy runs are to be made on any target declared closed.
7. Water filled bombs over 100 pounds may not be used on water bombing targets or land skip bombing targets.
8. Units desiring to drop live bombs must notify Joint Operations Center, San Diego at least 24 hours in advance.
9. The following targets can be illuminated: Otay on request to Naval Auxiliary Air Station, Brown Field, all Salton Sea targets on request to

SOURCE: NARA LAGUNA NEGLECT

RG: 181

SERIES: 11th NAVAL DIST. COR

BOX: 38

ACC/F41-10
A2-11(wt)
Serial: 98

24 August, 1944

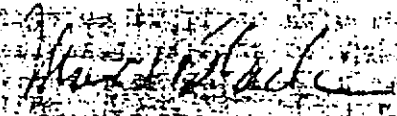
Subj: Bombing Targets in Southern California Sector, Western
Sea Frontier.

Naval Auxiliary Air Station Salton Sea and Holtville one (1) and two (2)
on request to Naval Auxiliary Air Station Holtville.

10. Squadrons must observe provisions of Fleet Air Detachment Circular
Letters 25-43 and 22-44.

By direction of ComAirSoCalSec, WSF.

Enc-(1) Position & Description
of Bombing Targets.



MAX L. BLACK
Deputy Commander

APPENDIX E-5

**U.S. Navy, Eleventh Naval District
Letter: *Land and Water Targets - Numbering of*,
dated 23 April 1945. Record Group 181, Entry
11th Naval District Correspondence, Box 38,
Folder NAB 11. National Archives and Records
Administration-Pacific Southwest Region, Laguna
Niguel, CA.**

NAVY
 OFFICE OF THE COMMANDING OFFICER
 ELEVENTH NAVAL DISTRICT

NAB11/OT
 (950135) (mo)

23 April 1945

NAB-11TH N. D. ORDER NO. 4

To: Commanding Officers and Officers-in-Charge, All Units of the Naval Air Bases, Eleventh Naval District.

Subj: Land and Water Targets - Numbering of.

1. In the past, all targets in the Eleventh Naval District, used for aircraft training, have been designated by name or number and have caused some confusion in assignment.
2. In order to simplify the identity of targets, all land and water targets will bear a series of numbers, the series indicating the location or type of target.
3. Listed below are the old names and numbers of the targets and the new numbers which are being assigned.
4. Water and Off-Coast targets will bear numbers from 1 to 30.

<u>Present Name of Target</u>	<u>New Number</u>
WBT #1	1
WBT #2	2
WBT #3	3
WBT A	4
WBT B	5
WBT C	6
WBT D	7
WBT E	8
WBT F	9
WBT G	10
Wilson Rock	11
Borg Rock	12
Jacobs Rock	13
San Clemente #5	14
San Clemente #6	15
San Clemente #21	16
Catalina (Catalina)	17
Combes Bank (Combes)	18
Glide Angle Target	19

Numbers 20 to 30 available for assignment to new targets.

SOURCE: NARA LAGUNA NEGEL
 RG: 181
 SERIES: 11th NAVAL DIST. GEN. CO.
 BOX: 38
 FOLDER: NAB 11

MAR 11/57
(250156) (mc)

Subj: Land and Water Targets - Numbering of.

5. Land targets near the coastline will bear numbers from 30 to 29.

<u>Present Name of Target</u>	<u>New Number</u>
Lake Hodge's	
Lake Hodge's	30
Mearner Miramar	31
Otay Otay	32
Tomocula #1	33
Tomocula #2	34
Trabuco X Trabuco	35
Trabuco Y	36
Trabuco Z	37

Numbers 38 to 50 available for assignment to new targets.

6. Targets in the desert area other than Rocket Targets will bear numbers from 50 to 90.

<u>Present Name of Target</u>	<u>New Number</u>
Salton Sea #1	50
Salton Sea #2	51
Salton Sea #3	52
Salton Sea #4	53
Salton Sea #5	54
Salton Sea #6	55
Salton Sea #7	56
Salton Sea #8	57
Salton Sea #9	58
Salton Sea #10	59
Salton Sea #11	60
Salton Sea #12	61
Salton Sea #13	62
Salton Sea #14	63
Salton Sea #15	64
Salton Sea #16	65
Salton Sea #17	66
Salton Sea #18	67
Salton Sea #19	68
Salton Sea #20	69
Salton Sea #21	70
Salton Sea #22	71
Salton Sea #23	72
Salton Sea #24	73
Salton Sea #25	74
Salton Sea #26	75
Salton Sea #27	76
Salton Sea #28	77
Salton Sea #29	78
Salton Sea #30	79
Salton Sea #31	80
Salton Sea #32	81
Salton Sea #33	82
Salton Sea #34	83
Salton Sea #35	84
Salton Sea #36	85
Salton Sea #37	86
Salton Sea #38	87
Salton Sea #39	88
Salton Sea #40	89
Salton Sea #41	90

Numbers from 91 to 99 available for assignment to new targets.

NAB-11th
(950126)(mc)

23 April 1945

Subj: Land and Water Targets - Numbering of

7. Rocket Targets regardless of location will bear numbers from 90 on.

<u>Present Name of Target</u>	<u>New Number</u>
Winona #1	90
Winona #2	91
El Centro #1	92
El Centro #2	93
Holtville 1R	94
Holtville 2R	95
King #1	96
King #2	97
29 Palms #1	98
29 Palms #2	99
29 Palms #3	100
Mojave 1	101
Trabuco Rocket	102

Numbers from 103 on available for assignment to new rocket targets.

A. D. Bernhardt
A. D. BERNHARD
Commander, Naval Air Bases,
Eleventh Naval District.

Copies to:
ComEleven (30)
ComFairWestCoast (150)
Deputy Comdr., NAB-11th N.D. (100)
MarFairWestCoast (100)
Naval Air Control Center (250)

APPENDIX E-6

**U.S. Navy, Eleventh Naval District
Letter: *Lease NOy(R)-36994 with State of
California, Covering Section 16, Township 13,
South, Range 10 East, S.B.M., Imperial County,
CA for Bomb Target Site - Cancellation of*, dated
15 November 1945. Record Group 71, Entry
1037 Lease Files, 1941-47, Box 4, Folder L5-7-
SD-7 NOy(R) 36994 State of CA Site for
Bombing Targets Fleet Units NABs, SD, CA.
National Archives and Records Administration,
Archives II, College Park, MD.**

15-7-8D-7
 ND11/ML-13
 F-5-5/JCH/ec

15 November 1945

To: The Commandant, ELEVENTH Naval District.

Subj: Lease HOY(R)-36994 with State of California, covering Section 16, Township 13, South, Range 10 East, S.B.M., Imperial County, California for Bomb Target Site - Cancellation of.

Ref: (a) Com1 TWX 100001 November to BuDocks.

1. By reference (a) this Bureau has been advised that no improvements were constructed on the property covered by the subject lease, that there is no salvageable material, and that the removal of the target markers and leveling of the ground will be accomplished by station labor. Accordingly, a 30-day notice of cancellation was mailed to the lessor as of this date.

2. Enclosed in duplicate for the lessor's signature is a form of release effective December 15, 1945, the expiration date of the cancellation notice. It is requested that both copies of this release are forwarded to this Bureau properly executed.

By direction of the Chief, BuDocks:

ANDREW J. MURPHY, JR.
 Head, Real Estate Division

Encl: (HW)

1. Release of HOY(R)-36994 in duplicate.

J. C. H.
 11-15-45
 Return to Real Estate Files

ROUTE TO
 COMDR. E. P. MCCANILL
 F-5B

RECEIVED

RECORDED

APPENDIX F
REAL ESTATE DOCUMENTS
NOT USED
(see Appendix E)

APPENDIX G
NEWSPAPER / JOURNALS
NOT USED

APPENDIX H
INTERVIEWS

INTERVIEWS

The following organization and individuals comprised the archive search team:

U.S. Army Corps of Engineers

St. Louis District (DSN: 555)

Engineering Division - Ordnance and Technical Services Branch (CEMVS-ED-P)

1222 Spruce Street

St. Louis, MO 63103-2833

<u>Individual</u>	<u>Telephone Number</u>	<u>CEMVS Position</u>
Kenneth J. Brimm	314-331-8797	ED-P, Historian
Randal Curtis	314-331-8786	ED-P, ASR Project Manager
Michael Dace	314-331-8036	ED-P, Chief of Ordnance and Technical Service Branch
Shirley Hamilton	314-331-8848	ED-P, Project Assistant
Sharon Hornback	314-331-8388	ED-HG, CADD Specialist
Jennifer James	314-331-8897	ED-P, Quality Assurance Specialist Ammunition Surveillance (QASAS)
William K. James	314-331-8789	ED-P, Safety Specialist/QASAS
Shelia Thomas	314-331-8793	ED-P, Historian
Rick Webster	314-331-8639	ED-HG, Aerial Photography Interpretation

The archive search team contacted the following individuals in preparation of this ASR. Conversation with these people yielded information of three general sorts:

- background data contained in written documents
- negative information (i.e. no pertinent knowledge of the site)
- coordination of efforts for various interested parties

While valuable, conversations with these individuals did not yield information cited in this report and hence Telephone Conversation Records have not been included. (See additional Points of Contact under section 4.2 Records Review):

<u>Individual Contacted</u>	<u>Telephone Number</u>	<u>Position/Organization</u>
Fred Jee	760-767-5311	Ranger, Borrego/Anza Desert State Park, California Department of Parks and Recreation

U.S. Army Engineering and Support Center, Huntsville (CEHNC)
Mandatory Center of Expertise and Design Center of Ordnance and Explosives
Danny Mardis 205-895-1797 ASR Project Manager

APPENDIX I
PRESENT SITE PHOTOGRAPHS

PRESENT SITE PHOTOGRAPHS

TABLE OF CONTENTS

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3	Portions of cast iron, 3 pound miniature practice bomb	I-3
4	Sheet metal debris from 100 pound practice bomb	I-4
5	Nose end portion of 100 pound practice bomb	I-4
6	Tail fins of 100 pound practice bomb	I-5
7	Nose end portion of 100 pound practice bomb	I-5
8	Suspension lug strap from 100 pound practice bomb	I-6
9	20 mm link at coordinates N 33° 02.466', W 117° 56.572'	I-6
10	Caliber .50 link at coordinates N 33° 02.466', W 117° 56.572'	I-7
11	Expendable caliber .50 cartridge	I-7



↑ Photo #1

San Felipe Bombing Target #67 - 31 March 1998

Panorama of Target Center at N 33° 02.408', W 117° 56.389'. Looking west from the southeast end of 200 foot diameter concentric circle delineated with piles of broken concrete/cinder blocks. Team member Kirk James is standing at target center.



† Photo #2

San Felipe Bombing Target #67 - 31 March 1998

Sheet metal debris from 100 pound practice bomb and broken concrete/cinder blocks delineating target concentric circles. Looking southeast toward target center.

↓ Photo #3

San Felipe Bombing Target #67 - 31 March 1998

Portions of cast iron, 3 pound miniature practice bomb (i.e. AN-MK 23) near target center at N 33° 02.408', W 117° 56.389'.





↑ Photo #4

San Felipe Bombing Target #67 - 31 March 1998

Sheet metal debris from 100 pound practice bomb near target center at coordinates N 33° 02.428', W 117° 56.403'.

↓ Photo #5

San Felipe Bombing Target #67 - 31 March 1998

Nose end portion of 100 pound practice bomb, probably MK XV at coordinates N 33° 02.480', W 117° 56.529'.





↑ Photo #6

San Felipe Bombing Target #67 - 31 March 1998

Tail fins of 100 pound practice bomb at coordinates N 33° 02.580', W 117° 56.360'.

↓ Photo #7

San Felipe Bombing Target #67 - 31 March 1998

Nose end portion of 100 pound practice bomb, probably MK XV at coordinates N 33° 02.522', W 117° 56.580'.





↑ Photo #8

San Felipe Bombing Target #67 - 31 March 1998

Suspension lug strap from 100 pound practice bomb at coordinates N 33° 02.466', W 117° 56.572'.

↓ Photo #9

San Felipe Bombing Target #67 - 31 March 1998

20 mm link at coordinates N 33° 02.466', W 117° 56.572'.





↑ Photo #10
San Felipe Bombing Target #67 - 31 March 1998
Caliber .50 link at coordinates N 33° 02.466', W 117° 56.572'.

↓ Photo #11
San Felipe Bombing Target #67 - 31 March 1998
Expendable caliber .50 cartridge at coordinates N 33° 02.490', W 117° 57.122' near the arm
of the Carrizo Wash which delineates the western border of Section 16.



APPENDIX J
HISTORICAL PHOTOGRAPHS
NOT USED

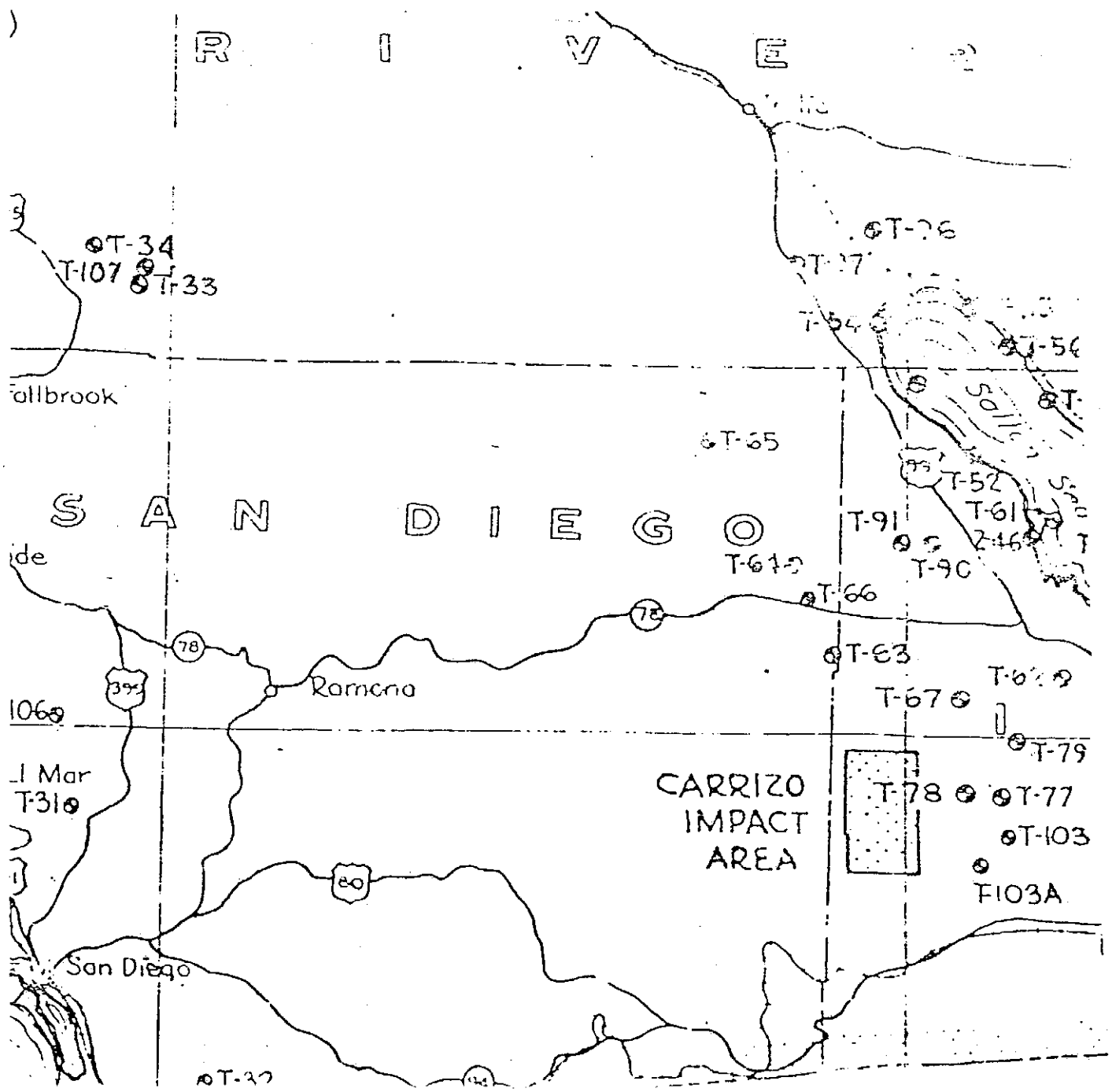
APPENDIX K
HISTORICAL MAPS / DRAWINGS

HISTORICAL MAPS / DRAWINGS

Page No. Historical Maps / Drawings

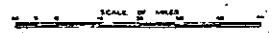
K-1 Naval Air Station San Diego
1950 *Status of Targets Naval Air Bases, II N.D.*, dated 30 June 1950. Record
Group 181, Entry 11th Naval District, Box 38 General Correspondence 1925-
52, National Archives - Pacific Southwest Region, Laguna Niguel, CA.

TOLD №	PRES №	NAME	COORDINATES		USE
			LATITUDE	LONGITUDE	
	67	San Felipe	33° 02' 30"	115 56 00"	Dive Bombing



NAVAL AIR BASES, U.N.D.
 N.A.S. SAN DIEGO, CALIF.
 STATUS OF TARGETS

SHOWING CONDITIONS ON
 JUNE 30, 1950



Reprinted from the Bureau of the United States
 Pacific Southwest Region

Howard H. Smith
 Field versus Office

APPENDIX L

**SITE SAFETY AND HEALTH PLAN / SITE
INSPECTION REPORT**

SITE SAFETY AND HEALTH PLAN / SITE INSPECTION REPORT

- L-1 Site Safety and Health Plan - San Felipe Bombing Target #67
- L-2 Site Inspection Report - San Felipe Bombing Target #67

APPENDIX L-1

Site Safety and Health Plan - San Felipe Bombing Target #67

SITE SAFETY AND HEALTH PLAN (SSHP)
for
San Felipe Bombing Target #67
Kane Springs, CA
SITE #: J09CA014301

The purpose of this site visit is to reconnoiter, document, and photograph areas on San Felipe Bombing Target #67, Kane Springs, California suspected to be contaminated with unexploded ordnance and/or toxic chemical munitions.

PREPARED BY: William K. James
OFFICE USACE, CEMVS-ED-P
ADDRESS 1222 Spruce St. St. Louis, Mo
PHONE 314-331-8789
DATE PREPARED 3-23-98

REVIEWED/APPROVED BY: Randy Fraser
SSHO, UXO Spec.

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 the Safety Briefing Checklist and the SSHP acceptance form (Appendix C) is filled out prior to the start of the site visit.

A. SITE DESCRIPTION AND PREVIOUS INVESTIGATIONS

1. Site Description

a. Size 640 acres

b. Present Usage (check all that apply)

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

2. **Past Uses:** The Navy acquired use of this "unimproved, undeveloped, rough desert" land for a bomb target for Fleet Unit training. In 1946 the site was declared surplus, and according to historical records, was restored to its condition prior to Navy use.

3. **Surrounding Population** (check all that apply)

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

4. **Ordinance/Explosives (OE) Potential:** Practice bombs with spotting charges.

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

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

C. SITE PERSONNEL AND RESPONSIBILITIES

1. Responsibilities

a. **Project Manager** The Corps of Engineers Project Manager (PM) is overall responsible for the site visit. He will assign a Team Leader, (most situation will be the PM). The PM will ensure that the SSHP is completed. Coordinates and executes the site visit.

b. **Site Safety and Health Officer** Individual 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.

2. Team Members

Name	Position	Address	Phone
<u>Randal Curtis</u>	<u>PM/Team Leader</u>	<u>USACE, St. Louis, MO</u>	<u>314-331-8786</u>
<u>William K. James</u>	<u>QASAS/UXO SAFETY</u>	<u>USACE, St. Louis, MO</u>	<u>314-331-8789</u>
<u>Jennifer J. James</u>	<u>QASAS</u>	<u>USACE, St. Louis, MO</u>	<u>314-331-8897</u>

D. OVERALL HAZARD EVALUATION (check one)

High Moderate Low Unknown

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

E. 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 days 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 will be enforced at all times.

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

1. 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.

2. Material Handling Procedures Do not handle.

3. Drum Handling Procedures Do not handle.

4. 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.

5. 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

6. **Spill Containment** N/A

7. **Excavation Safety** Do not enter trenches/excavations.

8. **Illumination** Site visits will be conducted during daylight hours only.

9. **Sanitation** Use existing sanitary facilities.

10. **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.

11. **Engineering Controls** N/A

12. **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 is 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.

13. **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.

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

15. **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.

16. **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.

17. 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.

18. Ordnance

a. General Information

- (1) 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.
- (2) 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 become more sensitive to shock, movement, and friction, because the stability agent in the explosives may be degraded.
- (3) When chemical agents may be present, further precautions are necessary. If the munitions item has green markings leave the area immediately, since it may contain a chemical filler.
- (4) 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.

b. On-Site Instructions

- (1) DO NOT TOUCH or MOVE any ordnance items regardless of the markings or apparent condition.
- (2) 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.
- (3) DO NOT use a radio or cellular phone in the vicinity of a suspect ordnance item.

- (4) DO NOT walk across an area where the ground cannot be seen.
- (5) DO NOT drive a vehicle into a suspected OE area; use clearly marked lanes.
- (6) DO NOT carry matches, cigarettes, lighters or other flame producing devices into a OE site.
- (7) DO NOT rely on color code for positive identification of ordnance items or their contents.
- (8) Approach ordnance items from the side; avoid approaching from the front or rear.
- (9) Always assume ordnance items contain a live charge until it can be determined otherwise.
- (10) 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.

c. Specific Action Upon Locating Ordnance

- (1) DO NOT touch, move or jar any ordnance item, regardless of its apparent condition.
- (2) 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 mismarked.
- (3) DO NOT roll the item over or scrape the item to read the markings.
- (4) The location of any ordnance items found during site investigations should be clearly marked so it can be easily located and avoided.
- (5) Reporting will be conducted in accordance with CELMS-PM-M, Standard Operating procedure for Reporting Ordnance and Unexploded Ordnance (UXO), dated 19 January 1995.

19. Other (specify)

G. SITE CONTROL AND COMMUNICATIONS

1. **Site Map** Map will be maintained by the PM or Safety Officer.
2. **Site Work Zones** N/A
3. **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.

4. **Communications**

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

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

Cellular phone

Public/private phone (location _____)

Other _____

c. **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) _____

H. 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 SSHO's 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.

1. **Emergency/Important Telephone Numbers**

Westmoreland Sheriffs Department (760)344-2111

Pioneer Hospital (760)344-2120

710th Ord. Co. (EOD) (619)553-7291/8500

3d Ord. Bn. (EOD) (206)967-1972/3/4 853-9952

Huntsville Safety Office (205) 895-1598/1596

Huntsville Safety (after hours) (205) 895-1180
On-site cellular phone (314) 606-4960
St Louis Corps of Engineers (314) 331-8036

2. Hospital/Medical Facility Information

Name: Pioneer
Address: Westmoreland, CA Phone: (760)344-2120

Distance to hospital: Approximately 24 miles.

Route to Hospital: refer to the site map included with this SSHP.

I. MONITORING EQUIPMENT AND PROCEDURES

1. 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.

a. **Monitoring Equipment To Be Utilized** N/A

b. **Equipment Calibration Results** N/A

c. **Action Levels** N/A

2. Heat/ Cold Stress Monitoring

a. 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.

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

J. 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.

1. 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.

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

3. **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.

4. **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.

K. 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.

L. 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.

M. 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 ANZI Z-88.2, as appropriate, depending on the PPE and site specific tasks.

NAME DATE	HAZWOPER	PROVIDER	MEDICAL DATE
<u>Randal Curtis</u>	<u>Jan 98</u>	<u>Corps of Engineers</u>	<u>Oct 97</u>
<u>William K. James</u>	<u>Dec 97</u>	<u>Corps of Engineers</u>	<u>Oct 97</u>
<u>Jennifer J. James</u>	<u>Jan 98</u>	<u>Corps of Engineers</u>	<u>Oct 97</u>

N. LOGS, REPORTS AND RECORDKEEPING 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.

O. 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 someone is stung by an insect, remove the stinger. Scrape it away with from the skin with your fingernail or plastic car, 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.

Spiders; there are also 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.

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 grey 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, stiffneck, 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 ziplock 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
San Felipe Bombing Target #67
San Felipe Bombing Target #67, CA

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

NAME	OFFICE	SIGNATURE	DATE
<u>Randal Curtis</u>	<u>USACE-STL, CEMVS-ED-P</u>	<u>Randal Curtis</u>	<u>3/31/98</u>
<u>William K. James</u>	<u>USACE-STL CEMVS-ED-P</u>	<u>William K. James</u>	<u>3/31/98</u>
<u>Jennifer J. James</u>	<u>USACE-STL, CEMVS-ED-P</u>	<u>Jennifer J. James</u>	<u>3/31/98</u>

SITE SURVEY SAFETY BRIEFING

(Check subjects discussed)

Date 31 March 1998

GENERAL INFORMATION

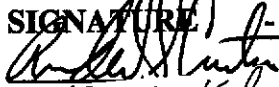
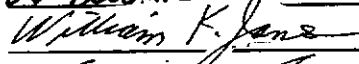
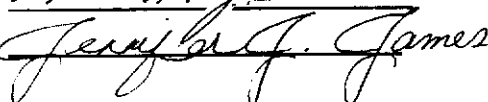
- Purpose of Visit
- Identify Key Site Personnel

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
<u>Randy Curtis</u>	<u>USACE-STL, CEMVS-ED-P</u>	<u></u>
<u>William K. James</u>	<u>USACE-STL, CEMVS-ED-P</u>	<u></u>
<u>Jennifer J. James</u>	<u>USACE-STL, CEMVS-ED-P</u>	<u></u>

APPENDIX L-2

Site Inspection Report - San Felipe Bombing Target #67

CEMVS-ED-P

31 March 1998

MEMORANDUM FOR RECORD

SUBJECT: ASR Site Inspection: San Felipe Bombing Target #67 - California

1. Personnel from the St. Louis District Corps of Engineers travelled to California to perform a site survey of the former San Felipe Bombing Target #67. The Ordnance and Explosive (OE) and Chemical Warfare Materials (CWM) Archive Search Report (ASR) program requires a site inspection. The ASR program supports the Defense Environmental Restoration Program (DERP) at Formerly Used Defense Sites (FUDS).
2. The ASR site inspection characterized OE and CWM potential based on a visual examination at the former San Felipe Bombing Target #67. Land owners granted verbal permission for right-of-entry prior to the site inspection. The site inspection included only visual and non-intrusive methods of inspection. The team followed a site safety and health plan (SSHP) prohibiting digging or handling of potential OE/CWM. The inspection team consisted of the following personnel: Jennifer J. James, William K. James and Randal S. Curtis.
3. The team arrived in the vicinity of the San Felipe Bombing Target #67 on 31 March 1998 at 0930. From highway 78, the team took an unimproved Bureau of Land Management (BLM) power line access road, separating Range 9 East and Range 10 East. This road is about 7 miles west of highway 78's intersection with highway 86. The team drove about 6 miles south and hiked in about 2 miles into the target location from the west.
4. Crossing the arm of the Carrizo Wash, which delineates the western border of Section 16, the team located a single expended caliber .50 cartridge. The noted presence of OE debris became more prevalent about half way across the section mile at coordinates N 33° 02.466', W 117° 56.572'⁴, with the discovery caliber .50 and 20mm links and debris from 100 pound practice bombs (i.e. suspension lug straps, nose cones and fins). The target consisted of 100, 200 and 300 feet diameter concentric circles defined by piles of broken concrete/cinder blocks centered around coordinates N 33° 02.408', W 117° 56.389'. The types of expended OE debris found in the area were:
 - 3 pound practice bomb AN-MK 23, (cast iron)
 - 100 pound practice bombs, MK VII or XV
 - caliber .50 cartridge cases, links and projectiles
 - 20mm links and projectiles

⁴ All coordinates were taken with a Trimble Scout GPS (Global Positioning Satellite) receiver using mapping datum WGS 1984.

CEMVS-ED-P

SUBJECT: ASR Site Inspection: San Felipe Bombing Target #67 - California

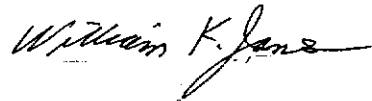
5. The site inspection team did not discover any fragmentation or cratering that would indicate the use of High Explosives (H.E.) on the target.



RANDAL S. CURTIS, P.E.
Project Manager/Civil Engineer



JENNIFER J. JAMES
Quality Assurance Specialist
Ammunition Surveillance (QASAS)



WILLIAM K. JAMES
Safety and Occupational Health Specialist /
Quality Assurance Specialist
Ammunition Surveillance (QASAS)

APPENDIX M
REPORT DISTRIBUTION LIST

REPORT DISTRIBUTION LIST

<u>Addressee</u>	<u>No. Copies</u>
Commander, U.S. Army Engineering and Support Center Huntsville, ATTN: CEHNC-ED-SY-O (D. MARDIS) P.O. Box 1600 Huntsville, Alabama 35807-4301	2
Commander, U.S. Army Engineer District, Los Angeles ATTN: CESPL-ED-MI 911 Wilshire Boulevard P.O. Box 2711 Los Angeles, CA 90053-2325	1
Project Manager Chemical Demilitarization, Non-Stockpile ATTN: SFAE-CD-NM Aberdeen Proving Ground, Maryland 21010-5401	1
Commander, U.S. Army Chemical & Biological Defense Command ATTN: AMSCB-CIH, Bldg. E5183 Aberdeen Proving Ground, MD 21010-5423	1
U.S. Army Technical Center for Explosives Safety ATTN: SIOAC-ESM Savanna, IL 61074-9639	1

PLATES

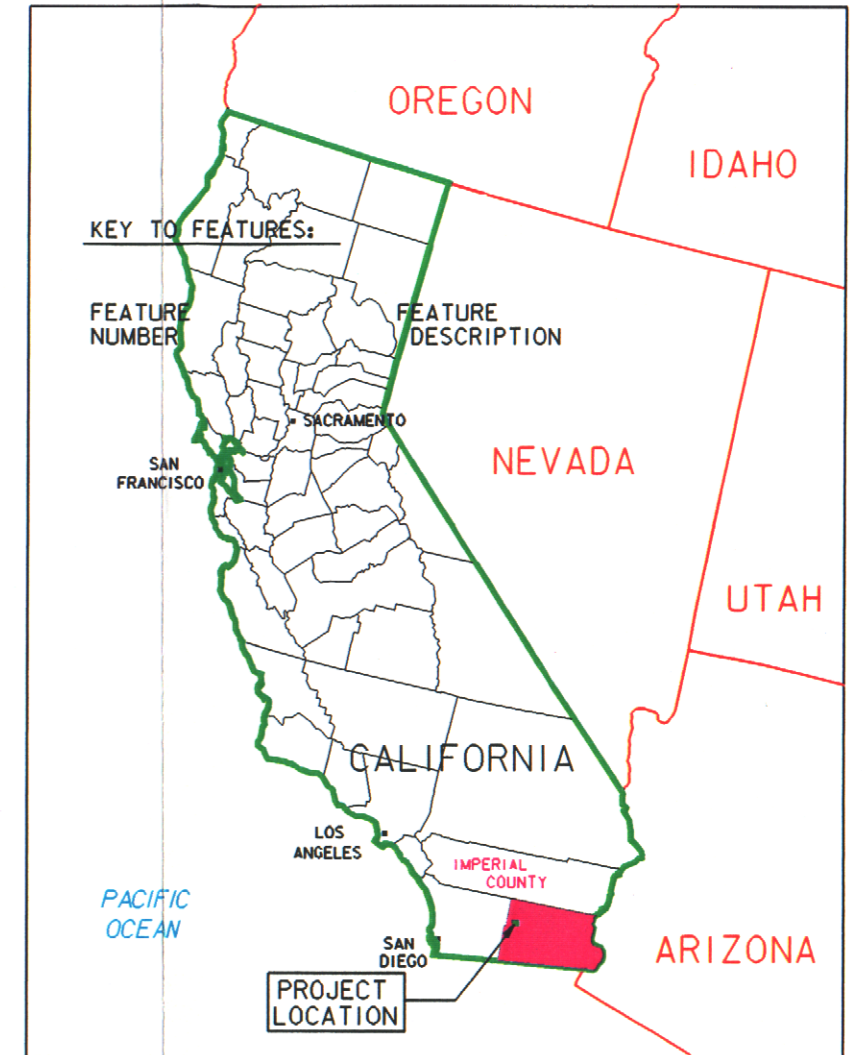
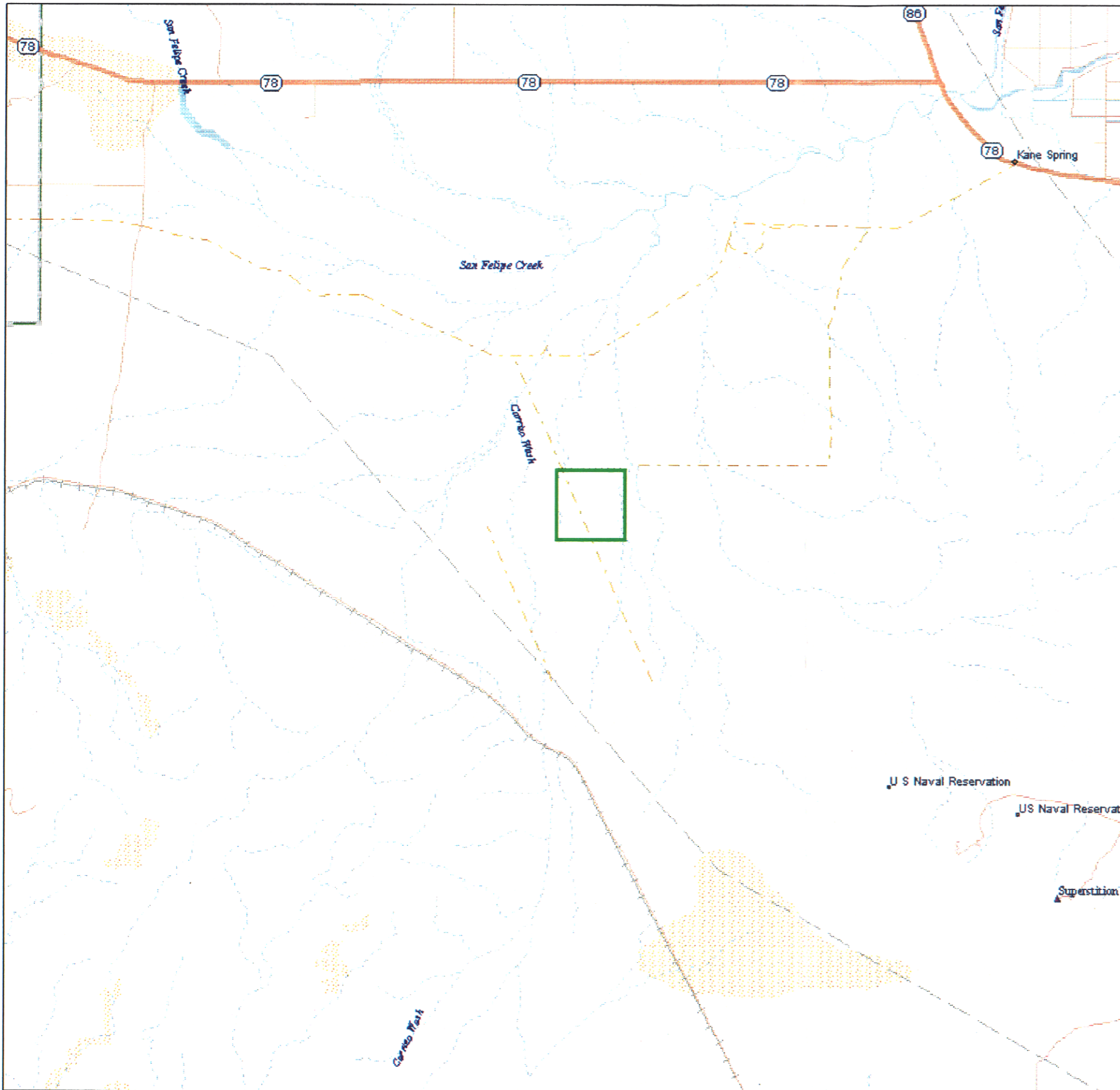
- 1 San Felipe Bombing Target #67 - Vicinity Map
- 2 San Felipe Bombing Target #67 - Aerial Photograph-1953

Computer-Aided Design and Drafting (CADD) files are referenced to USGS quadrangles at a scale of 1:24,000. The quadrangles conform to National Map Accuracy Standards (NMAS), which provide that vertical accuracy on maps of such scale are within one (1) contour interval, and horizontal accuracies are within 60 feet.

Minor distortions are associated with rectifying or georeferencing quadrangles to a known grid and projection, scanning historical documents (and subsequent vector-to-raster conversion), and rectifying the scanned historical maps to the georeferenced quadrangle.

Each of the above steps may introduce minute positional errors in the location of historical objects delineated on CADD drawings and plates. The caveat "NOT TO SCALE" will be used when the original historical map is not considered to conform to NMAS. Many of the historic maps used were hand-drawn or built on survey data that was inaccurate by modern standards. In general, historic maps used can have significant distortions, which are then magnified by the georeferencing process. CADD Drawings containing historic maps and drawings will have an accuracy no greater than that of the compilation accuracy of the historic document.

Furthermore, aerial photography used in CADD plates has not been orthorectified. While photography used in CADD plates has been rectified (georeferenced) to a coordinate system, the photos have not been corrected for photogrammetric displacements such as those due to topography or the attitude of the aircraft at the time of imaging. Therefore, locations of features detected on aerial photography are not exact due to the rectifying of both the image and the base map.



KEY TO FEATURES:

FEATURE NUMBER	FEATURE DESCRIPTION
	PROJECT BOUNDARY

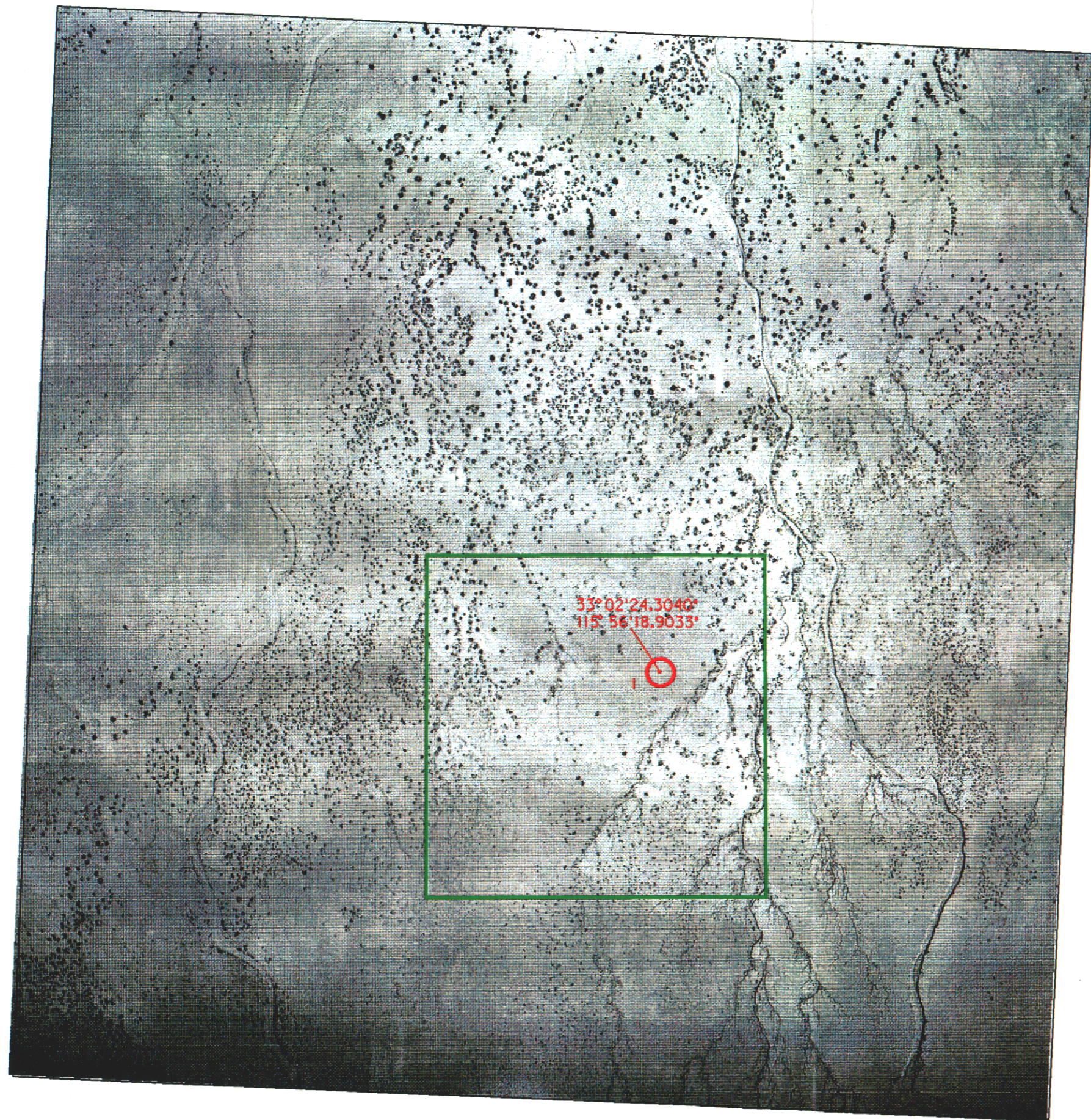
LEGEND
 PROJECT BOUNDARY



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

**SAN FELIPE BOMBING TARGET (#67)
 KANE SPRINGS, CALIFORNIA
 IMPERIAL COUNTY
 DERP-FUDS #J09CA014301
 VICINITY MAP**

PROJ. DATE: OCTOBER, 1997	DATE OF MAP: 1997	PLATE NO. 1
20-APR-1998 10:02	f:\oew\oew98a\collf6\fellpe+snfelip.v.dgn	

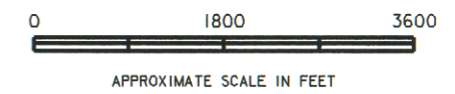



KEY TO FEATURES:

FEATURE NUMBER	FEATURE DESCRIPTION
I.	POSSIBLE TARGET APPROXIMATELY 200 FEET IN DIAMETER.

LEGEND

- PROJECT BOUNDARY
- FEATURE LOCATION



	U.S. ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT
<p>SAN FELIPE BOMBING TARGET (#67) KANE SPRINGS, CALIFORNIA IMPERIAL COUNTY DERP-FUDS #J09CA014301 1953 AERIAL PHOTOGRAPH</p>	