



**US Army Corps  
of Engineers**

HUNTSVILLE ENGINEERING  
SUPPORT CENTER

---

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM  
FOR  
FORMERLY USED DEFENSE SITES

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS

**ARCHIVES SEARCH REPORT**

**FINDINGS**

**HOLTVILLE TARGET (BT) NO. 3**

IMPERIAL COUNTY, CALIFORNIA

PROJECT No. J09CA017101

SEPTEMBER 1996

---

PREPARED BY  
US ARMY CORPS OF ENGINEERS  
ST. LOUIS DISTRICT

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVES SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) No. 3  
HOLTVILLE, CALIFORNIA  
IMPERIAL COUNTY

PROJECT NO. J09CA017101

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
1.0	<b>INTRODUCTION</b>	
1.1	Authority	1-1
1.2	Subject	1-1
1.3	Purpose	1-2
1.4	Scope	1-2
2.0	<b>PREVIOUS SITE INVESTIGATIONS</b>	
2.1	Corps of Engineers Documents	2-1
2.2	Other Reports	2-1
3.0	<b>SITE DESCRIPTION</b>	
3.1	Land Usage	3-1
3.2	Climatic Data	3-1
3.3	Geology and Soils	3-3
3.4	Hydrology	3-4
3.5	Ecology	3-6
3.6	Demographics	3-6
4.0	<b>HISTORICAL ORDNANCE USAGE</b>	
4.1	Historical Site Summary	4-1
4.2	Review of Historical Records	4-3
4.3	Summary of Interviews	4-10
4.4	Air Photo Interpretation and Map Analysis	4-10
5.0	<b>REAL ESTATE</b>	
5.1	Confirmed DOD Ownership	5-1
5.2	Potential DOD Ownership	5-1
5.3	Significant Past Ownership other than DOD	5-1
5.4	Present Ownership	5-1



<b>6.0</b>	<b>SITE INSPECTION</b>	<b>6-1</b>
<b>7.0</b>	<b>EVALUATION OF ORDNANCE PRESENCE</b>	<b>7-1</b>
<b>8.0</b>	<b>TECHNICAL DATA OF ORDNANCE AND EXPLOSIVES</b>	
8.1	Ordnance Related Mission	8-1
8.2	Description of Ordnance	8-1
8.3	Reference	8-1
<b>9.0</b>	<b>EVALUATION OF OTHER SITE INFORMATION</b>	<b>9-1</b>

### APPENDICES

A	REFERENCES
B	GLOSSARY AND ACRONYMS
C	TEXT / MANUALS
D	REPORTS / STUDIES
E	LETTERS / MEMORANDA / MISCELLANEOUS ITEMS
F	REAL ESTATE DOCUMENTS (NOT USED)
G	NEWSPAPERS / JOURNALS (NOT USED)
H	INTERVIEWS
I	PRESENT SITE PHOTOGRAPHS
J	HISTORICAL PHOTOGRAPHS (NOT USED)
K	HISTORICAL MAPS / DRAWINGS (NOT USED)
L	SITE SAFETY AND HEALTH PLAN / SITE INSPECTION REPORT
M	REPORT DISTRIBUTION LIST

### REPORT PLATES

<u>PLATE</u>	<u>DESCRIPTION</u>
1	LOCATION MAP
2	SITE MAP
3	PHOTO LOCATIONS
4	AERIAL PHOTO INTERPRETATION - 1953
5	AERIAL PHOTO INTERPRETATION - 1992

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVES SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) No. 3  
HOLTVILLE, CALIFORNIA  
IMPERIAL COUNTY

PROJECT No. J09CA017101

## 1.0 Introduction

### 1.1 Authority

In 1986, Congress established the Defense Environmental Restoration Program at 10 U.S. C. 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 EPA issued a revised National Contingency Plan. Under 40 C.F.R. 300.120, EPA designated 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, has been the Mandatory Center of Expertise and Design Center for Ordnance and Explosives.

### 1.2 Subject

Research revealed an inventory of bombing ranges which listed Holtville Target (BT) No. 3. None of the research uncovered the actual real estate description, however, it did list the coordinates of the site as Latitude 33° 09' 00" North and Longitude 115° 22' 05" West. These coordinates are located in Section 1, Township 12 South, and Range 15 East. According to documentation, the site consisted of a concentric circle target where dive bombing was conducted with practice bombs.

### 1.3 Purpose

This Archives Search Report (ASR) compiles information obtained through historical research at various archives and records holding facilities, interviews with individuals associated with the site or its operations, and personal visits to the site. All efforts were directed towards determining possible use or disposal of ordnance on site. Particular emphasis was placed on establishing the types, quantities and area of disposal. Information obtained during this process was used in developing recommendations for further actions at the site.

### 1.4 Scope

The entire area of the former Holtville Target (BT) No. 3 (acreage unknown, but assumed to be 640 acres--one section) was considered in assessing the potential for ordnance and explosives. Based on documentation, chemical warfare material contamination is not a concern.

## **2.0 Previous Site Investigations**

### **2.1 Corps of Engineers Documents**

U.S. Army Corps of Engineers, Los Angeles District (CESPL), prepared an Inventory Project Report (INPR), dated 22 September 1993 for the former Holtville Target (BT) No. 3, Project No. J09CA017101. Science Applications International Corporation (SAIC) personnel conducted a site visit on 1 May 1993. Only the remains of one rocket were found during the site visit. A RAC score of 2 was calculated for this site. Copies of this information are in APPENDIX D.

CESPL did not identify any environmental concerns other than the potential for OE.

### **2.2 Other Reports**

Research did not uncover any other reports on this site.

### 3.0 Site Description

#### 3.1 Land Usage

An inventory of bombing ranges under the jurisdiction of the Eleventh Naval District from August 1944 listed Holtville Bombing Target No. 3. It described the target as having concentric circles, and the inventory revealed that pilots conducted dive bombing runs using practice bombs. The coordinates of the site are Latitude 33° 09' 00" North and Longitude 115° 22' 05" West. These coordinates transpose to Section 1, Township 12 South and Range 15 East. Research failed to uncover any disposal information concerning this site, but it is probable that the Navy declared the range surplus soon after the conclusion of World War II (Southern California Sector, Western Sea Frontier 1944; Vanantwerp 1993).

#### 3.2 Climatic Data

The Imperial Valley of California has a desert climate and records a higher percentage of sunshine than any other place in the United States. The greatest amount of possible sunshine, as high as 97%, occurs in June. The smallest amount of possible sunshine, as high as 82%, occurs in the month of December.

The summers are long and hot with afternoon temperatures reaching 100° F and higher on the average. The highest temperature recorded at the climatological station at Yuma, Arizona was at 122° F in 1990. The highest daily average temperature of 106.6° F occurs during July.

December and January are the only months that have an average daily high below 70° F, with temperatures of 68.5° F and 68.7° F, respectively. December through February are the only months with an average daily low temperature below 50° F, with temperatures falling between 44° F and 45° F. The average annual daily high temperature is 87.9° F while the low is 60.5° F. The average annual monthly mean temperature is 74.2° F.

Precipitation is sparse with an annual average precipitation of only 3.17 inches. Moisture laden air from the Gulf of California frequently invades the area during the summer months. August is the month with the highest mean monthly precipitation of 0.64 inches. May and June record the lowest mean monthly precipitation at 0.04 and 0.02 inches, respectively. The maximum monthly recorded precipitation of 3.44 inches occurred in August, 1989. This event is also the maximum precipitation in a 24 hour period. The minimum monthly recorded precipitation of 0.00 inches occurred in May, 1983.

The relative humidity range is approximately 30% to 50%. The relative humidity is higher in the winter and lower in the summer. On a daily basis, the relative humidity is usually higher in the early morning and lower in the early evening.

The mean annual wind speed is 7.8 mph with a mean annual prevailing direction of north. The prevailing wind direction during the summer is south southeast; during the Fall and Winter is north; and during the Spring is west northwest.

Climatological data for this area are summarized in TABLE 3-1. Data were collected at the National Weather Service meteorological station at Yuma, Arizona.

**TABLE 3-1  
CLIMATOLOGICAL DATA  
YUMA, ARIZONA**

Month	Temperature		Precipitation Average (inches)	Wind	
	Average Minimum (°F)	Average Minimum (°F)		Average Speed Miles/ Hour	Average Direction
January	44.2	68.7	0.35	7.3	N
February	46.9	74.4	0.22	7.4	N
March	50.8	78.9	0.21	7.9	WNW
April	56.5	86.3	0.14	8.3	W
May	63.8	94.2	0.04	8.3	WNW
June	72.0	103.3	0.02	8.5	SSE
July	80.7	106.6	0.26	9.5	SSE
August	80.1	105.3	0.64	8.9	SSE
September	73.2	100.5	0.31	7.3	SSE
October	62.2	90.3	0.29	6.6	N
November	50.9	77.4	0.24	6.9	N
December	44.3	68.5	0.45	7.2	N
<b>Average</b>	<b>60.5</b>	<b>87.9</b>	<b>3.17</b>	<b>7.8</b>	<b>N</b>

### 3.3 Geology and Soils

#### 3.3.1 Geology/Physiography

The site of the former Holtville Target #3 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 just over one hundred miles to the north 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 streamwash deposits.

The site is situated between a series of irrigation canals to the west and the East Mesa to the east. The canals trend east-west and deliver water for farming. The East Mesa is a relatively flat area which is covered with the Quaternary alluvium described above. Further to the east of the Holtville site is the Algodones Sand Hill. This area is covered with vast amounts of sand which has been shaped into dunes by the prevailing northwesterly winds. The sand can reach thicknesses of over 400 feet (Morton 1966).

#### 3.3.2 Soils

Soils of the Holtville Target #3 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. TABLE 3-2 shows a typical profile of the soil found on the site of the former target.

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

TABLE 3-2. Soil Profile						
DEPT H (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.

### 3.4 Hydrology

#### 3.4.1 Surface Water

The study site is located within the Imperial Valley of California. The terrain of the Imperial Valley consists mostly of smooth plains. Approximately 50% to 80% of the local relief, which is between 100 and 300 feet, is gently sloping. A large part of the terrain of the Imperial Valley is below sea level. The elevation of the water surface for the Salton Sea, located within the Imperial Valley, is 228 feet below sea level.

The soil in the Imperial Valley of California is warm and dry, with a mean annual temperature higher than 47° F. The western and southern sections of California have very low frost penetration amounts. The average frost penetration for the study site is between zero and 3 inches while the depth of extreme frost penetration is only about 5 inches. The soil in this region is sandy and generally lacks moisture. Evaporation is high due to the plentiful amounts of sunshine and the hot, dry conditions. The vegetation that grows naturally in this area is mostly brush and shrublands. The Imperial Valley is generally vulnerable to droughts which may last several years.

The principle water use of the Imperial Valley is for irrigation. Fresh surface water is provided from an extensive network of canals for irrigation .

The average concentration of sediment in the rivers is generally high; between 15,000 and 30,000 parts per million. The prevalent type of chemicals naturally in the rivers are sodium, potassium, sulfate and chloride. The concentration of dissolved minerals in the ground water is low with less than 1000 parts per million.

Natural drainage occurs through washes, draws and gullies (trenches cut out by the natural drainage of runoff from precipitation). These trenches are dry in times of no precipitation. A wash is the largest type of trench drainage; gullies are the smallest and draws are usually in between. These natural runoff drainage trenches



empty into rivers or canals. Flooding at the site is unlikely because of the small amount of precipitation and the porous nature of the sandy soils throughout the Imperial Valley.

Imperial Valley generally drains in a southern direction. The Alamo River, New River and the Western Main Canal all originate at the Salton Sea and flow south into the All American Canal. The Coachella Canal which originates at the Colorado Aqueduct near Coachella, California also flows south, just east of and parallel to the others. These four water systems empty into the All American Canal. The All American Canal flows east along the Mexican border and empties into the Colorado River near Yuma, Arizona. The Colorado River flows south and empties into the Gulf of California.

The former Holtville Target #3 site is located in the East Mesa area in the foothills of the Chocolate Mountains. The elevation of the site is between a high of about 260 feet above sea level to a low of about 10 feet below sea level. The Mammoth Wash is the principle drainage for the site and drains southwest into the Coachella Canal and the East Highland Canal.

While no gage data is available at this site, the U.S. Geological Service (U.S.G.S.) maintains gages on some of the major rivers located within the general area. One such gage, covering 14 years of continuous record, located on the Alamo River at Calipatria, California, recorded a maximum discharge of 6770 cfs in January 1993. The minimum recorded discharge, 1080 cfs, occurred in August 1990. The maximum recorded stage, 7.20 feet, occurred in January 1993, equivalent to an elevation of 189.20 feet. Another gage, on the New River near Westmoreland, California, has 32 years of continuous record. It recorded a maximum discharge of 3000 cfs in August 1977, and its minimum recorded flow of 691 cfs occurred in January 1966. No stage data is provided for this gage site.

#### 3.4.1 Ground Water

The site of the former Holtville Target #3 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 pastureland or farmland. There are extensive irrigation systems throughout the surrounding areas for both domestic and farm use.

### 3.5 Ecology

The information provided for this site was compiled from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game Natural Diversity Data Base (NDDDB).

The following federally-listed species may occur in the vicinity of the former Holtville Target (BT) #3: desert pupfish (Cyprinodon macularius), endangered; flat-tailed horned lizard (Phrynosoma mcalli), proposed endangered; Aleutian Canada goose (Branta canadensis leucopareia), threatened; bald eagle (Haliaeetus leucocephalus), endangered; peregrine falcon (Falco peregrinus), endangered; brown pelican (Pelecanus occidentalis), endangered; Yuma clapper rail (Rallus longirostris yumanensis), endangered; and Pierson's milk-vetch (Astragalus magdalenae var. piersonii), proposed endangered.

The NDDDB records indicated that the following state-listed species occurs in the vicinity of the Holtville Target (BT) #3 Site: California black rail (Laterallus jamaicensis coturniculus), threatened; Peirson's milk-vetch, endangered; Wiggin's croton (Croton wigginsii), rare; and Algodones dunes sunflower (Helianthus niveus spp. tephrodes), endangered.

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 Center of Activity

The former Holtville Target #3 site is located near the city of Calipatria, Imperial County, California.

#### 3.6.2 Population Density

CITY/COUNTY	CITY: Calipatria	COUNTY: Imperial
AREA (sq. mi.)	N/A*	4.173
POPULATION	2,690	109,303
POP DENSITY	N/A*	26.2

NOTE: Population density is in units persons per square mile.

\*N/A denotes data which were not available to this study.

### 3.6.3 Types of Businesses and Industry

The number of business establishments in Imperial County can be broken down by type as follows: manufacturing 3.0%; agriculture 3.6%; services 28.3%; trade and financial 48.3%; and other 16.8%. Of the people employed in Imperial County, 21.6% are employed by classified businesses. Trade and financial firms employ 50% of the working population, and the service industry employs 20.5%. 7.6% of the people employed work in manufacturing businesses, and 0.3% are employed by unclassified businesses. Foregoing percentages are from March 1991.

### 3.6.4 Types of Housing

Housing in Calipatria is composed of both single family and multi-family dwellings. The median value of 767 specified owner-occupied housing units in Calipatria is \$52,400.

### 3.6.5 New Development in the Area

No new development in the area, except for residential dwellings.

### 3.6.6 Typical cross section of the Population

The portion of the population under the age of 18 is 35.8%, and the portion over the age of 65 is 8.9%. The median age is 30 years.

### 3.6.7 Information Sources

U.S. Census report as listed below:

- 1990 CENSUS OF POPULATION AND HOUSING, Imperial County, California
- 1990 CENSUS OF POPULATION AND HOUSING, Calipatria, California
- 1988 COUNTY AND CITY DATA BOOK, LAND AREA AND POPULATION, Imperial County, California
- 1988 COUNTY AND CITY DATA BOOK, LAND AREA AND POPULATION, Calipatria, California
- 1991 COUNTY BUSINESS PATTERNS, Imperial County

## 4.0 Site History

### 4.1 Historical Site Summary

#### 4.1.1 General History of Naval and Marine Corps Facilities in Imperial County, California

##### 4.1.1.1 El Centro Marine Corps Air Station

In May 1942, military construction began on the Civil Aeronautics Administration (CAA) airfield at El Centro, CA. Seven months later limited operations at the base started. The Marine Corps chose this location because the flat, sandy desert floor and the climate provided an excellent opportunity for all types of pre-combat training and a large amount of flying time. Additional facilities constructed included skeet and rifle ranges, gunnery practice ranges, a rocket range, and rocket ground school. Official commissioning of the base took place on 23 July 1943 (Coletta 1985).

In October 1943, El Centro expanded its facilities due to increasing requirements for Marine Corps pilots. It moved its moving target range closer to the base for convenience, and it expanded existing runways and also built two new ones. El Centro began training heavy bomber crews at this time. By the end of 1944, the base maintained training capabilities for sixteen squadrons of fighters, bombers and transports (Office of the Chief of Naval Operations 1943; Coletta 1985).

After World War II, jurisdiction for the base switched from the Marine Corps to the Navy. For most of the post-war period, Naval Air Facility (NAF) El Centro's mission has been to support the rocket, bombing, gunnery, anti-submarine warfare, and night flying training for fleet aircraft (U. S. Naval Auxiliary Air Station, El Centro, CA 1952a).

##### 4.1.1.2 Holtville Naval Auxiliary Air Station

Construction on the Holtville station began in January 1943, and it was completed five months later. The official commission occurred on 4 July 1943. Naval Auxiliary Air Station (NAAS) Holtville specialized in night flying. The instruction schedule included training in dive bombing, skip bombing, low-level bombing, target strafing, and carrier landings. Later, trainees also practiced rocket firing. The Navy reduced the station to caretaker status in April 1946 and declared it surplus on 10 June 1946 (U. S. Naval Auxiliary Air Station, Holtville, CA 1945, 1946; Navy Department 1948).

#### 4.1.1.3 Salton Sea Naval Auxiliary Air Station

In 1942, after infrequent, limited use for seaplane landings and as a bombing target, the Navy established an auxiliary facility for seaplanes on the shore of the Salton Sea. It trained seaplane crews and served as an emergency landing area when seaplanes could not land at San Diego. Eventually, the base administered ten water targets, thirteen land targets and five emergency landing fields. The Manhattan project conducted some experiments from the base during World War II, and after the war the base was owned by the Atomic Energy Commission. In the 1960's, the Navy re-acquired the land and used it as a support facility for NAF El Centro. In 1988, the Base Realignment and Closure Commission recommended its closure (U. S. Army Corps of Engineers-Rock Island, IL 1996).

#### 4.1.1.4 Holtville Bombing Target No. 3

The only reference to this site is from an inventory of Eleventh Naval District bombing ranges from 1944. The site consisted of a concentric circle target, and pilots practiced their dive bombing skills there. The coordinates of the site were Latitude 33° 09' 00" North and Longitude 115° 22' 05" West, which corresponds to Section 1, Township 12 South and Range 15 East. Research failed to uncover any property disposal information concerning this site, but it was probably returned to the Department of Interior soon after the war ended (Southern California Sector, Western Sea Frontier 1944).

#### 4.1.2 Historical Use of OE and CWM at Holtville Bombing Target No. 3

The bombing range inventory alleged that practice bombs were the only authorized type of munition to be used on this site. No evidence of any type of munition was discovered by the site visit team in February 1996. However, the remains of one rocket was found by SAIC personnel during their site inspection in 1993. At various times, however, the following OE or CWM was stored at the El Centro Marine Corps Air Station:

- 100-pound water filled bombs
- 100-pound general purpose bombs
- 500-pound water filled bombs
- 500-pound general purpose bombs
- 1000-pound water filled bombs
- 1000-pound general purpose bombs
- 1000-pound semi-armor piercing bombs
- Miniature bombs
- 2.25" rocket
- 3.5" rockets
- 5" rockets

Tiny Tim (11.75") rockets  
.30 caliber tracers  
.30 caliber incendiary  
.30 caliber armor-piercing ammunition  
.50 caliber ammunition  
20mm ammunition  
FS Smoke drums  
.45 caliber ball ammunition  
pyrotechnics  
rocket firers

Both air stations at Holtville and Salton Sea also stored some OE and CWM, but the items stored at El Centro reflect the largest, most varied arsenal (Bureau of Ordnance 1946a, 1946b, 1946c; Headquarters, Naval Air Bases 1946b, n.d.; U. S. Marine Corps Air Station 1946; United States Pacific Fleet 1946).

#### 4.2 Review of Historical Records

Records relating to the history of Holtville Bombing Target No. 3 were gathered from the following sources from December 1995 to February 1996. The research team consisted of Rochelle Ross and Theresa Williams-Dye, CELMS-PM-M, and David Tajkowski, and John Daly CELMS-PD-R. Decisions about which record groups to examine at the various national, state, and local archives and records centers were made by consulting finding aids, archivists and records managers. Through the use of finding aids, such as inventories and master accession lists, the researchers were able to focus on those record groups they thought would be most fruitful before calling, or visiting, various repositories.

**National Archives  
8th and Pennsylvania  
Washington, D.C. 20408**

RG 72      Records of the Bureau of Aeronautics (NAVY)  
Box 2323, General Correspondence, 1943-45, KV 91 Et 14, Dv 39 Vol 2  
(no entry number). Contained the following information: acquisition of  
Permit for use of land for rocket target, El Centro MCAS; lease of  
additional land for El Centro Bombing Target #1; El Centro MCAS  
Gunnery Training Facilities; access roads to El Centro Rocket Target  
#'s 1 & 2.

Entry 67, Box 274, Confidential Correspondence, 1922-47 (1945), Kv to  
Kv 58.

Entry 17A, Box 980, Confidential Correspondence, 1922-44 (1942), K7-Kv41. Contained a map showing the El Centro NAS Plot Plan (Nov 4, 1942).

RG 49      Records of the Bureau of Land Management  
Abandoned Military Reservations File, CA-Fort Reading to Fort Collins, Boxes 25 & 27. No information on El Centro or Holtville.

**National Archives-Suitland Branch  
Washington National Records Center  
4205 Suitland Road  
Suitland, MD 20409**

RG 127      Records of the United States Marine Corps  
Office of the Commandant, General Correspondence, Box 1845, Jan 1939-June 1950, 2785-2385. Contained a file on the El Centro MCAS, no pertinent information.

RG 175      Records of the Chemical Warfare Service  
Entry 2, Box 450, Index Briefs 1918-42, Samples-Schedule.  
Entry 2, Box 448, Index Briefs 1918-1942, Sales-Samples  
Entry 2, Box 259, Index Briefs 1918-1942, Hig-Hooker  
Entry 2, Box 175, Index Briefs 1918-1942, Education-Electric

RG 74      Records of the Bureau of Ordnance (Navy)  
Entry 1529, Box 1282, ND7-ND11, 1945. Req. disposition of 752 MK 6 Mod 1 parachute flares at NAAS Holtville.

Entry 5595, Box 209, ND10-ND12, 1947. The following information was copied from this box: request for ammunition, MCAS El Centro (2.25" Rocket SCARs, 8000 rounds); disposal officer has been acquired to effect demolitions of dud rockets and bombs on the El Centro Aviation Practice Ranges; discontinuance of target and bombing ranges (#'s 58, 59, 60, 61, 62, 69, 77, 90 & 91).

Entry 25, Box 362, KV37-NA8, 1943. Monthly ammunition allotment, MCAS El Centro.

Entry 25, Box 453, KV9-LL, 1943. This box contained information on empty drums for FS Smoke Mixture and a request for ammunition and waterfillable bombs MCAS El Centro.

Entry 4444, Box 194, KV thru L1-1, 1946. Receipt for shipment of rocket firers.

Entry 4444, Box 193, KK/579 thru Kv, 1946.

Entry 1529, Box 374, F4 1-10, 1945.

Entry 4444, Box 287, ND8-ND11, 1946. Training for a four month period, 1,224 Tiny Tim's, 53,292 SCARs, 11,176 100# H2O filled, 2,500 3.5 AR'S.

Entry 1529, Boxes 373, 376 & 377, 1216 & 1283.

Entry 4444, Boxes 154-156, 264 & 288.

Entry 25, Boxes 187 & 188, 248, 386 & 515.

Entry 5595, Boxes 100 & 101, 130 & 197.

- RG 72      Records of the Bureau of Aeronautics  
Entry 69A2454, Box 2 & 3, California. Declaration of Surplus for the Holtville Naval Auxiliary Air Station.
- RG 143     Records of the Bureau of Supplies and Accounts (NAVY)  
All requests for RG 143 were unsuccessful.

**Washington National Record Center  
4205 Suitland Road  
Suitland, MD 20409**

Based on the finding aids available at this repository and due to the nature of the site, no boxes were requested.

**National Archives at College Park  
8201 Adelphi Rd  
College Park, MD 20740**

- RG 48      Records of the Office of the Secretary of the Interior  
Entry 748, Boxes 44, 45, 92, 142, 149, 162 & 748.  
Entry 749, Boxes 3218, 3219 & 3220.  
Entry 942, Not Found



**Naval Historical Center/AR  
Washington Naval Yard  
901 M Street S.E.  
Washington, D.C. 20374**

Aviation History Files, 11th Naval District, Boxes 210, 212, 221, 290, 292 & 391. Information copied included: histories on El Centro MCAS and Holtville NAAS; 11th Naval District Directory of Naval Air Bases; chronologies of El Centro and Holtville NAAS; rounds expended by fleet units (El Centro NAAS).

**United States Marine Corps Historical Center  
Washington Naval Yard  
901 M Street S.E.  
Washington, D.C. 20374**

Additional histories on El Centro were reviewed along with information on the Twenty-nine Palms Marine Corps Base. No copies were made at this repository.

**Chemical and Biological Defense Agency Historical Office  
AMSCB-CIH  
Aberdeen Proving Ground  
Edgewood, MD 21010**

All pertinent information was faxed to the St. Louis District.

**National Archives-Pacific Southwest Region  
24000 Avila Rd  
Laguna Niguel, CA 92677-6719**

RG 181      Records of Naval Districts and Shore Establishments  
Box 38, File N1-9, 11th Naval District General Correspondence 1925-1952.

Naval and Marine flying within Western Air Defense Zone; survey of shore activities; mission of El Centro NAAS and a historical report on Holtville NAAS.

Box 39, File N1-N3, 11th Naval District General Correspondence 1925-1952. Danger area-El Centro Gunnery Range for MCAS.

Box 422, File NA-NA, 11th Naval District General Correspondence 1925-1952. Land occupied by rocket target #103; free gunnery range facilities located near El Centro; rocket stowage at El Centro NAS; permit for movable target range for El Centro MCAS and investigation of wrongful release of bombs near El Centro MCAS.

Box 57, File CF20C/SF20C/1943, 11th Naval District Formerly Classified Correspondence 1921-47. Board report of investigation of additional facilities requested at the Marine Corps Air Stations on the west coast.

Box 424, File NA(2), 11th Naval District General Correspondence 1924-1955.

Price of construction for Holtville Outdoor Gunnery Range; acquisition of land for bombing targets and rental price for Holtville Target #1.

Additional boxes viewed under RG 181 at the Pacific Southwest Archives included: Boxes 5, 56, 116, 119, 421, 423, 427, & 435.

RG 270      Records of the War Assets Administration  
Boxes 63 & 64, File Hollister-Holtville, Real Property Case Files.

**Federal Record Center-Pacific Southwest Region  
24000 Avila Rd  
Laguna Niguel, CA 92677-6719**

Based upon the finding aids and on the opinion of the consulting archivist, no boxes were requested at this repository.

**National Personnel Record Center-Military Branch  
9700 Page Avenue  
St. Louis, MO 63132**

Based upon the finding aids and on the opinion of the consulting archivist, no boxes were requested at this repository.

**USACOE-Los Angeles District  
300 Los Angeles Ave  
Los Angeles, CA 90053**

Information gathered at the L.A. Corps of Engineers included reports of previous site visits, along with real estate data.

**National Archives-Pacific Sierra Region  
1000 Commodore Dr.  
San Bruno, CA 94066**

RG 291      Records of the Property Management and Disposal Service  
Series 9NSS-121-90-002, Box 59, File B-Calif-730 Salton Sea Test  
Base. File contained regional information on El Centro.

**Federal Record Center-Pacific Sierra Region  
1000 Commodore Dr.  
San Bruno, CA 94066**

Based on the consultation of the archivists and the corresponding finding aids, no documents were requested at this repository.

**NAVFAC Historian's Office  
Seabee Museum  
Construction Battalion Center  
Port Hueneme, CA 93043**

Maps of the El Centro NAAS and of Imperial County (showing bombing targets).

**Naval Facilities Engineering Command  
Southwest Division  
1220 Pacific Hwy, Code 2421  
San Diego, CA 92132-5190**

A Land Acquisition Map of range 2512 (East Mesa) and a Real Estate Summary Map of Imperial County (dated 7-1-65) were available at this repository.

**U.S. Department of the Navy  
Public Works Department (Code 341)  
Naval Air Facility  
El Centro, CA 92243-5001**

A Historic and Archeological Resources Protection Plan for Naval Air Facility, El Centro (October 1994) and additional Land Acquisition Maps were copied at El Centro NAS.

**U.S. Department of the Navy  
Base Library  
Naval Air Facility  
El Centro, CA 92243-5001**

The base library contained a series of scrapbooks on the history and social activities of El Centro.

**Bureau of Land Management  
El Centro Resource Office  
1661 South Fourth St.  
El Centro, CA 92243**

Items procured included a Desert Access Guide to Imperial Valley California and BLM jurisdiction and site access maps.

**Combat Heritage Museum  
Holtville Airport  
Holtville, CA 92250**

Base newspapers of the Holtville Auxiliary Naval Air Station were available for viewing.

**BARSA Inc.  
422 North Imperial Ave.  
El Centro, CA 92243**

Maps on Imperial County and the State of California were available at this repository.

### 4.3 Summary of Interviews

None of the individuals interviewed, personnel from the Naval Amphibious Base, Naval Facilities Engineering Command, El Centro Naval Air Facility, EOD (Naval, Army, and Marines), and local residents, knew this range had ever existed.

### 4.4 Air Photo Interpretation and Map Analysis

#### 4.4.1 Air Photo Interpretation

Photographic analysis and land-use interpretation were performed using the following photographic sources:

<u>Photography Date</u>	<u>Scale</u>	<u>Source</u>	<u>Frame Identifier(s)</u>
21 Nov 1937	1:20,000	National Archives	ABN-7 97 thru 102 ABN-8 76 thru 82 ABN-9 41 thru 47
17 Feb 1949	1:20,000	National Archives	ABN-2F 10 thru 13 ABN-2F 36 thru 39
08 May 1953	1:23,600	EROS	GS-YQ 4-9 thru 12 GS-YQ 4-34 thru 36
31 May 1959	1:20,000	ASCS	1W 34 thru 37
01 Dec 1959	1:20,000	ASCS	15W 136 thru 139
06 Jun 1965	1:20,000	ASCS	3FF 168 thru 171 3FF 184 thru 187
23 Aug 1972	1:40,000	ASCS	527 160 thru 162
16 Sep 1979	1:40,000	ASCS	179 175 thru 177
27 Sep 1992	1:23,600	EROS	VFNI 1-137 thru 139

The photography was referenced using the 1992 edition USGS Tortuga, California 7.5' quadrangle. No ground disturbances or ordnance related activity was detected on any of the photos analyzed.

#### 4.4.2 Map Analysis

Map analysis was performed using the 1992 edition USGS Tortuga, California 7.5' quadrangle.

Planimetric and topographic features are shown on the quadrangle. The planimetric features include buildings, loose and hard surface roads. There are several manmade canals in the area. The topography of the area ranges from flat to gently rising terrain to the east.

## 5.0 Real Estate

### 5.1 Confirmed DoD Ownership

Research revealed an inventory of bombing ranges which listed Holtville Target (BT) No. 3. None of the research uncovered the actual real estate description; however, it did list the coordinates of the site as Latitude 33° 09' 00" North and Longitude 115° 22' 05" West. These coordinates are located in Section 1, Township 12 South, and Range 15 East. Disposal documentation was not found during research.

### 5.2 Potential DoD Ownership

There is a potential that the bombing target was not located entirely in Section 1 of Township 12 South and Range 15 East. The coordinates listed above fall within the southwestern quarter of Section 1. Therefore, part of the target could have been in the adjacent sections.

### 5.3 Significant Past Ownership other than DoD

There is no significant past ownership other than DoD.

### 5.4 Present Ownership

According to the INPR, the current land owners of Section 1 are John and Bertha Garabedia of Fresno, California.

## **6.0 Site Inspection**

St. Louis District Corps of Engineers personnel, Rochelle Ross, Gregg Kocher, and John Daly, began the site walk on Holtville Target #3 in approximately the center of the northern boundary on February 23, 1996. We covered a good area of the site while avoiding the heavy vegetation located along the southern side and the middle of the western side. No ordnance related items were discovered on this site.

## **7.0 Evaluation of Ordnance Presence**

No evidence of OE was found at this location during the site inspection conducted in February 1996. However, the remains of one rocket were found during a site inspection conducted by SAIC personnel in 1993.



## 8.0 Technical Data of Ordnance and Explosives

### 8.1 Ordnance related Mission

This was a practice bombing range in the 1940's. It is possible that target rockets or subcaliber rockets were fired.

### 8.2 Description of Ordnance

Practice bombs like the 100-lb. M38 series, 25-lb. and 3-lb. miniature bombs may have been dropped. Target rockets were probably fired to indicate the target, or used as subcaliber munitions.

### 8.3 Reference

NAVSEA OP 1280, Aircraft Bombs, 1945  
NAVSEA OP 1415, Rocket Assemblies, dated 1955  
NAVSEA OP 1664, U.S. Explosive Ordnance, dated 1947  
TM 9-1325-200, Bombs and Bomb Components, dated 1966  
TM 9-1980, Bombs for Aircraft, dated 1950  
TM 9-1950, Rockets, dated 1950



## 9.0 Evaluation of Other Site Information

The archive search did not reveal any additional areas of potential environmental concern associated with DoD use.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 2 (#95)  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017001

APPENDICES

- A. REFERENCES
- B. GLOSSARY AND ACRONYMS
- C. TEXT / MANUALS
- D. REPORTS / STUDIES
- E. LETTERS / MEMORANDA / MISCELLANEOUS ITEMS
- F. REAL ESTATE DOCUMENTS (NOT USED)
- G. NEWSPAPER / JOURNALS (NOT USED)
- H. INTERVIEWS
- I. PRESENT SITE PHOTOGRAPHS
- J. HISTORICAL PHOTOGRAPHS (NOT USED)
- K. HISTORICAL MAPS / DRAWINGS (NOT USED)
- L. SITE SAFETY AND HEALTH PLAN / SITE INSPECTION REPORT
- M. REPORT DISTRIBUTION LIST

**APPENDIX A**

**REFERENCES**

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

INVENTORY PROJECT REPORT (INPR)

**Lee, Lawson S., P.E., USACE, Huntsville**

1995 Letter to Commander, HQUSACE, Washington, D.C., subject: DERP-FUDS Inventory Project Report (INPR) Requiring an Ordnance and Explosive Waste (OEW) Engineering Evaluation and Cost Analysis (EE/CA), dated 28 March 1995; Site Survey Summary Sheet, dated 16 September 1993; Findings of Fact, dated 5 January 1995; Project Summary Sheet, n.d.; RAC Form, n.d.; DD 1391, dated 2 February 1995.

REFERENCES

**Assistant Commandant (Logistics).**

1944 Correspondence to Comdr. NAC, SD., dated 29 August, regarding the acquisition of land for bombing targets, NAC, San Diego, CA. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 424; file: NA(2). National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Bagley, D. W. and R. R. Smith.**

1943 Correspondence to Commanding Officer, Marine Corps Air Station, El Centro, CA, dated 27 April, regarding the Danger Area for a gunnery range at El Centro. Record Group 181; Box 39: N1-N3. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Bureau of Aeronautics.**

1945a Correspondence to Bureau of Yards and Docks, dated 2 July, regarding the construction of Duck Skeet, Skeet and Trap Ranges. Record Group 72; Entry: General Correspondence 1943-45; Box

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

2323; File KV37. National Archives-Downtown Branch,  
Washington D.C.

1945b Correspondence to Bureau of Yards and Docks, dated 30 July,  
regarding gunnery training facilities. Record Group 72; Entry:  
General Correspondence 1943-45; Box 2323; File: KV37.  
National Archives-Downtown Branch, Washington D.C.

**Bureau of Docks.**

1948 Routing Slip referencing correspondence to Eleventh Naval  
District, dated 8 April, regarding permission to use Department of  
Interior land for a movable target range, rifle range and pistol  
range. Record Group 181; Entry: 11th Naval District,  
Commandant's Office, General Correspondence 1924-55; Box 425.  
National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Bureau of Naval Personnel.**

1947 Correspondence to Commander, Eleventh Naval District, dated  
19 February, regarding the cancellation of interim caretaker force  
allowances. Record Group 74; Entry 5595; Box 209: ND10-ND12,  
1947. National Archives-Suitland Branch, Suitland, MD.

**Bureau of Ordnance.**

1943a Correspondence to Commanding Officer, Bombardier and Air  
Gunner School, El Centro MCAS, dated 5 May, regarding inert  
bombs and fuzes for instruction. Record Group 74; Entry 25; Box  
453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

**ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA**

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

- 1943b Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 6 May, regarding Aircraft Munitions. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.
- 1943c Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 14 July, regarding the approved capacities of Magazines. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.
- 1943d "Cross Index: KV37," dated 5 October, for correspondence to S & A Ofcr MarCorps Air Sta. El Centro, Calif., regarding bombing trainers. Record Group 74; Entry 25; Box 362; KV37-NA 8. National Archives-Suitland Branch, Suitland, MD.
- 1946a Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 4 January, regarding the Ammunition Stock Recording System. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946b Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 19 April, regarding the stowage of ammunition. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946c Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 27 June, regarding a request for rocket firers. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.



ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Bureau of Yards and Docks.**

- 1947 *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps, 1940-1946.*  
Volume I. United States Government Printing Office,  
Washington D.C.

**Chief of Naval Air Technical Training.**

- 1948 Correspondence to Chief of Naval Operations, dated 16 January, regarding Rock Mining Permit at Gunnery Range, NAS, El Centro, CA. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Chief of Naval Operations.**

- 1947 Correspondence, dated 7 November, regarding the Revised Planning Estimate for Roll-Up of Continental Air Stations, Satellites and Outlying Fields. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Coletta, Paola E., ed.**

- 1985 *United States Navy and Marine Corps Bases, Domestic.*  
Greenwood Press, Westport, CT.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Commandant, Eleventh Naval District.**

- 1944 Routing Slip referencing correspondence from Bureau of Docks, dated 28 February, regarding the lease of land for Holtville Target No. 1. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 424; File: NA(2). National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1947a Correspondence to the Chief of Bureau of Yards and Docks, dated 28 February, regarding the leases and/or permits for Imperial Valley Bombing Targets. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1947b Correspondence to the Chief of Bureau of Yards and Docks, dated 24 July, regarding Free Gunnery Range Facilities near El Centro, CA. Record Group 181; Entry: Commandant's Office, General Correspondence; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1947c Correspondence to the Chief of Bureau of Ordnance, dated 26 September, regarding rocket stowage at Naval Air Station, El Centro, CA. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1968 *United States Naval Administration in WWII*, Volume 118; Part 3. Washington Navy Yard Library, Washington D.C.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Commander, Naval Air Bases, Eleventh Naval District.**

- 1947 Correspondence to Chairman General Board, dated 23 June, regarding Survey of Shore Activities of the Naval Establishment. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1949 Routing Slip for correspondence to Secretary of Navy, dated 5 March, regarding Board of Investigation investigating wrongful release of bombs near U. S. Naval Air Station, El Centro, California. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Department of the Navy, Bureau of Yards and Docks.**

- 1965 "Real Estate Summary Map," for U. S. Naval Air Facility, El Centro, CA. Real Estate Division, Naval Facilities Engineering Command, San Diego, CA.

**Eleventh Naval District.**

- 1946 "Facilities Considered Excess to Needs of 11th Naval District," dated 01 April. Record Group 74; Entry 4444; Box 287; File: ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.
- 1947 "Speedletter" to Chief of Naval Personnel, dated 12 August, regarding retaining the services of Bomb and Mine Disposal Expert until a qualified replacement arrives in Southern California. Record Group 74; Entry 5595; Box 209: BD10-ND12, 1947. National Archives-Suitland Branch, Suitland, MD.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

- n.d. "Directory of Naval Air Bases." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- Fogg, A. K.**  
1943 Correspondence from officer-in-charge of construction to Commander, Marine Fleet Air West Coast, dated 27 October, regarding the expansion of facilities at MCAS El Centro, CA. Record Group 72; Entry: General Correspondence 1943-45; Box 2323; File KV37. National Archives-Downtown Branch, Washington D.C.
- Gunther, E. L.**  
1942 "Report of Naval and Marine Flying Within Western Air Defense Zone," dated 23 September. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- Headquarters, Marine Fleet Air, West Coast.**  
1943 Correspondence to Bureau of Ordnance, dated 10 May, regarding mil sights for free gunnery instruction. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.
- Headquarters, Naval Air Bases.**  
1945 Correspondence to Commanding Officer of All Units at Naval Air Bases, dated 23 April, regarding the numbering of land and water targets. Engineering Division, Installation Support Section, U. S. Army Corps of Engineers-Los Angeles, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

- 1946a Speedletter; File NAB11/S78-2, dated 28 February, regarding excess ammunition at Naval Air Bases. Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946b Correspondence to Chief, Bureau of Ordnance, dated 12 August, regarding a Request for Disposition of Small Arms Ammunition for Caliber .30 Aircraft Machine Gun. RG 74; Entry 4444; Box 287; ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946c Correspondence to Commandant, Eleventh Naval District, dated 18 September, regarding land occupied by Rocket Target No. 103. Record Group 181; Entry: Commandant's Office General Correspondence; Box 422. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- n.d. Speedletter; File NAB11/S78-2, regarding Ordnance inventories at 11th Naval District's Air Bases. Record Group 74; Entry 4444; Box 287; File ND8-ND11, 1946. National Archives- Suitland Branch, Suitland, MD.

**Headquarters, U. S. Marine Corps Air Station, El Centro, CA.**

- 1943 Correspondence to Bureau of Ordnance, dated 6 August, regarding empty drums for FS smoke mixture. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

- 1945a Correspondence to Chief, Bureau of Ordnance, dated 26 June, regarding a Request for Ordnance Equipment for Duck Skeet, Skeet and Trap Ranges. Record Group 74; Entry 1529; Box 374: F4 1-10, 1945. National Archives, Suitland Branch, Suitland, MD.
- 1945b "History of Marine Corps Air Station, El Centro, California," dated 18 December. Naval Historical Center and Archives, Washington Naval Yard, Washington D.C.

**Holtville, Auxiliary Air Station.**

- 1948 Legal Descriptions of Land to be disposed of by the Navy Department to Imperial County. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.
- n.d. "Structures for Use Off-Site." Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

**Marine Corps Air Station, El Centro, CA.**

- 1946 Teletype to Bureau of Ordnance, dated 26 March, regarding the shipment of 36 Rocket Firers. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.

**Marine Fighter Squadron 216.**

- 1943 Correspondence to Bureau of Ordnance, dated 21 August, regarding a request for glide bombing monograms for F4U aircraft. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**n.a.**

- c.1946 "Status of Units of Naval Air Bases, 11th Naval District." Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1966a Handwritten correspondence regarding disposition of NAAS Holtville, dated 21 September. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.
- 1966b Handwritten correspondence regarding disposition of 110 acres at NAAS Holtville, dated 16 November. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

**Naval Air Bases, 11th Naval District.**

- 1945 "Cross Index: ND11/S70; A6-1(10)," dated 13 February, regarding disposition of 752 parachute flares at NAAS Holtville. Record Group 74; Entry 1529; Box 1282, ND7-ND11, 1945. National Archives-Suitland Branch, Suitland, MD.
- 1947 Correspondence to Bureau of Ordnance, dated 18 April, regarding a request for ammunition for El Centro NAS. Record Group 74; Entry 5595; Box 209: ND10-ND12, 1947. National Archives-Suitland Branch, Suitland, MD.

**Naval Facilities Engineering Command.**

- n.d. "Acquisition R-2512, NAVFAC Drawing No. PW904." Real Estate Division, Naval Facilities Engineering Command, San Diego, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Navy Department.**

- 1944 Correspondence to Eleventh Naval District Public Works Officer, dated 10 July, regarding Outdoor Gunnery Ranges. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 424; File NA(2). National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1948 Correspondence to Deputy Administrator, Office of Real Property Disposal, dated 11 February, regarding the declaration of surplus for Holtville Auxiliary Air Station. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

**Office of the Chief of Naval Operations.**

- 1943 "Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast." Record Group 181; Entry: 11th Naval District, Commandant's Office, Formerly Classified Correspondence 1921-47; Box 57; File: CF20C/SF20C/1943. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Office of the District Engineer, Los Angeles, CA.**

- 1951 "California-Arizona Maneuver Area, Dedudding Program," dated October. Record Group 181; 11th Naval District General Correspondence. National Archives-Pacific Southwest Region, Laguna Niguel, CA.



ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Public Works Office.**

- 1950 "Naval Air Bases, 11 N.D.; N.A.S. San Diego; Status of Targets," dated 30 June. Record Group 181; 11th Naval District General Correspondence. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- n.d. "N.A.B. Status of Land Acquisition; Location and Plot Plan." Record Group 181; Records of the Commandant's Office; Box 422. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**Real Property Division.**

- 1961 Inspection Report of a portion of the Salton Sea Test Base, 4 October. Record Group 291; Entry 9NSS-121-90-002; Box 58; Folder B-Calif.-730. National Archives-Pacific Sierra Region, San Bruno, CA.
- 1963 Appraisal Report of Salton Sea Test Base, dated 1 May. Record Group 291; Entry 9NSS-121-90-002; Box 58; Folder B-Calif.-730. National Archives-Pacific Sierra Region, San Bruno, CA.
- 1966 "Real Property Acquisition Advice," dated 24 October. Record Group 291; Entry: 9NSS-291-94-001; Box 11; Folder: GR-Calif.-515A, Imperial Valley TB Sanatorium. National Archives-Pacific Sierra Region, San Bruno, CA.

**Second Marine Air Wing.**

- n.d. "Map Showing Army, Navy, and Military Facilities in the Southern California Area." Record Group 181; 11th Naval District General Correspondence. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Secretary of the Interior.**

- 1941a Correspondence to the Secretary of War, dated 5 July, regarding the transfer of land for military purposes. Record Group 48; Entry 749B; Box 3220; File: Reservations for Military and Naval Purpose, California, March 19, 1937-Dec. 21, 1942. National Archives II, College Park, MD.
- 1941b Correspondence to the Secretary of the Navy, dated 12 July, regarding the transfer of land for military purposes. Record Group 48; Entry 749B; Box 3220; File: Reservations for Military and Naval Purpose, California, March 19, 1937-Dec. 21, 1942. National Archives II, College Park, MD.

**Southern California Sector, Western Sea Frontier.**

- 1944 Correspondence to AIRCRAFT, Southern California Sector, Western Sea Frontier, dated 24 August, regarding bombing targets in Southern California Sector. Engineering Division, Installation Support Section, U. S. Army Corps of Engineers, Los Angeles, CA.

**Southwest Division, Bureau of Yards and Docks.**

- 1964 "Release for Publication," dated 8 December. File Cabinet Drawer: Southern California; Folder: El Centro NAS, CA. U. S. Navy Construction Battalion Museum, Port Hueneme, CA.
- 1966 "Report of Excess Real Property," dated 6 April. Record Group 291; Entry: 9NSS-291-93-002; Box 20; Folder 9-N-Calif-869. National Archives-Pacific Sierra Region, San Bruno, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**Supply Officer, Naval Air Station, San Diego.**

1943 "Speedletter" to Bureau of Ordnance, dated 26 October, regarding ordnance shipment for MCAS El Centro. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

**U. S. Army Corps of Engineers, Los Angeles District.**

1992 Inventory Project Report for Miscellaneous Bombing Ranges, Site No. J09CA103800. On File: Engineering Division, Installation Support Section. U. S. Army Corps of Engineers, Los Angeles, CA.

**U. S. Army Corps of Engineers, Rock Island District.**

1996 Archives Search Report for Salton Sea Test Base. Prepared for Naval Facilities Engineering Command-Southwest Division, San Diego, CA. On File: U. S. Army Corps of Engineers, Rock Island, IL.

**U. S. Department of Interior.**

1945 Correspondence to Secretary of the Navy, dated 18 December, regarding the transfer of Interior land to the Navy. Record Group 48; Entry 749B; Box 3220; File: Reservations for Military and Naval Purpose, California, Part 4 Nov. 30, 1945-Dec. 19, 1950. National Archives II, College Park, MD.

**U. S. Engineer's Office, Los Angeles, CA.**

1942 "General Map" of World War II Landing Fields and Bombing Targets, dated December. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**U. S. Marine Corps Air Station.**

- 1943a Correspondence to the Chief, Bureau of Ordnance, dated 27 April, regarding a request for Ammunition and Waterfillable Bombs. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.
- 1943b "Cross Index: KV37," dated 24 November, for correspondence to Commanding Officer, El Centro Marine Corps Air Station, regarding monthly allotment of shotgun shells.
- 1946 Correspondence to Chief, Bureau of Ordnance, dated 10 July, regarding Rocket Firers. Record Group 74; Entry 4444; Box 194: KV-L1-1, Jun-July 1946. National Archives-Suitland Branch, Suitland, MD.

**U. S. Naval Air Facility, El Centro, CA.**

- n.d. Brief Introduction to NAF, El Centro and Imperial County. Environmental Office, NAF El Centro, CA.

**U. S. Naval Air Station, El Centro, CA.**

- 1949 "Historical Report of U. S. Naval Air Station, El Centro, CA for the period of 1 August 1946 to 30 June 1949." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- 1951 "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 January to 30 June 1951." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**U. S. Naval Auxiliary Air Station, El Centro, CA.**

- 1950a "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 July to 31 December 1949." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- 1950b Correspondence to Chief of Naval Operations, dated 3 November, regarding the Revision of the Mission of U. S. Naval Auxiliary Air Station, El Centro, California. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1951 "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 July to 31 December 1950." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- 1952a "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 July to 31 December 1951." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- 1952b "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 January to 30 June 1952." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
- 1953 "Rounds of Ordnance Expended by Fleet Units during the Period 1 July 1952 through 31 December 1952." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**U. S. Naval Auxiliary Air Station, Holtville, CA.**

1945 Historical Report of U. S. Naval Auxiliary Air Station, Holtville, CA. Box 221; Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

1946 "Historical Report of U. S. Naval Auxiliary Air Station, Holtville Calif" for 1 September 1945 to 15 April 1946. Box 221; Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

**U. S. Pacific Fleet.**

1946 "COMFAIR West Coast Service and Training Munition Requirements," dated 26 January. Record Group 74; Entry 4444; Box 287; File: ND8-ND11,1946. National Archives-Suitland Branch, Suitland, MD.

**War Assets Administration.**

1948 "Real Property Classification," dated 15 September, for Holtville Auxiliary Station. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

**Western Division, Naval Facilities Engineering Command.**

n.d. "Land Acquisition Map, Range 2512 (East Mesa)." Drawing No. C-102634. Real Estate Division, Naval Facilities Engineering Command, San Diego, CA.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX A

REFERENCES

**REFERENCES FOR DEMOGRAPHICS**

U.S. Census report as listed below:

- |      |  |
|------|--|
| 1990 | Census of Population and Housing, Imperial County, California                    |
| 1990 | Census of Population and Housing El Centro, California                           |
| 1988 | County and City Data Book, Land Area and Population, Imperial County, California |
| 1988 | County and City Data Book, Land Area and Population, El Centro, California       |
| 1991 | County Business Patterns, Imperial County  |

**REFERENCES FOR GEOLOGY AND SOILS**

**Morton, Paul K.**

- |      |  |
|------|--|
| 1966 | <i>Geologic Map of Imperial county, California.</i> County Report 7, California Division of Mines and Geology, Sacramento, CA. |
|------|--|

**Zimmerman, Robert P.**

- |      |   |
|------|---|
| 1981 | <i>Soil Survey of Imperial County, California, Imperial Valley Area.</i> US Department of Agriculture, Soil Conservation Service in cooperation with the University of California Agricultural Experiment Station and the Imperial Irrigation District. |
|------|---|

**APPENDIX B**

**GLOSSARY AND ACRONYMS**



ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX B

GLOSSARY AND ACRONYMS

AAF	Army Air Field
AA	Anti-Aircraft
AEC	Army Environmental Center
AGO	Adjutant General's Office
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Antipersonnel
APT	Armor Piercing with Tracer
ASR	Archives Search Report
Aux	Auxiliary
BAR	Browning Automatic Rifle
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BE	Base Ejection
BGR	Bombing and Gunnery Range
BLM	Bureau of Land Management
BRAC	Base Realignment And Closure
BT	Bomb Target
CAA	Civil Aeronautics Administration
CADD	Computer-Aided Design/Drafting
Cal	Caliber
CBDA	Chemical and Biological Defense Agency
CBDCOM	Chemical and Biological Defense Command
CE	Corps of Engineers
CEHNC	Corps of Engineers, Huntsville
CELMS	Corps of Engineers, St. Louis
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESPL	Corps of Engineers, Los Angeles District
CFR	Code of Federal Regulations

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX B

GLOSSARY AND ACRONYMS

cfs	Cubic Feet Per Second
COE	Chief of Engineers
COMP	Composition
CTG	Cartridge
CSM	Chemical Surety Material
CSM	Command Sergeant Major
CWM	Chemical Warfare Material
CWS	Chemical Warfare Service
DA	Department of the Army
DARCOM	Development and Readiness Command
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DERP-FUDS	Defense Environmental Restoration Program-Formerly Used Defense Sites
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EOD	Explosives Ordnance Disposal
EPA	Environmental Protection Agency
ERDA	Environmental Restoration Defense Account
FDE	Findings and Determination of Eligibility
FFMC	Federal Farm Mortgage Corporation
FLCH	Flechette
FS	Feasibility Study
FWS	(U.S.) Fish and Wildlife Service
FUDS	Formerly Used Defense Sites
GIS	Graphic Information System
GSA	General Services Administration
HE	High Explosive

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX B

GLOSSARY AND ACRONYMS

HEAT	High Explosive Anti-Tank
HEI	High Explosive Incendiary
HEP	Plastic
HE-S	Illuminating
HTRW	Hazardous Toxic and Radioactive Waste
HTW	Hazardous and Toxic Waste
IAS	Initial Assessment Study
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
MG	Machine Gun
MG	Major General
mm	Millimeter
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NAF	Naval Air Facility
NARA	National Archives and Records Administration
NAS	Naval Air Station
NCDC	National Climatic Data Center
NCP	National Contingency Plan
NFS	National Forest Service
NG	National Guard
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
OEW	Ordnance and Explosive Waste
OSHA	Occupational Safety and Health Act
PA	Preliminary Assessment
PD	Point Detonating

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX B

GLOSSARY AND ACRONYMS

PIBD	Point Initiating, Base Detonating
PL	Public Law
QASAS	Quality Assurance Specialist Ammunition Surveillance
RA	Removal Action
RAC	Risk Assessment Code
RD	Remedial Design
RG	Record Group
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SAIC	Science Application International Corporation
SARA	Superfund Amendments and Reauthorization Act
SCS	Soil Conservation Service
SLD	St. Louis District, Corps of Engineers
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Units
TECOM	Test Evaluation Command
TEU	Technical Escort Unit
TNT	Trinitrotoluene
TP	Target Practice
USA	United States of America
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAED	U.S. Army Engineer District
USAESCH	U.S. Army Engineering and Support Center, Huntsville, AL
USATHMA	U.S. Army, Corps of Engineers, Toxic and Hazardous Materials Agency
USC	United States Code
USDA	U.S. Department of Army
USFWS	U.S. Fish and Wildlife Service

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX B

GLOSSARY AND ACRONYMS

USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WAA	War Assets Administration
WD	War Department
WNRC	Washington National Records Center

**APPENDIX C**

**TEXT / MANUALS**

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX C

TEXT / MANUALS

**Coletta, Paola, E.**

1985 *United States Navy and Marine Corps Bases, Domestic.* Greenwood  
Press, Westport, CT.

---

**UNITED STATES  
NAVY AND  
MARINE CORPS BASES,  
DOMESTIC**

---

PAOLO E. COLETTA, *Editor*  
K. Jack Bauer, *Associate Editor*

1985



Greenwood Press  
Westport, Connecticut • London, England



called for an addition to the gasoline storage supply and various other projects that amounted to more than \$2 million, but the cancellation of various other projects reduced costs by \$600,000.

Edenton was placed in caretaker status on 1 July 1946 and inactivated and disestablished on 1 August 1946. On 2 August 1955, however, it was reestablished as a naval auxiliary air station, only to be disestablished on 31 December 1958 and decommissioned on 1 January 1959. With another turn of the wheel of fate, it was redesigned as an outlying field for MCAS Cherry Point, N.C., on 9 January 1959. Within three months, however, it was disestablished again on 31 March 1959. Given the cost of modernization, about \$48 million, it was decided to close the facility; with the laying off of 1,294 military and 138 civilians, this would account for an annual saving of \$810,000. The 3,283 acres of land on which it sat were declared surplus with the right of recapture.

#### BIBLIOGRAPHY

A. U.S. Navy, Bureau of Yards and Docks, *Building the Navy's Bases in World War II*, 2 vols. (Washington: GPO, 1947); "Edenton, N.C., MCAS/NAS," in *Naval Air Stations*, 3 vols. (Washington, D.C., Navy Yard: Naval Aviation History Office, n.d.); "Unit History of U.S. Marine Corps Air Station, Edenton, N.C." (Washington: Naval Historical Center, Operational Archives Branch).

B. "Four Stations Will Close," *Naval Aviation News*, Mar. 1958, p. 34.  
Nancy Lindstrom-TAPEE2-445-457

#### EL CENTRO, CALIF., MARINE CORPS AIR STATION, 1943-1945, AND NAVAL AIR FACILITY, 1949-

Shortly after the Japanese attack on Pearl Harbor, the Navy approved the request of the Marine Corps for the establishment of five air stations on the West Coast. Site selection devolved upon Lt. Col. William Fox, USMCR, with directions to find sites in the Imperial Valley of California. One of the sites Fox chose was at El Centro, at the southern end of the valley not far from the Mexican border 125 miles east of San Diego, seven miles west of Imperial and El Centro, Calif., and fifty miles west of Yuma, Ariz. It was an excellent choice because the floor of the valley, at a mean elevation of minus fifty-two feet, is flat, sandy, and extends for many miles. Although summer temperatures reach 105° F, the air is dry, and winter weather runs between 75° F and 90° F. With an average wind speed of only ten mph, flying is possible 92 percent of the time. El Centro was thus ideal for all types of precombat training, for the solution of tactical problems, and for gunnery practice.

On a property acquired by the Navy (943 acres leased and 949 purchased, later expanded to 2,300 acres), the Civil Aeronautics Administration had already constructed two 4,500-by-150-foot runways. Additional construction began on 15 May 1942, and limited operations were possible only seven months later. Construction and improvement costs reached about \$11.5 million. Beyond the station area were skeet and rifle ranges, malfunction and turret ranges for gunnery practice, a rabbit range, a rocket range, and a rocket ground school. The first

air unit to report aboard, on 1 January 1943, was Marine Air Base Defense Aircraft Group 43, soon redesignated Marine Air Group (MAG 43) and still at the base at the end of the war. Commissioning occurred on 23 July 1943, Lt. Col. Thomas J. McQuade commanding.

Many were the trained squadrons that left El Centro for forward operating areas in the Pacific, and as the desirability of the base for training purposes became increasingly evident, the construction of a second area was authorized. Work began on 10 April 1944 and was completed for occupancy in December, with MAG-35 and a transport training group the first groups to come on board. The initial allotment for construction under a cost-plus-fixed-fee contract was \$6,014,671. The final expenditure for the first area was \$8.5 million; for the second area, \$3 million. To the end of 1944, sixteen squadrons of fighter, bomber, and transport aircraft pilots and aircrewmembers were trained at El Centro.

Soon after the end of World War II, El Centro was greatly reduced and on 1 May 1946 was commissioned as a naval auxiliary air station. On 15 October 1946 its status was that of modified maintenance. On 6 January 1947 the Bureau of Aeronautics established there a storage pool for TD2 *Devastator* torpedo aircraft and on 20 March authorized Western Air Lines to operate two flights daily. Its condition when inspected by the staff of the Commandant of the Eleventh Naval District had been found to be "good to very good." Inspected again on 3 June 1947, the report read "very good." In November 1947 the Parachute Experimental Division from NAS Lakehurst, N.J. (q.v.), moved to El Centro. On 9 June the Joint Parachute Test Facility was established; it consisted of the Naval Parachute Unit and the 6511 Parachute Development Test Group. Also, from 1947 to 1964, the Air Force cooperated as part of El Centro's test organization. The Naval Aerospace Recovery Facility commissioned in 1964 was combined with the Naval Auxiliary Air Facility on 1 July 1973 to form the National Parachute Test Range. When the last was transferred to the Naval Weapons Center, Inyokern/China Lake (q.v.), on 1 July 1979, El Centro again became a naval air facility.

Soon after the end of World War II, El Centro was used to provide support to various fleet squadrons. In 1949 there was established the Fleet Gunnery Unit, which for ten years provided support for squadrons that came to conduct gunnery, bombing, and carrier landing practice. In addition, a permanent detachment from Attack Squadron 174 beginning in 1979 provided maintenance support for East Coast A-7 pilots who fly out to use the range area. The expanded Desert Test Range is a modern inert target complex that utilizes remote TV and acoustical and laser scoring systems. The current mission of NAF El Centro is to support operational fleet units that come for bombing and gunnery practice or to use the simulated carrier deck landing area. In use are four runways, the longest of which is equipped with a permanent mirror landing system at each approach end. El Centro is the winter home for training for the Blue Angels Demonstration Team.

At the nearby town of El Centro is a general hospital, eleven public and

e Defense  
and still at  
1943, Lt.

operating  
g purposes  
authorized.  
December,  
: on board,  
contract was  
on; for the  
of fighter,  
El Centro

d and on 1  
15 October  
the Bureau  
tor torpedo  
two flights  
dant of the  
" Inspected  
er 1947 the

, moved to  
; it consisted  
Fest Group  
Centro's test  
ned in 1964  
to form the  
o the Naval  
Centro again

vide support  
unnersy Unit  
uct gunnery  
chment from  
port for East  
l Desert Test  
nd acoustical  
is to support  
or to use the  
re longest of  
ach approach  
emonstration  
n public and

parochial elementary schools, two junior high schools, one high school, and two schools for higher education: Imperial Valley (two-year) Community College, and the San Diego State College extension at Imperial Valley Center, Calexico. There are two man-made lakes nearby, and mountain areas and the former site of a naval seaplane base at Salton Sea, Westmorland, Calif. (q.v.) are but an hour's drive away. The usual range of station facilities is available, with quarters for 29 officers and 141 men, and off-base housing located in three suburban areas located within two miles of El Centro. Word about station affairs is passed in part through *The Sand Paper*. In addition to Attack Squadron 174, a second tenant command is U.S. Air Force Space and Missile System Organization (or SAMSO), which works with NAVSTAR, a naval satellite navigation system useful to all branches of the armed forces.

#### BIBLIOGRAPHY

- A. "History of Marine Corps Air Station, El Centro, Calif., December 18, 1945" (Washington: Naval Historical Center, Operation Archives Branch); Commandant 11th Naval District, "Command Histories, 3 September 1959" (Washington: Naval Historical Center, Operational Archives Branch).
- B. *Naval Air Facility, El Centro, California* (N.p.; C/R Printers, 1979), courtesy Ens. Apprentice, USNR, Public Affairs Officer, NAF, El Centro, 11 Feb. 1983.

#### EL TORO (SANTA ANA), CALIF., MARINE CORPS AIR STATION, 1944-

On 15 September 1944 Col. William J. Fox, USMCR, who during World War II served as a representative with Army and Navy people on a site selection board to choose sites for air stations in southern California, became the aviation assistant to the Commandant of the Marine Corps. In this billet his mission involved the military direction and administrative coordination of Marine Corps aeronautical activities in the Eleventh Naval District. In addition to subordinate units at Marine Corps Air Stations (MCAS) at Santa Barbara (Goleta) (q.v.), Mojave (q.v.), and El Centro (q.v.), he had charge of the Marine Corps Air Department at Miramar (q.v.); the Headquarters Squadron, Marine Corps Activities, Naval Air Bases, Eleventh Naval District; and Marine auxiliary air stations at Gillespie, Ill.; Chino Field, Ontario; and Ryan Field, Hemet, Calif., all outlying fields for El Toro.

Since Naval Air Station (LTA) Santa Ana (q.v.) is covered separately, a brief resume of El Toro's beginnings must suffice.

Following the Japanese attack on Pearl Harbor, the United States direly needed aviation training areas. Because of the mountainous terrain and limited air space in southern California, the Army, Navy, and Marine Corps became involved in numerous conflicts. A particular problem was that the Army, responsible for coast defense, might send up aircraft to intercept naval or Marine aircraft and thus disrupt training schedules, and the Marines were under the pressure of knowing that their squadrons would soon be sent to engage in combat in the South Pacific. In early 1942 Marine aviation had only two wings, the First and

**APPENDIX D**

**REPORTS / STUDIES**

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX D

REPORTS / STUDIES

**INVENTORY PROJECT REPORT (INPR)**

**Lee, Lawson S., P.E., USACE, Huntsville**

1995 Letter to Commander, HQUSACE, Washington, D.C., subject: DERP-FUDS Inventory Project Report (INPR) Requiring an Ordnance and Explosive Waste (OEW) Engineering Evaluation and Cost Analysis (EE/CA), dated 28 March 1995; Site Survey Summary Sheet, dated 16 September 1993; Findings of Fact, dated 5 January 1995; Project Summary Sheet, n.d.; RAC Form, n.d.; DD 1391, dated 2 February 1995.

**REFERENCES**

**Office of the Chief of Naval Operations.**

1943 "Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast." Record Group 181; Entry: 11th Naval District, Commandant's Office, Formerly Classified Correspondence 1921-47; Box 57; File: CF20C/SF20C/1943. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

**U. S. Army Corps of Engineers, Rock Island District.**

1996 Archives Search Report for Salton Sea Test Base. Prepared for Naval Facilities Engineering Command-Southwest Division, San Diego, CA. On File: U. S. Army Corps of Engineers, Rock Island, IL.

**U. S. Naval Auxiliary Air Station, El Centro, CA.**

1952a "Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA for the period of 1 July to 31 December 1951." Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX D

REPORTS / STUDIES

**U. S. Naval Auxiliary Air Station, Holtville, CA.**

- 1945 Historical Report of U. S. Naval Auxiliary Air Station, Holtville, CA. Box 221; Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.
  
- 1946 "Historical Report of U. S. Naval Auxiliary Air Station, Holtville Calif" for 1 September 1945 to 15 April 1946. Box 221; Naval Historical Center and Archives, Washington Navy Yard, Washington D.C.

**Lee, Lawson S., P.E., USACE, Huntsville**

1995 Letter to Commander, HQUSACE, Washington, D.C., subject: DERP-FUDS Inventory Project Report (INPR) Requiring an Ordnance and Explosive Waste (OEW) Engineering Evaluation and Cost Analysis (EE/CA), dated 28 March 1995; Site Survey Summary Sheet, dated 16 September 1993; Findings of Fact, dated 5 January 1995; Project Summary Sheet, n.d.; RAC Form, n.d.; DD 1391, dated 2 February 1995.



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

REPLY TO  
ATTENTION OF

CEHND-PM-SO (200-1c)

28 March 1995

MEMORANDUM FOR Commander, HQUSACE, ATTN: CEMP-RF,  
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	[REDACTED]	2	Imperial County, Holtville Target [REDACTED]

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: CESPD-ED-G, 630 Sansome Street,  
Room 720, San Francisco, CA 94111-2206

U.S. Army Engineer District, Los Angeles, ATTN: CESPL-ED-MI, P.O. Box 2711,  
Los Angeles, CA 90053-2325





1-522  
REPLY TO  
ATTENTION OF:

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

CESPD-ED-G (200-1c)

6 JAN '95

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 Holtville Target (BT) No. 3, Imperial County, CA, Site No.  
J09CA017100

1. I am forwarding the INPR for Holtville Target (BT) No. 3 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 OEW  
project. Los Angeles District has computed a RAC 3 on this  
project.

Encl

*for* *DERP* *COL*  
BRUCE K. SCOTT  
Brigadier General, U.S. Army  
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

22 September 1993

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

SUBJECT: DERP-FUDS Inventory Project Report's (INPR's) for Site  
Nos: J09CA017100 and J09CA014400

1. Enclosed are the INPR's for:

- J09CA017100 HOLTVILLE TARGET NO. 3
- J09CA014400 BOMBING TARGET IMPERIAL DUNES

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.

2 Encl

  
R.L. VANANTWERP  
COL, EN  
Commanding

**SITE SURVEY SUMMARY SHEET**  
**FOR**  
**DERP-FUDS SITE NO. J09CA017100**  
**HOLTVILLE TARGET (BT) NO. 3**  
**16 September 1993**

**SITE NAME:** HOLTVILLE TARGET (BT) NO. 3.

**LOCATION:** Holtville Target (BT) No. 3 is located in Imperial County, California, approximately 9 miles northeast of Calipatria. Haley Road borders the northwest portion of the site and the Coachella Canal crosses the northeast corner of the site.

**SITE HISTORY:** In 1944, the Eleventh Naval District listed this site on a status inventory. The site was located by longitude and latitude coordinates only. No further information was available concerning acquisition of this site. It is assumed that the Navy acquired temporary use of one section of land. Certain targets listed on the above-mentioned inventory were not in commission as of 24 August 1944; however, once put into commission, targets were permitted to perform pre-approved bombing runs and use specified ordnance only. According to the inventory, Holtville Target No. 3 was approved for use of practice bombs. No information was found concerning the disposal date of this site, but permits for several other Imperial County Naval land targets were discontinued in approximately 1946 (see J09CA103800). According to Imperial County tax assessor records, the current site owners are John and Bertha Garabedia of Fresno, California. During the onsite survey, the remains of one rocket was found on the southwest corner of the site. Further, approximately 100 yards of old, stacked hay bales were observed on the east side of the site. The hay bales were stacked in a wall type formation roughly three feet high.

**SITE VISIT:** The site was visited on May 1, 1993, by Hunter Butler and Sandra Rehfeldt of Science Applications International Corporation, San Diego, California.

**CATEGORY OF HAZARDS:** OEW

**PROJECT DESCRIPTION:** OEW. Recommended MCX for OEW at Huntsville Division make a determination concerning further action.

**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

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

HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA  
SITE NO. J09CA017100

FINDINGS OF FACT

1. Extremely limited information is available concerning this site. In 1944, the Eleventh Naval District listed "Holtville BT 3" on an inventory of "Bombing Targets in Southern California Sector, Western Sea Frontier." Not all of the targets on this list were in commission at that time, but apparently all were planned to be placed in commission. The coordinates of the site were listed as Latitude 33°09'00"N and Longitude 115°22'05"W. No further information was available concerning this site. It is assumed for the purposes of this report that, as with several other Imperial County bomb targets acquired by the Navy in the mid-1940s (see J09CA103800), temporary use of an approximately one-square-mile section was obtained. Based on the above-mentioned coordinates, this section is assumed to be Section 1, Township 12 South, Range 15 East, San Bernardino Meridian (629.01 acres).
2. According to the above-mentioned Navy inventory, Holtville Target (BT) No. 3 was a practice dive bombing target. The target was described as "concentric circles" and practice bombs were listed as the permitted ordnance.
3. No information was found concerning the disposal of this site. It is likely that, as with the other above-mentioned Imperial County target sites, Navy use was discontinued in approximately 1946. This desert property has remained unimproved. Currently, Section 1, Township 12 South, Range 15 East is under private ownership.

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.

5 Jan 95

Date

for DE P/H/col  
BRUCE K. SCOTT  
Brigadier General, U.S. Army  
Commanding

PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS OEW PROJECT NO. J09CA017101  
HOLTVILLE TARGET (BT) NO. 3  
SITE NO. J09CA017100

**PROJECT DESCRIPTION:** In the mid-1940s, this site may have been used by the Eleventh Naval District as a practice bombing target. The site is currently located in vacant desert land that is sporadically covered with dense high scrub, grasses and trees. Ordnance observed on site includes one rocket. Approximately 100 yards of stacked hay bales of unknown use are also present. The presence and condition of any ordnance below the surface of the earth is not known. The site is subject to weather conditions that may have concealed additional ordnance. Certain areas were covered with dense vegetation that may also have concealed ordnance.

**PROJECT ELIGIBILITY:** This site may have been 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) at Huntsville make a determination concerning further investigation.

**RAC FORM:** Attached.

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

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

Site Name Holtville BT #3 Rater's Name R.G. HARRIS  
 Site Location Imperial Co, CA Phone No. (205) 895-1590  
 DERP Project # 2096A01701 Organization CEHND-PM-50  
 Date Completed 1 Feb 95 RAC Score 2(II, B)

OEW RISK ASSESSMENT:

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

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

TYPE OF ORDNANCE  
 (Circle all values that apply)

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

What evidence do you have regarding conventional OEW? As reported in  
TNPR.

B. Pyrotechnics (For munitions not described above.)

	VALUE
Munition (Container) Containing White Phosphorus (WP) or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smokes (other than WP)	4
Pyrotechnics <u>(Select the largest single value)</u>	<u>0</u>
What evidence do you have regarding pyrotechnics?	<u>As reported in INPR.</u>

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
High Explosives <u>(Select the largest single value)</u>	<u>0</u>
What evidence do you have regarding bulk explosives?	<u>As reported in INPR.</u>

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

	VALUE
Solid or Liquid Propellants	6
Propellants	<u>0</u>
What evidence do you have regarding bulk propellants?	<u>As reported in INPR.</u>

E. Chemical Warfare Materiel and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control Agents (Vomiting, Tear)	5
Chemical and Radiological (Select the largest single value)	<u>0</u>

What evidence do you have of chemical/radiological OEW? As reported in INPR.

TOTAL HAZARD SEVERITY VALUE 10  
 (Sum of Largest Values for A through E--Maximum of 61)  
 Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY\*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	<u>II</u>	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		0

\* Apply Hazard Severity Category to Table 3.

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



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

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

A. Locations of OEW Hazards

On the surface

VALUE

(5)

Within Tanks, Pipes, Vessels  
 or Other confined locations.

4

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

3

Subsurface

(2)

Location (Select the single largest value) 5

What evidence do you have regarding location of OEW? As reported in INPR.

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

VALUE

Less than 1250 feet

5

1250 feet to 0.5 miles

(4)

0.5 miles to 1.0 mile

3

1.0 mile to 2.0 miles

2

Over 2 miles

1

Distance (Select the single largest value) 4

What are the nearest inhabited structures? As reported in INPR.

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

	VALUE
26 and over	5
16 to 25	4
11 to 15	③
6 to 10	2
1 to 5	1
0	0
Number of Buildings <u>(Select the single largest value)</u>	<u>3</u>
Narrative <u>As reported in INPR.</u>	

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

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	④
Agricultural, Forestry, etc.	③
Detention, Correctional	2
No Buildings	0
Types of Buildings <u>(Select the largest single value)</u>	<u>4</u>
Describe types of buildings in the area. <u>As reported in INPR.</u>	

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

BARRIER	VALUE
No barrier or security system	(5)
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or	0
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	

Accessibility (Select the single largest value)

5

Describe the site accessibility. As reported in INPR.

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

	VALUE
Expected	5
None Anticipated	(0)
Site Dynamics (Select largest value)	<u>0</u>

Describe the site dynamics. As reported in INPR.

TOTAL HAZARD PROBABILITY VALUE  
(Sum of Largest Values for A through F--Maximum of 30)  
Apply this value to Hazard Probability Table 2 to determine  
Hazard Probability Level.

21

TABLE 2  
HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

\* Apply Hazard Probability Level to Table 3.

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

TABLE 3

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

RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.
- RAC 2 High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

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

*DEW was seen at this site during the site visit. The proximity to occupied buildings raises the RAC score. Heavy vegetation may have concealed additional DEW.*

**Office of the Chief of Naval Operations.**

"Board Report of Investigation of Additional Facilities Requested  
at the Marine Corps Air Stations on the West Coast."  
Record Group 181; Entry: 11th Naval District, Commandant's Office,  
Formerly Classified Correspondence 1921-47; Box 57;  
File: CF20C/SF20C/1943.  
National Archives-Pacific Southwest Region, Laguna Niguel, CA.

BOARD REPORT  
OF  
INVESTIGATION OF ADDITIONAL FACILITIES REQUIRED  
AT  
THE MARINE CORPS AIR STATIONS ON THE WEST COAST

Aer-33-33-1 R

CONFIDENTIAL  
In \_\_\_\_\_  
and No. \_\_\_\_\_

NAVY DEPARTMENT  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON

18 October 1943

From: Senior Member, Board to Review Progress of Aviation  
Shore Facilities.  
To: Deputy Chief of Naval Operations (Air).  
Via: (1) Director, Aviation Planning Division.  
(2) Assistant Deputy Chief of Naval Operations (Air).  
SUBJECT: Board Report of Investigation of Additional Facilities  
Requested at the Marine Corps Air Stations on the  
West Coast.

Reference: (a) Memo from Director, Aviation Planning Div. to  
Capt. I. M. McQuiston, USNR, dated 15 September 1943,  
Op-31-1-23/438.  
(b) WMO Conf. ltr. dated 2 Sept. 1943, Op-31B-496(80),  
421-1, Doc. 91322.  
(c) Comden, WarFairWest Coast conf. ltr to Comdr., Fair  
West Coast, W-9/43-1/(0113)wfk, dated 17 June 1943,  
with 1st end. dated 30 June thereto.  
Enclosure: (1) Table of Existing and Required Personnel Facilities.

1. In accordance with instructions from the Director of  
Aviation Planning, reference (a), the Board has investigated the matter of  
additional facilities requested for Marine Corps Air Stations on the West Coast.  
On September 23, 24, 25 and 26, the Board visited the Marine Corps Air Stations  
at El Centro, El Toro, and Mojave, California, the Marine Corps Air Depot at  
Miramar, and the Naval Auxiliary Air Station, Camp Kearney, California. Con-  
ferences were held at the several stations at which the following officers  
were present:

Dear Adm. E. L. Gunther, Comdt., PAC, San Diego, Air Officer, 11th Naval Dist.  
Capt. I. M. McQuiston, USNR, Senior Member of Board.  
Capt. J. C. Adams, USN, Director of Aviation Medicine, BUMS.  
Capt. G. H. DeBaun, USN, Office of PWC, WMOO.  
Capt. A. K. Fogg (COC), USN, Public Works Officer, 11th Naval District.  
Col. Frank H. Lanson-Scribner, USMC, Asst. Chief of Staff, WarFairW.C.  
Col. William Fox, USMC, Commanding Officer, WMOO, El Toro, Calif.  
Lt. Col. Avery L. Rier, USMC, Asst. Operations & Training, WarFairW.C.  
Lt. Col. Willis, USMC, Marine Corps Air Station, El Toro, Calif.  
Lt. Col. E. B. Carney, USMC, CG, Group 14, Marine Fleet Air West Coast.



Acr-MA-33-L.A.

SUBJECT: Board Report of Investigation of Additional Facilities  
Requested at the Marine Corps Air Stations on the West  
Coast.

-----

Lt. Col. D. Torrey, USMC, Exec. Officer, Group 44, MarFair West Coast.  
Lt. Col. L. B. Stedman, Jr. USMCR, Exec. Officer, MCAD, Miramar.  
Lt. Col. Chauncey Burnett, USMC, Commanding Officer, MCAS, Santa Barbara.  
Lt. Col. T. J. McQuade, USMC, Commanding Officer, MCAS, El Centro.  
Comdr. Grant M. Elliott, USN (Ret), Operations Officer, MAC, San Diego.  
Comdr. K. A. Godwin, (CEC), USNR, Asst. Sup'te, Area VI.  
Lt. Cdr. C. S. Boundy, (SC), USN, Supply Officer, MCAS, Mojave, Calif.  
Lt. D. H. Askew, (CEC), USNR, Public Works Officer, MCAS, El Toro.  
Lt. J. S. Hamel (CEC), USNR, Public Works Officer, MCAS, El Centro.  
Lt. (jg) W. C. McCluskey, (CEC), USNR, Public Works Officer, MCAS, Mojave.  
Lt. Cdr. E. C. Bench, USNR, Spec. Asst. ASA, Navy Department.  
Lt. Cdr. H. M. Humes, USN, Board Member, Bureau of Supplies and Accounts.  
Lt. Cdr. R. E. Hiles, (CEC), USNR, Board Member, Bureau of Yards & Docks.  
Lt. Cdr. L. E. Root, (CEC), USNR, Board Member and Recorder, BUAr.

2. The additional facilities in question for the Marine Corps Air Stations on the West Coast were requested by the Commanding General, Marine Fleet Air, West Coast, by reference (b). The background of this request may be summarized briefly as follows:

There have developed in the combat areas of the South Pacific certain shortages of pilots and crews both for carrier type aircraft and for heavy bombers. This shortage is apparently due in part to the inability of the Naval Air Operational Training Command to supply operationally trained pilots to the Marine Corps in sufficient numbers. In order to make up this deficiency, Cominch and Cincpac have directed, by correspondence of higher classification, that operational training of a considerable number of pilots for Marine Air Groups be conducted at the Marine Corps Air Stations on the West Coast. This is in addition to the normal function of the stations, which is to serve as bases for the forming and organization of Marine squadrons, preparatory to their joining the active forces of the fleet. The forming of squadrons has now expanded well beyond the planned rate for this function. The Commanding General, Marine Fleet Air West Coast has determined that in order to effect the entire program, including the operational training, the facilities at the stations will have to be expanded beyond the point directed by the Vice Chief of Naval Operations in reference (b). As a result of this, reference (c) was initiated and is now awaiting action.

3. The Board has made a careful study of the conditions which have given rise to the present situation, and has inspected the stations themselves in order to determine what facilities are presently available. The following conclusions were reached:

Aer-MA-33-LER

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

(a) The present operational and training load, as far as can be seen at the present time, is a continuing and growing load. As of 6 October there were 18 tactical squadrons, 5 HELICOPTERS, 5 SERVICONS, and 4 training units in Marine Fleet Air West Coast. Of these organizations, 1 HELICOPTER, 1 SERVICON, and 1 tactical squadron were located at MAAS, Camp Kearney, leaving 4 HELICOPTERS, 4 SERVICONS, 17 tactical squadrons and the 4 training units located at the four Marine Corps Air Stations. Squadrons are leaving for overseas duty at approximately the same rate that squadrons are returning, which would indicate a fairly steady or slightly increasing load. The operational training load is already in excess of the planned program and indications are that this load will continue. It was generally believed in the early summer that the operational training to be conducted by Marine Fleet Air West Coast was a temporary operation only, and that the operational training stations in the Florida area would soon absorb the training load. However, subsequent assignments of non-operationally-trained pilots have indicated that such is not the case and that the Marine Corps Air Stations on the West Coast must be prepared to carry on operational training for an indefinite period.

(b) Present facilities, both operational and personnel, are already severely overtaxed. This is due in part to the normal increase in Marine Corps Aviation, and in part to the operational training program. The current aviation shore facilities directive dated 2 September 1943 directs that provision be made to accommodate a total of 5 Marine Air Groups at the West Coast Marine Corps Air Stations. This would mean a total of 450 operating planes. Actually there are already operating from these stations a total of 673 planes and Commander Marine Fleet Air West Coast anticipates the necessity for operating more than 1000 planes in order to meet his training and operating schedule. A comparison of the program as set up in reference (b) with that presently existing and that anticipated by Marine Fleet Air West Coast is shown below.

Station	Plane Complement- 2 Sept. Directive	Present Plane Complement	Planned Plane Complement
Al Toro	180	299	486
Santa Barbara	90	138	203
Al Centro	90	117	180
Mojave	90	89	154
	<u>450</u>	<u>673</u>	<u>1023</u>

Enclosure shows a comparison between the existing major personnel

Aer-133-LER

SUBJECT: Board report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

facilities and the requirements estimated by Marine Fleet Air West Coast.

(c) In view of the fact that the present load on the stations is a continuing and growing load, and that the present facilities are already severely overtaxed, it is believed that additional facilities must be provided as quickly as possible for Marine Corps air operations on the West Coast. The possibility of using existing facilities at other locations was investigated with very little success. All aviation facilities in the southern west coast area are already congested, and there is apparently little possibility of relief by a re-distribution of operations to existing stations. Those present at the conferences, however, agreed that the possibility of conducting a limited amount of the training at one of our mid-western air stations should be investigated. This applies particularly to familiarization training in F2H-1s. In any event, it will still be necessary to expand facilities at all four of the Marine Corps Air Stations in question.

4. The additional facilities requested by Marine Fleet Air West Coast in reference (c), are discussed in further detail below, the paragraphs lettered to conform with those in paragraph (10) of reference (c).

(a) "El Centro be made into a two-group base with additional facilities for a gunnery school." The board concurs with the need for these facilities. In brief, this concurrence is based on the fact that over-all additional facilities are required and that El Centro lends itself to expansion readily. Weather conditions in the Imperial Valley are unfavorable during certain seasons of the year due to the extreme heat, but experience has shown that operations can be carried on successfully in spite of this fact, and in view of the urgent need for additional facilities, approval of this request is recommended. The gunnery school, the only one available to Marine aviation units on the West Coast, is already operating, but under difficulties. Quarters are cramped, and it is now necessary to transport men by bus to Border Field near San Diego where the present moving target range is located. Facilities for the gunnery school should include personnel and range facilities at or near the Marine Corps Air Station, El Centro.

(b) "Additional headquarters building be constructed for the use of station personnel." At the time these stations were originally constructed, the plan was to have operating squadrons administer each station with a very small permanent station complement. Since that time, however, the training program has developed, the squadron complements have increased, the number of squadrons has increased, and administrative activities have therefore become a major problem. The small new buildings constructed at the stations have very limited capacity

Aer-33-33

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

space so that administrative office space is at a premium. In view of the above, approval of the request for additional administrative space is recommended.

(c) "Present runways be widened to 500'". This request was in accordance with a proposal deemed necessary in order for the stations to handle the increased operating loads placed upon them. The Board is of the opinion that maximum traffic at the Air Stations can be handled in a satisfactory manner without resorting to such an expensive procedure and one which would interfere with the continuity of operations. Alternate proposals were therefore suggested in conference, and the following recommendations were advanced.

1 Centro: Widen existing runways, now capable of supporting heavy bomber wheel loads, to 200 feet by adding 25 foot stabilized shoulders. Construct two new runways 200 feet in width, with 25 foot shoulders, and parallel to the existing runways as determined by the wind rose at the station. All new construction to provide for CV type aircraft wheel loadings. New taxiways as required plus concrete turnarounds at ends of runways and at intersections of taxiways with runways.

1 Torro: Construct parallel runway 200' wide with 50' shoulders, along prevailing wind runway. New taxiways and turnarounds as at 1 Centro. New construction to be designed for heavy bombers.

Mojave: Widen existing runways by adding 100 foot shoulders for CV type aircraft wheel loadings. Turnarounds as at 1 Centro.

Santa Barbara: Construct two new runways parallel to existing runways as determined by the wind rose at the station. New runways to be 200 feet in width with 25 foot shoulders. Construction to be for CV type aircraft wheel loadings.

The above plans were arrived at taking into consideration the necessity for maintaining operations without interruption, the cost involved, and certain other conditions peculiar to individual stations. The widening of the runways at Mojave, for instance, was recommended in lieu of parallel runways because of the extremely variable winds at that location and the consequent desirability of wide runways to minimize chances of ground looping.

War-1-33-R

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

(d) "El Centro and El Toro be converted into heavy bomber fields:"  
The Board concurs in the need for runways at these two fields capable of supporting heavy bombers. Marine Fleet Air West Coast is receiving planes of the PB4-Y type, and must have fields from which to operate them. With this in mind, it was recommended that the proposed parallel runway and new taxiways at El Toro be designed for heavy bombers. The Board was advised by the District Public Works Department that the present runways at El Centro were adequate to support heavy bombers, and for this reason no change in present runways is considered necessary other than shoulders adequate for intermittent heavy bomber loads. It is not believed necessary to build the new parallel runways at El Centro for planes larger than CV type, since the greater part of traffic will be by light planes, and the present runways will accommodate any conceivable type of aircraft. The runways at El Toro are on Navy-owned land, and those at El Centro are on leased land which will revert to the owner after the war.

(e) "Additional hard surface parking and warm-up areas for all types planes be constructed at all stations." This request was based on requirements for the large number of planes expected to be operated at the Marine Corps Stations. The Bureau of Aeronautics has partially complied with this request and has authorized construction of additional parking areas as follows:

MCAS, El Centro, Calif.	39,400 sq.yds.
MCAS, Mojave, Calif.	30,000 sq.yds.
MCAS, Santa Barbara, Calif.	30,000 sq.yds.
MCAS, El Toro, Calif.	60,000 sq.yds.

The Board is of the opinion that adequate parking areas should be provided to accommodate all planes to be operated at the stations as listed in paragraph (3) above.

(f) "Immediately increase the existing facilities at the following fields to provide for additional dispersal areas: Miramar, Camp Gillespie, and Camp Pendleton". This request is not believed to be urgent at the present time. The landing field at Miramar is too small to be of much use for service type aircraft other than for practice landings, and adjacent hills impair its use for this purpose. It is not believed that additional funds should be expended at Miramar for the above reasons. At Camp Pendleton the Marine Corps is providing facilities for the operation of one squadron of aircraft to be used in connection with training of ground troops, and the field will therefore not be available for the proposed dispersal of aircraft.

Aer-MA-33-LER

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

-----

5. Attention is invited to the fact that the operation of a thousand planes from the four Marine Corps Air Stations, as planned by Marine Fleet Air West Coast, will result in undesirable congestion of landing fields and air space. It is clear, however, that the additional facilities should be provided as soon as possible in order to permit operations at the stations to reach their maximum efficiency, and to give Marine Fleet Air West Coast every opportunity to meet its schedules. An outlying field for practice landings adjacent to El Toro should also be obtained to relieve air traffic at the main field.

6. The Marine Corps Air Depot at Miramar was visited by the Board and a thorough inspection of facilities was made. The Depot functions as a receiving and distributing center for aviation personnel and equipment of the Marine Corps on the West Coast. - An indication of the scope of its activities may be had by the fact that it is now receiving and distributing from 5000 to 7000 officers and men about every two weeks, and that it now has on hand for distribution approximately 2500 pieces of automotive equipment. It was observed that all facilities are extremely overcrowded, and that personnel were occupying storehouses as a temporary measure. Large numbers of trucks were stored on the unpaved soil, where they could not be properly cared for. The Board was advised that additional facilities will be requested, roughly enough to increase the capacity of the camp by 2500 men. New facilities will include barracks, bachelor officers' quarters, paved areas for storing automotive equipment, fire station, garage and public works building, and other miscellaneous items. The Board concurs in the need for facilities adequate to permit the Depot to function properly, since its presence reduces the possibility of severe overlapping at such stations as San Diego and the Marine Corps Air Stations.

7. The study conducted by the Board, revealed, in brief, that essential Marine Corps Air Operations on the West Coast are severely overtaxing existing facilities, and that the construction of additional facilities should be given a high priority. Detailed recommendations are summarized below:

Recommendations:

The Board recommends that:

- (1) The WMO directive dated 2 September 1943 be modified insofar as the Marine Corps Air Stations on the West Coast are concerned to indicate actual planned loads.

COMMENT: Since this directive is used as a basis for new construction, its modification will materially assist in the approval of additional facilities required by Marine Fleet Air West Coast.

Aer-NA-33-EEB

SUBJECT:

Board Report of Investigation of Additional Facilities  
Requested at the Marine Corps Air Stations on the West  
Coast.

-----

- (2) Additional facilities be provided at El Centro and the other Marine Corps Air Stations to provide for the increased personnel indicated in enclosure (A).

COMMENT: Information has been forwarded to the District Public Works Officer for his use in preparing estimates and plans for the proposed work.

- (3) Additional administrative office space be provided at all four stations.

COMMENT: The required amount of this space is now under study, and recommendations will be submitted by the stations.

- (4) Improvements to the runway and taxiway systems at all four fields as described in paragraph 4(c) above be provided.

COMMENT: Information was furnished the District Public Works Officer at the time of the Board's visit to permit preparation of plans and estimates.

- (5) Additional parking areas and warm-up aprons be provided in accordance with approved plane complements.

COMMENT: Information was furnished to the District Public Works Officer for use in preparing plans and estimates.

- (6) Facilities at the Marine Corps Air Depot, Miramar be expanded to permit accommodation of approximately 9000 men, and 2500 pieces of automotive equipment.

COMMENT: Present temporary type of construction is adequate and should be used for new construction.

- (7) An outlying field for practice landings be obtained in connection with training operations from Marine Corps Air Station, El Toro.

COMMENT: The Commanding Officer, Marine Corps Air Station, El Toro was instructed to submit his recommendations, via the Eleventh Naval District, for consideration and action by the Bureau of Aeronautics.

L. E. McQuiston, Captain, USAF  
Senior Member

TABLE OF EXISTING AND REQUIRED PERSONNEL FACILITIES

Additional Facilities at El Centro - Projected Program

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	100	322	33	21
*Two Base Defense Groups	<u>3799</u>	<u>0</u>	<u>503</u>	<u>0</u>
Totals	3899	322	536	21
Living Ashore	200	0	140	3
Net	<u>3699</u>	<u>322</u>	<u>396</u>	<u>18</u>
Plus Contingencies, 25%	925	0	99	0
Total required	<u>4624</u>	<u>322</u>	<u>495</u>	<u>18</u>
Existing Facilities	<u>2112</u>	<u>376</u>	<u>240</u>	<u>26</u>
Additional Required	2512	0	255	0

<u>*Based upon:</u>	<u>Officers</u>	<u>Men</u>
2 REGIONS	96	884
2 SQUADRONS	20	490
7 Tact. Sqdns.	336	1926**
1 Gunnery School	<u>51</u>	<u>500</u>
	503	3799

\*\* 275 used as average squadron complement.



Additional Facilities at El Toro - Projected Program (Without AG-2)

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	500	400	50	30
*Two Base Defense Groups	3740	0	500	0
Totals	<u>4240</u>	<u>400</u>	<u>550</u>	<u>30</u>
Living Ashore	167	0	32	0
Net	<u>4073</u>	<u>400</u>	<u>518</u>	<u>30</u>
Plus Contingencies, 25%	1018	0	124	0
Total Required	<u>5091</u>	<u>400</u>	<u>642</u>	<u>30</u>
Existing Facilities	3600	400	480	32
Facilities Required	<u>1491</u>	<u>0</u>	<u>162</u>	<u>0</u>

* Based Upon:	<u>Officers</u>	<u>Men</u>
2 HEDRONS	96	384
2 SERVRONS	20	490
8 Tactical Squadrons	<u>384</u>	<u>2366</u>
	500	3740

Additional Facilities at Mojave - Projected Program

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	100	376	40	20
*Marine Base Defense Group	1955	0	298	0
<b>Totals</b>	<u>2055</u>	<u>376</u>	<u>338</u>	<u>20</u>
Living Ashore	60	0	71	0
Net	<u>1995</u>	<u>376</u>	<u>267</u>	<u>20</u>
Plus Contingencies, 25%	498	94	66	5
	<u>2493</u>	<u>470</u>	<u>333</u>	<u>25</u>
Existing Facilities	1995	376	240	32
	<u>498</u>	<u>94</u>	<u>93</u>	<u>0</u>

<u>*Based Upon:</u>	<u>Officers</u>	<u>Men</u>
1 HEDRON	18	442
1 SERVICE	10	245
4 VEF	192	966
1 VEO or VED	48	300
	<u>298</u>	<u>1955</u>

Additional Facilities at Santa Barbara - Projected Program

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	209	300	33	28
# Marine Base Defense Group	2069	0	350	0
Other Activities	91	0	1	0
Totals	<u>2369</u>	<u>300</u>	<u>384</u>	<u>28</u>
Living Ashore	118	0	69	3
Net	<u>2251</u>	<u>300</u>	<u>315</u>	<u>25</u>
Plus Contingencies, 25%	550	75	79	6
Total Required	<u>2801</u>	<u>375</u>	<u>394</u>	<u>31</u>
Existing Facilities	2320	440	240	32
Facilities Required	<u>481</u>	<u>0</u>	<u>154</u>	<u>0</u>

# Based Upon:

	<u>Officers</u>	<u>Men</u>
1 HEDRON	48	112
1 SEAVRON	10	245
2 VLF	96	484
2 VMTB	96	598
1 BTU	100	300
	<u>350</u>	<u>2069</u>

**U. S. Army Corps of Engineers, Rock Island District.**

Archives Search Report for Salton Sea Test Base.  
Prepared for Naval Facilities Engineering Command-Southwest Division,  
San Diego, CA.

On File: U. S. Army Corps of Engineers, Rock Island, IL.



US Army Corps  
of Engineers  
Rock Island District



Defense Environmental Restoration Program  
for  
Base Realignment and Closure  
Ordnance and Explosives

# Archives Search Report

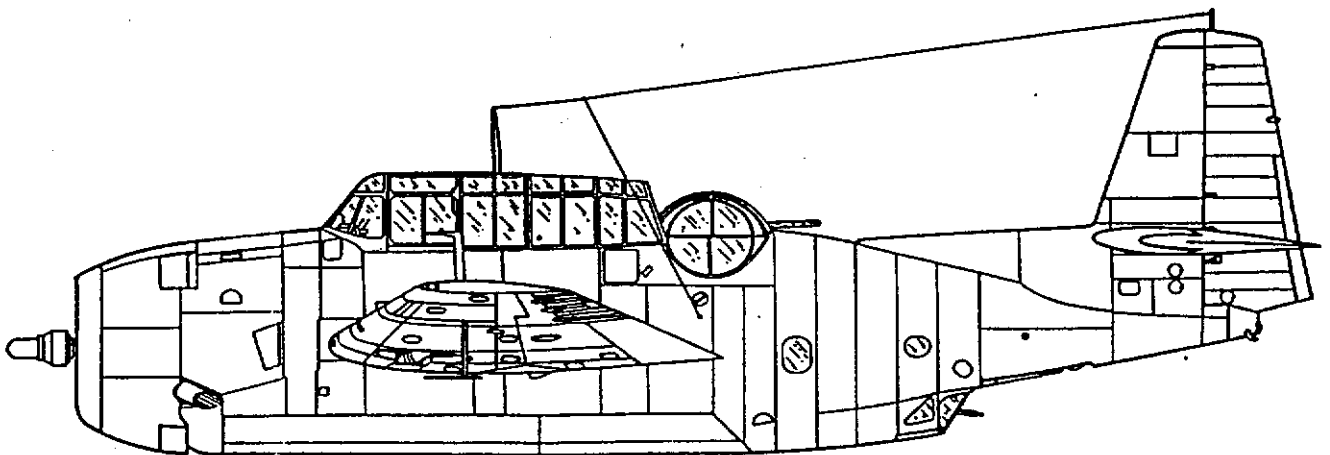
## FINDINGS

for the

# Salton Sea Test Base

Imperial County, California

January 1996



DEFENSE ENVIRONMENTAL RESTORATION PROGRAM  
BASE REALIGNMENT AND CLOSURE

FINDINGS

ORDNANCE AND EXPLOSIVES  
ARCHIVES SEARCH REPORT  
FOR  
SALTON SEA TEST BASE  
IMPERIAL COUNTY, CALIFORNIA

January 1996

Prepared For

Naval Facilities Engineering Command  
Southwest Division  
ATTN: Code 1832.MR  
1220 Pacific Highway  
San Diego, CA 92132-5190

Prepared By

U.S. Army Corps of Engineers  
Rock Island District  
ATTN: CENCR-ED-DO  
P.O. Box 2004  
Rock Island, Illinois 61204-2004

and

U.S. Army Defense Ammunition  
Center and School  
ATTN: SIOAC-ESL  
Savanna, Illinois 61074-9639

#### 4. HISTORICAL ORDNANCE PRESENCE

##### a. Chronological Site Summary

(1) The first known Naval activity in the Salton Sea took place in December 1939 when seaplanes from the USS Memphis used the sea for night landing operations. The first bombing target was built in July 1940. Permanent landing buoys were installed a year later in the northeastern corner of the sea. In early 1942, the Navy realized the need for additional seaplane training facilities and an emergency landing site. The Sandy Beach location was selected and the Navy began to acquire the land. In the meantime, Paramount Pictures built a clay runway and pier at the site to film the movie "Wake Island". A complete chronology of the WWII years is provided as document E-1 (reference B-11 and B-12).

(2) Construction of the seaplane base began in May 1942. The site was commissioned as a Naval Air Facility (NAF) on October 8, 1942. The site's mission was to train seaplane crews and served as an alternate landing area whenever San Diego was fogged in. Training was limited, however, by the lack of paved runways (see documents E-2 and E-3). By 1944, an additional clay runway had been built and the mission was expanded to include rocket training by carrier-type aircraft and experimental work with jet-assisted take-off (JATO) bottles. The station controlled 10 water targets, 13 land targets, and 5 emergency landing fields (see documents E-4 through E-6 and H-1).

(3) While Navy training operations continued, additional personnel from the Army arrived at the station. In December 1944, B-29s from the Manhattan project began using the site for drop testing of the first atomic bomb shapes. Ground crews built extensive monitoring facilities and used a water and a land target north of the main base (reference B-124 and B-125).

(4) Navy operations were reduced when WWII ended in 1945. The regional commander recommended closing the base. The few remaining personnel maintained the facilities and removed some of the bombing targets (see documents E-7, E-8, and H-2). In October 1946, the property was transferred to the War Department and renamed the Salton Sea Test Base. It was used as a site for further Manhattan Project development of newer atomic weapons (see document G-1).

(5) From 1946 until 1961, the site was used by the Atomic Energy Commission (AEC) for various types of testing. In addition, aircraft of the Strategic Air Command (SAC) used the water target to practice dropping weapons shapes (see document

E-9). In 1962, NAF El Centro acquired the site and used it as a Joint Parachute Test Facility to test equipment for the manned space program as well as for military systems (see documents E-10 and E-11).

(6) Operations were gradually reduced in the mid-1970s, and the site was turned over to the Naval Air Weapons Station, China Lake in 1979. In 1987, guard services were terminated and the site was listed as excess property. The 1988 Base Realignment and Closure (BRAC) Commission recommended the SSTB for closure. For several years beginning about 1977, Marines and SEALs from several bases used the site for training exercises. Live ammunition was frequently used (reference B-124 and B-125).

**TABLE 4-1  
SUMMARY OF CHRONOLOGICAL HISTORY**

Date	Action
Dec 1939	Navy seaplanes use Salton Sea for night landings
Jul 1940	First bombing target built
Nov 1941	Permanent bouys installed in NW corner of the sea
Apr 1942	Paramount films "Wake Island" at the site
May 1942	Construction begins on seaplane base
Feb 1944	Additional magazines and runway built
Mar 1944	Rocket training begins
Dec 1944	B-29s begin drop testing atomic shapes
Sep 1945	Station reduced to caretaker status
Oct 1946 to Jun 1961	Used by AEC and SAC for drops and environmental tests of atomic weapons components
Dec 1963	Property transferred to Navy for use as a joint parachute test facility
Circa 1977 to 1992	Site used by Marines & SEALs for training exercises
Sep 1979	Site closed, guard service maintained
Oct 1987	Guard service terminated
Dec 1988	BRAC Commission recommends closure



**U. S. Naval Auxiliary Air Station, El Centro, CA.**

"Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA  
for the period of 1 July to 31 December 1951."

Naval Historical Center and Archives, Washington Navy Yard,  
Washington D.C.

Washington Naval Yard  
Historical Center and Archive  
Washington, D.C. ✓

IN REPLY REFER TO:

~~1459-325~~  
A12/RNH/HWS:er  
Serial: 51495

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

DECLASSIFIED

FEB 20 1952

From: Commanding Officer  
To: Chief of Naval Operations (Aviation History and Research  
Section)  
Subj: Historical Report (OPNAV 575-1)  
Ref: (a) OPNAV INSTRUCTION 5750.2  
Encl: (1) Historical Report of U.S. Naval Auxiliary Air Station,  
El Centro, California for the period of 1 July to  
31 December 1951  
1. Enclosure (1) is submitted herewith in accordance with  
reference (a).

  
J.B. WAKELEY, JR.  
Acting

Copy to:  
CNAB11/12

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

PART I - CHRONOLOGY OF THE U.S. NAVAL AUXILIARY AIR STATION, EL CENTRO,  
CALIFORNIA FOR THE PERIOD 1 JULY TO 31 DEC 1951

- 2 JUL 1951 - Completed work on Informal Contract ELC-48-51 - Construction of concrete foundations and floor slabs for two magazine buildings. Amount: \$1,935.55.  
Commenced work on Informal Contract ELC-54-51 - Placing 2½" conduits at Target No. 94.
- 3 JUL 1951 - Completed work on Informal Contract ELC-49-51 - Alterations to the air conditioning system in Bldg. No. 435.  
Amount: \$1,400.00.  
Commenced work on Informal Contract ELC-57-51 - Construction and installation of doors in Bldg. No. 227.
- 9 JUL 1951 - Commenced work on Informal Contract ELC-51-51 - Repairs to shower floors in Bldg. No. 409.
- 12 JUL 1951 - Commenced work on Informal Contract ELC-53-51 - Installation of ceramic tile wainscote in lobby of Bldg. No. 313.  
ENS. G. BASYEY, USN, attached to VF-113, was killed in the crash of an F4U-4 BuNo. 97102, while engaged in rocket runs.
- 20 JUL 1951 - Commenced work on Informal Contract ELC-1-52 - Removal, alterations, and reinstallation of refrigeration equipment in Bldg. No. 313.
- 23 JUL 1951 - Commenced work on Informal Contract ELC-2-52 - Installation of fiberglass in ceiling of Bldg. No. 313.

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

- Commenced work on Informal Contract ELC-3-52 - Repairing and replacing the air conditioning unit in Bldg. No. 227.
- Commenced work on Informal Contract ELC-4-52 - Alterations to the air conditioning system in Bldg. No. 110.
- Commenced work on Informal Contract ELC-5-52 - Repairs and alterations to the air conditioning system in Bldgs. No. 335 and 336.
- 24 JUL 1951 - Completed work on Informal Contract ELC-57-51 - Construction and installation of doors in Bldg. No. 227. Amount: \$267.50.
- Completed work on Informal Contract ELC-3-52 - Repairing and replacing the air conditioning unit in Bldg. No. 227. Amount: \$134.03.
- Completed work on Informal Contract ELC-4-52 - Alterations to the air conditioning system in Bldg. No. 110. Amount: \$1,485.00.
- Completed work on Informal Contract ELC-5-52 - Repairs and alterations to the air conditioning system in Bldgs. No. 335 and 336. Amount: \$950.00.
- 26 JUL 1951 - Completed work on Informal Contract ELC-54-51 - Placing 2½" conduits at Target No. 94. Amount \$111.82.
- 31 JUL 1951 - Completed work on Project 34976-51 - Construction of TDD hangar and heavy stores warehouse building. Amount: \$3,975.00.
- 3 AUG 1951 - Completed work on Contract NOY-23448 - Construction of a special devices strafing target. Amount: \$12,985.00.

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

7 AUG 1951 - Commenced and completed work on Informal Contract ELC-10-52 - Application of flameout mastic heavy coating to Bldg. No. 542. Amount: \$1,400.00.

Commenced work on Informal Contract ELC-11-52 - Application of flameout mastic heavy coating to Bldg. No. 1 at NATTU.

8 AUG 1951 - Commenced work on Informal Contract ELC-9-52 - Placing wall-paper in main entrance to Bldg. No. 227.

14 AUG 1951 - Completed work on Informal Contract ELC-1-52 - Removal, alterations, and reinstallation of refrigeration equipment in Bldg. No. 313. Amount: \$1,221.49.

Completed work on Informal Contract ELC-2-52 - Installation of fiberglass ceiling in Bldg. No. 313. Amount: \$1,955.00.

Commenced work on Informal Contract ELC-12-52 - Repairing and placing rubber tile on floor of lobby of Bldg. No. 313.

16 AUG 1951 - Commenced work on Informal Contract ELC-13-52 - Construction of a Jet Drone Launching platform.

2nd LT P. TAYLOR, USAF, attached to 170th Fighter Bomber Squadron, George AFB Victorville, California, was killed in the crash of an F-51, Aircraft No. 45-11665A, while engaged in dive bombing and strafing at Target No. 68.

30 AUG 1951 - Completed work on Informal Contract ELC-9-52 - Placing wall-paper in main entrance to Bldg. No. 227. Amount: \$129.50.

Commenced work on Informal Contract ELC-14-52 - Placing

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

"Formica" strips on the counter, asphalt tile behind counter,  
and asphalt tile baseboards in the heads and hallways in  
Bldg. No. 313.

Commenced work on Informal Contract ELC-15-52 - Placing linoleum  
on floors of ten (10) Homoja Apts.

31 AUG 1951 - Completed on Project 34921-51 - Construction of two (2) pre-  
fabricated steel magazines and access road. Amount: \$2,600.00.

8 SEP 1951 - Completed work on Informal Contract ELC-12-52 - Repairing and  
placing rubber tile on floor in lobby of Bldg. No. 313.  
Amount: \$435.00.

10 SEP 1951 - Pursuant to BuPers Orders B115-SHR-1 Serial 37669 dtd 16 May  
1951. CAPT R. N. HUNTER 57613/1310, reported aboard to relieve  
CDR C. K. WILKINSON 60084/1310. CDR C. K. WILKINSON was  
Commanding Officer of U.S. Naval Auxiliary Air Station, El Centro,  
from 23 October 1949 to 10 September 1951.

11 SEP 1951 - Completed work on Informal Contract ELC-14-52 - Placing "Formica"  
strips on the counter, asphalt tile behind the counter, and  
asphalt tile baseboards in the head and hallways in Bldg. No.  
313. Amount: \$363.06.

13 SEP 1951 - Completed work on Informal Contract ELC-11-52 - Application of  
flameout mastic heavy coating to Bldg. No. 542. Amount: \$557.00.  
Completed work on Informal Contract ELC-11-52 - Application of  
flameout mastic heavy coating to Bldg. No. 1 at NATTU.  
Amount: \$557.00.

DELETED

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

- 17 SEP 1951 - Commenced and completed on Informal Contract ELC-17-52 - Construction of roads to magazine Bldgs. Nos. 181 and 182.
- 18 SEP 1951 - Commenced work on Contract NOy-27507 - Construction of runway extension, taxiway, and parking aprons.
- 29 SEP 1951 - Commenced work on Project 50701-52 - Marking the boundaries of Chocolate Mountain Gunnery Range, Carrizzo Impact Area, landing strip at Sand Hills, Hill Top Field, South Coyote Wells, Clarks Dry Lake Field, and Occotillo Field.
- 1 OCT 1951 - Completed work on Informal Contract ELC-13-52 - Construction of a jet launching platform. Amount: \$1,985.00.
- 4 OCT 1951 - Commenced work on Contract NOy-29189 - Alterations and additions to Bldg. No. 118.
- 10 OCT 1951 - Completed work on Informal Contract ELC-53-51 - Installation of ceramic tile wainscote in lobby of Bldg. No. 313. Amount: \$1,310.20.
- 12 OCT 1951 - Commenced work on Informal Contract ELC-17-52 - Construction of a temporary power line to the Parachute Whirl Tower.
- 17 OCT 1951 - Completed work on Contract NOy-22700 - Construction of a Rocket Assembly Bldg. Amount: \$66,654.00.
- 22 OCT 1951 - Completed work on Informal Contract ELC-15-52 - Placing linoleum on floors of ten (10) Homoja Apts. Amount: \$675.00.
- 23 OCT 1951 - Commenced work on Informal Contract ELC-21-52 - Installation of venetian blinds in Bldg. No. 513.

**DECLASSIFIED**  
U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

- 29 OCT 1951 - Commenced work on Informal Contract ELC-19-52 - Construction of a Septic Tank and tile drain at the Parachute Whirl Tower. Commenced work on Informal Contract ELC-23-52 - Installation of a "Solex" green plate glass in the control tower at Target No. 66.
- 2 NOV 1951 - Completed work on Informal Contract ELC-51-51 - Repairs to shower floors in Bldg. No. 409. Amount: \$1,859.78.
- 8 NOV 1951 - LT A. KING, USN, attached to VF-871, was killed in the crash of an F4U-4 BuNo. 81939, while engaged in air to air gunnery. Aircraft collided with tow target and crashed 13 miles North-east of Niland, California.
- 15 NOV 1951 - Commenced work on Informal Contract ELC-22-52 - Construction of a road and installation of clothes line in Homoja Housing.
- 23 NOV 1951 - Completed work on Informal Contract ELC-19-52 - Construction of a Septic Tank and tile drain line of Parachute Whirl Tower. Amount: \$920.60.
- 5 DEC 1951 - Commenced work on Informal Contract ELC-24-52 - Installation of glass in CO and XO offices in Bldg. No. 214. Completed work on Informal Contract ELC-21-52 - Installation of venetian blinds in Bldg. No. 513. Amount: \$194.30.
- 10 DEC 1951 - Completed work on Informal Contract ELC-24-52 - Installation of glass in CO and XO offices in Bldg. No. 214. Amount: \$91.20.



U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

Completed work on Informal Contract EIC-25-52 - Installation  
of "Solex" green plate glass in the control tower at Target  
No. 68. Amount: \$491.20.

20 DEC 1951 - Commenced work on Contract NOy-29211 - Installation of a  
sprinkler system in Bldg. No. 313.

DECLASSIFIED

EL CENTRO, CALIFORNIA  
U. S. NAVAL AUXILIARY AIR STATION

DECLASSIFIED

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

PART II - NARRATIVE OF THE NAVAL AUXILIARY AIR STATION, EL CENTRO, CALIFORNIA  
FOR THE PERIOD 1 JULY TO 31 DECEMBER 1951

The U. S. Naval Auxiliary Air Station has continued in its assigned mission as follows:

1. Provide facilities to support fleet aircraft rocket, gunnery, bombing, ASW, and night FCLP training operations, Fleet and other major activities will include:
  - (a) Four (4) carrier air group squadrons or Marine squadrons (transient).
  - (b) Fleet Air Detachment Personnel (transient).
  - (c) Joint Parachute Test Facilities.
  - (d) Naval Air Technical Training Unit.
  - (e) Military Airways Plan 62 Facilities.
  - (f) Emergency Seadrome (Salton Sea).

In accordance with DD Directive No. 2033-1, dated 9 June 1951, a Joint Parachute Test Facility was established at NAAS, El Centro, Calif., with an effective date of 15 Sep 1951. The purpose of this facility is to assure the maximum joint utilization of trained personnel, equipment, and technology in the development, testing and evaluation of parachute and related equipment used by the Armed Forces of the United States.

In implementing the DD Directive, General Order No. 26, dated 23 July 1951, was issued by Hg. AROC, which designated the Air Force activity at El Centro as Headquarters, 6502d Parachute Development Test Group. The Group was assigned to HgWADC for direct command responsibility.

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

The detailed delineation of USAF and Navy responsibility, as well as the proposed planning for operation of the Joint Facility, are contained in the "Agreement between the Department of the Navy and the Department of the Air Force", dated 2 December 1950.

The 6502d Parachute Development Test Group conducted its first drop test mission on 24 August 1951, using a borrowed Navy PV-2 aircraft. This is the date the Group first became operational.

7 JUL 1951 - CAPT DREW, Commanding Officer USNAS Los Alamitos, visited our station while enroute to Los Alamitos.

30 JUL 1951 - CDR V. WILLIAMS, Chief of Staff ComNAB11/12ND, and party, arrived aboard our station for an inspection.

31 JUL 1951 - CAPT BARWOOD, Assistant Inspector General Supply Corps (Air) arrived aboard our station for an inspection and departed for NAS Miramar 1 August.

1 SEP 1951 - ADM BAKER and party arrived on board our station for an inspection.

19 SEP 1951 - BRIGEN MANALY, USMC, visited our station while enroute to USMCAS El Toro.

30 SEP 1951 - SSW Air Lines R5C N54339 enroute from El Paso to San Diego made an emergency landing at our station - starboard engine afire. The aircraft carried forty (40) passengers and a crew of three (3). There were no injuries to passengers or crew. The aircraft sustained major damage.

DEPARTMENT OF THE NAVY  
NAVY DEPARTMENT

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

PART III - APPENDICIES OF THE NAVAL AUXILIARY AIR STATION, EL CENTRO, CALIFORNIA  
FOR THE PERIOD 1 JULY TO 31 DECEMBER 1951

AVERAGE NUMBER ON BOARD FOR DUTY AND TAD:

OFFICERS . . . . . 58  
ENLISTED . . . . . 400

NUMBER OF PERSONNEL FROM FLEET UNITS ON BOARD FOR TRAINING:

OFFICERS

NAVY . . . . . 1230  
MARINE . . . . . 403  
AIR FORCE . . . . . 53

ENLISTED

NAVY . . . . . 3016  
MARINE . . . . . 1394  
AIR FORCE . . . . . 149

SUPPLY DEPARTMENT TONNAGE:

RECEIVED . . . . . 13,250.0 Tons  
SHIPPED . . . . . 44.3 Tons

ORDNANCE EXPENDED BY FLEET UNITS:

<u>ITEM</u>	<u>WEIGHT</u>
50 Cal. belted	60.29 tons
20 MM belted	111.91 tons
Miniature Bombs	76.28 tons
100 lb. w/s Practice bomb (empty)	21.02 tons

U. S. NAVAL AUXILIARY AIR STATION  
EL CENTRO, CALIFORNIA

500 lb. w/s Practice bomb (empty)	2.16	tons
1000 lb.w/s Practice bomb (empty)	22.95	tons
100 lb. G.P. Bombs	45.26	tons
250 lb. G.P. Bombs	9.38	tons
500 lb. G.P. Bombs	93.26	tons
1000 lb.G.P. Bombs	66.18	tons
Fuzes, Bomb, Rocket	4.47	tons
2425 SCAR	365.50	tons
3425 Aircraft Rockets	20.63	tons
570 HVAR	400.67	tons
11475 Tiney Tim Rockets	58.46	tons
NaPalm, Type, 1 Mix	1.95	tons
Parachute flares	5.98	tons
Miscellaneous Small Arms Ammunition	1.21	tons

---

TOTAL TONNAGE . . .1367.56

**U. S. Naval Auxiliary Air Station, Holtville, CA.**

Historical Report of U. S. Naval Auxiliary Air Station, Holtville, CA.  
Box 221; Naval Historical Center and Archives,  
Washington Navy Yard, Washington D.C.

Box 221  
Washington Naval Yard  
Historical Center/Archives

ADDRESS REPLY TO



TO REPLY REFER TO NO.

U. S. NAVAL AUXILIARY AIR STATION  
HOLTVILLE, CALIFORNIA

NA11-6/A9-3 KVS:ls  
Serial 2173 10

20 September 1945

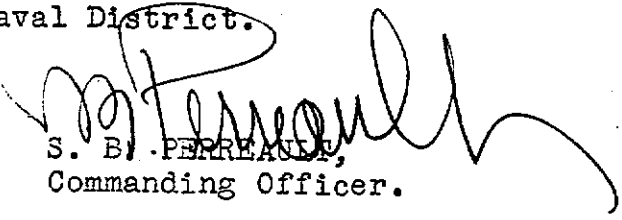
To: Chief of Naval Operations, History Unit, OP-33-J-6,  
Aviation Training Division, Navy Department,  
Washington, D. C.

Via: Commander, NAVAL AIR BASES, ELEVENTH Naval District,  
San Diego, Calif.  
Commandant, ELEVENTH Naval District, San Diego, Calif.

Subj: Historical Report - Submission of

Ref: (a) Aviation Cir. Ltr. No. 74-44 of 7/25/44.

1. The Historical Report required by reference (a) is herewith submitted.
2. Copies of this report are enclosed for retention by Commander, Naval Air Bases, Eleventh Naval District and by the Commandant, Eleventh Naval District.

  
S. B. PERREAULT,  
Commanding Officer.

Encl: (HW)

1. Subject Reports

U. S. NAVAL AUX. AIR STATION HOLTVILLE CALIF.



Ordnance Magazines

OFFICIAL U S NAVY PHOTOS



U.S. NAVAL AUX. AIR STATION  
HOLTVILLE CALIF.

PART II: Narrative

1. Function

a. Purpose

This Naval Auxiliary Air Station was organized as a unit of the Naval Air Center Eleventh Naval District as part of a general plan for the training of Fleet aircraft units in the Southern California area. The sites selected were such that each station or facility could perform a specialized type of training in the syllabus of each squadron. In the case of NAAS Holtville the special type of training was night flying, the site selection in Imperial Valley being made due to the 360-day per year average of clear weather, especially under night-flying conditions. In general, the syllabus included dive bombing, low level bombing, skip bombing (at Salton Sea, about 30 miles airline northerly of Holtville), target strafing, and field carrier landing practice, as well as cross-country and round-robin flights. Originally the Composite-type squadrons were sent here for training. On 15 August 1944 a Fleet Air Training Detachment was established on the Station with primary function of rocket-firing training, and since that date a number of VF, VT and VB squadrons, plus a few VCB and VBF units, as well as streamlined VC groups have utilized the training facilities of the field. A considerable amount of Ground Training is carried on also, involving Recognition, Link Trainer, Free Gunnery and various special devices. With the construction of a special Carrier Landing Training Field about seven miles easterly of the Station, greater concentration was placed on FCLP training.

b. Construction

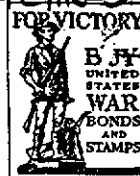
Original construction work was commenced in January 1943 by the Macco-McKittrick Construction Co. The original runways were 4500 ft., these being increased to 6000 ft. due to the anticipated usage of the field by larger aircraft than in the original plan. With the exception of a few minor structures, the base as planned was completed ready for occupancy in late June 1943. Subsequently it was determined that the housing facilities for pilots and enlisted personnel, and adequate maintenance facilities were insufficient to handle the proposed increase from three to six squadrons, and SecNav authority was granted 19 May 1944 to provide additional facilities, work being started on 10 August 1944. This expansion provided additional BOQ's, double-deck enlisted personnel barracks, a WAVE's barracks, two line shacks, two nose hangers, a Training building, an Officers' Mess, three Supply warehouses, and expanded water-supply system and sewage disposal system. Started about 1 February 1945, a Homoja Hut project for 84 families will relieve the critical housing situation in the Imperial Valley.

**U. S. Naval Auxiliary Air Station, Holtville, CA.**

"Historical Report of U. S. Naval Auxiliary Air Station, Holtville Calif"  
for 1 September 1945 to 15 April 1946.  
Box 221; Naval Historical Center and Archives,  
Washington Navy Yard, Washington D.C.

ADDRESS REPLY TO

BOX 221  
WASHINGTON Naval Yard  
Historical Center / ARCHIVES



U. S. NAVAL AUXILIARY AIR STATION  
HOLTVILLE, CALIFORNIA

REPLY REFER TO NO.  
NALL-6/A9-3 KAS:  
Ser 366-10

11 April 1946

To: Chief of Naval Operations, History Unit OP-33-J6,  
Aviation Training Division, Navy Department,  
Washington, D.C.

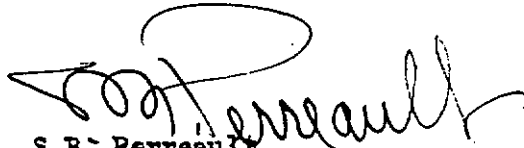
Via: Commander, NAVAL AIR BASES, ELEVENTH Naval District,  
San Diego, Calif.  
Commandant, ELEVENTH Naval District, San Diego, Calif.

Subj: Historical Report - Submission of

Ref: (a) Aviation Cir Ltr No. 74-44 of 7/25/44  
(b) NAB11/A12/29-3 SWG:en Serial 83-95 3/26/46

1. The Historical Report required by references (a) and  
(b) is herewith submitted.

2. Copies of this report are enclosed for retention by  
Commander, Naval Air Bases, Eleventh Naval District and by the  
Commandant, Eleventh Naval District.

  
S.B. Perreault,  
Commanding Officer

Encl: (hw)

1. Subject reports

A HISTORICAL REPORT  
ON  
U.S. NAVAL AUXILIARY AIR STATION HOLTVILLE CALIF

This Report is composed of the following parts:

- I. Chronology
- II. Narrative
- III. Appendices
  - A. List of Fleet Activities
  - B. List of Casualties

Information compiled from 1 September 1945 to 15 April 1946

Enclosure (1)

U.S. NAVAL AUXILIARY AIR STATION  
HOLTVILLE, CALIFORNIA

PART I: Chronology

1. Construction started: January 1943
2. First station Naval personnel on board: 20 June 1943
3. Placed in Commission: 4 July 1943
4. Commanding Officers:

	From	To
a. Lt. Cmdr. Emory B. Bronte USNR	4 July 43	28 Dec 43
b. Lt. Benoni H. McClure USNR, O-in-C during interim	28 Dec 43	3 Jan 44
c. Lt. Cmdr. Henry J. White USNR	3 Jan 44	31 July 44
d. Lt. Cmdr. David C. Parker USNR	31 July 44	27 Jan 45
e. Lt. Cmdr. Seraphin B. Perreault USN	27 Jan 45	

5. Originally established as a unit of the Naval Air Center, Eleventh Naval District.
6. Naval Air Center 11ND disestablished 10 August 1944 and the unit became part of Naval Air Bases, 11ND.
7. Reduced to caretaker status April 1, 1946.
8. This activity has not been involved in any enemy action.

## Part II Narrative

### 1. Function

#### a. Purpose

Holtville Air Station has a past record as a training center for combat air groups scheduled for duty on the small Navy escort carrier, and became a center for strafing and bombing practice for fighters, dive bombers and torpedo bombers. Special attention was given to Rocket training. The 1397-acre station was built to serve as an operation training base for fleet units. There are two 6000 foot runways at the air station. Eight miles east of the station there is a 4000 foot strip designated and marked for practice carrier landings. Because of the all year flying weather, the station also has been used to train squadrons in the final phases of night formation flying.

Beginning with the termination of war with Japan operations at this station have steadily decreased. Squadrons continued to train on a reduced scale through 15 December 1945. On December fourth PV-2 aircraft began to arrive on station for short time preservation and were kept on a flyaway status. By January 1, 1946 there were one hundred eleven of these aircraft stationed here. April 10 1946 marked the departure of the last PV-2.

This station was reduced to caretaker status April 1, 1946 and is scheduled for surplus May 1, 1946.

#### b. Construction

There has been no construction since August 15, 1946.

APPENDIX A: DATA REGARDING ARRIVAL AND DEPARTURE DATES OF FLEET AND AIRCRAFT UNITS, AND DESTINATION

	ARRIVAL	DEPARTURE	DESTINATION
VT 80	17 Aug 1945	12 Sept 1945	NAAS Ream Field, Calif
VC 80	2 Aug 1945	12 Sept 1945	Decommissioned, Planes and Personnel going to NAAS Holtville
VF 84	28 Aug 1945	27 Sept 1945	NTB, Los Alamitos, Calif
VBF 84	28 Aug 1945	27 Sept 1945	NTB, Los Alamitos, Calif
AG 7	17 Oct 1945	6 Dec 1945	San Diego, California
VF 98	10 Dec 1945	15 Dec 1945	NTB, Los Alamitos, Calif
VBF 98	10 Dec 1945	15 Dec 1945	NTB, Los Alamitos, Calif
CASU 53	15 Aug 1944	18 Dec 1945	MCAS, El Centro, Calif

**APPENDIX E**

**LETTERS / MEMORANDA / MISCELLANEOUS ITEMS**



ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX E

LETTERS / MEMORANDA / MISCELLANEOUS ITEMS

**Bureau of Ordnance.**

- 1946a Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 4 January, regarding the Ammunition Stock Recording System. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946b Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 19 April, regarding the stowage of ammunition. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.
- 1946c Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 27 June, regarding a request for rocket firers. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.

**Headquarters, Naval Air Bases.**

- 1946b Correspondence to Chief, Bureau of Ordnance, dated 12 August, regarding a Request for Disposition of Small Arms Ammunition for Caliber .30 Aircraft Machine Gun. Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.
- n.d. Speedletter; File NAB11/S78-2, regarding Ordnance inventories at 11th Naval District's Air Bases. Record Group 74; Entry 4444; Box 287; File ND8-ND11, 1946. National Archives- Suitland Branch, Suitland, MD.

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
**ARCHIVE SEARCH REPORT**  
**FINDINGS**  
FOR  
**HOLTVILLE TARGET (BT) NO. 3**  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX E

LETTERS / MEMORANDA / MISCELLANEOUS ITEMS

**Navy Department.**

1948 Correspondence to Deputy Administrator, Office of Real Property Disposal, dated 11 February, regarding the declaration of surplus for Holtville Auxiliary Air Station. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

**Southern California Sector, Western Sea Frontier.**

1944 Correspondence to AIRCRAFT, Southern California Sector, Western Sea Frontier, dated 24 August, regarding bombing targets in Southern California Sector. Engineering Division, Installation Support Section, U. S. Army Corps of Engineers, Los Angeles, CA.

**U. S. Marine Corps Air Station.**

1946 Correspondence to Chief, Bureau of Ordnance, dated 10 July, regarding Rocket Firers. Record Group 74; Entry 4444; Box 194: KV-L1-1, Jun-July 1946. National Archives-Suitland Branch, Suitland, MD.

**U. S. Pacific Fleet.**

1946 "COMFAIR West Coast Service and Training Munition Requirements," dated 26 January. Record Group 74; Entry 4444; Box 287; File: ND8-ND11,1946. National Archives-Suitland Branch, Suitland, MD.

**Bureau of Ordnance.**

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,  
dated 4 January 1946,  
regarding the Ammunition Stock Recording System.  
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.  
National Archives-Suitland Branch, Suitland, MD.

KV

TRAVEL  
 WASHINGTON DC

1 JAN 1946

**AIR MAIL**

From: The Chief of the Bureau of Ordnance  
 To: The Commanding Officer  
 Marine Corps Air Station  
 El Centro, California

Subject: Ammunition Stock Recording System.

Reference: (a) Navord 282-A for code 11575 701-1100-J  
 showing balance on-hand for month ending  
December 1945

1. Reference (a) reports the balance on hand for the  
 ammunition described below:

**11575 Rocket Motor, Mark 1 Mod 1.**

2. Reference (a) carries the correct code 11575 701-1100-J  
 for the item at the lower left hand corner and an incorrect code  
701-1100-J at the upper right hand corner.

3. It is requested that the correct code be placed in  
 both spaces provided for it on the on-hand balance card.

G. F. BUSSET, JR.

*R. A. Savosche*  
 R. A. Savosche  
 By direction

MSV/mcs

*SSR  
 Ad 1/14/46  
 Green*

**Bureau of Ordnance.**

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,  
dated 19 April 1946,  
regarding the stowage of ammunition.  
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.  
National Archives-Suitland Branch, Suitland, MD.

NAT'L Archives - Suitland  
Rg 74, Entry 4444, Box 193  
KK/579 Thru KV Mar-Apr 46

A  
B  
(Mn2) KV  
Ad  
From  
To  
Re  
Subject:  
Reference:  
Fi  
Mn  
Pr  
PL  
Sp  
Le

The Chief of the Bureau of Ordnance,  
The Commanding Officer,  
Marine Corps Air Station,  
El Centro, California.

Ammunition - Storage of.

- (a) NGA5, El Centro Storage Report, MATORD 272, dated 30 March 1946.
- (b) OP 8, Vol. 1 (Para. 2608, Item 71).

- Reference (a) reports that small arms are stored with pyrotechnics in Magazine 148.
- This combination is not permissible according to provisions of reference (b), and it appears that restorage can be accomplished to provide an acceptable combination.
- It is recommended that the small arms be removed from Magazine 148 and that they be stored in Magazine 149.

G. F. HUSKEY, JR.

F. F. Johnston.  
By direction.

REP: SJB:adb  
CC: Fr6b  
Adlb

Prep: 4/19/46  
Ext: 4564

**Bureau of Ordnance.**

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,  
dated 27 June 1946,  
regarding a request for rocket firers.  
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.  
National Archives-Suitland Branch, Suitland, MD.

Natl Archives - Suitland  
Rg 74, Entry 4444, Box 194  
KV thru 11-1 Jun 54 46

A
B
Ad
From
To
Re
Subject
References
Fi
Min
PL
Sp
Es

*KV*  
(data)

*19*

27 JUN 1946

**AIR MAIL**

**From:** The Chief of the Bureau of Ordnance.  
**To:** The Commanding Officer, Naval Air Station,  
El Centro, California.

**Re Subject:** Rocket Firers; request for.

- References:**
- (a) NIAS, El Toro, NEX 071884 of March.
  - (b) Report (Info) NEX 111155 of March.
  - (c) NIAS, El Toro, NEX 140005 of March.
  - (d) NIAS, El Centro, NEX 158114 of April.
  - (e) AMNS 210772 dated 27 April 1945.
  - (f) NIAS, El Centro, NEX 152204 of May.
  - (g) Report (Info) NEX 152204 of May.
  - (h) NIAS, Northport, NEX 200000 of May.
  - (i) NIAS, El Centro, NEX 110000 of June.

In reply to reference (i) the following outline of action to supply the subject Rocket Firers is forwarded.

*Marine*  
*Info*

Upon receipt of reference (a), reference (b) was sent to the Marine Corps Air Station, El Toro, with an information copy to the Marine Corps Air Station, El Centro, requesting clarification inasmuch as the Mark number and Bureau of Ordnance Code, YED 80004, referred to the Douglas type firer manufactured by the Union Aircraft Products Company while the manufacturer listed in the request referred to the reel type firer manufactured by the Douglas Aircraft Company. Marine Corps Air Station, El Toro, in reference (c) then requested Marine Corps Air Station, El Centro, to advise the type desired. Marine Corps Air Station, El Centro, replied in reference (d) stating that the Douglas firer was required and with this information Bureau Memorandum Order 151772 was written on the Naval Ammunition Dept., San Diego, Nevada, requesting shipment of this type. Reference (e) was subsequently received requesting a reply to reference (d) and reference (f) was then received requesting that the Naval Ammunition Dept., Northport, supply shipping instructions which they did in reference (h) stating the material was shipped on 4 May 1945.

It is noted that reference (i) again confuses the two types of firers by giving the code of the firer manufactured by Union Aircraft Products Company and naming the Douglas Reel type which has already been



Nat'l Archives - Suitland  
Rg 74, Entry 4444, Box 194  
KV Thru 21-1 Jun-July 46

(M2b)  
B  
Ad  
Re  
Fi  
Mn  
PL  
Sp  
Le

KV

shipped. It is requested that the preference as stated in reference (d) be confirmed and that one of the following codes be used:

- (a) Code 790 8901-M - Reel Type, Manufactured by Douglas Aircraft Company.
- (b) Code 790 8902-M - Magazine Type, Manufactured by Union Aircraft Products Company.

A. P. HUGHES, JR.

E. F. Johnson  
By direction

Copy to  
WAS, San Diego, California

Proposed 6-28-46  
732747

**Headquarters, Naval Air Bases.**

Correspondence to Chief, Bureau of Ordnance,  
dated 12 August 1946,  
regarding a Request for Disposition of Small Arms Ammunition for  
Caliber .30 Aircraft Machine Gun.  
Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946.  
National Archives-Suitland Branch, Suitland, MD.

Suitland Branch  
Rg 74, Entry 4441, Box 287  
ND 8-ND 11, 1946

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND PROJECT  
NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

HEADQUARTERS  
COMMANDER, NAVAL AIR BASES  
ELEVENTH NAVAL DISTRICT

In reply address  
COMMANDER  
NAVAL AIR BASES  
11th Naval District  
San Diego 35, Calif.

and refer to:  
NAB 11/ L11-3/F41-11 JEH:st  
Serial 54-90

AUG 12 1946

ND 11  
Mr 2  
jm

To: Chief of the Bureau of Ordnance  
Subj: Disposition of Small Arms Ammunition for Caliber .30  
Aircraft Machine Gun - Request for.  
Ref: (a) BuOrd ltr (Mn2b) S78-1(17) dtd 1Aug46  
(b) BuOrd ltr F41-1(Mn6b) dtd 26Jul46

082046 0060

1. In compliance with references (a) and (b), disposition is requested for the following .30 Caliber aircraft machine gun ammunition which is surplus to the requirements of activities within Naval Air Bases.

NAVAL AIR STATION, SAN DIEGO

.30 Caliber Ball M2	186,550
.30 Caliber Incendiary M1	48,000
.30 Caliber A.P. M2	35,500
.30 Caliber Blank	2,815
.30 Caliber Dummy	79,678
.30 Caliber Link M1	540,000

*BOSO 517757  
to  
Fall Brook*

NAVAL AIR STATION, EL CENTRO

.30 Caliber Tracer M1	180,935
.30 Caliber Incendiary M1	575,000
.30 Caliber A.P. M2	125,000
.30 Caliber Links M1	40,000

*BOSO 517758  
to  
Fall Brook*

MARINE CORPS AIR STATION, EL TORO

.30 Caliber Ball M2	103,190
.30 Caliber Incendiary M1	24,000
.30 Caliber Links M1	14,000

*BOSO 517759  
-1- to  
Fall Brook*

**Headquarters, Naval Air Bases.**

Speedletter; File NAB11/S78-2,  
regarding Ordnance inventories at 11th Naval District's Air Bases.  
Record Group 74; Entry 4444; Box 287; File ND8-ND11, 1946.  
National Archives- Suitland Branch, Suitland, MD.

Suffield Branch  
Rg 74, Entry 4444 Box 387  
NDS-ND11, 1946

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, MND PROJECT  
NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

FILE OR SERIAL NO. NAB11/S78-2  
Serial 02-90 JEH:st

**SPEEDLETTER**

TO:

Page 3 of 3 Pages

Use in lieu of despatches, telegrams, teletypes, and mailgrams when appropriate.

Do not handle through Communication Offices.

Despatch phraseology may be used.

Use size No. 9 window envelopes when appropriate and available.

If used for classified matter handle as prescribed in U. S. Navy Regs., Arts. 73 1/2 and 78.

Upon receipt EXPEDITE HANDLING and DELIVERY as much as possible.

NAAS REAM FIELD (Cont'd)

M16A1 8-15 Sec. delay 10  
Auxiliary Booster MK 4 79

NAS SANTA ANA

7.2 Rocket head MK 5 (Torpex load) <sup>in Rocket Motor</sup> 600  
7.2 Rocket motor MK 3 Mod 2 (inert) <sup>7.2 mod 2, 1000 lbs, 1000 lbs, 1000 lbs</sup> 620  
7.2 Rocket Head MK 4 Mod 1 32  
Fuse ANM 100A2 } 900 units as of 1 Jan. '46 100  
Fuse MK 140 } 600

MCAS EL CENTRO

Bomb S.A.P. 1000# ANM-59 <sup>76 mo. 1000# space as of 1 Jan. '46</sup> 2  
Bomb waterfillable 1000# MK 7 <sup>6500 ca. 1000# space as of 1 Jan. '46</sup> 282  
Bomb waterfillable 500# MK 21 28  
FB Smoke Mixture 800# drums <sup>2150 ca. 1000# space as of 1 Jan. '46</sup> 148

MCAS EL TORO

FB Smoke Mixture 800# drums <sup>Space for 213 drums as of 1 Jan. '46</sup> 100

By direction.

- Copies to:
- Encl. 1. Copy of Ref(a)
  - NAAS Brown Field
  - NAAS Camp Kearney
  - NAAS Ream Field
  - NAS Santa Ana
  - MCAS El Centro
  - Com11
  - MCAS El Toro
  - ComFair WC (Grd Dept)

Title and Signature  
*H. T. Wray*  
H. T. WRAY, Comdr., USN(ret)  
Ordnance Officer

SENDER'S MAILING ADDRESS (Including symbol or identity of originating office.)

HEADQUARTERS RECEIVED  
COMMANDER, NAVAL AIR BASES  
ELEVENTH NAVAL DISTRICT  
SAN DIEGO 35, CALIFORNIA

ATTENTION ADDRESSES: Address reply exactly as indicated on right.

REGISTERED MAIL  
351826

030646

**Navy Department.**

Correspondence to Deputy Administrator, Office of Real Property Disposal,  
dated 11 February 1948,  
regarding the declaration of surplus for Holtville Auxiliary Air Station.  
Record Group 72; Entry 69A-2454; Box 2; File: California.  
National Archives-Suitland Branch, Suitland, MD.

Sutland Branch  
Rg 72, Entry 69A2454  
Box 2, California.

ADDRESS REPLY TO  
THE BUREAU OF YARDS AND DOCKS

AND REFER TO

ND11/ML-15  
TS-2-280  
B-413.5/DCB/vv

NAVY DEPARTMENT

WASHINGTON 25, D. C.



11 FEB 1948

Deputy Administrator  
Office of Real Property Disposal  
War Relocation Administration  
General Mail Room 1515  
Railroad Retirement Building  
Washington, D. C.

Dear Sir:

Reference is made to Navy Department Declaration of  
Surplus No. 125 dated June 10, 1946 of the Naval Auxiliary  
Air Station, Holtville, California.

Enclosed herewith is Form SPA-5 (Attachment). This  
Attachment is made to include as surplus property lands trans-  
ferred to the Department of the Navy by the Department of the  
Interior under Public Land Order 424. Also included are certain  
lands of installed property considered part of the realty, which  
were not covered by the original Declaration.

If further information is desired, please advise this  
Bureau.

Very truly yours,

Wilfred P. Tiencken  
By direction of Chief of Bureau

WPT: (W)  
Form SPA-5 No. 125  
(Attachment)

CC: WPT (W)  
Assistant (Mail Div)  
WPT  
WPT (Ident Div) EW-4  
COMM-11  
COMM-11  
Lt. Larkin, Rm. 4229, Main Bldg.

80430049

11-311-11

(S)

(1)

**Southern California Sector, Western Sea Frontier.**

Correspondence to AIRCRAFT, Southern California Sector, Western Sea Frontier,  
dated 24 August 1944,  
regarding bombing targets in Southern California Sector.  
Engineering Division, Installation Support Section,  
U. S. Army Corps of Engineers, Los Angeles, CA.



AIRCRAFT  
SOUTHERN CALIFORNIA SECTOR  
WESTERN SEA FRONTIER

LA District  
Engineering Division  
Installation Support  
Section  
Kane Springs

24 August, 1944

Eleventh Naval District  
San Diego, California

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

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 ComAirSOCSec, WSP.

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

MAX L. BLACK  
Deputy Commander

NAME	POSITION	DESCRIPTION	TYPE OF BOMBING RUN	TYPE OF ORDNANCE
WBT A	32-32-10 117-12-30	Radar-rigged Pyramid	Bombing runs must be conducted at an alt. not to exceed 700 ft. Actual releases at 200 feet.	Practice Bombs
WBT B	33-04-40 117-19-50	Radar Rigged Pyramid	Low level (see WBT A)	Practice bombs
Borego Hotel BT D C O.	33-05-30 116-06-06	Concentric Circles	High Altitude and Dive Bombing	Practice bombs and strafe
Borego Wash BT	33-11-45 116-09-15	Concentric circles with airplane silhouette adjacent to target for strafing only	High Altitude and Dive Bombing	Practice bombs and strafe
WBT C	33-26-00 117-41-30	Radar-rigged Pyramid	Low-level (see WBT A)	Practice bombs
Catalina BT	33-18-50 118-26-40	Concentric circles	Dive Bombing	Practice bombs
Clarks Dry Lake BT	33-20-24 116-16-48	Concentric circles simulated submarine	High Altitude and Dive Bombing	Practice bombs and strafe
Cortez Bank WBT	32-28-45 119-12-50	Radar-rigged	Low-level	Practice bombs
Coyote Wells BT	32-56-00 115-52-30	Circle - simulated Destroyer deck	High Altitude and Dive bombing	Practice bombs and strafe
WBT D	33-37-27 118-04-00	Radar-rigged Pyramid	Low-level (See WBT A)	Practice bombs
WBT E	34-01-00 118-36-00	Radar-rigged Pyramid	Low-level (see WBT A)	Practice bombs
East Borego BT	33-04-00 115-57-25	Circle	High Altitude and Dive Bombing	Practice bombs and strafe
Holtville BT 1	32-56-45 115-12-30	Concentric circles	Dive Bombing	Practice bombs and strafe
Holtville BT 2	33-01-30 115-18-30	Concentric circles	Low-level	Rocket's
Holtville BT 3	33-09-00 115-22-05	Concentric circles	Dive Bombing	Practice bombs

Reproduced in the Holdings of the National Archives  
Pacific Southwest Region

NAME	POSITION	DESCRIPTION	TYPE OF BOMBING RUN	TYPE OF ORDNANCE
Holtville I R	32-54-45 115-15-30	Concentric circles	Low-level	Rocket
Lake Hodges BT	33-00-55 117-08-45	Concentric circles simulated destroyer deck	Dive Bombing	Practice Bombs
Kane Springs SBT	33-04-10 115-47-45	Radar-rigged Fence	Low-level	Miniature Bombs and strafe
Miramar BT	32-54-08 117-07-01	Concentric circles	Runs must be made so that pull-outs will be in northerly direction and when operating below 5000 feet will remain north of an eastwest line drawn through the field to avoid conflict with traffic on Camp Kearney Field.	Practice Bombs
Ocotillo Mobile and Stationary BT	33-08-08 116-07-09	Concentric circles	Dive bombing	Practice Bombs
Otay BT	32-35-00 116-55-45	Concentric circles simulated destroyer deck	Dive bombing	Practice bombs
Ramona BT	33-02-00 116-54-48	Concentric circles simulated destroyer deck	Dive bombing	Practice bombs
<u>ALTON SEA</u> SBT	✓ 33-15-15 115-49-15	Screened raft-radar	Low-level	Practice bombs (Target closed for repairs 0001 to 2000 each Monday.)
FBT 11	✓ 33-18-15 115-51-15	Pyramid	High Altitude and Dive Bombing	Practice bombs
FBT 12	✓ 33-24-30 115-59-15	Pyramid	High Altitude and Dive Bombing	Practice bombs
FBT 13	✓ 33-24-15 116-02-15	Pyramid	High Altitude and Dive Bombing	Practice bombs
FBT 14	✓ 33-29-30 115-55-00	Pyramid	High Altitude and Dive Bombing	Practice Bombs

Enc-1 to ComAirSoCalSec, WSP  
C/L No. 20-44

NAME	POSITION	DESCRIPTION	TYPE OF BOMBING RUN	TYPE OF ORDNANCE
FBT 15 ✓	33-27-00 115-52-30	Pyramid	High Altitude and Dive Bombing	Practice Bombs
FBT 16 ✓	33-23-30 115-48-15	Pyramid	High Altitude and Dive Bombing	Practice Bombs
FBT 17 ✓	33-20-15 115-45-00	Pyramid	High Altitude and Dive Bombing	Practice Bombs
FBT 18 ✓	33-17-30 115-40-30	Pyramid Radar-rigged	Low-level	Practice Bombs
FBT 19 ✓	33-15-15 115-37-00	Radar-rigged Pyramid	Low-level	Practice Bombs
<u>SAN CLEMENTE</u>				
LBT 21	32-53-23 118-29-13	Concentric circles and rectangle	Dive Bombing	Practice Bombs
WBT 5	32-54-55 118-27-42	Pyramid	High Altitude and Dive Bombing	Practice Bombs
Castle Rock BT	33-02-10 118-36-45	Rock	High Altitude and Dive Bombing	Practice Bombs and Strafe
WBT 6	32-49-57 118-21-17	Pyramid	High Altitude and Dive Bombing	Practice Bombs
Trabuco BT	33-37-45 117-36-00	X east target a destroyer masthead Y center target a circle Z west target a circle	Dive and Glide Bombing	Five pound practice bombs only
WBT 1	32-27-00 117-10-30	Radar-rigged Pyramid	Low-level	Practice Bombs
WBT 2	32-22-45 117-09-18	Radar-rigged	Low-level	Practice Bombs
WBT 3	32-17-34 117-09-30	Pyramid	Low-level	Practice Bombs
Winona BT 1	33-13-30 115-58-15	Concentric Circles	Low-level	Rockets
Winona BT 2	33-13-30 115-00-30	Concentric Circles	Low-level	Rockets
Wilson Rock BT	34-06-30 120-24-12	Rock	High Altitude and Dive Bombing	Practice and live Bombs and Strafe

Reproduced from the holdings of the National Archives and Records Administration, Pacific Southwest Region

**U. S. Marine Corps Air Station.**

Correspondence to Chief, Bureau of Ordnance,  
dated 10 July 1946,  
regarding Rocket Firers.

Record Group 74; Entry 4444; Box 194: KV-L1-1, Jun-July 1946.  
National Archives-Suitland Branch, Suitland, MD.

Nat'l Archives Suitland  
Rg 74, Entry 4444, Box 194  
KV Thru 4-1 Jun Jly 1946

IN REPLY REFER TO NO.

L21-5/MGO:dd  
Serial 1475-40

U. S. MARINE CORPS AIR STATION  
EL CENTRO, CALIFORNIA



10 July, 1946.

To: Chief of the Bureau of Ordnance (Section MN2C)  
Navy Department, Washington 25, D. C.

Subj: Rocket Firers (El Centro S.R. 186-46)

Ref: (a) BuOrd.Air Mail ltr.KV(Mn2a)Serial 1519 of 27 June,1946.  
(b) NAS El Centro MEX 210045 of June.

*KV Mn2*  
*jm*

1. After receipt of reference (a), a careful search at this station reveals the fact that subject Rocket Firers have been received from the Naval Ammunition Depot at Hawthorne. However, the shipment was not marked with the shipment request number, and therefore was not properly identified with the original request.

2. Material was correct as received, and the order is therefore considered complete.

071546 0444

*M. G. Oliver*  
M. G. OLIVER, LT(SC)USN  
Supply Officer.

**U. S. Pacific Fleet.**

"COMFAIR West Coast Service and Training Munition Requirements,"  
dated 26 January 1946.

Record Group 74; Entry 4444; Box 287; File: ND8-ND11,1946.  
National Archives-Suitland Branch, Suitland, MD.



Suitland Branch  
Rq 74, Entry 444, Box 28  
ND 8-ND 11, 1946

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND PROJECT NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

COPY

UNITED STATES PACIFIC FLEET  
AIR FORCE  
FLEET AIR, WEST COAST

26 Jan 1946

045

C O N F I D E N T I A L

COMPAIR WEST COAST SERVICE AND TRAINING MUNITION REQUIREMENTS

	<u>NAS SAN DIEGO</u>	<u>NAAS BROWN</u>	<u>NAAS CAMP KEARNEY</u>	<u>MCAS EL CENTRO</u>	<u>NAAS LOS ALAMITOS</u>
<u>SERVICE</u>					
100# GP	300	114	---	126	---
500# GP	96	48	---	48	---
1000# GP	20	20	36	32	---
350# BB	72	---	72	---	---
Torpedoes	44	---	---	---	---
.30 Cal.	96,000	48,000	---	48,000	---
.50 Cal.	434,460	145,050	172,800	195,630	---
20 MM	19,200	9,600	---	9,600	---
5' HVAR	900	342	---	272	---
Tiny Tin	---	---	---	12	---
<u>TRAINING (For a four month period)</u>					
100# Live	744	244	162	---	---
500# Live	318	122	---	---	---
1000# Live	372	122	81	---	---
325-350# DB	54	---	81	---	---
100# H2O fil.	7,440	2,440	810	11,176	1,220
Minatures	22,320	7,320	2,430	20,176	3,660
SCAR (fast)	7,632	2,928	---	53,292	1,464
3.8 A R	---	---	---	2,500	---
Tiny Tin	---	---	---	1,224	---
.30 Cal	696,000	348,000	---	348,000	174,000
.50 Cal	5,193,120	1,776,960	864,000	2,380,560	888,480
20 MM	139,200	69,600	---	69,600	34,800

ENCLOSURE (A)

ENCLOSURE (A)

C  
O  
P  
Y

030696 0318

**APPENDIX F**

**REAL ESTATE DOCUMENTS  
(NOT USED)**

**APPENDIX G**

**NEWSPAPERS / JOURNALS  
(NOT USED)**

**APPENDIX H**

**INTERVIEWS**

**TELEPHONE OR VERBAL CONVERSATION RECORD**

DATE 4 January 1996

For use of this form, see AR340-15; the proponent agency is the Adjutant General's Office.

<b>SUBJECT OF CONVERSATION:</b> 2nd Quarter Sites		
<b>OUTGOING CALL</b>		
<b>PERSON CALLING</b> Rochelle Ross	<b>ADDRESS</b> CELMS-PM-M	<b>PHONE NUMBER AND EXTENSION</b> 314-331-8784
<b>PERSON CALLED</b> Command Master Chief Tom Dye	<b>OFFICE</b> Naval Amphibious Base Building 156, 2nd floor Coronado, CA	<b>PHONE NUMBER AND EXTENSION</b> 619-437-0732

**SUMMARY OF CONVERSATION:**

Dick Thiel and Dave Frandsen (HFA, Inc) gave me Tom's name and number.

Theresa, Randy and I will be stopping by the 16th of January to talk to Tom and his assistant Rick Kiser regarding any other possible points of contact who may have information regarding our sites this quarter.

He did suggest we contact the El Centro Naval Facility and go through their historical files.

The EOD unit in charge out there is the EOD North Island. The POC is the Officer in Charge, Lt Martinez at 619-545-0486.

TELEPHONE OR VERBAL CONVERSATION RECORD DATE 11 January 1996  
For use of this form, see AR340-15; the proponent agency is the Adjutant General's Office.

<b>SUBJECT OF CONVERSATION:</b> 2nd Quarter Sites		
<b>OUTGOING CALL</b>		
<b>PERSON CALLING</b>  Rochelle Ross	<b>ADDRESS</b>  CELMS-PM-M	<b>PHONE NUMBER AND EXTENSION</b>  314-331-8784
<b>PERSON CALLED</b>  Officer in Charge, LT. Martinez and Officer Branum (used to the OIC)	<b>OFFICE</b>  Naval EOD, North Island	<b>PHONE NUMBER AND EXTENSION</b>  619-545-0486

**SUMMARY OF CONVERSATION:**

Command Master Chief, Tom Dye, of the Naval Amphibious Base gave me the above name and number.

I spoke to Mr. Branum. Once Lt Martinez returns, they will review their files for UXO recovered around El Centro. He also suggested I call the Army 70th EOD located in Point Loma, 619-553-8500. This detachment maintains an historical database which contains all past recovered ordnance from all local EOD units. The Naval EOD send their info to this office.

Next Tuesday, when in San Diego, I am to call back to find out what information they were able to find. Lt. Martinez may meet us at Tom Dye's office Tuesday morning.

=====

Neither the Army 70th EOD or the EOD North Island had any information on any of the Imperial County Ranges for us.

**APPENDIX I**

**PRESENT SITE PHOTOGRAPHS**

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX I

PRESENT SITE PHOTOGRAPHS

**Page I-1**

PHOTO #1 - VIEW FACING SOUTHWEST

(LOCATION: N 33°9'45.2" W 115°21'45.1"; PG 52695 70311)

PHOTO #2 - VIEW FACING EAST

(LOCATION: N 33°8'57.1" W 115°21'46.1"; PG 52694 68829)





**PHOTO #1**  
**VIEW FACING SOUTHWEST**  
**(LOCATION: N 33°9'45.2" W 115°21'45.1"; PG 52695 70311)**



**PHOTO #2**  
**VIEW FACING EAST**  
**(LOCATION: N 33°8'57.1" W 115°21'46.1"; PG 52694 68829)**

**APPENDIX J**

**HISTORICAL PHOTOGRAPHS  
(NOT USED)**

**APPENDIX K**

**HISTORICAL MAPS / DRAWINGS  
(NOT USED)**

**APPENDIX L**

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

**SITE SPECIFIC SAFETY AND HEALTH PLAN (SSHP)**  
**OE/CWM Archives Search Site Inspection Visit**

Holtville Target (BT) No. 3

Imperial County, CA

Site #J09CA017101

**1. REFERENCES:**

- a. Safety Manual, CELMS-PM-M, 16 Sep 93 w/ Ch1.
- b. SOP for Reporting Ordnance and Unexploded Ordnance (UXO), CELMS-PM-M, 19 Jan 95.
- c. OEW Guidance Regarding Coordination with EOD Organizations, 10 Jan 95.

**2. GENERAL:** This plan prescribes the safety and health requirements for team activities and operations conducted to determine the presence of ordnance and explosive waste and /or chemical warfare materials at the specified site.

- a. The Safety Officer has final authority on all matters relating to safety. The safety rules will be followed at all times. Any member of the team may stop operations if they observe a situation or activity which poses a potential hazard to any individual or to the operation. All actions must comply with the common sense rule!
- b. All team members will be aware of the local emergency numbers and the location of the nearest telephone.
- c. A minimum of two and a maximum of eight persons will be allowed on-site at any one time.
- d. The property owner is not required to sign the SSHP, but should be politely asked to participate in the safety briefing.

**3. MISSION:** Reconnoiter, document, and photograph areas on Holtville BT No. 3 suspected to be contaminated with UXO and/or toxic chemical munitions.

**4. SAFETY PRECAUTIONS:** All team members will stay within sight of each other while

on site. A first aid kit will be on hand. The following three basic safety rules apply at all times:

a. Rule 1 - Do not touch or pick up anything at the site.

b. Rule 2 - Do not step anywhere you cannot see where you place your foot.

c. Rule 3 - There will be no eating or smoking at the site. Hands will be washed after the survey and prior to eating. Drinking fluids should be done during periodic breaks.

5. SITE COMMUNICATIONS: The primary means of communicating with other team members will be by voice. Team members will always remain within sight of each other. Cellular telephones should be carried to facilitate and expedite calling for emergency medical services.

6. NATURAL HAZARDS: Desert terrain with dry washes and desert flora such as cacti. Venomous animals include rattlesnakes, scorpions, and spiders. Temperatures may be in the mid-70's.

7. ORDNANCE HAZARDS: Practice bombs and rockets of unspecified nomenclature.

8. HAZARD EVALUATION: Estimate the overall hazards using the following guidelines: (check appropriate item)

Low (small arms ammunition)

Moderate (practice bombs with spotting charge)

High (high explosive munitions, toxic chemicals, WP)

Unknown

9. EMERGENCY PROCEDURES: First aid will be rendered for any injuries. In the event of a detonation, everyone should freeze until the situation can be assessed by the team leader. Unnecessary injuries can be avoided by not panicking and planning a logical course of action, which may include retracing your steps out of an impact area. Emergency medical services will be contacted by the most expeditious means available.

10. SAFETY STATEMENT: Safety is everyone's business. No unnecessary risks will be taken to obtain photos or other data. Team members are responsible for notifying the project Manager or safety Officer of any physical conditions that may impede or prevent their

accomplishment of the mission. An example is allergic reactions to bee stings.

### Important Phone Numbers

Emergency medical service: 911  
Pioneers Memorial Hospital (619) 351-3333  
El Centro Regional Medical Center (619) 339-7100

Law enforcement agency: 911  
Non-emergency number: (619) 352-2111

Huntsville Safety: (205) 895-1582/1579  
(800) 627-3532, PIN 777-2534

Michael Dace, St. Louis District (314) 331-8036

SSHP reviewed by: George Sugar  
George Sugar

### SSHP Compliance Statement:

I acknowledge that I have read and will comply with the provisions of this SSHP:

Print name and organization

Signature

<u>GREGG E. KLOCHER</u>	<u>CELMS-PM-M</u>	<u>[Signature]</u>
<u>Barbelle Aaga</u>	<u>CELMS-PM-M</u>	<u>Barbelle Aaga</u>
<u>John Daly</u>	<u>CELMS-PD-R</u>	<u>John Daly</u>
_____	_____	_____
_____	_____	_____

MANDATORY MINIMUM SAFETY GEAR

First aid kit (individual)	<u>✓</u>
Survival kit	<u>✓</u>
Fire starter	<u>✓</u>
Space blanket	<u>✓</u>
Whistle	<u>✓</u>
Mirror	<u>✓</u>
Cellular phone	<u>✓</u>
Flash light	<u>✓</u>
Survey tape	<u>✓</u>
Canteen	<u>✓</u>



# SITE SURVEY SAFETY BRIEFING

(check subjects discussed)

Date 23 FEB 96

## GENERAL INFORMATION

- Purpose of visit
- Identify key personnel

## SITE-SPECIFIC INFORMATION

- Site description/past use
- Results of previous studies
- Potential site hazards
- OE safety procedures
- Site control and communications
- Emergency response
  - location of first aid kit
  - emergency phone numbers
  - map to hospital
- PPE
- weather precautions
  - cold/heat
  - severe weather

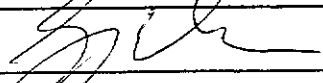

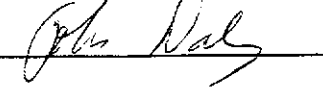
## Safety Briefing Attendance

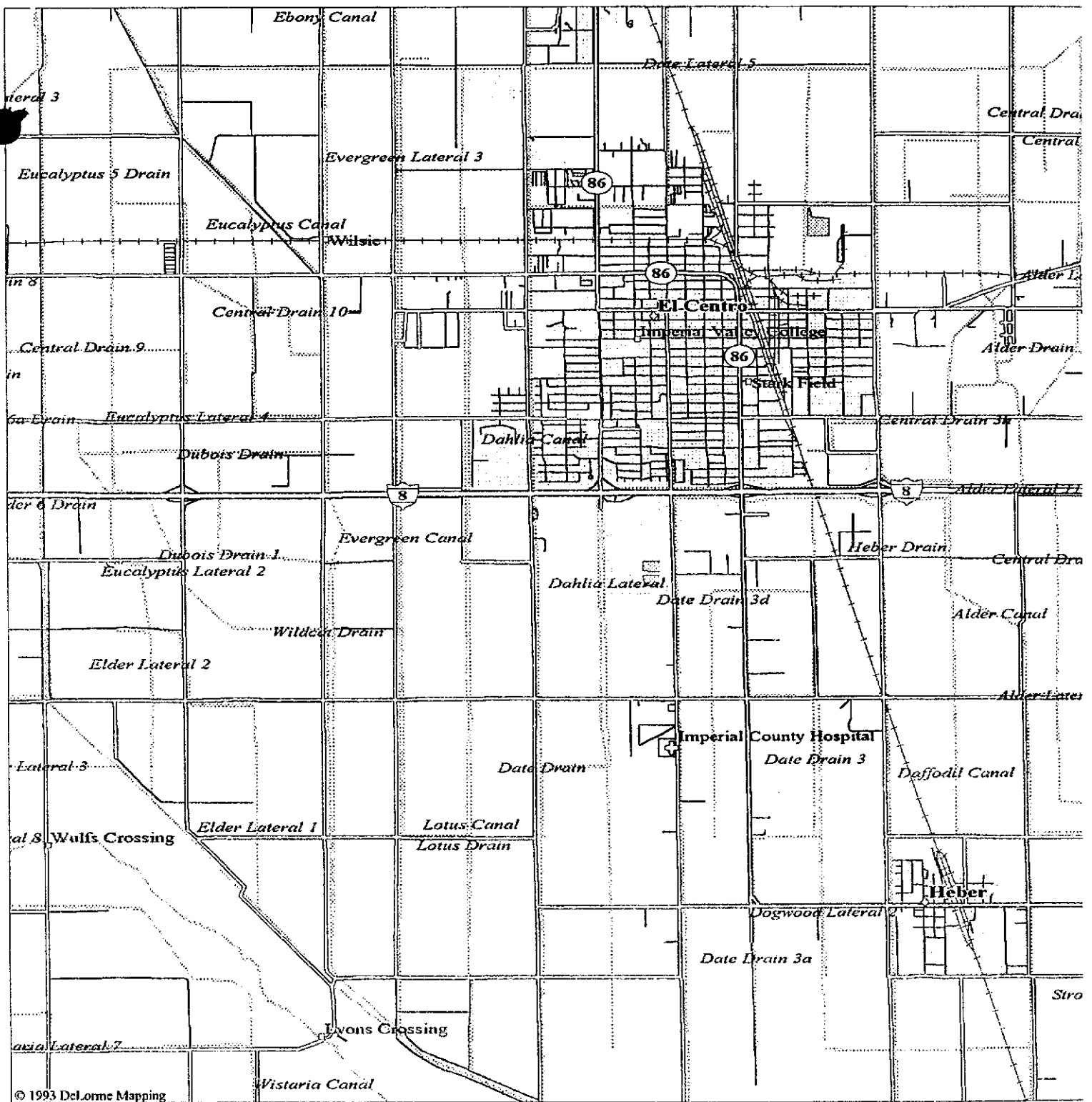
All team members and any accompanying personell will be briefed and sign this form:

NAME (print)

ORGANIZATION

SIGNATURE

NAME (print)	ORGANIZATION	SIGNATURE
G. KOCHERL	CEIMS-PM-M	
Rochelle Ross	CEIMS-PM-M	
John Daly	CEIMS-PP-K	



© 1993 DeLorme Mapping

**LEGEND**

- |  |                      |  |                    |
|--|----------------------|--|--------------------|
|  | Population Center    |  | Major Street/Road  |
|  | State Route          |  | State Route        |
|  | Geo Feature          |  | Interstate Highway |
|  | Town, Small City     |  | Railroad           |
|  | Hospital             |  | River              |
|  | Interstate, Turnpike |  | Airfield           |
|  | Street, Road         |  | Open Water         |
|  | Hwy Ramps            |  |                    |

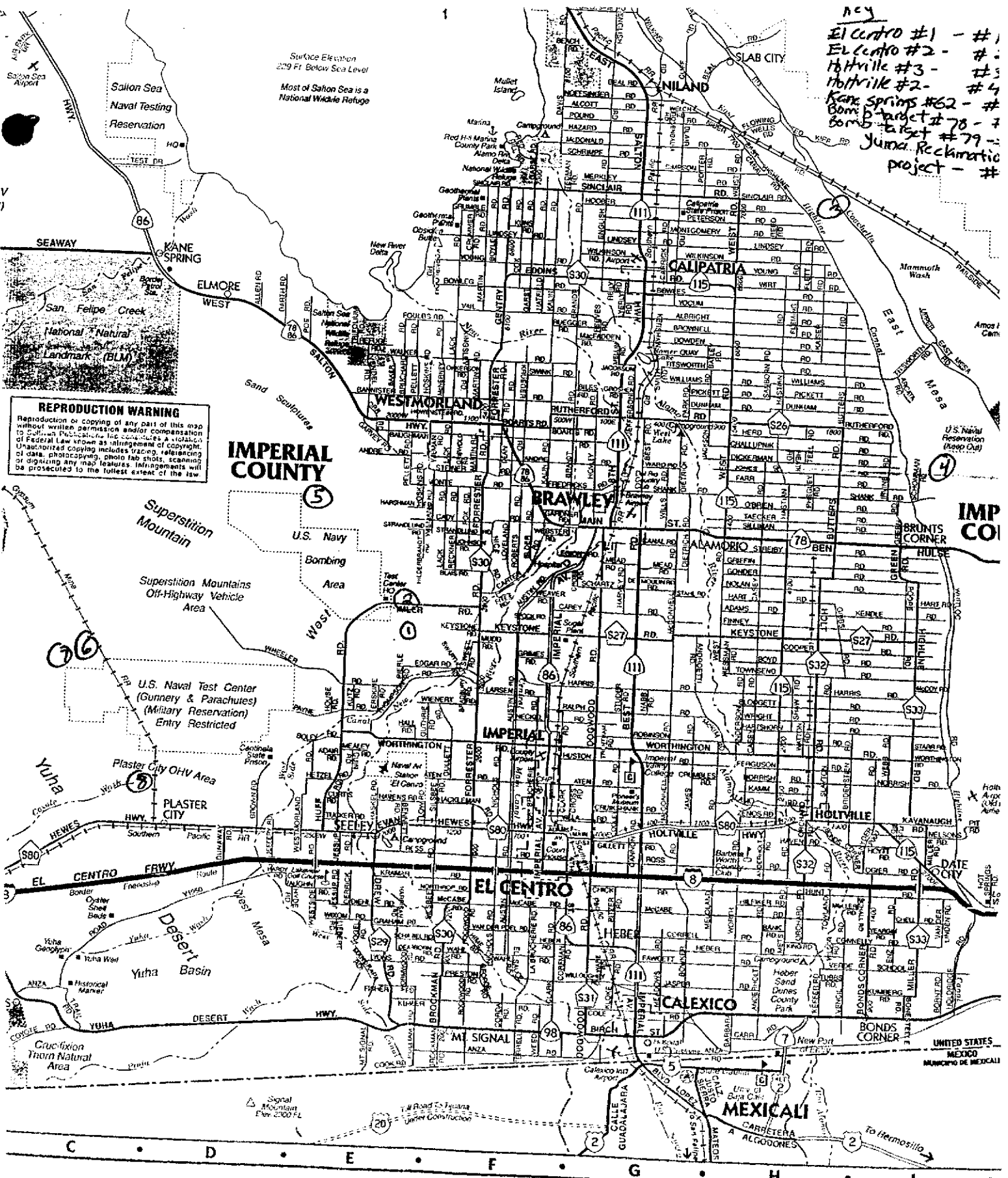
Scale 1:62,500 (at center)

1 Miles

2 KM

Mag 13.00

Mon Feb 05 11:07:06 1996



**REPRODUCTION WARNING**  
 Reproduction or copying of any part of this map without written permission and/or compensation of Federal Landmark Inc. constitutes a violation of Federal Law known as infringement of copyright. Unauthorized copying includes tracing, rephotographing, photocopying, photo lab shots, scanning or digitizing any map features. Infringements will be prosecuted to the fullest extent of the law.

El Centro #1 - #1  
 El Centro #2 - #2  
 Holtville #3 - #3  
 Holtville #2 - #4  
 Kane Springs #62 - #7  
 Bom B Target #78 - #7  
 Juma Reclamation project - #79

The New and Beautiful  
**CALIPATRIA INN**  
 "Gateway to the Salton Sea Wildlife Refuge"  
 Featuring: Spacious parking • Cable TV/ESPN • Movies

I.V. 352-7120  
**RECYCLING, INC.**  
 WE PAY CASH

5655 Imperial Ave. El Centro, CA 92526  
 808-333-803

**SITE INSPECTION REPORT**

11 March 1996

## MEMORANDUM FOR Mike Dace

SUBJECT: Trip Report for Site Visits to Bomb Target #78, Bomb Target #79, Holtville Target #2, **Holtville Target #3**, Kane Springs SBT #62, Yuma Target Reclamation Project, El Centro Rocket Target Range #1, and El Centro Rocket Target Range #2 during the week of February 19, 1996.

## Personnel on the trip:

Rochelle Ross (PM-M)

Gregg Kocher (PM-M)

C. John Daly (PD-R)

Monday, February 19, 1996:

We departed St. Louis, MO and arrived in Yuma, AZ late afternoon. Due to problems with the airline, we stayed in Yuma for the night.

Tuesday, February 20, 1996:

We departed Yuma, AZ and drove to El Centro, CA for our 8:00 am meeting with the Operations Officer for El Centro Naval Air Facility, Chief Warrant Officer Durham. We discussed our plan of action for the week. A portion of a few of our sites are within the Naval Facility's boundaries, flight lines, and/or restricted air space. Because of this, it was necessary to coordinate our site visit with their training schedule. Chief Warrant Officer Durham would call Yuma for their schedule and inform us this afternoon when we can go into Holtville Target #2, southwest of their Target #95, and the Yuma Reclamation Project, south of their Target 103A. We then provided Mr. Fred Rivera, Naval Air Facility, Public Works Department, with our research information and our schedule for site visits. Before we started our site visits, we picked up a radio from Range Control and discussed our site visit schedule with Mr. Al Wilson, Range Control Contract Supervisor.

We began on El Centro Rocket Target Range #1 in the northwest corner of the range and criss-crossed through the area, covering a good portion of the property. We found several pieces of ordnance related items and scrap, including 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors which were scattered throughout the range. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
Tail Boom from a 25-lb practice bomb, MK 76	N 32°55'31.7" W 115°40'24.9" (PG 24020 43613)
Tail Tube Assembly from 25-lb, MK 76	N 32°5'28.3" W 115°40'30.6"

Several scattered MK 76's  
20mm Dummy; early 1970's  
manufacture, cartridge case marked Mk 5  
Mod 0 and projectile marked Mk 14 Mod 0

N 32°5'28.3" W 115°40'30.6"  
N 32°55'17.3" W 115°41'27.6"

After completing El Centro Rocket Target Range #1, we stopped by Range Control where we were given the dates and times we could go into Holtville Target #2 and the Yuma Reclamation Project. We then drove to El Centro Rocket Target Range #2. We began on the southern boundary of the site, made a loop through the area and returned to the jeep after we found a 5" Rocket Warhead and what appeared to be the target center due to the abundance of ordnance debris. The description of items found and their location are:

<u>Description</u>	<u>Location</u>
.50-caliber casing and link	N 32°56'57.8" W 115°40'26.3"
.50-caliber tracer bullet	N 32°57'17.4" W 115°40'47.7"
5" Rocket Warhead, MK 1 series	N 32°57'16.7" W 115°40'56.3" (PG 23164 46837)
Possible target center; 3.25" rocket motor, 2.25" rocket motor, 2.25" target rocket, 20mm projectile, TP-T, and scrap from 3-lb miniature practice bombs	N 32°55'25.0" W 115°40'58.3"

We also found, scattered throughout the range, 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors. We notified Range Control when we located the 5" Rocket Warhead. We marked this area and the possible target area and provided the GPS location and type of ordnance items found to the Range Control.

Wednesday, February 21, 1996:

Greg Boghossian from the Los Angeles District Corps of Engineers joined us for the day. Our first stop was at Fred Rivera's office where we informed him of yesterday's findings and provided him with Greg's security letter. Mr. Rivera would like a copy of our trip report, maps of our sites, and a copy of the pictures we took. He will receive this information in a few weeks.

We stopped by the Range Control to find out what happened with the ordnance we found on Tuesday and to pick up a radio. Since the employees at the Range Control are contractors and cannot do anything outside of their contract, we contacted Chief Warrant Officer Durham and informed him of the items found the day before. Mr. Al Wilson faxed him a map with the GPS locations. He then would have someone from his office go to the site today.

An eastern portion of Holtville Target #2 is within the Navy's current Target #95. Between 10:00 am and 11:00 am, when the target is closed for maintenance, we are allowed to do our site visit. We began our site visit just off of Schoneman Road, criss-crossed through the area, covering a good portion of the property. We found several pieces of ordnance related items and scrap, including 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors scattered throughout the area. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
Box fin from M38 100-lb practice bomb	N 33°1'24.5" W 115°18'32.8"
2.25" Target Rocket Motor, 2.25" diameter, 26" long	N 33°1'28.8" W 115°18'31.1"
Scrap from M38 100-lb practice bomb	N 33°1'31.0" W 115°18'29.0"
Most likely, the tail section of MK 21 500-lb practice bomb	N 33°1'39.2" W 115°18'32.2"
Most likely, the nose section of MK 21 500-lb practice bomb	N 33°1'39.2" W 115°18'32.2"
Most likely, the body of MK 21 500-lb practice bomb	N 33°1'39.2" W 115°18'32.2"
Lanyard; top disk is 3¾" diameter; overall diameter is 4¼"; possibly from an aircraft flare	N 33°1'52.3" W 115°18'32.2"
Unidentified stem; possibly part of an aircraft flare or electronic fuze	unknown location

On our return to the jeep, we walked through the location of the circular target as identified on the aerial photos. We found scrap from M-38 practice bombs scattered throughout the area.

After we completed the site visit we met with Mr. Chuck Phillips and his daughter, Mrs. Mathews of the Combat Heritage Museum at the former Holtville Army Air Field. A previous phone call led us to believe that he and his daughter had a list of veterans names, information on the base's history, and inert ordnance. Unfortunately, the documents they had were already looked at when we visited the Pioneers Museum in Imperial. There was no other pertinent information available.

We continued on to **Holtville Target #3**. By the time we reached the site, it was too late to begin the site visit, therefore, we returned to Range Control to turn in the radio. We spoke to Pete, Range Control contract employee, who informed us that the Marine EOD out of Yuma, AZ were called in to detonate the 5" rocket warhead we located the day before. We were also told that there were two detonations, one of the rocket and one of an item located among the scattered ordnance items at the possible target center.

Thursday, February 22, 1996:

We checked in at the Range Control. Mr. Al Wilson informed us that there wouldn't be any training on Target 103A, just north of the Yuma Reclamation Project, between 7:00 am and 11:30 am. Therefore, we could complete the site visit on this site first, Target #78 second, and Target #79 third. Target #78 is within the flight line for the Navy's current Target 103A. If the pilots become nervous about us walking on Target #78, range control would radio us and instruct us to move to Target #79.

After struggling through the sandy wash, we reached the middle of the eastern side of the Yuma Project. We began walking at this point and covered a good sampled portion of the site. We found a few pieces of ordnance related items and scrap. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
.30-caliber bullet, full metal jacket	N 32°50'21.8" W 115°53'47.9" (PG 03262 33829)
Fragment from M38 100-lb practice bomb	N 32°50'25.6" W 115°53'56.3" (PG 03043 33946)
25-lb practice bomb, Mk 76, Mod 5, recent vintage	N 32°50'31.3" W 115°54'26.0" (PG 02269 34113)

We next drove to Bomb Target #78. A jeep trail crosses over the Mining Railroad and through the southern half of the site. From where we parked, we walked north a short distance when we came across what appeared to have been the target area. Scrap from M-38 practice bombs was scattered throughout this area. Also found scattered throughout the area were 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors, .50-caliber casings, .50-caliber armor piercing bullets, and 20mm. The description of other items and their location are:

<u>Description</u>	<u>Location</u>
Scrap from M38 100-lb practice bomb	N 32°55'43.1" W 115°55'32.1" (PG 00452 43695)
View of possible target, facing NE, several pieces of scrap from M38 100-lb practice bombs	N 32°55'51.3" W 115°55'34.3")
25-lb practice bomb w/o tail boom	N 32°55'56.6" W 115°55'8.6"
3-lb Miniature Practice Bomb, AN/MK 23	unknown location
Tail Section from unknown item	N 32°55'58.0" W 115°55'4.6"
Unidentified item; possible target drone	just SW of N 32°55'58.0" W 115°55'4.6"

After completing the site visit on Bomb Target #78, we continued along the jeep trail to the approximate center of Bomb Target #79. The Carizzo Wash runs



through a large portion of the site. In this wash is where we located the remains of a 2.25" Rocket (location: N 32°55'7.3" W 115°57'29.9"). We also found a few pieces of HE frag and pieces from an M-38 100-lb practice bomb.

After completing the site visit on Bomb Target #79, we returned to Range Control to turn in the radio.

**Friday, February 23, 1996:**

Once we picked up a radio from Range Control, we drove to Holtville Target #3. We began our site walk in approximately the center of the northern boundary. We covered a good sampled area of the site while avoiding the heavy vegetation located along the southern side and the middle of the western side. No ordnance related items were discovered on this site.

We traveled to our final site visit, Kane Springs SBT #62. We began walking in the northeast corner and continued south and west through the site. We found several ordnance items, including .50-caliber and 20mm links, .50-caliber and 20mm casings, scrap from M-38 100-lb practice bombs, and .50-caliber bullets. The descriptions and locations of the items found are:

<u>Description</u>	<u>Location</u>
M38 100-lb Practice Bomb	N 33°04'25.1" W 115°47'52.5" (PG 12205 59901)
20mm Casing and M8 links from 20mm	N 33°04'13.9" W 115°48'34.6" (PG 11119 59547)
Concrete blocks from possible target location	N 33°03'50.9" W 115°48'36.7" (PG 11073 58834)

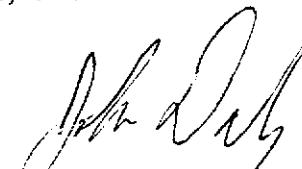
We completed the site visit and returned the radio to Range Control.

**Saturday, February 24, 1996:**

We departed El Centro, CA and returned to St. Louis, MO.

  
Rochelle Ross  
Project Manager

  
Gregg Kocher  
Safety Officer

  
John Daly  
Historian

**APPENDIX M**

**REPORT DISTRIBUTION LIST**

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVES SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

PROJECT NO. J09CA017101

APPENDIX M

REPORT DISTRIBUTION LIST

<u>Addressee</u>	<u>No. Copies</u>
Commander, U.S. Army Engineering and Support Center Huntsville, ATTN: CEHNC-OE-PM P.O. Box 1600 Huntsville, Alabama 35807-4301	2
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, Maryland 21010-5423	1
U.S. Army Technical Center for Explosives Safety ATTN: SIOAC-ES Savanna, Illinois 61074-9639	1
Commander, U.S. Army Corps of Engineers, Los Angeles District ATTN: CESPL-EN-MI (Clinton Chien) P.O. Box 2711 Los Angeles, California 90053-2325	1
CELMS-ED-G	1
CELMS-ED-H	1
CELMS-PD-R	1
CELMS-PM-M	1

REPORT PLATES

ORDNANCE AND EXPLOSIVES  
CHEMICAL WARFARE MATERIALS  
ARCHIVE SEARCH REPORT  
FINDINGS  
FOR  
HOLTVILLE TARGET (BT) NO. 3  
IMPERIAL COUNTY, CALIFORNIA

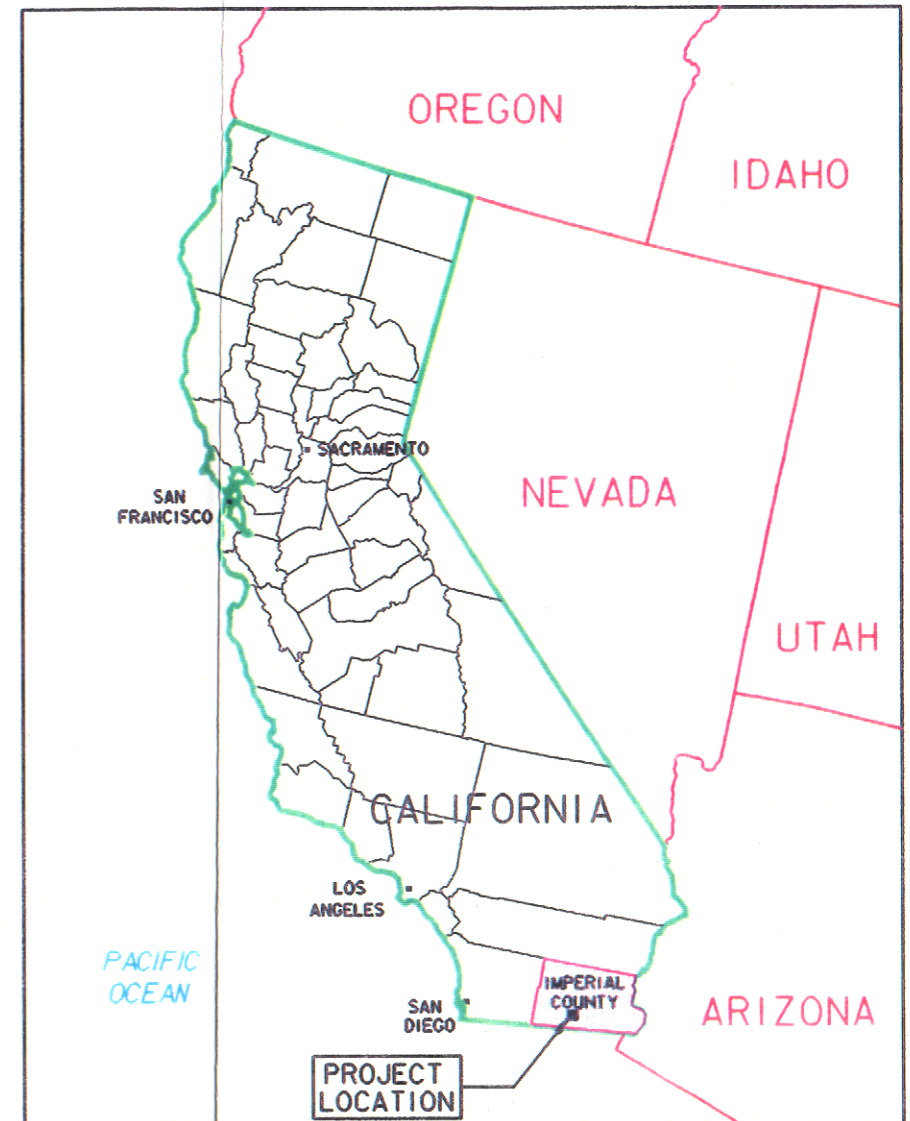
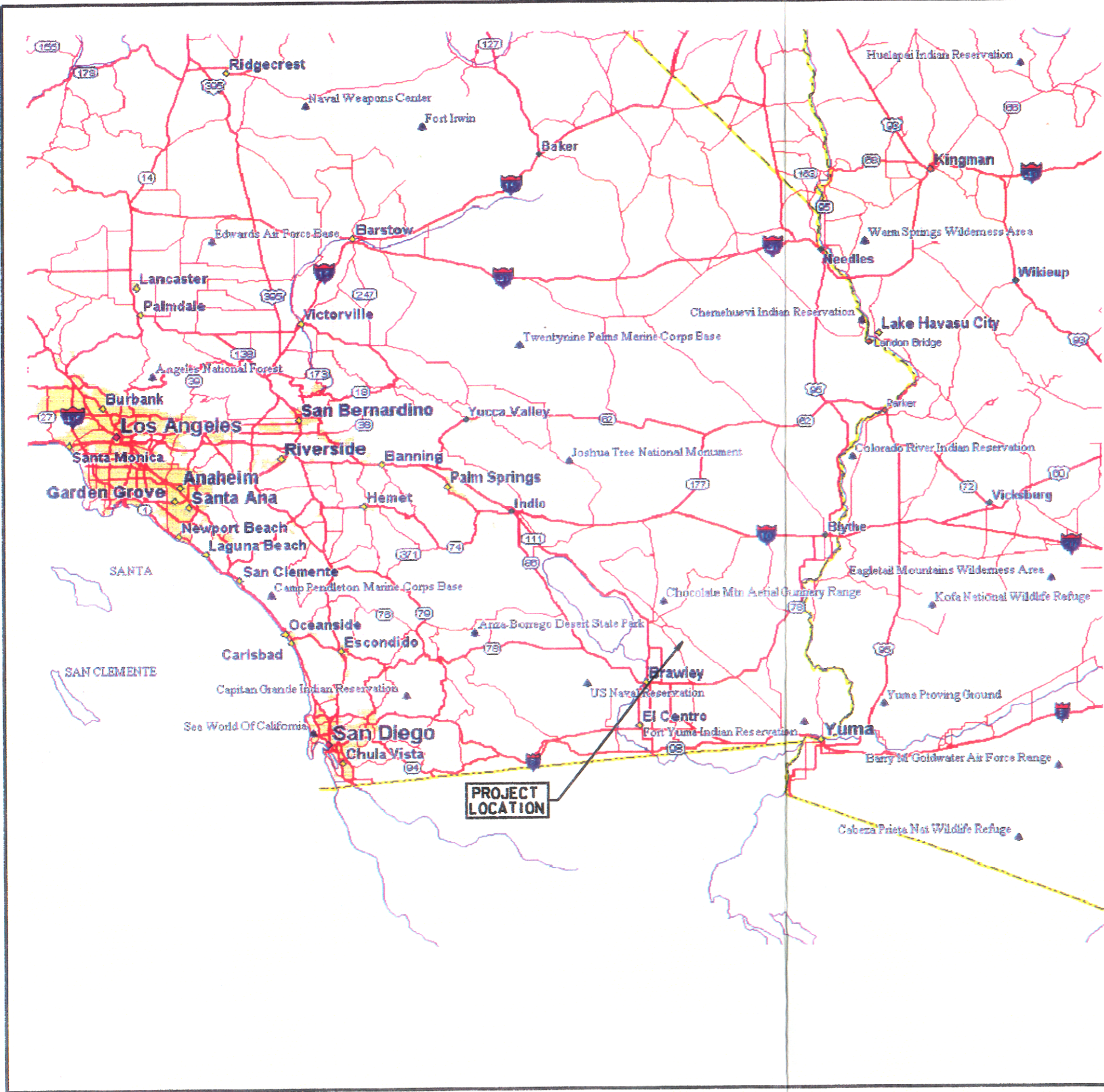
PROJECT NO. J09CA017101

REPORT PLATES

PLATE

DESCRIPTION

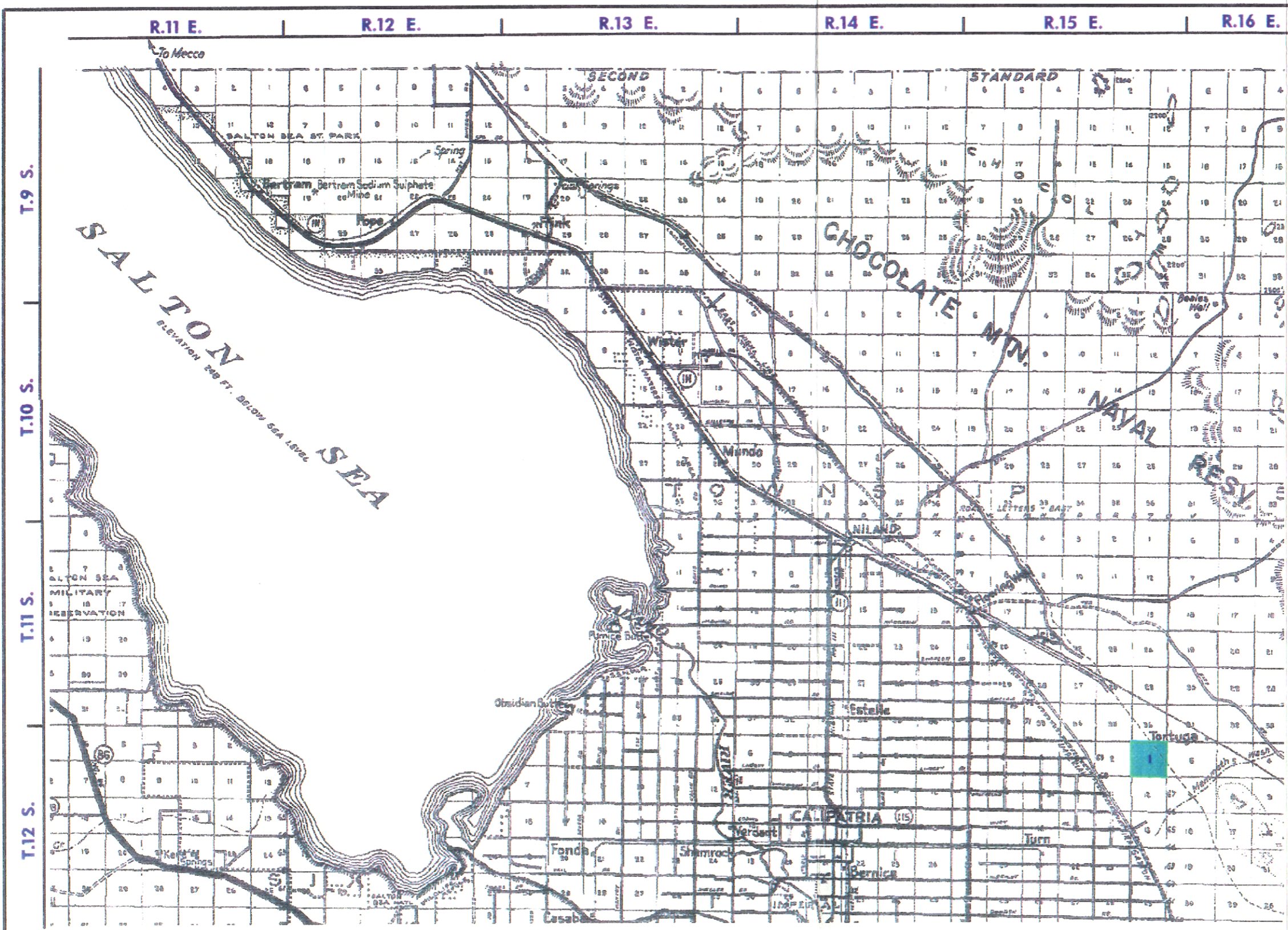
- |   |                                    |
|---|------------------------------------|
| 1 | LOCATION MAP                       |
| 2 | SITE MAP                           |
| 3 | PHOTO LOCATIONS                    |
| 4 | AERIAL PHOTO INTERPRETATION - 1953 |
| 5 | AERIAL PHOTO INTERPRETATION - 1992 |



**PLATE I**

**HOLTVILLE TARGET (BT) NO. 3  
 CALIFORNIA  
 IMPERIAL COUNTY  
 DERP-FUDS# J09CA017101  
 LOCATION MAP**





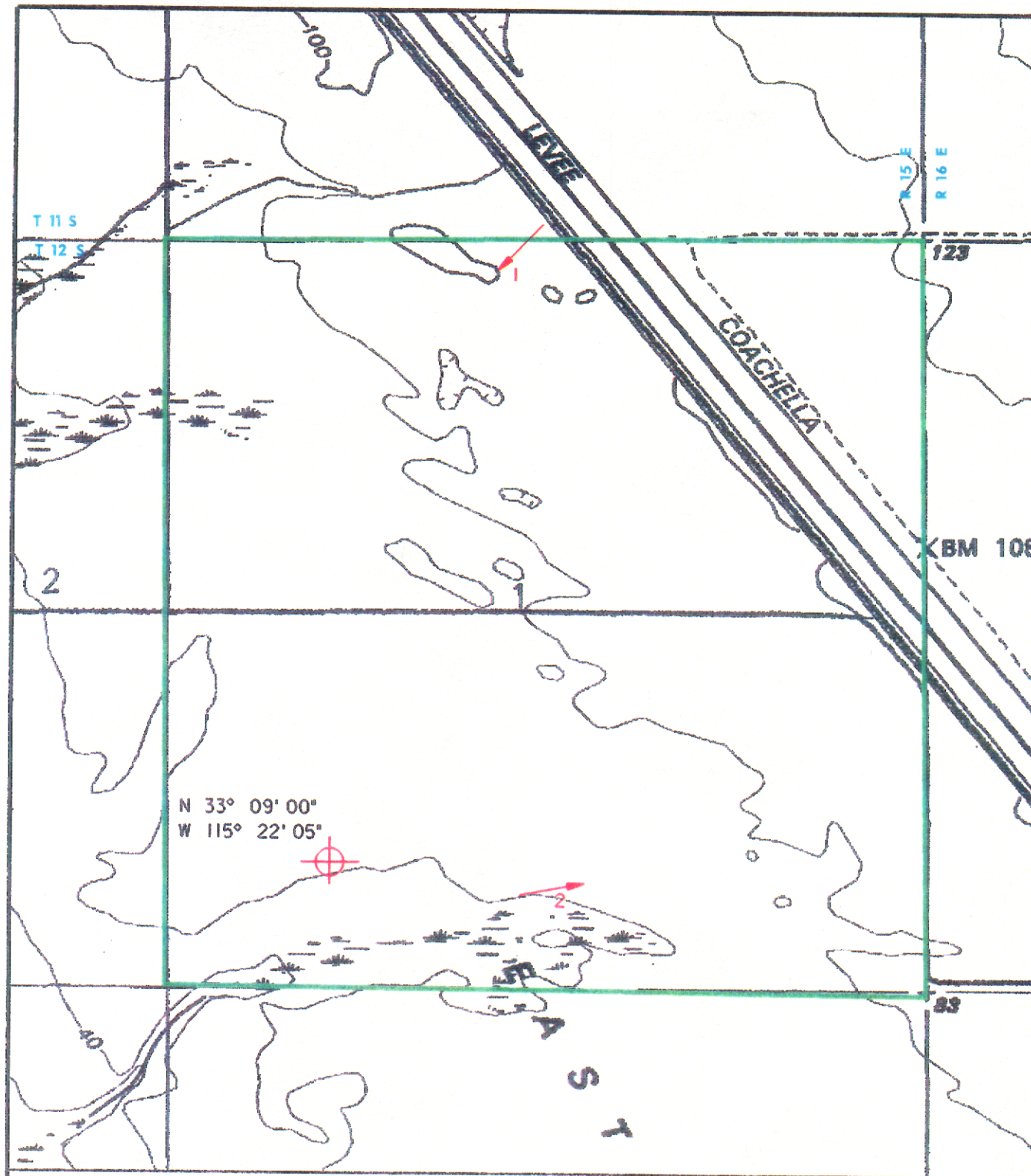
**PLATE 2**

**HOLTVILLE TARGET (BT) NO. 3  
 CALIFORNIA  
 IMPERIAL COUNTY  
 DERP-FUDS# J09CA017101  
 SITE MAP**

NOT TO SCALE

PROJ. DATE: MARCH 1996	DATE OF MAP: UNKNOWN
21-MAR-1996 08:02	m:\oow96b\j2\map\hlt3cnty.dgn





**LEGEND**

→ PHOTO LOCATION

⊕ COORDINATES OF RANGE  
(FROM HISTORICAL DOCUMENTATION)



NOT TO SCALE

**PLATE 3**

HOLTVILLE TARGET (BT) NO. 3  
CALIFORNIA  
IMPERIAL COUNTY  
DERP-FUDS# J09CA017101  
PHOTO LOCATIONS

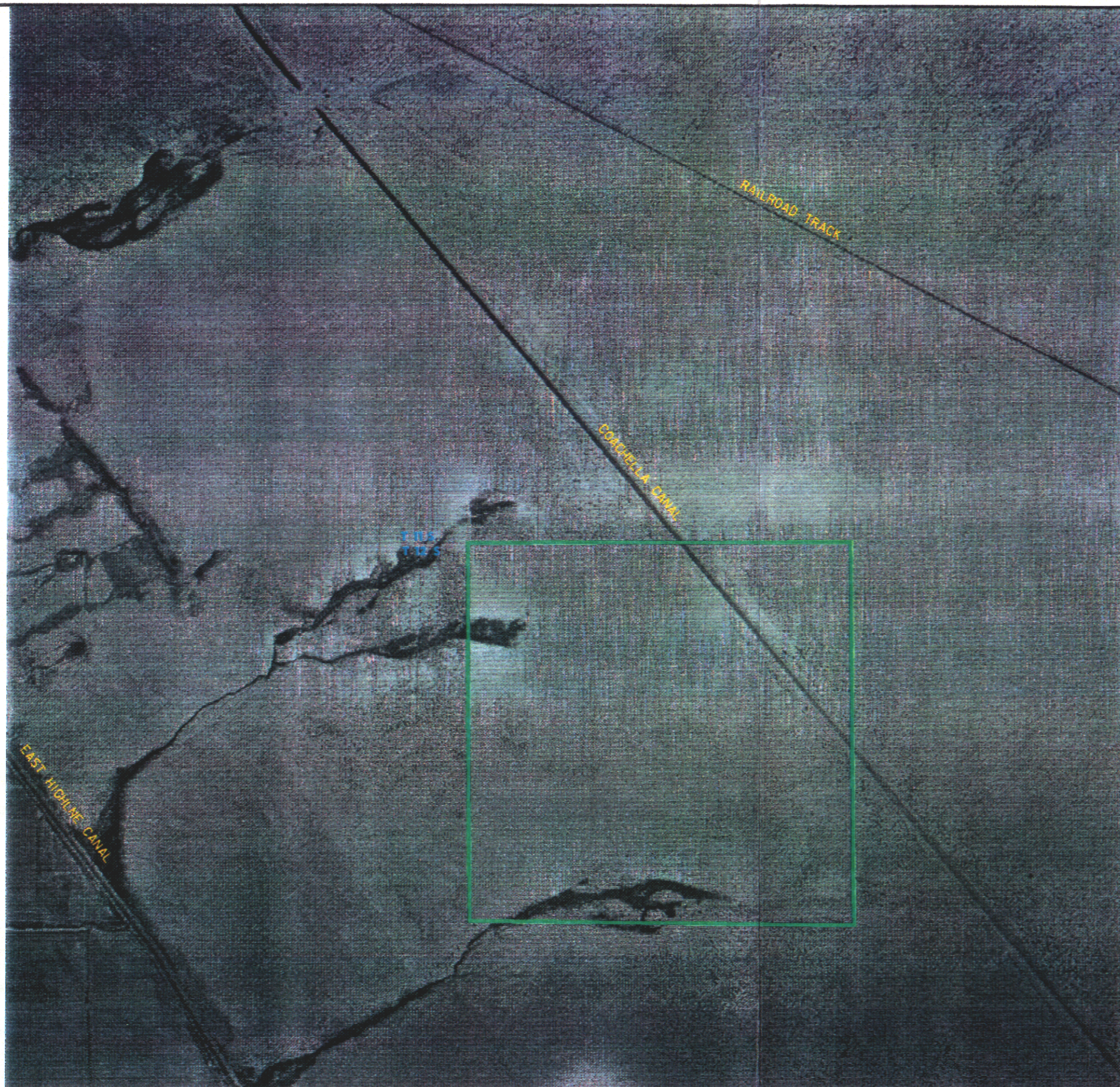
PROJ. DATE: MARCH 1996

DATE OF QUAD: 1992

27-MAR-1996 08:41

n:\oaw96b\j2\quadd\lhf3\_92.dgn





NOTE:  
NO VISIBLE EVIDENCE OF ORDNANCE AND  
EXPLOSIVE (OE) ACTIVITY.

**LEGEND**



SITE BOUNDARY



**PLATE 4**

HOLTVILLE TARGET (BT) NO. 3  
CALIFORNIA  
IMPERIAL COUNTY  
DERP-FUDS# J09CA017101  
AERIAL PHOTO INTERPRETATION  
1953 PHOTO

NOT TO SCALE

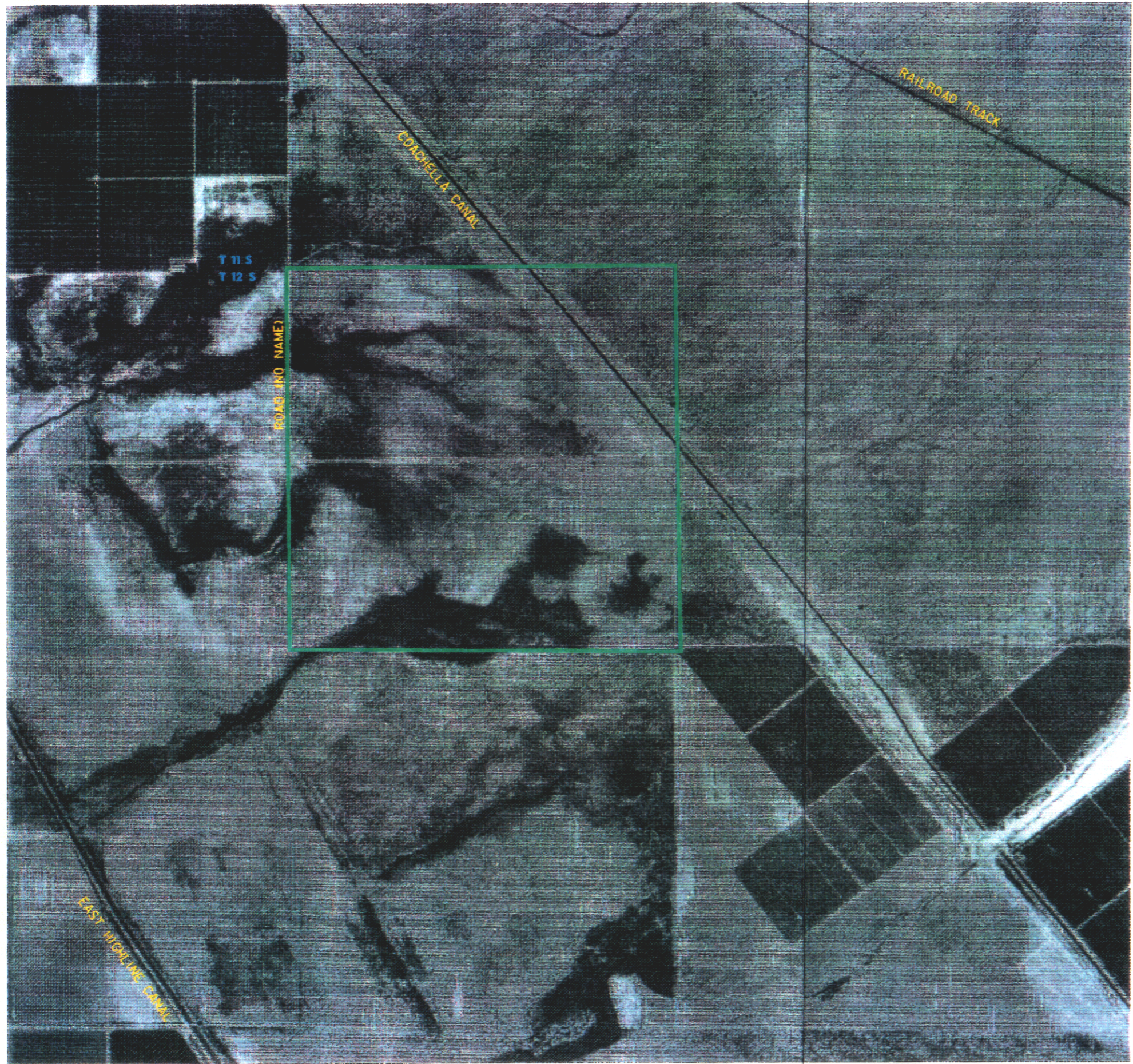
PROJ. DATE: MARCH 1996

DATE OF MAP: 8 MAY 1953

21-MAR-1996 09:14

n:\oew96b\j2\photo\holt3\_53.dgn





NOTE:  
NO VISIBLE EVIDENCE OF ORDNANCE AND  
EXPLOSIVE (OE) ACTIVITY

**LEGEND**

 SITE BOUNDARY



**PLATE 5**

HOLTVILLE TARGET (BT) NO. 3  
CALIFORNIA  
IMPERIAL COUNTY  
DERP-FUDS# J09CA017101  
AERIAL PHOTO INTERPRETATION  
1992 PHOTO

NOT TO SCALE

PROJ. DATE: MARCH 1996	DATE OF MAP: 27 SEPT 1992
21-MAR-1996 09:12	ns:oe96b+j2+photo+holt3.92.dgn