

# Defense Environmental Restoration Program for Formerly Used Defense Sites

Ordnance and Explosive Waste Chemical Warfare Materials

### **ARCHIVES SEARCH REPORT**

#### **FINDINGS**

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

Riverside, California

Site Nos. J09CA001100, J09CA047600 AND J09CAT82600

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# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS

FOR

MARCH AIR FORCE BASE AND ASSOCIATED SITES RIVERSIDE, CALIFORNIA

DERP-FUDS SITE NOS. J09CA001100, J09CA047600, AND J09CAT82600

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#### 1.0 Introduction

#### 1.1 Authority

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 USC 9601 et seq. Ordnance and explosive wastes are included in the CERCLA definition of pollutants and contaminants that require a remedial response.

In 1983, the Environmental Restoration Defense Account (ERDA) was established by Public Law 98-212. This Congressionally directed fund was to be used for environmental restoration at Department of Defense (DOD) active installations and formerly used properties. The DOD designated the Army as the sole manager for environmental restoration at closed installations and formerly used properties. The Secretary of the Army assigned this mission to the Corps of Engineers (USACE) in 1984.

The 1986 Superfund Amendments and Reauthorization Act (SARA) amended certain aspects of CERCLA, some of which directly related to OEW contamination. Chapter 160 of the SARA established the Defense Environmental Restoration Program (DERP). One of the goals specified for the DERP is "correction of environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment."

The DERP requires that a CERCLA response action be undertaken whenever such "imminent and substantial endangerment" is found at:

- A. A facility or site that is owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense.
- B. A facility or site that was under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination.

#### C. A vessel owned or operated by the Department of Defense.

The National Contingency Plan (NCP) was established by the Clean Water Act of 1972. The NCP has been revised and broadened several times since then. Its purpose is to provide the organizational structure and procedures for remedial actions to be taken in response to the presence of hazardous substances, pollutants, and contaminants at a site. Section 105 of the 1980 CERCLA states that the NCP shall apply to all response actions taken as a result of CERCLA requirements.

The March 1990 National Oil and Hazardous Substances Pollution Contingency Plan given in 40 CFR part 300 is the latest version of the NCP. Paragraph 300.120 states that "DOD will be the removal response authority with respect to incidents involving DOD military weapons and munitions under the jurisdiction, custody, and control of DOD."

On April 5, 1990, U.S. Army Engineer Division, Huntsville (USAEDH) was designated as the USACE Mandatory Center of Expertise (MCX) and Design Center for Ordnance and Explosive Waste (OEW). As the MCX and Design Center for OEW, USAEDH is responsible for the design and successful implementation of all Department of the Army OEW remediations required by CERCLA. USAEDH will also design and implement OEW remediation programs for other branches of the Department of Defense when requested. In cooperation with the Huntsville Division the U.S. Army Corps of Engineers St. Louis District has been assigned the task of preparing Archives Search Reports for those Formerly Used Defense Sites (FUDS) suspected of chemical warfare materials (CWM) contamination.

#### 1.2 Subject

March Air Force Base, Site Number J09CA001100, March Air Force Base Rifle Range, Site Number J09CA047600, and March Air Force Base Poorman Range, Site Number J09CAT82600, were located between 5 and 10 miles south of Riverside, California. The Air Force Base is adjacent to old Highway 395 (now Highway 215), the rifle range was north of the base in the Box Springs Mountain area, and the poorman range was located southeast of the base in the Perris Valley. Previous names of March Air Force Base were Alessandro Aviation Field and March Field. After WWII, Camp Haan, Site Number J09CA027900, became part of the air base and was known as West March.

#### 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 the possible use or disposal of chemical warfare materials on the site and documenting the existence of Ordnance and Explosive Waste (OEW). Particular emphasis was placed on establishing the chemical (agent), the type of munitions or container, quantities and area of disposal. Information obtained during this process was used in

developing recommendations for further actions at the site.

#### 1.4 <u>Scope</u>

Camp Haan (West March) and March Field operated in an integrative manner before their consolidation as March Air Force Base (March AFB). The Camp Haan ASR investigated the majority of the FUDS property associated with the region. That ASR identified a piece of property south of the magazine area as an area of concern. This ASR addresses that area and a skeet range buffer zone as March Air Force Base, Site Number J09CA001100. The other two sites are March AFB Rifle Range, Site Number J09CA047600, and March AFB Poorman Range, Site Number J09CAt82600.

#### 2.0 Previous Site Investigations

The Los Angeles District Corps of Engineers (CESPL) prepared INPR's or Findings of Facts for the following sites associated with March Air Force Base:

March Military Airfield (March Air Force Base), Site Number J09CA001100

March Air Force Base Rifle Range, Site Number J09CA047600

March Air Force Base Communication Annex No. 2, Site Number J09CA012000

March Air Force Base ILS Outer Marker, Site Number J09CA012100

March TVOR Annex, Site Number J09CA047900

Lake Mathews Water Line and Retail Stores, Site Number J09CA048000

March Air Force Base Light Annex No. 2, Site Number J09CA212000

Camp Haan, Site Number J09CA027900

Camp Haan Rifle Range, Site Number J09CA028000

Camp Haan and Camp Haan Rifle Range are addressed in a separate ASR, completed September 1994 by St. Louis District Corps of Engineers (CELMS).

An INPR has not been prepared for the March Air Force Base Poorman Range.

Other reports include an Aerial Photographic Analysis of the March Air Force Base Study Area, completed by the EPA, and a Remedial Investigation/Feasibility Study (RI/FS) by Earth Technology Corporation.

Copies of the above INPRs and portions of the other reports are located in Appendix C.

Only those sites addressing OEW and/or CWM will be discussed in this ASR.

#### 2.1 Inventory Project Reports and Findings of Fact

#### 2.1.1 March Military Airfield

This INPR disclosed that the site is still an active DOD installation not eligible for the DERP project. Further research, however, uncovered a few parcels of land that can be considered FUDS.

#### 2.1.2 March Air Force Rifle Range

The rifle range consisted of 648.69 acres of leased and fee owned land in the South half of Section 27 and Section 34, Township 2 South, Range 4 West. It remained in use until 1953.

On November 21, 1991, NBS/Lowry conducted a site visit and later derived a RAC score of 5 for the range.

#### 3.0 Site and Site Area Description

#### 3.1 Location

#### 3.1.1 March Air Force Base

The active portion of March Air Force Base is located 9 miles southeast of Riverside in Moreno Valley. Highway 395 divides the base in half. The northern boundary is Cactus Avenue on the east of Highway 395 and varies on the west side of the highway. The western boundary is just east of Cole Street and the eastern boundary is Heacock street. Nandina is the southern boundary west of Hwy 395 and varies east of the highway. See Figures 2 and 3 for the location and boundaries of the base.

#### 3.1.2 March Air Force Base Rifle Range

The site of the former March Air Force Base Rifle Range was located in the Box Springs Mountain area just north of Highway 60. Clark Street currently divides the site in half. See Figure 2 and Map M-5 for the location and layout.

#### 3.1.3 March Air Force Base Poorman Range

The Poorman Range was located east of the Air Force Base near Lake Perris. It was in Sections 28, 29, 32, and 33 of Range 3 W, Township 3 S. Present day Kine Avenue most likely was the east west divider. Mariposa Avenue dissected the north and south halves of the range. See Figure 3 and Map M-5 for the location and layout of the range.

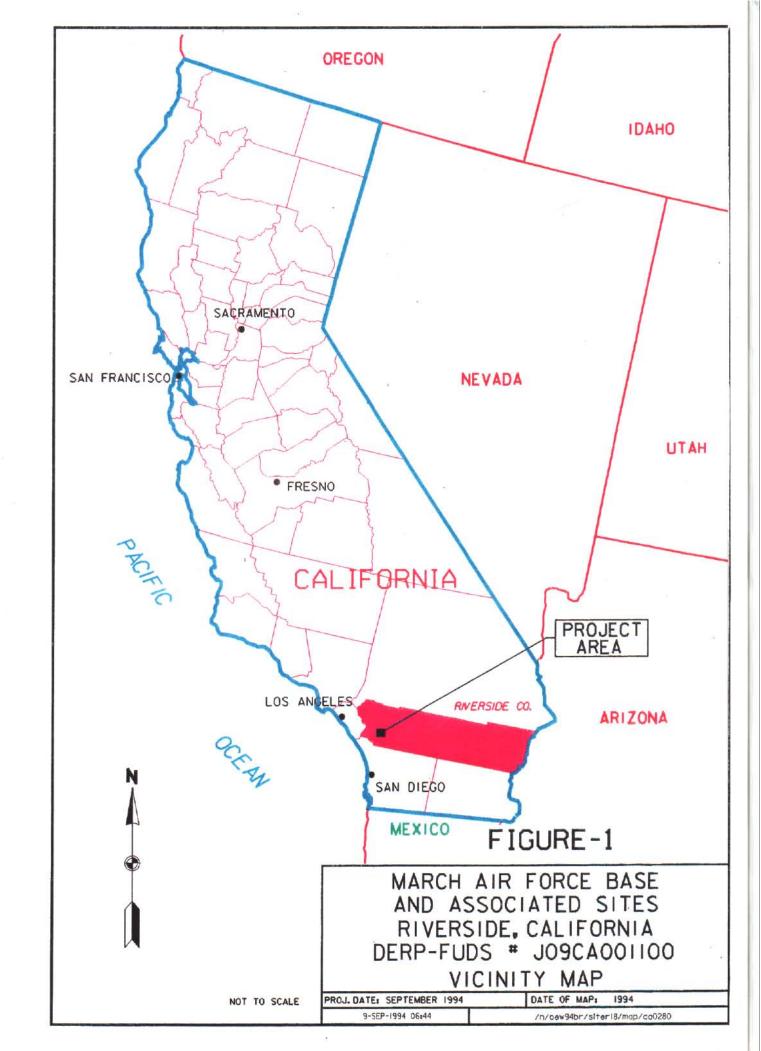
#### 3.2 Past Uses

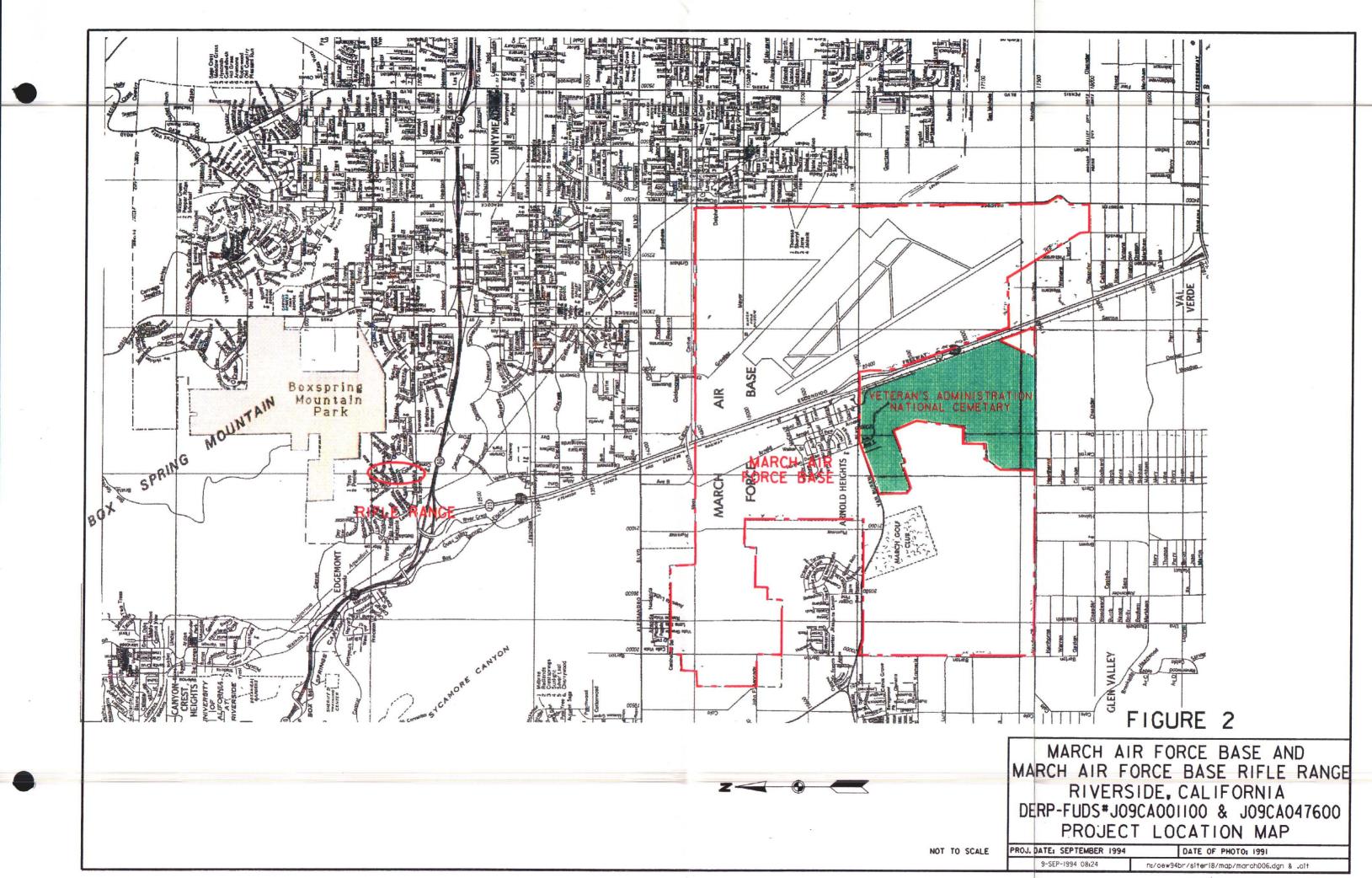
#### 3.2.1 March Air Force Base

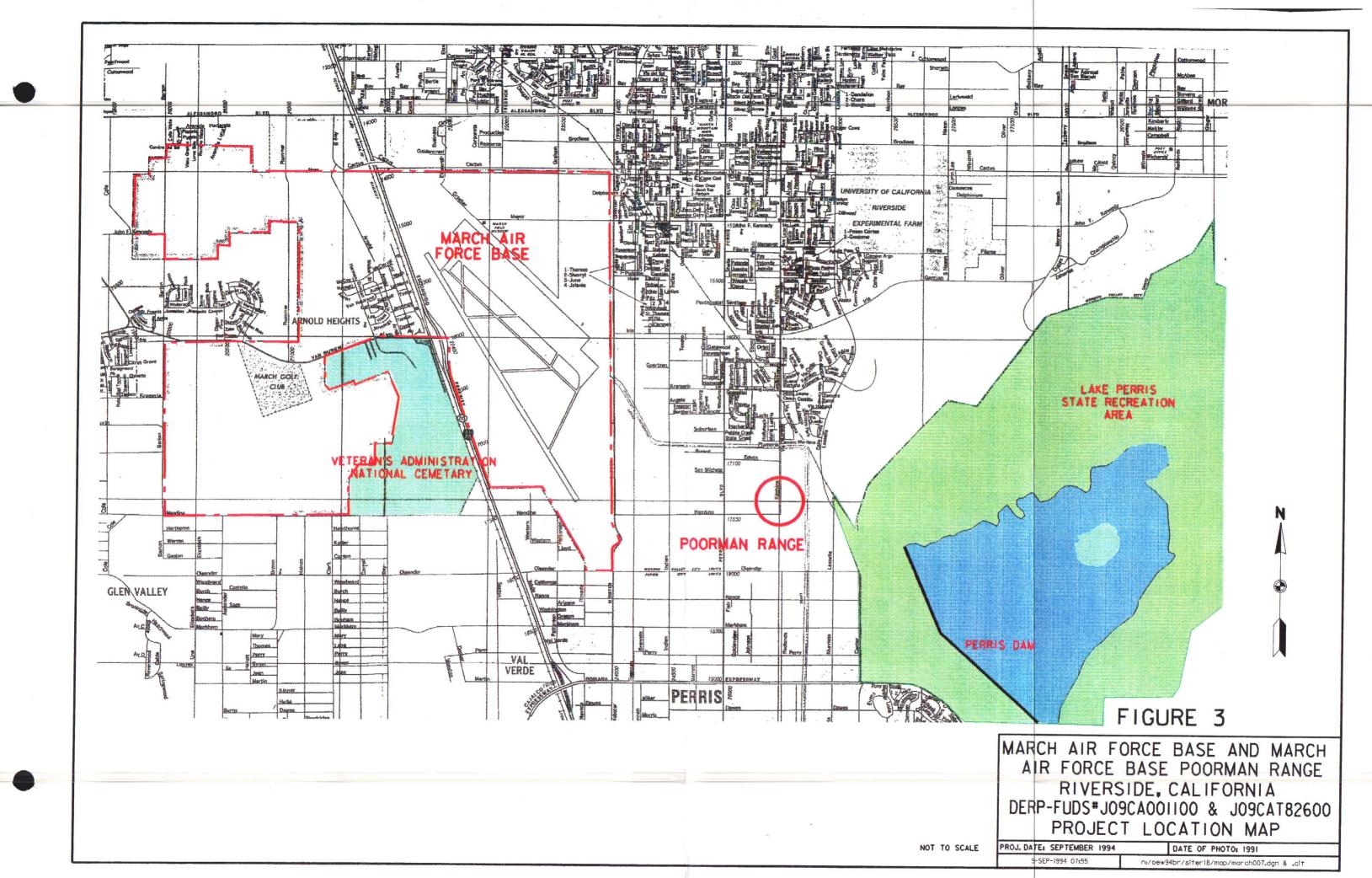
Prior to the government's acquisition, in March 1918, the land that became March Field supported agriculture and the Alessandro Aviation Field. Originally, March Field trained pilots for the "Jenny" biplane, but after the First World War, it focused on bombing and gunnery training. West March, the former Camp Haan, served as an anti-aircraft training facility. See the ASR for Camp Haan, Site Number J09CA027900.

#### 3.2.2 March Air Force Base Rifle Range

Prior to the acquisition, most of the land comprising the rifle range was classified as unimproved. A small parcel was used by the County of Riverside for road and utility purposes. March Field used this range to train troops on the carbine, sub-machine gun, M1903 rifle, pistol, and .50-cal ground machine gun (Mamerow, 1946).







#### 3.2.3 March Air Force Base Poorman Range

Based on the current state of the property, it was probably unimproved prior to the government's acquisition.

#### 3.3 Current Uses

#### 3.3.1 March Air Force Base

The majority of the land which constituted March Field is still an active installation. The Camp Haan ASR studied most of the FUDS property which includes a VA Cemetery, a retirement community, agriculture, businesses, and light industry. The ammunition disposal pit and the skeet range buffer zone constituted the FUDS property not previously addressed. The skeet range buffer zone is an open field and was plowed for planting during the site visit. Residential area is across the street from the location of the ammunition demolition pit. This land is a field with a few drainage ditches and is used by children as a play area.

#### 3.3.2 March Air Force Base Rifle Range

This area is now residential and commercial.

#### 3.3.3 March Air Force Base Poorman Range

The land on the east side of Kine Avenue is undeveloped, and the west side holds a playground, Aroya Park, and some residences.

#### 3.4 Interpretation of Aerial Photography

Photo analysis and land use interpretation were done using the following listed photography.

		Identifier(s)
<u>Scale</u>	<u>Source</u>	Frame(s)
1"=1667	ASCS	2K-171 thru 176
1"=1667	ASCS	5K-7 thru 15,
		5K-69 thru 72
1"=2000'	EROS	1-19 thru 1-24,
		1-70 thru 1-72
		2-54 thru 2-57
1"=2000'	EROS	6-75 thru 6-77,
		6-130 thru 6-135
1"=3000'	Curtis	81 and 82
1"=3000'	Curtis	252 thru 255
1"=3000'	Curtis	522 thru 526
1"=3000'	Curtis	488 and 489,
	1"=1667' 1"=1667' 1"=2000' 1"=2000' 1"=3000' 1"=3000' 1"=3000'	1"=1667' ASCS 1"=1667' ASCS  1"=2000' EROS  1"=2000' EROS  1"=3000' Curtis 1"=3000' Curtis 1"=3000' Curtis

Terrain in the vicinity of March Field is hilly with local relief mostly less than 100 feet. Surface drainage is well developed. Land use is mainly agriculture with large tracts in orchards and much of the rest in grass. Light to moderate residential development is seen.

#### 3.4.1 March Air Force Base

There is one feature of interest, located south of the magazine area. It is seen as a small bare area (about 75' by 75') with a small pit (about 20' by 40') at the south edge and a small black object near the center of the area. The feature is seen only on the 1980 photography. It is not there on the 1966 photography and is covered by new development (drainage ditch/structure) on the 1989 and 1992 photography. This feature may be either a burn area or a burn/burial area. Configuration of the bare area/pit/object is similar to that seen in a larger bare area which is located about 1000 feet east of the weapons storage area.

#### 3.4.2 March Air Force Base Rifle Range

The facility is a known distance (KD) range with target berm to the north and firing lines at 100, 200, 300, and 500 yards south of the target berm. Thus, firing on the range is from south to north toward the target berm and the hill mass beyond. Brief discussion of features Numbered 2 through 6 on photos dated 1966 and shown on Map M-6 are described as:

#### • Feature Number 2:

All of the above mentioned firing lines and target berms are seen on the 1953, 1966, and 1980 photography. There is not much change seen between these years.

#### • Feature Number 3:

In 1953, one small building is seen on the top of a terraced hillside. In 1966, that building and three additional buildings are seen in the vicinity, two of which are at the base of the hill and one is on the side of the hill. These buildings were probably used for storage of targets and other range operation and maintenance materials. In 1980, the building on the side of the hill is not visible, but the other three are.

#### • Feature Number 4:

This feature is a U-shaped lake. There is not much change seen on the photography between the years 1953 and 1980.

#### • Feature Number 5:

Three adjoining square areas, 150 feet on a side, with low walls or revetments on three sides of one square area and on two sides of the other two are seen on the 1953 photos. In 1966 only two of the three are visible. These areas are on the side of a hill without a good access road. There is no significant change between the 1966 and 1980 photography.

#### Feature Number 6:

Feature number 6 is an excavation into the hillside and is first seen on the 1966 photography. In 1980, the excavation appears to be a borrow pit.

The entire area is under development in the 1989 and the 1992 photography. Streets and lots are laid out and graded and some buildings are built.

#### 3.4.3 March Air Force Base Poorman Range

The overall size and location of the assemblage of range facilities seen on the 1966 photography is about the same as shown on the reference map (see Map M-5). However, many individual features, such as berms, shown on the map are not seen on the photography. By this time it appears that operations as a range has ceased and the facilities seen on the photography are either not being used or are being used for another purpose. The Poorman Range area is not covered by the 1953 photography. A brief discussion of features 7 through 12 as seen on the 1966 and 1980 photography follows.

#### • Feature Number 7:

In 1966, this area is a rectangular pond, and is dry by 1980.

#### • Feature Number 8:

In both 1966 and 1980, this feature is a dry depression.

#### • Feature Number 9:

A complex of eight buildings located near the center of the range facility area is seen on the 1966 photography. By 1980 only one building remains. An earth scar, apparently from grading, is seen where the range facilities were located.

#### • Feature Number 10:

An excavation, weathered and dry with scattered small objects of vegetation within, between two parallel roads is seen on the 1966 photography.

#### • Feature Number 11:

This feature, seen only on the 1966 photography, is a line of small objects and/or structures.

#### • Feature Number 12:

In 1966, an area with about eight low structures or ruins of structures is seen.

By 1980, the range facilities are gone. None of the features are recognizable on the 1989 and 1992 photography.

#### 3.5 Map Analysis

The site was analyzed using the following maps.

- (1) Drawing No. PE-750, Plan of March Field, California, Office of the Post Engineer, March Field, California, dated July 1945. An extract from this is designated Map M-5 in this ASR.
- (2) USGS 7.5 minute quadrangle map sheets: RIVERSIDE EAST, CALIF., dated 1967, photorevised 1980; PERRIS, CALIF., dated 1967, photorevised 1979; SUNNYMEAD, CALIF., dated 1967, photorevised 1973, photorevised 1980; STEELE PEAK, CALIF., dated 1967, photorevised 1973, photorevised 1978.

Reference drawing number (1) cited above shows the locations of facilities at March Field. Those pertinent to this analysis are the locations of the rifle range and the poorman range. The terrain/land use summary from photography in Section 3.4 above is confirmed by review of the USGS map sheets cited.

#### 3.6 Demographics of the Area

#### 3.6.1 Center of Activity

March Air Force Base is located near the City of Riverside, Riverside County, California. Riverside has numerous centers of activity such as the Riverside Central Library, Historic Mission Inn Hotel, Riverside Municipal Auditorium, Riverside Art Museum, Jurupa Mountains Cultural Center, California Museum of Photography, Riverside Ballet Theatre, Riverside Municipal Museum, Riverside Community Hospital, Riverside General Hospital University Medical Center, Riverside Plaza, Galleria, University of California at Riverside, La Sierra University, California Baptist College, California Paramedical and Technical College, Riverside Community College, Phillips College, Arlington Park, Don Lorenzi Sports Complex, Lincoln Park, and other numerous recreational facilities throughout the community.

#### 3.6.2 Population Density

CITY: Riverside

**COUNTY: Riverside** 

AREA:

74 sq.mi.

7,214 sq.mi.

POPULATION:

226,505

1,170,413

POP DENSITY: 3,061 persons/sq.mi.

162 persons/sq.mi.

Population and area are based on the U.S. Department of Commerce, Bureau of the Census, 1990 statistics, and telephone interviews.

#### 3.6.3 Type of Businesses

A review of both telephone interviews and County Business Patterns (1990) assisted in developing a business profile of the area. The City of Riverside is diversified. The largest employers are Borden Cabinet Company, woodwork; Fleetwood Enterprises, modular homes manufacturer; Parkview Community Hospital, medical services; Riverside Community Hospital, medical services; and Toro Company, sprinkler and nozzle manufacturer.

#### 3.6.4 Type of Industry

Riverside is an economically diverse community. The community supports governmental, light manufacturing, retail and service, and wholesale sectors.

#### 3.6.5 Type of Housing

Housing in Riverside is composed of both single and multi-family homes.

#### 3.6.6 New Development in the Area

Development in the area includes small businesses, office parks, and residential growth.

#### 3.6.7 Cross-Section of Population

The population in Riverside is diverse. The percent of those under the age of 18 is 29%, over 65 years is 8.9%. The median age is 29. Approximately 60.6% of the population is White, 7.4% Black, 26% Hispanic, .8% American Indian or Eskimo, and 5.2% Asian or Pacific Islander. There are approximately 80,240 housing units with a median value of \$134,800. The work force, based on the number of establishments, of Riverside County is broken down into the following: manufacturing, 19.6%; non-manufacturing, 72.7%; agriculture, 2.7%; and other non-agriculture, 5%.

#### 4.0 Physical Characteristics of the Site

#### 4.1 Geology/Physiography

March Air Force Base is located in the northern portion of the Peninsular Range province, as defined by the California Division of Mines and Geology. The eastern portion of the site is located at the western edge of the Perris Valley, characterized by flat topography and sandy alluvial deposits derived from the surrounding granitic mountains. The western part of March Air Force Base is located on the Perris Erosional Surface (Earth Technology Corporation, Inc., 1992), characterized by thin or non-existent soils on high relief surfaces of the shallow Cretaceous and older granite and granodiorite bedrock.

The area is seismically active, and is underlain by the generally northwest-trending Elsinore-Chino fault system. Past movement along the faults of this system have been right lateral with variable dip-slip movement. The faults of the region tend to act as barriers to ground water aquifers.

Bedrock geology under the site consists of Cretaceous and older granite and granodiorite and metamorphic crystalline rock. Alluvial valley fill of the Perris Valley is a significant aquifer, and is currently under remediation (RI/FS) under March Air Force Base Basewide Installation Restoration Plan for contamination from a wide variety of sources related to base activities. Coalescing alluvial deposits range from 10-feet to greater than 400-feet, with coarse grained deposits typically occurring at depths greater than 50-feet below ground surface (BGS). Interfingering stratigraphy within the valley fill occurs with silty sands, sandy silts and occasional silty clay lenses, particularly in the upper 50-feet (Kissane, 1993).

The western portion of the site is characterized by weathered and jointed bedrock exposures and shallow soil deposits typical of erosional surfaces in the region. The surface exposures are generally rounded outcrops with associated rounded detached boulders.

#### 4.2 Soils

The major near-surface soil associations present in the March Air Force Base area are the Cieneba-Rockland-Fallbrook and the Monsarate-Arlington-Exeter (Tetra Tech, Inc., 1992.) Both are shallow (1 to 3-feet thick) well-drained silty sands. The Cieneba-Rockland-Fallbrook association is formed on the upland slopes of the Perris Erosional Surface. The Monsarate-Arlington-Exeter association typically overlies a discontinuous hardpan layer in the alluvial valley of the eastern portion of the site.

Thicker deposits of soil are present in the alluvial valley and in small depressions of the Perris Erosional Surface. These soils are typically fine to medium grained silty sands (USCS soil type SM). There are some discontinuous lower permeability silty sandy clay deposits present within the weathered alluvium and as linings in the bottoms of small depressions within the uplands as well. Where the latter occurs the result is a small ephemeral pond or

wetland marsh.

#### 4.3 Hydrology

The terrain of the March Air Force Base area is hilly with numerous tributaries running throughout. An elevation range of about 250 feet exists in the area with a high elevation of about 1750 feet NGVD and a low elevation in the area of about 1500 feet NGVD. The airport and runways are located on the eastern side of the area which is lower and flatter.

The numerous tributary streams drain the area into either the Gage Canal or the Colorado River Aqueduct. The Gage Canal and the Colorado River Aqueduct both empty into the Santa Ana River. A maximum peak flow of 19,500 cfs occurred on the Santa Ana River at Mission Blvd. at Riverside. This peak flow was recorded on February 18, 1980. The drainage area of the Santa Ana River at this location is 810 square miles.

#### 4.4 Ground Water

The alluvial valley fill present in the eastern portion of the site is part of a large local aquifer. Based on the ongoing investigations underway as part of March Air Force Base's RI/FS general conditions appear to be those of a single shallow hydraulically-interconnected system acting as a leaky semi-confined aquifer (Figure 4.1.). The interfingering stratigraphy of the alluvial aquifer has caused difficulty in characterization during the RI/FS. Ground water levels within the valley are seasonably dynamic, and react to recharge from adjacent highlands and well pumping. Ground water levels in the valley appear to be slightly higher each year, possibly attributable to a combination of long term cycles of climatic patterns, decreased pumping from wells following organization of a local water supply district and the aquifer remediation efforts in the area.

Ground water flow direction varies within the valley depending upon the subsurface water budget and the effect of bedrock topography. It is currently thought that the ground water surface trends toward a low in the southwest edge of the valley, although at a very slight gradient. Ground water depths in the western area of the valley (the eastern edge of March Air Force Base) are in the range of 40 to 50-feet BGS.

Surface and bedrock topography determine the depth and gradient of ground water in the portion of the site on the Perris Erosional Surface Figure 4.2.) The crystalline bedrock underlying the site is not considered to be a ground water producer. The ground water surface occurs in the soil overlying bedrock sub-parallel to the bedrock and ground surface. Depth to ground water varies from at or near the ground surface to 40-feet BGS. Several small marshy areas and seasonal springs exist in the western portion of the site. Drainages have been modified by recent residential developments in the area as well.

Hydraulic conductivity of the alluvial aquifer at the site varies widely at the site in the range of 10<sup>-2</sup> to 10<sup>-4</sup> cm./sec., generally increasing with increasing depth below ground surface.

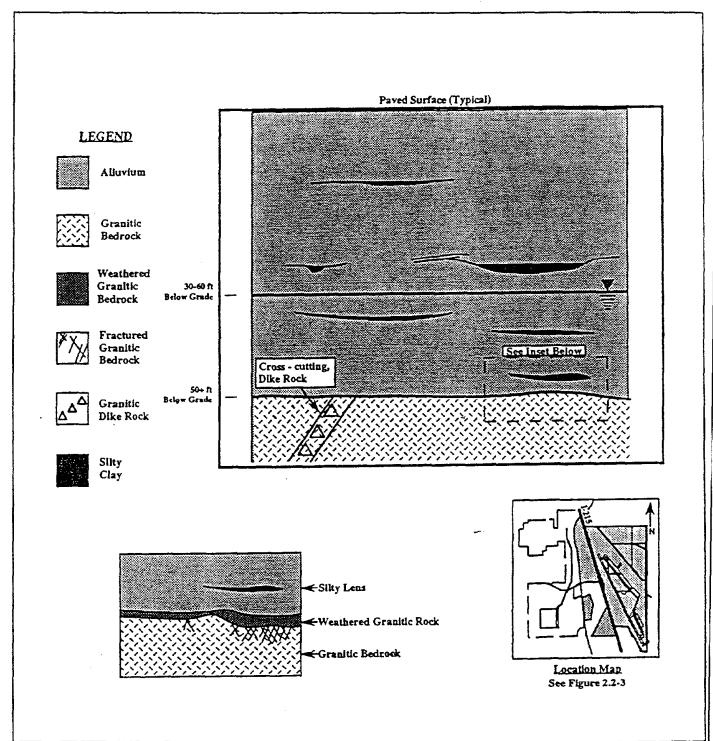


Figure 4.1. Generalized schematic of alluvial aquifer at March Air Force Base, California. Schematic does not represent relative frequency or areal extent of silty leses. Paved surface is flightline runway/taxiway. (After Tetra Tech, Inc., 1992.)

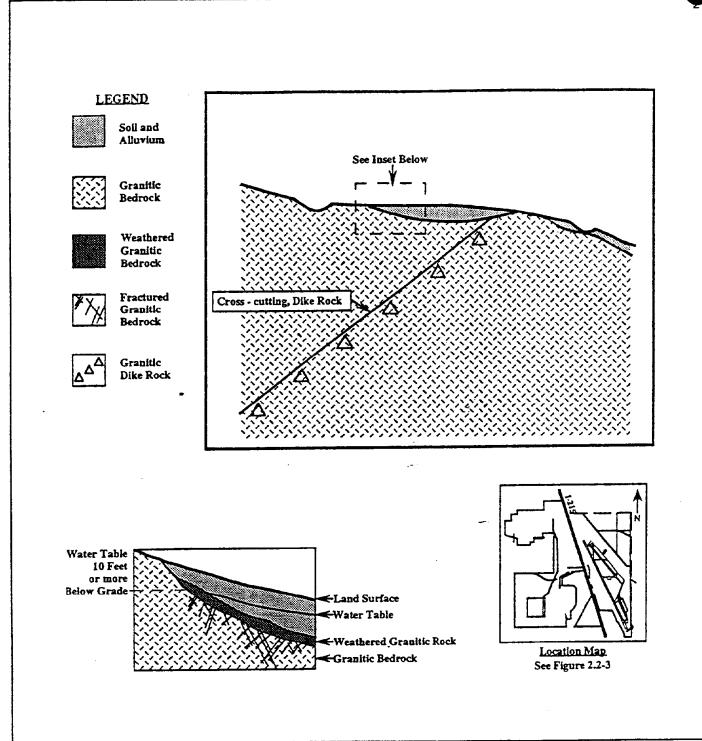


Figure 4.2. Generalized schematic of geology of Perris Erosional Surface showing relationship of ground water surface to topography and bedrock surface. (After Tetra Tech, 1992.)



Hydraulic conductivity in the Perris Erosional Surface, likewise, varies greatly in the same range.

#### 4.5 Weather

Riverside is located within the Los Angeles coastal basin. The Pacific coast is the primary moderating influence. The coastal mountain ranges lying along the north and east sides of the Los Angeles coastal basin act as a buffer against extremes of summer heat and winter cold occurring in the desert and plateau regions in the interior.

The daily temperature range is usually less than 15 degrees in the spring and summer and about 20 degrees in the fall and winter. Nighttime temperatures are generally cool but minimum temperatures below 40 degrees are rare. The highest recorded temperature of 112 degrees occurred June of 1990 while the lowest recorded temperature of 28 degrees occurred during January of 1949.

Precipitation occurs mainly in the winter. Snow, ice and hail, are extremely rare, and the maximum recorded amount consisted of 0.3 inches in January of 1949. Most of the rainfall occurs in January with an average of about 3.7 inches while July is practically rainless. Measurable rain may fall on about one day in four from late October into early April. The maximum 24 hour precipitation of 6.11 inches occurred in January of 1956.

The average monthly wind velocity is 6.2 miles per hour and the prevailing wind direction is west. The maximum wind velocity usually occurs during March with an average of 7.0 mph and the minimum usually occurs during August and September with an average of 5.3 mph. During the fall, winter, and spring, gusty dry northeasterly Santa Ana winds blow over southern California mountains and through passes to the coast. These winds produce extremely dry air and dust clouds. At times the lack of air movement combined with temperature inversion is associated with concentrations of air pollution.

Climatological data for the area are summarized in TABLE 4-1. Data were collected at the National Weather Service meteorological station at Los Angeles Civic Center, California.

#### 4.6 Ecology

The information provided for these sites has been compiled from the U. S. Fish and Wildlife Service and the California Department of Fish and Game-Natural Diversity Data Base: Rarefind.

The U.S. Fish and Wildlife Service lists the Stephens' kangaroo rat (<u>Dipodomys stephensi</u>), bald eagle (<u>Haliaeetus leucocephalus</u>), American peregrine falcon (<u>Falco peregrinus anatum</u>), Artic peregrine falcon (<u>Falco peregrinus tundrius</u>), least Bell's vireo (<u>Vireo bellii pusillus</u>), California gnatcatcher (<u>Polioptila californica californica</u>), Southwestern willow flycatcher (<u>Empidonax trailii extimus</u>), Southwestern arroyo toad (<u>Bufo microscaphus californicus</u>),

unarmored threespine stickleback (<u>Gasterosteus aculeatus williamsoni</u>), slender-horned spineflower (<u>Dodecahema leptoceras</u>), Santa Ana River woolly-star (<u>Eriastrum densifolium ssp. sanctorum</u>), California Orcutt grass (<u>Orcuttia californica</u>), San Diego button celery (<u>Eryngium aristulatum var. parishii</u>), Gambel's watercress (<u>Rorippa gambelii</u>), marsh sandwort (<u>Arenaria paludicola</u>), Riverside fairy shrimp (<u>Steptocephalus woottoni</u>), vernal pool fairy shrimp (<u>Branchinecta lynchi</u>), and Delhi Sands flower-loving fly (<u>Rhaphiomidas terminatus abdominalis</u>) as listed or proposed species known to occur in Western Riverside County. It should be noted that least Bell's vireo critical habitat occurs along the Santa Ana River in Riverside County. Sixty-three Federally listed candidate species may also be found in the vicinity of the project area (see attachment).

State recognized species and communities include: San Diego horned lizard (<u>Phrynosoma coronatum blainvillei</u>), black shouldered kite (<u>Elanus caeruleus</u>), Western yellow billed cuckoo (<u>Coccyzus americanus occidentalis</u>), tricolored blackbird (<u>Agelaius tricolor</u>), Coopers hawk (<u>Accipiter cooperii</u>), long eared owl (<u>Asio otus</u>), California gnatcatcher, orange throated whiptail (<u>Cnemidophorus hyperythrus</u>), Stephen's kangaroo rat, Arroyo chub (<u>Gila orcutti</u>), Santa Ana sucker (<u>Catostomus santaanae</u>), Munz's onion (<u>Allium munzii</u>), Southern cottonwood willow riparian forest, and Southern sycamore alder riparian woodland.

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.

CLIMATOLOGICAL DATA FOR LOS ANGELES, CALIFORNIA CIVIC CENTER TABLE 4-1

Month	Ave	p. (F) erage aily Max	Average Monthly Mean	PRECIP. Average (inches)	Wind Velocity (mph)	Wind Direction
Monui	141111	IVIAA	Mean	(menes)	(mpn)	Difference
Jan	47.7	66.6	57.2	3.69	6.8	NE
Feb	49.2	68.5	58.9	2.96	6.9	W
Mar	50.2	68.7	59.5	2.35	7.0	W
Apr	53.0	70.9	62.0	1.17	6.6	$\mathbf{W}$
May	56.6	73.2	64.9	0.23	6.3	W
Jun	60.4	77.9	69.2	0.03	5.7	W
Jul	64.3	83.8	74.1	0.00	5.4	W
Aug	65.3	84.1	74.7	0.12	5.3	W
Sep	63.7	83.0	73.4	0.27	5.3	W
Oct	59.2	78.5	68.9	0.21	5.7	W
Nov	52.7	72.7	62.7	1.85	6.4	$\mathbf{w}$
Dec	48.4	68.1	58.3	1.97	6.6	NE
Annual	55.9	74.7	65.3	14.85	6.2	W

Source: NOAA 1992. Local Climatological Data of Los Angeles, California at the Civic Center. ISSN 0198-0920.

#### 5.0 Real Estate

#### 5.1 DOD Ownership

#### 5.1.1 March Air Force Base

On March 23, 1918, the U.S. Army established March Field by assuming control of the Alessandro Aviation Field. The initial acquisition totaled 640 acres, but in late 1940, the field needed 950 acres to extend the runways.

After WWII, March Field (soon to be called March Air Force Base) acquired 7,800 acres when the army excessed Camp Haan. This acquisition, referred to as West March, nearly doubled the size of March Field (Saunders, 1993). Consequently, between 1940 and when March Field began acquiring land from Camp Haan, the airfield's size greatly increased, but research failed to locate the exact transactions.

In 1947, March Field's bomb storage facilities moved to the former Camp Haan magazine area, and the airfield acquired additional land for a safety zone (Crane, 1947).

In 1974, DOD declared 1593 acres of West March (formerly Camp Haan) excess. Of this land, the Veterans Administration acquired 757 acres for a cemetery. Other FUDS properties are now agricultural, residential, commercial, and light industrial.

March Air Force Base's present size is 7,123 acres (Earth Technology Corporation (ETC), 1992).

#### 5.1.2 March Air Force Base Rifle Range

Based on the information provided by the INPR, the rifle range consisted of 610.07 leased acres and 38.62 acres transferred from the Department of Interior (DOI) for a total of 648.60 acres. Construction for the range began in 1943, and soldiers used it until 1953. It was completely disposed of by 1956 (Mamerow, 1946).

#### 5.1.3 March Air Force Base Poorman Range

The single reference obtained during research identifying the Poorman Range was a Plan of March Field, dated July 1945, Drawing Number PE-750. Based on this map, the range was located in Sections 28, 29, 32, and 33 of Township 3 South, Range 2 West. The latitudinal line of Mariposa Avenue divided the northern and southern halves and Kine Avenue divided the eastern and western halves. From this map, the land which comprised the Poorman Range was 2640 feet by 2640 feet; or 160 acres.

Map M-5 shows the details of the Poorman Range.

#### 5.2 Present Ownership

#### 5.2.1 March Air Force Base

A majority of the Air Force Base is still active. Most of those areas not under DOD jurisdiction are FUDS properties which were addressed in the Camp Haan ASR. The Veterans Administration (VA), Air Force Village West are two of the larger current owners. The rest of the FUDS property (see Map M-8 for location of the FUDS) is residential, industrial, or agricultural. That location which had been an ammunition demolition pit (see Map M-2) is a field with a few drainage ditches throughout and is near the habitat of the endangered species, Kangaroo rat. Across the street is a residential area.

#### 5.2.2 March Air Force Base Rifle Range

The rifle range was located in Box Springs Mountain. Clark Street presently bisects the former range. This area is now residential and commercial.

#### 5.2.3 March Air Force Base Poorman Range

The land which was occupied by the Poorman Range is vacant east of Kine Avenue. West of Kine Avenue are residences and Aroya Park.

#### 5.3 Significant Past Ownership other than DOD

There is no other significant past ownership other than DOD.

#### 6.0 OEW/CWM Site Analysis

#### 6.1 Historical Summary of OEW/CWM Activities

Numerous documents located during the archives search indicate that the potential for OEW/CWM contamination at March Air Force Base exists.

March Air Force Base, formerly March Field, was established in 1918. March Air Force Base is still in operation today.

Several types of units have been assigned to the base since its activation, including Aero Squadrons, Bomb Squadrons and Groups, Service Squadrons, and Weapons Squadrons (Department of Air Force, n.d.).

March Field primarily trained pilots of the "Jenny" biplanes for the First World War. The base was in caretaker status between April 1923 through March 1927. The base then prepared for bomber crew training, its primary focus during WWII. In 1938, March Field served as the central base for West Coast bombing and gunnery training. In late 1940, an anti-aircraft training facility, known as Camp Haan, was established across the highway from March Field. This camp later was added to March Air Force Base and became known as West March (Saunders, 1993).

#### 6.1.2 OEW Activities

#### 6.1.2.1 March Air Force Base

Historical records indicate that conventional ordnance was present and used in training at March Air Force Base. The base contained numerous ordnance warehouses, magazines and igloos (Corps of Engineers, 1943). Records did not indicate the amount or types of ordnance and munitions stored in these buildings. In 1947, the Bomb Storage Area on-March Field (see Map M-3 for location) was relocated to the storage facilities on Camp Haan (West March). In addition, troops stationed at the base used a skeet range, a rifle range, and a poorman range (Crane, 1947).

The skeet range was located on the northern edge of the base, east of the former Bomb Storage area. The buffer zone for this range is now FUDS property.

Aerial photos and maps identified an ammunition demolition pit located southwest of the current magazine area on FUDS property (EPA, 1992).

#### 6.1.2.2 March Air Force Base Rifle Range

Soldiers fired carbines, sub-machine guns, M1903 rifles, pistols, and .50-cal ground machine guns. At the range, targets consisted of 7 type E sub-machine targets, pistol targets (silhouette),

and 24 type L pistol targets (1,000 inch) (Mamerow, 1946).

#### 6.1.2.3 March Air Force Base Poorman Range

Based on the drawing referenced in Section 3.5 and Map M-5 of this ASR, the Poorman Range consisted of a .30 and .50 cal. turret machine gun range.

#### 6.1.3 CWM Activities

#### 6.1.3.1 March Air Force Base

Historical records reveal that chemical warfare material were present and that chemical warfare training was conducted at March Air Force Base. Numerous CWS units were activated, stationed, and trained at the site. To meet the needs of chemical warfare training, magazines for chemical munitions and toxic chemicals were constructed on land still owned by the DoD. Chemical warfare materials known to have been shipped to and stored at the base are as follows (Bartron, 1939; Mason, 1938, 1939):

Gas Identification Sets (Detonating)
Gas Identification Sets, M1 samples
CN Capsules
HC Smoke Pots
M1 Smoke Pots
FS, FM Drums (smoke agent)
Decontamination Apparatus

Chemical Warfare ammunition expended between December 1936 and January 1940 consisted of the following (Robbins, 1937 and 1938; Wakefield, 1940):

between December 31, 1936 and July 1, 1937 CN capsules (30)
CN (430 lbs)
Ethylene (3850 lbs)
FM (770 lbs)
FS (10,500 lbs)
between July 1, 1937 and December 31, 1937 FS (6,200 lbs)
between January 1, 1939 and January 1, 1940 Smoke pots, HC, M1
Capsules, CN
Sulfur Trioxide Chlor Acid Smoke (FS)

6.1.3.2 March Air Force Base Rifle Range

None of the records researched indicated that any CWM activity occurred at the rifle range.

6.1.3.3 March Air Force Base Poorman Range

None of the records researched indicated that any CWM activity occurred at the poorman range.

#### 6.2 Records Review

## National Archives Washington D.C.

- RG 160 Army Service Forces.

  No pertinent information.
- RG 337 Army Ground Forces.

  No pertinent information.
- RG 407 Records of the Adjutant General's Office.

  No pertinent information.
- RG 225 Joint Army and Navy Boards and Committees.

  No pertinent information.
- RG 153 Records of the Office of the Judge Advocate General(Army).

  No pertinent information.
- RG 270 Records of the War Assets Administration. Real property disposal.

#### National Archives Suitland Branch Suitland, MD

- RG 77 Office of the Chief of Engineers.
  Building schedule
- RG 407 Records of the U.S. Army Adjutant General's Office
  Information on 54th and 754th Chemical Companies
- RG 175 Records of the Chemical Warfare Service.

  Information on chemical weapons munitions and equipment.

# National Archives Pacific Southwest Region Laguna Niguel, CA

- RG 77 Office of the Chief of Engineers.

  Maps and property disposal.
- RG 92 Records of the Office of the Quartermaster General.

  No pertinent information.
- RG 270 Records of the War Assets Administration.
  Real property disposal and maps.

National Archives Pacific Sierra Region San Bruno, CA

- RG 121 Public Buildings Service Real property disposal files
- RG 291 Records of the Federal Property Resources Service Real property disposal files

#### National Personnel Records Center St. Louis, MO

RG 342 - Air Force Commands, Activities, and Organizations, U.S. No pertinent information.

Accessions: 342-57H-3001 Box 23 of 23

Real estate for rifle range

342-44A-6005 File March AFB 600.1

Real estate for magazine area safety zone

## Washington National Records Center Suitland, MD

RG 341 - Headquarters U.S. Air Force (Air Staff). Camp Haan building listing.

#### **Local Research Locations**

Riverside, CA: Riverside Press Enterprise Newspapers.

March Air Force Base: March Air Force Base Museum

These locations contained general historical information in clippings files and microfilm.

#### 6.3 <u>Summary of Interviews</u>

Appendix E contains interviews conducted before and during the site visit.

#### 6.4 Site Visit

On April 21, 1994, the inspection team of Rochelle Ross and George Sloan conducted interviews and research at the Environmental Office with John Sabol and the Real Estate Office with Benedetta Caiazza. The team first met with John Sabol to review information discovered on March AFB including a Poorman's Range (no site number) east of the base, a Rifle Range (Site Number, J09CA047600) north of the base, and activities which occurred just south of the Weapons Storage Area (WSA). John confirmed locations of both ranges and that an ammunition disposal area was south of the WSA. This property is no longer owned by DOD. The Real Estate Officer, Benedetta, had pulled some files for our review prior to our arrival. The files discussed the land south of the WSA. Included in these files was a map identifying the location of an ammunition disposal area within this area.

After the research was completed, the team acquired Quad maps and performed a site visit on the FUDS properties of March AFB. The team drove to the Poorman Range first. This area is now a small park near a residential area. No ordnance was discovered. Next, the team drove to the rifle range. This area is all residential. No ordnance was discovered at this FUDS location either. Just north of March AFB was property which was used as a safety fan for a skeet range. This area is still an open field. A portion of this field had been plowed and was in crop. No ordnance was found. The team then drove to the location of the ammunition disposal area. The location of the pit is a field with drainage ditches throughout. Just northwest of the pit is a water tower and drainage structure. Just to the south is residential. Within the field, in the area of the former disposal area, were several children playing and riding their dirt bikes. No ordnance was discovered on the surface.

#### 7.0 Evaluation of Contamination

Based on the archive research, interviews, and site investigations, the potential for OEW and CWM contamination on the FUDS properties associated with March Air Force Base, not addressed in the Camp Haan ASR, is likely in one area. This area is south of the weapons storage area where an ammunition demolition pit was located. It is not likely any OEW contamination remains in those areas once occupied by the rifle range and the poorman range, or the buffer zone for the skeet range.

Risk Assessment Codes (RAC) were derived for the base proper, the rifle range, and the poorman range. Both the rifle range and the poorman range received RAC scores of 5. A RAC score of 2 was derived for March Air Force Base, Site Number J09CA001100.

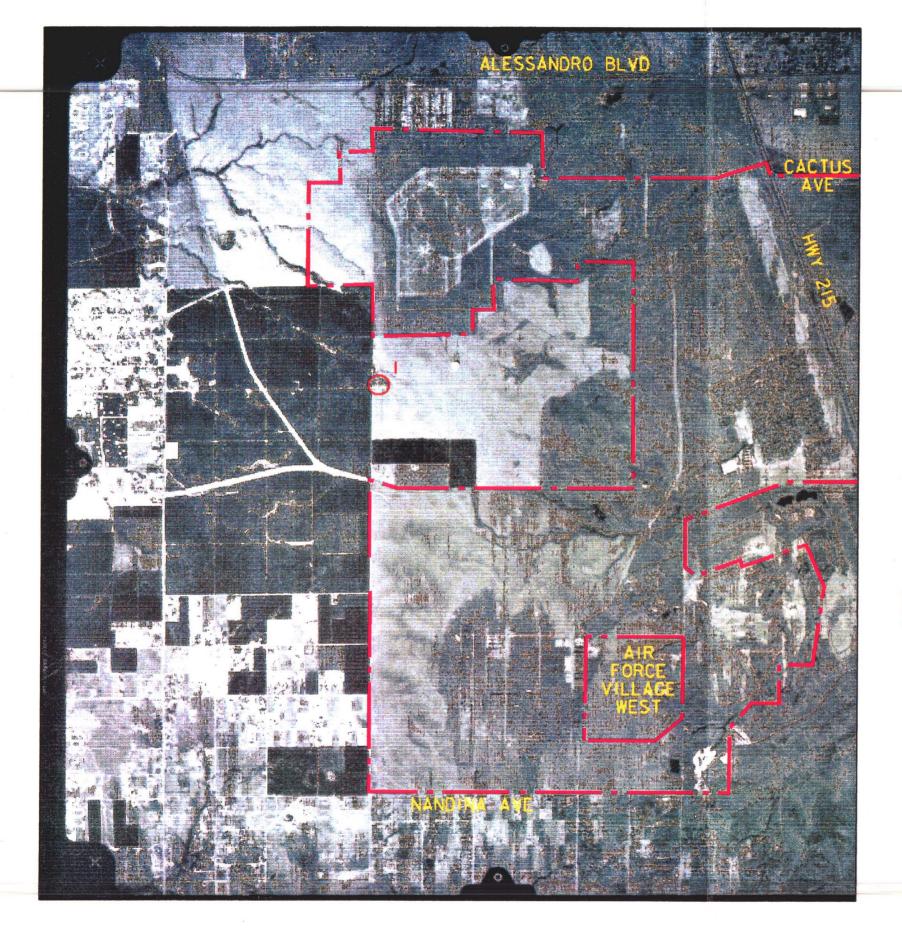
# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

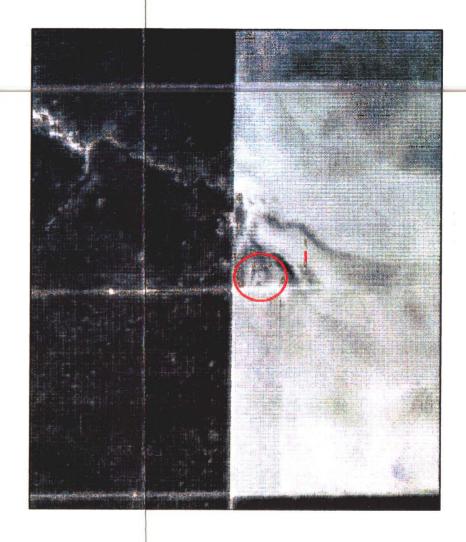
#### RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600, AND J09CAT82600

#### MAPS/DRAWINGS

<u>SHEET</u>	<u>DESCRIPTION</u>
M-1	March Air Force Base - Aerial Photo Interpretation Ground Features, 1980
M-2	March Air Force Base - Demolition Area
<b>M-3</b>	March Air Force Base - Bomb Storage Facility and Skeet Ranges, 1943
<b>M</b> -4	March Air Force Base - Land Development
M-5	March Air Force Base Rifle Range and March Air Force Base Poorman Range, Location and Layout - 1966
M-6	March Air Force Base Rifle Range, Aerial Photo Interpretation, Ground Features - 1966
<b>M-7</b>	March Air Force Base Poorman Range, Aerial Photo Interpretation, Ground Features - 1966
M-8	March Air Force Base - Cantonment Area





FEATURE NUMBER

#### FEATURE DESCRIPTION

SMALL BARE AREA (ABOUT 75' x 75') WITH SMALL PIT (ABOUT 40' x 20') AT SOUTH EDGE AND LOCATION OF FORMER AMMUNITION DISPOSAL PIT.



MARCH AIR FORCE BASE RIVERSIDE, CALIFORNIA DERP FUDS \* JO9CAOOIIOO AERIAL PHOTO INTERPRETATION GROUND FEATURES

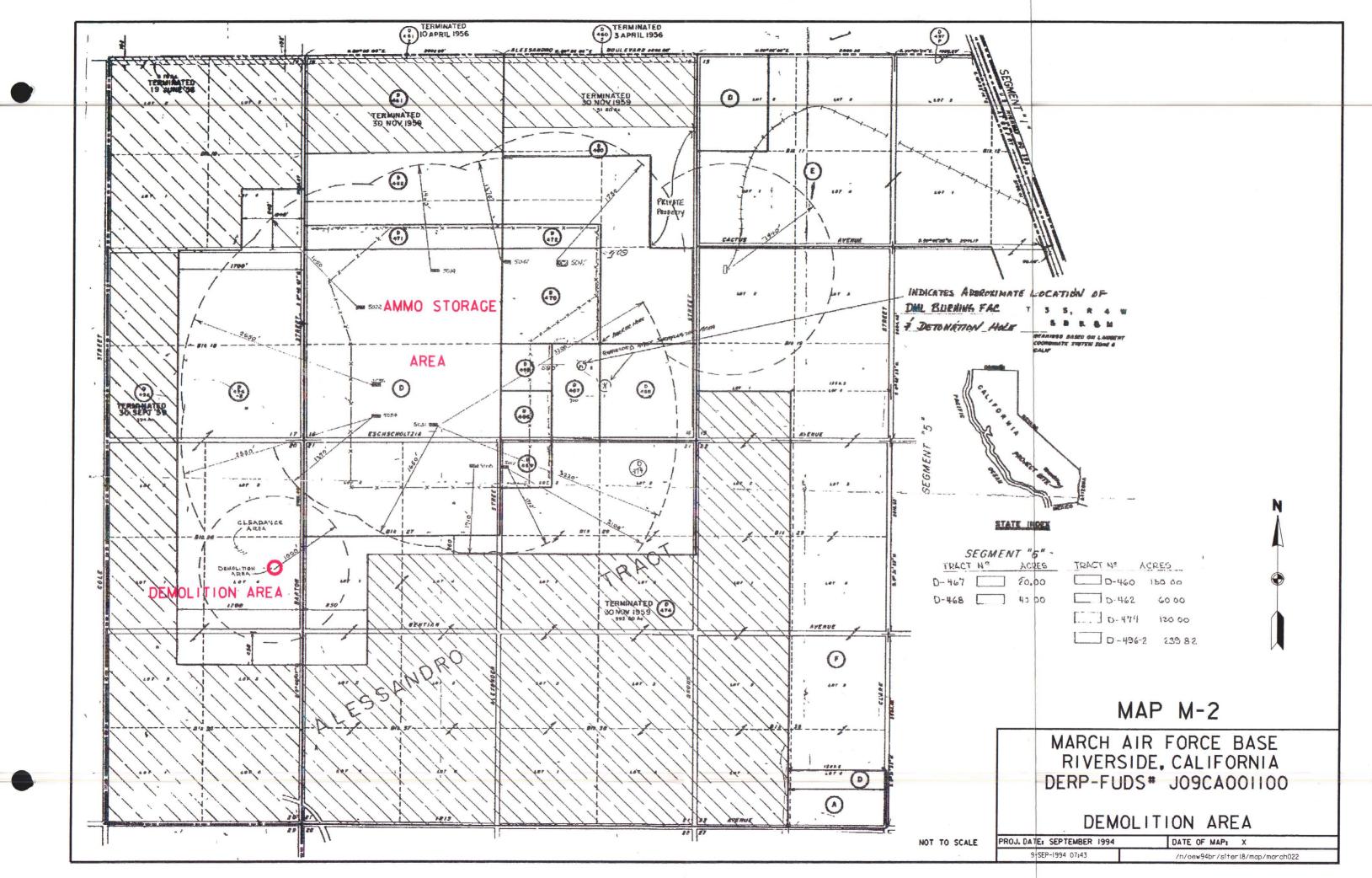
NOT TO SCALE

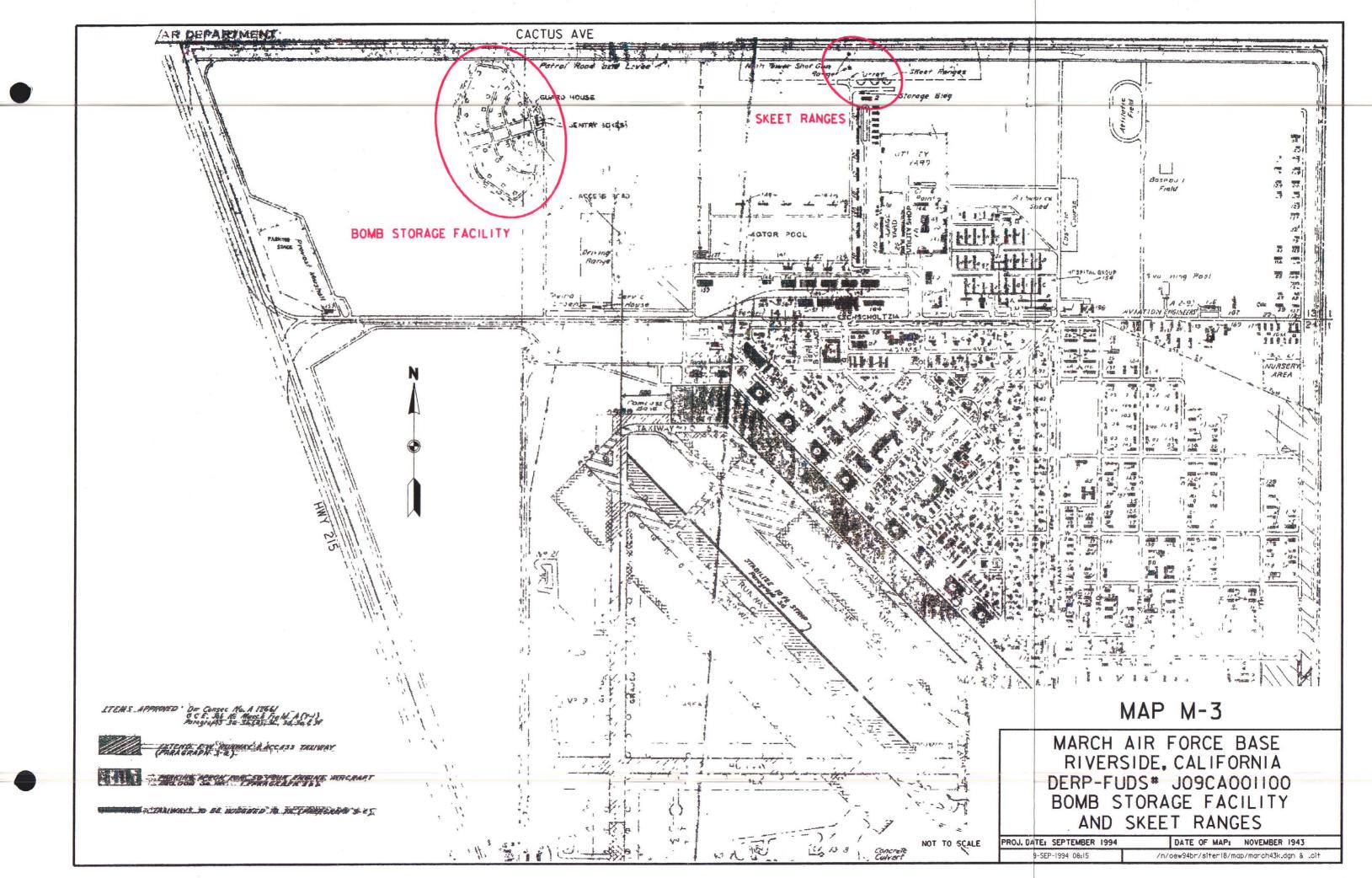
PROJ. DATE: JUNE 1994

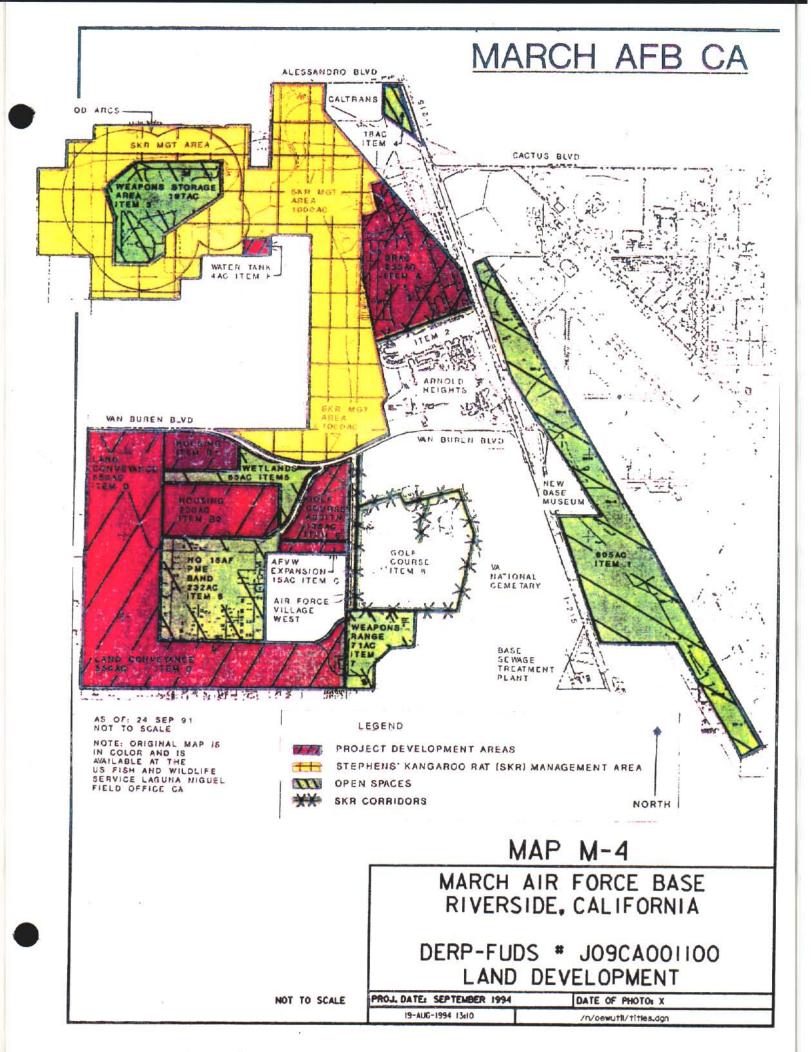
DATE OF PHOTO: 30 OCT 1980

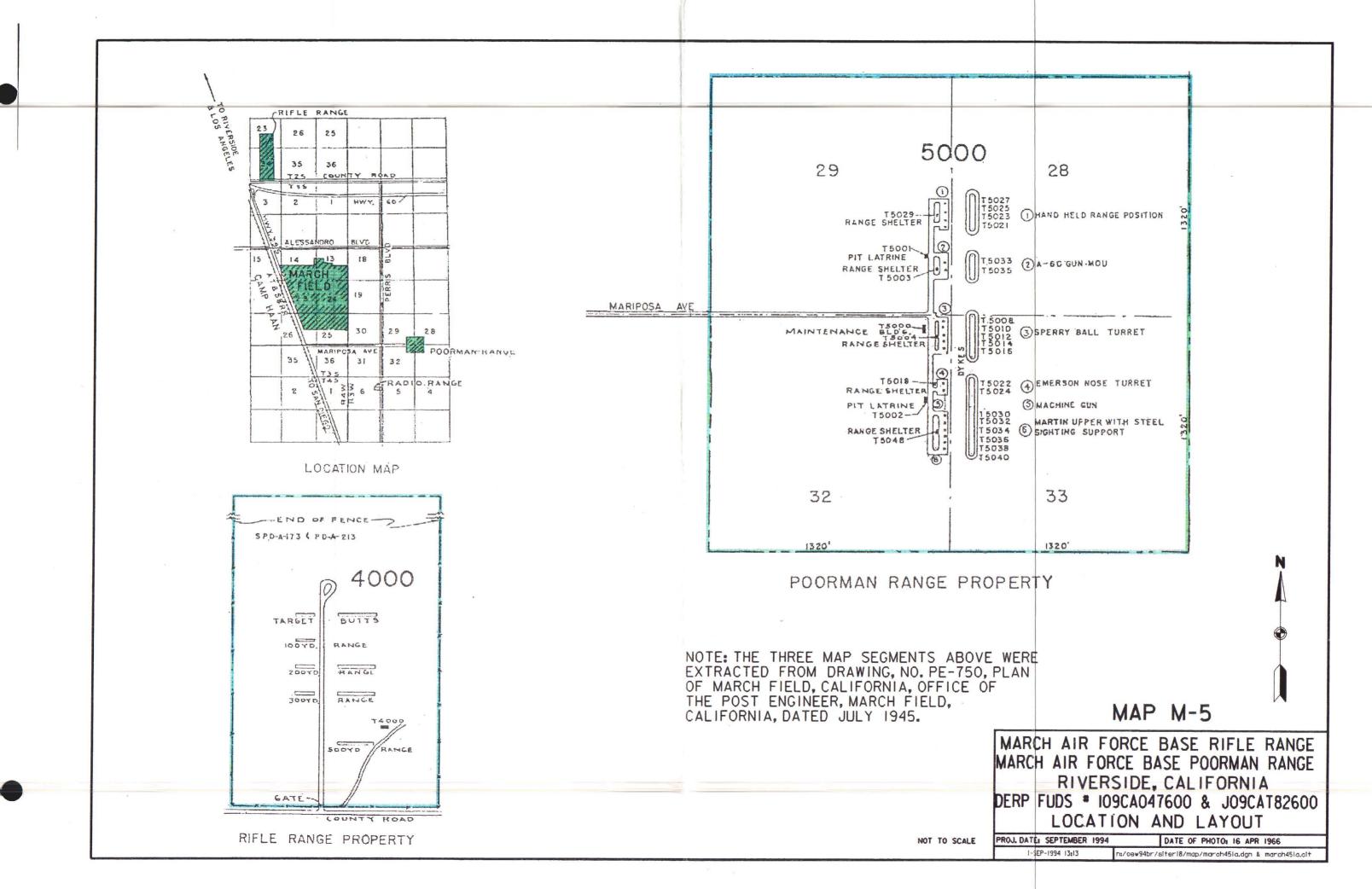
23-JUN-1994 09:41

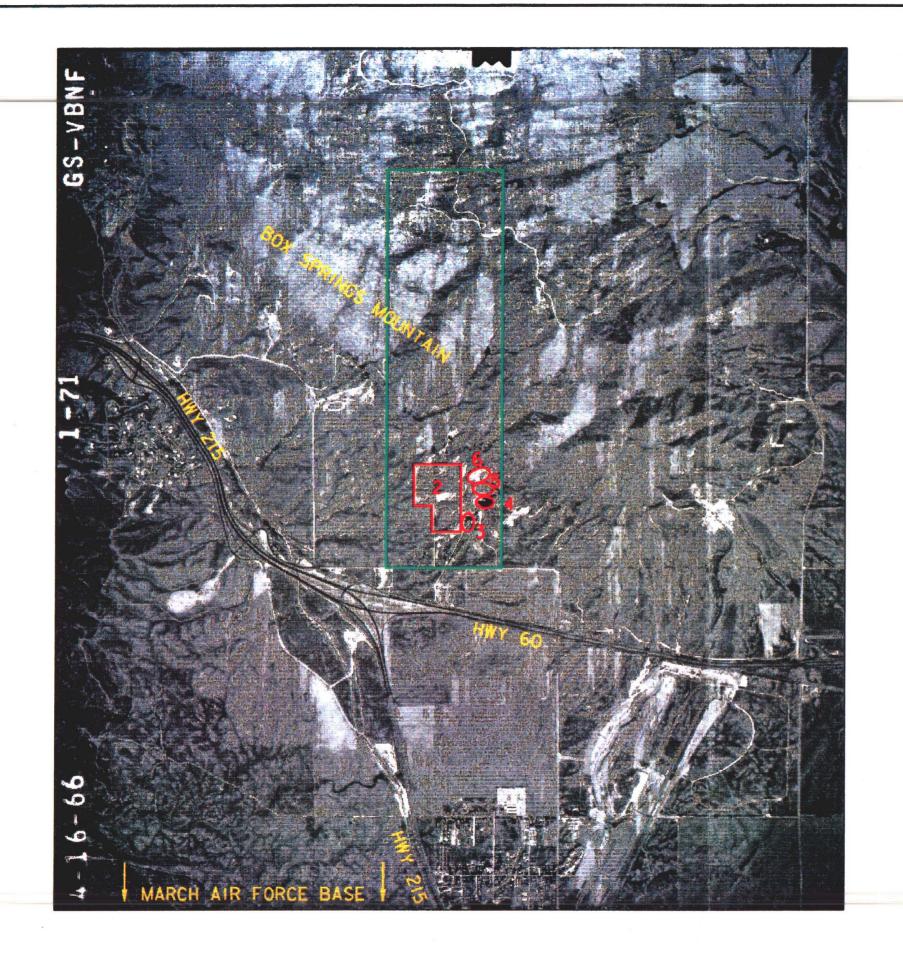
n:/oew94br/siter18/photo/march801.dgn & march80a&b.ext













## FEATURE NUMBER

## FEATURE DESCRIPTION

- 2 TARGET BERM AND FIRING LINE BERMS
- 3 BUILDING ON TERRACED HILL PLUS TWO BUILDINGS AT BASE OF HILL
- 4 LAKE
- 5 TWO AREAS WITH LOW WALLS OR REVETMENTS
- 6 EXCAVATION IN HILLSIDE

## LEGEND:



GROUND FEATURES



RIFLE RANGE BOUNDARIES

MAP M-6

MARCH AIR FORCE BASE RIFLE RANGE RIVERSIDE, CALIFORNIA DERP FUDS \* JO9CAO47600 AERIAL PHOTO INTERPRETATION GROUND FEATURES

NOT TO SCALE

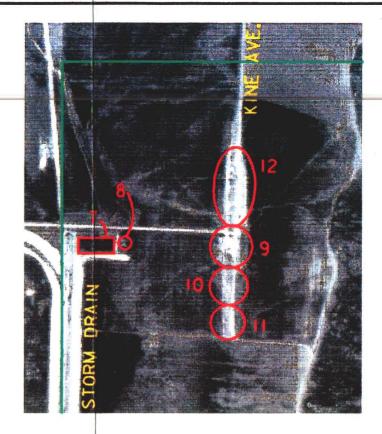
PROJ. DATE: SEPTEMBER 1994

DATE OF PHOTO: 16 APR 1966

10-AUG-1994 08:01

n:/oew94br/siter18/photo/march661.dgn & march66a&b.ext





FEATURE NUMBER

FEATURE DESCRIPTION

- 7 RECTANGULAR POND
- 8 DEPRESSION, DRY
- 9 EIGHT BUILDINGS
- O EXCAVATION BETWEEN TWO PARALLEL ROADS
- II SMALL OBJECTS AND/OR STRUCTURES
- 12 LOW STRUCTURES OR RUINS OF STRUCTURES

LEGEND:



GROUND FEATURES



POORMAN RANGE BOUNDARIES

MAP M-7

MARCH AIR FORCE BASE POORMAN RANGE RIVERSIDE, CALIFORNIA DERP-FUDS # JO9CAT82600 AERIAL PHOTO INTERPRETATION GROUND FEATURES

NOT TO SCALE

E PROJ. DATE: SEPTEMBER 1994

DATE OF PHOTO: 16 APR 1966

29-AUG-1994 13:44

n:/oew94br/siter18/photo/march662.dgn & march66c&d.ext

## MAP M-8

MARCH AIR FORCE BASE - CANTONMENT AREA (in back cover)

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## **APPENDICES**

- A. REFERENCES
- **B. ACRONYMS**
- C. REPORTS/STUDIES/LETTERS/MEMORANDUMS
- D. HISTORICAL PHOTOGRAPHS (NOT USED)
- E. INTERVIEWS
- F. NEWSPAPERS/JOURNALS (NOT USED)
- G. PRESENT SITE PHOTOGRAPHS
- H. HISTORICAL MAPS/DRAWINGS (NOT USED)
- I. OEW RISK ASSESSMENT CODE FORM
- J. REPORT DISTRIBUTION LIST
- K. ARCHIVES ADDRESSES

APPENDIX A

REFERENCES

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE

## RIVERSIDE, CALIFORNIA

AND ASSOCIATED SITES

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

### **REFERENCES**

## A-1. <u>INVENTORY PROJECT REPORT (INPR)</u>

- A-1.1 U.S. Army, Office of the District Engineer, Los Angeles, California
  1989 Inventory Project Report, March Military Airfield, John F. Sobke, Brigadier
  General, Commander, U.S. Corps of Engineers, Los Angeles, California
  District, dated July 27. Engineering Division, CESPL.
- A-1.2 U.S. Army, Office of the District Engineer, Los Angeles, California
  1992 Inventory Project Report, March AFB Rifle Range, Roger F. Yankoupe,
  Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles,
  California District, dated September 28. Engineering Division, CESPL.
- A-1.3 U.S. Army, Office of the District Engineer, Los Angeles, California
  1991 Inventory Project Report, March AFB Communication Annex No. 2, Roger
  F. Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers, Los
  Angeles, California District, dated December 27. Engineering Division,
  CESPL.
- A-1.4 U.S. Army, Office of the District Engineer, Los Angeles, California

  1991 Inventory Project Report, March AFB ILS Outer Marker, Roger F.

  Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers, Los
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- A-1.5 U.S. Army, Office of the District Engineer, Los Angeles, California
  1993 Inventory Project Report, March TVOR Annex, Milton Hunter, Brigadier
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## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

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### REFERENCES

- A-1.6 U.S. Army, Office of the District Engineer, Los Angeles, California
  n.d. Inventory Project Report, Lake Mathews Water Line and Retail Stores,
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- A-1.7 U.S. Army, Office of the District Engineer, Los Angeles, California
  1992 Inventory Project Report, March AFB Light Annex No. 2, Roger F.
  Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers, Los
  Angeles, California District, dated March 19. Engineering Division, CESPL.

## A-2. HISTORICAL REFERENCES (Cited in Report)

- A-2.1 Babcock, John C., 1st Lieut., C.W.S., Base Chemical Property Officer
  1942 Requisition for chemical warfare items, dated July 22. Record Group 174,
  Entry 1, Box 228, File: 400.312/2233, National Archives and Records
  Administration, Suitland, MD.
- A-2.2 Bartron, H.A., Major, Air Corps, Base Chemical Officer.

  1939 Correspondence to the Chief Chemical Warfare Service, regarding Gas ID sets, dated July 6. Record Group 175, Entry 1, Box 33, File: 121.2, National Archives and Records Administration, Suitland, MD.
- A-2.3 Chemical Warfare Service.
  - 1942 "News Letter," dated February. Chemical Biological Defense Agency Historical Office, Edgewood, MD.

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

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- A-2.4 Crane, Carl J., Colonel, Air Corps, Commanding
  - 1947 Correspondence to Division Engineer, regarding acquisition of land used for safety zone, dated June 6. Record Group 342, Accession # 342-44-A-6005, File: March Air Force Base, 601, National Personnel Records Center, St. Louis, MO.
- A-2.5 Department of the Air Force.
  - 1989 "March Air Force Base," Active Air Force Bases Within the United States. Washington D.C.: Office of Air Force History.
- A-2.6 Earth Technology Corporation.
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  - 1992 "Aerial Photographic Analysis of the March Air Force Base Study Area," dated April. Environmental Monitoring Systems Laboratory, Las Vegas, NV.
- A-2.8 Mamerow, J. R., Lt. Colonel, A.G.D., Adjutant.
  - 1946 Correspondence to Commanding General Twelfth Air Force, regarding acquisition of real estate for rifle range, dated November 25. Record Group 342, Accession # 342-57H-3001, Box 23 of 23, File: General, 684, National Personnel Records Center, St. Louis, MO.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

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- A-2.10 \_\_\_\_\_
  - 1938b Correspondence to Chief Chemical Warfare Service, Washington D.C., regarding FS and FM drums, dated May 20. Record Group 175, Entry 1: General Correspondence, Box 416, File: 600.1/207, National Archives and Records Administration, Suitland, MD.
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- A-2.12 Robbins, Earl C., Captain, Air Corps, Base Chemical Warfare Service.
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- A-2.13 Robbins, Earl C., Captain, Air Corps, Base Chemical Warfare Service.
  - 1938 Correspondence to Chief Chemical Warfare Service, regarding expended chemical warfare ammunition, dated January 3. Record Group 175, Entry 1:

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

## **REFERENCES**

General Correspondence, Box 521, File: 471/51, National Archives and Records Administration, Suitland, MD.

- A-2.14 Saunders, Randolph J.
  - "March Field, 75 Years of Service, 1918-1993," dated October 29. Office of the Historian, Headquarters, 22d Air Refueling Wing, March Air Force Base, California.
- A-2.15 U.S. Army Corps of Engineers.
  - "Permanent Buildings," March Field, dated January 14. Record Group 77, Entry 393, Box 134, File: 1, National Archives and Records Administration, Suitland, MD.
- A-2.16 Wakefield, Joseph S., 2nd Lieut., Air-Res., Base Chemical Officer.

  1940 "Expenditure Reports," March Field, dated January 3. Record Group 175,

Entry 1: General Correspondence, Box 521, File: 471/51, National Archives and Records Administration, Suitland, MD.

- A-2.17 884th Chemical Company Air Operations.
  - 1944 Company History, dated January 31. Record Group 407, Entry 427, Box 18563, National Archives and Records Administration, Suitland, MD.
- A-2.18 N.A.
  - n.d. "History of 754th Chemical Depot Company." Record Group 407, Entry 427, Box 18560, National Archives and Record Administration, Suitland, MD.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

**FOR** 

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

### APPENDIX A

### REFERENCES

## A-3. REAL ESTATE REFERENCES

## A-3.1 Bristol, R.M.

1947 Correspondence to Commanding Officer, March Field regarding transfer of real property of Camp Haan, dated March 13. Record Group 342, Accession #44A-6005, File: March AFB, 600.1. National Personnel Record Center (NPRC), St. Louis, MO.

## A-3.2 Crane, Carl J.

1947 Correspondence to Commanding General, Twelfth Air Force, March Field, regarding transfer of facilities from Camp Haan to March Field, dated February 11. Record Group 341, Accession # 61-A-1464, Box 6 of 31, Washington National Records Center, Suitland, MD:

## A-3.3 Finch, V. A.

1964 Correspondence to 22d Bomb Wing regarding ammunition disposal range, dated March 11. Real Estate Office, March Air Force Base, Riverside, California.

## A-3.4 General Services Administration.

1961 GSA Form 118, Report of Excess Real Property, 91.17 acres of fee owned land, dated May 12. Record Group 291, Accession # 9NSS-121-90-002, Box 19, File: Real Property Disposal Case Files, 61-64, NARA Pacific Sierra Region, San Bruno, California.

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

## **REFERENCES**

	•
1961	GSA Form 1432, Determination of Surplus, Portion of March Air Force Base, Riverside County, California, dated May 15. Record Group 291, Accession # 9NSS-121-90-002, Box 19, File: Real Property Disposal Case Files, 61-64, NARA Pacific Sierra Region, San Bruno, California.
1961	"Appraisal of Parcels 1, 2, and 3," March Air Force Base, Riverside, California, dated July 10. Record Group 121, Accession # 9NSS-121-87-001, Box 7, File: Real Property Disposal Case Files, 45-61, NARA Pacific Sierra Region, San Bruno, California.
1963	"Appraisal of 4.9 acres of land," March Air Force Base, Riverside, California, dated November 14. Record Group 121, Accession # 9NSS-121-87-001, Box 7, File: Real Property Disposal Case Files, 45-61, NARA Pacific Sierra Region, San Bruno, California.
	·
1978	GSA Form 118, Report of Excess Real Property, ILS Outer Marker Annex, March Air Force Base, California, dated July 21. Record Group 291, Accession # 291-87-0006, Box 2 of 3, File: ILS Outer Marker Annex, March AFB. NARA Pacific Sierra Region, San Bruno, California.
·	·
1980	"Excess Plan," March VOR Annex, March AFB, California, dated September 10. Record Group 291, Accession # 291-90-0001, Box 6 of 23,

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

### REFERENCES

File: March VOR Annex, NARA Pacific Sierra Region, San Bruno, California.

- A-3.10 Headquarters Strategic Air Command.
  - 1983 Weapons Storage Area acreage, dated February. Real Estate Office, March Air Force Base, Riverside, California.
- A-3.11 Headquarters Tactical Air Command
  - n.d. Correspondence to Chief of Staff, United Air Force regarding the acquisition of real estate. Record Group 341, Accession # 61-A-1464, Box: 6 of 31, Washington National Records Center, Suitland, MD.
- A-3.12 War Assets Administration.
  - "Additional Area to be Transferred to March Field," dated August 25.
    Record Group 270, Box # 57, File: Camp Haan, Class & Surplus Data
    [2/5], NARA, Pacific Southwest Region, Laguna Niguel, California.
- A-4. DEMOGRAPHICS REFERENCES
- A-4.1 Chamber of Commerce (Riverside, California).
- A-4.2 Convention and Visitors Bureau (Riverside, California)
- A-4.3 U.S. Department of Commerce. Bureau of the Census, California. 1990.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

MARCH AIR FORCE BASE AND ASSOCIATED SITES

RIVERSIDE, CALIFORNIA

DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX A

## **REFERENCES**

## A-5. GEOLOGICAL AND SOILS REFERENCES

- A-5.1 Earth Technology Corporation.
  - "Installation Restoration Program, Remedial Investigation/Feasibility Study, Final Basewide Work Plan," March Air Force Base, dated January. United States Air Force, Center for Environmental Excellence, Brooks Air Force Base, TX. (FULL REPORT ON FILE AT CELMS-PM-M)
- A-5.2 Kissane; Geologist U.S. Army Engineer District, St. Louis
  1993 Letter Report to March Air Force Base, dated April 2.
- A-5.3 Tetra Tech, Inc.
  - 1992 March Air Force Base, California Installation Restoration Program RI/FS Work Plan Addendum for Operable Unit 2, dated August 27.

## A-6. ECOLOGICAL REFERENCES

A-6.1 Listed, Proposed and Candidate Species Which Occur in Western Riverside County and Southwestern San Bernardino County, California (Exclusive of High Mountain and Desert Habitats)

APPENDIX B

**ACRONYMS** 

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT **FINDINGS**

**FOR** 

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX B

## **ACRONYMS**

Adjutant General's Office		
Agricultural Stabilization and Conservation Service		
Archive Search Report		
Below Ground Surface		
Chemical & Biological Defense Agency		
Corps of Engineers		
Comprehensive Environmental Response, Compensation		
and Liability Act		
Corps of Engineers, Los Angeles District		
Corps of Engineers, Huntsville Division		
Corps of Engineers, St. Louis District		
Directorate of Military Programs (Wash DC)		
Chief of Engineers		
Chemical Warfare Material		
Chemical Warfare Service		
Department of the Army		
(U.S. Army Materiel) Development and Readiness Command		
Defense Environmental Restoration Account		
Defense Environmental Restoration Program		
Department of Defense		
Department of Interior		
Explosives Ordnance Disposal		
Environmental Protection Agency		
Environmental Restoration Defense Account		
Findings and Determination of Eligibility		
Formerly Used Defense Sites		
High Explosive		

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS

**FOR** 

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

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## APPENDIX B

## **ACRONYMS**

HTRW Hazardous, Toxic, and Radioactive Waste
HTW Hazardous and Toxic Waste
IAS Initial Assessment Study
INPR Inventory Project Report
IRP Installation Restoration Program
KD Known Distance
MCX Mandatory Center of Expertise

MCX Mandatory Center of Expertise
NCP National Contingency Plan

NEESA Naval Energy and Environmental Support Activity

NGVD National Geodetic Vertical Datum

NOFA No Further Action
NWS Naval Weapons Station

OEW Ordnance and Explosive Waste

RAC Risk Assessment Code

RI/FS Remedial Investigation and Feasibility Study
SARA Superfund Amendments and Reauthorization Act

SI Site Inspection

SLD St. Louis District, Corps of Engineers

USACE U.S. Army Corps of Engineers

USAEDH U.S. Army Engineer Division, Huntsville, AL

USDA U.S. Department of Agriculture

USGS U.S. Geological Survey
UXO Unexploded Ordnance
VA Veterans Administration
WAA War Assets Administration

WD War Department

WNRC Washington National Records Center

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## APPENDIX C

REPORTS/STUDIES/LETTERS/MEMORANDUMS

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

## RIVERSIDE, CALIFORNIA

## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX C

## REPORTS/STUDIES/LETTERS/MEMORANDUMS

## C-1. INVENTORY PROJECT REPORT (INPR)

- C-1.1 U.S. Army, Office of the District Engineer, Los Angeles, California

  1989 Inventory Project Report, March Military Airfield, John F. Sobke,
  Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles,
  California District, dated July 27. Engineering Division, CESPL.
- C-1.2 U.S. Army, Office of the District Engineer, Los Angeles, California

  1992 Inventory Project Report, March AFB Rifle Range, Roger F. Yankoupe,
  Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles,
  California District, dated September 28. Engineering Division, CESPL.
- C-1.3 U.S. Army, Office of the District Engineer, Los Angeles, California

  1991 Inventory Project Report, March AFB Communication Annex No. 2, Roger
  F. Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers,
  Los Angeles, California District, dated December 27. Engineering Division,
  CESPL.
- C-1.4 U.S. Army, Office of the District Engineer, Los Angeles, California 1991 Inventory Project Report, March AFB ILS Outer Marker, Roger F. Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles, California District, dated October. Engineering Division, CESPL.
- C-1.5 U.S. Army, Office of the District Engineer, Los Angeles, California

  1993 Inventory Project Report, March TVOR Annex, Milton Hunter, Brigadier
  General, Commander, U.S. Corps of Engineers, Los Angeles, California
  District, dated March 26. Engineering Division, CESPL.
- C-1.6 U.S. Army, Office of the District Engineer, Los Angeles, California n.d. Inventory Project Report, Lake Mathews Water Line and Retail Stores,

£9

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT **FINDINGS**

**FOR** 

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

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John F. Sobke, Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles, California District. Engineering Division, CESPL.

C-1.7 U.S. Army, Office of the District Engineer, Los Angeles, California

1992 Inventory Project Report, March AFB Light Annex No. 2, Roger F. Yankoupe, Brigadier General, Commander, U.S. Corps of Engineers, Los Angeles, California District, dated March 19. Engineering Division, CESPL.

## C-2. HISTORICAL REFERENCES (Cited in the Report)

- C-2.1 Babcock, John C., 1st Lieut., C.W.S., Base Chemical Property Officer
  - 1942 Requisition for chemical warfare items, dated July-22. Record Group 174, Entry 1, Box 228, File: 400.312/2233, National Archives and Records Administration, Suitland, MD.
- C-2.2 Bartron, H.A., Major, Air Corps, Base Chemical Officer.
  - 1939 Correspondence to the Chief Chemical Warfare Service, regarding Gas ID sets, dated July 6. Record Group 175, Entry 1, Box 33, File: 121.2, National Archives and Records Administration, Suitland, MD.
- C-2.3 Chemical Warfare Service.
  - "News Letter," dated February. Chemical Biological Defense Agency 1942 Historical Office, Edgewood, MD.
- C-2.4 Crane, Carl J., Colonel, Air Corps, Commanding
  - 1947 Correspondence to Division Engineer, regarding acquisition of land used for safety zone, dated June 6. Record Group 342, Accession # 342-44-A-6005, File: March Air Force Base, 601, National Personnel Records Center, St. Louis, MO.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

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## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

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## REPORTS/STUDIES/LETTERS/MEMORANDUMS

- C-2.5 Department of the Air Force.

  1989 "March Air Force Base," Active Air Force Bases Within the United States.

  Washington D.C.: Office of Air Force History.
- C-2.6 Earth Technology Corporation.

  1992 "Installation Restoration Program, Remedial Investigation/Feasibility Study,
  Final Basewide Work Plan," March Air Force Base, dated January. United
  Stated Air Force, Center for Environmental Excellence, Brooks Air Force Base,
  TX. (FULL REPORT ON FILE AT CELMS-PM-M)
- C-2.7 Environmental Protection Agency.

  1992 "Aerial Photographic Analysis of the March Air Force Base Study Area," dated
  April. Environmental Monitoring Systems Laboratory, Las Vegas, NV.
- C-2.8 Mamerow, J. R., Lt. Colonel, A.G.D., Adjutant.

  1946 Correspondence to Commanding General Twelfth Air Force, regarding acquisition of real estate for rifle range, dated November 25. Record Group 342, Accession # 342-57H-3001, Box 23 of 23, File: General, 684, National Personnel Records Center, St. Louis, MO.
- C-2.9 Mason, R. J., 2nd Lieut., Air-Res., Base Chemical Officer.
  1938a Correspondence to Chief Chemical Warfare Service, Washington, D.C., regarding shipping of Gas ID Set containers, dated May 3. Record Group 175, Entry 1: General Correspondence, Box 416, File: 457/312, National Archives and Records Administration, Suitland, MD.
- C-2.10

  1938b Correspondence to Chief Chemical Warfare Service, Washington D.C., regarding FS and FM drums, dated May 20. Record Group 175, Entry 1:

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

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## DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

## APPENDIX C

## REPORTS/STUDIES/LETTERS/MEMORANDUMS

General Correspondence, Box 416, File: 600.1/207, National Archives and Records Administration, Suitland, MD.

- C-2.11 Powell Jr., Charles A., Asst. General Supply Officer.
  - "Report of Controlled and Other Critical Items of Equipment," March Field, dated February 28. Chemical Biological and Defense Agency, Historical Office, Edgewood, MD.
- C-2.12 Robbins, Earl C., Captain, Air Corps, Base Chemical Warfare Service.
  - 1937 Correspondence to Chief Chemical Warfare Service, regarding expended chemical warfare ammunition, dated June 30. Record Group 175, Entry 1: General Correspondence, Box 520, File: 471/51, National Archives and Records Administration, Suitland, MD.
- C-2.13 Robbins, Earl C., Captain, Air Corps, Base Chemical Warfare Service.
  - 1938 Correspondence to Chief Chemical Warfare Service, regarding expended chemical warfare ammunition, dated January 3. Record Group 175, Entry 1: General Correspondence, Box 521, File: 471/51, National Archives and Records Administration, Suitland, MD.
- C-2.14 Saunders, Randolph J.
  - "March Field, 75 Years of Service, 1918-1993," dated October 29. Office of the Historian, Headquarters, 22d Air Refueling Wing, March Air Force Base, California.
- C-2.15 U.S. Army Corps of Engineers.
  - 1943 "Permanent Buildings," March Field, dated January 14. Record Group 77, Entry 393, Box 134, File: 1, National Archives and Records Administration, Suitland, MD.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

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## REPORTS/STUDIES/LETTERS/MEMORANDUMS

C-2.16 Wakefield, Joseph S., 2nd Lieut., Air-Res., Base Chemical Officer.

"Expenditure Reports," March Field, dated January 3. Record Group 175, Entry 1: General Correspondence, Box 521, File: 471/51, National Archives and Records Administration, Suitland, MD.

C-2.17 884th Chemical Company Air Operations.

1944 Company History, dated January 31. Record Group 407, Entry 427, Box 18563, National Archives and Records Administration, Suitland, MD.

C-2.18 N.A.

n.d. "History of 754th Chemical Depot Company." Record Group 407, Entry 427, Box 18560, National Archives and Record Administration, Suitland, MD.

## C-3. ECOLOGICAL REFERENCES

C-3.1 Listed, Proposed and Candidate Species Which Occur in Western Riverside County and Southwestern San Bernardino County, California (Exclusive of High Mountain and Desert Habitats)

## C-4. REAL ESTATE REFERENCES

C-4.1 Bristol, R.M.

1947 Correspondence to Commanding Officer, March Field regarding transfer of real property of Camp Haan, dated March 13. Record Group 342, Accession #44A-6005, File: March AFB, 600.1. National Personnel Record Center (NPRC), St. Louis, MO.

C-4.2 Crane, Carl J.

1947 Correspondence to Commanding General, Twelfth Air Force, March Field, regarding transfer of facilities from Camp Haan to March Field, dated

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## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

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## REPORTS/STUDIES/LETTERS/MEMORANDUMS

February 11. Record Group 341, Accession # 61-A-1464, Box 6 of 31, Washington National Records Center, Suitland, MD.

- C-4.3 Finch, V. A. 1964 Correspondence to 22d Bomb Wing regarding ammunition disposal range, dated March 11. Real Estate Office, March Air Force Base, Riverside, California. General Services Administration. C-4.4 GSA Form 118, Report of Excess Real Property, 91.17 acres of fee owned 1961 land, dated May 12. Record Group 291, Accession # 9NSS-121-90-002, Box 19. File: Real Property Disposal Case Files, 61-64, NARA Pacific Sierra Region, San Bruno, California. C-4.5 GSA Form 1432, Determination of Surplus, Portion of March Air Force Base, 1961 Riverside County, California, dated May 15. Record Group 291, Accession # 9NSS-121-90-002, Box 19, File: Real Property Disposal Case Files, 61-64, NARA Pacific Sierra Region, San Bruno, California. C-4.6 "Appraisal of Parcels 1, 2, and 3," March Air Force Base, Riverside, 1961 California, dated July 10. Record Group 121, Accession # 9NSS-121-87-001, Box 7, File: Real Property Disposal Case Files, 45-61, NARA Pacific Sierra
- C-4.7

  1963 "Appraisal of 4.9 acres of land," March Air Force Base, Riverside, California, dated November 14. Record Group 121, Accession # 9NSS-121-87-001,

Region, San Bruno, California.

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

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Box 7, File: Real Property Disposal Case Files, 45-61, NARA Pacific Sierra Region, San Bruno, California.

- C-4.8

  1978 GSA Form 118, Report of Excess Real Property, ILS Outer Marker Annex, March Air Force Base, California, dated July 21. Record Group 291, Accession # 291-87-0006, Box 2 of 3, File: ILS Outer Marker Annex, March AFB. NARA Pacific Sierra Region, San Bruno, California.
- C-4.9

  1980 "Excess Plan," March VOR Annex, March AFB, California, dated September
  10. Record Group 291, Accession # 291-90-0001, Box 6 of 23, File: March
  VOR Annex, NARA Pacific Sierra Region, San Bruno, California.
- C-4.10 Headquarters Strategic Air Command.
  - 1983 Weapons Storage Area acreage, dated February. Real Estate Office, March Air Force Base, Riverside, California.
- C-4.11 Headquarters Tactical Air Command
  - n.d. Correspondence to Chief of Staff, United Air Force regarding the acquisition of real estate. Record Group 341, Accession # 61-A-1464, Box: 6 of 31, Washington National Records Center, Suitland, MD.
- C-4.12 War Assets Administration.
  - "Additional Area to be Transferred to March Field," dated August 25. Record Group 270, Box # 57, File: Camp Haan, Class & Surplus Data [2/5], NARA, Pacific Southwest Region, Laguna Niguel, California.

## C-5.1 <u>SITE INSPECTION SAFETY PLAN</u>

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT **FINDINGS**

FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

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## APPENDIX C

## REPORTS/STUDIES/LETTERS/MEMORANDUMS

## C-5.2 SITE VISIT TRIP REPORT

## ADDITIONAL REPORTS, STUDIES, LETTERS, AND MEMORANDUMS NOT **C-6.** OFFICIALLY INCLUDED IN THE BODY OF THE REPORT

Commanding Officer March Field. C-6.1

Correspondence to Chief Chemical Warfare Service 1949 regarding chemical loading facilities, dated August 29. Record Group 175, Entry 1, Box 33, File 121.2, National Archives and records Administration (NARA), Suitland, MD.

- Gardenhire, S.C. Colonel, Q.M.C., Constructing Quartermaster. C-6.2
  - Correspondence regarding completion report for the Air Corps Warehouse, dated December 21. Record Group 77. Entry 391, Box 194, File: March Field, 2-A, NARA, Suitland, MD.
- Hardy, Donald L., Asst Lieut, Air Corps, Ass't Adjutant.
  - Correspondence to Chief Chemical Warfare Service regarding storage facilities for smoke material, dated Record Group 175, Entry 1: General Correspondence, Box 556, File: 600.1/41-70, NARA, Suitland, MD.
- Porter, William N. C-6.4
  - 1941 Letter to Major Norman C. Gillett, CWS, regarding trucks and trailers for the Chemical Companies, dated February 24. Record Group 175, Entry 1, Box 328, File: 600.1/207, NARA, Suitland, MD.

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE

## RIVERSIDE, CALIFORNIA

AND ASSOCIATED SITES

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## REPORTS/STUDIES/LETTERS/MEMORANDUMS

C-6.5	U.S. Army Corps of Engineers.  1934 "Completion Report of Ordnance Warehouse at March Field," dated September 25. Record Group 77, Box 195, File: 4, NARA, Suitland, MD.
C-6.6	"Completion Report, Target Range, including Demolition of Buildings," dated June 30. Record Group 77, Engry 391, Box 195, File: 5, NARA, Suitland, MD.
C-6.7	"Completion Report on the Design and Construction of March Field Additions," dated June 15. Record Group 77, Entry 391, Box 196, File: 8, NARA, Suitland, MD.
C-6.8	1952 "Design Analyis, March Air Force Base, Ammunition Storage," dated March 7. Record Group 77, Box 77, File: Military Construction Projects, Administration, Pacific Southwest Region, Laguna Niguel, CA.

APPENDIX C-1.1

## DERP

PROJECT NO.:	J09CA001100			
LOCATION:	March Air Force Base			
SITE NAME:	March Military Airfield			
	EXCLUSION CATEGORY			
	I - CEMETERIES			
	II - RECRUITING STATION			
	III - CIVIL WORKS			
	IV - ACTIVE DOD SITE			
	V - NO RECORDS AVAILABLE			
•				
DATE DETERMI	NED:			
DDATEGE VINI	APB.			

100 West Broadway, Suite 5000 / Post Office Box 22785 Long Beach, California 90802-5785 Telephone: (213) 495-4449. (714) 821-7062 / Fax. (213) 426-0666

July 27, 1989

U.S. Department of the Army Los Angeles District, Corps of Engineers 300 North Los Angeles Street, Room 6003 Los Angeles, California 90012

Attention:

Mr. Joe Burwell

Contract No:

DACA09-88-D-0044

Subject:

DERP Draft IPR, Delivery Order No. 1

Dear Mr. Burwell,

Enclosed herein is a Draft Inventory Project Report (two copies) for DERP site March MIL AF, Project No. J09CA001100.

If you have any questions, please contact the undersigned at (213) 495-4449.

Very truly yours,

THE EARTH TECHNOLOGY CORPORATION (Western)

Ray Sugiura

Project Manager

RS:csl

enclosures

## DEFENSE ENVIRONMENTAL RESTORATION PROGRAM FOR FORMERLY USED SITES MARCH MILITARY AIRFIELD RIVERSIDE COUNTY, CALIFORNIA PROJECT NO. J09CA001100

## FINDINGS OF FACT

1. The former March Military Airfield is located on an active United States Air Force installation, March Air Force Base (AFB), Riverside County, California.

## DETERMINATION

Based on the foregoing findings, the site has been determined to be an active Department of Defense (DOD) installation. Therefore, it is determined that an environmental restoration project is not an appropriate undertaking within the purview of the Defense Environmental Restoration Program for Formerly Used Sites, 10 U.S.C. 2701 et seq., for the reasons stated above.

Date

JOHN F. SOBKE Brigadier General, U.S. Army Commanding

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DATE: July 1989

## SITE SURVEY SUMMARY FOR PROJECT NO. J09CA001100

-SITE NAME: March Military Airfield.

LOCATION: The former March MIL AF is located approximately 5 miles southeast of the City of Riverside in Riverside County, California.

DESCRIPTION OF SITE: The site is currently an active Stategic Air Command facility. March Air Force Base (AFB).

SITE HISTORY: The original 640 acre March Airfield was leased from the Riverside Chamber of Commerce on 26 February 1918 with an option to purchase. This option was exercised on 27 May 1920 and the 640 acres were acquired by fee purchase. Subsequently, March AFB expanded beyond the original 640 acres to its present size of approximately 7000 acres. The original 640 acre site is incorporated within the present day March AFB boundary.

AVAILABLE STUDIES & REPORTS: Installation Restoration Program Record Search for March Air Force Base, California, prepared for Strategic Air Command, Deputy Chief of Staff, Engineering and Services, Offutt Air Force Base, Nebraska, Contract No. F08637-890-G0010-5010, Gainsville, FL.; prepared by CH2M HILL, April 1984.

Installation Restoration Program Phase II - Confirmation/Quantification, Stage 1, March Air Force Base, California, Preliminary Draft, Prepared for Headquarters Strategic Air Command, Command Surgeon's Office (HQ SAC/SGBP) Bio-environmental Engineering Division, Offutt Air Force Base, Nebraska, USAF Contract No. F33615-84-D-4403, Delivery Order No. 00803, Atlanta, GA; prepared by Engineering Science, August 1986.

Installation Restoration Program Phase II - Confirmation/Quantification, Stage 2, March Air Force Base, California, Final Report, Prepared for Headquarters Strategic Command, Deputy Chief of Staff for Engineering and Services (HQ SAC/DE), Environmental Compliance Division, Offutt Air Force Base, Nebraska, USAF Contract No. F33615-84-D-4403, Delivery Order No. 0021, Atlanta, GA; prepared by Engineering Sciences, June 1988.

Installation Restoration Program Stage 3 - Draft Remedial Investigation/Preliminary Feasibility Study Area No.5 March Air Force Base, California, Prepared for Headquarters Strategic Air Command, Deputy Chief of Staff for Engineering and Services (HQ SAC/DE), Environmental Compliance Division, Offutt Air Force Base, Nebraska, USAF Contract No. F33615-84-D-4403, Delivery Order No. 0021, Atlanta, GA; prepared by Engineering Sciences, May 1988.

CATEGORY OF HAZARDS: None.

BASIS OF DOD RESPONSIBILITY: Facilities were constructed for and used by the United States Army Air Force to train pilots during World War I. Various areas of March AFB have been used by different branches of the DOD up to 1949, when the Strategic Air Command became the host unit at March AFB.

DATE OF FIELD INSPECTION: 9 November 1988

INSPECTION TEAM MEMBERS: Dennis Parker, The Earth Technology Corporation.

POC/DISTRICT: Joe Burwell, (213) 894-6266, Los Angeles District, Army Corps of Engineers.

STATUS: The site is an active Department of Defense (DOD) installation.

DESCRIPTION OF PROPOSED REMEDIAL ACTION: None

ESTIMATED COSTS: None

APPENDIX C-1.2

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

March Air Force Base Rifle Range Riverside, California

Site No. J09CA047600

#### FINDINGS OF FACT

- 1. In December 1943, the United States Department of the Army leased 610.07 acres of land from various owners and acquired an additional 38.62 acreage by transfer from the Department of Interior. The combined total of 648.69 acres became known as the March Air Force Base Rifle Range.
- 2. The Department of Defense constructed a complete Rifle Range Facility at the site. Several buildings were required for the efficient operation of the Range and were constructed in the southern portion of the site. March Air Force Base Rifle Range remained active until 1953.
- 3. On 28 October 1952, the Department of Defense terminated its lease on 321.99 acres. On 2 and 10 June 1953, leases on 108.18 and 9.65 acres were terminated. On 31 July 1953, lease on 169.65 acres was also terminated. On 20 July 1956, 38.62 acres were transferred back to the Department of Interior. Over a number of years the land was subdivided into tracts of residential homes and disposed to different home owners.

#### **DETERMINATION**

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

Date

MILTON HUNTER
Brigadier General, U.S. Army
Commanding

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

March Air Force Base Rifle Range Riverside, California

Site No. J09CA047600

#### FINDINGS OF FACT

- 1. In December 1943, the United States Department of the Army leased 610.07 acres of land from various owners and acquired an additional 38.62 acreage by transfer from the Department of Interior. The combined total of 648.69 acres became known as the March Air Force Base Rifle Range.
- 2. The Department of Defense constructed a complete Rifle Range Facility at the site. Several buildings were required for the efficient operation of the Range and were constructed in the southern portion of the site. March Air Force Base Rifle Range remained active until 1953.
- 3. On 28 October 1952, the Department of Defense terminated its lease on 321.99 acres. On 2 and 10 June 1953, leases on 108.18 and 9.65 acres were terminated. On 31 July 1953, lease on 169.65 acres was also terminated. On 20 July 1956, 38.62 acres were transferred back to the Department of Interior. Over a number of years the land was subdivided into tracts of residential homes and disposed to different home owners.

#### DETERMINATION

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

Date

ROGER F. YANKOUPE Brigadier General, U.S. Army Commanding

# SITE SURVEY SURMARY SHEET FOR DERP-FUDS SITE NO. J09CA047600 MARCH AFB RIFLE DANGE 28 SEPTEMBER 1992

SITE NAME: March Air Force Base Rifle Range.

SITE LOCATION: The site is located within the South half of Section 27 and Section 34 of Township 2 South, Range 4 West, San Bernardino Base and Meridian, said parcel being located in Riverside, California.

and become known as March Air Force Base Rifle Range. The Department of Defense erected several buildings located in the South half of Section 34, Township 2 South, Range 4 West, San Bernardino Baseline and Meridian. Complete disposal of the 648.69 acres was done by 1956. Currently, land previously known as The March Air Force Base Rifle Range has been developed as residential subdivisions with some commercial development and apartment complexes along Box Springs Road (formerly Lawless Road). There also is undeveloped mountainous terrain and a radio station site operated and maintained by AT & T Communications Inc., Pacific Bell, and C.H. Buckley Inc..

SITE VISIT: A site visit was conducted by Mr. Bud Furlong of NBS\Lowry on 21 November 1991.

CATEGORY OF HAZARDS: OEW

PROJECT DESCRIPTION: Recommend Huntsville Division make a determination regarding the need for further investigation into potential ordnance contamination.

AVAILABLE STUDIES AND REPORTS: None

PA POC: Debra Castens, Los Angles District (213) 894-2865.

### PROJECT SUMMARY SHEET FOR

DERP-FUDS OEW PROJECT NO. J09CA047601 MARCH AFB RIFLE RANGE SITE NO. J09CA047600 28 SEPTEMBER 1992

PROJECT DESCRIPTION: The preliminary site investigation revealed no evidence of hazardous conditions. However, as it was previously used as a rifle range, a more in-depth investigation is recommended, but regarded as a low priority concern at this time due to construction and development that has been taken place. Current land use ranges from commercial development to residential subdivisions to no improvements.

PROJECT ELIGIBILITY: The property was formerly used by the Army. Any ordnance found would clearly be the result of DOD activities.

POLICY CONSIDERATIONS: There are no policy considerations that affect the proposal of this project.

PROPOSED PROJECT: Recommend that the Corps' Mandatory Center of Expertise (MCX) for OEW at the Huntsville Division investigate this area to verify that no unexploded ordnance remains at this site and make a determination that this site is clean of OEW.

RAC FORM: Attached.

DISTRICT POC: Requests that CEHND inform Ms. Debra Castens at (213) 894-2865 when a determination is made in regard to project status and scheduling.

# APPENDIX A RISK ASSESSMENT PROCEDURES FOR EXPLOSIVE ORDNANCE (EXO)

Site	Name 1	1ARCH	AFB	RIFLE	RANGE	 Rater'	s	Name	
	Location	_		SIDE,		Organi	za	tion	
	Project		)9CA(	04760C	)	 RAC			

#### EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon <u>documented</u> evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. <u>Hazard Severity</u>. 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

### A. Conventional Ordnance and Ammunition

	<u>YES</u> VALUE	<u>NO</u> VALUE	VÁLUE
Small Arms (.22 cal50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	0
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0

	_	•			
		YES VALUE	<u>NO</u> VALUE	VALUE	
	Military Dynamite	10	0	<u> </u>	
	Less Sensitive Explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0	
	High Explosives Value (Maximum value of 10).				0
D.	Propellants	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE	
	Solid or Liquid Propellants	6	0	0	0
		_			

## E. Chemical Agents/Radiological Materials/Munitions

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	~ 5 i	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0 .	0

Chemical Agents/Radiological Materials/Munitions Value (Maximum 25).

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C + D + E with a Maximum value of 61).

Part II. <u>Hazard Probability</u>. The probability that a hazard has been or will be created due to the presence and other rated factors of explosive ordnance (EXO) on a formerly used DOD site.

## AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

### A. Locations of Contamination

	<u>YES</u> VALUE	<u>no</u> Value	VALUE	
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0	
On the surface or within 3 feet.	5	0	0	
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	0	
Subsurface, greater than 3 feet in depth.	3	0	0	
Value for location of EXO (Maxim Value of 5).	un			0

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

Distance to Nearest Target	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	
2.0 miles to 5.0 miles	1	
Over 5.0 miles	0	
Distance to Persons Value (Maximum Value of 5).		<u> </u>

OI Barrier

#### Assigned Value

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).	0	· · ·
Security guard, but no barrier	1	
A barrier, (any kind of fence) but no separate means to control entry	2	
Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		N/A NO DEN Found

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 errosion by beaches or streams, increasing land development that could reduce distances from the site to inhabitated areas or otherwise increase accessability.

VALUE

0 None Anticipated 5 Expected

Total value for hazard probability. Sum of Values A through F. (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level.

(Maximum Value of 5)



TABLE 3

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

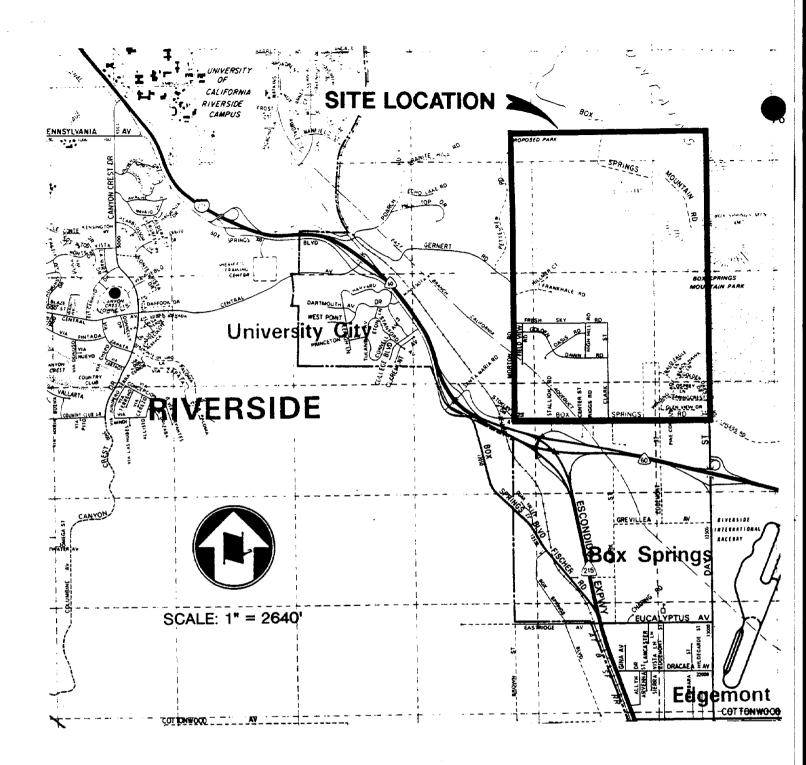
Note: The risk assessment code for EXO is not equivalent to the risk assessment code prescribed in AR 385-10:

#### RISK ASSESSMENT CODE (RAC)

- RAC 1 Imminent Hazard Emergency action required to mitigate the hazard or protect personnel (i.e., Fencing, physical barrier, guards, etc.).
- RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.
- RAC 3 Action required to evaluate potential threat to personnel. High priority Site Inspection is appropriate.
- RAC 4 Action required to evaluate potential threat to personnel. Site Inspection is appropriate.
- RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

I concur with the results of this risk assessment code. The site investigation revealed no obvious ordnance/explosive waste material. However, as this site was used as a rifle range, the presence of small caliber unexploded shells cannot be ruled out. A more in-depth investigation conducted by qualified personnel is recommended, but considered to be a low priority concern at this time.



SITE LOCATION MAP

MARCH AFB RIFLE RANGE RIVERSIDE, CALIFORNIA SITE NO. J09CA047600 APPENDIX C-1.3

#### 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, Alabama 35807-4301

Commander, U.S. Army Engineer Division, Missouri River, P.O. Box 103, Downtown Station, Omaha, Nebraska 68101-0103

SUBJECT: Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) Inventory Project Reports (INPR).

1. I am forwarding the INPR for following ten sites.

SITE NUMBERS	SITE NAME	RECOMMENDED PROJECT TYPE
J09AZ033600	Davis-Monthan Family Housing Annex	NOFA
J09AZ033700	Davis-Monthan AFB ILS Outer Marker Annex	NOFA
J09CA012000	March AFB Communication Annex No. 2	NOFA
J09CA029300	Camp Seeley Ordnance Training Center	NOFA
J09CA042400	L.A. Defense Area Nike Battery 32	NOFA
J09CA044300	Lamont Prisoner of War Camp	NOFA
J09CA049100	Mirage Lake Glider School	NOFA
J09CA051400	Various Properties, Norton Air Force Base	NOFA
J09CA054400	Parker Auxiliary Air Field No. 1	NOFA
J09CA061200	San Ysidro Gap Filler Annex P-76B	NOFA

2. All ten sites are eligible for DERP-FUDS. No projects are proposed for any of the sites at this time.

10 Encls

ROGER F. YANKOUPE Brigadier General, U.S. Army Commanding

CESPL-ED-M(HTW)

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

MARCH AFB COMMUNICATION ANNEX NO. 2 RIVERSIDE, CALIFORNIA PROJECT NO. J09CA012000

#### FINDINGS OF FACT

- 1. The former March AFB Communication Annex No. 2 was located in Riverside County, California approximately 15 miles northwest of Riverside, California. The site originally consisted of 195 acres. The land of the Communication Annex was part of the Mira Loma Quartermaster Depot which was established in 1942 under the jurisdiction of Norton AFB. The 195 acres were transferred to March AFB on 1 January 1965, for use as a communications site.
- 2. Facilities on the former March Communication Annex No. 2 site included a series of antennae, World War II vintage wooden buildings, and one building of concrete block construction. These facilities were used in conjunction with the Air Force's Giant Talk project.
- On 6 June 1983, March AFB Communication Annex No. 2 was declared excess. On 9 December 1983, 10 acres were quitclaimed to Ivan and Vilma Halaj, Vartkes and Jean Barsam, and Seymour and Betty Joyce Waterman. On 23 June 1986, the other 185 acres of the site were quitclaimed to the County of Riverside, Asset Leasing Corporation. In both quitclaim deeds the United States of America reserved all rights in or to any oil, gas and other hydrocarbon substances and all other minerals in, or under the subject property. Because there was a transformer on the site. 185 acres of the are owned by the County of Riverside Assets Leasing Corporation, 10 acres are owned by Space Center Mira Loma Inc., and .07 acres are owned by the Federal Government. is located in an industrial area of Mira Loma, California, Surrounded mainly by business parks. The DOD improvements remaining on the site are mostly asphalt roads across the site. In addition to the asphalt roads there are the cement supports for one of the antennae. There is no visible evidence of unsafe debris, hazardous of toxic waste, or unexploded ordnance resulting from DOD use of the site. APCB study performed at the site found no significant contamination. Riverside County Fire and Environmental Health Department's records do not indicate any hazards Environmental Health Department's records do not indicate any hazards associated with the site.

Continued Project No. J09CA012000

#### **DETERMINATION**

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

27 Dec 51

Date

ROGER F. YANKOUPE

Brigadier General, U.S. Army

Commanding

# SITE SURVEY SUMMARY SHEET DERP-FUDS SITE NO. J09CA012000 MARCH AFB COMMUNICATION ANNEX NO. 2 RIVERSIDE COUNTY, CALIFORNIA OCTOBER 1991

SITE NAME: March Air Force Base Communication annex Number 2.

LOCATION: March Air force Base Communication Annex Number 2 was located approximately 15 miles northwest of Riverside, California (see location site map).

SITE HISTORY: The site originally consisted of 195 acres. site was originally acquired in 1942 and was a part of the Mira Loma Quartermaster Depot. In 1965, the southern part of the Mira Loma Quartermaster Depot was sold to private interests and most of the northern part of the site was transferred to March AFB for use as a communication annex. The site featured a series of different antennae to support the Air Force's Giant Talk In June 1983, the Communication Annex was declared project. excess. Between 1983 and 1986 the lands of March AFB Communication Annex No. 2 were sold to different private interests. However, the United States of America reserved all rights in or to any oil, gas and other hydrocarbon substances and all other minerals in, or under the site. Currently, the site is owned by the County of Riverside Assets Leasing Corporation, Space Center Mira Loma Inc., and the Federal Government.

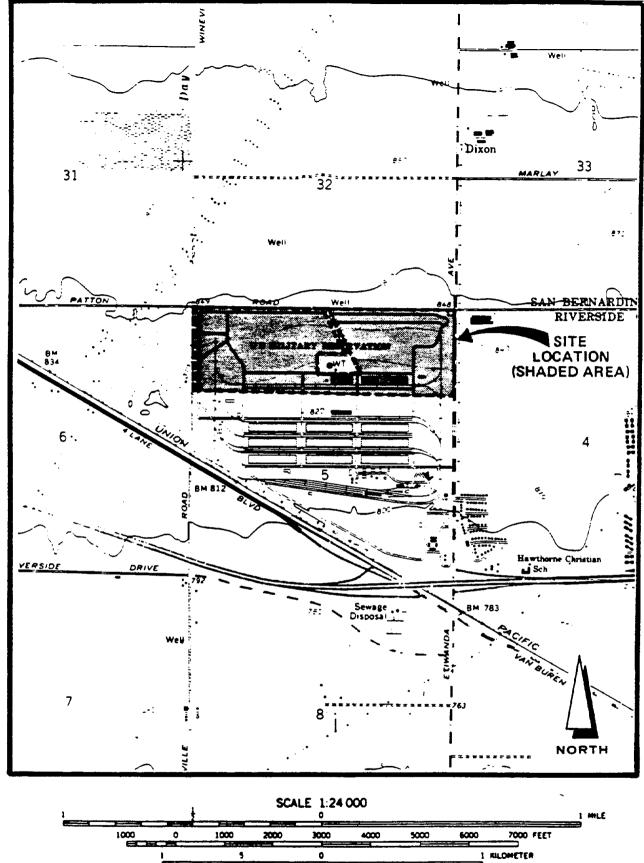
<u>SITE VISIT</u>: A site visit was conducted on 10 January 1989 by Dennis Parker of the Earth Technology Corporation.

CATEGORY OF HAZARD: NONE.

PROJECT DESCRIPTION: NONE.

AVAILABLE STUDIES AND REPORTS: NONE.

<u>PA/POC</u>: Debra Castens, CESPL-ED-MI, Los Angeles District, (213) 894-2865.



CONTOUR INTERVAL 20 FEET

TOPOGRAPHIC SITE MAP OF THE FORMER **MARCH AFB COMMUNICATION ANNEX NO. 2**  APPENDIX C-1.4

CESPD-ED-GH (200-1c)

#### MEMORANDUM FOR

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

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

Commander, U.S. Army Engineer Division, Missouri River, P.O. Box 103, Downtown Station, Omaha, Nebraska 68101-0103

SUBJECT: Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) Inventory Project Reports (INPR).

1. I am forwarding the INPR for following ten sites.

SITE NUMBERS	SITE NAME	RECOMMENDED PROJECT TYPE
J09AZ033500 J09AZ046200 J09CA009900 J09CA007600 J09CA012100 J09CA035200 J09CA036800 J09CA048800 J09CA049000	Davis-Monthan Detachment Housing Site Luke Air Force Auxiliary Field #4R Shafter Air Force Station Castle Communications Annex (Receiver) March AFB ILS Outer Marker El Cajon Heights Project Freda Railhead Mira Loma Engineer Sub-Depot Mirage Auxiliary Field No. 3	NOFA NOFA NOFA NOFA NOFA NOFA NOFA NOFA
J09CA049500	Moreno Gap Filler Annex P-76E	NOFA

2. All ten sites are eligible for DERP-FUDS. No projects are proposed for any of the sites at this time.

10 Encls

ROGER F. YANKOUPE Brigadier General, U.S. Army Commanding

CF: CESPK-ED-M(HTW) CESPL-ED-M CESPD-ED-GH CESPD-PM-PH CESPD-CO CESPD-RF

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

MARCH AFB ILS OUTER MARKER RIVERSIDE COUNTY, CALIFORNIA PROJECT NO. J09CA012100

#### FINDINGS OF FACT

- 1. The fomer March ILS Outer Marker was located in Riverside County, California approximately 20 miles southeast of Riverside, California. The site originally consisted of 3.03 acres and was leased from Mr. Floyd C. Bonge, under Lease No. DA-04-353-ENG-3202, in the early 1950's. In 1956, Mr. Bonge decided that he would no longer lease the land because of his increased operating costs due to government occupancy of his land. On 9 November 1956, the government purchased the .45 acres of the land where the essential facilities were located. The land was purchased by fee acquisition through a Condemnation Assembly and Declaration of Taking.
- 2. The March AFB ILS Outer Marker was used as part of the aircraft landing system at March AFB. The basic facilities at the Outer Marker consisted of a small building with a transmitter on top. The transmitter sent signals to approaching aircraft to assist the aircraft in aligning itself with the March AFB runway.
- The exact date of excess is unknown, however, on 1 May 1980, acting by and through the Administrator of General Services, the .45 acres of March AFB ILS Outer Marker were sold to Mr. George Hill and Orville J. Montgomery. Currently, the site is owned by Parkwest Associates of New York. The site is located in an agricultural area with flat relief. Most of the site is covered by weathered asphalt and DOD improvements at the site are still in place, although in deteriorating condition. The boundaries of the site are marked by a barbed wire fence which is falling There are two structures on the site, one structure is a small (12ft x 12ft) one room building in fair to poor condition. There is a metal frame around the outside of the building which was apparently used to support the transmitter. structure is a corrugated metal building (3ft wide x 6ft long x 5ft high) with an above ground fuel tank inside. No signs of leakage from the tank were observed during the site visit. Riverside County Fire and Environmental Health Departments records indicate no hazards associated with the site.

# SITE SURVEY SUMMARY DERP-FUDS SITE NO. J09CA012100 MARCH AFB ILS OUTER MARKER RIVERSIDE COUNTY, CALIFORNIA OCTOBER 1991

SITE NAME: Formerly March AFB ILS Outer Marker

LOCATION: The former March AFB ILS Outer Marker is located approximately 20 miles southeast of Riverside, Caifornia. The former Outer Marker site is located in an area of flat relief within an agricultural region of the Perris Valley (see location map enclosed).

SITE HISTORY: The site originally consisted of 3.03 acres. The site was leased from Mr. Floyd C. Bonge, under Lease No. DA-04-353-ENG-3202. In November 1956, the Air Force purchased .45 acres of the site by fee acquisition through a Condemnation Assembly and a Declaration of Taking. The site was used as part of the aircraft landing system for March AFB. The exact date of excess is unknown, however, in May 1980, acting by and through the Administrator of General Services, the .45 acres of March AFB ILS Outer Marker were sold to Mr. George Hill and Orville J. Montgomery. Currently, the site is owned by Parkwest Associates of New York.

SITE VISIT: The site visit was conducted by Dennis Parker, the Earch Technology Corporation on 9 January, 1989.

CATEGORY OF HAZARD: None.

PROJECT DESCRIPTION: None.

VAILABLE STUDIES AND REPORTS: A real estate file is maintained by the Real Estate Division, Civil Engineering Office, March AFB. The real estate file contains partial acquisition and disposal records for the site. Riverside County Fire Department and Department of Environmental Health records indicate no hazards associated with the site.

<u>PA/POC</u>: Joe Burwell, (213) 894-6266, Los Angeles District, Corps of Engineers.

Continued Project No. J09CA012100

#### **DETERMINATION**

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

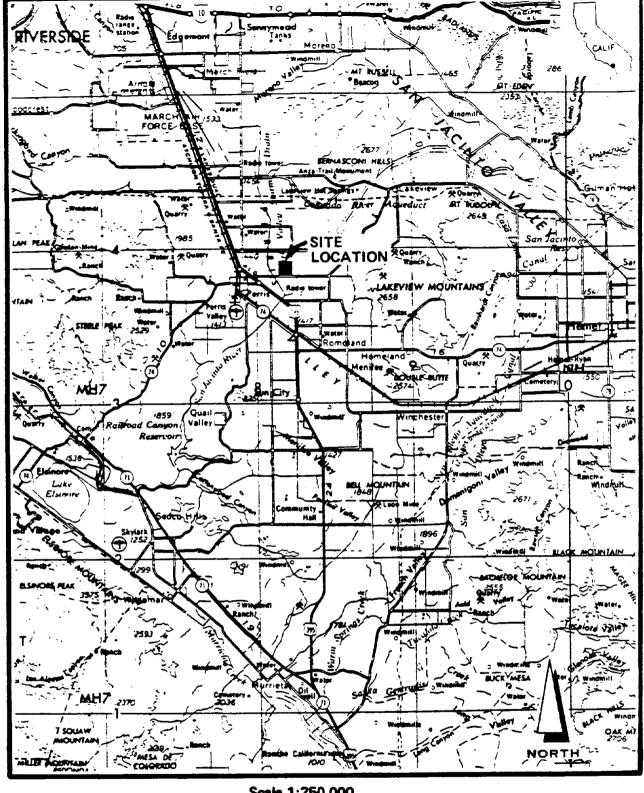
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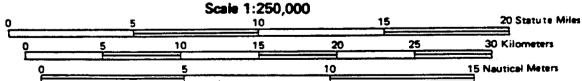
Date

ROGER F. YANKOUPE

Brigadier General, U.S. Army

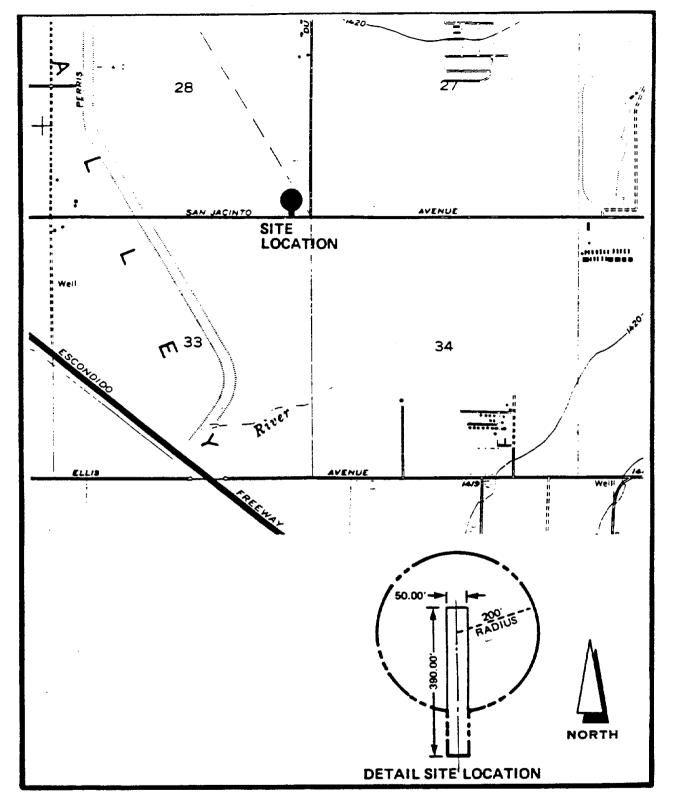
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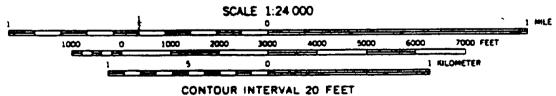




CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION

REGIONAL MAP FOR THE FORMER MARCH AFB ILS OUTER MARKER





TOPOGRAPHIC SITE MAP OF THE FORMER MARCH AFB ILS OUTER MARKER

APPENDIX C-1.5

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

#### MARCH TVOR ANNEX RIVERSIDE COUNTY, CA SITE NO. JO9CA047900

#### FINDINGS OF FACT

- 1. Acquisition of 288.48 acres of land was accomplished by the U.S. Air Force through leases dated 7-1-60 and 1-19-65 from the Vail Company, a Nevada Corporation, and lease dated 7-26-65 from Rancho California, a partnership.
- 2. The acquisition by the U.S. Air Force was for support of the primary instrument runway at March Air Force Base, Riverside, CA and approaches from related navaids. U.S. Air Force improvements to site consisted of buildings and associated utilities, a storage tank, underground cables and conduits, and miscellaneous supporting elements.
- 3. By lease termination on 3-25-69, the land reverted back to Rancho California. From then until the present, the site has been privately owned, presently by Bedford Properties. The site is part of a now defunct commercial outdoor wilderness recreational area known as "Butterfield Country". On 3-3-69, just prior to lease termination, the U.S. Air Force and Rancho California entered into a supplemental agreement relinquishing all improvements to Rancho California and releasing and forever discharging the Government from any actions, liabilities, and claims against it for the restoration of the premises.

#### **DETERMINATION**

Based upon the foregoing Findings of Fact, the site has been determined to have been 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.

D	а	t	e

MILTON HUNTER
Brigadier General, U.S. Army
Commanding

## SITE SURVEY SUMMARY SHEET FOR

#### DERP-FUDS SITE NO. J09CA047900 MARCH TVOR ANNEX RIVERSIDE COUNTY, CALIFORNIA 26 MARCH 1993

SITE NAME: The former March TVOR Annex (also once known as Vail TVOR) lies within a privately owned wilderness recreational area now called "Butterfield Country".

LOCATION: 11 miles east of Temecula, CA , 1 mile north of State Highway #79 and 1/2 mile south of Vail Lake.

SITE HISTORY: In October 1959, the U.S. Air Force (807th Combat Support Group, March Air Force Base, CA) requested acquisition of the site. The site was a 200 ft. radius circle (2.88 acres) within a large, undeveloped wilderness area which surrounded Vail Lake and included the right of non-exclusive use of an additional 285.60 acres (2000 ft. radius) and existing access road plus the exclusive use for utility line rights-of-way (area undetermined). The site was for support of the primary instrument runway at March Air Force Base, Riverside, CA which was approximately 27 miles to the north. Prior to October 1959, the U.S. Air Force had occupied the site with mobile equipment to conduct flight tests to verify site suitability for its intended purpose. Site leases from the Vail Company, a Nevada Corporation, were executed 7-1-60 and 1-19-65, effective 7-20-59 to 12-3-64. Subsequent lease from Rancho California, a partnership, was executed 7-26-65, amended 10-13-65, effective 12-4-64 to 12-3-69. Disposal through lease termination was effected on 3-25-69. There are no buildings remaining and the visible residue of and debris from previous improvements which are probably attributable to U.S. Air Force presence include a large vertically-mounted-on-grade storage tank, a group of concrete piers protruding above grade, an asphalt paved area and access road, an empty pole mounted electrical transformer casing and lid, miscellaneous cable, wire, conduit, pipe, and mounds of demolished building and utility materials. It is logical to assume that this residue is of U.S. Air Force origin since the material is at the former March TVOR site. A small, above-grade storage tank is located outside the perimeter of the March TVOR site. Its proximity to the commercial building nearby gives credence to the fact that it was installed and used by the owners/operators of the wilderness recreational area and was not a U.S. Air Force improvement. A supplemental agreement between Rancho California and the U.S. Air Force dated 3-3-69 relinquished all improvements to Rancho California and released and forever discharged the Government from any actions, liabilities, and claims against it for the restoration of the premises.

SITE VISIT: On October 28, 1992 Roy H. Bennett of Wheeler and Gray, Inc. visited the site and met with the property manager, Mr. William E. Edge of Kemper Real Estate Management Company, 28765 Single Oak Drive, Temecula, CA, 92590, (714)676-5641

CATEGORY OF HAZARD: CON/HTW

PROJECT DESCRIPTION: Removal and disposal of existing vertically-mounted-on-grade storage tank and empty pole mounted electrical transformer casing and lid. Soil sample in vicinity of removed storage tank and transformer casing.

AVAILABLE STUDIES AND REPORTS: Record data is on file with the Corps of Engineers, Los Angeles District, Real Estate Division.

DISTRICT POC: Debra Castens (213)894-2865, Los Angeles District

## PROJECT SUMMARY SHEET FOR

# DERP-FUDS CON/HTW PROJECT NO. J09CA047901 MARCH TVOR ANNEX RIVERSIDE COUNTY, CALIFORNIA SITE NO. J09CA047900 26 MARCH 1993

PROJECT DESCRIPTION: An aboveground storage tank estimated at 1500 gallons remains on site. It is believed this contained diesel fuel for operation of equipment housed at the March TVOR Annex. There is also an empty transformer case and lid lying on the ground. The transformer is a pole mounted type and is completely dry. There is no evidence on the ground surface of any spillage of transformer oil.

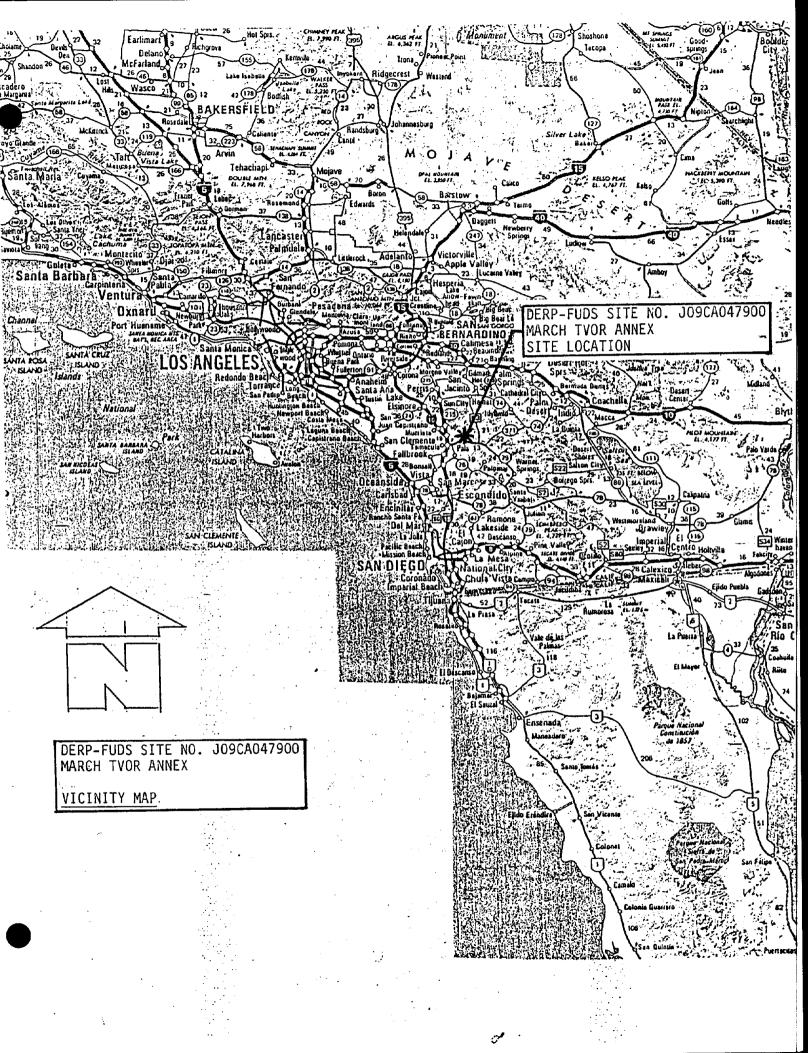
PROJECT ELIGIBILITY: The property was formerly used by DOD (U.S. Air Force) who installed the storage tank and transformer.

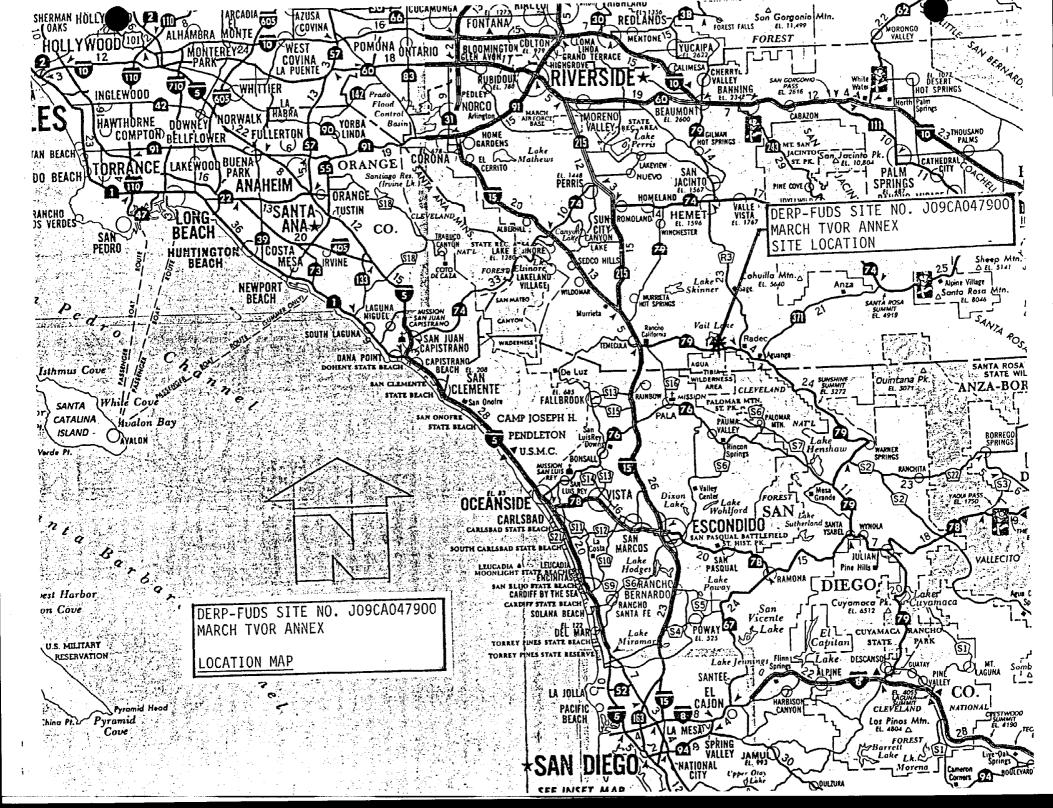
POLICY CONSIDERATIONS: There are no policies which prevent proposal of this project.

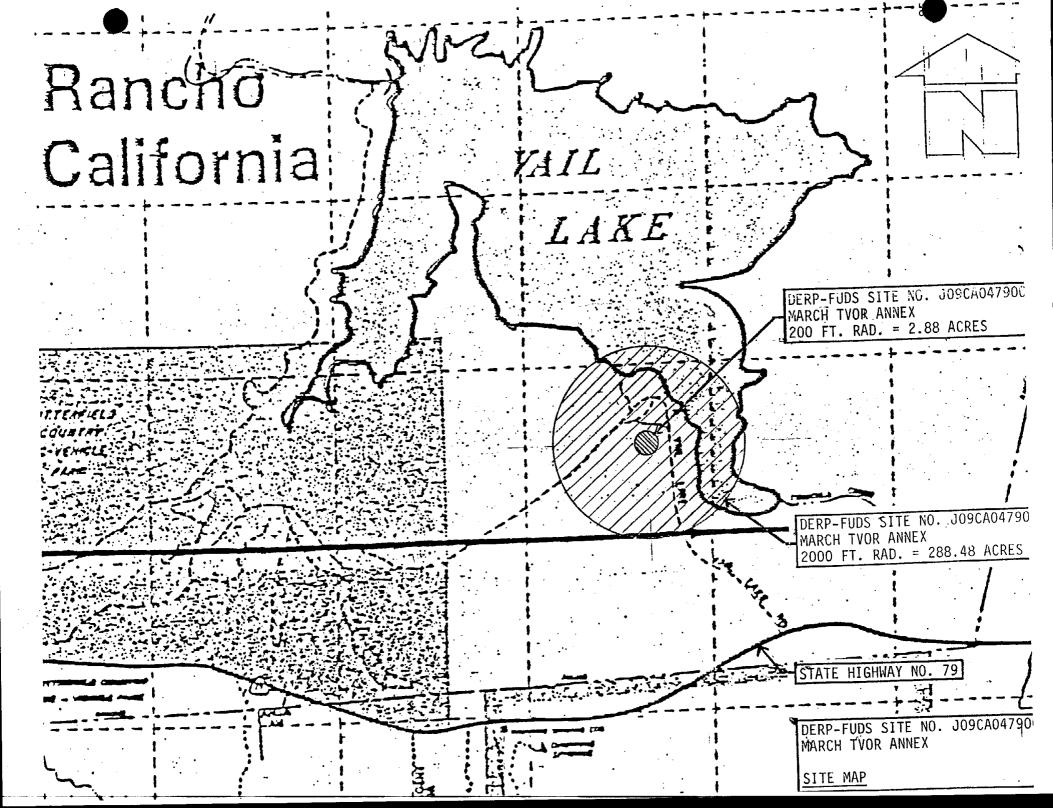
PROPOSED PROJECT: Remove and dispose of existing vertically-mounted-on-grade, 1500 gallon, diesel storage tank and existing empty pole mounted transformer case and lid. Sample soils in vicinity of removed storage tank and transformer casing. Sample contents of storage tank and wipe sample for transformer case.

DD FORM 1391: Attached

DISTRICT POC: Ms. Debra Castens at (213)894-2865, Los Angeles District.







APPENDIX C-1.6

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR FORMERLY USED SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY
LAKE MATHEWS WATER LINE
AND

RETAIL STORES (MARCH WATER SYSTEM ANNEX) RIVERSIDE COUNTY, CALIFORNIA

PROJECT NO. J09CA048000

#### FINDINGS OF FACT

- 1. The March Water System Annex consists of a water pipeline from Lake Mathews into the southwestern portion of March Air Force Base (M.A.F.B.) on Nandina Ave. turning north through the base and exiting the base on Cactus Ave. and proceeding northwesterly into the City of Riverside and terminating at a pump house located on Iowa Ave. The entire system is located in Riverside County, California with its beginning approximately 9 miles south of the City of Riverside and its terminus in the City of Riverside near the University of California, Riverside. The portion of the line from Lake Mathews to where it enters March Air Force Base on Nandina Ave. is still active and serves the Air Force Base with water from Lake Mathews. The remaining portion of the line is inactive.
- 2. The inactive portion of the March Water System Annex consisted of a 0.03 acre parcel on Iowa Ave. where a pump house was constructed, permits covering no area and a license covering no area, all transferred from Camp Haan by letter from The Secretary of the Army, dated April 16, 1949.
- The March Water System Annex was a standby water line between 3. Riverside and Camp Haan (now March Air Force Base). A pump house was constructed on a 0.03 acre parcel on Iowa Avé. in 1940, as a result of a permit granted by the County of Riverside. This was a no cost permit for an area of 1375 square feet. On December 1, 1940, the State of California Department of Public Works issued a no cost, no area encroachment permit to the Government to construct a 16-inch water pipe from Iowa Ave. to Iris Ave. in Riverside. An agreement with the Atchison, Topeka and Santa Fe Railway Company in November 1943 granted the Government a rightof-way to construct a 16-inch pipeline beneath the tracks at Cactus Ave. for the cost of \$10. No area was stated. A contract was also made with the Atchison, Topeka and Santa Fe Railway Company for the use of certain air valves and blow-off boxes located on the railroad right-of-way at Box Springs at a cost of These air valves and blow-off boxes were constructed by the Government as an integral part of the excess water supply system. Government property was not involved and the contract was never transferred to the Department of the Air Force.

- All Government property located on land covered by the permits and licenses noted in paragraph 3 were disposed of during the period that Camp Haan (now March Air Force Base) was under jurisdiction of the War Assets Administration except for 1348 linear feet of the 16-inch pipe. This remaining 1348 feet of pipe was declared excess in July, 1950. On June 23, 1952, the pump house and land were transferred to the County of Riverside, plus the sum of \$1400 paid in lieu of restoration of the premises. The Agreement also released the Government from any liability and claims against The State of California agreed to the abandonment of the waterline by the Government and relieved the Government from liability and claims against them on February 5, 1952. On February 1, 1952, the Atchison, Topeka and Santa Fe Railway Co. terminated its license with the Government and forever released the Government from liability and claims against them. evidence was found of unsafe debris, hazardous or toxic waste, or unexploded ordnance resulting from Department of Defense (DOD) use of the site.
- 5. The Lake Mathews to M.A.F.B. portion of the March Water System Annex is used to supply water to the Base from Lake Mathews. The Riverside to Camp Haan (now M.A.F.B.) portion is abandoned and the area where the pump house stood is now developed property with retail stores. No evidence was found of unsafe debris, hazardous or toxic waste, or unexploded ordnance resulting from DOD use of the site. The California Regional Water Quality Control Board and the County of Riverside Department of Health have no record of hazardous or toxic waste on the site.

#### **DETERMINATION**

Based on the foregoing findings of fact, the Lake Mathews to March Air Force Base portion of the March Water System Annex is active and Therefore, it is determined that currently being used. environmental restoration project is not an appropriate undertaking within the purview of the Defense Environmental Restoration Program, 10 U.S.C. 2701 et seq.) for the reasons stated above. Based upon the foregoing findings of fact, the Riverside to Camp Haan (now M.A.F.B.) portion of the March Water System Annex is inactive but has been determined to have been formerly used by D.O.D. However, the site has There is no evidence of been beneficially used by the current owner. unsafe conditions resulting from DOD use of the site. Therefore, it is determined that an environmental restoration project is not an appropriate undertaking within the purview of the Defense Environmental Restoration Program, 10 U.S.C. 2701 et seq., for the reasons stated above.

MARCH WATER SYSTEM ANNEX PROJECT NO. JO9CA048000







THESE PICTURES REPRESENT THE LAND UPON WHICH
THE PUMP HOUSE WAS LOCATED FOR THE NORTHERN
SECTION OF THE WATER SYSTEM ANNEX. THE SOUTHERN
SECTION FROM LAKE MATHEWS TO MARCH A.F.B. IS
STILL ACTIVE THEREFORE NO PHOTOGRAPHS WERE
TAKEN OF THIS SECTION.

APPENDIX C-1.7

#### 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, Alabama 35807-4301

Commander, U.S. Army Engineer Division, Missouri River, P.O. Box 103, Downtown Station, Omaha, Nebraska 68101-0103

SUBJECT: Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) Inventory Project Reports (INPR).

1em 1. I am forwarding the INPR for the following <del>eleve</del>n sites.

SITE NUMBERS	SITE NAME	RECOMMENDED PROJECT TYPE
J09CA078800 J09CA084900 J09CA085400 J09CA085900 J09CA087300 J09CA092200 <del>J09CA100120</del> J09CA104500 J09CA108400 J09CA108400	Denio Gap Filler Annex Lemoore Aux. Field (Corcoran Airport) Lincoln Radio Beacon Annex Madera Airport Merced Janpanese Reception Center Sacramento Engineering Depot March AFB Light Annex No. 2 Linda Vista Mesa Fld (Norco) Naval Ordnance Lab (Norco) Smiths Ranch Dry Lake Annex	NOFA NOFA NOFA NOFA NOFA NOFA NOFA NOFA

2. All eleven sites are eligible for DERP-FUDS. No projects are proposed for any of the sites at this time.

11 Encls

09-A212000

ROGER F. YANKOUPE Brigadier General, U.S. Army Commanding

CF: CESPK-ED-M(HTW) CESPL-ED-M(HTW) DEFENSE ENVIRONMENTAL RESTORATION PROGRAM FORMERLY USED DEFENSE SITES FINDINGS AND DETERMINATION OF ELIGIBILITY

> MARCH AFB LIGHT ANNEX NO. 2 RIVERSIDE COUNTY, CALIFORNIA PROJECT NO. J09CA100120

TACA212000

### FINDINGS OF FACT

- 1. The former March AFB Light Annex No. 2 is located in Riverside County, California approximately 15 miles east of Riverside, California. The site originally consisted on 10.43 acres. On 6 May 1944, the Department of Defense obtained a permanent easement of .07 acres from M.J. and Anita s. Yoder as part of the power line right-of-way for the March Light Annex No. 2. On 6 June 1944, the Department of Defense obtained permanent easements on 10.36 acres from the Joseph W. Wolfskill Company for the power line right-of-way, access trail, and the beacon site for the Light Annex.
- 2. The lands of March AFB Annex No. 2 consisted of a power line right-of-way, an access trail, and a beacon site. The power line right-of-way was 20 feet wide and 17,770 feet long and formed a path from the beacon site to an existing power line. The access trail was wide and 6,141 feet long and was a cleared dirt path from the beacon site to the flat area southwest of the beacon site. The beacon site was 50 by 50 feet with a metal tower. On top of the metal tower there was lighting device. This facility was used as part of the night system of March Air Force Base.
- On 30 November 1972, the Strategic Air Command (SAC) requested to dispose of March AFB Light Annex No. 2. SAC requested abandonment-in-place for the facilities of the Light The site was declared excess on 7 October 1974. Currently, the site is owned by the California Department of Water Resources who lease the land to the Lake Perris State Recreation Area. The site is in an undeveloped area with hilly DOD improvements of the site are scattered near the terrain. former beacon site. There are small metal girders scattered in bushes. In a crevice between rocks, there is a large concentration of metal girders and a metal box with electrical switching devices inside. There is no visible evidence of unsafe debris, hazardous or toxic waste, or unexploded ordnance resulting from DOD use of the site. Officials of the Lake Perris State Recreation Area have no records of any hazards associated with the site.

Continued Project No. JOCA100120

#### DETERMINATION

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

19 March 92 Date

ROGER F. YANKOUPE

Brigadier General, U.S. Army

Commanding

## SITE SURVEY SUMMARY SHEET DERP-FUDS SITE NO. J09CA100120 MARCH AFB LIGHT ANNEX NO. 2 RIVERSIDE COUNTY, CALIFORNIA OCTOBER 1991

SITE NAME: Formerly March AFB Light Annex No. 2.

<u>LOCATION</u>: The former March AFB Light Annex No. was located approximately 15 miles east of Riverside, California (see location map enclosed).

SITE HISTORY: The site originally consisted of 10.43 acres. In May 1944, the Army obtained a permanent easement from M.J. and Anita S. Yoder on .07 acres for part of the power line. In June 1944, the army obtained permanent easements on 10.36 acres from the Joseph W. Wolfskill Company for the beacon site, access trail, and a power line. The site was used as part of the night lighting system for March Air Force Base. The site was declared excess in October 1974. Currently, the site is owned by the California Department of Water Resources who lease the land to the Lake Perris State Recreation Area.

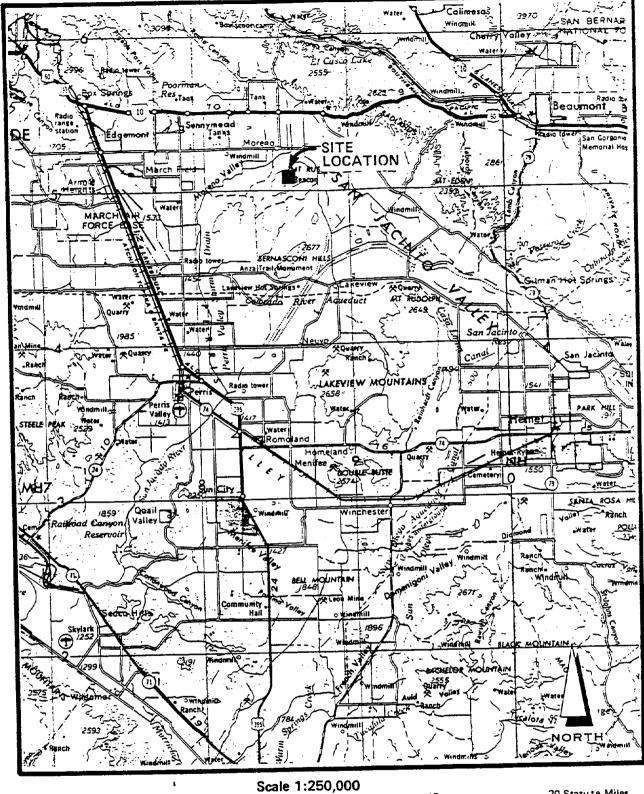
<u>SITE VISIT</u>: A site visit was conducted on 9 January 1989 by Dennis Parker, The Earth Technology Corporation.

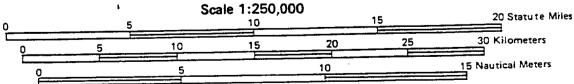
CATEGORY OF HAZARDS: None.

PROJECT DESCRIPTION: None.

AVAILABLE STUDIES AND REPORTS: None.

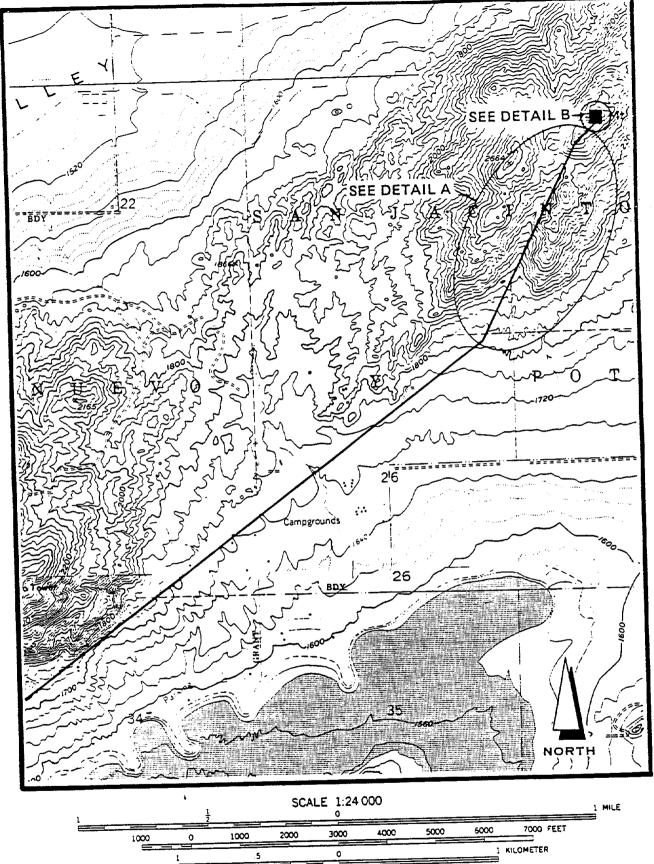
PAC/POC: Debra Castens (213) 894-2865, Los Angeles District.





CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION

REGIONAL MAP FOR THE FORMER MARCH AFB LIGHT ANNEX NO. 2



CONTOUR INTERVAL 20 FEET

TOPOGRAPHIC SITE MAP OF THE FORMER MARCH AFB LIGHT ANNEX NO. 2

APPENDIX C-2.1

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REQUISITIONED By (show Signature, Rank, Organization, Destination. If different from "ship to" include address):

APPROVED BY: No 40 a 312.

For The: Commanding Officeri

JOHN F. BABGOCK, let Lieut., G.W.S., Base Chemical Property Officer. ROBERT H. HERMAN, Major, A.A.F., Executive.

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### AIR BASE HEADQUARTERS Office of the Base Chemical Officer

121

MARCH FIELD. RIVERSIDE, CALIFORNIA.

July 6. 1939.

Subject: Transportation Procurement Authority.

To: Chief, Chemical Warfare Service, Washington, D.C.

1. Request transportation procurement authority CWS be furnished this office to cover the cost of transportation by rail to the Port of Embarkation, San Francisco, California, of five (5) sets, gas identification, MI, sample replacements which are to be returned to the Edgewood Chemical Warfare Depot, Edgewood, Karyland.

H. A. BARTRON. Hajor, Air Gorps, Base Chemical Officer.



MARCH FIELD. RIVERSIDE, CALIFORNIA

July 11, 1939.

subject: Pransportation Procurement Authority.

To: Chief, Charical Marfare Service, Washington, D.C.

l. Request this office be furnished transportation procurement authority, 0.W.S., to cover the cost of transportation by freight to the Port of Embarkation, San Francisco, California, of one (1) Container, steel, for the Edgewood Chemical Marfers Depot, Edgewood, Haryland.

H. A. BARTRON. Major, Air Corps. Base Chemical Officer. APPENDIX C-2.3

### $\equiv$ Chemical Warfare Service $\stackrel{ extstyle d}{=}$





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FEBRUARY 1942

### Chemical Warfare Service News Letter



SUBJECT: Information for all Chemical Warfare Service Officers.

TO: All Chemical Warfare Service Officers.

#### CONTENT

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From the Chief .		• • • • •	• • • • •	• • • • •	• • • •	-3
From the Chief's	Office .	• • • • •	• • • •,•	• • • • •	• • • • •	. 9
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#### THE COVERS

FRONT - - - Brig. Gen. Rollo C. Ditto, Commanding General, Huntsville Arsenal, addressing employees on January 12, 1942, on the occasion of a visit of high Army Officers from Washington and Ft. McClellan.

BACK - - - Color photo of experimental Mickey Mouse gas mask, designed by Walt Disney. Masks of this type may be produced to encourage children to carry their masks at all times.

REPRODUCTION PLANT
CHEMICAL WARFARE SCHOOL

cers' School and certificates were issued to 20 men. Approximately 125 men received specialized training in Airdrome Decontamination. In addition to this training all officers at Pope Field attended a 10 hour Refresher Course in Defense Against Chemical Attack.

All personnel were required to wear gas masks and during a period of two weeks each organization was trained to wear gas masks donnedfor a period of two hours without undue fatigue or loss of efficiency. A 15 hour course for all men (Basic Squadron CWS Training) was initiated by each unit, to continue this training with a minimum of 10 hours of instructions per month.

Each organization was left with four Gas Non-Coms, a nucleus for Decontaminating Teams, and a start toward more efficient training in Personal and Collective Protection Against Chemical Attack.

Approximately 900 men and 25 officers received some phase of Chemical training during the month.



### Fourth Air Force March Field

Under the supervision of Capt. Ted. E. Enter, Base Chemical Officer, a Unit Gas Officers' School was recently conducted at March Field. Twenty officers representing sixteen organizations of March Field and Camp Haan graduated and received certificates of proficiency at the conclusion of the course. A sixty hour program included lectures, demonstrations and practice in Chemical Warfare activities. In addition to the intensive study of the agents, chemical reconnaissance and intelligence, weapons and offensive measures against chemical attack was carried out.

A demonstration of the controlling of incendiary bombs was held before a large group, consisting of the officers attending the school and the personnel of the Base Fire Department. This demonstration included the technique for the control of both the magnesium and thermit bombs. A forceful demonstration are the control of both the magnesium and thermit bombs.

stration of the effect of an incendiary bomb burst in a littered attic emphasized the necessity of adhering to protective measures in the home. All phases of decontamination were studied and demonstrated.

Before a large group of crew chiefs representing all combat Air Corps units at the Field and the officers attending the school a demonstration of airplane decontamination was conducted. A decontamination crew, clad in impervious clothing, demonstrated the proper technique in neutralizing contaminated areas of the plane. This three hour demonstration included decontamination of the fuselage, wings, tires, and cockpit. Personnel of the 3d Chemical Company, Service (Aviation) made up the decontamination crew and gave individual instruction in decontaminating technique to the crew chiefs.



### Hatrs. First Division

During recent training exercises conducted by the Chemical Detachment for the Station Hospital, Ft. Bliss, Tex., news-reel pictures were taken by the News-of-the-Day photographer.

The Division Chemical Warfare School commenced the latter part of January. The class was held in the Post Theater to Accommodate all students in the one class.

A Chemical Warfare School for Unit Gas Officers and Gas Commissioned Officers of the 1st Cavalry Division was scheduled for the period of January 19 - 30.

#### Hgtrs. Second Division

Three officers from the second Cavalry Division recently attended the Unit Gas Officers' Course at Edgewood Arsenal.

Captain McMillen, Division Chemical Officer, was recently graduated from the 10th Unit Gas Officers' Course at Edgewood Arsenal.

APPENDIX C-2.4

NPR C 342-44-A-6005 FILE - NIALS- 258 601

### COORDINATION

HEADQUARTERS
Office of the Commanding General
March Field, Riverside, California

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SUBJECT: Acquisition of Safety Zone for Magazine Area

**T**0:

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EX ADJUTANT S÷1

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Division Engineer Scuth Pacific Division Real Estate Sub-Office 621 South Hope Street Los Angeles 14, California

Regulation 35-3a, and in accordance with the authority in TWI AIS 1429, dated 28 May 1947, from Headquarters Factical air Command, a further submission is herewith made for the Safety Zone bounding the 240 acres of Government-owned Magasine Area, which originally belonged to Camp Haan, located in Township 3 S R 4 N, SBB and M, as set forth in paragraph 4b of letter this headquarters, subject: "Transfer of Facilities from Camp Haan to March Field", dated 11 February 1947 written to Commanding General, Twelfth Air Force, for submission through channels, four-tenths of a mile Safety Zone around the 240 acres of Government-owned land was requested, however, since that time your office has requested the submission of a request for a bare minimum area covering this Safety Zone, which will have to be acquired by lease.

2. a. The Government-owned land consists of the SW 1/4 of Section 16 and N 1/2 of NW 1/4 of Section 21, paragraph 4b of letter mentioned above requested a four-tenths mile Safety Zone bounding this area, however, in checking with the Ordnance Officer, it is found that a minimum of 1815 feet from the igloos will suffice. In this connection the following minimum description is given for that portion of Township 3 S R 4 W, SSB and W required to meet this minimum:

N 660° of SE 1/4 of SE 1/4 Section 17

ME 1/4 of SE 1/4 of Section 17

SE 1/4 of NE 1/4 of Section 17

S 1815° of NH 1/4 of Section 16

S 1815° and N 1900° of NE 1/4 of Section 16

N 1900° of SE 1/4 of Section 16

N 2250° and N 1900° of NE 1/4 of Section 21

H 830° of S 1/2 of NH 1/4 of Section 21

RECORD JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC-MON-RECORD JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

### COORDINATION

HEADQUARTERS
Office of the Commanding General
warch Field, Riverside, California

Subj: Acquisition of Safety Zone for Magazine Area Basic contd

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EX ADTUTANT

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MIL PERS

PERS MONT

SPEC SERY

ORG & MAN

BASE INTEL

GND SAFETY

1 & B

S-1

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CHAPLAIN

b. The minimum is shown on the attached Real Estate Map cross-hatched in blue.

c. However, in this connection the minimum desired section which requires additional land is shown cross-hatched in red, bounding the Government-owned land, and described as follows:

HH 1/4, NE 1/4 and SE 1/4 of Section 16 H 3135' and W 1900' of E 1/2 of Section 21 S 1/2 of HH 1/4 and N 495' of SW 1/4 of Section 21 H 3135' and E 1815' of E 1/2 of Section 20 E 1815' of E 1/2 of Section 17

- d. By acquiring the remaining 3/4s of Section 16, March Field would have an access road from Allesandro Boulevard to the Ammunition Area, as well as an access road along Cactus Avenue into the Ammunition Storage Area and Section 16 would join that portion of Section 15, which was previously requested by March Field.
- 3. a. The Government-owned land consisting of the SW 1/4 of Section 16 and N 1/2 of NW 1/4 of Section 21 is proposed to be used as an Ammunition and Bomb Storage Area for March Field. In the Post War Plan the Ammunition Storage Area, which was located on March Field proper, lies too close to the existing facilities and the proper Safety Zone cannot be maintained, thus, it is the desire of the Master Planning Board to isolate the Ammunition Storage Area from March Field proper and locate it in the old Camp Haan Ammunition Storage Area.
- b. By so doing, and bounding this area by a minimum of 1815 feet of Safety Zone, there will be adequate space to virtually double the ammunition storage capacity of the area by the addition of igloos in the area, which could all be located on Government-cwneeland. Attention is invited to the fact that three of the existing igloos are now located on leased land.
- c. It is estimated that the occupancy of this Real Estate will be permanent.
- d. Possession is required immediately in that all the ammunition and bombs now stored on March Field have been, or are being, moved to the new Magazine Area.
- 4. a. It is certified that the project requirements have been reduced to the base essentials and that the acquisition is essential to prevent a breakdown of functions.

JAN MAR APR MAY JUN JUL AUG SEP YEB RECORD DEC CCT FEB MAR APR JUL AUG JAN NON-RECORD

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### COORDINATION

HEADQUARTERS

Office of the Commanding General

March Field, Riverside, California

Subj: Acquisition of Safety Zone for Magazine Area Basic contd

b. The present fence is barbed wire (as shown on attached map) on wooden posts. The present boundary fence of Camp Haan, which is a link-chain fence, has been acquired by March Field and it is proposed that a portion of the present boundary fence of Camp Haan will be used to fence the entire 240 acres of Government-camed land. The sixteen igloos now located in the area can be used in the present condition and very few minor repairs will have to be made in the near future.

5. a. No other facilities of the AAF, partially, or totally unused, including the facilities not presently under the jurisdiction of the Command concerned, meet the requirements.

b. The attached Real Estate map shows the location of the Real Estate required; and the vicinity map shows the location in relation to March Field.

6. The desired area, as shown on the attached Real Estate map, will barely fulfill the needs of March Field, and the fourtenths of a mile Safety Zone, previously requested, is desirable, but in any event it is particularly desired that the remaining 3/4s of Section 16 be acquired in this transaction. It is considered desirable to acquire the land in fee, however, a permanent lease setting the area up as a Safety Zone would suffice. In this event the lessor could be granted the privilege of cultivating the land and allowing the Government the right of ingress and egress along the existing access reads.

2 Incls

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S-1

CPA

ADJUTANT

MIL PERS

PERS MENT

SPEC SERV

PERS AFF

GND SAFETY

BASE INTEL

PECTO

GND TMG

FLY THE

BASE OPES

SEP DIV

MAINT DIV

POST ENG

AI TC

PINANCE

LEGAL O

SURGEON
B & F
STAT
PRO
PROVO

CHAPLAIN

COMM PX

TRAFFIC DIV

QX SERV DIV

I & · E

1 - Real Estate Map(in trip)

2 - Location Map(in trip)

CARL J. CRANE Colonel, Air Corps Commanding

Copy Furnished:

CG, TAC, langley Fld, Va

CG, 12 AF, March Fld, Calif.

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### COORDINATION

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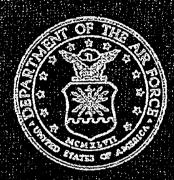
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	HEADQUARTERS	
	Office of the Commanding General	KF-A
	March Field, Riverside, California	
	<b>-</b> 7	IB (849
EX	$\overline{A}$	
ADJUTANT V		
S÷1	SUBJECT: Safety Zene Magazine Area Camp Hasn	
MIL PERS	SUBJECT: Safety Zene Ragazine Area Cany	
CP0	O: Divisies Engineer	}
PERS NEWT	10: Division Engineer South Pacific Division	•
SPEC SERV	L. A. Real Estate Sub-Office	
I A B	Les Angeles 14, California	
PERS APP		
ORG & MAN	<del> </del>	
GND SAPETT	1. In accordance with agreement reached between men	Ders ei
-		
S-1 BASE INTEL		
	res and leaves will have to be obtained in line with pres	SUE La-
PROTO	duirements.	
S-3	2. It is understood, however, that this headquarter	e wall
GND TRG		
FLI ING		
BASE OPES	et up to bound the entire 240 acres of government ewned l	ANG
S-4	3. In each request it is desired to include one rea	rth
SEP DIV		
MAINT DIV	from the magazine area and the other datement	,-
TRAFFIC DIV	the north east corner.	
QM SERV DIV		JN
	POR THE COMMANDING OFFICER:	•
		400 T
		19
	EDWIN C.1LARSON	
AI TC	EDWINE G.1LARSON  Major, Air Corps	
FINANCE	Adjutant	
LEGAL O	Aujuun	
SURGEON		1171 1171
B&F		
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AUG JUL WAY MAR RECORD JUL FEB NON-RECORD

**APPENDIX C-2.5** 

### THE UNITED STATES AIR FORCE REFERENCE SERIES



### Air Force Bases

Active Air Force Bases
Within the United States

### 126

4-2 Jul 66

19 Nov 69 66-

8-1 Jul 71

69-

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-30 Apr 72 71-1 Jul 74

72-1 Jan 75

72-1 Jul 74

173-

t **73**≔

74-13 Jul 79

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p 75-

et 77-

ct 77-

ct 78-

### March Air Force Base

Location: Located 10 mi SE of Riverside, CA, about 65 mi E of Los Angeles, CA.

Name: Named in honor of 2d Lt Payton Conway March, Jr (1896–1918). Lieutenant March was fatally injured on 12 Feb 1918, two weeks after he had been commissioned in the regular Air Service, when his Curtiss JN-4 crashed at Fort Worth, TX.

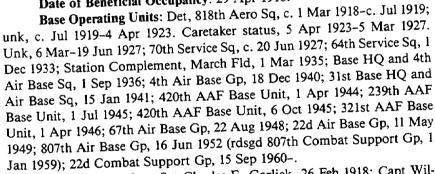
Date of Current Name: 13 Jan

Previous Names: Alesandro Aviation Field, 1 Mar 1918; March Field, 20 Mar 1918.

Date of Establishment: 23 Mar 1918.

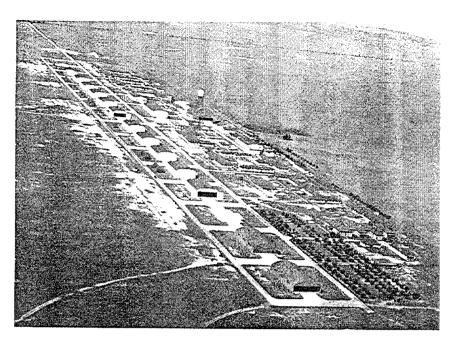
Date Construction Began: 23 Mar 1918.

Date of Beneficial Occupancy: 29 Apr 1918.

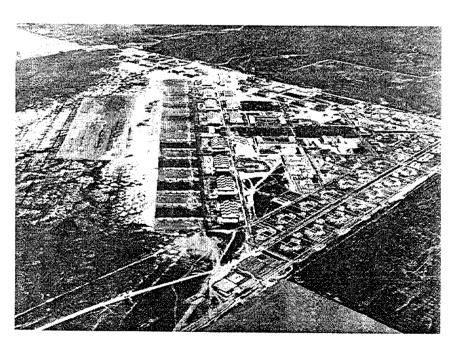


Base Commanders: Sgt Charles E. Garlick, 26 Feb 1918; Capt William H. Carruthers, 11 Mar 1918; Maj John C. Bartholf, 11 Jun 1918; Lt Col Barton K. Yount, Jul 1919; Maj George H. Peabody, 26 Jun 1921; 1st Lt Earle H. Tonkin, c. Aug 1922; MSgt William J. Anderes, 5 Apr 1923 (caretaker); 1st Lt Earle H. Tonkin, 6 Mar 1927; Maj Carlyle H. Wash, c. Apr 1927; Maj Millard F. Harmon Jr, 8 Aug 1927; Maj Joseph T. McNarney, 5 Aug 1930; Maj Carl A. Spaatz, 25 Oct 1931; Lt Col (later, Brig Gen) Henry

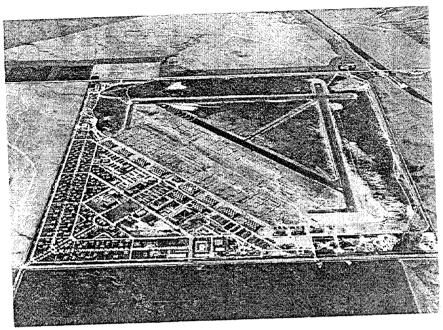




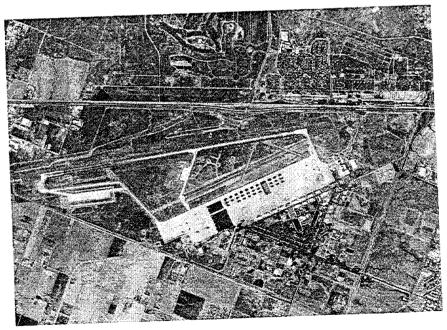
March Field, March 1927



March Field, March 1932



March Field, May 1940



March AFB, May 1986

H. Arnold, 26 Nov 1931; Lt Col Hubert R. Harmon, 11 Jan 1936; Brig Gen Henry B. Clagett, 1 Mar 1936; Col John H. Pirie, 17 Jul 1936; Col Rush B. Lincoln, Jan 1937; Col Carlyle H. Wash, Nov 1938; Brig Gen Jacob E. Fickel, 31 Mar 1939; Brig Gen Frank D. Lackland, 23 Jan 1941; Lt Col (later, Col) Benjamin G. Weir, 28 May 1941; Col Joseph H. Davidson, 4 Nov 1941; Col Charles R. Melin, 19 Oct 1943; Col Ernest S. Moon, Jan 1944; Col Leroy A. Walthall, 6 Apr 1944; Col John V. Hart, 23 Nov 1944; Col Stanton T. Smith, 5 Dec 1944; Col John W. Warren, 1 Jul 1945; Col Stanton T. Smith, 15 Aug 1945; Col Allen W. Reed, 27 Oct 1945; Col Earle G. Harper, 5 Nov 1945; Col Leonidas L. Koontz, 11 Jan 1946; Col Earle G. Harper, 17 Apr 1946; Col Leonidas L. Koontz, 29 May 1946; Col Carl S. Crane, 10 Feb 1947; Col Elvin F. Maughan, 19 Jan 1948; Col Clifford H. Rees, 17 May 1948; Brig Gen Joseph H. Davidson, 13 Jan 1949; Col George McCoy Jr, 14 Jun 1949; Col William L. Lee, 22 Aug 1949; Col Wiley D. Ganey, 4 Jan 1950; Col Howell M. Estes Jr, Jul 1950; Col Wiley D. Ganey, Nov 1950; Col Charles W. Bicking, 23 Jan 1951; Col Gilbert F. Friederichs, 9 Jul 1953; Col Robert B. Miller, 4 Jun 1955; Lt Col George J. Krause, 15 Jul 1955; Col Pinkham Smith, 2 Aug 1955; Col Burton C. Andrus Jr, 11 Feb 1956; Col Thomas Fletcher Jr, 22 Apr 1957; Col James M. Bagley Jr, 11 Aug 1958; Col Earl S. Kimbell, 27 May 1960; Col John Luts, 8 Aug 1962; Col Richard D. Butler, 15 Feb 1964; Col Robert L. Bennett, 1 Jul 1966; Col Edward G. Butler, Jun 1967; Col Roderick R. Patton, 5 Sep 1968; Col Frank A. Knapp, 4 Aug 1969; Col Robert L. Cooch, 22 Apr 1971; Col Robert J. Yentz, 4 Jan 1972; Col Guy D. Perham, 31 Jan 1973; Col Stanford E. Brown, 18 Feb 1974; Col Gary E. Spohn, 28 Feb 1975; Col Lawrence E. Pennington, 3 Feb 1976; Col Belmer J. Addison, 22 Mar 1976; Col Elmer Funderburk Jr, 4 Oct 1976; Col Billy S. Lyons, 26 Nov 1978; Lt Col Eugene C. Borowski, 3 Dec 1979; Col Albert F. Litzler, 3 Jan 1980; Col Robert B. Picht, 31 Aug 1980-.

Major Off-Base and Detached Installations: Blythe AAFId, 7 mi W of Blythe, CA, 7 Apr 1944 (asgnd)-1 Jul 1945 (tsfrd to Muroc Fld, CA), 16 Oct 1945 (asgnd)-7 Aug 1946 (spls); Camp Haan, 8 mi SE of Riverside, CA, 16 Apr 1949 (dsgd)-5 Apr 1951 (absorbed by base); Daggett MAP, Daggett, CA, 6 Oct 1945 (dsgd)-31 Mar 1946 (rlvd); Desert Center AAFId, Desert Center, CA, 30 Apr 1944 (asgnd)-31 Oct 1944 (tsfrd to ATSC); Estrella AAFId, Paso Robles, CA, 28 Dec 1945 (asgnd)-8 Jan 1946 (discd); Grand Central Aprt (rdsgd Grand Central Air Trml), Glendale, CA, 16 Jun 1942 (asgnd)-unk, mid-1943 (asgnd)-c. 1944 (tsfrd to Van Nuys Metro Aprt, CA), 6 Oct 1945 (asgnd)-19 Feb 1946 (tsfrd to San Bernardino AAFId, CA); Kearny-Mesa Aprt, San Diego, CA, 3 Sep 1942 (asgnd)-1 May 1946 (tsfrd to USN); Lomita Flt Strip, Lomita, CA, 2 Nov 1942 (asgnd)-unk, mid-1943 (asgnd)-23 Aug 1944 (rlvd); March Water Plant Anx (rdsgd Riverside Water Plant Anx; March Water Sys Anx), Arlington, CA, 7 Mar 1956 (actvd)-;

Muroc Bombing and Gnry Rg (rdsgd Muroc Rg), Sep 1933 (asgnd)-18 Aug 1936 (merged w/instl), 22 Jul 1942 (sep fr instl)-; Needles MAP, Needles, CA, 3 Sep 1942-13 Nov 1944 (tsfrd to San Bernardino AAFld, CA); Norwalk AF POL Retail Distr Stn, #2 (rdsgd Norwalk Defense Fuel Spt Pt), Norwalk, CA, 1949 (asgnd)-; Ontario AAFId, 1.2 mi ESE of Ontario, CA, mid-1943 (asgnd)-unk, 6 Oct 1945 (asgnd)-I Mar 1946 (tsfrd to Army Div Engrs); Orange County AAFld, 4.5 mi S of Santa Ana, CA, unk-25 May 1944 (rlvd); Oxnard Landing Strip, 5.5 mi ENE of Oxnard, CA, mid-1943 (asgnd)-6 Oct 1945 (rlvd); Rice AAFld, Rice, CA, 30 Apr 1944 (asgnd)-30 Oct 1944 (tsfrd to ATSC); San Nicholas Isl AAFId, 74 mi SW of Redondo Beach, CA, mid-1943 (asgnd)-unk, 28 Mar 1944 (asgnd)-31 May 1944 (tsfrd to USN); Santa Ana AAB, Santa Ana, CA, mid-1943 (asgnd)-29 Mar 1946 (tsfrd to Army Div Engrs); Santa Maria AAFld, Santa Maria, CA, Apr 1946 (asgnd)-Jul 1946 (rlvd); Shavers Summit AAFld, Shavers Summit, CA, 30 Apr 1944 (asgnd)-Jan 1948 (dspd); Thermal AAFld, Indio, CA, 30 Apr 1944 (asgnd)-6 Jun 1945 (tsfrd to USN), 16 Oct 1945 (asgnd)-unk; Tonopah Bombing and Gnry Rg, Tonopah, NV, 1 Apr 1942 (asgnd)-unk, 1 Jul 1943 (asgnd)-15 Nov 1944 (tsfrd to Fresno AAFId, CA); Van Nuys Metro Aprt, Van Nuys, CA, mid-1943 (asgnd)-3 May 1946 (rlvd), 20 Oct 1946 (asgnd)-Aug 1950 (dspd).



March Field, February 1930

Major Changes in Operational Capability: Pilot training, 1917-1923; seven hangars, airplane machine shop, assembly buildings and warehouse accepted 2 Mar 1929; first hospital opened Dec 1933; 1,600 acres added to north of installation late 1940; base facilities geared for heavy-bomber crew training during World War II; extensive runway rehabilitation project completed mid-1945; start of B-47/KC-97 operations prompted strengthening of concrete areas and addition of facilities, including hangars, armament, and electronics buildings 1952-1954; 644-unit Wherry housing project completed mid-1953; maintenance hangar completed mid-1955; new taxiway accesses, enlisted men's dormitory, and an alternate communication center constructed 1958; alert facility opened 9 Jan 1960; runway strengthening and new operations center completed Aug 1963; 200-bed hospital opened Jun 1965; introduction of B-52/KC-135 operations made base largest SAC installation in 1966-1968; aircraft maintenance dock completed mid-1970; major housing conversion project completed Jan 1972; new hospital wing dedicated 17 Feb 1976; air refueling operations training facility completed Nov 1978; electrical power station completed spring 1980; alert facility and weapons storage area completed May 1980.

Major Commands to Which Assigned: Army Air Service, 6 Mar 1918; Army Air Corps, 2 Jul 1926; GHQAF, 1 Mar 1935; Fourth AF, 31 Mar 1941; Continental Air Forces, 13 Apr 1945 (rdsgd Strategic Air Comd, 21 Mar 1946); Tactical Air Comd, 1 Apr 1946; Continental Air Comd, 1 Dec 1948; Strategic Air Comd, 1 May 1949-.

Major Changes in Status: Leased (in 1917) prior to acquisition by purchase in 1919; in caretaker status, 4 Apr 1923-6 Mar 1927.

-			
Units A	Assigned:		
	1918	95 Pur Sq	7 Jun 27-31 Jul 27
68 II Aero Sq		15	931
(Sq A)	Jun 18-Nov 18	1 Wg	
215 Aero Sq		(1 Bomb Wg; 1	
(Sq B)	Mar 18-Nov 18	Pur Wg; 1 Wg; 1	
289 Aero Sq	Aug 18-Nov 18	Bomb Wg)	1 Apr 31-27 May 41
293 Aero Sq		7 Bomb Gp HQ	29 Oct 31-4 Dec 34
(Sq D)	Jun 18-Nov 18	9 Bomb Sq	1 Apr 31-4 Dec 34
311 Aero Sq		11 Bomb Sq	29 Oct 31-4 Dec 34
(Sq E)	Jun 18-Nov 18	17 Pur Gp	
Sq C	Aug 18-Nov 18	(17 Atk Gp; 17	
	1919	Bomb Gp)	15 Jul 31-24 Jun 40
9 Aero Sq	22 Jul 19-2 Aug 19	31 Bomb Sq	1 Apr 31-4 Dec 34
	15 Nov 19-11 Dec 19	34 Pur Sq	
	1921	(34 Atk Sq; 34	
19 Sq	1 Oct 21-29 Jun 22	Bomb Sq)	15 Jul 31-24 Jun 40
23 Sq	1 Oct 21-21 Mar 22	73 HQ Sq	
	1927	(73 Pur Sq; 73	
11 Bomb Sq	3 Jun 27-31 Jul 27	Atk Sq; 73 Bomb	
13 Sch Gp	31 Jul 27–30 Apr 31	Sq)	15 Jul 31-24 Jun 40
44 Obs Sq	25 Jun 27-31 Jul 27	95 Pur Sq	
47 Sch Sq	17 Jun 27-12 Jun 31	(95 Atk Sq; 95	
70 Svc Sq	20 Jun 27-1 Dec 33	Bomb Sq)	29 Oct 31-25 Jun 40

### MARCH AIR FORCE BASE

		01 0. 1	15 Jan 41-1 Oct 41
	1935	(31 Obs Sq)	15 Jan 41-1 Oct 41
19 Bomb Gp	25 Oct 35-4 Jun 41	32 AB Gp (32 Svc Gp)	15 Jan 41-c. 15 Dec 42
30 Bomb Sq	25 Oct 35-1 Oct 38	34 AB Gp	15 Jan 41-10 Jun 41
32 Bomb Sq	25 Oct 35-4 Jun 41 25 Oct 35-unk	38 Bomb Sq	15 Jan 41-28 May 41
76 Svc Sq		41 Bomb Gp	15 Jan 41-20 May 41
	1936	42 Bomb Sq	15 Jan 41-14 May 41
4 AB Sq	1 Sep 36-8 Apr 41	46 Bomb Sq	15 Jan 41-18 May 41
(4 AB Gp)	1 Sep 36-15 Apr 37	47 Bomb Sq	15 Jan 41-16 May 41
38 Recon Sq	1937	48 Bomb Sq	15 Jan 41-14 May 41
First AC Wea Sq	1 Jul 37-3 Feb 41	48 Pur Sq	
That AC won oq	1939	(48 Ftr Sq)	10 Jun 41-20 Jul 42
93 Bomb Sq	20 Oct 39-2 Jun 41	49 AB Gp	15 Jan 41-1 Aug 41
)) Bomo oq	1940	49 Ftr Sq	10 Jun 41-8 May 42
1 Mat Sq, 23 AB C	3p	50 Ftr Sq	10 Jun 41-7 Feb 42 10 Jun 41-10 Jan 42
(31 Mat Sq)	1 Sep 40-10 Dec 40	51 Pur Gp	14 Jul 41-2 Feb 42
9 Pur Wg	18 Dec 40-1 Oct 41	64 Trpt Gp	14 301 41-2 100 42
15 Bomb Wg	18 Dec 40-3 Sep 41	AB Sq, 32 AB Gp	
23 Base Sq	_	(31 AB Sq; 31	
(23 AB Gp)	1 Feb 40-10 Dec 40	Base HQ & AB	15 Jan 41-31 Mar 44
28 Comps Gp	1 Feb 40-10 Dec 40	Sq)	[5 Jan 41-51 War 4.
32 Mat Sq	1 Feb 40-10 Dec 40	AB Sq, 34 AB Gp	15 Jan 41-10 Jun 41
36 Bomb Sq	1 Feb 40-9 Jul 40	(33 AB Sq)	[3 Jan 41=10 Jun 41
89 Recon Sq	1 Feb 40-24 Jun 40	AB Sq, 49 AB Gp	15 Jan 41-1 Aug 41
AB Sq, 4 AB Gp		(50 AB Sq)	15 Jan 41-1 /108
(3 AB Sq)	1 Sep 40-8 Apr 41	Mat Sq, 34 AB Gp	15 Jan 41-10 Jun 41
AB Sq, 23 AB Gr	1 Feb 40-10 Dec 40	(46 Mat Sq)	15 3411 11 10 000
HQ & HQ Sq,		Mat Sq, 49 AB Gp	15 Jan 41-1 Aug 41
Southwest Air		(64 Mat Sq) Tow Target Det	.5 54.1
Dist	,	(7 Tow Target Sq.	1 Jun 41-31 Mar 44
(HQ Fourth AF		(7 IOW Target Sq.	1942
Mat Sq, 4 AB Gp	1 S 40 9 Apr 41	8 Photo Sq	1 Feb 42-14 Mar 42
(7 Mat Sq)	1 Sep 40-8 Apr 41	14 Intep Con Sq	10 Jan 42-7 Feb 42
	1941	21 Bomb Sq	11 Feb 42-20 Aug 42
1 Mat Sq, 32 AB	15 Jan 41-10 Jan 42	27 Bomb Sq	11 Mar 42-28 Sep 43
(43 Mat Sq)		28 Svc Gp	1 Nov 42-30 Nov 42
2 Mat Sq, 32 AB	15 Jan 41-2 Sep 42		11 Mar 42-28 Sep 43
(44 Mat Sq)	15 Jan 41-5 May 41	38 Bomb Sq	11 Mar 42-28 Sep 43
2 Recon Sq	15 Jan 41. 5 11. 25	39 Mat Sq	1 Nov 42-30 Nov 42
4 AF Svc Comd		51 Intep Con Sq	
(4 AF Base	1 Oct 41-10 Dec 41	(51 Ftr Con Sq;	
Comd)	1000 11 10 2 1	15 Ftr Con Sq)	10 Jan 42-18 Jan 43
4 Photo Sq (4 Mapping So	n· 4	57 Avn Sq	15 Jul 42-31 Mar 44
Photo Mappir		64 Svc Gp	7 Dec 42-18 Jan 43
Sq; 4 Photo	*5	79 AB Gp	14 Aug 42-23 Oct 42
Charting Sq)	10 Dec 41-10 Jan 44	82 Ftr Sq	3 Nov 42-10 Nov 42
6 Recon Sq	15 Jan 41-17 May 4	l 84 Svc Sq	14 Aug 42-23 Oct 42
14 Pur Gp	10 Jun 41-7 Feb 4:	2 330 Ftr Sq	c. Sep 42-31 Mar 44
16 Pur Sq	10 Jun 41-10 Jan 4	2 355 Svc Sq	1 Nov 42-30 Nov 42
18 Trpt Sq	10 Jul 41-6 Jun 4	2 829 MP Co [Avn]	27 Mar. 42 21 Mar. 44
21 Bomb Sq	15 Jan 41-22 May 4	1 (829 Guard Sq)	27 May 42-31 Mar 44
25 Pur Sq	10 Jun 41-10 Jan 4	2 Sub Dep	11 Jul 42-10 Apr 44
26 Pur Sq	10 Jun 41-10 Jan 4	2 (34 Sub Dep)	11 Jul 42-10 Apr 44
27 Bomb Sq	15 Jan 41-25 May 4	1 Sub Dep	12 Mar 42-31 Mar 44
28 Bomb Sq	15 Jan 41-28 May 4	1 (64 Sub Dep)	1943
30 Bomb Gp	15 Jan 41-20 May 4	1 5- 0- 5-	16 Aug 43-23 Oct 43
31 Army Recon	Sq	1 Ftr Con Sq	10 Aug 45-25 Oct 45

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### AIR FORCE BASES

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4 Engrg Avn Unit		343 Bomb Sq	10 Nov 45-27 Mar 46
Tng Cen	10 May 43-27 Mar 44	365 Air Svc Gp	18 Jun 45-11 Jul 45
20 Ftr Gp	4 Jan 43-11 Aug 43	405 AAF BU	7 Nov 45-1 Apr 46
21 Alt Tng Unit	10 Apr 43-31 Mar 44	445 Ftr Sq	3 Dec 45-3 Jul 46
37 Ftr Con Sq	8 Jun 43-16 Aug 43	458 Bomb Gp	21 Aug 45-17 Oct 45
55 Ftr Sq	1 Jan 43-11 Aug 43	470 AAF BU	25 Jan 45-5 Apr 45
71 Ftr Wg	15 Aug 43-26 Nov 43	474 AAF BU	1 Jul 45-8 May 46
77 Ftr Sq	11 Feb 43-11 Aug 43	489 Bomb Gp	2 Sep 45-17 Oct 45
79 Ftr Sq	c. I Jan 43-11 Aug 43	497 Bomb Gp	26 Nov 45-5 Jan 46
82 Ftr Con Sq	4 Jan 43-18 Jan 43	498 Bomb Gp	c. Dec 45-5 Jan 46
86 Ftr Wg	1 Dec 43-25 Mar 44	499 Bomb Gp	c. 25 Nov 45-16 Feb 46
303 Ftr Con Sq	4 Oct 43-31 Mar 44	500 Bomb Gp	24 Oct 45-17 Jan 46
312 Ftr Con Sq	6 Jun 43-unk	513 Bomb Sq	
316 Ftr Con Sq	6 Jun 43-15 Dec 43	(513 Recon Sq)	10 Nov 45-c. Dec 50
317 Ftr Con Sq	15 Jun 43-22 Mar 44	514 Bomb Sq	10 Nov 45-c. Dec 45
399 Bomb Gp	3 Dec 43-31 Mar 44	572 Air Mat Sq	25 Nov 45-17 Jan 46
434 Ftr Sq	28 Oct 43-7 Apr 44	573 Air Mat Sq	25 Nov 45-17 Jan 46
435 Ftr Sq	28 Oct 43-8 Apr 44	578 Air Mat Sq	27 Nov 45-8 May 46
436 Ftr Sq	28 Oct 43-8 Apr 44	615 Air Engrg Sq	29 Nov 45-15 Aug 47
453 Bomb Gp	1 Oct 43-2 Dec 43	624 Air Mat Sq	19 Nov 45-15 Aug 47
473 Ftr Gp	1 Nov 43-31 Mar 44	625 Air Engrg Sq	18 Jun 45-11 Jul 45
479 Ftr Gp	28 Oct 43-7 Apr 44	638 Air Mat Sq	1 Sep 45-17 Oct 45
482 Ftr Sq	I Nov 43-31 Mar 44	752 Bomb Sq	22 Aug 45-17 Oct 45
484 Ftr Sq	1 Nov 43-31 Mar 44	753 Bomb Sq	22 Aug 45-17 Oct 45
604 Bomb Sq	c. 1 Dec 43-31 Mar 44	754 Bomb Sq	22 Aug 45-17 Oct 45
605 Bomb Sq	c. 1 Dec 43-31 Mar 44	755 Bomb Sq	22 Aug 45-17 Oct 45
606 Bomb Sq	c. 1 Dec 43-31 Mar 44	814 Air Engrg Sq	22 Aug 45-17 Oct 45
607 Bomb Sq	c. 1 Dec 43-31 Mar 44	844 Bomb Sq	2 Sep 45-16 Oct 45
732 Bomb Sq	29 Sep 43-2 Dec 43	845 Bomb Sq	2 Sep 45-16 Oct 45
733 Bomb Sq	29 Sep 43-2 Dec 43	846 Bomb Sq	2 Sep 45-16 Oct 45
734 Bomb Sq	29 Sep 43-2 Dec 43	869 Bomb Sq	c. 26 Nov 45-c. 5 Jan 46
735 Bomb Sq	29 Sep 43-2 Dec 43	870 Bomb Sq	
819 Bomb Sq	23 Sep 43-4 Oct 43	871 Bomb Sq	c. 26 Nov 45-c. 5 Jan 46 c. 26 Nov 45-c. 5 Jan 46
1175 Pre-Flt Tng Sq	1 Mar 43-30 Apr 44	875 Bomb Sq	
1308 Guard Sq	20 Jun 43-31 Mar 44	877 Bomb Sq	c. 26 Nov 45-5 Jan 46
	1944	878 Bomb Sq	c. Nov 45-16 Feb 46
420 AAF BU	1 Apr 44-9 Apr 46		c. Nov 45-16 Feb 46
Engrg Camouflage	1 Mpt 44-5 Mpt 40	879 Bomb Sq	c. Nov 45-16 Feb 46
Sch, Avn #1	19 Feb 44-1 May 44	881 Bomb Sq	29 Nov 45-17 Jan 46
~~··, · · · · · · · ·	1945	882 Bomb Sq	29 Nov 45-17 Jan 46
3 Air Engrg Sq	· · ·	883 Bomb Sq	29 Nov 45-17 Jan 46
25 Bomb Sq	c. 1 Dec 45-17 Jan 46	996 Air Mat Sq	18 Jun 45-11 Jul 45
29 Ftr Sq	27 Nov 45-7 May 46	1012 Air Svc Sq	16 Jun 45-11 Jul 45
31 Ftr Sq	6 Dec 45-3 Jul 46	HQ & Base Svc Sq,	
35 Air Engrg Sq	6 Dec 45-3 Jul 46	25 Air Svc Gp	27 Nov 45-5 May 46
39 Photo Recon Sq	27 Nov 45-7 May 46	HQ & Base Svc Sq,	
	2 Dec 45 20 7 1 46	361 Air Svc Gp	29 Nov 45-15 Aug 47
(39 Tac Recon Sq)			1946
40 Bomb Gp	27 Nov 45-9 May 46	1 Ftr Gp	3 Jul 46-17 Jul 50
44 Bomb Sq	27 Nov 45-c. 13 May 46	12 Recon Sq	
45 Bomb Sq	27 Nov 45-c. 13 May 46	(12 Tac Recon Sq)	29 Jul 46-28 Mar 49
58 Bomb Wg	2 Dec 45-8 May 46	27 Ftr Sq	
65 Air Svc Gp	c. 1 Dec 45-17 Jan 46	(27 FI Sq)	3 <b>J</b> ul 46–13 Jul 50
91 Svc Gp	c. 15 Oct 45-17 Jan 46	31 Mat Trpt Sq, Avn	18 Nov 46-14 May 49
301 Air Mat Sq	19 Nov 45-22 Dec 45	71 Ftr Sq	·
303 Air Svc Gp	c. Dec 45-5 Jan 46	(71 FI Sq)	3 Jul 46-17 Jul 50
321 Wg	7 Nov 45-1 Apr 46	94 Ftr Sq	
322 Air Engrg Sq	c. 3 Dec 45-17 Jan 46	(94 Intep Sq)	3 Jul 46-18 Jul 50
330 Air Svc Gp	19 Nov 45-22 Dec 45	321 AAF BU	

1 F ( N N S T )

### MARCH AIR FORCE BASE

		_	
(321 AF BU)	1 Apr 46-25 Aug 48	Sup Gp	25 Nov 47-28 Mar 49
409 AAF BU	1 Oct 46-1 Mar 47	(67 Sup Sq)	
414 Night Ftr Sq	8 Mar 46-31 Jul 46	19	22 Aug 48-17 Jul 50
425 Night Ftr Sq	0 111201	AB Gp	22 Aug 48-17 Jul 50
Air Orientation Unit		AP Sq	22 Aug 48-10 Feb 50
1.56 [Prov]		Base Svc Sq	22 Aug 48-17 Jul 50
AAF Regional &		Comms Sq	22 Aug 40-17 Jul 30
Convalescent		Finance	22 Aug 48-1 Nov 49
Hosp	4 Mar 46-30 Jun 46	Disbursing Unit	22 Aug 48-17 Jul 50
194	,	1 Food Svc Sq	22 Aug 48-17 Jul 50
1 Adrm Gp		1 Instls Sq	22 Aug 48-17 Jul 50
1 Ftr Wg		I Maint & Sup Gp	22 Aug 48-17 Jul 50
(1 FI Wg)	13 / 146 11 11 11 11 11	1 MV Sq	22 Aug 46-17 Jul 50
1 Maint & Sup Gp	15 Aug 47–17 Jul 50	1 Stn Med Gp	00 t - 40 17 Iul 50
1 Maint Sq	15 Aug 47-17 Jul 50	(1 Med Gp)	22 Aug 48-17 Jul 50
1 Stn Med Gp	15 Aug 47-24 Aug 48	3 Shoran Beacon	20 15 - 40 20 Mor 48
7 Ln Sq	1 Sep 47-28 Mar 49	Unit	23 Mar 48-28 Mar 48
11 Recon Sq, Night	•	67 AB Gp	22 Aug 48–28 Mar 49
Photo		67 Base Svc Sq	22 Aug 48-28 Mar 49
(11 Tac Recon Sq,		67 Comms Sq	22 Aug 48-28 Mar 49
	1 Sep 47-28 Mar 49	67 Finance	10
Night Photo)	25 Nov 47-24 Aug 48	Disbursing Unit	22 Aug 48-28 Mar 49
67 Adrm Gp	25 Nov 47-28 Mar 49	67 Food Svc Sq	22 Aug 48-28 Mar 49
67 Maint & Sup Gp	25 1101 17 25 1123	67 Instls Sq	22 Aug 48-28 Mar 49
67 Recon Gp	25 Jul 47-28 Mar 49	67 MV Sq	22 Aug 48-28 Mar 49
(67 Tac Recon Gp)	25 541 11 25 112	67 Stn Med Gp	22 Aug 48-28 Mar 49
67 Recon Wg		101 AACS Sq	
(67 Tac Recon	25 Nov 47-28 Mar 49	(1907 AACS Sq;	
Wg)	25 Nov 47-24 Aug 48	1907 Comms Sq)	1 Jun 48–1 Jul 76
67 Stn Med Gp	25 Jul 47-25 Nov 47		1949
500 Air Svc Gp	25 341 47 25 110	2 Bomb Sq	10 May 49-15 Mar 63
506 AC&W Gp	6 Mar 47-28 Mar 49	19 Bomb Sq	11 May 49-15 Mar 63
(506 Tac Con Gp)	17 Jan 47-28 Mar 49	22 AB Gp	11 May 49-16 Jun 52
608 AC&W Sq	29 Aug 47-28 Mar 49	22 AP Sq	11 May 49-16 Jun 52
609 AC&W Sq	29 Aug 47-28 Mar 49	22 Base Svc Sq	11 May 49-10 Feb 50
638 Tac Con Sq	20 Nov 47–3 Jun 48	22 Bomb Gp	11 May 49-16 Jun 52
731 AF BU	25 Jul 47-25 Nov 47	22 Bomb Wg	
742 Air Mat Sq	25 Jul 47-25 Nov 47	(22 Air Rflg Wg)	10 May 49-
918 Air Engrg Sq	7 Jun 47-28 Mar 49	22 Comms Sq	11 May 49-10 Feb 51
933 Sig Bn, Sep, Tac	/ 1411 4/-20 14441 4/	22 Food Svc Sq	11 May 49-16 Jun 52
Maint Sq, 67 Maint		22 Instls Sq	11 May 49-16 Jun 52
& Sup Gp	25 Nov 47-28 Mar 49	22 Maint & Sup Gp	11 May 49-10 Feb 51
(67 Maint Sq)	15 Aug 47-24 Aug 48	22 Maint Sq	
Sq A, 1 Adrm Gp	25 Nov 47-24 Aug 48	(22 Fld Maint Sq	) 11 May 49-
Sq A, 67 Adrm Gp	15 Aug 47-24 Aug 48	22 Med Gp	•
Sq B, 1 Adrm Gp	25 Nov 47-24 Aug 48	(22 Med Sq; 22	
Sq B, 67 Adrm Gp	15 Aug 47-24 Aug 48	Med Gp; 22 Tac	
Sq C, 1 Adrm Gp	25 Nov 47-24 Aug 48	Hosp)	11 May 49-1 Jan 59
Sq C, 67 Adrm Gp	25 NOV 47-24 Aug 40	22 MV Sq	11 May 49-16 Jun 52
Sq D, 1 Adrm Gp	15 Aug 47-24 Aug 48	22 Sup Sq	11 May 49-16 Jun 52
Sq D, 67 Adrm Gp	25 Nov 47-24 Aug 48	22 Wea Sq	26 Sep 49-23 Jan 51
Sq E, 1 Adrm Gp	15 Aug 47-24 Aug 48	33 Bomb Sq	11 May 49-15 Mar 63
Sq E, 67 Adrm Gp	25 Nov 47-24 Aug 48	33 Comms Sq,	-
Sq F, 1 Adrm Gp	15 Aug 47-24 Aug 48	Comd	
Sq F, 67 Adrm Gp	25 Nov 47-24 Aug 48	(33 Comms Sq,	
Sup Sq, 1 Maint &		AF; 33 Comms	•
Sup Gp	15 Ave 47 17 Tell 60		7 Nov 49-
(1 Sup Sq)	15 Aug 47-17 Jul 50	330 AB Gp	27 Jun 49-16 Jun 51
Sup Sq, 67 Maint &		220 115 Op	

1ar 46 Jul 45 .pr 46 Jul 46 Oct 45 **⊾pr 45** 1ay 46 Oct 45 Jan 46 Jan 46 Feb 46 Jan 46 Dec 50 Dec 45 Jan 46 Jan 46 1ay 46 **Aug** 47 Aug 47 Jul 45 Oct 45 Jan 46 Jan 46 Jan 46 Jan 46 Feb 46 Feb 46 Feb 46 Jan 46 Jan 46 Jan 46 l Jul 45 l Jul 45 May 46 Aug 47 7 Jul 50 Mar 49 3 Jul 50 May 49 7 Jul 50 8 Jul 50

### AIR FORCE BASES

	25 Y 40 16 T = 51	C~\	16 Jun 52-
330 Bomb Gp	27 Jun 49–16 Jun 51	Sq)	1 Dec 52-15 Jan 54
330 Bomb Wg	25 Jun 49–16 Jun 51	26 WAF Sq	14 Nov 52-8 Dec 56
457 Trp Carr Sq	27 Jun 49-16 Jun 51	42 Air Rscu Sq 106 Air Rflg Sq	8 Jul 52-1 Dec 52
4106 WAF Sq	7 Nov 49-1 Dec 52	106 Armnt & Elect	0 Jul 32 1 Dec 32
8535 AACS Sq	27 Jun 49-24 Jul 51	Maint Sq	16 Jun 52-1 Dec 52
HQ & HQ Sq,		•	16 Jun 52-1 Dec 52
Fifteenth AF		106 Prdc Maint Sq 320 Air Rflg Sq	1 Dec 52-4 Jun 54
(HQ Fifteenth	<b>7.</b> N. 40	320 Armnt & Elect	1 200 32 4 341 3 4
AF)	7 Nov 49-	Maint Sq	1 Dec 52-15 Sep 60
	950 16 Jun 50-3 Jan 56	320 Bomb Wg	1 Dec 52-15 Sep 60
22 Air Rflg Sq	16 Jun 30-3 Jan 30	320 Fld Maint Sq	1 Dec 52-15 Sep 60
4112 Orgnzl Maint	24 May 50-16 Jun 52	320 Med Gp	1 2 3 3 3 4 5 5 F
Sq	24 May 30-10 Juli 32	(320 Tac Hosp)	1 Dec 52-1 Jan 59
	10 Feb 51-1 Jan 62	320 Prdc Maint Sq	
12 Air Div	2 Jan 51-10 Feb 51	(320 Orgnzl Maint	
44 AB Gp	2 Jan 51-2 Jul 51	Sq)	1 Dec 52-15 Sep 60
44 AP Sq	2 Jan 51-1 Aug 51	441 Bomb Sq	1 Dec 52-15 Sep 60
44 Bomb Gp	2 Jan 51-1 Aug 51	442 Bomb Sq	1 Dec 52-15 Sep 60
44 Bomb Wg	2 Jan 51-10 Feb 51	443 Bomb Sq	1 Dec 52-15 Sep 60
44 Comms Sq 44 Food Svc Sq	2 Jan 51-2 Jul 51	807 AB Gp	
-	2 Jan 51-2 Jul 51	(807 Cmbt Spt	
44 Instls Sq 44 Maint & Sup Gp	2 Jan 51-10 Feb 51	Gp)	16 Jun 52-15 Sep 60
44 Maint Sq	2 Jan 51-1 Aug 51	807 AP Sq	
44 Med Gp	2 3411 31 1114 31	(807 Cmbt Def	
(44 Med Sq)	2 Jan 51-2 Jun 51	Sq)	1 Jun 52-15 Sep 60
44 MV Sq	2 Jan 51-2 Jul 51	807 Food Svc Sq	16 Jun 52-15 Sep 60
44 Sup Sq	2 Jan 51-2 Jul 51	807 Instls Sq	
66 Bomb Sq	2 Jan 51-1 Aug 51	(807 CE Sq)	16 Jun 52-16 Sep 50
67 Bomb Sq	2 Jan 51-1 Aug 51	807 MV Sq	
68 Bomb Sq	2 Jan 51-1 Aug 51	(807 Trnsp Sq)	16 Jun 52-15 Sep 60
106 Bomb Gp	28 Mar 51-16 Jun 52	807 Ops Sq	16 Jun 52-15 Sep 60
135 Bomb Sq	1 May 51-1 Dec 52	807 Sup Sq	16 Jun 52-15 Sep 60
3933 Radar Bomb		• •	1953
Scoring Sq	16 Oct 51-10 Aug 54	26 Rad Sq, Mobile	26 Oct 53-8 May 55
4109 Armnt & Elect		510 Avn Sq	18 Jun 53-1 Jul 54
Maint Sq	10 Feb 51-1 Aug 51		1954
4109 Ops Sq	10 Feb 51-2 Jul 51	11 Radar Bomb	
4109 Orgnzl Maint		Scoring Sq	10 Aug 54-22 Aug 66
Sq	2 Jan 51-1 Aug 51	320 Air Rflg Sq	4 Sep 54-2 May 55
4112 Armnt & Elect		4164 USAF Hosp	15 Feb 54-1 Jan 59
Maint Sq	10 Feb 51-16 Jun 52	4169 USAF Hosp	15 Feb 54-1 Feb 59
4112 Ops Sq	10 Feb 51-16 Jun 52		1955
4118 Armnt & Elect		1469 Flt Svc Sq	1 Jul 55-1 Oct 56
Maint Sq	1 May 51-16 Jun 52	4070 Spt Wg	20 Dec 55-15 Jun 57
4118 Ops Sq	1 May 51-16 Jun 52	4306 Spt Sq	1 Nov 55-31 Dec 72
4118 Orgnzl Maint		6983 Rad Sq,	0.35 55 1 1.1.57
Sq	1 May 51-16 Jun 52	Mobile	8 May 55-1 Jul 57
	1952		1956 3 Mar 56-15 Jun 60
15 Recon Tech Sq	16 Feb 52-30 Jun 72	22 Air Rflg Sq	
22 Armnt & Elect		USAF Sety Svc Sch	
Maint Sq		20 4 - D C-	1957
(22 Avnes Maint	17 7 75	38 Avn Dep Sq	
Sq)	16 Jun 52-	(38 Mun Maint	1 Jan 57-30 Dec 72
22 Comms Sq	14 Feb 52-16 Jun 52	Sq)	16 Jun 57-15 Sep 62
22 Maint & Sup Gp	14 Feb 52-16 Jun 52	320 Air Rflg Sq 6940 Tech Tng Gp	1 Jul 57-1 Nov 58
22 Prdc Maint Sq			1 Jul 57-1 Apr 58
(22 Orgnzl Maint		6941 Spt Sq	1 0 0 1 0 1 1 1 1 p 1 0 0

### MARCH AIR FORCE BASE

6942 Student Sq	1 Jul 57-26 Sep 58		1963
6943 Student Sq	1 Jul 57-26 Mar 59	2 Bomb Sq	15 Sep 63-1 Oct 82
1959		22 Air Rflg Sq	1 Jul 63-
408 Bomb Sq	1 Jan 59-1 Jan 62	942 Cmbt Spt Sq	17 1 62 1 1 73
444 Bomb Sq	1 Jan 59-15 Sep 60	(942 Spt Sq)	17 Jan 63-1 Jan 72
807 Acft Spt Sq	1 Jan 59-15 Sep 60	942 Mat Sq	17 Jan 63-1 Dec 65
807 Med Gp	1 Jan 59–2 Jul 69	943 Mat Sq	17 Jan 63-1 Nov 66
196		944 Cmbt Spt Sq	17 Jan 63-25 Mar 68
22 Acft Spt Sq	30 Mar 60-1 Jan 62	944 Mat Sq	17 Jan 63-15 Mar 67
22 CE Sq	15 Sep 60-		1964
22 Cmbt Def Sq		24 Med Svc Sq	8 Mar 64-31 Jan 73 8 Nov 64-
(22 Scty Pol Sq)	15 Sep 60-	414 Med Svc Sq	
22 Cmbt Spt Gp	15 Sep 60-	000 A !- D.G C	1965 25 Jun 65-1 Jul 71
22 Food Svc Sq		909 Air Rflg Sq	23 Juli 03-1 Juli 71
(22 Svcs Sq)	15 Sep 60-1 Mar 70	942 Consold Acft	1 Dec 65-1 Jan 72
22 Ops Sq	15 Sep 60-1 Jan 62	Maint Sq	1 Dec 65-1 Jan 72
22 Sup Sq	15 Sep 60-	942 Sup Sq	1966
22 Trnsp Sq	15 Sep 60-	106 D - 11 C -	2 Oct 66-1 Jul 71
303 Air Rscu Sq		486 Bomb Sq	2 001 00-1 341 71
(303 Aerosp Rscu		943 Consold Acft	1 Nov 66-25 Apr 69
& Recovery Sq)	1 Nov 60-	Maint Sq	1 Nov 66-25 Apr 69
452 AB Gp	1 Nov 60-17 Jan 63	943 Sup Sq	1967
452 AP Sq	1 Nov 60-17 Jan 63	042 0-14 0-4 0-	17 Jan 67-25 Apr 69
452 CE Sq	1 Nov 60-17 Jan 63	943 Cmbt Spt Sq	17 3all 07-23 Apr 03
452 Consold Acft		944 Consold Acft	15 Mar 67-25 Mar 68
Maint Sq	1 Nov 60-17 Jan 63	Maint Sq	15 Mar 67-25 Mar 68
452 Ops Sq	1 Nov 60–17 Jan 63	944 Sup Sq	1968
452 Sup Sq	1 Nov 60-17 Jan 63	MO Alfo Co	1700
452 Tac Hosp	1 Nov 60-17 Jan 67	Mil Alft Gp, Associate, Prov	
452 Trnsp Sq	1 Nov 60-27 Jan 63	944	15 Jan 68-25 Mar 68
452 Trp Carr Wg	4.51 (0.1.173	944	1969
(452 Mil Alft Wg)	1 Nov 60-1 Jan 72	HEAT Horn Marc	
616 USAF Hosp	10 Oct 60-25 Jun 64	USAF Hosp, Marc	1975
728 Trp Carr Sq		9 Wea Sq	1 Jan 75-
(728 Air Trpt Sq;	1 No. (0 1 Yes 72	y wea sq	1976
728 Mil Alft Sq)	1 Nov 60-1 Jan 72	336 Air Rflg Sq	l Jan 76-
729 Trp Carr Sq		452 Cmbt Spt Gp	13 Jan 76-
(729 Tac Alft Sq;	1 Na. (0 25 Apr 60	452 Consold Acft	13 3411 75
729 Mil Alft Sq)	1 Nov 60-25 Apr 69	Maint Sq	1 Oct 76-
730 Trp Carr Sq		452 Tac Alft Wg	
(730 Tac Alft Sq;	1 Nov 60-25 Mar 68	(452 Air Rflg W	/g) 1 Jan 76-
730 Mil Alft Sq)	1 140V 00-25 Wat 00	452 Tac Hosp	
8499 Navigator Tng	1 Nov 60-1 Jul 67	(452 USAF Clin	nic) 1 Oct 76-
Sq	062	904 Consold Acft	,
	102	Maint Sq	12 Jan 76-1 Oct 76
942 Tac Hosp	28 Dec 62-1 Jan 72	904 Tac Hosp	12 Jan 76-1 Oct 76
(942 USAF Dispy) 942 Trp Carr Gp	20 000 02 1 0411 12	4101 Res Advisor	Sq 1 Jul 76-31 May 81
(942 Air Trpt Gp;			1978
942 Mil Alft Gp)	28 Dec 62-1 Jan 72	452 CE Sq	15 Nov 78-
943 Trp Carr Gp	20 2000 02 10000 1	•	1979
(943 Tac Alft Gp;		22 Svcs Sq	1 Oct 79-
943 Mil Alft Gp		-	1981
[Associate])	28 Dec 62-1 Jul 73	22 Tac Hosp	1 Jul 81-
944 Trp Carr Gp			1982
(944 Tac Alft Gp;		9 Air Rflg Sq	1 Aug 82-
944 Mil Alft Gp		79 Air Rflg Sq	1 Sep 82-
[Associate])	28 Dec 62-25 Mar 68	}	
( )/			

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p 60 p 60 p 60 p 60

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ay 55

Jul 54

lug 66 lay 55 lan 59 Feb 59

Oct 56 Jun 57 Occ 72 Jul 57

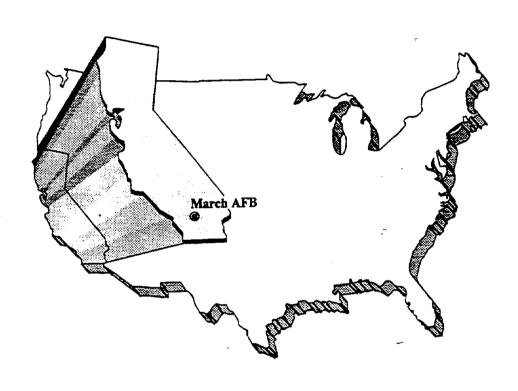
Jun 60 Oct 58

Dec 72 Sep 62 Nov 58 Apr 58 APPENDIX C-2.6

KISSANE

# INSTALLATION RESTORATION PROGRAM REMEDIAL INVESTIGATION/FEASIBILITY STUDY FINAL BASEWIDE WORK PLAN

MARCH AIR FORCE BASE CALIFORNIA January 1992



### Prepared by:

THE EARTH TECHNOLOGY CORPORATION 300 North Washington Street, Suite 700 Alexandria, VA 22314



### Prepared for:

HEADQUARTERS STRATEGIC AIR COMMAND DEPUTY CHIEF OF STAFF FOR ENGINEERING AND SERVICES (HQ SAC/DE) Environmental Compliance Division Offutt Air Force Base, Nebraska 68113-5001

UNITED STATES AIR FORCE Center for Environmental Excellence Brooks Air Force Base, Texas 78235-5501

### INSTALLATION RESTORATION PROGRAM

### REMEDIAL INVESTIGATION/FEASIBILITY STUDY BASEWIDE WORK PLAN

MARCH AIR FORCE BASE CALIFORNIA

THE EARTH TECHNOLOGY CORPORATION 300 NORTH WASHINGTON STREET ALEXANDRIA, VIRGINIA 22314

JANUARY 1992

**FINAL** 

PREPARED FOR:

HEADQUARTERS STRATEGIC AIR COMMAND.

DEPUTY CHIEF OF STAFF FOR ENGINEERING AND SERVICES (HQ SAC/DE)

ENVIRONMENTAL COMPLIANCE DIVISION

OFFUTT AIR FORCE BASE, NEBRASKA 68113-5001

UNITED STATES AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE ENVIRONMENTAL RESTORATION DIVISION (ESO/ER) BROOKS AIR FORCE BASE, TEXAS 78235-5000

### INSTALLATION RESTORATION PROGRAM

## REMEDIAL INVESTIGATION/FEASIBILITY STUDY BASEWIDE WORK PLAN

## MARCH AIR FORCE BASE CALIFORNIA

Prepared for:

HEADQUARTERS STRATEGIC AIR COMMAND
DEPUTY CHIEF OF STAFF FOR ENGINEERING AND SERVICES (HQ SAC/DE)
ENVIRONMENTAL COMPLIANCE DIVISION
OFFUTT AIR FORCE BASE, NEBRASKA 68113-5001

January 1992

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USAF CONTRACT NO. F33615-90-D-4007, DELIVERY ORDER NO. 7

FINAL

IRP PROGRAM OFFICE

Mark Smallwood, Captain, USAF TECHNICAL PROJECT MANAGER

CENTER FOR ENVIRONMENTAL EXCELLENCE ENVIRONMENTAL RESTORATION DIVISION (ESO/ER) BROOKS AIR FORCE BASE, TEXAS 78235-5000

#### PREFACE

The Earth Technology Corporation is a contractor for the Remedial Investigation/Feasibility Study (RI/FS) program at March Air Force Base (AFB), CA. This work was performed for the Center for Environmental Excellence, F33615-90-D-4007, Delivery Order 0007.

This document, the Basewide Work Plan, provides information on proposed activities associated with the RI/FS for all sites on March AFB, discussing objectives, rationale, and schedule to be followed throughout the March AFB remedial response program. The Work Plan is composed of four component parts; this document addresses the base as a whole and describes work done in the past as well as the work to be accomplished. Three addenda to this document will be prepared to address the specific work and schedule for each Operable Unit (OU). Each addendum will be written by the contractor responsible for that work. OUs 1 and 2 will be prepared by contractors for the U.S. Air Force Center for Environmental Excellence, OU1 by The Earth Technology Corporation and OU2 by TETRA TECH, Inc. OU3 will be prepared by EG&G Idaho, Inc., the prime operating contractor at the Idaho National Engineering Laboratory (INEL). The INEL is a Department of Energy facility and the work is being accomplished under an agreement between the Department of the Air Force and the Department of Energy.

The work presented herein was accomplished between April 29 and December 2, 1991. Captain Mark Smallwood, U. S. Air Force Center for Environmental Excellence, Environmental Restoration Division (ESO/ER) was the Technical Project Manager.

Approved:

Robert Colonna, Program Manager

Phillip Watts, Project Manager

Registered Geologist, California No. 5246

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### 1.3 MARCH AFB MISSION AND HISTORY

March AFB is located on 7,123 acres at the north end of the Perris Valley, southeast of the city of Riverside, in Riverside County, California. The Base is approximately 60 miles east of Los Angeles and 90 miles northeast of San Diego (Figure 1.3-1). The Base lies in sections of Township 3 South, Range 4 West of the Riverside East, Steele Peak, Sunnymead, and Perris USGS 7.5 minute quadrangles. Highway 215 (also known as the Escondido Freeway and Old U.S. Highway 395) bisects the Base in a NW-SE direction.

March AFB was originally a 640-acre facility called the Alessandro Aviation Field. It was officially opened on March 1, 1918, and was the first U.S. Army Air Base established in the western United States. The Base was initially used to train "Jenny" pilots during World War I. Following World War I, the Base closed for approximately four years then reopened in 1927. By 1938, the Base was considered to be the central location for West Coast bombing and gunnery training. During World War II, the Camp Haan Army Base, which was constructed west of Highway 215 (old Highway 395), was used primarily as an anti-aircraft artillery camp and a staging area for General Patton's tank force. Camp Haan was approximately five miles long and bordered the western edge of old Highway 395, south of the present location of Alessandro Boulevard. Following World War II, Camp Haan became part of March AFB, and is known as the West March area.

In 1949, the Strategic Air Command took control of March AFB, and the 22nd Bombardment Wing became the senior host tactical unit at the Base. The Headquarters of the 15th Air Force was relocated to March AFB to supervise the Strategic Air Command operations. By mid-1950s, the Base was used primarily as a bomber Base. During the early 1950s, maintenance hangers for the 22nd Bombardment Wing's B-47s were constructed. In the mid-1960s, the 909th

March/020-3

Air Refueling Squadron and the 486th Bombardment Squadron were transferred to March AFB. During the late 1960s, the 303rd Air Rescue Squadron and the 452nd Military Airlift Wing reserve units were also transferred to March AFB. Additional support facilities were constructed to accommodate the increasing number of Base units and aircraft used at the Base. A wing maintenance control facility, an engine inspection and repair shop, a large maintenance dock, new officer's quarters, and a dormitory were constructed at March AFB during the late 1960s. In the early 1970s, the 486th and 909th tactical squadrons were removed from duty at March AFB. During the mid-1970s, the 452nd Air Refueling Wing converted from C-119s, to C-124s, to C-130s, and then to KC-135s. In 1977, the 33rd Communications Group occupied buildings previously used by the Cartographic Technical Squadron.

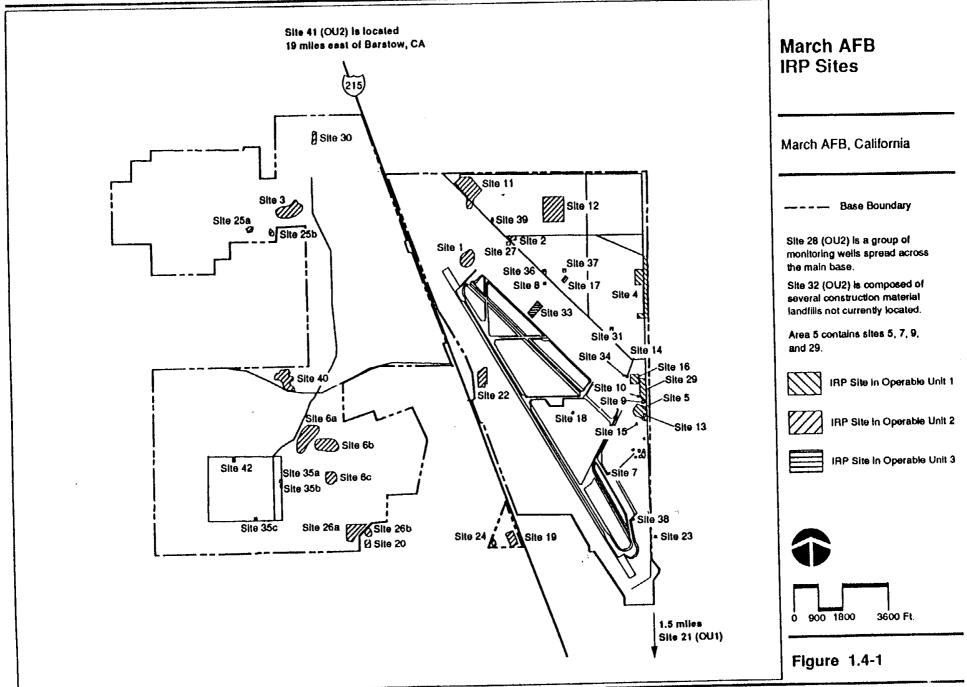
On October 1, 1982, the 22nd Bombardment Wing was re-designated as the 22nd Air Refueling Wing. The refueling wing was notified that aging B-52s would be retired and the wing would receive new KC-10A Extender giant tankers.

Currently, March AFB is a Strategic Air Command facility that is supervised by Headquarters, 15th Air Force. The 22nd Air Refueling Wing is the primary mission of the Base, and is responsible for maintaining an effective air-to-air refueling operations capability (CH2M Hill, 1984). The majority of Department of Defense activity on Base takes place east of Interstate 215; this area is referred to as the Main Base. The portion of the Base west of Interstate 215 is referred to as West March. Privately held land adjacent to the Base is used for light industrial, agricultural, and residential purposes. Significant residential construction is occurring east of the Base (USGS, 1967a, 1967b, 1967c, and 1967d; Engineering Science, 1988).

### 1.4 DESCRIPTION OF CURRENT STUDY

This RI/FS is being performed to fulfill requirements of the Federal Facility Agreement. The 42 IRP Sites have been divided up into three operable units for RI/FS activities at March AFB (Figure 1.4-1).





APPENDIX C-2.7

United States
Environmental Protection
Agency

Environmental Monitoring Systems Laboratory P.O. Box 93478 Las Vegas, NV 89193-3478 TS-PIC-92581 April 1992 DEU

Research and Development

### **\$EPA**

## AERIAL PHOTOGRAPHIC ANALYSIS OF THE MARCH AIR FORCE BASE STUDY AREA Riverside, California

**EPA** Region 9



TS-PIC-92881 April 1992

AERIAL PHOTOGRAPHIC ANALYSIS OF MARCH AIR FORCE BASE STUDY AREA Riverside, California

by

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Contract No. 68-C0-0050

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ENVIRONMENTAL MONITORING SYSTEMS LABORATORY OFFICE OF RESEARCH AND DEVELOPMENT U.S. ENVIRONMENTAL PROTECTION AGENCY LAS VEGAS, NEVADA 89193-3478



Figure 1. Study area location map, California. Scale 1:4,500,000.

#### ABSTRACT

This report presents the results of an intensive aerial photographic analysis of the March Air Force Base Study Area, approximately 14 square miles, located southeast of Riverside, California. This military reservation is under investigation by the Department of Defense through its Installation Restoration Program (IRP) to provide compliance with CERCLA regulations. The U.S. Air Force has identified over 42 specific IRP sites at this facility. This report used nine selected dates of historical photographs covering the time period from 1949 to 1991 and will assist the U.S. Environmental Protection Agency's Region 9 office in locating, documenting, and monitoring these IRP sites.

The 1949 photographs were the earliest used in this report and showed the air base well established and fully operational. A significant portion of the study area, situated along the west side of the Escondido Expressway, was formerly occupied by U.S. Army Camp Haan as evidenced by visible road and street patterns and extensive remains of building foundations. A second, isolated, also dismantled military camp within the southwest portion of the study area, stood approximately 2 miles west of the Escondido Expressway. Over time the main weapons storage compound, several soil borrow pits, and several landfills were located in the open areas west of the former Camp Haan.

Of interest are specific waste disposal activities at certain locations. In 1959 a weapons residue burial trench was observed southwest of the southwest fence corner of the weapons storage compound. The trench was not covered on 1961 photographs but was observed to be closed on the 1966 photograph. IRP sites #6B (landfill #4), #6C (landfill #4), #30 (construction rubble burial site), and #40 (landfill #8) were all apparently soil borrow pits that later received dumping of principally fill material and/or rubble. IRP site #20 (landfill #7) was a landfill operation that went idle and then became a dumping place for lime-sludge from the adjacent water treatment plant. IRP sites #4 (landfill #6) and #5 (landfill #3) were placed on the eastern perimeter of the air base and directly adjacent to the drainage ditch that flows along Heacock Street and empties into the Perris Valley Storm Drain.

IRP site #24 (landfill #1) was located at the southeast corner of former Camp Haan and apparently received incinerator ash. The 1949 photographs revealed this landfill closed but the adjacent area continued to receive a massive amount of fill material and debris. IRP site #6C a soil borrow pit, was covered by a residential development. Site #22 (landfill #2) was only observed active on the 1991 photograph.

The U.S. Environmental Protection Agency's Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, prepared this report for the agency's Region 9 Hazardous Waste Management Division in San Francisco, California and the Office of Emergency and Remedial Response in Washington D.C.

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#### INTRODUCTION

This report presents the results of an intensive aerial photographic analysis of the March Air Force Base (MAFB) study area near Riverside, California (Figure 1). The MAFB study area covers approximately 14-square miles southeast of Riverside; it is bordered to the north and east by the city of Moreno Valley and to the south by the city of Perris (Figure 3). The MAFB study area is transected by the Escondido Expressway/Interstate Route 215 which divides the study area in half. The airfield operations are located on the east side of this highway. A weapons storage compound, support facilities, golf course, cemetery, and several waste disposal sites are located on the west side of the highway. The western portion of the MAFB study area also contains the ruins of the military reservation, U.S. Army Camp Haan, which was operational prior to the establishment of March AFB. March Air Force Base is being investigated by the U.S. Environmental Protection Agency's Region 9 office under its CERCLA program. This analysis documents visible waste disposal activities and physical conditions at the MAFB study area that posed potential and/or real environmental hazards through the period 1949 to 1991. Of particular interest are the locations of waste disposal pits, trenches, and/or landfill areas. Nine selected dates of black-and-white, color, and color-infrared, aerial photography are the primary data source used in this report. This report will assist field investigators in evaluating the scope and location of waste disposal units at the study area over time and design sampling strategies.

Potential sources of environmental pollution generated at MAFB could include aircraft and vehicle maintenance with associated petroleum fuels, solvents, lubricants, paints, and acids. Other hazardous materials include fuels used in fire fighting training, fire fighting chemicals, hospital supplies, pesticides, and waste materials resulting from explosive ordnance disposal. Routine or accidental spillage and/or leakage of pollutants through normal operations, could allow these substances to enter the natural environment via rainwater transport. Topics addressed in this report include surface water contamination, indications of leachate, drainage patterns, disposal and/or burial of solid, liquid, and/or sludge waste, and visible vegetation stress associated with facility operations.

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The Department of Defense is addressing the management of its hazardous wastes and locating past disposal sites at its facilities through its Installation Restoration Program (IRP) to comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). In 1983 March Air Force Base began to identify potential hazardous waste problem areas on the base for eventual cleanup under IRP. March AFB was placed on the National Priorities List in November 1989. The U.S. Air Force has identified 42 potentially contaminated sites associated with March AFB. Those potentially contaminated sites within the study area covered in this report are listed below and located on Figure 2.

#### REPORTED PERIOD OF OPERATION SITE NAME 1961-65 Site 1 - Aircraft Isolation Project prior to 1950 Site 2 - Waste Oil Pit 1954-74 Site 3 - Landfill #5 1955-68 Site 4 - Landfill #6 1950-60 Site 5 - Landfill #3 1950-1980 Site 6 - Landfill #4 1954-1978 Site 7 - Fire Protection Training Area #2 1918-present Site 8 - Flightline Shop Zone after 1974 Site 9 - Main Oil/Water Separator prior to 1940 Site 10 - Flightline Drainage Channel Site 11 - Bulk Fuels Storage Area Spill 1976 Site 12 - Civil Engineering Storage Yard 1940-1950 1973 Site 13 - Tank Truck Spill Site Site 14 - Liquid Fuel Pump Station Overflow 1973 1978 Site 15 - Fire Protection Training Area 1938-1977 Site 16 - E. March Sludge Drying Beds 1979-80 Site 17 - Abandoned Swimming Pool 1951-present Site 18 - Engine Test Cell 1941-present Site 19 - W. March Sludge Drying Beds 1958-65 Site 20 - Landfill #7 1942-51 Site 22 - Landfill #2 1938-77 Site 23 - E. March Effluent Pond 1941-65 Site 24 - Landfill #1 1950-60 Site 25 - Munitions Residue Burial Site Site 26 - Water Treatment Plant Sludge 1941-1984 prior to 1941 Site 27 - Building 422 Underground POL Tanks prior to 1951 Site 29 - Fire Training Area #1 Site 30 - Construction Rubble Burial Site no threat posed 1954-1976 Site 31 - Unconfirmed Solvent Disposal 1952-1964, present Site 33 - Panero Aircraft Fueling System Site 34 - Pritchard Aircraft Fueling System 1964-present Site 35 - 15th AF Underground Storage Tank undetermined undetermined Site 36 - Building 458 Leach Pit undetermined Site 37 - PCB Contamination, Building 317 undetermined Site 38 - PCB Contamination, Building 1305 1930-1979 Site 39 - Abandoned Gas Station after 1940 Site 40 - Landfill #8 undetermined Site 42 - PCB Contamination, Building 3404

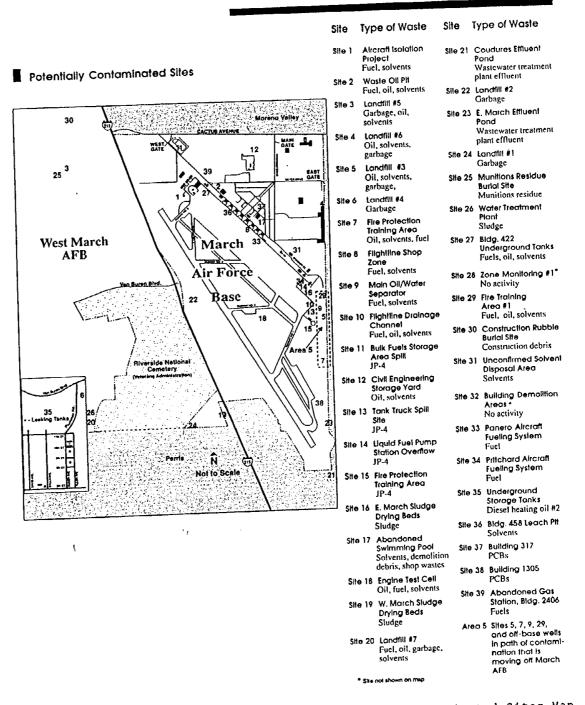


Figure 2. Installation Restoration Program, Potentially Contaminated Sites Map, March AFB.

These IRP sites are discussed as they are identified on the photographs chronologically and are annotated with an "S-number" consistent with their order in Figure 2. Sites 21, 32, 41 are located outside the photo coverage of the March Air Force Base study area and are outside the scope of this report. Background information used to identify the March Air Force IRP study sites was obtained from a draft copy of the document, "Status of Installation Restoration Program Sites at March Air Force Base, California, April 1991, prepared by: The Earth Technology Corporation, San Bernadino, California", and the document, "March Air Force Base Environmental Cleanup Process", Director Public Affairs Division, March AFB, CA.

The U.S. Environmental Protection Agency's Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, prepared this report for the Agency's Region 9 Hazardous Waste Management Division in San Francisco, California and the Office of Emergency and Remedial Response in Washington D.C.

#### METHODOLOGY

Stereoscopic pairs of historical aerial photographs were used to perform the analysis. Stereo viewing enhances the interpretation because it allows the analyst to observe the vertical as well as horizontal spatial relationships of natural and cultural features. Stereoscopy is also an aid in distinguishing between various shapes, tones, textures, and colors that can be found within the study area.

Evidence of waste burial is a prime consideration when conducting a hazardous waste site analysis. Leachate or seepage resulting from burial and dumping of hazardous materials might threaten existing surface or ground-water resources. Pools of unexplained liquid are routinely noted because they can indicate seepage from buried wastes and may enter drainage channels that allow contaminants to move off the site. An excellent indicator of how well hazardous materials are being handled at a site is the presence or absence of spills, spill stains, and vegetation damage. Trees and other forms of vegetation that exhibit a marked color difference from surrounding members of the same species are labeled "stressed", "damaged," or "dead" based upon the degree of noticeable variation. Vegetation is so labeled only after consideration of the season in which the photography was acquired.

Drainage analysis identifies the direction a spill or surface runoff would follow. Direction of drainage is determined from analysis of the photographs and from U.S. Geological Survey topographic maps. Whenever they are available, 7.5-minute quadrangle maps (scale 1:24,000) are used to show site location and to provide geographic and topographic information. The site boundaries as depicted on maps and photos within the report were selected by the analyst, and are not intended to be used as legal boundaries.

The U.S. Environmental Protection Agency's Statement of Procedures on Floodplain Management and Wetlands Protection (Executive Orders 11988 and 11990, respectively) requires EPA to determine if removal or remedial actions at hazardous waste sites will affect wetlands or flood plains and to avoid or minimize adverse impacts on those areas. To aid in compliance with these orders, significant wetland areas

located within and adjacent to the site have been identified when present. However, these sites have not been visited to verify the accuracy of wetland identification.

Results of the analysis are shown on annotated overlays attached to the photos. The following table provides documentation of the photographs used in this report:

TABLE 1. DOCUMENTATION OF AERIAL PHOTOGRAPHY

Site name, location, geographic coordinates, and SSID#	Figures	Date of acquisition	Original scale	Film type*	Photo source†	Photo I.D.	Frames
March Air Force E Riverside, Califo	Base 4-7 ornia 9-15 17-20 22-23 25-29	05-06-49 10-15-59 06-15-61 04-16-66 05-24-74	1:20,000 1:20,000 1:20,000 1:24,000 1:24,000	B&W B&W B&W B&W	ASCS ASCS ASCS EROS RIVCFC	AXM AXM AXM VBNF XRIVCO 6065	SEE FIGURES
33°53'00"N 117°15'47"W SSID # CA-N6	31-36 38-39 40 42-59	09-20-78 10-30-80 07-28-85 10-03-91	1:24,000 1:24,000 1:58,000 1:10,900	B&W B&W CIR CC	ASCS EROS EROS EMSL	VEZS-2 NHAP 91846	

<sup>\*</sup>Film type identification:

B&W:. Black-and-white

CIR: Color Infrared

CC: Conventional Color

### †Photo source identification:

EROS: U.S. Department of the Interior, Geological Survey, Earth Resources Observation Systems Data Center, Sioux Falls, South Dakota

ASCS: U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service, Salt Lake City, Utah

RIVCFC: Riverside County Flood Control District, Riverside, California

EMSL: U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Las Vegas, Nevada

#### ANALYSIS SUMMARY

This report presents the results of an aerial photographic analysis of the March Air Force Base Study Area southeast of Riverside, California, in reference to Installation Restoration Program Sites (Figures 1 and 2). The study area covers approximately 14 square miles. Black and white, color, and color infrared photographs from 1949, 1959, 1961, 1966, 1974, 1978, 1980, 1985, and 1991 were used in this analysis.

Of the 42 IRP sites discussed in this report the following were of particular interest. In 1959 a weapons residue burial trench was observed southwest of the southwest fence corner of the weapons storage compound. The trench was not covered on 1961 photographs but was observed to be closed on the 1966 photograph. IRP sites #6B, and #6C (portion of landfill #4), #30 (construction rubble burial site), and #40 (landfill #8) were all apparently soil borrow pits that later received dumping of principally fill material and/or rubble. IRP site #20 (landfill #7) was a landfill operation that went idle and then became a dumping place for lime-sludge from the adjacent water treatment plant. IRP sites #4 (landfill #6) and #5 (landfill #3) were placed on the eastern perimeter of the air base and directly adjacent to the drainage ditch that flows along Heacock Street and empties into the Perris Valley Storm Drain. IRP site #24 (landfill #1) was located at the southeast corner of former Camp Haan and apparently received incinerator ash. The 1949 photographs revealed this landfill closed but the adjacent area continued to receive a massive amount of fill material and debris. IRP site #6C a soil borrow pit, was covered by a residential development. Site #22 (landfill #2) was only observed active on the 1991 photograph.

The March Air Force Base Study Area is not adjacent to any significant creeks or rivers to be a risk from a 100-year flood event. The primary natural drainage direction, including potentially contaminated surface runoff from the aircraft flightline maintenance areas, is southeast to Perris Valley. Drainage from the extreme western portion of the study area, including potentially contaminated rainwater runoff from weapons residue burial trenches, flows northwest to Riverside. No wetland areas were identified from aerial photographs as being at risk from waste disposal activities at this study area.



Figure 3. March Air Force Base Study Area, 1949 Photo Figure Index Map. Approximate

ECSTS 1-37 000

#### PHOTO ANALYSIS

MAY 6, 1949 (Figures 4-7)

The 1949 photographs show an operational airfield. This military reservation is transected by the Escondido Expressway. The northern boundary of the study area, west of the expressway, follows Alessandro Blvd. East of the Escondido Expressway, the northern boundary follows Cactus Ave. The study area is bounded to the east by Heacock Street. The southern boundary of the study area, east of the expressway, follows Iris Ave. but then follows Nandina Ave., west of the expressway. The study area is bounded to the west by Barton street. The western boundary of March AFB shows changes over time; for this reason, the western study area boundary is defined as Barton Street after 1959.

The main aircraft runway (Figure 5, Annotation A), flight operations areas, maintenance buildings, housing, administration, and aircraft operations support buildings (Figure 5, Annotation B) are predominately on the east side of the Escondido Expressway. Along the west side of this expressway are extensive street patterns, lined with the remains of building foundations, which constitute the ruins of the dismantled U.S. Army Camp Haan (Figure 4, Annotation C). Near the northwest corner of the study area is a fence secured, weapons storage compound containing revetted magazine's (Figure 4, Annotation D). Additional ruins of a separate, isolated, military type reservation are in the southwest corner of the study area (Figure 6, Annotation E). Several ground scars suggest waste disposal operations in the study area west of the expressway, these include: open dump areas of fill material (Figure 4, Annotations F1, F2), a group of small pits (Figure 6, Annotation G1), and unusual depressions/excavations (Figure 6, Annotations G2 and G3). A waste water treatment plant, with lagoons and sludge drying beds, is partially photographed outside the southwest corner of the study area (Figure 6, Annotation G4).

Specific observations on IRP study sites:



Site #1: Aircraft Isolation Project (Figure 5, Annotation S1). This study site is reported to have been operational from 1961 to 1965 and is not be identified on this 1949 photograph. This north portion of the airfield appears to have been used for isolating aircraft. Two aircraft are observed at the north end of the parking apron and the ground around these aircraft is dark-toned to suggest spillage. No waste disposal structures or activities are observed at this location at this date.

Site #2: Waste Oil Pit/Solvent Tanks (Figure 5, Annotation S2) - No waste oil pit is discerned northwest of building #420, and no excavation to install the reported underground storage tanks, later demolished in this area, is observed. One horizontal and two vertical storage tanks are observed north of building #420 but their contents could not be determined.

Site #3: Landfill #5 (Figure 4, Annotation S3) - This landfill is reported to have operated from 1954 to 1974. No waste disposal structures or activities are observed at this location at this date; however, the area to the west of the dismantled Camp Haan area has extensive ground scar patterns.

Site #4: Landfill #6 - This site is reported to have operated from 1955 to 1968 and is not present at this time. No waste disposal structures or activities are observed. The east side of the air base presently consists of barracks and support buildings.

Site #5: Landfill #3 (Figure 7, Annotation S5) - This disposal area is active and consists of three, open, disposal trenches along the west side of Heacock Street. These disposal trenches are on the south side of the flightline drainage channel (Site 10); a mound of debris is along the north side of the channel.

Site #6: Landfill #4 (Figure 6, Annotation S6C) - This landfill is reported to have operated from the 1950's to 1980. The open pit east of Allen Avenue appears to be a gravel quarry. No deliberate disposal activity is noted at this pit; however, the material in this pit could not be discerned.

Site #7: Fire Protection Training Area #2 - This site is reported to have operated between 1954 and 1978 and is not present at this time.

Site #8: Flightline Shop Zone (Figure 5, Annotation S8) - The aircraft maintenance hangars and shops are located along the northeast side of the aircraft parking apron. No specific waste disposal activity is discernable; however, stains from spillage and/or leakage are visible on the parking apron.

Site #9: Main Oil/Water Separator - This site is reported to have been constructed in 1974 and is not present at this time.

Site #10: Flightline Drainage Channel (Figure 7, Annotation S10) - The drainage leaving the flightline is likely to transport contaminants, from spillage and/or leakage, into the natural drainage system via rainwater runoff.

Site #11: Bulk Fuels Storage Area Spill (Figure 5, Annotation S11) - The reported fuel spill at this site occurred in 1976. In 1949 a motor-pool parking area and storage yard occupy this location and no storage tanks are visible.

Site #12: Civil Engineering Storage Yard (Figure 5, Annotation S12) - The fenced storage yard and parking area contain numerous vehicles and pieces of equipment. Debris appears to have accumulated at the northwest corner of the yard and some ground staining is visible in the center of the yard. The poor photo resolution precludes identifying 55-gallon drums in this yard.

Site #13: Tank Truck Spill Site - The reported fuel spill at this site occurred in 1973. There is no tank truck refueling facility in this area at this date.

Site #14: Liquid Fuel Pump Station Overflow - The reported fuel spill at this site occurred in 1973. This site could not be identified on the 1949 photograph.

Site #15: Fire Protection Training Area #3 - This training facility is reported to have been operational after 1978.

Site #16: East March Sludge Drying Beds (Figure 7 Annotation S16) - These sludge drying pits are associated with the adjacent wastewater treatment plant (Annotation H). Many of these sludge beds appear to be empty. A large, empty, concrete-lined basin is adjacent to the south end of the wastewater treatment plant.

**3** 

Site #17: Abandoned Swimming Pool (Figure 5 Annotation S17) - The swimming pool is reported to have been used for waste disposal in 1979 or 1980. In 1949, the pool appears in use for swimming.

Site #18: Engine Test Cell - This site is reported to have been operational after 1950 and is not present at this date.

Site #19. West March Sludge Drying Beds (Figure 7, Annotation S19) - There is a total of seven drying beds; only one contains sludge. Theses beds are associated with the adjacent wastewater treatment plant at the south end of the dismantled Camp Haan (Annotation I).

Site #20: Landfill #7 (Figure 6, Annotation S20) - This landfill is reported to have operated from approximately 1958 to 1965. In 1949 there is a large excavation east of the wastewater treatment plant located along the south perimeter of the study area. No solid waste dumping is discerned at this date.

Site #22: Landfill #2 - A landfill is reported to have operated from 1942 to 1951. This site could not be identified because no waste disposal structures or activities are observed at this location at this date. The southern portion of the air field contains taxiways, hardstands, and revetted bunkers (Annotation J).

Site #23: East March Effluent Pond - This pond is reported to have been in operation from 1938 through 1977 and is not present at this time.

Site #24: Landfill #1 (Figure 7, Annotation S24) - This landfill is reported to have operated from 1941 to 1965. A rectangular mound of probable waste is visible on the west side of the adjacent wastewater treatment plant (Annotation I). A building adjacent to this mound is probably an incinerator (Annotation K). Ground scars and the presence of access roads indicate extensive dumping around this location.

Site #25: Munitions Residue Burial Site - This burial site is reported to have operated in the late 1950's. On the 1949 photograph the site could not be identified because no waste disposal structures or activities are observed.

Site #26: Water Treatment Plant Sludge (Figure 6, Annotation S26) - There are extensive excavations on the north side of the water treatment plant at the southern

end of the study area. The observed spoil material spread around this excavation is white. A lime-soda ash process is reported to have been used at this plant.

Site #27: Building 422, Underground POL Tanks - These tanks were reportedly installed prior to 1941. This site could not be identified because no underground POL tanks or evidence of excavations to install these tanks were noted.

Site #29: Fire Training Area #1 - This training area is reported to have been in use prior to 1951. In 1949 this site had not been established; no derelict aircraft or fire fighting structures are observed at this location at this date.

Site #30: Construction Rubble Burial Site (Figure 4, Annotation S30) - A probable soil borrow pit or gravel quarry is noted south of Alessandro Blvd at the north end of the study area. This pit appears to have become an open dump site; however, the composition of the waste material dumped at this pit could not be discerned.

Site #31: Unconfirmed Solvent Disposal - This site on the east side of building #1211 is reported to have been a dump site from 1950's and 1970's. The site could not be identified because no waste disposal structures or activities are observed on the 1949 photograph.

Site #33: Panero Aircraft Fueling System - This fueling system is reported to have been installed in 1952 and is not present at this time.

Site #34: Pritchard Aircraft Fueling System - Fuel storage tanks were reportedly moved to this site in 1962. This site could not be identified at this date.

Site #35: 15th AF Underground Storage Tank - This site could not be identified because no underground POL tanks or evidence of excavations to install these tanks were noted.

Site #36: Building #458 Leach Pit - This site could not be identified because no waste disposal structures such as a leach pit or activities are observed at this location at this date.

Site #37: PCB Contamination, Building #317 - This site could not be identified



because no waste disposal structures or activities are observed at this location at this date.

Site #38: PCB Contamination, Building #1305 - This site could not be identified because no waste disposal structures or activities are observed at this location at this date.

Site #39: Abandoned Gas Station - Four underground fuel storage tanks are reported to have been installed in the 1930's. This site could not be identified because no underground POL tanks or evidence of excavations to install these tanks were noted.

Site #40: Landfill #8 (Figure 6, Annotation S40) - A waste disposal operation is active along the north side of Van Buren Avenue. The waste content of this pit could not be identified.

Site #42: PCB Contamination, Building #3404 - This site could not be identified because no waste disposal structures or activities are observed at this location at this date.

OCTOBER 15, 1959 (Figures 9-15)

The 1959 photographs reveal March AFB continues to be operational. The annotations "A" through "K" are consistent with the earlier photographs. Since 1949 the air base has been enlarged with the addition of a northwest-southeast oriented, 7000 feet, runway (Figure 10, Annotation A2). The former north-south, east-west, and northwest-southeast runways and several associated former taxiways have been resurfaced to form an extensive aircraft parking apron (Figure 10, Annotation A). Numerous aircraft are parked on this parking apron which has become stained from spillage/leakage.

The isolated, revetted, weapons storage compound in the northwest portion of the study area has been enlarged with additional, underground, magazines (Figure 9, Annotation D). Southwest of the weapons storage compound are what appear to be munitions residue burial trenches (Figure 9, Annotation L). The contents in these burial trenches could not be discerned.

A golf course is being established west of the expressway, encroaching on the southwest side of the former U.S. Army Camp Haan (Figure 13, Annotation M). An irrigation system to enlarge this golf course is revealed by the trench patterns of the irrigation pipes (Figure 13, Annotation M2).

The southern portion of the former U.S. Army Camp Haan (Figure 10, Annotation C) has been renovated since 1949 with the construction of West March base housing (Figure 10, Annotation O). The south end of the former U.S. Army Camp Haan has received a massive amount of fill material (Figure 13, Annotation N). This open dumping appears to be a continuation of the dumping started at the nearby landfill and adjacent incinerator, Site 24 (Figure 13, Annotation S24).

Additional waste disposal activity is suggested by two open trenches (Figure 12, Annotation G5), on the northwest side of the dismantled facility. No vehicles are discerned at either of these open trenches.

Site #1: Aircraft Isolation Project - The two previously reported isolated aircraft parked off the north end of the runway are absent. A new, enlarged, aircraft parking apron now covers this formerly unpaved area at the north



end of the runway. No waste disposal structures or activities observed at this location at this date.

Site #2: Waste Oil Pit/Solvent Tanks. A pit is not observed in this area at this date.

Site #3: Landfill #5 - There are no discernible disposal structures or activities observed at this reported location.

Site #4: Landfill #6 - No waste disposal structures or activities are observed along the west side of Heacock Street at this date.

Site #5: Landfill #3 (Figure 14, Annotation S5) - The previously reported three open trenches in this area are absent. No waste disposal activity is observed; however, construction work is indicated by the presence of building supplies and heavy equipment such as cranes and trucks.

Site #6A: Landfill #4 (Figure 12, Annotation S6A) - A large landfill operation has been established along the south side of intersection of Plummer Road and Van Buren Boulevard. Vehicles are observed at this disposal area, dumping and covering the solid waste; however, the composition of the solid waste could not be discerned. The smaller of the two pits at this site is the primary dump site (Annotation S6A1).

Site #6B: Landfill #4 (Figure 12, Annotation S6B) - This site consists of a group of three small soil-borrow pits, southeast of the two disposal pits of Site 6A. Dumping into these pits could not be discerned.

Site #6C: Landfill #4 (Figure 12, Annotation S6C) - The soil-borrow/quarry pit east of Allen Avenue remains open. No vehicles are observed at this site and dumping is not confirmed.

Site #7: Fire Protection Training Area #2 - This training area is not established at this date.

Site #8: Flightline Shop Zone (Figure 10, Annotation S8) - The aircraft maintenance hangars and shops remain operational. Stains from spillage and/or

leakage from the parked aircraft are still visible on the parking apron. This area remains a potential source of contamination from rainwater runoff transport.

Site #9: Main Oil/Water Separator - This facility has not been constructed at this date.

Site #10: Flightline Drainage Channel (Figure 14, Annotation S10) - The drainage leaving the flightline is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 10, Annotation S11) - The motor-pool parking lot and storage yard, reported in 1949, are absent. A bulk fuels storage area consisting of three vertical fuel storage tanks with an adequate secondary containment wall has been constructed in this area. No leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 10, Annotation S12) - The fenced, storage yard and parking area contain numerous vehicles and pieces of equipment. The poor photo resolution precludes identifying 55-gallon drums in this yard. A large ground stain revealing spillage/leakage is visible on the west side of this yard.

Site #13: Tank Truck Spill Site - This site could not be identified at this date.

Site #14: Liquid Fuel Pump Station Overflow - This site could not be identified at this date.

Site #15: Fire Protection Training Area #3 - This training area is not established at this date.

Site #16: East March Sludge Drying Beds (Figure 14, Annotation S16) - These sludge drying beds remain operational; although, many of these beds appear to be empty.

Site #17: Abandoned Swimming Pool (Figure 11, Annotation S17) ~ The swimming pool does not appear to contain water and may not be operational at this date.

Site #18: Engine Test Cell (Figure 14, Annotation S18)- This engine test cell is located in an isolated area between two taxiways. The ground is dark stained from engine exhaust burn marks; no liquid spillage is discerned.

Site #19: West March Sludge Drying Beds (Figure 15, Annotation S19) - Three additional drying beds have been added since 1949 bringing the total to ten.

Site #20: Landfill #7 (Figure 13, Annotation S20) - This extensive pit appears to be receiving solid waste. The composition of the solid waste could not be determined.

Site #22: Landfill #2 - This site could not be identified; no waste disposal structures or activities are observed at this location. The western portion of the air field has been altered with the construction of a longer runway across this area.

Site #23: East March Effluent Pond - This site has not been constructed.

Site #24: Landfill #1 (Figure 13, Annotation S24) - This landfill and to a larger extent, the surrounding area to the north (Annotation N), has received a massive amount of fill material since 1949.

Site #25: Munitions Residue Burial Site - This site could not be identified because no waste disposal structures or activities are observed at this location at this date.

Site #26A: (Water Treatment Plant Sludge (Figure 13, Annotation S26A) - The white material spread adjacent to the two excavations remains visible. Another large excavation has been completed to the northwest of the water treatment plant to form a water impoundment (Figure 12, Annotation IM). No water has been retained in this impoundment at this time.

Site #27: Building 422, Underground POL Tanks - This site could not be identified.

Site #29: Fire Training Area #1 (Figure 14, Annotation S29) - This training area is identified by a derelict aircraft and extensive ground stains around this aircraft. Surface runoff leaving this site would enter the flightline drainage channel, Site #10.

Site #30: Construction Rubble Burial Site (Figure 9, Annotation S30) - This large soil borrow pit appears larger since 1949. Dumping at this pit can not be confirmed at this date.

Site #31: Unconfirmed Solvent Disposal - This site could not be identified.

Site #33: Panero Aircraft Fueling System (Figure 10, Annotation S33) - The Panero refueling system has been installed with the construction of the enlarged parking apron. No spillage and/or leakage is observed at this date.

Site #34: Pritchard Aircraft Fueling System - The Pritchard fueling system is not discerned.

Site #35: 15th AF Underground Storage Tank - This site could not be identified.

Site #36: Building #458 Leach Pit - This site could not be identified.

Site #37: PCB Contamination, Building #317 - This site could not be identified.

Site #38: PCB Contamination, Building 1305 (Figure 15, Annotation S38) - This building has been constructed since 1949; however, no waste disposal structures or activities are observed at this location at this date.

Site #39: Abandoned Gas Station (Figure 10) - This gas station does not appear to have been constructed by 1958. No underground storage tanks or excavations to install underground storage tanks are observed at this location at this date.

Site #40: Landfill #8 (Figure 12, Annotation S40) - This pit along the north side of Van Buren Avenue appears to be inactive; vegetation has covered the bottom of



the pit because it captures rainwater runoff. The pit is open and access roads into the pit suggest the pit may be visited for sporadic, occasional dumping.

Site #42: PCB Contamination, Building #3404 - This site could not be identified.

JUNE 15, 1961 (Figures 17-20)

The 1961 photocoverage is incomplete because it does not cover the entire northwest and northeast portions of the March AFB study area. The annotations "A" through "O" are consistent with the earlier photographs. There have been no significant new developments at the air field. Other improvements include enlarging the golf course (Figure 19, Annotation M2) and completing work on the impoundment west of the water treatment plant, Site #26A.

Site #1: Aircraft Isolation Project - This site is not identified. No aircraft fuel dumping or spillage is observed.

Site #2: Waste Oil Pit/Solvent Tanks - A pit is not observed in this area at this date.

Site #3: Landfill #5 - A landfill is not identified at this location. No waste disposal activity is identified.

Site #4: Landfill #6 - This site is not covered by the photography.

Site #5: Landfill #3 (Figure 20, Annotation S5) - The previously reported construction activity in this area is absent; no solid waste or waste disposal activity is observed.

Site #6A. Landfill #4 (Figure 17, Annotation S6A) - These landfill disposal pits along the south side of Van Buren Blvd have been enlarged through excavation since 1959. Waste disposal activity has continued, resulting in the partial filling of the largest pit. There are numerous access roads into these pits. No vehicles in the process of unloading solid waste are observed.

Site #6B: Landfill #4 (Figure 17, Annotation S6B) - These two smaller pits remain open. Dumping of waste material into these pits could not be determined. Water appears to be accumulating in the eastern pit.



Site #6C: Landfill #4 (Figure 18, Annotation S6C) - The borrow pit east of Allen Avenue remains open. No vehicles are observed at this pit and no waste disposal activity could be confirmed at this date.

Site #7: Fire Protection Training Area #2 - This training area has not been established at this date.

Site #8: Flightline Shop Zone (Figure 17, Annotation S8) - No significant changes are noted at the aircraft maintenance hangars and shops along the northeast side of the enlarged parking apron. The previously reported stains from spillage and/or leakage remain visible on the parking apron making this area a potential source of contamination.

Site #9: Main Oil/Water Separator (Figure 20) - This facility has not been constructed at this date.

Site #10: Flightline Drainage Channel (Figure 20, Annotation S10) - The drainage leaving the flightline is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 17, Annotation S11) - This bulk fuels storage area consists of three, adequately contained, vertical fuel storage tanks. No leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 17, Annotation S12) - There are no significant changes noted at this fenced, storage yard and parking area. The poor photo resolution precludes identifying 55-gallon drums in this yard. A large ground stain revealing spillage/leakage is visible on the north side of this yard.

Site #13: Tank Truck Spill Site (Figure 20) - This site could not be identified.

Site #14: Liquid Fuel Pump Station Overflow (Figure 20) - This site could not be identified.

Site #15: Fire Protection Training Area #3 (Figure 20, Annotation S15) - This training area has not been established at this date.

Site #16: East March Sludge Drying Beds (Figure 20, Annotation S16) - There has been no significant construction at these sludge drying beds or associated waste water treatment plant. Four of these beds appear to contain sludge.

Site #17: Abandoned Swimming Pool (Figure 17, Annotation S17) - This swimming pool appears to contain water.

Site #18: Engine Test Cell (Figure 17, Annotation S18)- There are no significant changes noted at this engine test cell. The ground stained from engine exhaust burn marks are evident. Rainwater runoff leaves this site and enters the flightline drainage channel, Site #10.

Site #19: West March Sludge Drying Beds (Figure 19, Annotation S19) - Three of the ten drying beds appear to contain sludge.

Site #20: Landfill #7 (Figure 19, Annotation S20) - The large pit east of the water treatment plant remains open. Piles of debris are noted within the pit; however, no vehicles are present unloading solid waste at this date.

Site #22: Landfill #2 - This site could not be identified; no ground scars or waste disposal structures are observed.

Site #23: East March Effluent Pond (Figure 20., Annotation S23) - A large, square, lagoon has been constructed along the east side of Heacock Street. The lagoon contains liquid which prevents observing the presence of a bottom lining.

Site #24: Landfill #1 (Figure 19, Annotation S24) - Parallel ground scar patterns on the west side of the adjacent waste water treatment plant suggest buried disposal trenches. The area surrounding this site has received a massive amount of fill material since 1949. The incinerator building in this area is still visible (Annotation K).

Site #25: Munitions Residue Burial Site - This study site could not be identified.

Site #26A: Water Treatment Plant Sludge (Figure 19, Annotation S26A) - A large liquid filled impoundment has been completed northwest of the waste water treatment



plant. Extensive deposition of a light-toned material, sludge, is visible north of the waste water treatment plant.

Site #27: Building #422, Underground POL Tanks (Figure 17) - This site could not be identified.

Site #29: Fire Training Area #1 (Figure 20, Annotation S29) - This training area remains operational with one derelict aircraft and extensive ground stains around the aircraft.

Site #30: Construction Rubble Burial Site (Figure 17, Annotation S30) - This large soil borrow pit remains open; however, the contents of the pit could not be identified.

Site #31: Unconfirmed Solvent Disposal - This site could not be identified at this date.

Site #33: Panero Aircraft Fueling System (Figure 17, Annotation S33) - This refueling system remains operational. No spillage and/or leakage is observed at this date.

Site #34: Pritchard Aircraft Fueling System (Figure 20, Annotation 34) - This site could not be positively identified.

Site #35: 15th AF Underground Storage Tank - This site could not be identified.

Site #36: Building #458 Leach Pit - This site could not be identified.

Site #37: PCB Contamination, Building #317 - This site could not be identified.

Site #38: PCB Contamination, Building #1305 (Figure 20, Annotation S38) - A sump pit containing liquid is at the east side of this building. The function of this structure could not be determined.

Site #39: Abandoned Gas Station - A gas station is not identified and no underground storage tanks are noted.

Site #40: Landfill #8 (Figure 17, Annotation S40) - The waste disposal pit along the north side of Van Buren Avenue remains open and what appears to be debris is noted in the bottom of the pit. Vegetation is also filling the pit suggesting dumping activity has either stopped or slowed.

Site #42: PCB Contamination, Building #3404 - This site could not be identified.



# APRIL 16, 1966 (FIGURES 22 and 23)

The 1966 photographs show the air base is operational and there has been no major construction since 1961 although renovation projects are on going. The 1966 photography does not completely cover the northwest edge of the study area. The annotations "A" through "O" are consistent with the earlier photographs.

Site #1: Aircraft Isolation Project - This site could not be identified.

Site #2: Waste Oil Pit/Solvent Tanks - The previously reported storage tanks are absent. This site could not be positively identified however, because no underground storage tanks or a waste oil pit is discerned at this date.

Site #3: Landfill #5 - Extensive ground scars are observed on the west side of the abandoned Camp Haan area. No landfill operations are identified.

Site #4: Landfill #6 (Figure 23, Annotation S4) - A large, open, disposal trench runs along the west side Heacock Street on the east side of the air base. Vehicles are visible at this trench; however, the composition of the solid waste could not be discerned. Additional ground scars are noted along the west side of this open trench.

Site #5: Landfill #3 (Figure 23, Annotation S5) ~ No solid waste or waste disposal activity is observed at this location.

Site #6A: Landfill #4 (Figure 22, Annotation S6A) - This large, open, disposal pit continues to receive solid waste. The eastern side of the pit has been partially filled with solid waste since 1961. Vehicles are present at the dump zone revealing the site is active. The composition of the solid waste could not be discerned.

Site #6B: Landfill #4 (Figure 22, Annotation S6B) - This disposal site consists of two, irregular shaped, open pits. These pits were probably soil borrow pits or quarries. Vegetation is noted in the southern pit.

Site #6C: Landfill #4 (Figure 22, Annotation S6C) - This pit remains open. The texture of the soil/rock at the base of the pit appears irregular to suggest dumping. No vehicles are visible at this pit.

Site #6CC Landfill (Figure 22, Annotation S6CC) - These two excavations are likely soil borrow pits. They may have been exploited for soil/fill used to develop the adjacent golf course.

Site #7: Fire Protection Training Area #2 (Figure 23, Annotation S7) - This training area has been established since 1961. A derelict aircraft fuselage is at the center of this training area. This training area is likely to have been relocated from Site #29 which is now vacant. Ground scars reveal spillage and staining at this location. Rainwater runoff is likely to transport potential contamination to the east and off the study site.

Site #8: Flightline Shop Zone (Figure 23, Annotation S8) - The aircraft maintenance hangars and shops continue operations along the northeast side of the enlarged parking apron. The previously reported stains on the parking apron are fading and less discernible.

Site #9: Main Oil/Water Separator - The oil/water separation plant has not been constructed at this date.

Site #10: Flightline Drainage Channel (Figure 23, Annotation S10) - The drainage leaving the flightline is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 22, Annotation S11) - There are no significant changes noted at this bulk fuels storage area; no leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 23, Annotation S12) - There are no significant changes noted at this fenced, storage yard and parking area. The poor photo resolution precludes identifying 55-gallon drums in this yard. A liquid spill is visible within the compound.



Site #13: Tank Truck Spill Site - This site could not be positively identified.

Site #14: Liquid Fuel Pump Station Overflow - This site could not be identified.

Site #15: Fire Protection Training Area #3 - This fire-fighting practice area has not been established.

Site #16: East March Sludge Drying Beds (Figure 23, Annotation S16) - There has been no significant construction at these sludge drying beds or the associated wastewater treatment plant. Nine of these beds appear to contain sludge.

Site #17: Abandoned Swimming Pool (Figure 23, Annotation S17) - The swimming pool appears to contain water and be in service.

Site #18: Engine Test Cell (Figure 23, Annotation S18)- There are no significant changes noted at this engine test cell. The ground is scarred from engine exhaust burn marks. Rainwater runoff leaves this site and enters the flightline drainage channel, Site #10.

Site #19: West March Sludge Drying Beds (Figure 23, Annotation S19) - Two of the ten drying beds appear to contain sludge.

Site #20: Landfill #7 (Figure 22, Annotation S20) - The large, disposal pit has been partially filled with solid waste and cover soil. Wide spread ground scars cover the disposal area. No solid waste dumping is observed.

Site #22: Landfill #2 - This site could not be identified; no ground scars or waste disposal structures are observed at this date.

Site #23: East March Effluent Pond (Figure 23, Annotation S23) - No significant changes are noted at this large, square, lagoon.

Site #24: Landfill #1 (Figure 23, Annotation S24) - Parallel ground scar patterns are still visible on the west side of the adjacent waste water treatment

plant. The area surrounding this site continues to receive a massive amount of fill material. The incinerator building in this area is still visible (Annotation K).

Site #25: Munitions Residue Burial Site (Figure 22, Annotation S25) - Two burn pits and an open disposal trench are visible. The disposal site is east of the weapons storage area and appears to be fenced.

Site #26: Water Treatment Plant Sludge (Figure 22, Annotation S26A) - No significant changes are noted at this facility since 1961.

Site #27: Building #422, Underground POL Tanks - This site could not be identified.

Site #29: Fire Training Area #1 (Figure 23, Annotation S29) - This training area has been deactivated at this location and probably relocated to Site #7. The ground at the former fire-fighting training area reveals earth-moving scars.

Site #30: Construction Rubble Burial Site - This study site is not covered.

Site #31: Unconfirmed Solvent Disposal - This site could not be identified.

Site #33: Panero Aircraft Fueling System (Figure 23, Annotation S33) - This refueling system remains operational. No spillage and/or leakage is observed at this date.

Site #34: Pritchard Aircraft Fueling System - The refueling area could not be positively identified; however, a fuel truck parking area and refueling area is noted (Figure 23, Annotation P).

Site #35: 15th AF Underground Storage Tank - This site could not be identified.

Site #36: Building #458 Leach Pit - This site could not be identified.



Site #37: PCB Contamination, Building #317 - This site could not be identified.

Site #38: PCB Contamination, Building #1305 (Figure 23, Annotation S38) - The formerly reported sump pit appears to actually be a small swimming pool.

Site #39: Abandoned Gas Station - A gas station could not be identified.

Site #40: Landfill #8 (Figure 22, Annotation S40) - The waste disposal pit along the north side of Van Buren Avenue remains open and appears to receive solid waste; however, contents of this pit could not be identified.

Site #42: PCB Contamination, Building #3404 - This site could not be identified.

# MAY 24, 1974 (FIGURES 25-29)

The 1974 photographs show the air base remains operational. There are no major changes noted at the flight operations area at this air base since 1966. The annotations "A" through "P" are the same locations previously referenced on earlier photographs in this report.

Site #1: Aircraft Isolation Project (Figure 26, Annotation S1) - One isolated aircraft is observed at this location; however, no sign of spillage or fuel dumping is discernible.

Site #2: Waste Oil Pit/Solvent Tanks - This site is not unidentified.

Site #3: Landfill #5 (Figure 25, Annotation S3) - Two large, open, disposal pits have been excavated in this area since 1966. This is an active landfill operation and solid waste piles are clearly visible. No vehicles are discerned and the composition of the solid waste dumped at this landfill could not be identified.

Site #4: Landfill #6 (Figure 29, Annotation S4) - The previously reported disposal trench along the west side of Heacock Street on the east side of the air base is closed and the area has been re-contoured. Stables, corrals, and riding areas have been constructed adjacent to this former disposal trench (Annotation Q).

Site #5: Landfill #3 (Figure 29, Annotation S5) - No solid waste material or waste disposal activity is observed at this closed landfill.

Site #6A: Landfill #4 (Figure 25, Annotation S6A) - This large, open, disposal pit continues to receive solid waste. The eastern side of the pit, in particular, is being filled with solid waste.

Site #6B: Landfill #4 (Figure 25, Annotation S6B) - These two, irregular shaped, open pits appear to receive sporadic open dumping rather then being active sanitary landfill operations.



Site #6C: Landfill #4 (Figure 27, Annotation S6C) - This pit remains open; however, it does not appear to receive solid waste. No vehicles are visible at this pit and solid waste is not discernible within the pit.

Site #6CC Landfill (Figure 27, Annotation S6CC) - These two soil borrow pits are being excavated. No open dumping is discerned.

Site #7: Fire Protection Training Area #2 (Figure 29, Annotation 37). This fire-fighting training area remains active. There are two derelict aircraft within containment areas; all the same, the site has ground stains from spillage and is likely to remain a source of contamination to rainwater runoff.

Site #8: Flightline Shop Zone (Figure 26, Annotation S8) - The aircraft maintenance hangars and shops continue operations along the northeast side of the enlarged parking apron. The previously reported stains on the parking apron are fading and less discernible.

Site #9: Main Oil/Water Separator - This oil/water separation plant has not been constructed.

Site #10: Flightline Drainage Channel (Figure 29, Annotation S10) - The drainage leaving the flightline is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 26, Annotation S11) - There are no significant changes noted at this bulk fuels storage area; no leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 26, Annotation S12) - This fenced, storage yard and parking area appear to have been paved. Fuel and/or oil storage tanks are at the north end of the yard. The facility reveals good housekeeping practices. The poor photo resolution precludes identifying 55-gallon drums in this yard.

Site #13: Tank Truck Spill Site - This site could not be positively identified.

Site #14: Liquid Fuel Pump Station Overflow - This site could not be identified.

Site #15: Fire Protection Training Area #3 (Figure 29, Annotation S15) - This training area has not been established at this date.

Site #16: East March Sludge Drying Beds (Figure 29, Annotation S16) - No significant construction or activity is observed at these sludge drying beds. Ten pits appear to hold sludge.

Site #17: Abandoned Swimming Pool (Figure 26, Annotation S17) - The swimming pool appears operational.

Site #18: Engine Test Cell (Figure 26, Annotation S18)- There are no aircraft noted at this engine test cell.

Site #19: West March Sludge Drying Beds (Figure 28, Annotation S19) - There are five sludge drying beds that appear to hold sludge. The soil southeast of these drying beds is now very dark in comparison to 1966. It appears the sludge has been removed from the beds and spread-out in this region.

Site #20: Landfill #7 (Figure 27, Annotation S20) - The former excavation at this location is now being filled with the same white material previously reported spread north of the water treatment plant.

Site #22: Landfill #2 - This site could not be identified. No ground scars or waste disposal structures are observed.

Site #23: East March Effluent Pond (Figure 28, Annotation S23) - No significant changes are noted at this effluent pond since 1966.

Site #24: Landfill #1 (Figure 28, Annotation S24) - No significant changes are noted since 1966. Parallel ground scar patterns are still visible on the west side of the adjacent wastewater treatment plant. The area surrounding this site continues to receive a massive amount of fill material. The incinerator building in this area is still visible (Annotation K).

Site #25: Munitions Residue Burial Site (Figure 25, Annotation S25) - The soil around this disposal area has been scraped and re-contoured. The two previously reported burn pits and open disposal trench are not visible.

Site #26A: Water Treatment Plant Sludge (Figure 27, Annotation S26A) - Extensive spreading of white material is indicated north of the water treatment plant.

Site #27: Building #422, Underground POL Tanks - This site could not be identified.

Site #29: Fire Training Area #1 (Figure 29, Annotation S29) - All that remains of this former training area are ground scars.

Site #30: Construction Rubble Burial Site (Figure 25, Annotation S30)- This former soil borrow pit appears to have captured rainwater runoff along its east side. Vegetation is also present. Construction rubble is not discernible.

Site #31: Unconfirmed Solvent Disposal - This site could not be identified.

Site #33: Panero Aircraft Fueling System (Figure 26, Annotation S33) - This refueling system remains operational. No spillage and/or leakage is observed at this date.

Site #34: Pritchard Aircraft Fueling System (Figure 26) - The refueling area could not be discerned.

Site #35: 15th AF'Underground Storage Tank - This site could not be identified.

Site #36: Building #458 Leach Pit - This site could not be identified.

Site #37: PCB Contamination, Building #317 - This site could not be identified.

Site #38: PCB Contamination, Building #1305 (Figure 28, Annotation S38) - There are no visible signs of waste disposal activity at this site.

Site #39: Abandoned Gas Station (Figure 26, Annotation S39) - This gas station appears operational; however, no fuel storage tanks are visible.

Site #40: Landfill #8 (Figure 25, Annotation S40) - The waste disposal pit along the north side of Van Buren Avenue remains open and appears to receive solid waste. Vegetation is starting to cover the bottom of this pit.

Site #42: PCB Contamination, Building #3404 - This site could not be identified because no waste disposal structures or activities are observed.



SEPTEMBER 20, 1978 (FIGURES 31-36)

The 1978 photographs show the air base remains operational. The annotations "A" through "Q" are the same locations previously referenced on earlier photographs in this report. A major construction effort is underway on the west side of the Escondido Expressway and south of Van Buren Boulevard with the construction of the Riverside National Cemetery. The cemetery is being built on the southern portion of what had been U.S. Army Camp Haan.

Site ##1: Aircraft Isolation Project (Figure 32, Annotation S1) - One isolated aircraft is parked in a level, unsurfaced, pull-off area at the north end of the parking apron.

Site ##2: Waste Oil Pit/Solvent Tanks - This site could not be identified. No underground storage tanks or pit are observed.

Site ##3: Landfill #5 (Figure 31, Annotation S3) - Waste disposal activity is still observed at these two large, open, disposal pits. Solid waste piles are clearly visible within the pits. Vehicles are not discerned and the composition of the solid waste dumped at this landfill could not be identified.

Site #4: Landfill #6 (Figure 33, Annotation S4) - This disposal trench on the east side of the air base remains closed. No waste disposal activity is noted.

Site #5. Landfill #3 - No solid waste material or waste disposal activity is observed at this closed landfill.

Site #6A: Landfill #4 (Figure 34, Annotation S6A) - Waste disposal activity continues at these open disposal pits. The eastern side of the original pit has been filled causing only a small depression to remain.

Site #6B: Landfill #4 (Figure 34, Annotation S6B) - These two, irregular-shaped, open pits appear to be abandoned. The southern pit has accumulated of rainwater runoff and vegetation undergrowth.

Site #6C: Landfill #4 (Figure 34, Annotation S6C) - There are no significant changes at this site since 1974. This pit remains open; however, it does not appear

to receive solid waste. No vehicles are visible at this pit and solid waste is not discernible within the pit.

Site #6CC Landfill (Figure 34, Annotation S6CC) - These two former soil borrow pits now appear to receive sporadic open dumping but do not appear to be sanitary landfill operations.

Site #7: Fire Protection Training Area #2 (Figure 33, Annotation S7) - This fire-fighting training area remains active. There are two derelict aircraft within containment areas; all the same, the site has ground stains from spillage and is likely to remain a source of contamination via rainwater runoff.

Site #8: Flightline Shop Zone (Figure 32, Annotation S8) - The aircraft maintenance hangars and shops continue operations along the northeast side of the enlarged parking apron. The previously reported stains on the parking apron are fading and less discernible.

Site #9: Main Oil/Water Separator (Figure 33, Annotation S9) - The oil/water separation lagoon has been excavated at the south end of the aircraft parking apron. The lagoon is situated adjacent to the drainage channel, Site 10, and contains liquid. A bottom lining for this lagoon could not be discerned.

Site #10: Flightline Drainage Channel (Figure 33, Annotation S10) - The drainage leaving the flightline is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 32, Annotation S11) - There are no significant changes noted at this bulk fuels storage area; no leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 32, Annotation S12) - This fenced, storage yard and parking area are still being used for vehicles, supplies, and equipment. The poor photo resolution precludes identifying 55-gallon drums in this yard.

Site #13: Tank Truck Spill Site - This site could not be positively identified.



Site #14: Liquid Fuel Pump Station Overflow - This site could not be identified.

Site #15: Fire Protection Training Area #3 - This training area has not been established at this date.

Site #16: East March Sludge Drying Beds (Figure 33, Annotation S16) - All of the sludge drying beds have been removed since 1974. Ground scar patterns reveal earthmoving activity in this area. The adjacent waste water treatment plant has also been dismantled. One water treatment tank remains in this area.

Site #17: Abandoned Swimming Pool (Figure 32, Annotation S17) - The swimming pool appears to be presently empty.

Site #18: Engine Test Cell (Figure 35, Annotation S18)- There are no aircraft noted at this engine test cell.

Site #19: West March Sludge Drying Beds (Figure 35, Annotation S19) - The sludge drying beds remain visible. A large triangular shaped impoundment has been constructed on the north side of this waste water treatment plant.

Site #20: Landfill #7 (Figure 34, Annotation S20) - The former excavation at this location continues to be filled with the same white material previously reported spread north of the water treatment plant.

Site #22: Landfill #2 (Figure 35) - This site could not be identified because no ground scars or waste disposal'structures are observed at this location at this date.

Site #23: East March Effluent Pond (Figure 36, Annotation S23) - There are no significant changes noted at this effluent pond since 1974.

Site #24: Landfill #1 (Figure 35, Annotation S24) - Parallel ground scar patterns are still visible but no waste disposal is observed. The area surrounding this closed landfill continues to receive a massive amount of fill material. The previously reported incinerator building in this area has been dismantled (Annotation K).

Site #25: Munitions Residue Burial Site (Figure 31, Annotation 525) - This area has been scraped and re-contoured. The two previously reported burn pits and open disposal trench are not visible.

Site #26A: Water Treatment Plant Sludge (Figure 34, Annotation S26A) - Extensive deposits of white material are noted north of the water treatment plant. Two excavated water impoundments are at the center of these deposits.

Site #27: Building #422, Underground POL Tanks - This site could not be identified.

Site #29: Fire Training Area #1 (Figure 33, Annotation S29) - This training area is closed and only ground scars remain visible.

Site #30: Construction Rubble Burial Site (Figure 31, Annotation S30) - This former soil borrow pit is abandoned and now collects rainwater runoff and vegetation overgrowth. Construction rubble is not discernible.

Site #31: Unconfirmed Solvent Disposal - This site could not be identified.

Site #33: Panero Aircraft Fueling System (Figure 35, Annotation S33) - This refueling system remains operational; no spillage and/or leakage is observed at this date.

Site #34: Pritchard Aircraft Fueling System - The refueling area could not be positively identified; however, fuel trucks are parked in this area.

Site #35: 15th AF Underground Storage Tank - This site could not be identified.

Site #36: Building #458 Leach Pit - This site could not be identified.

Site #37: PCB Contamination, Building #317 - This site could not be identified.

Site #38: PCB Contamination, Building #1305 (Figure 36, Annotation S38) - No significant changes are noted at this facility.



Site #39: Abandoned Gas Station (Figure 32, Annotation S39) - The gas station at this location continues to operate. No underground fuel storage tanks are visible.

Site #40: Landfill #8 (Figure 34, Annotation S40) - This pit remains open and appears to collect rainwater. The base of the pit has vegetation cover. Dumping into this pit appears to have stopped.

Site #42: PCB Contamination, Building #3404 - This site could not be identified.

#### OCTOBER 3, 1991 (FIGURES 42-59)

The 1991 photographs show the air base remains operational. New residential subdivisions have been constructed on the western side of the March AFB study area since 1985. This residential development is generally north of Van Buren Boulevard; however, there is also a large development east of Allen Avenue. The annotations "A" through "R" are the same locations previously referenced on earlier photographs in this report.

Site #1: Aircraft Isolation Project (Figure 51, Annotation S1) - No isolated aircraft are parked at this pull-off area at the north end of the parking apron.

Site #2: Waste Oil Pit/Solvent Tanks (Figure 53, Annotation S2) - The adjacent area on the northwest side of building #420 is annotated, but visible evidence of the reported underground storage tanks and/or a waste oil pit are not discerned. No waste disposal activity is noted at this location.

Site #3: Landfill #5 (Figure 47, Annotation S3) - Vegetation has become established in the largest pit which suggests dumping activity has stopped. Extensive ground scars at the southern pit suggest dumping has been moved into this location. The composition of the solid waste dumped at this landfill could not be identified.

Site #4: Landfill #6 (Figure 56, Annotation S4) - There are no signs of exposed solid waste or visible evidence of leachate seepage at this closed landfill site. No activity is observed and the ground has been restored to its undisturbed terrain contours.

Site #5: Landfill #3 (Figure 57, Annotation S5) - There are no signs of exposed solid waste or visible evidence of leachate seepage at this closed landfill site. No solid waste disposal activity is observed at this site. This study area is presently adjacent to an oil/water separation plant, site #9.

Site #6A: Landfill #4 (Figure 48, Annotation S6A) - There is no visible evidence of leachate seepage at this closed landfill site. Dumping at the main, large pit has stopped but solid waste and debris are still being dumped into the smaller pit on the

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east side of the main pit. The size of the trees growing at the bottom of the large pit reveals the length of time the pit has stood idle.

Site #6B: Landfill #4 (Figure 48, Annotation S6B) - These two, irregular shaped, open pits appear to abandoned; there are no signs of exposed solid waste or visible evidence of leachate seepage. No waste disposal activity is observed. The southern pit contains dense vegetation cover.

Site #6C: Landfill #4 (Figure 49, Annotation S6C) - The land east of Allen Ave has been developed into a residential subdivision since 1985. The previously reported pit is absent. The location of this former pit is presently a parking lot.

Site #6CC Landfill (Figure 49, Annotation S6CC) - These two former soil borrow pits appear abandoned. The northern pit contains dense vegetation growth. These inactive pits are presently within the perimeter fence of a residential subdivision and as a result the original vehicle access roads into the pits are blocked.

Site #7: Fire Protection Training Area #2 (Figure 57, Annotation S7) - This fire-fighting training area has been closed since 1978; only ground scars are visible.

Site #8: Flightline Shop Zone (Figures 53 and 54, Annotations S8) - The aircraft maintenance hangars and shops do not appear as active as in earlier photographs. No spills, dumping, or signs of poor housekeeping practices are observed.

Site #9: Main Oil/Water Separator (Figure 57, Annotation S9) - The oil/water separation lagoon remains operational. No bottom-lining material is discerned in the separation lagoon.

Site #10: Flightline Drainage Channel (Figure 57, Annotation S10) - The drainage leaving the flightline remains operational. Runoff leaving the March AFB is channeled into the Perris Valley Storm Drain east of the air base.

Site #11: Bulk Fuels Storage Area Spill (Figure 50, Annotation S11) - There are no significant changes noted at this bulk fuels storage area; no leakage or spillage is observed around these tanks.

Site #12: Civil Engineering Storage Yard (Figure 53, Annotation S12) - This fenced, storage yard and parking area are still being used for vehicles, supplies, and equipment. There are numerous stacks of 55-gallon drums throughout this yard that lack secondary containment berms. There is one ground-stained area that reveals liquid spillage entered a drainage ditch.

Site #13: Tank Truck Spill Site - This reported truck spill site is located along the eastern perimeter road of the base. This site could not be visually identified from aerial photographs.

Site #14: Liquid Fuel Pump Station Overflow (Figure 57, Annotation S14) - This reported jet fuel spill resulted from an overflow of the liquid fuels pump station at building #1245. Building #1245 is annotated but the spill site could not be identified from aerial photographs.

Site #15: Fire Protection Training Area #3 (Figure 57, Annotation S15) - This training area consists of a paved, circular, hardstand with a horizontal tank as a simulated fuselage training structure. A sump pit is along the west side of the hardstand. No spillage is noted escaping into the natural drainage system.

Site #16: East March Sludge Drying Beds (Figure 57, Annotation S16) - This former location for sludge drying beds presently has been paved and is now the location of two, adequately contained, storage tanks.

Site #17: Abandoned Swimming Pool (Figure 54, Annotation S17) - The swimming pool has been removed since 1978. This area presently has a mounded appearance. No waste disposal activity is observed.

Site #18: Engine Test Cell (Figure 54, Annotation S18)- There are no aircraft noted at this engine test cell. No waste disposal activity is noted at this location.

Site #19: West March Sludge Drying Beds (Figure 55, Annotation S19) - Earth-moving equipment has started to bury those sludge drying beds nearest to the Escondido Expressway. Earth-moving activity has re-contoured the southeast corner of the waste waster treatment plant.



Site #20: Landfill #7 (Figure 52, Annotation S20) - Dumping of light-toned material, lime sludge from the adjacent water treatment plant, has formed a large mound of these deposits. This deposition pile is also referred to as Site 26-b.

Site #22: Landfill #2 (Figure 54, Annotation S22) - Since 1985 this area along the east side of the Escondido Expressway reveals extensive ground scars from earthmoving activity. Earth-moving equipment is observed at this location spreading a grey-toned, dry, material. Ground scars suggest this material is later covered with soil. No disposal trenches or disposal pits are discerned.

Site #23: East March Effluent Pond (Figure 58, Annotation S23) - This pond is absent and the area is reclaimed for agriculture.

Site #24: Landfill #1 (Figure 55, Annotation S24) - There are no visible signs of exposed solid waste or leachate at this closed landfill. The area to the west of this closed landfill continues to receive a massive amount of fill material, construction rubble, and debris (Figure 52, Annotation N).

Site #25: Munitions Residue Burial Site (Figure 47, Annotation S25) - No waste disposal activity is observed at this site. A small open pit is visible and ground scars cover the area. No leachate seepage is noted at this site.

Site #26A: Water Treatment Plant Sludge (Figure 49, Annotation S26A) - The significant change noted at this site since 1980 is that the water treatment plant appears closed; there is no water in any of the treatment tanks or ponds. The deposits of light-toned material, lime sludge, form large mounds on the north side of the water treatment plant.

Site #27: Building #422, Underground POL Tanks - This site of underground fuel storage tanks could not be identified from aerial photographs.

Site #29: Fire Training Area #1 (Figure 57, Annotation S29) - This abandoned training area is presently an empty, ground scarred area.

Site #30: Construction Rubble Burial Site (Figure 46, Annotation S30) - This former soil borrow pit is not a commercial landfill operation. Because the pit is

abandoned it now receives sporadic dumping of trash, debris, and construction rubble. Because the pit collects rainwater runoff it supports dense vegetation growth.

Site #31: Unconfirmed Solvent Disposal (Figure 57, Annotation S31) - This reported solvent disposal area is on the east side of building #1211. Building #1211 is annotated but the disposal site could not be identified from aerial photographs.

Site #33: Panero Aircraft Fueling System (Figure 54, Annotation S33) - This refueling system is being completely removed. A large excavated pit where the underground storage tanks and/or piping was located has been dug in order to extract this equipment. Piles of soil are visible on the aircraft parking apron as this clean-up/removal work continues.

Site #34: Pritchard Aircraft Fueling System (Figure 57, Annotation S34) - The refueling area is identified with building #1245 however no underground fuel storage tanks were observed. This area is also associated with Site 14.

Site #35: 15th AF Underground Storage Tank - These reported underground fuel storage tanks associated with buildings #3409, #3406, and #3417/#3418 could not be identified from aerial photographs.

Site #36: Building #458 Leach Pit (Figure 53, Annotation S36) - This reported leach pit at building #458 was not discerned. Building #458 is annotated but the study site could not be identified from aerial photographs.

Site #37: PCB Contamination, Building #317 (Figure 53, Annotation S37) - This reported PCB contamination around building #458 was not discerned. Building #458 is annotated but the source of the contamination could not be identified from aerial photographs.

Site #38: PCB Contamination, Building #1305 (Figure 58, Annotation S38) - No significant changes are noted at this facility. This reported PCB contamination around building #1305 was not discerned. The source of the PCB contamination could not be identified from aerial photographs.



Site #39: Abandoned Gas Station (Figure 53, Annotation S39) - An operating gas station at building #2406 could not be confirmed. No underground fuel storage tanks are visible at this location.

Site #40: Landfill #8 (Figure 48, Annotation S40) - This pit along the north side of Van Buren Avenue is abandoned but appears to receive sporadic dumping of trash, debris, and construction rubble. Because the pit collects rainwater runoff it supports dense vegetation growth.

Site #42: PCB Contamination, Building #3404 (Figure 44, Annotation S42) - This reported PCB contamination around building #3404 was not discerned. The location of building #3404 is presumed to be along 11th Street, west of Plummer Road. The source of the contamination could not be identified from aerial photographs.



Figure 4. March Air Force Base Study Area, Hay 6, 1949. Approximate scale 1:20,000.

# INTERPRETATION CODE

### BOUNDARIES AND LIMITS

x-x-x- FENCED SITE

BOUNDARY

UNFENCED SITE BOUNDARY

XXXXXX FENCE

--- STUDY AREA

#### DRAINAGE

---- DRAINAGE

- FLOW DIRECTION

-----INDETERMINATE DRAINAGE

# TRANSPORTATION/UTILITY

==== VEHICLE ACCESS

HAILWAY

# SITE FEATURES

mending DIKE



STANDING LIQUID

STANDING LIQUID



EXCAVATION, PIT (EXTENSIVE)

MOUNDED MATERIAL (EXTENSIVE)

MOUNDED MATERIAL ISMALL

CRATES/BOXES

DRUMS

HORIZONTAL TANK

PRESSURE TANK

¥ ¥ VERTICAL TANK

CLEARED AREA

DISTURBED GROUND

£ 1 FILL

IMPOUNDMENT

LAGOON

OF OUTFALL

SD SLUDGE

57 STAIN

SW SOLID WASTE

TR TRENCH

VEGETATION STRESS

WASTE DISPOSAL AREA

WETLAND



Figure 5. Harch A

# **ITERPRETATION CODE**

# HUNDARIES AND LIMITS

-x--x- FENCED SITE BOUNDARY

UNFENCED SITE BOUNDARY

XXXXX FENCE

--- STUDY AREA

#### MAINAGE

--- DRAINAGE

FLOW DIRECTION

--- INDETERMINATE DRAINAGE

#### IANSPORTATION/UTILITY

=== VEHICLE ACCESS

++++ RAILWAY

#### **TE FEATURES**

muteut DIKE

STANDING LIQUID

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EXCAVATION, PIT (EXTENSIVE)

MOUNDED MATERIAL (EXTENSIVE)

MOUNDED MATERIAL MM (SMALL)

CRATES/BOXES CR

DRUMS

HORIZONTAL TANK HT

PRESSURE TANK

VERTICAL TANK VT

**CLEARED AREA** CA

DG DISTURBED GROUND

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IMPOUNDMENT I M

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OUTFALL OF

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SW **SOLID WASTE** 

TR TRENCH

**VEGETATION STRESS** 

WASTE DISPOSAL AREA

WETLAND

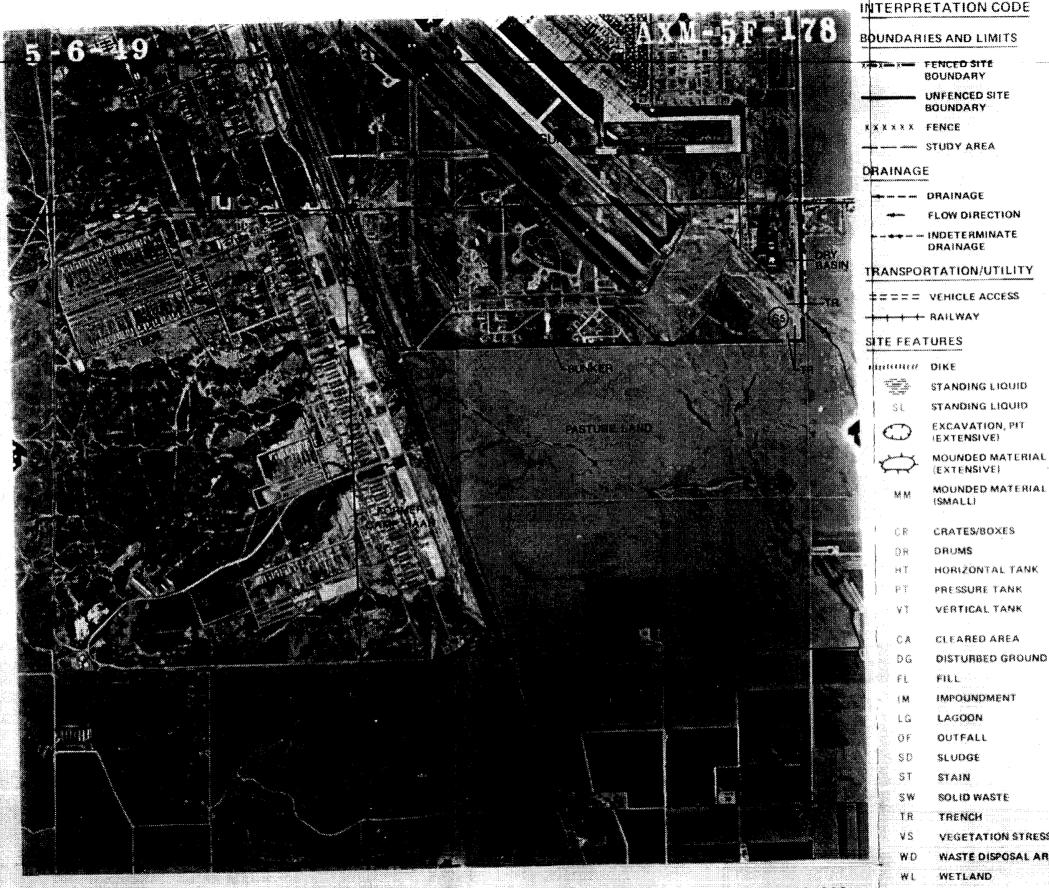


Figure 7. March Air Force Base Study Area, May 6, 1949. Approximate scale 1:20,000.

LAGOON

OUTFALL

SLUDGE

TRENCH

WETLAND

SOLID WASTE

**VEGETATION STRESS** 

WASTE DISPOSAL AREA

STAIN

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; be identified.



Pigure 9. March Air Force Base Study Area, October 15, 1959. Approximate scale 1:20,000.

# INTERPRETATION CODE

# **BOUNDARIES AND LIMITS**

X-X-X- FENCED SITE BOUNDARY

UNFENCED SITE

XXXXXX FENCE

- STUDY AREA

## DRAINAGE

--- DRAINAGE

- FLOW DIRECTION

----- INDETERMINATE DRAINAGE

### TRANSPORTATION/UTILITY

==== VEHICLE ACCESS

TTTT RAILWAY

# SITE FEATURES

#### monuter DIKE

STANDING LIQUID

SL STANDING LIQUID

EXCAVATION, PIT (EXTENSIVE)

MOUNDED MATERIAL (EXTENSIVE)

MOUNDED MATERIAL MM (SMALL)

CRATES/BOXES

DR DRUMS

HORIZONTAL TANK

PT PRESSURE TANK

VERTICAL TANK

CLEARED AREA

DISTURBED GROUN

FL FILL

IMPOUNDMENT

LG LAGOON

OF OUTFALL

SLUDGE

ST STAIN

SW SOLID WASTE

TR TRENCH

VS VEGETATION STRESS

WASTE DISPOSAL AREA

WL WETLAND



Figure 10. March Air Force Base Study Area, October 15, 1959. Approximate scale 1:20,000.

WE WETLAND

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Figure 11. Harch Af 1:20,000



Figure 12. March Air Porce Base Study Area, October 15, 1959. Approximate scale 1,20,000.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

x-x-x- FENCED SITE

UNFENCED SITE

XXXXX FENCE

--- STUDY AREA

DRAINAGE

---- DRAINAGE

-- FLOW DIRECTION

---- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

==== VEHICLE ACCESS

HHHH BAILWAY

SITE FEATURES

mnummer DIKE

1 STANDING LIQUID

SL STANDING LIQUID

D EXCAVATION, PIT

MOUNDED MATERIAL (EXTENSIVE)

MOUNDED MATERIAL

R CRATES/BOXES

R DRUMS

T HORIZONTAL TANK

T PRESSURE TANK

VT VERTICAL TANK

A CLEARED AREA

DISTURBED GROUND

L FILL

IMPOUNDMENT

G LAGOON

OF OUTFALL

SD SLUDGE

ST STAIN

W SOLID WASTE

R TRENCH

VEGETATION STRESS

VD WASTE DISPOSAL AREA

WETLAND



Figure 13. Harch Air F

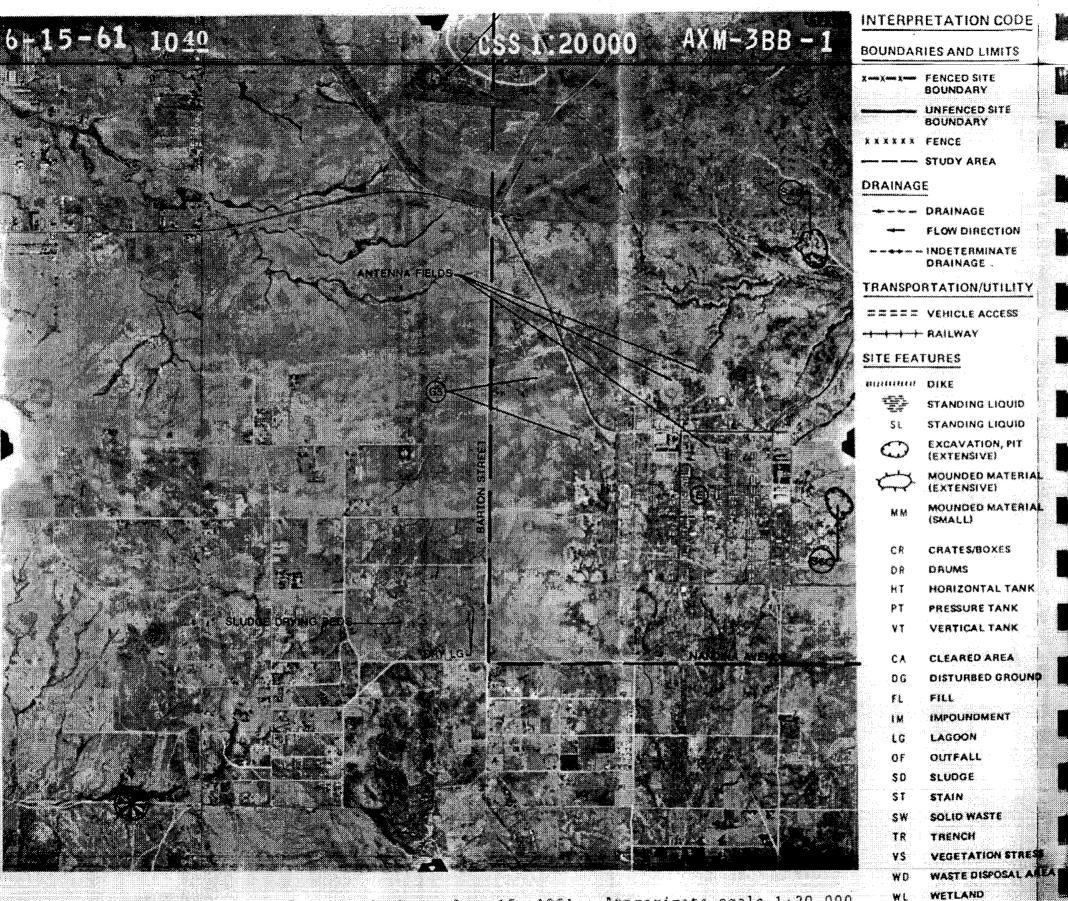


Figure 18. Harch Air Force Base Study Area, June 15, 1961. Approximate scale 1:20,000.

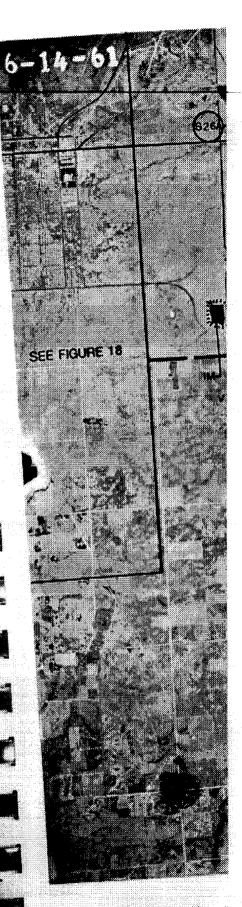


Figure 19. Marc

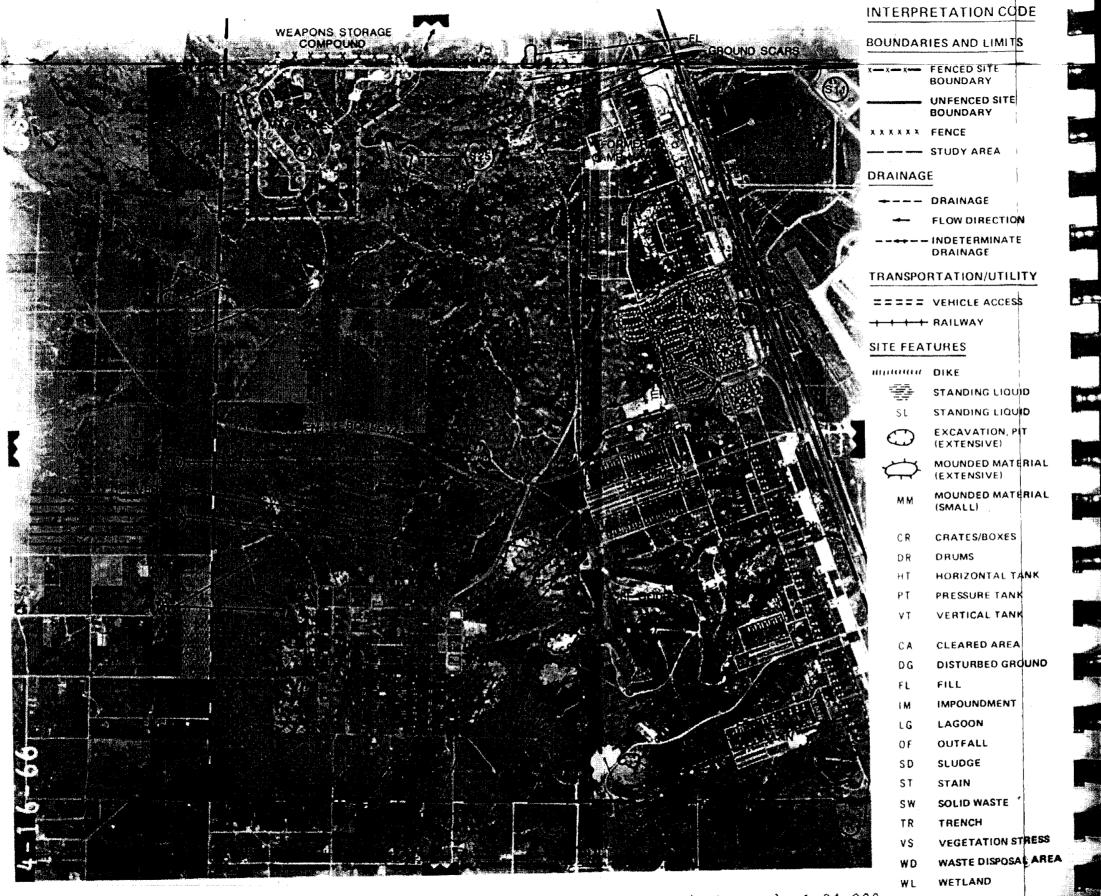


Figure 22. March Air Force Base Study Area, April 16, 1966. Approximate scale 1:24,000.

Figure 23. Ma

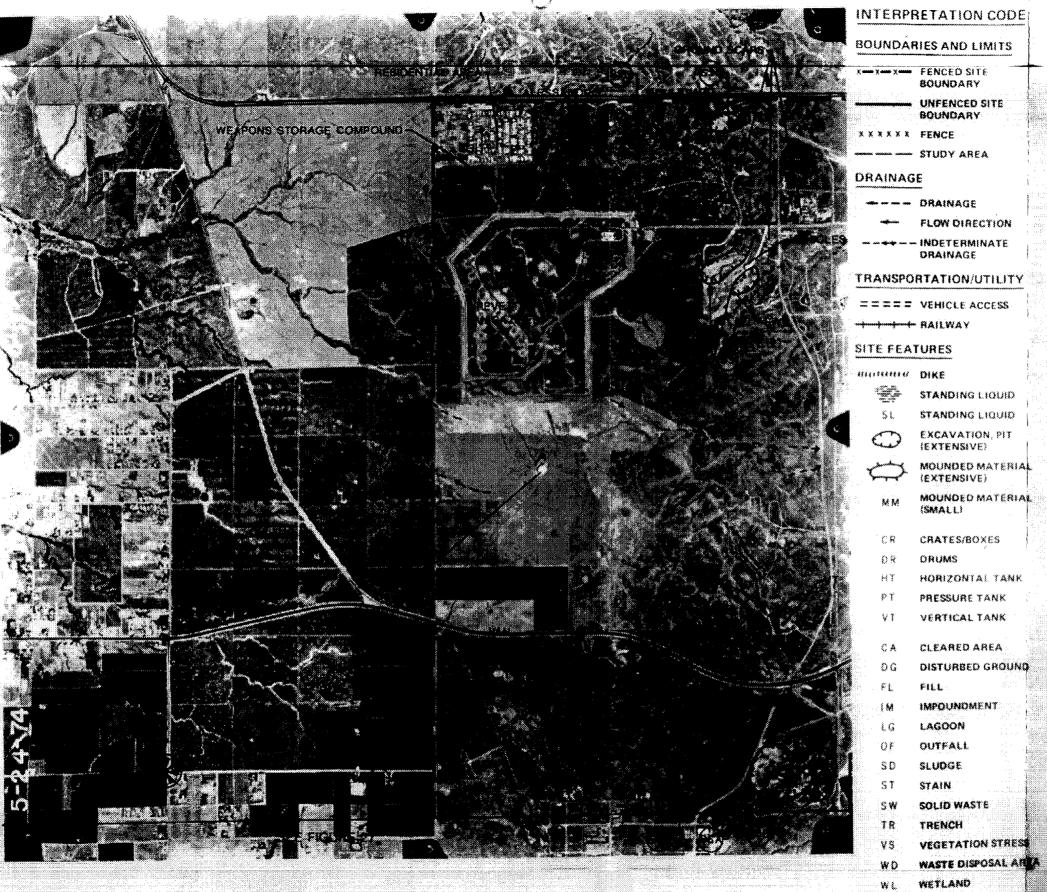


Figure 25. March Air Force Base Study Area, Hay 24, 1974. Approximate scale 1:24,000.

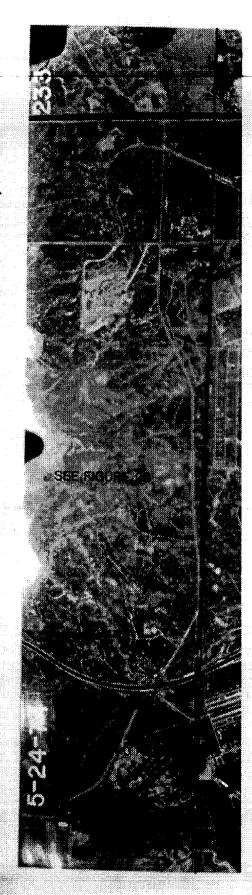


Figure 26. March Air

# INTERPRETATION CODE BOUNDARIES AND LIMITS X-X-X- FENCED SITE BOUNDARY UNFENCED SITE BOUNDARY XXXXXX FENCE --- STUDY AREA DRAINAGE ---- DRAINAGE -- FLOW DIRECTION -----INDETERMINATE DRAINAGE TRANSPORTATION/UTILITY ==== VEHICLE ACCESS SITE FEATURES monume DIKE STANDING LIQUID Si STANDING LIQUID EXCAVATION, PIT (EXTENSIVE) MOUNDED MATERIAL (EXTENSIVE) MOUNDED MATERIAL (SMALL) CB CRATES/BOXES OR DRUMS 11 1 HORIZONTAL TANK ₽\* PRESSURE TANK VŤ VERTICAL TANK CLEARED AREA DISTURBED GROUND FILL IMPOUNDMENT LAGOON OUTFALL SLUDGE STAIN SOLID WASTE TRENCH **VEGETATION STRESS** WASTE DISPOSAL AREA W ( WETLAND 4.000.

# INTERPRETATION CODE **BOUNDAHIES AND LIMITS** X-X-X- FENCED SITE BOUNDARY UNFENCED SITE BOUNDARY XXXXXX FENCE - STUDY AREA DRAINAGE ---- DRAINAGE FLOW DIRECTION ----- INDETERMINATE DRAINAGE TRANSPORTATION/UTILITY ==== VEHICLE ACCESS THE RAILWAY --- SITE FEATURES minimum DIKE STANDING LIQUID STANDING LIQUID St EXCAVATION, PIT (EXTENSIVE) MOUNDED MATERIAL **(EXTENSIVE)** MOUNDED MATERIAL M M (SMALL) CRATES/BOXES 0.8 08 DRUMS \$\$ T HORIZONTAL TANK 91 PRESSURE TANK VI VERTICAL TANK CA CLEARED AREA OG DISTURBED GROUND 1 FILL IMPOUNDMENT L.G LAGOON 01 OUTFALL 20 SLUDGE 31 STAIN SW SOLID WASTE TR THENCH VEGETATION STRESS WO WASTE DISPOSAL AREA

W

WETLAND

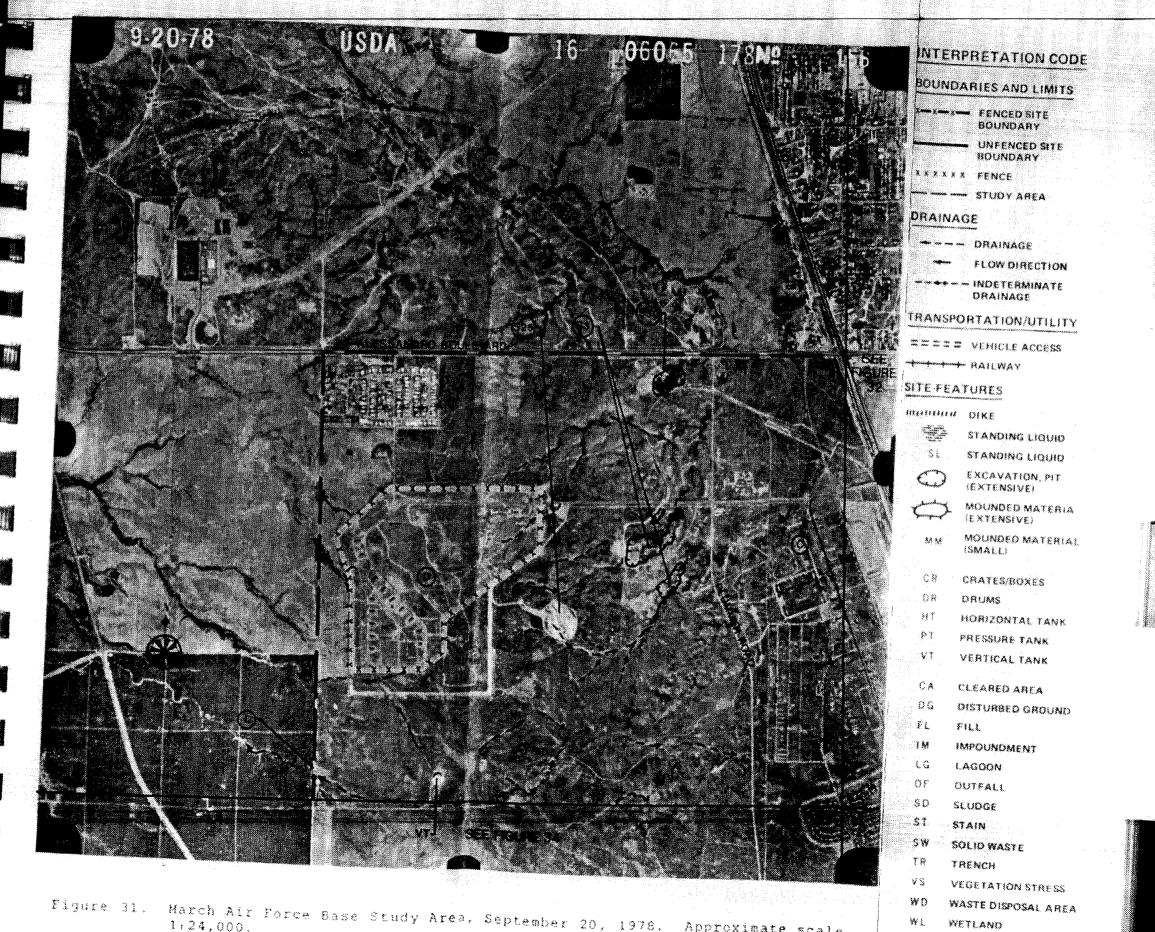


Figure 31. March Air Force Base Study Area, September 20, 1978. Approximate scale

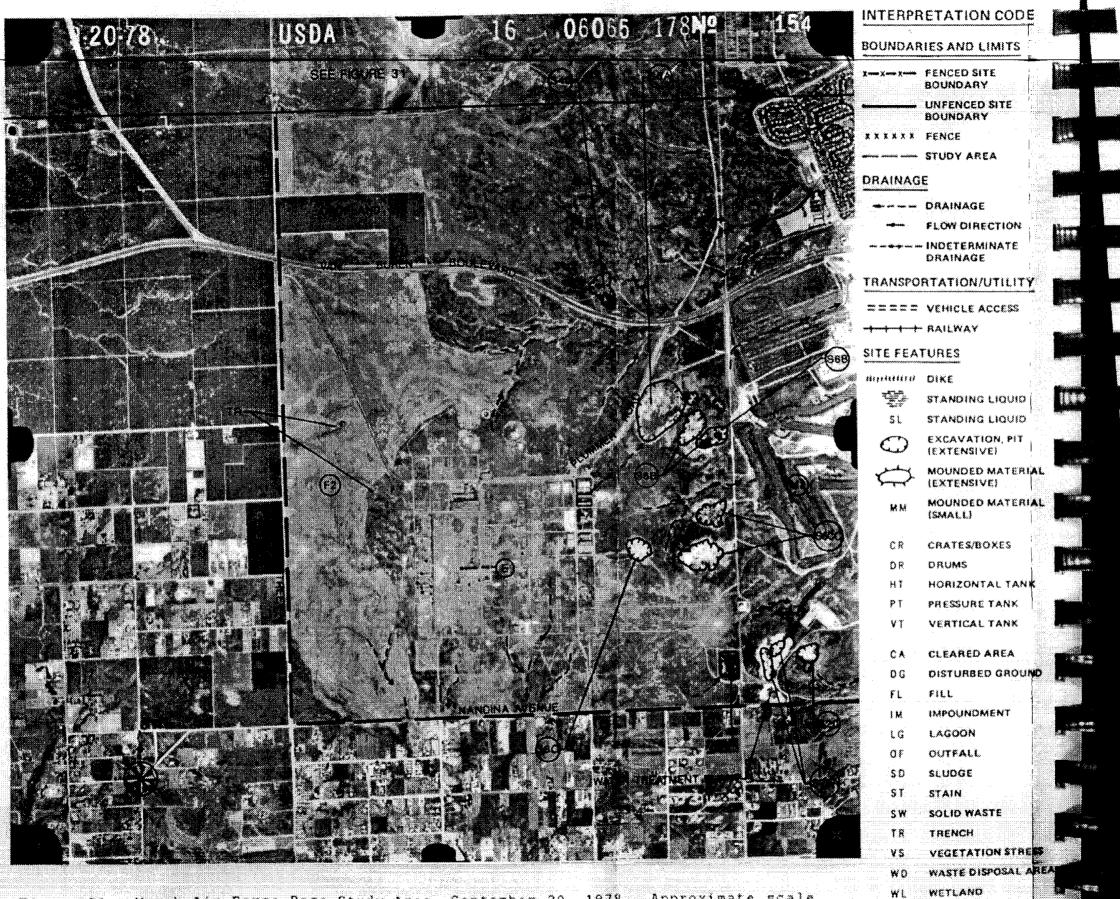


Figure 34. March Air Force Base Study Area, September 20, 1978. Approximate scale 1,24,000.

Figure 35. March 1,24,0

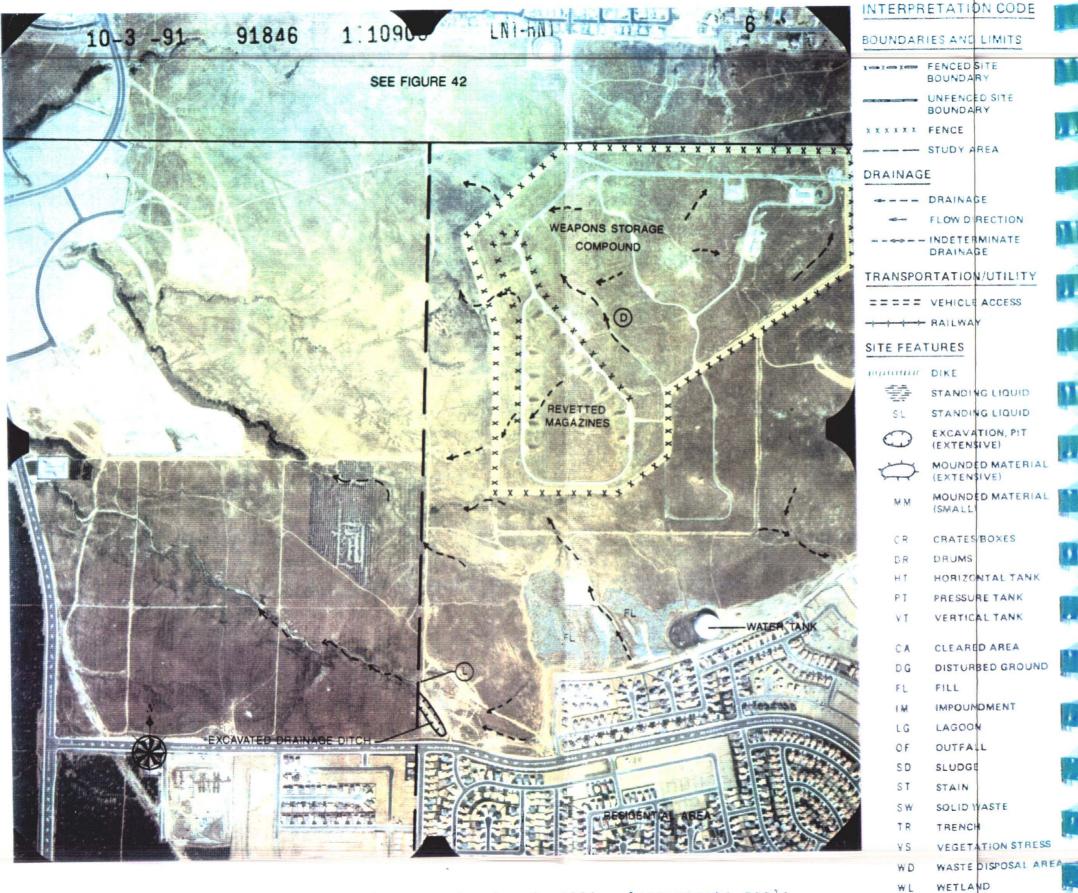


Figure 43. March Air Force Base Study Area, October 3, 1991. Approximate scale 1:10,900.

Figure 44.

6811/3/

## HEADQUARTERS Office of the Commanding Officer March Field, Riverside, California

25 November 1946

BUBJECT: Acquisition of Real Estate for Rifle Range, March Field, California

TO:

Commanding General
 Twelith Air Force
 March Field, California

1. It is requested that the parcels of Real Astate described below, now under lease be acquired in fee simple title for use of March Field as a permanent Rifle Range. In accordance with AAF Regulation 85-3, Section THI the following information is submitted:

a. These lands are located approximately 3 1/2 miles N.W. of March Field, County of Riverside, California and are described as follows:

#### (1) Parcel 1.

"A parcel of unimproved land containing 210.64 acres, lying approximately 6 miles southeast of the City of Riverside, in the County of Riverside, State of California, and 1 1/4 miles North of the junction of U. S. Highway 395, and more particularly described as:

The East 1080 feet of the Southwest 1/4 and the Southesst 1/4 Section 27 T 2 S, R 4 W, S.B. & M.: EXCEPTING THEREFROM two portions, more particularly described as:

PARCEL 1: Approximately 14.81 acres beginning at the Southeast corner of said Section 27; thence Westerly along the Southeasterly line of said Section 27, 808.33 feet; thence Northerly along a line parallel to the Easterly line of said Section 27, 808.33 feet; thence Easterly along a line parallel to the Southerly line of said Section 27; thence South along the said East line to the point of beginning; and

PARCEL 2: A strip of land across Section 27, forty feet wide owned by the County of Riverside for read and utility purposes by deed dated May 20, 1941, recorded in book 505 at Page 318, Official Records of said County.

Owner - C. F. Rayburn
Court House, Riverside, California
Now leased by the Government under No. WO4-193-Eng 2380
Rental - \$1.00 for term of lease. Paid.

7

3/R

"108.84 acres of unimproved, rocky hillside land approximately 6 miles Southeast of the City of Riverside, California, approximately 3/4 mile north of the Junction of U. S. Highway 60 and U.S. Highway 395 and more particularly described as follows:

The North one-half of the Northeast quarter and the Northeast quarters of the Northwest quarter of Section 34, Township 2 South, Range 4 West, SBB&M, Riverside County, California.

Owner - W. . Turner 3943 Chestnut Street Riverside, California How leased by the Government under No. W04-193 Eng 2396 Rental - \$15.00 per annum.

#### (3) Parcel 3.

"All that certain unimproved rocky land located approximately six miles Southeast of the City of Riverside, County of Riverside, Sate of California, and approximately three-fourths of a mile North of the Junction of U S Highway No. 60 and U S Highway No. 395 more particularly described as:

NT 1/4 of SW 1/4 of NE 1/4 Section 34, Township 2 South, Range 4 West, SBB&M;

Approximate area - 9.65 acres."

Owner - Christian H. Wannemacher
Route 4, Box No. 623
Riverside, California
Now leased by the Government under No. WOS-193
Ing 6187
Rental - \$1.00 for term of lease. Paid.

#### (4) Parcel 4.

"A parcel of unimproved rough hillside land containing 9.55 acres approximately 6 miles southeast of the City of Riverside, California and approximately 5/8 of a mile north of the junction of U S Highway 60 and U 3 Highway 395 and more particularly described as follows:

Northeast 1/4 of Southwest 1/4 of Northeast 1/4 of Section 34, Township 2 South, Range 4 West SBE&M., Riverside County, Calif.

Owner - Henry Haves and Marion Haves 903 Union Bank Building Los Angeles, California

#### (5) Parcel 5.

"A parcel of unimproved rough hillside land containing 9.65 acres approximately six miles southeast of the City of Riverside, California, and approximately one-half mile north of the junction of U.S. Highway 395 in Riverside County, California, and more particularly described as follows:

The southwest quarters of the southwest quarter of the northeast quartersof Section 34, Township 2 South, Range 4 West, SBRM."

Owner - John A. Hogg and Beatrice Hogg
Municipal Building
Vancouver, Washington
Now leased by the Government under No. W04-193Eng 2412.
Rental - \$1.00 for term of lease. Paid.

#### (6) Parcel 6.

"A parcel of unimproved dry farm land and rough hill-side land containing 97.05 acres approximately 6 miles southeast of the City of Riverside, California and 1.4 mile north of the junction of U S Highway 60 and U S Highwat 395 and more particularly dscribed as the Wast 1080' of SW 1/4 and Wast 1080' of SE 1/4 of NW 1/4 of Section 34, T 2 S, R 4 W, SBR&M, Riverside County, California."

Owner - Joaquin Orraj and Catherine Orraj Route 4, Box 605, Ricerside, California Now leased by the Government under No. MO4-193 Eng 2389 Rental - \$183.00 per annum.

#### (7) Parcel 7.

"Approximate 169.65 acres located approximately 6 miles southwest of the city of Riversi e and approximately 1/4 mile north of the junction of U S Highways numbered 60 and 395, said land being more particularly descrived as:

Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 and southeast 1/4 of Section 34, Township 2 South, Range 4 West, SBR&B, in the County of Riverside, Sate of California."

Owner - Herman G. Halverson
3475 Madison Street
Riverside, California
Now leased by the Government under No. 704-193 ing
2649
Rental - \$325.00 per annum.

#### (\$) Parcel 8.

"Forty acres descrived as follows:

SE 1/4 of NE of Section 34, Township 2 South, Range 4 West, SBRAM, County of Riverside, California."

This is government land held by the Department of the Interior and was "withdrawn from all forms of appropriations under the public land laws, and reserved for the use of the War Department" under Public Land Order No. 199, dated 22 December 1943, and "shall cease at the expiration of the six months period following the termination of the unlimited national emergency declared by Proclamation No. 2487 of 27 May 1941 (55 Stat. 1647)".

- b. This acquisition is considered essential and recommended for the following reasons:
- (1) The table of organization and equipment of the various Units on this field including the carbine, sub-machine gun, rifle 11903, pistol and 50 cal ground machine gun, these are the weapons with which the Units are equipped and must fire.
- (2) In order to comply with AR 775-10, qualification in arms and training allowances, there must be a range where by the units may fire the weapons with which they are equipped, also AR 775-10 authorizes the expending of ammunition for men with his particular weapon.
- (3) MAF Letter 50-18 requires that at least 58 hours of fireing practice and ground school be given to all men before training is completed for overseas duty.
- (4) This range was constructed in 1943. Its completed cost was approximately \$100,000.00 and consists of 7 ype E sub-marhine targets, pistol targets (sillouette), 24 type L pistol targets (1,000 in), all necessary abutments brench work etc.
- (5) TAC Regulation 50-18 requires that the firing of Units under its control, and that before any minit will go overseas that 50% of the personnel will be qualified with their weapons.
- (6) The cost of restoration to original condition is estimated at approximately \$30,000.00
- (7) In the event of another national emergencyk the reconstruction of another range comparable to the one we now have would be an additional cost to the government.
- (8) Additional expenses would be incurr d on new construction in the modification of the reamining section la land, to insure adequate safety and operat onal factors.

- (9) In view of the above it is the opinion of this Head warters that it would be advisable to purchase this property, inasmuch as the  $\infty$ st of this property would be but a fraction of the present investment.
- c. This property will constitute a permanent Rifle Range and will be used as long as Training is continued at March Field.
  - d. As soon as practicable.
  - e. (1) Requirements are not beyond base essentials.
- (2) This acquisition is deemed essential to prevent breakdown of functions as stated in paragraph 1, above.
- f. There are no other facilities for this purpose in vicinity of March Field.
- g. Necessary installations have been made and no alterations are contemplated at this time.
  - h. Maps of Parcels 1 to 8 and locator map are inclosed herewith.
  - i. Not applicable.
  - j. Not applicable.
  - k. It is requested that funds be made available for this acquasition.
  - 1. Not applicable.

FOR THE COMMANDING OFFICER:

2 Incls:

1- Locator Map

2- Range Map

J. R. MAMEROW Lt. Colonel, A.G.D. Adjutant

Suit land Rb 175, 10 446 Entry 1

AIR BASK HEADQUARTERS Base Chemical Section

121.

March Field, Riverside, Calif. May 3, 1938.

Subject: Transportation Procurement Authority.

To: Chief. Chemical Warfare Service, Washington, D.C.

l. Request transportation procurement authority be granted this office to cover the cost of transportation by rail to San Francisco. Colifornia, of one (1) Container, shipping, steel, for gas Identification Detonation Set, which has apparently been at this station since 1934.

2. As soon as transportation authority is received, this container will be shipped to the New York Port of Embarkation for the Commanding Officer, Edgewood Chemical Warfare Depot who should furnish transportation procurement authority to cover shipment from New York to Edgewood Arsenal, Md.

R. J. MASON. 2nd Lieut., Air-Res., Base Chemical Officer. CWS 457/310 lst Ind.
War Dept., O-C of CWS, May 10, 1938. To: Base Chemical Officer, Air Base Headquarters, March Field, Riverside, Calif.

- l. Procurement Authority 14 12 1611 P 69-0700 A 0525-8 may be quoted by you to cover the transportation by rail, from Earch Field to San Francisco, of one (1) Container, shipping, steel, for gas Identification Detonation Set. It is requested that this office be notified of the amount of funds involved in making this shipment.
- 2. Transportation from New York to Edgewood Arsenal will be taken care of when the shipment reaches the New York Port of Embarkation.

For the Chief of the Chemical Warfare Service:

ay ment to cows.

H. W. BLACK Major, Chemical Marfare Service Assistant

Entry |
File 4571-04
312
457

AIR BASE HEADQUARTERS Base Chemical Section

457.

March Pield, Riverside, Calif., May 20, 1938.

Subject: Containers for Bulk Chemical Agents.

To: Chief, Chemical Warfare Service, Washington, D.C.

- 1. There are on ham at this station eleven (11) supty FS and FH drums that are apparently in serviceable condition.
- 2. Information is desired as to disposition of these drums, whather they should be shipped back to Edgewood Arsenal.
- 3. If their return to the Edgewood Chemical Warfare Depot is desired, it is requested that transportation procurement authority be granted to cover cost of transportation from March Field to the Port Justermaster, Fort Mason, Ban Francisco, California.

R. J. MASON. 2nd Lieut., Air-Res., Base Chemical Officer.

TORICAL OFFICE

## REPORT OF CONTROLLED AND OTHER CRITICAL ITEMS OF EQUIPMENT

g or Regiment Arm Group, Battalion or Depot Station	on
-----------------------------------------------------	----

#### A. CHEMICAL WARFARE ITEMS

108A Index	ltem			Serial Number	1 "1		
(1)	ltem		•	Serial Number or W. D. Registration number	Author ized	Number Currently On Hand	e. Assigned) Number Currently Loanerd On On Meino Receipt
	Apparetus, deconteminating, power-driven M3A1 (400 gal.)	V ,					<del></del>
(2)	Apparatus, decontaminating, power-driven M4 (400 gal.)	··		1795-BC	1	0	<u> </u>
(3)	Apparatus, decontaminating, 3 gal., M1	`				<u> 0</u>	3
(4)	Apparatus, decontaminating, 1½ qt., M2				ļ	0	8
(5) •	Tractor, crane, M1-complete		· · · · · · · · · · · · · · · · · · ·				<del></del>
(6)	Truck, crane, swinging boom, M1				<del></del>		<u></u>
(7)	Trailer, chemical handling, M2		·	STCH-688	1	0	<del> </del>
(8)	Truck, Chemical Service, Mi			4155135	11	0	1
			· ·				<u> </u>
			56 T.A.				-
(10)	Beam, grab, M1 (1 ton container)	3 33 50	<b>A</b> COMMON TO SERVICE AND ADMINISTRATION OF THE PROPERTY OF THE				<del> </del>
(11)	Beam, hoisting, airplane smoke tank, M2		The Control		<del></del>		<del> </del>
(12)	Container, steel, 1 ton, type D	4.1	We to be	<u>, , , , , , , , , , , , , , , , , , , </u>			<del></del>
(13)	Kit, HS, vapor detector, M4	* */	- 1 .		1 1	0	<del>  <u>+</u> +</del>
(14)	Kit, repair, gas mask, universal, MB	7 10			2	0	2
(15)	Line, filling, airplane smoke tank, M3	1. 1.1			3	0	3_
(16)	Line, filling, chemical spray tank, M2	5 5 5 5	-				<del> </del>
(17)	Mechanism, valve replacement, M1		No. of the second				
(18)	Set, equipment, maintenance & repair, M1					<u> </u>	
(19)	Set, gas, identification, detonating, M1					70	
(20)	Stand, carrying, airplane smoke tank, M1			N			<u> </u>
(21)	Stand, holding, airplane smoke tank, M5					<u> </u>	
(22)	Stand, platform, airplane smoke tank, MO			· .	11	0	
(23)	Tank, smoke, airplane, M10			• •	2	0	\$
(24)	Tank, smoke, airplane, M20	•					
(25)		7			•		
(26)					1	0	1
(27)	Truck, tank, hand, M1	<del></del>	<del></del>				
(27)			<del></del>				
		100	· # 7 * .				
1	C)	HEMICAL Y	WARFARE UNITS OF	NLY*			-i
						,	
(a)	Mesk, gos	and the state	e paginger			1	
	1	7.0	a king tirk				<u>/ ]                                   </u>

\*Organizations other than Chemical Warfare units assigned to the Army Air Forces will not make entries in this section.

Basis of authorized allowances used	and a control to all and the least to the l	
Dasis of authorized allowances used		Scharle ( Howel B. 1.
	Signature of Carrantes Officer	
		CHARLES A. POWELL Jr. ZERG E
	Organization	Asst. General Supply Office
Service Control of the Control of th		and the second second

Responsibility for the accuracy of this report lies with the Commanding Officer.

#### BASE CHEMICAL WARFARE OFFICE MARCH FIELD. CALIFORNIA

June 30, 1937.

saunifect: Semi-annual report of chemical warfare assumition expenditures.

to : Chemical warfare officer. Ninth Corps Area, Presidio of San Francisco, California.

1. The following report of chemical warfare assumition expended during the period from December 31, 1936 to July 1, 1937 is submitted.

Organization and Station	: Item expended	: Authorized	:	Quantity :	Lot no.	
	•	: allowance		expended:		:
	:	: for the	1	first half		:
		: year 1957.	•	1937. :		:
	:Capsules CN.	:50 Capsules	:	30 :	2536-1	;
	:CN.	: Lbs.	:	430 :	2340-1	:
March Field, California	:Ethylene	: Lbs.	:	3850 :		:
	:Dichloride.	<b>\$</b>		3		:
• • •	:PM.	i Lbs.	:	770 :		ı
	:Fe.	: Lbs.	1	10,500 :		:

REC'D CWO JUL

1937

EARL C. ROBBINS CAPTAIN, AIR CORDS BASE CHEMICAL WARFARE OFFICER M. Sales M.

93

Swittena Rb 175, BOX521 Entry 1

1712 - 4711

JAN 97/ L

AIR BASE CHEMICAL SECTION March Field, Riverside, California.

January 3, 1938.

Subject: Semi-annual Report of Chemical Warfare amountaion expenditures.

To: Chief. Chemical Warfare Service, Munitions Building, Washington, D.C.

1. The following report of chemical warfare ammunition expended during the period from July 1, 1937 to December 31, 1937 is submitted.

Organization and Station	i Item Expended  i	Authorized (Quantity : Lot No. : Allowance : Expended : for the : ifirst half: : Year 1937 : 1937 :
Earch Field, California	: FS 6200 lbs	1 45,000 lbs:10,500 lbs:

EARL C. ROBBIRS. Captain, Air Corps. Base Chemical Officer. 11/12

# MARCH FIELD

75 Years of Service

1918 - 1993







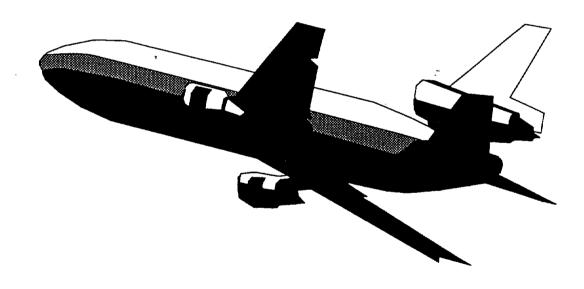




## **March Field**

75 Years of Service

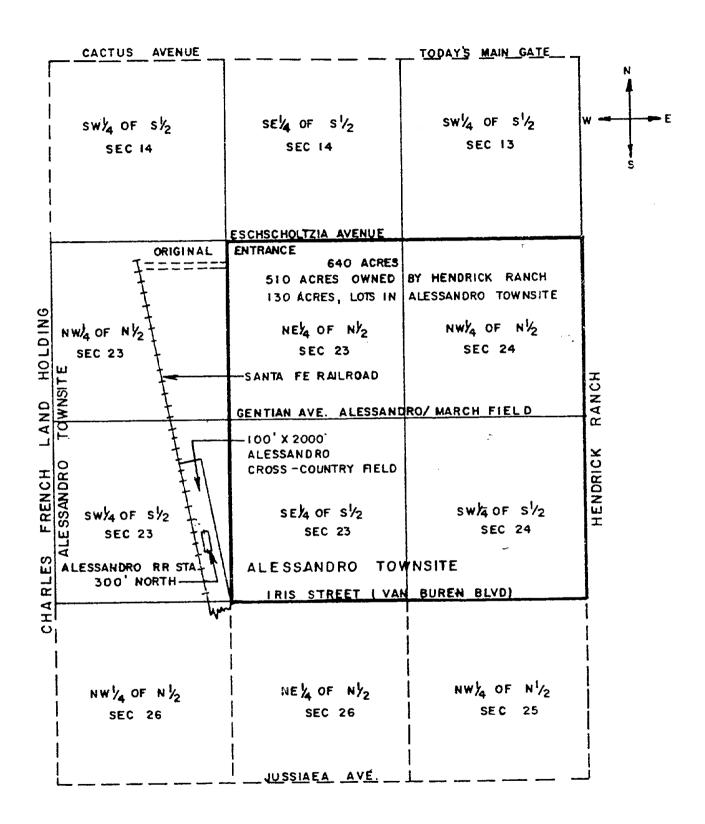
1918-1993



Compiled and edited by:
TSgt Randolph J. Saunders
Office of the Historian
Headquarters, 22d Air Refueling Wing
March Air Force Base, California

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### A New Era Began ...

With the shutdown of March Field as part of the post World War I reductions in the military, the Alessandro Plain had become rela-The whir of tively quiet. Jennies overhead and the romance of aviation had seemvanished from ingly Riverside County. These circumstances would not long Three years after endure. March Field entered caretaker status, significant changes in the organization of the Nation's military air service be-Congress, on July 2, gan. 1926, renamed the Air Service, which had separated from the Signal Corps in 1918, the Army Air Corps. This renaming, and a new five-year plan for military aviation, resulted in large part from a heightened interest in military aviation. In the first years of America's fledgling air forces, adventurous young men had demonstrated well true capabilities heavier-than-aircraft. They

had been used to carry mail. to conduct reconnaissance, to fight battles, and to serve the general public. Under the guidance (and because of the perseverance) of men like "Hap" Arnold. "Tooev" Spatz, Benjamin Foulois, Billy Mitchell, and many others, military aviation would grow in breadth and scope, becoming a vital weapon in America's arsenal. Accordingly, the new Army Air Corps planned to expand pilot training beginning in 1927 to provide qualified aviators sufficient to activate tactical aviation units.

## THE ARMY AIR CORPS BREATHES LIFE INTO MARCH

In line with this new fiveyear plan for expanding tactical aviation units, Congress allocated funds for the reopening of March Field as a primary flying training facility, based on the assumption that Randolph Field, to be built near San Antonio, Texas, would assume March's previous basic flying training mission by 1931. Not short on coincidence, the first officer to arrive at March Field and relieve Sergeant Anderes was Captain Earle H. Tonkin, who arrived on March 6. 1927. Within one week of Tonkin's arrival, Quartermaster Corps personnel had arrived and established their services. The Army assigned Col. William C. Gardenhire to direct the base's buildup Maj. Carlyle H. activities. Wash relieved Captain Tonkin of command upon the latter's arrival later in March 1927. All was well and Riverside businesses looked forward to the economic advantages the base's monthly \$60,000 planned would have on the community.

MSgt. (Ret.) Edgar R. Henderson remembered the

first days of opening the field:

"I came here the first time as a staff sergeant on March 19, 1927, from Camp Beale. There were several enlisted men, and I was one of them. and four officers. commanding officer was Mai. Carlyle H. Wash. Then there were more troops in here until June 25th of the same vear. ... I lived in a room. They generally put two men in those rooms. There was only three types of fellows in the service that had rooms, all the rest of the men slept in squad rooms. In order to get a room you had to be a senior NCO, that is one of the first [top] three grades, masters, techs and staff [sic]. sergeants."

What began next was an extensive remodelling and rebuilding effort at March Field. On January 13, 1927, Congress appropriated \$1.3 million for March's renewal process. The construction plan called for the repair of five original hangars and the construction of six additional ones, new enlisted barracks and officers quarters, a head-quarters building, operations

office, parachute hut, air corps shop, and a warehouse. Upon his arrival, Colonel Gardenhire declared that existing facilities would be used until new structures were prepared, announcing that new construction and rehabilitation would begin at once! As Henderson Sergeant recounted years later, the facilities were not quite ready for occupancy when the base reopened.

"... [when] they [caretaker crews] left, if they left the doors in the old wooden builiding open, we couldn't close them; and if they were closed, we couldn't open them."

Gardenhire's men found that only the pine underpinnings of the existing frame buildings had rotted. The majority of the framing had been constructed of first grade redwood, so the crews' main tasks were to jack up the buildings and replace the underpinnings.

"The base Quartermaster started hiring a bunch of civilians and general laborers and some carpenters. They would go through these buildings, get underneath them, put these little cement pyramids -- pedestals ... and they got them in pretty good shape."

The overall for plan March Field called for nearly \$1.5 million of new construction to replace existing facili-These new buildings would be erected just east of the 1918-built hangars and offices. Post commander. Major Wash, intended to make March Field. "the world's most famous army post" by constructing the new buildings in a Spanish mission architectural style. This reportedly resulted in great enthusiasm among the men of March Field and the local Washington's community. approval and confirmation of Wash's plans allowed Gardenhire to inform the press of these plans, stating that construction would begin in September using the same basic plan used in 1918. Specifically, all hangars would be to the right of the main road. All barracks and administrative buildings would be to the left. The main road from the highway was to be widened, and the Riverside City Park Board had donated 200 palm trees to be planted around the



Commery training for aviation students included skeet-shooting. Training officials at Army Headquarters believed that this type of experience would make better marksmen of pilots (above). Cadets also fired table-mounted machine guns for marksmanship training.



Gunnery Training - 1928



1st Wing Review, 1934 - waiting for takeoff



1st Wing Review, 1934 - Center, Lt. Col. "Hap" Arnold; Left, Secretary of War Dern; Right, Mayor Evans of Riverside













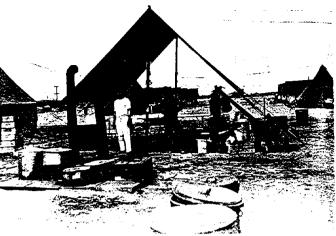




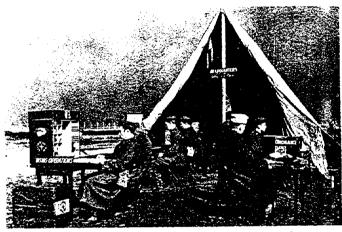
Squadron Insignia of 1st Bomb Wing, 1930s



Open House after Alaska Flight, July 4, 1934



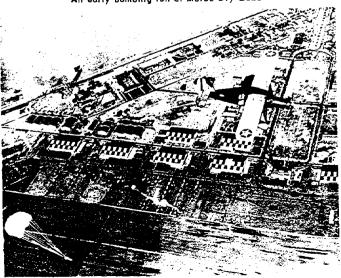
Palm Springs Maneuvers, 1934



1st Bomb Wing on maneuvers. Contrast with today's combat operations center.



An early bombing run at Muroc Dry Lake



Parachute jumps, Nov. 30, 1935

home. By late spring, 1933, the tests, which had also employed a pursuit plane flying as high as 29,200 feet, were completed. Through his interest in science and his wish to keep the public informed on the many uses of airplanes, Colonel Arnold had established an important bridge between scientists and aeronautical engineers and the Army Air Corps that would benefit America immensely in the decades to come.

Field in the March mid-1930s also caught the eyes of Congress. The House of Representatives' Military Affairs Committee visited the installation on October 26 and 27, 1935, as part of a tour of military posts in the west. On their arrival, the congressmen were treated to an aerial demonstration performed by crews and planes of the 17th Attack Group and the 19th Bombardment Group. Chairman John J. McSwain of South Carolina became particularly enthusiastic about March and described it as being in wonderful condition. "Most wonderful of all is the pride that the officers and

men apparently take in their training." He also noted that additional barracks were needed for 350 men recently transferred from Rockwell Field, San Diego. The congressmen found the esprit de corps at March exciting and invigorating.

Acutely aware of the

sound of opportunity's knock,

General Arnold, promoted from lieutenant colonel in March 1935, chose to close the air show by delivering a speech on the occasion of the In this congressional visit. speech, Arnold launched a campaign for more military bases (particularly Air Corps bases) on the Pacific Coast. General Arnold believed an installation in the Pacific Northwest and one in Alaska would allow America to exercise control of the North Pacific Ocean from Alaska to Seattle. According to Arnold, equipping these bases and their units with long-range bombers would ensure a strong American presence in the region. Events in the coming decade would almost raise General Arnold's remarks to the level of prophecy.

### MORE TRAINING AND A GUNNERY RANGE

In April 1932, the two March Field groups, the 7th and 17th, stopped individual training and began functioning as part of the 1st Bombardment Wing. One of the first joint exercises called for a daylight departure from March with Mather Field in Sacramento as the destination for some aircraft. Others would stage into other airfields in the Los Angeles area. Meanwhile, a squadron of the 17th staged into Rockwell Field and would later act as aggressors. At a specified time in this one-day exercise, the aircraft that had staged into Los Angeles area fields would be reassembled by radio and instructed to proceed to March Field. Their mission was to protect the base from the squadron of the 17th, simulating an attack from their position at Rockwell. The final portion of the exercise included a live fire event near the coastline between San Diego and Oceanside. The involvement of this number of units and aircraft in such an integrated and

planned exercise represented an important departure from previous training events at March

The use of California's coastal areas for live fire events did present some hazards and in 1932 Colonel Arnold and his staff were concerned that the field did not have an adequate aerial and machine gun range. That portion of the ocean between San Diego and Oceanside presented the only available range. The Navy, however, claimed exclusive rights to the range and generally was quite unwilling to permit the Army fliers access. In addition, firing over water presented another set of problems. First, trainers oftentimes were unable to determine a student's accuracy over water. And second, the ocean itself presented a featureless expanse making navigation difficult once the crew lost sight of the land mass.

Colonel Arnold learned that to the northeast of the field, just over the San Bernardino mountains, the Mojave Desert offered perhaps the best possibility for a range. Mostly unpopulated except for a few animal species, it seemed reasonable to assume that a portion of the region could be made into a range. Arnold, accompanied by two officers and two representatives from the Automobile Club of Southern California, inspected portions of the Mojave and selected a dry lake bed near the small desert town of Muroc. The lake bed reached nearly fourteen miles long, was seven miles wide, and presented to its viewers a hard clay surface as smooth as window glass. Not only would the area make an excellent bombing and gunnery range, it would also provide a superb landing strip.

After a quick title search at the San Bernardino County courthouse, Colonel Arnold's staff reported that most of the region was already owned by the government. It would be relatively easy to turn it over Planning to to the Army. prepare the Muroc dry lake as a bombing and gunnery range began immediately and within one month a small detachment of men set out to form the initial support cadre for the range. By September

1933, Muroc Bombing Range opened as an auxiliary installation for practice bombing and gunnery by March's crews. On July 23, 1942, this station was separated from March and became a test and research installation. Eventually, it was renamed Edwards Air Force Base.

In the spring of 1933, a provisional, general headquarters was established at March under the command of General Oscar Brigadier Westover. This provisional headquarters was to manage an extensive, three-week exercise to be conducted by several bombardment groups stationed in California. Colonel Arnold served as the headquarter's chief of staff in addition to his duties as wing and base commander. From May 8th to the 29th, 300 planes participated in maneuvers over land and water. The assigned order of battle for May 22nd provides an interesting example of the exercise's activities. The schedule for that day called for a demonstration attack on the air-March Field. drome at Takeoff was at 9:30 A.M. and crews were to rendezvous

over Perris, California, 30 minutes later.

Flight order consisted of 2nd Bombardment the Group's crews from Langley, Virginia, and those of the 7th Bombardment Group to lead the assault at 6,000 feet; the 12th Observation Group from Moffett Field, California, flew in column behind the leaders at 8,000 feet; the 8th Pursuit Group, also from Langley Field, flew on the left flank while the 20th Pursuit Group out of Barksdale Field, Louisiana. assumed position on the right flank of the column at 8,000 feet. The 3rd Attack Group, homebased at Fort Crockett, Texas, took up their position below the column at 1.000 feet above the terrain. The day's review formation consisted of units in echelon to the left in that order, with one squadron distance, passing over the field parallel to the hangars from southeast to northwest at 500 feet. All but one of the units landed in review order. The 8th Pursuit Group remained aloft and gave a ten minute demonstration of pursuit tactics and maneuver abilities, remaining above 1,500

feet. The 19th Bombardment Group from Rockwell Field and March's 17th Pursuit Group did not participate on this day.

## THE DEPRESSION TEMPORARILY HALTS TRAINING

Halfway through the exercises, the units from March Field had been ordered to stand down. Colonel Arnold and his men received instructions to stop everything and begin setting up a camp for a Civilian Conservation Corps contingent of approximately 3,000 men. As the economic depression continued in the early 1930s, President Roosevelt's New Deal played an important role in America's economic healing, and in the history of March Field. The creation of a "tent city" to house and mess the thousands of workers on March Field, hired under the New Deal's programs of the Civilian Conservation Corps and the Works Progress Administration, presented a glimpse of March as it might have appeared in the first months of its life. In April 1933, the

base established a Civilian Conservation Corps encampment southwest of the landing strip. These workers were incompleting strumental in March's construction program on time and in later years a similar program, the Works Administration. Progress would be entirely responsible for the construction of an anti-aircraft artillery post, Camp Haan, across the highway from the flying field.

In time, the men of March set up over thirty Civilian Conservation Corps camps spread out all over southern California and helped sustain them with food, blankets, tents, tent floorings, equipment, and other necessities. March was fortunate in that the field was able to use some World War I temporary structures that had not yet been Some barracks torn down. and mess halls were put back into service to support the refugees of the depression. While the need to aid thousands of young men displaced by the depression temporarily halted Air Corps training at March Field, it would not be long before other training opportunities would surface.

ability of ground crews to maneuver them into the aircraft, as well as to save money. The concrete bombs also had the advantage of allowing observers to see what effect the bombs had on aircraft formations when the planes were flying at different altitudes. Such practical demonstrations provided a basis for performance information that would become useful in World War II.

In the months following these exercises, while events in the Pacific and Europe still had little direct importance to America, March's aviators achieved a number of records. Some of these deserved loud boasting and others occasioned embarrassment. On August 21, 1936, crews assigned to the 17th Attack Group's 73rd Attack Squadron flew five Northrop attack aircraft on the longest military, non-stop flight on record to that date. The pilots, led by Maj. Louie C. Mallory, flew from March Field to Kelly Field in just seven hours, averaging 143.4 miles per hour.

In March 1937, the field's personnel were busily prepar-

ing for a joint automobile and airplane show to be held near the flight line, in addition to the more routine chores of training and base operations. For the two previous years, the base had cooperated with the civilian community to host this event at about that point in the year that the new model cars became available. The hangars were cleaned out and readied for stationary displays that had previously attracted large crowds. Proceeds from ticket sales would benefit the Air Force Association, and a flying exhibition would highlight the event.

Officials decided, for this show, to advertise the event by having the field's crews fly over Los Angeles in formation and release news of the show using smoke as an attention grabber. Accordingly, maintenance crews outfitted each participating aircraft with smoke tanks. Launched as planned, 1st Lt. Jack Wood, who participated in the event, confirmed that a great deal of smoke had been released over Los Angeles and that the effect had, indeed, been dramatic and effective. A few days later, however, March Field's officers began receiving an avalanche of telephone calls complaining that cars had been spotted with an oily substance and that laundry left hanging on lines at the time of the smoke release had taken on the appearance of Swiss The base received cheese. nearly 1,000 claims for damages, from as far away as Seattle, and quickly closed any thought of another joint auto and aircraft show.

Despite this unfortunate incident. March's aviators and support personnel remained undaunted in their efforts to perform their mission effec-Between 1937 and tively. 1939 Muroc Dry Lake became a temporary home for many of the field's aviators. Bombing practice at altitudes ranging from 4,000 to 15,000 feet allowed the airmen to sharpen skills that would all too soon be necessary in Their quarters at combat. Muroc often consisted of tents set up on the lake bed. Temperature variations in the summer months dictated that most training occur in the cooler, final three months of volved by building a new two-lane paved highway (Van Buren Drive) through Mockingbird Canyon into Riverside to help relieve the congestion that had developed on Highway 60. Within three months from beginning of construction in April 1941, the new road was a reality.

Toward the last of December 1940, the Post Beaannounced that appropriations bill had been presented to Congress requesting \$960,000 to conintersecting struct three runways at March Field. At mid-year 1941, the War Department approved \$178,597 for the build up of the 808th Engineers Battalion, making provisions for nine barracks, an administration building, rooms. recreation supply rooms, and mess halls. Besides these, there were also in construction 36 housing units, additional barracks. some small office areas, a service club for enlisted men, and an infirmary. Meanwhile, construction was underway on a chapel, eight warehouses, an 800-foot extension of the railroad spur, a motor repair shop, a subsidiary paint and

17

oil house, and the sewage disposal plant.

Still, the base remained so short of facilities, despite this massive construction program, that the headquarters of the Fourth Air Force had to be first set up in downtown Riverside, so by September, 1941, the War Department approved a new two-story building for the Fourth's command headquarters at March. Aircraft traffic became so congested that in December, the base asked for \$100,000 to acquire 625 acres of land to extend the diagonal northwest runway. Increased traffic in communications also caused March Field to seek approval from the President for a \$413,195 Works Progress Administration military allocation for a network control radio station unit to handle traffic to the various air bases. This was granted in the latter part of 1941. Supplementary communications relief was also provided when, as the year came to its close, March Field put into operation its new automatic telephone exchange, which provided 600 general lines, 18 special trunks to Riverside

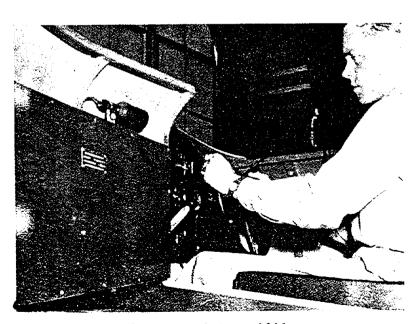
and changes in 550 base phones. A network control radio station to handle communications between various bases also went into operation at that time.

After a series of delays, personnel received some encouragement when the service club for enlisted men was completed on March 17, 1942, providing game rooms, social rooms, a cafe, a library, and other recreational facilities. Added to this, word was received the next month from Washington authorizing the beginning of the new hospital facilities additions (with completion planned for September) which included an administration building, surgical clinic, lab, x-ray room, nurses'- quarters, receiving room, patients and detachments' mess and barracks This bordered the rooms. north edge of Eschlotzia Avenue and, in the post-war years, became the home successively of the 12th Air Force and 15th Air Force.

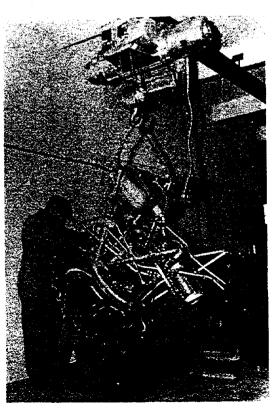
In addition to expanding its perimeters in 1942, March also had seven sub-bases, designated as army airdromes, established by mid-1943.



During World War II, Camp Haan was separate from March Field and functioned as an artillery school and anti-aircraft battery.



Flight simulator training, 1941.



Aircraft engine change, 1941.

Distinguished Service Cross the following October.

### TRAINING AND SECRET TESTS, TOO

In the midst of all the activity associated with staging units through March Field for special training and movement overseas or to other stateside bases, the gargantuan construction programs continuing on the main field and at Camp Haan, and visits by such personalities as Bob Hope and his radio show, March Field also served as a. test base for very special aircraft. Secrecy veiled the field on New Year's Day, 1939, when the prototype of America's first twin-engine fighter was moved into a hangar for final assembly. Designated the XP-38, the craft underwent test trials and then took off on a transcontinental hop February 11th. Although the plane crashed just short of the runway at Mitchell Field, New York, it had set a new in-flight speed record of 7 hours, 45 minutes, 36 seconds after its California takeoff. And, despite the accident, the XP-38 showed enough promise that the Army Air Corps ordered more for further evaluation. The P-38, later named Lightning, ultimately became a fighter and pursuit workhorse during World War II.

Between August 6th and 23rd, 1941, a series of highly secret tests took place at March, which ushered in the jet age for America. Using an Ercoupe aircraft, Team March proved that jet-assisted takeoffs were feasible. In April, 1942, liquid rockets were used to assist A-20 bombers into the air from Muroc Range.

#### WAR COMES TO SOUTHERN CALIFORNIA

speculation about All whether or not America would become involved in World War II ended with the Japanese attack on Pearl Harbor on December 7, 1941. Immediately after the attack, March Field quickened its for combat. preparations Throughout California, the fear of a possible attack by Japanese forces on the west coast occupied the minds of ership in the War Department. Gas mask training, necessitated by horrible memories of the atrocities of World War I, was implemented for all civilian employees before the end of 1941. The image of dozens of employees donning gas masks immediately and undeniably emphasized that the war had come to southern California.

When field officials ordered the first planned blackouts, an understanding of the depth of the crisis really hit home. - The base inspector called upon all organizations at March Field to order practice blackouts and to familwith iarize personnel pre-attack, attack, and postattack procedures. News coverage, much of it live, of the bombardment German London and other British towns highlighted the importance of preparation and also demonstrated to a frightened populace that preparedness meant survival.

The signal to initiate blackout procedures at the field was three flashes of all lights on the installation.

When a drill was called (and had an actual attack been imminent), all civilians operating their vehicles on the field. inside or outside the fenced area, were to extinguish their headlights immediately and proceed directly to a parking area or garage. Drivers of military vehicles bluow switch to blackout lights and continue their missions. One room in each facility was prepared for blackout at all times. If the room had windows, those windows were painted black or covered by blackout paper or blankets, a procedure still in effect in U.S. bases overseas. All entrances had to have a light trap, or have lights extinguished before the door could be opened. For the first few months of 1942, America sat on pins and needles with the preoccupation that an attack could come at any time.

# BACK TO THE FUTURE? TRAINING RETURNS

With the departure of so many aircraft units and the creation of Muroc Range as a separate field, independent

from March's jurisdiction, in 1942, March was assigned new tasks. In May 1942, the base was designated as a replacement center for glider training and resumed its pilot training role of past years. This time, however, students would not be passing their qualification tests in Curtiss "Jennies". Neither would they be commissioned upon graduation. These potential glider pilots would receive basic ground training at March Field, the first step in becoming noncommissioned flying officers. Upon completing all training levels, the students were promoted to staff sergeant with full flying To accelerate the status. training program, March received War Department authorization to accept enlistments from the civilian community directly into the glider training program. And, during most of 1943, the base supported an aviation engineer training center.

However, the main base mission focused primarily on tactical training for the balance of the war. An average of 50 10-man B-24 crews graduated monthly from

March for over 18 months. In June, 1945, B-29 training began, which continued until V-J Day. This training, unlike today's methods, usually centered on an entire unit or crew, rather than individuals. A tactical group, or sometimes a wing, managed the training program and other units rotated through the courses on their way overseas. The 30th Bombardment Group returned to March Field in February, 1942, and remained until September of that year, when it was reassigned. It was followed by the 453rd Bombardment Group, which called March Field home until December, 1943, and then the 399th Bombardment Group until March, 1944. During this same 4-month span, the 86th Fighter Wing also made a brief appearance at March.

Several fighter groups and squadrons also called March Field home for brief periods until 1944; although the installation's primary focus continued to be bomber crew training. These units were sometimes assigned only temporarily, while awaiting overseas movement because

March Field had facilities available, could allow crews to continue routine flight training, and was near to Naval ports of embarkation. This occurred more frequently after 1943. In that year, the 20th Fighter Group was assigned until August, and the 71st Fighter Wing until the end of the year.

Meanwhile at Camp Haan, though not officially a part of March Field, antiaircraft artillery and other gunnery training continued. The camp's primary mission continued to be concerned with defending against possible attack; though by 1943 there appeared little significant possibility of a Japanese attack on the U.S. mainland.

#### MACHINE GUNNER TRAINING

American bomber forces in Europe and in the Pacific operated a variety of aircraft including B-17s and B-24s, used primarily in Europe, the Mediterranean, and North African theaters, and in the Pacific, the B-29 (a little later in the war). Despite significant differences in the designs

and capabilities of these aircraft, they held one considerable point in common. After the bomber formation's fighter cover departed, usually because of fuel considerations, the bombers relied on each other and on their machine guns to protect them from German or Japanese fighters. Machine gunner training was very important!

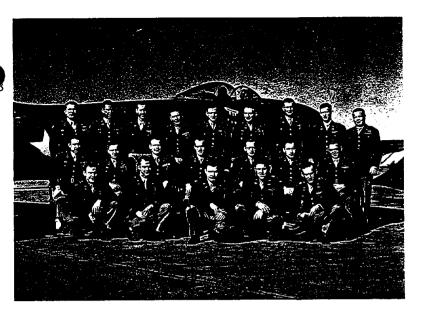
Maj. Gen. Jack Wood, then a colonel assigned to March Field recalled in years later:

"I was a close friend of movie star Andy Devine. He was a skeet shooter and used to come out to March about. once a month and spend two days instructing the gunners. We were required at that time to give skeet shooting instructions to our gunners on the trap range. We found out by the end of the war that you don't shoot a machine gun the same way you shoot a skeet gun. In shooting skeet, you lead the bird. In combat, you follow the fighter that's coming in on the bomber. We found out the skeet shooting was of no value whatsoever in training the gunners."

#### AN ATHLETE ENLISTS

In early 1942, Woodrow W. "Woody" Strode, then considered one of America's most versatile athletes enlisted in the Air Corps at March Field. His athletic ability was not wasted at March Field, assisting the base in establishing a football team that reportedly lost only one contest in three years -to the Washington Redskins. Years later he recalled the Army Air Corps' assignment policy and his basic training at March. He also recalled the field's first steps toward desegregation -- steps that occurred far in advance of the rest of the War Department.

"T Gilmore was at Stadium and Pearl Harbor was bombed. I ran off the field and a writer said, 'Hey Woody, What are you gonna do?' I said, 'I don't know.' We didn't have any idea [up to that time] that we'd be involved. I had gone to school with Tokyo Rose at the University of Southern California, but I didn't know this until after the war ended."



Left: Members of the famous 94th Pursuit (the Hat in the Ring) Squadron pose with their new P-80 jets. March AFB, circa 1947.

Below: Gas mask training also included performing normal duties while wearing the mask.



### The 22nd Bomb Wing

This organizational rangement at March Air Force Base (redesignated as Air Force Base in 1948) remained unchanged until early 1949, when following a brief period (December 1948-April 1949) under Continental Air jurisdiction Command. shifted to the Strategic Air Command on May 1st in preparation for the reassignment of the 22nd Bombardment Wing to March Air Force Base. The 22nd Bombardment Wing was to become the senior host tactical unit upon completion of its move from Smoky Hill Air Force Base, Kansas, under the temporary command of Lt. Col. Payne Jennings. But at Smoky Hill, the 22nd Wing's headquarters element was not operational. The wing actually shared a commander with Bombardment the 301st Wing, to which it was attached. And, lacking its own commander, upon its arrival at March on July 10, 1949,

the 22nd was attached to the 1st Fighter Wing until July of that year and the two wings shared a commander. In July, the 22nd became the base's host tactical unit, and Col. George McCoy, Jr., continued to command both the 22nd and the 1st Wings. The change in units composing Team March concluded in November, when Headquarters, Fifteenth Air Force moved from Colorado Springs, Colorado, to supervise Strategic Air Command's western operations. Fifteenth Air Force's commander at the time was Maj. Gen. Emmett O'Donnell, Jr., who continued to serve in that post until April, 1953.

Shortly after this shuffling of units, the Department of the Air Force stabilized its force structure, making some final changes. 1st Fighter Wing moved to George Air Force Base, California, in July 1950, taking also its subordinate fighter squadrons and its tactical aircraft. Its presence at March Field had added to the base's list of assigned aircraft the F-80 and RF-80, the FA (later RB)-26, the B-26 and B-29, and the F-86, as well as the L-4, L-5, and L-13.

#### KOREAN WAR AND COLD WAR

In November 1949, after completing the move from Kansas and returning to full mission readiness, the entire wing deployed to the United Kingdom for three months temporary duty. Shortly after the wing's return to its southern California home, the Korean War erupted and Team March was again mobilized. On July 2, 1950, Strategic Air Command ordered the 22nd Bombardment Group to Kadena Air Base, Okinawa, for combat duty. Only ten days later, 22nd bomber crews dropped their first bomb loads on North Korean posi-

iedy

sional provisions failed to keep up with the trend. Consequently, as 1966 moved along, several projects that had been approved failed to start because they did not seem to be crucial for immediate needs, and others were eliminated from the program until fiscal year 1967 funds were available.

Ultimately the following projects were placed under construction: a readiness crew building, an aircraft maintenance apron lighting project, a large maintenance dock, an engine inspection and repair shop and a wing maintenance control facility. Largely responsible for much of this new spurt of construction was the release of deferred funds by the Defense Department in August, 1966. As January 1967 dawned, more deferred funding for projects listed in the fiscal year 1966 construction program was released when additional money was provided for an 80-bed officers' billet and a new 200-bed airman dormitory.

In April 1967, Defense officials announced that more money from the fiscal year

1967 appropriation was available. This stimulated the beginning of five other projects: a squadron operations building, a demineralized water storage tank, a warehouse, another 200-bed enlisted dormitory and another officers billet (26-bed). By March 1968, support facilities for the B-52 build up program had been virtually finished. The many impressive permanent structures attested to the long-range need for March's continuéd existence.

#### MARCH FIELD'S FIFTIETH ANNIVERSARY

March Air Force Base celebrated its golden anniversary in grand style. The celebration began on the morning of Saturday, March 16, 1968, with a parade in Riverside. An estimated 20,000 people massed along Magnolia Avenue to watch the proceedings. Sharp marching units from the Navy and Marine Corps joined March units and a unit of Riverside Reserve Officer Training Corps cadets for the parade.

festivities Then the moved to March for an open house and air show by the Air Force Aerial Demonstration Thunderbirds. the Team. Carloads of visitors began entering the base in everincreasing numbers following the parade. Approximately 10,000 cars jammed the base flight line. A twenty-car passenger train brought almost 1.000 visitors from the Los Angeles area. During the ceremonies, Riverside County officials dedicated a marker identifying the base as a county historical site.

#### MARCH GOES TO WAR, AGAIN

March had served the nation well in three wars and three crises - Suez, 1956, Lebanon, 1956; Cuba, 1962 - all of which brought about an increased alert condition until tensions were somewhat relaxed. It was no surprise then that the base played a heavy role in the Southeast Asia conflict. In part due to the presence of Fifteenth Air Force, much planning was translated into action for the deployment of Strategic Air

Command forces from across the nation Furthermore. March's KC-135s participated in refueling operations of Tactical Air Command aircraft deploying since the Tonkin Gulf Incident of August, 1964. Conveniently located as a staging area, March was assigned the task of coordinating all refueling operations of Tactical Air Command and Military Airlift Command aircraft proceeding to the Western Pacific area. use of SAC's KC-135 tankers as passenger and cargo carriers was coordinated by Fifteenth Air Force's Transportation Division. On occasion, KC-135s from March participated in the task force refueling of SAC bombers proceeding from the West Coast.

In November 1966, a small detachment of personnel deployed to Southeast Asia from March. However, the most direct contribution was the deployment of March Air Force Base's bomber, tanker, and most support assets to other Strategic Air Command units involved in direct combat operations from March through October 1967.

During that period, the 22nd Bombardment Wing was essentially reduced to a nontactical, rear echelon organization, assigned to operate the base. Left behind was a small "base housekeeping" contingent to support various tenant units and to maintain base facilities. The EC-135 aircraft supporting Fifteenth Air Force's airborne command post functions remained at the field. During this sixmonth period, March's deployed crews set a new record of 99.6 percent bombing effectiveness. March's bombers flew more than 3,000 sorties and dropped more than 300,000 500- and 750-pound bombs.

During the time period of March's golden anniversary observance, the 22nd Bombardment Wing began another conversion process from the B-52D to the B-52E bomber aircraft. However. the demands of the Southeast Asia conflict found the wing still averaging better than twenty bomber crews on temporary assignment in 1968 to fly B-52D missions, using that model aircraft already in place overseas from other

units. When the wing had completed its conversion training, it remained an augmentee unit in support of the war effort.

Almost as soon as the wing had converted to the Eseries B-52, it had to begin preparations to convert back to the "D" model. The first such bomber arrived at March in November 1969, and the changeover was completed by March 27, 1970. This considerably eased the burden on the crews; a burden created by training on the E-model in the United States but flying the D-model in combat operations in Southeast Asia However, the reconversion also meant that eventually the whole wing plus its planes and not just crews would have to deploy to the war zone. But for the moment. the 22nd's aircraft remained in the augmentee category. Before a potential en masse deployment was scheduled; the wing's size was halved. On June 30, 1971, the 22nd lost two tactical squadrons. The 486th Bombardment Squadron was inactivated and its planes scattered among other units. At the same time.

the 909th Air Refueling Squadron was transferred to Kadena Air Force Base, Okinawa. Following that organizational realignment, from April 1972 until October 1973, the wing's bomber aircraft and crews again went to Southeast Asia as augmentees other combat units. March's tanker assets were also on loan to combat units from April 1972 until September 1972, when a few tankers returned to the operational control of the 22nd Bombardment Wing.

While overseas, the wing became heavily involved in the increased bombing activities associated with Operation Linebacker II over North Viet Nam during "The Eleven-Day War" of December 1972. These operations resulted in the first combat losses of crew members and aircraft from March since the Korean War. During the climactic period of December 21-27, 1972, the wing lost four men as missing in action, five became POWs, and five were rescued, although wounded.

On January 27, 1973, a cease-fire was announced in the war zone. Within 60 days

of that announcement all surviving American prisoners would be released. The Air Force Regional Hospital at March was one of the facilities selected to care for the returning POWs under OP-ERATION HOMECOMING. Ward One of the hospital's main floor was reserved for the returnees. During their stay at March, each former prisoner was given a complete medical examination and appropriate treatment, personnel processing and intelligence debriefings. primary purpose of the latter was to obtain any information concerning still unaccountedfor servicemen. Career counselings, legal services, and news and sports films covering the events for the entire period of imprisonment were also made available.

Fifty-two of the returnees processed through March, five of them from the 22nd Bombardment Wing. These included: Major James Condon, Captains Peter Camerota, Samuel Cusimans and Peter Giroux, and Master Sergeant Louis E. LeBlanc, Jr. Still listed as missing in action were Majors Gerald W.

Alley and Frank A. Gould, Captain Thomas W. Bennett, Jr., and First Lieutenant Joseph B. Copack, Jr.

As a continuing memorial to all those personnel from the 22nd Bombardment Wing who had served in Southeast Asia, the Base Chapel Congregants presented a memorial plaque on October 26, 1973.

#### "DUTY - HONOR -COUNTRY"

"Dedicated in honor of all those members of the 22nd Bombardment Wing who were engaged in aerial operations over the Southeast Asia area of involvement. With profound gratitude we commemorate those who gave the full measure of sacrifice."

The Riverside Chamber of Commerce's Military Affairs Committee presented another memorial to the 22nd Bombardment Wing the following year. On May 31, 1974, the memorial stone, located in the entrance foyer of the wing's headquarters, was dedicated to the March airmen who participated in

mander of the Strategic Air Command. A plaque honoring General Meyer was imbedded in a stone monument erected outside the new base chapel at the northeast corner of the intersection of Meyer drive and Riverside Drive. General Meyer, although never stationed at March, was one of the leading aces of World War II and the Korean Conflict. He retired in August 1974 and died December 2, 1975.

# THE NEW NATIONAL VETERAN'S CEMETERY

A five-year effort to establish a new national veteran's cemetery on former March Field land was climaxed with a dedication ceremony on June 27, 1976. Little of the land west of Interstate Highway 215 East (formerly California Highway 395) had been used for post-World War II military purposes. The Riverside, California, chapter of the Retired Officers Association first proposed in 1971 that the site be considered for one of the dozen new national cemeteries being planned by the Veterans' Administration. Various politicians and local businessmen's groups lobbied for the proposal during the first half of the 1970s in a manner reminiscent of the original establishment of the base in 1918. One evidence of progress was a March 1974 Department of Defense action declaring some 1,593 acres of West March excess to government needs. A few months later, the Administration revealed that it intended to build a national military cemetery in Southern California and was considering sites near Bakersfield, Merced and Riverside

Finally, the Veteran's Administration announced in September 1975 the awarding of a contract for cemetery design at the West March site. Earlier in the year, the General Services Administration had acquired a 757-acre portion of the excess land. Since no other federal agency desired the tract, the GSA turned the site over to the VA. The latter agency touted the location as "Arlington West," since the proposed layout was larger than the 600-acre Arlington National Cemetery across from the nation's capital. Basically, the site was chosen not only because of its size and potential but also because of its closeness to the population center of the three-state region it would serve (California, Nevada, Arizona), a region similar to that served by March's Regional Hospital. inducements to the location were the proximity to March Air Force Base and the new Veteran's Administration hospital in Loma Linda, California. The Air Force was content with the choice also, since the development along the highway skirting western edge of the base would preclude commercial and residential encroachment on the base's perimeter in that direction. That would also reduce the potential for increases in the number of complaints about aircraft operational noise.

The initial dedication ceremony that June day in 1976 occurred on a blistering Sunday afternoon at 5 p.m., with the temperature still at 105 degrees and a hot, dry breeze blowing. An esti-

APPENDIX C-2.15

Secretary of the Secret

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#### March Field.

#### PERMANENT BUILDINGS

January 14, 1943

Bldg. No	• Description	Bldg. No.	• Description
P-1	Adm. Op. Hdqrs.	P <b>-5</b> 0	Officers Quarters
P-2	Parachute & Armt.	P-51	11 11
P-3	Photo. Lab.w/addn.	P-52	tt ti
F-4	Guard & Fire House	P-53	n ti
	Tool House	P-514	n n
P-l <sub>l</sub> A		P-55	n n
	Gymnasium Air Corps Whse.	P-56	n ti
P-6	Machine Shop	P-57	et ti
P-7		P-58	<b>H</b> II
P-8	Hangar No. 1	P-59	n H
P-9	и 3 и 5	P-60	n e
P-10	п 3 п Ц п 5 п 6	P-61	n n
P-11	"	P-62	11 11
P-12	п 6	P-63	g II
P-13		P-64	n . n
P-11:	" 7 " 8		ii ti
P-15		P-65	tt II
P-16	Elec. Switch House	P-66	н и <del>.</del>
P-17	Radio Hut	P-67	n H
P-18	Paint, Oil & Dope House	P-68	и и
P-19	Q.M. Garage	P-69	•
P-20	Laundry	P-70	C.C.C QM Grp. Hdq.
P-21	Bakery	P-71	Main Gate
P-22	Q. M. Maint. Bldg.	P-72	Target Range
P-23	Q. M. Storage	P-73	Q. M. Oil Stg. Whse.
P-24	Barracks	P-74	Salv. Whse Lumber Yd.
P-25	π	P-75	Incinerator
- P-26	Post Hospital	P-76	Radio Operation Bldg.
P-26A	n n	P-77	Squash Court
P-27	¿Post Exchange		N. C. O. Club
₽ <b>-2</b> 8	Fordnance Whse.	P-79	Garage & Stg. Room
P <b>-2</b> 9	C. O. Quarters	P-80	Officers' Club & Mess
P-29A	Garage	P <b>-81</b>	Post Headquarters
P <b>-3</b> 0	Officers Quarters		✓ Officers' Swimming Pool
P <b>-31</b>	11 17	P-83	Radio BldgTowers
P-32	п 19	P <b>-8</b> 4	Car Storage EM
P <b>-3</b> 3	и и .	P-85	Radio Trans. Bldg.
P-34	H H	<del>-</del>	Rencing-Antenna
P <b>-3</b> 5	n ti	P-90	Officers Quarters
P-36	11 11	P <b>-91</b>	Garage & Storage Off.
P-37	tt tt	P <b>-</b> 92	Officers Quarters
P <b>-3</b> 8	Barracks	P <b>-9</b> 3	H H
P-39	Officers Quarters	P-94	-Bowling Alley, Etc.
P-40	пπ	P <b>-</b> 95	Concrete Reserv.200M
P-41	ппп	P <b>-</b> 96	11 TOOM
P-42	. II II	P <b>-97</b>	Steel Water Tank w/
P-43	Storage	P <del>-</del> 98	Gasoline Fueling Sys.
P-111	11	•	Inst., Tanks & Pumps
P-45	Ħ	P <b>-9</b> 9	War Dept. Theater
P-46	Officers Quarters	P-100	Ordnance Magazine
P-47	u u	P-101	Armament-Instr. Bldg.
P-48	n n	P-102A	Primary Clarifier
	tt II	P-102B	Secondary "
P-49		- 200	

#### PERMANENT BUILDINGS

Bldg. No.	Description	Bldg. No.	Description
P-102C	Primary Filter	P-154	N.C.O. Quarters
P-102D	Secondary Filter	P-155	Storage
P-102E	Control House	P <b>-1</b> 56	N.C.O. Quarters
P-102F	Pump House	P <b>-1</b> 57	п
P-102G	Digester	P <b>-15</b> 8	п п
P-102H	Laboratory	P <b>-15</b> 9	ппп
P-102I	Effluent Pump House	P <b>-16</b> 0	Storage Storage
P-103	Barracks, Med. Dept.	P <b>-161</b>	N.C.O. Quarters
P-104	Officers Quarters	P <b>-1</b> 62	u n
P-105	п	P-163	n n
P-106	u u	P <b>–16</b> l4	H # #
P-107	tt II	P-165	H H
P-108	и п	P <b>-16</b> 6	H H
P-109	н п	P <b>-167</b>	u u
P-110	Storage	P <b>-1</b> 68	••
P-111	Officers Quarters	P <b>-1</b> 69	n n
P-112	н и	P-170	n n
P-113	ппп	P-171	11 H H
P <b>-11</b>	Storage	P-172	**
P-115	Officers Quarters	P-173	Old Sewage Dis. Flt.
P <b>-11</b> 6	# 11	Р <b>-1</b> 7Ц	N.C.O. Quarters
P <b>-11</b> 7	n n	P-175	# # #
P-118	Storage	P <b>-1</b> 76	n n
P <b>-11</b> 9	Officers Quarters	P-177	ппп
P-120	n n	P-178	n n
P-121	tt tt	P-179	пп
P-122	Storage	P-180	n n
P-123	Officers Quarters	P-181	t n
P-126	Officers Quarters	P-182	n n
P-127	Storage	P-183	п
P-128	Officers Quarters	P-18h	н
P-130	Officers Quarters	P <b>-1</b> 85 P <b>-1</b> 86	n - n
P-131	Flood Lt.Inst. A-12		rt It
P-132	N.C.O. Quarters	P <b>-187</b> P <b>-18</b> 8	ıı t
P-133	n n		n n
P-1314		P-189	n n
P-135	Storage	P-190	Flood Lt. Installation
P-136	N.C.O. Quarters	F <b>-1</b> 91 P <b>-1</b> 92	1 1000 20. 1110 0027201
<b>E-137</b>		P-193	Pump House
P-138	n - n	P-193A	No. 1 Well & House
P-139	и	P <b>-1</b> 93B	No. 2 " "
P-11:0		P <b>-1</b> 93 <b>C</b>	No. 3 " "
P-141 P-142	,	P-193D	No. 4 "
P-143	Störage	P-193E	No. 5 " "
P-1113	N.C.O. Quarters	P-193F	No. 6 n
P-11.5	N.C.O. Quarters	P-194	N.C.O. Quarters
P-146	Storage N.C.O. Quarters	P-195	n It
P-11.7	"H H	P-196	11 11
5-17.8	n II	P-197	u u
P-149	n n	P <b>–1</b> 98	n n
F-150	Storage	P <b>-19</b> 9	tt tt
F-151	N.C.O. Quarters	P-200	n n
F-152	n.o.o. quarters	P-201	tt ti
F-153	n n	P-202	tt 11

### PERMANENT BUILDINGS

Bldg. No.	Description
P-203 P-204 P-205 P-206 P-207 P-208 P-209 P-210 P-211	N.C.O. Quarters  """"  """"  """"  """"  Svimming Pool, E.M.  Garage-Storage NCO  Garage-Storage NCO  """  """  N.C.O. Quarters  """  Chem. War. Mag.  Girl Scout Cabin  Concrete Roservoir  Dealler House
P-227	Gasoline Stg. System

Bldg. No.	Description	Bldg. No.	Description
<b>T-</b> 6	Old Barracks	<b>T</b> -368	Ward
T-7	Old Mess Hall	T-369	Storehouse -M.D.
T-8	Old Barracks	T-370	Clinic & Surgery
T-9	Finance Office	T-371	Storehouse - M.D.
T-20	Post School	T-372	Post Exchange
T-24	Servants Quarters(ANX P81)	<b>T-</b> 373	Storehouse, M.D.
T-41-4	Hangar, Old, Stg.	T-374	Ward
<b>T-41-</b> 5	n n n	T-375	Storehouse, M.D.
<b>T-41-</b> 6	u n n	T-376	Ward
<b>T-</b> 67	Green House	T-377	Hosp. Barracks
T-300	Storehouse	T-378	Ward
T-301	u XX	<b>T</b> -379	Hosp. Barracks
T-302	Warehouse F	T-380	Detention Ward
T-303	" E	T-381	Hosp. Barracks
T-30կ	QM Warehouse	T-383	Mess. Hosp. E.M.
T-305	Air Corps Whse.	T-384	Hosp. Barracks
, <b>T–</b> 306	Warehouse \\ \frac{1}{15}	<b>T</b> -385	Hosp. Boiler House
ं <b>T-3</b> 07	" Chem.War.	T-386	Hosp. Barracks
T-310	Narehouse	<b>T</b> -387	Recreation Bldg.
T-311	11 [1	T-388	Hosp. Barracks
T-312	n	T-389	Administration
T-313		T-390	Clinic (Low Pres.CH.)
T-315	ABCDEF Grease & InsRacks	T-391	Recreation
T-316	ABCDEFG Wash Racks	T-411	Mess Hall
T-317	A&B Gas & Oil Hse.	T-412	Barracks
T-318	Warehouse	T-413	Recreation Bldg.
T-319 T-320	n n	T-414	Barracks
T-321	Admin. 321A Dispatcher	T-115	11
T-322	Storehouse	T-416	:: ::
T-323	11	T-417 T-418	Recreation Bldg.
T-330	Administration	T-410	Barracks
T-331	Utilities Shops	T-420	it acres
T-332	Lumber Shed	T-421	11
T-334	Equipment Shed	T-422	ti
T-335	Storehouse	T-423	Mess Hall
T-337	Storage Shed	T-424	н н
T-338	Admin. Eng. Office	T-425	Barracks
T-338A	Quarters Post Engr.	T-426	π
T-350	Hospital Admin.	T-427	et .
T-351	" Recreation	T-428	Ħ
T-352	tt tt	T-429	Recreation Bldg.
T-353	Dental Clinic	T-430	Mess Hall
T-354	Nurses Quarters & Mess	<b>T-</b> 431	Barracks
<b>T-</b> 356	Nurses Quarters	<b>T-</b> 432	11
<b>T-35</b> 7	Ward	T-433	ti
T-358	Nurses Quarters	T–1:3կ	11
T-359	X-Ray Clinic & Med. Lab.	T-435	n **
T-361	GU Clinic & Lab.	T-436	11
T-362	Ward	T-437	IT
T-363	Infirmary	T-438	H
T-364	Ward	<b>T-</b> 439	Mess Hall
T-365	Mess. Hosp. E.M.	<b>T</b> -1,1,0	Recreation Bldg.
T-366	Ward	T-1111	
<b>T-</b> 367	Administration	T-442	Barracks

Bldg. No	Description	Bldg. No.	Description
T-443	Barracks	т-600	Barracks
T-1111	Mess Hall	T-601	п
Т-445	Barracks	T-602	11
T-կկ6	п	T-603	π
T-147	<b>11</b>	T-604	Day Room
T-148	11 11	T-605	Cafeteria
T—449 T—450	π	T–606 T–606A	Day Room
T-450	Mess Hall	T-607	Storeroom Barracks
T-452	Recreation Bldg.	T-608	II ECRB
T-453	u u	T-609	T T
T-456	Officers Quarters	T-610	II .
T-457	Cit. Nat. BkOff.Qtrs.	T-611	Post Exchange
<b>T-</b> 458	Officers Quarters	T-612	School
T-459	ti ti	T-613	Barracks
T-460	II II	T-611,	n n
T-461	Flying Cadet-Red Cross	T-615 T-616	11
T-462	Pastry Shop	T-617	·
Т—463 Т—464	Supply Room	T-619	Supply Room Day Room
T-465	п н	T-620	Mess Hall
T-466	g (t	T-621	Day ?Room
T-467	н п	<b>T-</b> 622	Administration
т-468	π #	T-624	Mess Hall
T-469	Provost Marshall	T-625	Barracks
T-470	Library	T-626	n .
T-471	Day Room	T-627	Storehouse
T-472	Chapel	T <b>-</b> 629 T <b>-</b> 630	Barracks
T-473	Administration Storehouse	T-631	Administration
T-474 T-475	Administration	T-635	Red Gross Bldg.
T-476	#	<b>T</b> -637	Red Cross Garage
T-477	Mess Hall	T-640	Service Club
T-479	Band Stand	T-655	Officers Quarters
T-480	Bomb Trainer Bldg.	<b>T-</b> 656	ii ii
T-500 T	Truck Shelter	T-657	n n
T-501	N N	T <b>-</b> 658 T <b>-</b> 659	11 11
T-502	n n	T-660	п и
T-503 T-504	n n	T-661	ii ii
T-505	tt ti	T-662	n n
T-506	n u	T-663	Officers Quarters
T-508	Latrine	T-664	tt tt
T-509	Post Office	T-700	Office & Supply Rm.
T-525	Flight Surgeon Clinic	T-701 A-B	Mess Hall
T-526	Recreation Bldg.	T-701 C T-701 D	Dish Wash. Bldg.
T-527	Barracks-Ward	T-701 E	Water Heater Room Garbage Rack & Stg.
T-528		T-702	Latrine
T-529	Mess Hall	T-703	Barracks
T-530 T-531	Barracks-Ward Storehouse	T-704	п
T-532	Nurses Quarters	T-705	π
- //~	, and the same same	T-706	II .

Bldg. No.	Description	Bldg. No.	Description
T-707	Barracks	T-821	Post Exchange
<b>T-</b> 708	n .	T-826	Infirmary
T-709	и	T-851	Barracks
T-711	Storehouse	T-852	n
T-712	Recreation	T-853	Day Room
T-725	Mess Hall	T-854	Barracks
T-726	Administration	T <b>–</b> 855	Supply Room
T-727	Storehouse	<b>T-</b> 856	Mess Hall
T-728	Barracks	T <b>-8</b> 58	Mess Hall
T-729	Recreation	T <b>-</b> 859	Supply Room
T-730	Barracks	T-860	Barracks
T-731	ti.	T <b>-</b> 861	Recreation
<b>T-73</b> 3	Barracks	<b>T-</b> 862	Barracks
T-734	Recreation	T-863	Ħ
T-735	Barracks	<b>T-</b> 865	Barracks
T-736	Storehouse	<b>T-</b> 870	Barracks
T-737	Barracks	T-871	Recreation
<b>T-73</b> 8	Mess Hall	T-872	Barracks
T-751	Barracks	T-873	tt
T-752	π	T-874	Administration
T-753	π	T-875	Barracks
T-754	Day Room	T <b>-</b> 876	Storehouse
T-755	Mess Hall	T <b>-</b> 901	n ~
T-756	Supply Room	<b>T-</b> 903	Mess Hall
T-757	Mess Hall	T-905	Recreation
T-758	Administration Bldg.	T-913	Recreation
T-759	Barracks	T-914	Administration
T-760	Supply Room	T-915	Storehouse
T-761'	Barracks	T-916	Administration
T-762	Day Room	T <b>-</b> 917	Barracks
T-763	Administration	T-918	<b>H</b>
T-764	Barrącks	T <b>-</b> 919	<b>11</b>
<b>T-</b> 765	Storehouse Storehouse	T-920	Recreation
T-766	Barracks	T <b>-</b> 921	Mess Hall
T-767	Mess Hall	T-922 ·	Mess Hall
T-768	Barracks	T <b>-</b> 923	Mess Hall
T-769	Recreation	T-92lj	Administration
T-775	Administration	T-925	Storehouse
T-776	Storehouse	T-927	Recreation
<b>T</b> -777	Mess Hall	<b>T-</b> 928	Mess Hall
T-800	Barracks	T-929	Barracks
T-801	11	<b>T-</b> 930	Storehouse
T-802	II i	T-931	Barracks
<b>T-</b> 803	II .	T-932	Recreation
т-804	ti .	T-933	Barracks
<b>T-</b> 805	Recreation	T-934	Barracks
T-806	Barracks	<b>T-</b> 935	••
<b>T-8</b> 07	Mess Hall	<b>T-</b> 936	ti .
<b>T-808</b>	Barracks	T-937	Mess Hall
T-809	Storehouse	T-938	Recreation
T-810	Barracks	<b>T-93</b> 9	Barracks
T-811	Administration	T-940	Storehous <del>e</del>
T-813	AC School	T-941	Barracks
	6		

Bldg. No.	<u>Description</u>	Bldg. No.	Description
T-942	A design of section and decision	T-1227	Recreation
T-943	Administration	T-1228	Storehouse
T-945	Barraeks "	T-1230	Mess Hall
7-344		T-1250	Fire Station
T-1002	Pograntian	T-1250	
	Recreation		Mess-AC Cadets
T-1003	**	T-1300	Storehouse
T-1004	Storehouse	T-1301	Mess Hall
T-1005	** •	T-1302	Barracks
T-1006	Mess Hall	T-1303	Storehouse
T-1007		T-130h	Barracks
T-1008	Barracks	T-1305	Recreation
T-1009	11	T-1306	Barracks
T-1010	<b>11</b>	T-1307	Recreation
T-1011	<b>11</b>	T-1308	Star_ehouse
T-1113	Mess Hall	<b>T-1</b> 309	<b>tt</b>
T-111/ <sub>1</sub>	Barracks	<b>T-1</b> 310	Barracks
T-1115	Storehous <b>e</b>	T-1312	Barracks
T-1116	Barracks	T-1314	Barracks
T-1117	Recreation	T-1315	Mess Hall
T-1118	Barracks	T-1324	Photo Lab.
T-1119	Administration		ehouse & Adm.
T-1120	Barracks	T-1401	Barracks
T-1121	Barracks	T-1402	Mess Hall
T-1122	Mess Hall	T-1403	Barracks
T-1123	Barracks	T-1404	Administration
T-1124	Storehouse	T-1405	Barracks
T-1125	Barracks	T-1406	Recreation
T-1127	Barracks	T-1407	Barracks
T-1129	Recreation		,
1-1129	necreation	T-1500	Administration
T-1200	Administration	T-1501	Barracks
T-1200	Off Quarters	T-1502	H
T-1201	Storehouse & Adm.	T-1503	Recreation
		T-1504	Mess Hall
T-1203	Recreation	T-1505	Storehouse
T-1201	Mess Hall, E.M.	T-1506	Barracks
T-1206	Barracks	T-1507	n .
T-1207		T-1508	Administration
T-1208	11	T-1509	Storehouse
T-1209	tt	T-1510	Administration
T-1210		T-1511	Mess Hall
T-1211	Recreation	T-1512	Barracks
T-1212	Storehouse & Adm.	T-1513	11
T-1211;	Mess Hall	T-1514	Recreation
T-1216	Mess Hall	T-1515	Barracks
T-1218	Storehouse	T-1516	natiacks
T-1220	Barracks	T-1518	Administration
T-1221	Administration	T-1510 T-1519	Barracks
T-1222	Barracks	T-1519 T-1520	Darracks
T-1223	II	T-1521	Recreation
T-1224	n	T-1521 T-1522	Mess Hall
T-1225	It .	T-1522	
T-1226	II .		Barracks
		T-152l:	•••

Bldg. No.	Description	Bldg. No.	Description
T-1525	Storehouse & Adm.		
T-1526	Administration		
T <b>-</b> 1527	Administration		
T <b>-1</b> 528	Mess Hall		
T-1529	Storehouse & Adm.		
T <b>-</b> 1530	Barracks		
T-1531	Ħ		
<b>T-15</b> 32	Recreation		
T-1533	Barracks		
T-1534	H		
T-1535	Armament Storage		
T <b>-1</b> 536	n n		•
T-1537	u n	-	•
~T-1538	ti II		
T-1620	Recreation		
T-1621	Barracks		
T-1622	Old Barn		
T-1623	Old Pump House		
I-162h	Barracks		-
T-1625	11		
T-1626	Mess Hall		
T-1627	Administration		
T-1628	Barracks		
T-1629	Storehouse & Adm.		
T-1630	Barracks		.~
T-1631	Storehouse		
T <b>-1</b> 632	Old Diner		
T-1800	Provo Marshall Bldg. (Main Gate)		
T-1900	Storage Whse. Bomb.		

#### THEATRES OF OPERATIONS

#### Bldg. No.

T-1184
T-1185
T-1186
T-1187
T-1188
T-1190
T-1191
T-1192
T-1193
T-1194
T-1195
T-1196
T-1197
T-1198
T-1199

HAROLD O. SEXSMITH Major, Corps. of Engrs. Post Engineer

January 14, 1943 March Field, Riverside, Calif.

### CHIEF OF ENGINEERS ADMINISTRATIVE PROPERTY

3 Prilding (Standards	N. P.
1. Buildings & Structures	
a. Buildings	
l. Permanent Buildings Total No. Uni	107
Total Square	——————————————————————————————————————
2. Temporary Bldgs.	10. 111 alea 701, ()
(a)Cantonment Type	
Total No. of	Units 460
Total Sq. Ft.	Floor Area 1,885,531
(b)Theater of Operat Total No. of	cions
Total Sq. Ft.	
(c)Hutments	21,000 Hea 21,000
None	
Total Designed Housin	ng Canacity.
	and men 15,000
b. Tents	- 41
No. of	264
Designed Capa Total Sq. Ft.	
-, 100al odė re	. ribor area 01,200
c. Wharves and Ferryslips	- 5
none	·
d. Channels	
none	
e. Seawalls, Jetties, etc	2.
none	<u> </u>
	•
f. Miscellaneous Structu	res Afri 200 20
Value	\$574,308.00
	•
2. Roads	
a. Concrete	
Square Yds.	97,061
b. Bituminous High Type	031 220
Square Yds.	214,332
<u>c. Bituminous Low Type</u> Square Yds -	non <b>a</b>
d. Gravel	-none
Square Yds	102,600
e. Parking Areas	
Square Yds.	68,833
f. & g. Aprons and Runwa	ys sq.Yds. 1,186,500

3. Railroads a. Trackage

Miles

2

- 3. Railroads (cont'd)
  - b. Trestles and Bridges none
- 4. Walks a. Walks

Square Yds.

23,009

Maintained Grounds (I) Govt. Owned

Acres

2,527

b. Other Post Areas

none

6. Water System

a. Water Mains

Lin.Ft.

145,629

b. Water Service Lines
lin Ft.

53,404

Impounding Reservoir Cap.

1.2 Mil. Gal.

c. Water Pumping Station

≃•	Marger Lumbring Progressor				
	Well				
	#1 Capacity	300	Gal.	Per.	Min.
	3 ""	150	11	n -	11
	<u>}</u>	175	11	u	ti _
	5 " 6 "	800	Ħ	Ħ	n
	6 u	800	#1	11	Ħ
	Booster Pumps				
	#1 March Field Cap.	1000	11	13	Ħ
	2 " " "	2000	tī	Ħ	tt
	3 " " "	1000	11	π	Ħ
	1 Gregory "	800	Ħ	11	tt
	2 " " "	1.600		11	ŧŧ
	Central Booster Pump				
	Capacity	4000	<b>11</b>	11	ង
	Ground Storage	1000	M Gal	l.	
	Elevated		M Ga		
	Source - Wells	,		•	

d. Water Filtration Plant

none

- Purchased Water none
- 7. Sewer System
  - a. Sanitary Sewer Mains lin. Ft.

100,858.

7. Sewer System (cont'd)	
b. Sanitary House Laterals Lin Ft.	54,982
<u>c. Storm Sewers</u> Lin.Ft.	25,200
d. Sewage Pumping System	••
none  e. Sewage Treatment Plant  M.G.P.D. Cap.  Primary Filters(Units)  Clarifiers "  Dosing Chamber "  Secondary Settling Tanks  Sludge Digestors  Single State  2 Stage  Chlorine Contact Chamber  Sludge Drying Beds	1,615 1, 1, 2 1, 1, 2, 1,
8. Electric System	
a. Generating Plant none	
<ul><li>b. Substations</li><li>No. Feeders</li></ul>	յր Մ
Lin. Ft.	73,920
c. Transmission Lines none	
d. Overhead Distr. Lines Lin. Ft.	162,775
e. Overhead Services Number	<u> 1</u> 62
f. Underground Distr. Lines Lin. Ft.	13,444
g. Underground Services Number	181
h. Exterior Lighting System Number of Lights	2145
i. Distr. Line Transformers  KVA Capacity	3,901
j. Purchased KWH Source Calif. Elec. Power	Co.
9. Gas System	
a. Distr. System Lin. Ft.	49,960
10. Central Heating Systems	-
No. Plants No. Boilers	1 3

b. Tons of Fuel  HP Cap.	456
11. Ice Manufacturing Plant none	
12. Cold Storage Plant none	
13. Incinerators  a. Tons Cap. b. No. Incinerators	12 1

HAROLD O. SEXSMITH
Major, Corps of Engineers
Post Engineer

WAR DEPARTMENT D. M. C. Form No. 117 (Old No. 178 A) Revised Aug. 21, 1924 Short

	,	0.	Q. M. G.: Plan	No	Building No.	P-28-	<del>-</del>
Place March Field, Riverside, California							
Place Karch Field, Riverside, California Designation of huiding Ordnance Warehouse Total cost, \$ Date completed Jur. Material: Walls Lond. Hol Tile-Stucco Foundation	Capacity Brigade	~or	1934				
Roof APM. Steal on Steel framing Ploors	Q∵ER.nt						_
Total floor area above basement, square feet 7722- ADDYOX.	Basement None						
a Gas Fired Unit heaters. (How heated)	ground6"  How lightedlec_					A Marie	
(Type of heat)	Water connections 1-						
COOKING RANGES INSTALLED Long-	Gas connections 1- METERS INSTALLED						MA
Coal, No.	Gas, No. 1- Electric, No. 1- Oil, No. 200				THE STREET		# 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4
Electric, No	Steam, No.						
Steam, No	Water, No.	or or	193;			101	Juni -

Post Plan No. 6694-1/01X 652-312 to 316-316.1-634.2-161.2-634.2-695-28- & 6694-155.

#### ADDITIONS AND INSTALLATIONS

(Below enter chronologically all modifications, additions, introductions of water, sewer, lights, heating, etc.)

DATE	1	COST	DATE	соѕт
1-9-34	Steel from AC Depot- Middletorm You. 5896	2004.16		
6-21-34	Change Order A. Extra Partitions - etc Change Order B. Steel grilles for wintows	658,00 629,00		ł
96	Thomgo Order 6. Steel grilles 101 31310 3		i	
	,		ŧ	
		J		
		1		
	l l			
		-		1

FPARTMENT Form No. 117 (Old No. 172A Vaug 21, 1921		Post Plan No.
5 X		O.Q.M.G.: Plan No. 6694-249 LFBuilding No. P-72
Place March Field, California	'	
Designation of building Target Range  Total cost S. 11,376,15  Date completed Ju	Capacity 6 targets	
Designation of building Target Range  Total cost, s. 11,376.15  Date completed	n reinforced concrete	
Total floor area above basement, square feet Size: Main building 40'-0" x 82'-0" Wings none a none	Pit 8'-C" x 74'-C" & 74'-C" & Bucoment average ht. 8'-4"	
h (How healed)	Height of first floor above ground wiseved for electricity How lighted but not coinceted. Water connections	
(Type of heat)		
(Type of domestic hot water heater)	Sewer connections none Gas connections none	the state of the s
COOKING RANGES INSTALLED Coal, No. none	MÉTERS INSTALLED none	
Gas, No. none Electric No. none	Electric, No. none	Base 2 77 The Control of Marie Control State (1997)
Oil, No. none Steam, No. none	Steam, No. :: one Water, No. : regre	

#### ADDITIONS AND INSTALLATIONS

(Below enter chronologically all modifications, additions, introductions of water, sewer, lights, heating, etc.)

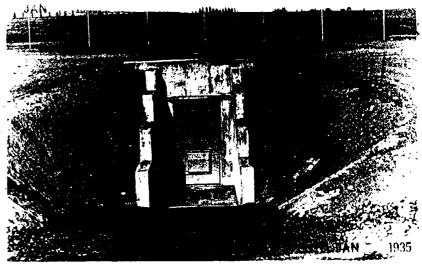
DATE		COST	D.	NTE	i			cost
/1/36	a mound of earth was thrown up, covered on							-
	one side with 12" of sand and on the other	-						
	with kesembryanthenums plants. In one emi of					the second second second second second second		
	mound is a reinforced concrete store room. In					to the second of		
•	front of mound is a reinforced concrete pit							••••
	with hatch covers to permit of the raising and							
	lowering of targets. In this pit is also in-							
	stalled the medianism for operating sill-onette							
	targets, which are controlled from pits at the							
	end of 6'-0" wide concrete platforms located							
	15 and 25 yards back of targets. In the rear							
	of 25 yard platform is a concrete platform							
	50' x 50' for the synctronization of airplace							
	machine gung. Both ends of the mound are							
	contained and supported by a reinforced conc-							
	rate retaining wall. The pit butts contain							
	six (6) 6' x 6' targets and five (5) silbonette							
	targets. Telephone connections are installed.					***	•	
	from platform pits to target butt pit. A					to the transfer of the same and		

'AR DEPARTMENT M. C. Form No. 117 (Old No. 173 A) Revisel Aug. 21, 1924

Post	Plan	No.	
1 000	I idil	110.	

O. Q. M. G.: Plan No. 6694-183-337 Buffding No. P-100

Place March Field, Riverside, California Designation of building Ordnance Magazines Total cost, S. 9500.00 Date completed November 14, 1934 Material: Walls Reinforced concrete Foundation Reinforced concrete Roof Reinforced concrete Floors Reinforced concrete Height of first floor advance below none (How heated) ground 8'-0" How lighted none none (Type of heat) Water connections none Sewer connections. (Type of demestic hot water heater) Gas connections none COOKING RANGES INSTALLED METERS INSTALLED Gas, No. none
Electric, No. 425952
Oil, No. none
Steam, No. none Coal, No. none Gas, No. none Electric, Nonone Oil, No. none Water, No. none Steam, No. none



#### ADDITIONS AND INSTALLATIONS

(Below enter chronologically all modifications, additions, introductions of water, sewer, lights, heating, etc.)

DATE.		соѕт	DATE		· ·	,	COST
11/14/34	Sump pump - Wesco Sales Co., 951 Folsom St., San Francisco, Calif. Notor- General Electric, dual wolt type Nodel 5 SCR 75 AA 4 Type SCR Frame 75A 3/4 U.P. 750 R.P.L.	<b>A</b> naa aa		-	Meter -	Westinghouse, type 0.B. 5 amp. 115 volts, single phase F.H. 1/31 S 425952 Serial 10 177 167 2-wire 60 cyc. Rewark, E.J.	9.37
	5 amp. Serial No. 1812748 40° C open  Transformer for femce lights  Westinghouse 348295 Saferty coil 7  66 amp. 60 cyc. 750 wasts 115 volts  Sec. 6.5 Normal L voltage 6900	32.34					
	Transformer for nump  1½ KVA Continuous 55° C rise.  3.7° Impedence 2 2400 V 75° C  2½ gals. oil. Style 804040  Serial 2001711, voltage rating 2400/4160 -  120/240 60 cyc. 2500/4330 - 125/250	40.19					

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#### COMPLETION REPORT

#### BUILDINGS & STRUCTURES

, 401								
<u>Reroh Field</u>			Date	Илу б,	1945		Plan No. 892/10.	
tion of Building Ermame	ent & Instrument Insp	. B14. Des	igned Conscity	25 mech	cnics	· · · · · · · · · · · · · · · · · · ·	3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	Building No. 2-101
Eng. 788 F993	1 0540.067-N		ropristion 2	$\iota^- \mathbf{x}$ osto $^-$	U. of B.	U. & A Military	Fosts-No Tear	
oots 385, 458.70				12-3-41				
at: Walte Concrete E"	thick lined with Ha			crete			1	
See "demorks			ora Concre		The t	- ρ		
Floor Area Above Basement			Sq. Ft.		00			
Main Building _07 x 1			sq. rt.		ement X	Cu. Ft.	1	
		**			ement		<b>i</b>	<i>\ta</i>
	Heating & Cookin	og Unite Insta	lled					
Kind	Purpose	Manufact		Size				
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i Dui TeRefrigerators In	4-11-4							
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. Pp.csr.)c	1.946 1 2.100	2	Gas		#4 & #3	<u> </u>	·	and the state of t
*	<del> </del>	<u></u>	G 8		#4 % #5			
Badiantas III ( a.		<b></b>	<u> </u>		L		CC10 1007 17.	
Protection 2013	Height	of First Floo	or Above Ground	1			CG18 -109 I - 4 PH)C	1-6-42)(6-3/8) <b>(</b>
nuctions Yes								
onnections 760		Gas Connection	ons Ies					
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	PERMA	ANENTLY INS	TALLED PROP	PERTY				
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	No. Date of Last Change	Present No.	TALLED PROP	PERTY	Original No.	Date of last Change	Present No.	STRUCTURES
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t Fen C  xes X  uckets X  xtinguisher X  ose C  eta, Secen, etc.  Hose X	No. Date of Last Change	ANENTLY INS. Present No.	TALLED PROP Itemized Liston Toilet Stools Transformers Ursnels Venetian Blind Water Coolers Sater Heaters	PERTY f Artisles			Present No.	STRUCTURES

APPENDIX C-2.16

WAR DEFT.

### AIR RASE HEADQUARTERS Office of the Base Chemical Officer

March Field, Riverside, Galfforn January 3, 1930.

EXPINITION REPORT, CMS AMERITION AS OF December 31, 1939

I certify that the following assimilation has been expended by the organizations named, during the period January 1, 1939 to January 1, 1940:

Organizations	Items :	: Authorised	: Expended	in first :	Expended 3	In second
:	l	: Anmoal	L half of C.	Y. 1939 :	half of C.	Y. 1939
	<u> </u>		: Quantity			
Hq Sqdn 19th 1		:	:			
Bomb Oroup	Pots, Snoke, HC, HL	: 5	: 2 :	2818-2:	1	• •
32nd Domb.Sqdn:	Capsules, CN, filled	: 25	: 18 : :	2867-1:	;	1
34th Att.Sqdn :	Capsulos, CN, filled	: 25	: 8 :	2067-1:	:	•
73rd Att.Sqdn i	Capsules, CN, filled	: 25	: 4 :	2567-1:	:	•
95th Att.Sqdn 1	Capsulos, CN, filled		* 7	2867-1:	3	
17th Att.Groups	Sulfur trioxide Chlor-	•		1		Special allowance
•	Acid Smoke (FS)	: 22,230 lbs	:* 5,250 lb:	1		used at It. Lowis
1	!	:	: :		:	•
38th Roc.Sqdn:	Pots, smoke, HC, ML	: 20	: :		3 :	2616-2
th Mir Baso :		3	: :			1
Squadron :	Capsules, CN, filled	: 25	2 3	1	12	2667-1
17th Attack:	Sulfur trioxide Chlor-	3	: :	•	•	
Group :	Acid Smoke (FS)	: 22,230 lbs	Ł :		4.519 1b:	

The 5,250 lbs of F3 desi nated thus \* in column 4, was a special authorization by the War Department for the Field Exercises at Fort Lewis, Washington during the month of May 1939.

JOS JH G. SARTED AD, 2nd Idout., Air-Ros., Base Thomical Officer.

Rb 175, BOX 52 Entry #1 File: 471/51 APPENDIX C-2.17

Suit 10 nd Por #407 Box 18513 Entry: 407

## Office of the Commading Officer ASCIC. Fresh 2, Celifornia

31 James 1944

#### COLPANY RISTORY

#### 4. Figural Unit

- A. The designation of this Unit was 884th Chemical Company, Air Romburtment.
- 1. Unit was active ted May 5, 1942, at March Field, Colif.
  2. The Sutherity for ectivation was extended in General Order number 45, Mq. Fourth Air Force, dated April 30, 1942 and General Order number 3, Al Mq. March Field, Calif dated May 6, 1942.
- 8. All original personnel were transferred in from Third Chemical Co. Service (Avn)
- 3. Unit was transferred from Read will, Rend. Nev. FP1, 80\$160, Bq & B. Read, Nevada dated 29 June, 1943.
- II. Strength: Commissioned and Malisted.
  - A. At Activation O Officers, 13 Enlisted Mea.

73	antal v	Set	OCTESSEL

Month	Mileste	E.S.
May 1942	3	13
June 1542	3	Ö
July 1942	3	8
August 1942	1	4
September 1942	1	Ó
Ostober 1942	3	17
Sevember 1942	Ö	ð
December 1942	1	<b>あ</b> よ
Jamery 1943	Ŀ	85
February 1943	1 <b>3</b>	1
%reh 1943	. 3	o
pril 1943	<b>3</b> -	o
1943 Tay 1943	<b>3</b>	. •
June 1943	1	44
July 1943	<b>ა</b>	O.
August 1943	2	9
September 1943	3	29
October 1943	<b>)</b> .	9
November 1943	3	c
Gecember 1943	3	3
January 1944	0	ő

Company Sis. 7

Pege 2

#### C. Monthly Set Decrease.

<u>conti</u>	Officers	Kelle
May 1942	٥	Q
June 1942	ð	1
July 1942	0	0
August 1942	0 9 -	0
September 1942	ខ	8
Catober 1942	1	<b>0</b> -
November 1942	3	- 5
December 1942	ð	, <b>0</b>
January 1343	Ö	0
February 1943	ä	9
March 1943	ì	14
April 1943	G	23
• · · · · · · · · · · · · · · · · · · ·	ĭ	5
22y 1913	ā	<b>o</b>
June 1943	ĭ	0
July 1943	ò	13
August 1943	-	٥
September 1943	1	
October 1945	O O	2
Hovesber 1943	0	3
December 1943	9	0
January 1944	4	150

#### HI. Its tions, Personent or Temporary.

organization transferred for permanent change of station from March Field, Calif. to AAF, Camp Merced. Calif. PP1. 30/279. No. Merch Field. Calif. dated dotober 7. 1942. Company left March Field, Calif. Motober 7. 1942 and arrived SAF Camp Merced, Calif. same date.

from the perced. Served. Salif to a B. Hono. Nevada FF2. Alff. Hq. Camp Merced. Merced. Salif. dated January 12. 1943. Company left Camp Merced. Merced. Calif. on January 13. 1943 and arrived Lab. Heno. Mevada January 14. 1943.

regardination was then transferred from Mar. News, Newada to BTO/8.
Fresho, Malifornia 111, 22/1 0, 2/2, 3/2, Rems. New. dated June 29, 1943.
Dompany left 4.8, Peno. Mevada 1 mly 1943 and arrived BTO/8, Fresho, Calif 2 July 1943.

#### IV. Changes in organization.

South Chemical Company wir-Samburdment was redesignated South Chemical Company. In operations (May, per Dec. 2. 4.7. 32. ADC. Wright Field. Dayton. Thio. dated sugust 4. 1942. Camendment to Paragraph 1. Sec. 1. 0.1.969 same Q. Sated aug 15. 1942.

APPENDIX C-2.18

• Suit Rna Pb: 407 BOX 1850

Entry: 427

HISTORY

DOD Dir. 5230.5, 27, 1953 NMW by Date 1 9 why 196

## SEGRET

sation was eventually to operate the first Chemical Station in England; was constituted per General Orders No. 48, Headquarters IV Air Force, San Francisco, California dated April 30, 1942, and subsequently activitated at March Field, Riverside, California, per General Orders No. 8, Air Base Headquarters, March Field, dated May 6, 1942. Organised under Table of Organization 3-418, the company was to have an organizational strength of seventy-eight enlisted men and four officers, and was set up as a Unit Gas and Incendiary Depot to serve Chemical Air Operations Companies that were being activated during this period.

Necessary personnel to form a cadre were transferred from the inactivated Third Chemical Company, Service Aviation and consisted of seventeen enlisted men and two officers. Major Ted E. Enter was assigned as the first Commanding Officer of the company, with lst Lieutenant John F. Babcock temporarily assuming other duties until a sufficient number of officers could be transferred into the organization. Master Sergeant Durward E. Thornhill was chief clerk of the company, lst Sergeant Clay C. Lanter assumed duties appropriate to his grade and Sergeant Robert J. Harnon was the company supply sergeant. Sergeants Clifton J. Nichols, Harold M. Pitt, Guy W. McDonald, Jr., and Leo J. Pudnik were assigned as chief duty NCOs.

During the six months period immediately following activation, organization of the company to full T/O strength and proper
training of the personnel were paramount. Strength of the unit was
slow in forming however, this being due to a shortage of Chemical Warfare Service personnel, which resulted in very little training being
accomplished in the first two months. Personnel of the company during

- PORFT

### · SECRET

this period were kept busy by serving as chemical instructors for the training of civilians in the vicinity of March Field and by occasional incendiary demonstrations conducted for the benefit of all personnel on the base.

During the months of July and August a large number of officers and fifty-two enlisted men were assigned to the organisation. The officers were 2nd Lieutenants Dean C. Glass, Roth G. Zahn, Harry E. Startsman, Melvin E. Jenkins, Robert R. Baster, Eden T. Pray and Robert F. Rocheleau.

It can be easily understood that those enlisted men who arrived from other camps were impressed by the appearance of March Field and the many diversions it offered. Compared to the training camps where some of the men had completed their basic training, the picturesque scenery of Southern California appeared very attractive indeed. Add to this, the comfortable barracks of March Field, the swimming pool, service club, post exchange and easy accessability to such cities as Riverside, Los Angeles, Long Beach, and San Diego, and its small wonder the men referred to March Field as "The Soldier's Paradise". Morale of the men was excellent and the rigid training program, put into effect upon their arrival, did not dampen their high spirits. Naturally, none had expected an easy training period and the rifle drills, long hikes, obstacle course and the like were taken as a matter of course. The inviting swimming pool which was located approximately one hundred feet from the barracks was, strangely enough, not enjoyed as much as would be expected. Reason for this was that all personnel were required to participate in swimming exercises held each morning at 7:00 o'clock. The temperature of the air and water at that time of the day was not exactly ideal for swimming but, being a good way of conditioning the men, it was strictly

advance do.

### SECRET

The 75tth Chemical Depot Content of Line and Special State of Color of Colo

in the entry left of Adverser the amount some time itself weighted questers in the edge of the first to promised attail barranks is the penter of near. Though quarters for the troops as thing the men had satesys teem good, the permanent barranks sickles anywhing the men had yet experienced in the army. The west wing of one building housed all enlisted men of the unit and meas hall facilities were available in the east wing. Two large rooms on the lower fiber were converted into an orderly room and a supply room which was all the second-dations needed for administration of the company. It was just for a brief time, however, that the troops occupied the stone barracks for immediately after moving in, the unit was alerted again and on Sovember 10th was transferred to Camp Merced, California.

Formerly an interpment comp for undesirable aliens, the new station was not a prepossessing sight to men of the 754th. All had been prepared for the worst however, and the poor quarters and latrine facilities, lack of fuel for heating purposes and other inconveniences, were taken in stride,

The two week period spent at Camp Merced marked several important changes in the company. Officer strength at this time was com-

APPENDIX C-3.1

## Listed, Proposed and Candidate Species Which Occur in Western Riverside County and Southwestern San Bernardino County, California (Exclusive of High Mountain and Desert Habitats)

(1-6-94-SP-75)

# LISTED/PROPOSED SPECIES

Common Name	Scientific Name	Status
<u>Mammals</u>		
Stephens' kangaroo rat	Dipodomys stephensi	(E)
Birds		
Bald eagle American peregrine falcon Artic peregrine falcon Least Bell's vireo California Gnatcatcher Southwestern willow flycatcher	Haliaetus leucocephalus Falco peregrinus anatum Falco peregrinus tundrius Vireo bellii pusillus Polioptila californica californica Empidonax trailii extimus	(E) (E) (T) (E) (T) (PE)
Amphibians	÷	
Southwestern arroyo toad	Bufo microscaphus californicus	(PE)
Fish		
Unarmored threespine stickleback	Gasterosteus aculeatus williamsoni	(E)
<u>Plants</u>		
Slender-horned spineflower Santa Ana River woolly-star California Orcutt grass San Diego button celery Gambel's watercress Marsh sandwort	Dodecahema leptoceras Eriastrum densifolium ssp. sanctorum Orcuttia californica Eryngium aristulatum var. parishii Rorippa gambelii Arenaria paludicola	(E) (E) (E) (E) (E)
Crustaceans		
Riverside fairy shrimp Vernal pool fairy shrimp	Steptocephalus woottoni Branchinecta lynchi	(E) (PE)
Flies		
Delhi Sands flower-loving fly	Rhaphiomidas terminatus abdominalis	(E)

### CANDIDATE SPECIES

Common Name	Scientific Name	Status
<u>Mammals</u>		
Mexican long-tongued bat	Choenycteris mexicana	(2)
San Bernardino kangaroo rat	Dipodomys meriami parvus	(2)
Spotted bat	Euderma maculatum	(2)
Greater western mastiff bat	Eumops perotis californicus	(2)
San Diego black-tailed jackrabbit	Lepus californicus bennettii	(2)
California leaf-nosed bat	Macrotis californicus	(2)
San Diego desert woodrat	Neotoma lepida intermedia	(2)
Southern grasshopper mouse	Onychomys torridus ramona	(2)
Northwestern San Diego pocket mouse		(2)
Pallid San Diego pocket mouse	Perognathus fallax pallidus	(2)
Los Angeles pocket mouse	Perognathus longimembris brevinasus	(2)
Birds		
Tricolored blackbird	Agelaius tricolor	(2)
Southern California	Aimophila ruficeps canescens	(2)
rufous-crowned sparrow	Almophila luliceps canescens	(-)
Bell's sage sparrow	Amphispiza bellii bellii	(2)
Ferruginous hawk	Buteo regalis	(2)
Cactus wren (coastal population)	Campylorhynchus bruneicappilus coues	
Western snowy plover	Charadrius alexandrinus nivosus	(2)
(interior population)		400
Mountain plover	Charadrius montanus	(2)
California horned lark	Eromophila alpestris actia	(2)
Western least bittern	<u>Ixobrychus exilis hesperis</u>	(2)
Loggerhead shrike	Lanius ludovicianus	(2)
Fish		
Arroyo chub	Gila orcuttii	(2)
Santa Ana sucker	Catostomus santaanae	(2)
Santa Ana speckled dace	Rhinichthys osculus	(2)
Reptiles		
Southwestern pond turtle	Clemmys marmorata pallida	(1)
Orange-throated whiptail	Cnemidophorus hyperythrus	(2)
Coastal western whiptail	Cnemidophorus tigris multiscutatus	(2)
San Diego banded gecko	Coleonyx variegatus abbotti	(2)
Northern red diamond rattlesnake	Crotalus ruber ruber	(2)
San Bernardino ringneck snake	Diadophis punctatus modestus	(2)
Coastal rosy boa	Lichanura trivirgata rosafusca	(2)
San Diego horned lizard	Phrynosoma coronatum blainvillei	(2
Coast patch-nosed snake	Salvadora hexalepis virgultea	(2
Two-striped garter snake	Thampophis hammondii	(2

# Amphibians

Large-blotched ensatina California red-legged frog Foothill yellow-legged frog Western spadefoot toad	Ensatina eschscholtzi klauberi Rana aurora draytoni Rana boylii Scaphiopus hammondii	(2) (1) (2) (2R)
Beetles		
Greenest tiger beetle	Cicindela tranquebarica viridissima	(1)
Butterflies & Moths	•	
Quino checkerspot butterfly (= Wright's checkerspot butterfly)	Euphydryas editha quino (= E. e. wrighti)	(1)
Bees		
Riverside cuckoo bee	Holcopastis ruthae	(2R)
PLANTS		
Munz's onion	Allina finbuishum muncii	(1)
Jaeger's milk vetch	Allium fimbriatum munzii	(1)
San Jacinto Valley crownscale	Atriploy coronate patentian	(2)
Parish's saltbush	Atriplex coronata notation	(1)
Nevin's barberry	Atriplex parishii	(2)
Thread-leaved Brodiaea	Berberis nevinii	(1)
Orcutt's Brodiaea	Brodiaea fillifolia	(1)
Plummer's mariposa lily	Brodiaea orcuttii	(2)
Payson's jewelflower	Callochortus plummerae	(2)
Parry's spineflower	Charizantha samulans	(2)
Many-stemmed live-forever	Chorizanthe parryii parryi	(2)
San Jacinto bedstraw	Dudleya multicaulis	(2)
Palmer's grappling hook	Galium californicum acanthodes	(2)
Smooth spikeweed	Harpagonella palmeri	(2)
Coulter's saltmarsh daisy	Hemizonia laevis	(2)
Humboldt's Lily	Lasthenia glabrata coulteri	(2)
Parish's bush-mallow	Lilium humboldtii var. ocellatum	(2)
Pringle's Monardella	Malacothamnus parishii	(2)
Little mousetail	Monardella pringlei	(2*)
Ditch Navarretia	Myosurus minimus apus	(2)
Moreno currant	Navaretia fossalis	(1)
Parish's gooseberry	Ribes canthariforme	(2)
	Ribes divaricatum var narishii	(2)

#### LEGEND:

- (E) ENDANGERED
- (T)= THREATENED
- (PE)=PROPOSED ENDANGERED
- (PT)=PROPOSED THREATENED

#### CANDIDATES:

- (1): Category "1" candidate for listing; taxa for which the Fish and Wildlife Service (Service) has substantial information to support listing as threatened or endangered.
- (2): Category "2" candidate for listing; taxa that may warrant listing but for which substantial information to support a proposed rule is lacking.
- (\*): No recent records; may be extinct
- (R): Recommended Candidate

APPENDIX C-4.1

# HEADQUARTERS TWELFTH AIR FORCE Office of the Commanding General March Field, California

12AF-Y

600.1 x686

1 3 MAR 1947

SUBJECT: Transfer of Real Property, Comp Hean, California

To: Germanding Officer

Wereh Field, California

- 1. Reference is made to letter 602/8, Headquarters March Field, dated 21 February 1947, subject, "Transfer of Roal Property, Camp Hann, California" to Real Metate Sub-Office, Division Engineer, South Pacific Division, 621 South Hope Street, Los Angeles, California.
- 2. Attention is invited to the character and number of errors in the legal descriptions of land to be transferred. Bearings and distances between points eften disagree with the written description of points on the course. Particular reference is made to legal descriptions in paragraphs 3 e (1) and 4 a (2). A complete check of reference letter has not been made and it is possible that more errors exist. Attached as Inclosure No. 1 is capy of referenced letter, marked to indicate errors.
- 3. It is desired that immediate corrective action be taken in order that transfer of lands at Camp Hamn will be accurately accomplished in such a manner that subsequent rectification will not be required. It is understood that a resurvey has been accomplished; however, no correction or revised description has been received by this Headquarters.
- 4. In view of the importance and urgency of subject matter, it is requested that the above receive immediate attention.

BY COMMAND OF BRIGADIER GENERAL DEVILS:

1 Incl
Oy lir 602/8
indicating
errors

R. M. BRISTOL Gelonel, GSC Chief of Staff

# HEADQUARTERS TWELFTH AIR FORCE Office of the Commanding General March Field, California

12AF-Y

<u> 4</u> [

SIDJECT: Transfer of Facilities from Camp Hann to March Mold

TO:

\*

Commending Officer

March Field

Riverside, California

- 1. The request for transfer of facilities from Camp Haan to March Field, submitted by your Headquarters on 11 February 1947, has been ferwarded through channels to Headquarters Army Air Forces, Mashington, D.C., as indicated in Incleases #1.
  - 2. A representative from Tactical Air Command Air Installations Office, Mr. White has advised that all items under consideration for transfer from Comp Hean to March Field are new deleted from immediate transfer to Mar Assets Administration; however, justification will be required for each individual facility requested before a permanent transfer to March Field can be affected.
  - 3. Reference is made to War Department Manuals centaining pertiment criteria relative to the fellowing:
    - a. Refrigeration: War Department Manual 5-600, Section 5, P.126.
  - b. Warehousing, Mater Peol, Temicle Parking, Shops: War Department Basic Housing Pelisy-1943.
    - 4. It is desired that this matter be given early consideration.

BY COMMAND OF BRIGADIER GENERAL DOYLE;

l Inel Cy 2nd Ind Hq TAC to Hq AAP Wash., D.C. 1. 2. FT201 Bajor : 1. Lumb Mintel : 1. Lumb

989 X

3

**APPENDIX C-4.2** 

Limble and some states of the control of the contro

11 Feb 1947

WNRC (FRC) . FG 341 AC. # 61-A-1464 BOX 6/31

DES

SUBJECT: Transfer of Facilities from Camp Haan to March Field

Commanding General
Twelfth Air Force
March Field, California

- l. Camp Haan has been declared surplus and transfer is expected to be effected on 20 February 1947 from VI Army through the District Engineer, Los Angeles to War Assets Administration. Reference MF-AIS-1-0787 requesting that additional items and facilities be withdrawn from surplus and assigned to March Field.
- 2. Several of the facilities have been reserved and transferred to March Field in the interest of the development of March Field in accordance with Postwar Planning. These facilities are indicated in green on inclosure #1. They include laundry, cold storage and warehousing facilities, together with pertinent utilities and access roads.
- 3. Action has been initiated by March Field to request approval and transfer from Camp Harn to March Field, in the interest of overall economy and safety, the following additional facilities, shown in blue on Inclosure #1.
- a. The 8" water main on Avenue "A" from 37th Street to 40th Street, the 16" water main on 40th Street from Avenue "A" to eastern Boundary of Camp Haan and approximately 1900 lineal feet of the 16" Camp Haan to Riverside water main from this point northward to the point where the Allesandro Trailer Camp Service tap is made. Ninety of the 104 units of this trailer camp are presently occupied by March Field personnel. As this main is the sole possible source of water supply, it should be preserved until the existing housing shortage is alleviated.
- b. All of the cyclone fencing around the perimeter of original Camp Haan main camp as well as the cyclone fencing lying within this perimeter. It has been impossible to procure cyclone fencing for the needs of March Field through ordinary procurement channels.
- c. The provision that on the sale of Camp Haan Real Estate by W.A.A. that Agency, be instructed to provide for the Avigation Essements for Runways #2 and #4.

This constquentors requests favorable consideration of the request for succlibios a, b, and c this paragraph with a view toward effecting transfer before 28 February 1947.

- 4. It is also requested that consideration be given to the retention of certain additional features which can be readily incorporated into Postwar plans with a large long term saving of Government funds. Although it would be very costly to duplicate these facilities, they represent little probable re-sale value through W.A.A. channels. These features shown in red on Inclosure #1, are as follows:
- a. The area bounded by Avenue "A" on the east, 40th Street on the north, westside of Avenue "B" on the west and Avenue 29 on the South. This area is largely hard standing area and it is felt would bring less on sale than cost of removing hard standing. There are several good Mobilization type buildings including three large motor repair shops as well as several T.O. type warehouses on this tract. Un-needed buildings could be disposed of by March Field at a later date. Hard standing areas will be needed for future use by March Field. This is Government-owned land, having been appraised at the time of purchase for approximately 30 dollars per acre.

DESC

b. The area bounded on the east by eastern boundary of Camp Haan, on the north by Allesandro Avenue on the west by western boundary of N.W. 1/4 of Sect. 15, Township 3 South, Range 4 West, S.B.B. & Mo: Thence east along south side of access road on east-west center line of said Section 15 to North-west corner of original Camp Haan (which is center of said Section 15); Thence east to west side of Avenue "A"; Thence south to north side of 37th Street; Thence east to Camp Haan boundary fence, which is point of beginning. This area contains the continuation of spur tract north from 37th Street to three large T.O. type warehouses in center of this area (Area 17), floor of which warehouses are concrete on fill, at an elevation on level with floors of railroad cars. Side and end loading ramps are adjacent to this spur and warehouses. Unloading facilities and paved roads in this area afford excellent facilities, remote from Highway, County roads and entrance drive to March Field for transfer of ammunition from R.R. to truck. Ammunition is presently unloaded at points (a) AND (b) in March Field and point (c) on Santa Fe right-of-way as shown on Inclosure #1, which is considerably more dangerous. This area is government-owned and if safety area of four-tenths of mile on eastern side of Magazine Area is extended to five-tenths of mile, trucks loaded with armunition could proceed on paved road from end of spur track to Magazine area without use of public roads. It is urgently requested that this area and improvements thereon, together with turnout (d) and other appurtenant facilities withdrawn from surplus and assigned to March Field prior to 28 February 1947.

The plays be mishered from scrolus and assigned to March Field when the need for these plugs cease to exist at Camp Haan. These fire plugs are needed to standardize the fire plug installation on March Field to inability of Purchasing and Contracting services to procure repairs.

- d. Also it is requested that all street light fixtures on poles be withdrawn from surplus and assigned to March Field because all the temporary building area is lighted by a similar light and repairs are difficult to obtain through normal supply or purchasing channels.
- 5. There are many pieces of shrubbery and flowers at Camp Haan which could be salvaged by individual or collective effort at March Field. Many trees which would otherwise be wasted could be salvaged and planted about swimping pools at March Field, if authority is granted for this purpose and should be in that it is contemplated that most of this land will be turned back to the original owners for agricultural purposes.
- 6. It is desired to point out that the cyclone fence requested in paragraph 3 b. above will be needed for replacement purposes around the facilities acquired by March Field. These include the sewage disposal plant, the water treatment plant, the laundry and warehousing area, and last of all the bomb storage area which is now fenced with barbed wire and should be fenced with the cyclone type fence. In this connection it is cited that 220 ft. of cyclone fence has been on requisition by March Field since August 1946 for replacement purposes and is not available through normal supply channels.
- a. March Field could utilize all fencing needed for its purposes and then could report any excess, making it subject to requisition by other bases. Even through the cost of salvaging the fence will equal that of new fence, it seems uneconomical to release this fencing to W.A.A. to be sold at a ridiculously low price.

/s/ CAJL J. CRANE Colonel, Air Corps Commanding

1 Incl Layout Map (in dupl) NNRC(FRC) RG 341

Ltw 140/20  $\times$  602 Hq Meh Fld, Riverside, Calif, dtd 11 Feb 47, Subject: "Transfer of Parilities from Camp Hasn to March Field"

1st Ind

12AF-Y

HEAD GARTHES TWELFTH AIR FORCE, March Field, Riverside, California, 12 Feb 1947

- TO: Commanding General, Tactical Air Command, Langley Field, Virginia €,
  - Forwarded recommending approval.
- 2. Utilization of the facilities requested will result in a very practical and efficient general layout of March Field for the immediate future, giving proper safety distances for handling ammunition entirely on Government-owned land. The requested features are currently being used, in many cases, and the loss of any would result in a lower efficiency or disruption of proper functioning of March Field.
  - 3. The early proposed transfer of these facilities to War Assets Administration necessitates immediate action to avoid loss of Army
  - 4. Two copies of "Report of Disposition Board Covering Camp Haan, California, 29 January 1947" are attached as Inclosure #2.

FOR THE COMMANDING GENERAL:

/s/ R. M. BRISTOL Colonel, GSC Chief of Staff

2 Incls 2 cys Report as noted above Incl #1 n/c

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**APPENDIX C-4.3** 

#### COORDINATION AND FILE COPY

DEPR 1-3

FILE DESIGNATION

5-3

March

COORDINATION

OFFICE

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DAS

DCR

Ltr, 22 Bomb Wg, BDCE, 10 Jan 64, Ammunition Disposal Range, Tract No. D-496-2, March AFB, Calif

1st Ind (DEDR)

11 MAR 1964

Hq 15AF, March AFB, Calif

TO: 22 Bomb Wg (BDCE)

Returned without action in accordance with your withdrawal request contained in paragraph 2 of your letter, BDCE, 10 January 1964, Ammunition Disposal Range, Tract No. D-496-2, March AFB, California.

FOR THE COMMANDER

V. A. FINCH Chief, Real Estate Branch Directorate of Civil Engineering 2 Atch w/d 1 cy es

Copy to: Los Angeles Dist. Corps of Engr

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COORD: DEDR FF: 00296

RETURN OFFICE SYMBOL ORIGINATOR'S NAME AND GRADE PHONE NO. TYPIST'S DATE TYPED INITIALS INITIALS TWO 10 Mar 64

ADMIN SERVICES (For Dispatch) Ammunition Disposal Range, Tract No. D-496-2, March AFB Calif

#### 15AF (DEDR)

- 1. The Real Estate Division, U S Army Corps of Engineers, Los Angeles District, advised this office by phone 8 Jan 1964, that a Court Trial regarding condemnation action of subject real estate tract was scheduled for 20 Jan 1964.
- 2. The Declaration of Taking for this land area, filed 27 Feb 1962 (copy attached), permits the lessors the right to cultivate the land for any and all crops which may be grown thereon. In this regard, it will be noted that our Ammunition Disposal Range is located within the southern portion of subject tract, for which exclusive Air Force use is required for an indefinite period.
- 3. The foregoing was discussed by our Mr. Virtue (Real Property Officer) with Corps of Engineer representatives and Mr James R.Akers Jr., Asst U.S. Attorney, Land Section, for the Southern District of California. Mr. Akers stated that he would request postponement of the 20 Jan 1964 trial to a future date.
- 4. To insure an accurate description of Air Force needs within subject land area for Mr. Akers presentation to the court, it is recommended that the following requirements be made known to him through the Los Angeles District, Corps of Engineers office:
- a. Extrusive use by the Air Force of the land area on which the Ammunition Disposal Range is located, measuring 2300' x 1700', totaling approximately 89.76± acres (see attachment 2).
- b. Joint use of the remaining 150.06 acres, affording the lessors the right to cultivate the land for any and all crops which may be grown thereon, providing, however, that no structures for human habitation shall be constructed and maintained on the land, and that no gathering of more than 25 persons shall be permitted thereon.
- 5. Further reference is made to adjacent Tract No. D-474 which also requires retention of exclusive use by the Air Force of an area 850' x 1750', totaling approximately 34.14 \(^{\frac{1}{2}}\) acres (see attachment 2). Although no known court action is pending on this tract, it is recommended that the Corps of Engineers also be advised of this continuing requirement.

6. Request expeditious action be taken to resolve this matter with appropriate headquarters and that this headquarters be advised accordingly.

FLOYD D. BENDER Deputy Civil Engineer Atch
 D/T Tract
 D-496-2 (2 cy)
 Layout Ammo Storage Area (2 cy)

Copy furnished: Corps of Engineers

#### UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF CALIFORNIA CENTRAL DIVISION

UNITED STATES OF AMERICA
Plaintiff.

VS.

239.82 ACRES OF LAND, MORE OR LESS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND MARY HENDRICK TRAUTYRIN, ET AL.,

Defendants.

DECLARATION OF TAKING

CIVIL NO.

TO THE ROMORLELS,
THE UNITED STATES DISTRICT COURTS

I, the undersigned

Secretary of the Air Porce of the United States of America, do hereby make the following declaration by direction of the Secretary of the Air Perce:

- 1. (a) The land hereinefter described is taken under and in asserdance with the Act of Congress approved February 26, 1931 (46 Stat. 1421, 40 U.S.C. 258a) and acts supplementary thereto and amendatory thereof, and under the further authority of the Act of Congress approved August 1, 1888 (25 Stat. 357, 40 U.S.C. 257); Sections 2663 and 9773 of Title 10, United States Code, which authorize the acquisition of land for military purposes; the Act of Congress approved August 17, 1961 (Public Law 87-144), which act authorized the acquisition and appropriated funds for such purposes.
  - (b) The public uses for which said land is taken are as

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follows: The said land is necessary edequately to provide for the establishment of facilities for the use of the Department of the Air Force and for other military uses incident thereto. The land has been selected under the direction of the Secretary of the Air Force for sequisition by the United States for use in connection with March Air Force Base, Riverside County, State of California, and for such other uses as may be authorized by Congress or by Executive Order.

- 2. A general description of the land being taken is not forth in Schedule "A", attached terreto and made a part hereof, and is a description of the same land described in the complaint in the above entitled cause.
- 3. The estate taken for said public uses is a non-explusive term for years beginning January 1, 1962 and ending June 30, 1962, extendible for yearly periods thereafter at the election of the United States until June 30, 1967, notice of which election shall be filed in the proceeding at least thirty (30) days prior to the end of the term hereby taken, or subsequent extensions thereof, together with the right to remove, within a reasonable time after the expiraties of the term taken, or any extension thereof, any and all improvements and structures beretofore or hereafter placed thorson by or for the United States; reserving to the lessors, their beirs, executors, administrators and essigns the right to cultivate the land for any and all crops which may be grown thereon; provided, however, that no structures for human habitation shall be constructed and maintained on the land; provided, further, that no gathering of two or more persons shall be permitted thereon; the above estate is taken subject to existing ensurents for public reads and highways, public utilities, railroads and pipelines.
- 4. A plan showing the land taken is annamed hereto as Schedule "E" and made a part hereof.
- 5. The sum estimated by the undersigned as just compensation for said land, with all buildings and improvements thereon and all

 appurtenances therete and including any and all interests hereby taken in said land, is set forth in Schedule "A" herein, which sum the undersigned causes to be deposited herewith in the registry of said Court for the use and benefit of the persons entitled thereto. The undersigned is of the epinion that the ultimate sward for said land probably will be within any limits prescribed by law on the price to be paid therefor.

with the same

Secretary of the Air Fere

### SCHEDULE "A"

The land which is the subject matter of this declaration of taking aggregates 239.82 acres, more or less, situate and being in the Gounty of Riverside, State of California. A description of the land taken together with the names and address of the purported owners thereof and a statement of the sum estimated to be just compensation therefor, is as follows:

#### TRACT NO. D-496-2

The South 840 feet of the East 840 feet of the Hortheast 1/4, and the East 1700 feet of the Southeast 1/4 of Section 17; the East 1700 feet of the Hortheast 1/4, and the North 450 feet of the East 1700 feet of the Southeast 1/4 of Section 20, all in Township 3 South, Range 4 West, San Bernardino Meridian, in the County of Riverside, State of California.

Containing 239.82 seres, more or less.

# MANES AND ADDRESS OF PURPORTED OWNERS &

Kary Hendrick Trantsein Caroline H. Trautsein Emily Trautsein Steddard Archer I. Schweizer Margaret Trautsein Steddard Kenneth H. Celville William T. Celville, Jr. Jessie Celville Pewell Dorothy Celville Dann

By: W. B. Stoddard and K. H. Colville, Attornays-in-Fact

e/o Frank Norgenthaler, Attorney at Law 510 South Spring Street Los Angeles 13, Galifornia

The empent of money estimated by the acquiring authority to be just compensation for the estate hereby taken, namely for the period from January 1, 1962 to and including June 30, 1962, is THREE HUMBERD HIREST AND MO/100 DOLLARS (\$390.00).

SCHEDULE "A"

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APPENDIX C-4.4

STANDARD FORM 118 DECEMBER 1953 PRESCRIBED BY GENERAL SERVICES ADMINISTRATION REGULATION 2-IV-201.00				EXCESS PERTY			INC NCY NO.  LA -  OF REPORT  May 1961	GSA CONT	EIVED (GSA use only) 15 - 6   ROL NO. (GSA use alc. 1 - 588 -
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General Services Administration Public Buildings Service h9 Fourth Street					U. S. Army Engineer District, Los Angeles Corps of Engineers, 751 So. Figueroa St.				
San Francisco 3, California  5. NAME AND ADDRESS OF REPRESENTATIVE TO BE CONTACTED. W. E. Franklin, Chief, Management & Disposal Br., Real Estate Div., U. S. Army Engineer Dist., Los Angeles, Corps of Engrs., 751 So. Figueroa St., Los Angeles 17, California					Los Angeles 17, California  6. NAME AND ADDRESS OF CUSTODIAN Commander March Air Force Base				
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W. E. FRANKLIN Lieby Tity Chief, Management & Disposal Branch					SIGNATURE				
Real Estate	gement & Divisio	υ πταboas	T DL:	TICU					<u></u>

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**APPENDIX C-4.5** 

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APPENDIX C-4.6

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## APPRAISAL

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PARCELS 1,2 & 3

MARCH AIR FORCE BASE
RIVERSIDE, CALIFORNIA
C-CALIF-588-L

FOR

GENERAL SERVICES ADMINISTRATION
49 FOURTH STREET
SAN FRANCISCO 3, CALIFORNIA

July 10, 1961

(Date of Valuation: July 10, 1961)

By

Albert L. Johnson, M.A.I.

443 Fourth Street

San Bernardino, California

Telephone: TU 9-3528

## LEGAL DESCRIPTION:

That portion of Lot 4, Block 113 of the Alessandro Tract, in the County of Riverside, State of California, as shown on a map, recorded in Book 6, page 13 of Maps in the Office of the County Recorder of San Bernardino County, California, described as follows:

Beginning at the Northeast corner of said Lot 4, said corner being also the Southwest corner of the Northwest 1/4 of the Northwest 1/4 of Section 36, T3S, R4W, SBB&M; thence Westerly along the North line of said lot 364', more or less, to the northeasterly line of the strip of land, 122' in width, as described in a Final Order of Condemnation in Case No. 35002, recorded in Book 580, Page 327 of Official Records in the office of the County Recorder of said Riverside County; thence Southeasterly along said Northeasterly line 1086' more or less, to an intersection with the West line of said Section 36; thence Northerly along said West line 1025', more or less, to the point of beginning.

# RESERVATIONS

Subject to an exception, or reservation of OR EXCEPTIONS: access rights granted to the State of California for the existing State Highway (being also U.S. Highway 395) conveyed by Instrument No. DA-04-353 ENG-6064 dated 3 September 1953, recorded 2 February 1954 in Book 1550, Page 596, Official Records of Riverside County, California. This means that the subject parcel does not have the right of ingress and egress from State Highway but must seek its access by other means.

# ACREAGE IN

PARCEL:

4.28 acres.

DIMENSIONS:

This parcel is triangular in shape. It has a width of 364' at the north end, a length

DIMENSIONS: (Cont'd)

of 1025' along the east boundary and 1066' along the southwest boundary abutting the highway.

LOCATION:

This parcel is on the northwest fringe of the Perris Valley, being approximately 6 miles northwesterly of the town of Perris and 10 miles southeast of the town of Riverside. It adjoins the south boundary of the March Air Force Base (as now fenced and used) and is about 1/8 mile north of Nandina Street. The parcel is situated on the east side of the State Highway (Also U.S. Highway 395), but it does not have access to the highway.

ACCESSIBILITY: This parcel has no apparent means of access other than through and across the Government The abutter's owned March Air Force Base. access rights have been granted to the State of California for freeway purposes. consequence, the freeway is not available to The land adjoining this ownerthe property. ship lying east of the freeway is also privately owned. It extends south to Nandina Avenue and intervenes between the south end of the subject parcel and Nandina Avenue. Government does not have the right to cross this adjoining parcel to provide access from Nandina Avenue. Therefore, the parcel as offered for sale is landlocked and any purchaser for it would have to obtain his own right of way into the property.

> The general accessibility of the immediate area is excellent, and if a private right of way can be acquired and improved to this property, it will have excellent accessibility. In this connection it is to be noted that the State Highway will be converted to freeway status and the present means of access from Nandina Avenue to the freeway may be altered by the State of California.

> > 2 3

## UTILITIES:

Electric power and telephone service are nearby. There are no sewer facilities serving this area. Therefore, individually installed septic tanks are used on developed properties in the area.

The parcel is within the general boundary of the Eastern Municipal Water District of Riverside County, which is annexed to the Metropolitan Water District of Southern California. Due to Government ownership, this parcel is technically not a part of the district, but under private ownership it will come into the district and water can be brought to it. There are nearby lines on the adjoining property to the east.

#### ZONING:

This area is in the M-3, light industrial zone of Riverside County. This is a general interim or holding zone, permitting uses conforming to the general pattern of the area.

# ENVIRONING INFLUENCES:

This parcel is in a rural area. It adjoins the south boundary of the March Air Force Base and is across Highway 395 from the former Camp Haan, which is now a part of March Air Force Base. The land to the south and east is predominantly devoted to irrigated agriculture and that to the west across the highway and extending in the nearby low hills is dry farmed or idle, with many rural homesites about 2 miles to the west.

There is some light commercial development along the east margin of the highway at points where lateral streets intersect and have access to the highway. On the east side at intermittent intervals there are short frontage roads, also with light commercial development such as a small cafe, trailer park, beer parlor, etc.

Riverside, California D-Calif-588-L Parcel 1

# ENVIRONING INFLUENCES: (Cont'd)

There is a Texaco Service Station at the southwest corner of Nandina Avenue and the highway about 1/8 mile south of the south end of the subject parcel.

The agriculture to the south and east is mostly irrigated general farming, with considerable emphasis on potatoes during the last 10 years in which period the area has come within the Metropolitan Water District system through the Eastern Metropolitan Water District of Riverside County. Lines have gradually been extended to near the subject parcel. This water system provides Colorado River water to the Perris Valley generally.

## TOPOGRAPHY:

This parcel is nearly level, with an even surface except for one drainage way crossing it. The land has a slight south slope. The elevation is approximately 1520' above sea level. The drainage way originates to the west in the old Camp Haan area with the stream waters spreading on the more level valley lands east of the subject parcel.

#### SOILS:

Soils on this parcel are mapped as San Joaquin loam and sandy loam and are of a somewhat reddish-brown color. The soil is generally old valley filling material formed by unconsolidated water land deposits derived from many different kinds of rocks. The San Joaquin soils commonly have very compact subsoils of darker color and heavier texture and often impervious hardpan is encountered.

Agricultural utility of these soils has largely been confined to dry farming for cereal grains and grain hay in the past, however, present uses are for irrigated crops usually including a cash crop of potatoes or onions on occasional years,

SOILS:

but mainly cereal grain and alfalfa hay production. Considerable fertilizer is required for irrigated agricultural uses.

Fertility, adaptability and durability of this soil series are rated only fair.

There is no salinity problem.

EASEMENTS:

None known.

IMPROVEMENTS: None

PRESENT USE:

This parcel has been farmed by the adjoining owner. It is now in irrigated grain, the crop is just now being harvested and the stubble will remain. This use is apparently by implied consent of the military at March Air Force Base, as no outgrant was reported.

HIGHEST AND BEST USE: The highest and best use of this parcel is for use along with the adjoining lands to the east and south. Under private ownership it will be necessary to acquire a means of access to the property. Without such a means of access it is only usable by the adjoining owner. If a means of access is obtained, future owners could use the parcel as a country homesite or for some highway commercial use that would not require direct access from the highway frontage, but would gain advantage of the easement of view from the freeway.

PRESENT FAIR MARKET VALUE:

\$2,150.00

Being at the rate of \$500 per acre for 4.28 acres, or \$2,140 adjusted to \$2,150.00

# MARKET DATA ANALYSIS:

The market for this parcel is to the adjoining owner who can put it to its best use, or to a speculative buyer who would hope that some day he could gain a means of access and thereby profit.

Market Data #1, the adjoining 40 acre parcel sold in October, 1959 for \$14,000 or \$350 per acre, 34% cash, balance by Trust Deed. The buyer and seller had known each other for 25 years or more. Although this was a transaction without duress on the part of either party, the price appears to be below the market. This was dry land, adjoining land under irrigation by the purchaser, and it had access from Nandina Avenue. Therefore the parcel is superior to subject parcel 1. The purchaser had farmed it previously.

Market Data #2 is a comparable land-locked parcel, quite similar in location and environing influences. This parcel sold on a low down payment which accounts for part of the high price. The purchaser apparently did not investigate its accessibility until after the sale, and since then has been turned down by two adjoining owners from whom he sought ingress and egress.

Market Data #3 is comparable in size, superior as to accessibility and is used to reflect the value of the subject parcel by deducting an estimated value of the improvements from the sale price. The broker who made the sale considered the improvements of nominal value. This parcel is inferior in location, but superior in accessibility as stated above. The imputed land price is \$700 per acre by analysis.

Irrigated ranches to the east and to the south of the subject property, with generally superior soil and location, have been selling at prices

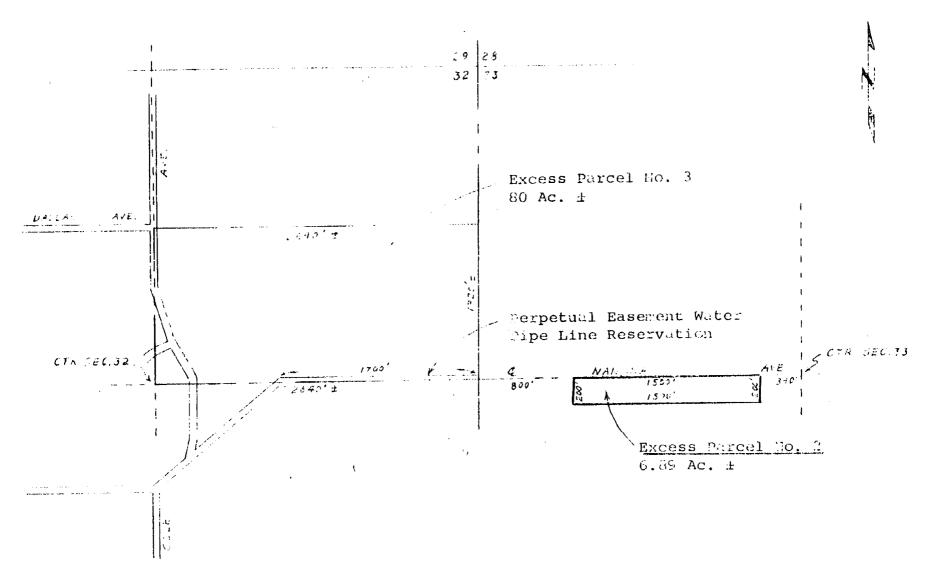
# MARKET DATA ANALYSIS:

(Cont'd)

of \$700 to \$1250 per acre. For instance, a 170 acre parcel lying on the east side of Highway 395 one mile south of the subject parcel, sold in 1960 for \$1152 per acre, without any buildings, but included surface sprinkling irrigation system.

The subject property, if attached to the adjoining ownership to the east and piped for irrigation by sprinkler system, would attain a value of \$800 to \$1000 per acre. In its present condition it is estimated that it will sell for approximately half this amount per acre, or \$400 to \$500 per acre. This is due to its lack of competitive market.

I have therefore concluded that the market value of subject Parcel 1 is \$500 per acre.



Parcels 1 3

# LEGAL DESCRIPTION:

A parcel of land situate in Section 33, T3S, R4W, San Bernardino Meridian, Riverside County, California, more particularly described as follows:

Commencing at the southwest corner of the NW4 of said Section 33; thence easterly along the southerly line of the NW4 of said section a distance of 800' to the true point of beginning; thence continuing easterly along said southerly line 1500'; thence southerly at right angles 200'; thence westerly parallel with the aforementioned quarter section line 1500'; thence northerly at right angles 200' to the true point of beginning.

#### RESERVATIONS

& EXCEPTIONS: None

None Known.

ACREAGE:

6.89 acres

DIMENSIONS:

200 x 1500'

#### LOCATION:

This parcel is situated in unincorporated county territory about 8 miles southeast of Riverside, the County Seat, and 8 miles northwest of the town of Perris.

The parcel is on the south side of Nandina Avenue, between Barton and Alexander Streets. It has 1500' of frontage on Nandina Avenue, beginning 800' east of Barton Street and extends to a point 340' west of Alexander Street.

This location is in the Glen Valley Community which is in the Mesa area northwest of Perris Valley about midway between Riverside and Perris. Nearby suburban communities are Gavilan, Woodcrest and Edgemont.

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ACCESSIBILITY: The subject parcel has access along its 1500' frontage on Nandina Avenue, a graded dirt roadway. This street connects with Oleander Avenue, a paved county road, one mile south of the property via Alexander Street, an unpaved county road. Another paved county road, known as Parson Road is approximately 3/4 mile west of the property.

> Oleander Street extends easterly and southeasterly to become Markham Street which intersects U.S. Highway 395 about 3 miles west of Alexander Street.

Parson Road extends north to join Old Elsinore Road to give paved access into River-To the south it connects with Highway 74 into Elsinore and Perris. Thus the general accessibility of the property is good.

## UTILITIES:

Electric power and telephone service are available to the property nearby. no sewer facilities. Tank gas is used in lieu of natural gas. Water is obtained from drilled wells, however, the property is near the east boundary of the Western Municipal Water District of Riverside County. nearest line to be installed soon will be on Cole Avenue, 3/4 mile west of the parcel.

## ZONING:

M-3, light industrial, being an open and holding interim zone.

# ENVIRONING INFLUENCES:

This parcel is in an area in transition from dry grain farming and idle land to rural homesites for persons predominantly of the minority groups. Most of the residents nearby are negroes. The surrounding lands are undulating and rolling in character, with granite outcroppings and small granite mountains. is semi-desert in character.

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March Air Force Base Riverside, California D-Calif-588-L Parcel 2

# ENVIRONING INFLUENCES: (Cont'd)

The general area is about 25 to 30% cut up into homesites of one to 5 or 10 acres and gives the appearance of being about 5% improved with homes. Many of these are moved in structures. Others are built from low grade and salvage materials usually without benefit of skilled craftsmanship, and in varying stages of completion. There are a few fully modern and attractive dwellings in the area.

There is a rural type subdivision about 1/2 mile to the northwest (north of subject parcel 3). This is a recent subdivision sold on easy terms. It contains 51 parcels of 1.43 acres in size. About 10% have improvements started. This subdivision has dirt streets and it was not necessary to provide water to the properties. The streets were graded to county standards. The subdivision is reported to be sold out.

The more open and less rocky parcels are dry-farmed.

The south boundary of the Camp Haan portion of March Air Force Base is across Nandina Avenue.

# TOPOGRAPHY:

Undulating, with granite outcroppings and small drainage channels.

# SOILS:

This parcel is mapped as Holland sandy loams which are brown and micaceous, with small angular granite particles, and are low in humus and gritty in texture. The series is characterized by shallow soils with bedrock often less than 6' in depth. Uses are similar to the San Joaquin series but generally Holland soils are less used in irrigated agriculture due to their location in moderately to steeply sloping areas and due to their boulder-strewn character. Fertility, durability and adaptability of the series are rated poor to fair.

Riverside, California D-Calif-588-L Parcel 2

IMPROVEMENTS: Government constructed concrete tank, below

ground, open top - see photograph.

PRESENT USE: Vacant and idle.

HIGHEST AND BEST USE:

The highest and best use of this parcel is for subdivision into small homesites. The size will not permit cutting into minimum  $2\frac{1}{2}$  acre lots under the Record of Survey provisions of the County without creating excessive wide parcels. The parcel could be sold without subdivision as four separate parcels and the purchaser later could redivide these under the 4-parcel rule. Thus the market for the parcel is to someone who would anticipate such a resale program.

PRESENT FAIR \$5,000

MARKET VALUE: Being: 6.89 acres @ \$725 per acre, adjusted

to a round amount.

MARKET DATA
ANALYSIS:

The sales prices of adjoining land show considerable variation as evidenced by unit prices ranging from \$212 per acre to \$1300 per acre reported under Market Data items 4 to 12.

Market Data #4 is inferior in location and accessibility to the subject property. It is superior only in that it does not have a penalty of removing cost of the existing concrete structure on the subject property. This property sold for \$400 per acre on terms.

Market Data #5 is comparable in general accessibility. Its shape is not as conducive to easy subdivision as is the subject property, due largely to the relative amount of frontage per acre.

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Riverside, California D-Calif-588-L Parcel 2

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# MARKET DATA ANALYSIS:

Market Data #5 (Cont'd)

This sale occurred two years ago, but the market has not materially changed. It has comparable soil and terrain, except for the pit on the subject parcel.

Market Data #6 is comparable to the parcel involved in Market Data 5. It has slightly better terrain and a little better access. The shape is not as desirable as the subject, with the frontage being on the narrow dimension of the parcel. The price of \$1300 per acre appears to be high.

Market Data #7 is an 80 acre parcel immediately north of subject parcel #3. It has comparable terrain to the subject. Since this sale occurred, the land has been subdivided into 51 parcels of 1.43 acres each, a size no longer possible under Riverside County Record of Survey procedure. This parcel sold for \$212 per acre. Due to size and shape it has a lower unit value than the subject parcel 2.

Market Data #8 sold for citrus planting. The transaction is now in escrow. The soil is superior to that on the subject parcel. Generally this transaction is not indicative of the value of the subject parcel 2.

Market data #9 is comparable in the same manner as #8 above except for size.

Market Data #10 is a current escrow under the same motivation as for #8 above. It is superior to the subject parcel for citrus culture. Its general location is also superior.

Market Data #11 has fair accessibility. The topography is more broken than the subject. It lacks the advantage of wide-road frontage. On the overall basis, it is considered inferior to the subject parcel. This property is in the Metropolitan Water District.

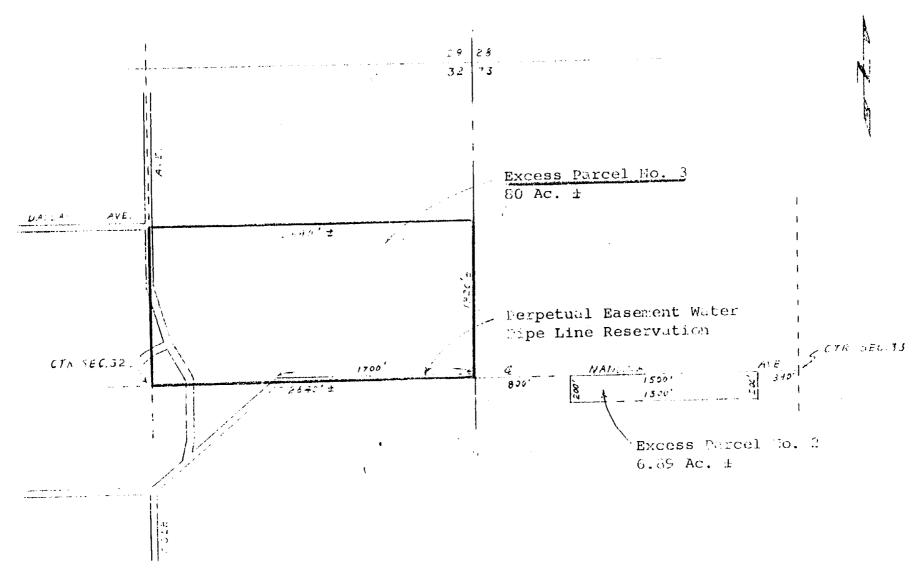
March Air Force Base Riverside, California D-Calif-588-L Parcel 2

# MARKET DATA ANALYSIS:

Market Data #12 is a 10 acre parcel with rolling topography and a wash crossing the front portion. It has fair accessibility but lacks the advantage of wide road frontage. The general location is considered inferior to the subject parcel. It sold for \$300/Acre. It is considered inferior overall to the subject parcel 2.

The cost of removing and filling the existing pit is estimated at \$880. This will be reflected in the market price for the land, as the presence of this pit is a hazard. It is possible that a purchaser might accomplish this removal at less cost by cut-rate method.

Anyone purchasing the parcel for resale would anticipate a profit of 40%. Thus with lots selling at \$1200 per acre the indicated value of the subject parcel is \$700 per acre by this analysis.



March Air Force Base Riverside, California D-Calif-588-L

Parcels 2 3

Riverside, California D-Calif-588-L Parcel 3

LEGAL
DESCRIPTION:

The S½ of the NE% of Section 32, T3S, R4W, San Bernardino Meridian, in the County of Riverside, State of California.

Subject to the following easement for a pipe line right of way:

A perpetual and assignable easement and right of way for the location, construction, operation, maintenance, replacement and/or removal of a pipe line and its appurtenances thereto, together with the right to trim, cut, fell and remove underbrush and other vegetation, structures or obstacles within the limits of the right of way, in, on, over and across the following described land:

A strip of land twenty (20) feet in width situated in the NE% of Section 32, T3S, R4W, SBB&M, as shown by Sectionalized Survey of Rancho El Sobrante de San Jacinto, recorded in Book 1, page 8 of Maps, Records of San Bernardino County, California, said strip of land being included between two side lines extended to the boundary lines of said NE% of Section 32 and everywhere distant 10 ft.on the northerly side and 10 on the southerly side, measured at right angles, from the following described centerline:

A line commencing at a point on the East line of said Section 32 20' north of the southeast corner of the northeast quarter (NE4) of said Section; thence south 89° 29' W. 1733.4 feet; thence south, 46° 36' W. to the south line of the NE4 of said Section.

ACREAGE:

80 acres, more or less.

This apparently includes right of way for Nandina Avenue and Cole Avenue, both of which

9

march Alr Force Base Riverside, California D-Calif-588-L Parcel 3

# ACREAGE: (Cont'd)

appear to be public streets and are in use. Barton Street along the east side is a graded dirt road, also in use by the public but it is assumed that this is presently only by permission of the Government. Under private ownership of the subject property, it is assumed that this street would become a public street also.

The parcel is appraised on a gross acreage basis of 80 acres.

# DIMENSIONS:

1320 x 2640'

# LOCATION:

This parcel is situated in unincorporated county territory about 8 miles southeast of Riverside, the county seat, and 8 miles northwest of the town of Perris.

The parcel is situated on the north side of Nandina Avenue, from Cole Avenue east to Barton Street. It extends north of Nandina Avenue one-fourth mile.

This location is in the Glen Valley Community which is situated in the mesa area northwest of Perris Valley about midway between River-Nearby suburban communities side and Perris. are Gavilan, Woodcrest and Edgemont.

ACCESSIBILITY: The subject property has its main access along Cole Avenue on the west boundary and Nandina Avenue on the south boundary. of these streets are unpaved county roads. The nearest paved road is Oleander Avenue, 1/2 mile to the south of the southwest corner, and Parson Road, 1/4 mile west, and Wood Road, 1/2 mile west.

> Oleander Avenue extends east and southeast to become Markham Street which intersects U.S.

March Air Force Base Riverside, California D-Calif-588-L

# ACCESSIBILITY: (Cont'd)

Highway 395 about  $3\frac{1}{2}$  miles west of Cole Avenue.

Parson Road extends north to join Old Elsinore Road to give paved access into Riverside. To the south it connects with Highway 74 into Elsinore and Perris. Thus, the general accessibility is good.

## UTILITIES:

Electricity and telephone service are available to the property. There are no sewer facilities. Tank gas is used in lieu of natural gas. Water is obtained in this area from shallow wells. However, this property adjoins the Western Municipal Water District of Riverside County. The area to the east is being considered for annexation into the district. Thus if the subject property comes into private ownership it can easily be annexed into the district. A distribution line is reported soon to be installed along Cole Avenue which is the west boundary of the subject parcel.

# ENVIRONING INFLUENCES:

This parcel is in an area in transition from dry grain farming and idle land to rural homesites for persons predominantly of the minority groups. Most of the residents nearby are negroes. The surrounding lands are undulating and rolling in character, with granite outcroppings and small granite mountains. It is semi-desert in character.

The general area is about 25 to 30% cut up into homesites of one to five or ten acres in size and gives the appearance of being about 5% improved with homes. Many of these are moved-in structures. Others are built from low grade and salvage materials usually without benefit of skilled craftsmanship, and in varying stages of completion. There are a few fully modern and attractive homes in the area.

March Air Force Base Riverside, California D-Calif-588-L Parcel 3

# ENVIRONING INFLUENCES: (Cont'd)

There is a rural type subdivision adjoining the subject property on the north. This is a recent development sold on easy terms. It contains 51 parcels of 1.43 acres in size. About 10% have improvements started. This subdivision has dirt streets and it was not necessary to provide water to the properties. The streets were graded to county standards. The subdivision is reported to be sold out.

The more open and less rocky parcels are dry-farmed.

# TOPOGRAPHY:

Undulating, with granite outcroppings and small drainage channels.

## SOILS:

This parcel is mapped similarly to Parcel 2. The soils are Holland sandy loams inclined to be somewhat heavier in rock and boulder strewn appearance than Parcel 2. This parcel exposes land typically Holland soils.

# IMPROVEMENTS:

Government constructed concrete separation tank on elevated mound, a settling basin with concrete perimeter wall, stock pile of crushed rock, etc. See photographs.

# PRESENT USE:

Vacant and idle.

# HIGHEST AND BEST USE:

Subdivision into small homesites with minimum of  $2\frac{1}{2}$  acres under minimum record of survey type subdivision requirements of Riverside County, with graded streets and no utilities provided.

The existing Government constructed concrete structures, etc. will require removal or disposal in some manner prior to subdividing and selling the land as lots. See market data

Riverside, California D-Calif-588-L Parcel 3

HIGHEST AND
BEST USE:
(Cont'd)

analysis and conclusions relative to the effect of these on the value of the property.

PRESENT FAIR

\$20,000

MARKET VALUE:

Being: 80 acres @ \$250 per acre.

# MARKET DATA ANALYSIS:

This parcel has the disadvantage of the cost of removing the existing concrete pits and crushed rock pile. Under minimum requirements this can be removed at a cost of \$5660 as estimated by John B. Kennedy in statement included in the Addenda of this report. This amounts to approximately \$70 per acre. Without this penalty it is estimated that the subject parcel would sell for approximately \$25,000 or \$325 per acre, adjusted.

Market Data #4 is inferior to the subject parcel. The terms are favorable. Accessibility is not as good as for the subject.

Market Data #5 is not quite as well situated as the subject parcel as to accessibility. The land has similar terrain. Overall desirability inferior to the subject.

Market Data #6 is a narrow, deep parcel, comparable as to terrain and soil. This sale appears to be out of line with the other sales, and the tone of the market indicated by the interviews made during the investigation. However, this is a small parcel, which accounts for some of the difference in the per acre price.

Market Data #7 is an 80 acre parcel adjoining the subject on the north. It has superior terrain and roads on 3 sides. The market is only slightly higher than when this sale occurred. It is the most comparable of the market data items.

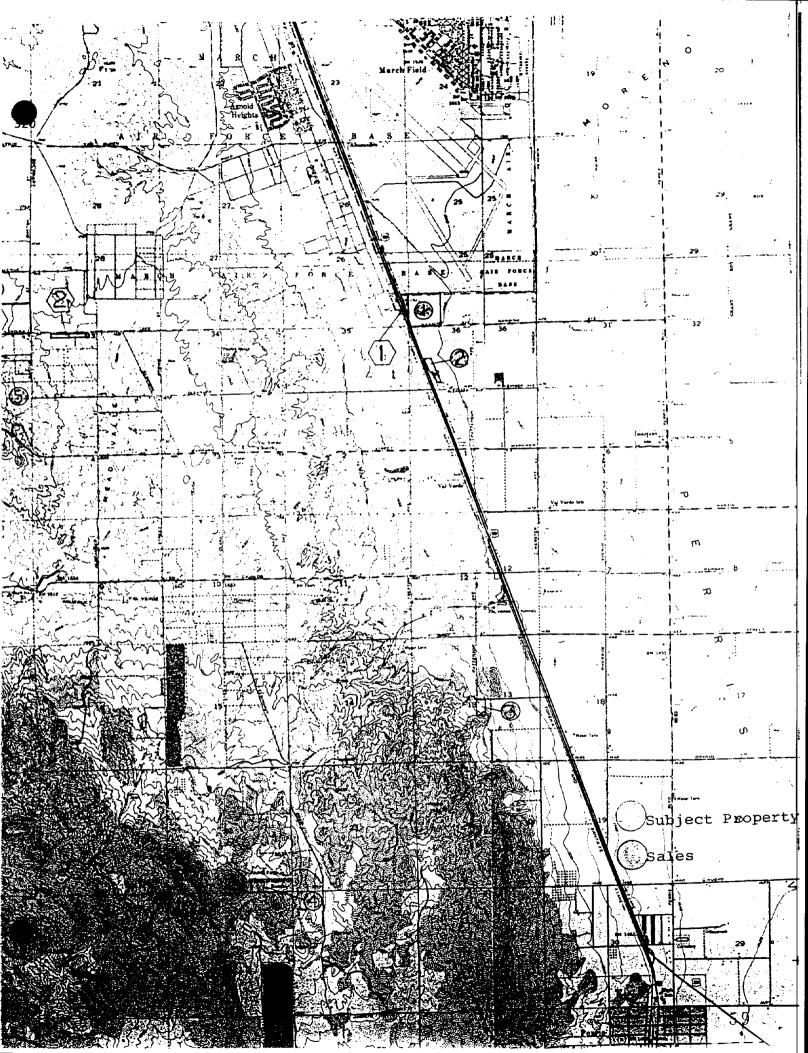
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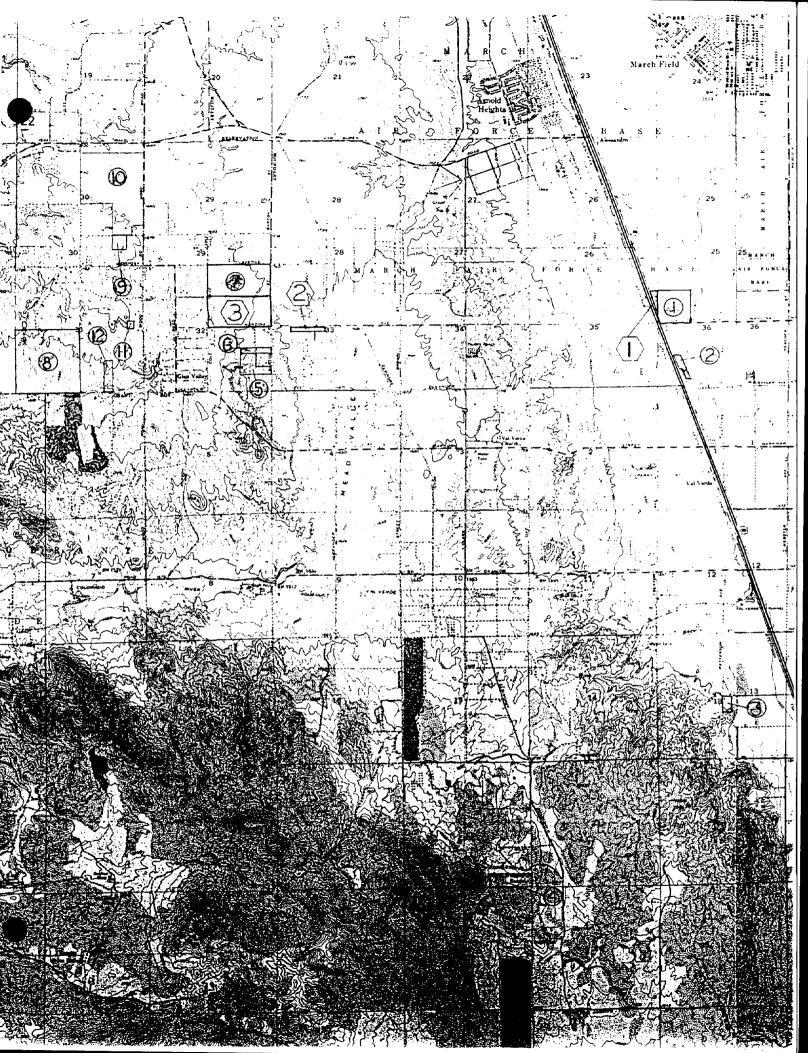
Riverside, California D-Calif-588-L Parcel 3

# MARKET DATA ANALYSIS:

Market Data 8,9 & 10 were purchases for proposed citrus planting. The lands sold have superior soil and elevation. They are in the Western Municipal Water District and have water available at \$100 per acre or more per year. These lands are considered superior to the subject property for citrus.

Market Data #11 and 12 are of two smaller acreage parcels, reflecting the retail market for small parcels. The unit prices paid in these two sales is therefore considered to be above that for an 80-acre parcel. However, Market Data #12 was cut by a wash along its south or frontage boundary.





SAN BRUND THERE GAMS - 121 - 90-002 MARCH AFB D.CALF - 588-L

# NARRATIVE SUMMARY

Excess land covered by this report was originally acquired as a part of Camp Haan and March Air Force Base. The two areas shown under Tract "F" (excess Parcels 2 and 3) were acquired in 1943 as a part of the Camp Haan acquisition and were transferred on 16 April 1949 from the Department of the Army to the Department of the Air Force. The other area shown as a portion of Tract B-201 (excess Parcel 1) was acquired in 1952 as a part of the expansion of March Air Force Base. Surrounding area ranges from unimproved to irrigated farm land, where water is available.

The excess portion of Tract B-201 contains 1.28 acres. The entire tract, containing 168.27 acres of land, was acquired at a cost of \$76,867.38, or a prorated cost of \$164 per acre. The cost of the excess portion is \$700, which is based on acquisition of the 1.28 acres at a cost of \$164 per acre.

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Disposal action of excess Parcel 3 (a portion of Tract "F" shown on Schedule B-5) shall be subject to reserving unto the Government a perpetual and assignable easement and right of way for a pipe line over the area described in Schedule B-3 and shown colored in red on Schedule B-5.

The property has been screened against the known needs of the Department of Defense.

This transaction is not subject to Section 2662, Title 10, U. S. Code.

Tract No:

17

Composition:

Excess Parcel No. 2 containing 6.89 acres + (All of Camp Hean Acquisition Tract C-1)

Grantor:

Henry D. Upton and Una Burritt Upton,

husband and wife

Acquired by:

Direct Purchase

Title Passed by:

Deed recorded 22 October 1943 in Book 602, Page 201, Official Records of Riverside County,

California

Subject to:

Nothing

Description:

A parcel of land situate in Section 33, Township 3 South, Range 4 West, San Bernardino Meridian, Riverside County, California, more particularly described as follows:

Commencing at the Southwest corner of the Northwest 1/4 of said Section 33; thence Easterly along the Southerly line of the Northwest 1/4 of said section a distance of 800 feet to the true point of beginning; thence continuing Easterly along said Southerly line 1500 feet; thence Southerly at right angles 200 feet; thence Westerly parallel with the aforementioned quarter section line 1500 feet; thence Northerly at right angles 200 feet to the / true point of beginning.

\* NOTE: Portion of Tract F containing 3545.06 acres transferred from Camp Haan by letter of the Secretary of the Army dated 16 April 1949 to the Department of the Air Force.

Jurisdiction:

Exclusive civil and criminal jurisdiction is vested in the United States by virtue of notices of acceptance issued by the Secretary of War on 3 January 1944, and 16 August 1944 and acknowledgment thereof by the Governor of California as of 8 January 1944 and 21 August 1944, respectively, and by Sections 33 and 34 of the Political Code of California as amended by the Act of the Legislature of California approved 5 July 1939. The right to serve civil and criminal process and to levy and collect taxes is reserved to the State of California.

Tract No:

P

Composition:

Excess Parcel No. 3 containing 80 acres + (All of Camp Haan Acquisition Tract C-2)

Owner:

Mabel A. Beier, Trustee

Acquired by:

Condemnation

Title Passed by:

Declaration of Taking filed 31 December 1943 in Condemnation Proceeding No. 2955-H Civil. District Court of the United States, Southern District of California, Central Division, entitled United States of America, Petitioner, vs. 13.66 Acres of Land, more or less in Riverside County, State of California, etc.,

et al., Defendants.

Estate Acquired:

Full fee simple title

Subject to:

Existing easements for public roads and

highways, for public utilities, for railroads,

and for pipelines.

Description:

The South 1/2 of the Northeast 1/4 of Section

32, Township 3 South, Range 4 West, San

Bernardino Meridian, in the County of Riverside,

State of California.

NOTE: Portion of Tract F containing 3545.06 acres transferred from Camp Hean by letter of the Secretary of the Army dated 16 April 1949 to the Department of the Air Force.

Jurisdiction:

Exclusive civil and criminal jurisdiction is vested in the United States by virtue of notices of acceptance issued by the Secretary of War on 3 January 1944, and 16 August 1944 and acknowledgment thereof by the Governor of California as of 8 January 1944 and 21 August 1944, respectively, and by Sections 33 and 34 of the Political Code of California as amended by the Act of the Legislature of California approved 5 July 1939. right to serve civil and criminal process and to levy and collect taxes is reserved to the State of California. United States Attorney GEORGE F. HURLET Special Attorney, Lands Division Department of Justice 807 Federal Building Los Angeles 12, California MAdison 7411, Ext. 231

Attorneys for Plaintiff

UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF CALLFORNIA CENTRAL DIVISION

UNITED STATES OF AMERICA.

Plaintiff

VS.

Case No. 13250-Y Civil
DECLARATION OF TAXING NO. 1

As to

Fracts Nos. B-201 and B-202

472.37 Acres of Land, more or less, in the County of Fiverside, State of California,
CAROLINE H. TRANSFUEIN, et al.

Defendants

ELEARONOH SHT OT

THE UNITED STATES DISTRICT COUPT:

I, the undersigned, Movin I. August Assistant
Secretary of the Air Force of the United States, hereby make the following
declaration by direction of the Secretary of the Air Force:

(a) The lands hereinafter described are taken under and in accordance with the Act of Congress approved February 26, 1931 (h6 Stat. 1421; 40 U.S.C. Sec. 258a), and acts supplementary thereto and amendatory thereof, and under the further authority of the Act of Congress approved August 1, 1888 (25 Stat. 357; 40 U.S.C. Sec. 257); and the Act of Congress approved August 15, 1890 (26 Stat. 316) as amended by the Acts of Congress approved July 2, 1917 (40 Stat. 241) and April 11, 1918 (40 Stat. 518; 50 U.S.C. Sec. 171), which acts authorize the acquisition of land for military purposes; the Act of Congress approved August 12, 1935 (49 Stat. 610, 611; 10 U.S.C. Secs. 1343a, b and c), which act authorizes the acquisition of land for air corps stations and depots; the National Security Act of 1947, approved July 26, 1947 (61 Stat. 495); the Act of Congress approved Jenuary 6, 1951 (Public Law 910, Elst Congress) which act also authorized the acquisition of land for military purposes and the Act of Congress approved January 6, 1951 (Public Law 911, Elst Congress), which act appropriated funds for such purposes.

Ind1

- (b) The p ic uses for which said lands at taken are as follows: The said lands are necessary adequately to provide for expanding needs and requirements of the Department of the Air Force and for other military purposes incident thereto. The said lands have been selected under the direction of the Secretary of the Air Force for acquisition by the United States for use in connection with MARCH AIR FORCE BASE, Riverside County, California, and for such other uses as may be authorized by Congress or by Executive Order.
- The descriptions of the lands being taken are set forth in Schedule "A" attached hereto and made a part hereof, and constitute a description of the same lands described in the Complaint filed in the above entitled cause and amendments thereto.
- 3. The estate taken in the lands for said public use is the fee simple title, subject however, to existing easements for public roads and highways, public utilities, railroads and pipe lines,
- 4. A plan showing the lands taken is annexed hereto as Schedule "B" and made a part hereof.
- 5. The sum estimated by the undersigned as just compensation for said lands, with all buildings and improvements thereon and all appurtenances thereto, and including any and all interests hereby taken in said lands, is set forth in Schedule "A" herein, which sum the undersigned causes to be deposited herewith in the registry of said court for the use and benefit of the persons entitled thereto. The undersigned is of the opinion that the ultimate award for said lands will probably be within any limits prescribed by law on the price to be paid therefor.

IN WITNESS WHEREOF, the undersigned, the Last Secretary of the Air Force, hereunto subscribes his name by direction of the Secretary of the Air Force, this TH day of August, A. D. 1952, in the City of Washington, District of Columbia.

rtliying Officer, OCE

A TRUE COPY

The land which is the subject matter of this Declaration of Taking aggregates 508.27 acres, more or less, situated and being in the County of Riverside, State of California. The descriptions of the land taken, together with the names and addresses of the purported owners thereof, and a statement of the sum estimated to be the just compensation therefor are as follows:

### TRACT NO. B-201

A parcel of land situate in the County of Riverside, State of California, being a portion of Section 36, Township 3 South, Range 4 West, San Bernardino Meridian, and those portions of Blocks 108, 109 and 113 of the Alessandro Tract, as shown on a map recorded in Book 6, page 13 of Maps in the office of the County Recorder of San Bernardino County, California, and those portions of Blocks 301, 342, 359 and 360, as shown on Map No. 1 of Bear Valley and Alessandro Dovelopment Company, recorded in Book 11, page 10 of Maps, in the office of said County Recorder of San Bernardino County, said parcel of land being described as a whole as follows:

Beginning at the point of intersection of the Southerly line of Lot 19 of Re-subdivision of Alessandro, as shown on map recorded in Book 13, pages 16 and 17 of Maps in the office of the County Recorder of said Riverside County, with the Northeasterly line of the strip of land, 122 feet in width, as described in a rinal Order of Condemnation in Case No. 35002, recorded May 18, 1943 in Book 580, page 327 of Official Records in the office of said Recorder of Riverside County; thence Southeasterly along said Northeasterly line, a distance of 5317.83 feet, more or less, to an intersection with the Mest line of said Section 36; thence Northerly along said Nest line 2345.64 feet, more or less, to the Northwest corner of said section; thence Easterly 1320 feet, more or less, to the Northwest corner of the Northeast 1 of the Northwest & or said Section 36; thence Southerly 1320 feet, more or less, to the Southwest corner thereof; thence Easterly 1320 feet, more or less, to the Southeast corner thereof; thence Northerly 1320 feet, more or less, to the North one-quarter corner of said section; thence Easterly along the Borth line of said section and along the North line of Section 31, Township 3 South, Range 3 West, San Bernardino Meridian, a distance of 2749.3 feet, more or less, to the point of intersection with the Southerly prolongation of the Rasterly line of the Westerly 30 feet of Hencock Street, 60 feet wide, according to said Man No. 1 of Bear Valley and Alessandro Development Company; thence Wortherly along said prolongation and said Easterly line a distance of 2613.2 feet, more or less, to the point of intersection with the Easterly extension of the Southerly lines of Lots 19 and 18 of said Re-subdivision of Alessandro; thence Westerly along last said line 7154.90 feet, more or less, to the point of beginning, containing 468.27 acres, more or less.

Names of Purported Owners:

Mary Hendrick Trautwein Caroline H. Trautwein Stoddard Margaret Trautwein Stoddard Kenneth Hendrick Colville Jessie Colville Powel Dorothy Colville Dann William Thomas Colville, Jr. Archer I. Schweizer

Address of Purported Owners:

o/o Frank Mergenthaler Attorney at Lew 510 South Spring Street Los Angelos, California

Estimated Compensation:

\$56,500.00

### TRACT NO. B-202

The Northwest & of the Northwest & or Section 36, Township 3 South, Range & West, San Bernardino Meridian, in the County of Riverside, State of California, containing 40 acres, more or less.

Name of Furported Owner:

Ide H. Tamplin

Address of Furported Owner:

2299 West 20th Street Los Angeles 7

California

Estimated Compensation:

\$5,000.00

The gross sum estimated to be just compensation for the estate acquired in the lands hereby taken is SIXTY-ONE THOUSAND FIVE HUNDRED AND NO/100 (\$61,500.00) DOLLARS.

### IN THE

### UNITED STATES DISTRICT COURT

# IN AND FOR THE SOUTHERN DISTRICT OF CALIFORNIA

### CENTRAL DIVISION

UNITED STATES OF AMERICA,
Petitioner.

DECLARATION OF TAKING

Vs.

NO. 1

13.66 ACRES OF LAND, MORE OR LESS, IN RIVERSIDE COUNTY, STATE OF CALIFORNIA,

Defendants.

CIVIL NO. 2955-H

AND ARCADIO CARRASCO, ET AL.,

TO THE HONORABLE, THE UNITED STATES DISTRICT COURT:

States, no hereby declare that:

- 1. (a) The lands hereinafter described are taken under and in accordance with the Act of Congress approved February 26, 1931 (46 Stat. 1421; 40 U.S.C. sec. 258a), and acts supplementary thereto and amendatory thereof, and under the further authority of the Act of Congress approved August 18, 1890 (26 Stat. 316) as amended by the Acts of Congress approved July 2, 1917 (40 Stat. 241), April 11, 1918 (40 Stat. 518; 50 U.S.C. sec. 171) and March 27, 1942 (Public Law 507 77th Congress), which acts authorise the acquisition of land for military or other war purposes, and the Act of Congress approved July 1, 1943 (Public Law 108 78th Congress), which act appropriated funds for such purposes.
- (b) The public uses for which said lands are taken are as follows:

  The said lands are necessary adequately to provide for a sewage disposal plant, reservoir and effluent pipe line, and for related military purposes. The said lands have been selected by me for acquisition by the United States for use in connection with the establishment of Camp Haan, Riverside, California, and for such other uses as may be authorized by Congress or by Executive Order, and are required for immediate use.

- 2. A general description of the lands being taken is set forth in Schedule "A" attached hereto and made a part hereof and is a description of part of the same lands described in the petition in the above ontitled cause.
- 5. The estate taken for said public uses in Tracts 2, 14 and 20 is the full fee simple title, subject, however, to existing easements for public roads and highways, for public utilities, for railroads, and for pipe lines, and in Tracts 3, 5, 11 and 12 is a perpetual easement for the location, construction, operation, maintenance and patrol of a sewer pipe line in, on, across, and under the said land.
- 4. A plan showing the lands taken is annexed hereto as Schedule "h" and made a part hereof.
- 5. The sum estimated by me as just compensation for said land, with all buildings and improvements thereon and all appurtenances thereto, and including any and all interests hereby taken in said lands, is set forth in Schedula "A" herein, which sum I cause to be deposited herewith in the Registry of said Court for the use and benefit of the persons entitled thereto. I am of the opinion that the ultimate award for said lands will probably be within any limits prescribed by law as the price to be paid therefor.

IE WITNESS WHRKEOF, the petitioner, by its Secretary of War, thereunto authorized, has caused this declaration to be signed in its name by said

HENRY L. STINSON . Secretary of War, this the day of December, A. D. 1945, in the City of Washington, District of Columbia.

Secretary of War of the United States.

### SCHEDULE "A"

The land which is the subject matter of this Declaration of Taking aggregates 126.40 acres, more or less, situate and being in the County of Riverside, State of California. A description of the lands taken, together with a list of the purported owners those of and a statement of the sum estimated to be just compensation therefor is as follows:

## TREOT NO. 2

All that certain real property situated in the County of Riverside, State of California, and particularly described as follows, to wit:

The South half of the Mortheast Quarter of Section 32, Township 3 South, Range A West, San Bernardino Base and Meridian. Containing 80 acres, more or less, including street areas.

The of Pusported Owner: Mabel A. Baier, Trustee

Address of Furported Owner: 503 North Grand Street, Orange, Calif.

Estimated Compensation: Two THOUSAND FIVE NUMBERS SIXTY AND HO/100 DOLL Ju (2560.00)

### TRACT NO. 3

All that certain real property situated in the County of Riverside, State of California, and particularly described as follows, to wit:

A stri; of land, 20 feet in width, situate in the County of Riverside, State of California, being a portion of the North half of the Northeast Quarter of Section 32, Township 3 South, Range 4 West, ban Bernardino Base and Meridian; said strip of land lying 10 feet on each side of the following-described center line: Beginning at a point in the west line of the said Northeast quarter of Section 32, distant thereon Southerly 583.55 feet from a 4" x 4" post and iron pin marking the North Quarter corner of said Section 32; thence South 46° 16' 30" East, a distance of 1032.16 feet to a point in the South line of the said North half of the Northeast quarter of Section 32 distant thereon 730.26 feet Easterly from the Southwest corner of said North half of the Northeast quarter of Section 32.

The side lines of the above-described strip of land shall be prolonged or shortened so as to terminate in the West line of the Northeast quarter of said Section 32 and in the South line of the North half of the Northeast quarter of said Section 32, containing 0.47 acre, more or less.

Mame of Purported Owner: Mabel A. Baier, Trustee
Address of Purported Owner: 593 North Grand Street, Orange, Calif.
Estimated Compensation: FORTY AND MC/100 DOLLARS (240.00)

APPENDIX C-4.7

San Bruno Archives
RG121. Records of Public Bids Centres for the State State 45-6:
Face 11/55-121.87-001
Box 7

# APPRAISAL

<u>0</u> F

4.9 ACRES OF LAND
MARCH AIR FORCE BASE
RIVERSIDE, CALIFORNIA
D-CALIF-588-T

# FOR

# GENERAL SERVICES ADMINISTRATION 49 FOURTH STREET SAN FRANCISCO 3, CALIFORNIA

November 14, 1963

(Date of Valuation: Nov. 14, 1963)

 $\mathbf{B}\mathbf{y}$ 

Albert L. Johnson, M.A.I.

356 Court Street

San Bernardino, California

Telephone: TU 5-6549

# PURPOSE OF APPRAISAL:

The purpose of this appraisal is to set forth an opinion as to the present fair market value of 4.90 acres of Government owned land, hereinafter described. The date of valuation is November 14, 1963. The valuation reported is for a fee title interest, subject to existing easements for public roads and highways, public utilities, railroads and pipe lines.

# FAIR MARKET VALUE DEFINED:

Fair market value as used in this report is defined by the United States Supreme Court in Olson vs. United States (1934) 292 US 246, at 257, as follows:

"Fair market value is the amount of money in cash which would have been arrived at by fair negotiations between a fully informed owner, willing but not obliged to sell, and a fully informed buyer, desiring but not obliged to buy, a reasonable time being allowed to negotiate the sale."

It is assumed that the properties will be sold by the General Services Administration on the following terms:

Purchase Price	Terms of Payment
\$2,500 or less	Cash
\$2,500 to \$10,000	<pre>1/4 cash, balance payable in 8 years or less in equal quarterly installments.</pre>
\$10,000 or more	<pre>1/5 cash, balance payable in 10 years or less in equal quarterly installments.</pre>

Interest on all deferred payment at 5%.

# BASIS OF APPRAISAL:

This appraisal is made largely by the use of the comparative or Market Data Approach through the analysis of nearby transactions, details of which are cited in the Addenda of this report.

Since no improvements are involved, the Cost Approach is not applicable. Although the subject parcel is used for agriculture by an adjacent owner, the insignificant amount of income produced does not warrant using the Income Approach. Therefore, these appraoches were not used.

There follows in this report a statement as to the comparability of the market data considered and the manner in which the transactions were interpreted in making the valuation estimate.

Reference is made to previous Appraisal Report under date of July 10, 1961 covering Parcels 1, 2 and 3 for information regarding General Location, The Area, Elevation & Terrain, Climate, Population, Transportation, Agriculture, Water, Neighborhood Data, etc.

The area has changed very slightly since the above referred to report.

# LEGAL DESCRIPTION:

A strip of land in the County of Riverside, State of California, being those portions of Lot 3 of Block 113 of the Alessandro Tract as shown on map recorded in Book 6, page 13 of Maps in the office of the Recorder of the County of San Bernardino, and of the North 1/2 of the Northwest 1/4 of Section 36, Township 3 South, Range 4 West, San Bernardino Meridian, described as follows, basis of bearings being California Coordinate System, Zone 6 (Chapter 1307, Statutes of 1947):

Said strip of land is the South 108.00 feet, measured at right angles from the South lines of said Lot 3 and said North 1/2 of the Northwest 1/4 of Section 36, lying Easterly of the Northeasterly line of the strip of land 122 feet in width, as described in a Final Order of Condemnation in Case No. 35002, recorded in Book 580, page 327 of Official Records in the office of the Recorder of the County of Riverside, and Westerly of a line bearing North 30° 06' 43" West through a point in the South line of said North 1/2 of the Northwest 1/4 of Section 36, said point being south 89° 54' 51" West 1023.87 feet along last said South line from the North-South midsection line of said Section 36.

Containing 4.90 acres, more or less, of which 1.63 acres, more or less, are within Tract B-201, and 3.27 acres, more or less, are within Tract B-202.

### ACREAGE:

4.90 acres.

# DIMENSIONS:

The subject parcel is in the shape of a parallelogram measuring approximately 108' wide with a depth of almost 2,000'.

# LOCATION:

This parcel is on the northwest fringe of the Perris Valley, being approximately 6 miles northwesterly of the town of Perris and 10 miles southeast of the town of Riverside. It adjoins the south boundary of the March Air Force Base (as now fenced and used) and is about 1/8 mile north of Nandina Street. It is situated on the east side of the State Highway (also U.S. Hwy. 395).

# ACCESSIBILITY:

There is an access opening on the east side of Hwy. 395 to the westerly boundary of the subject property.

# UTILITIES:

Electric power and telephone service are nearby. There are no sewer facilities serving this area. Therefore, individually installed septic tanks are used on developed properties in the area.

The parcel is within the general boundary of the Eastern Municipal Water District of Riverside County, which is annexed to the Metropolitan Water District of Southern California. Due to Government ownership, this parcel is technically not a part of the district but under private ownership it will come into the district and water can be brought to it. There are nearby lines on the adjoining property to the east.

# ZONING:

This area is in the M-3, light industrial zone of Riverside County. This is a general interim or holding zone, permitting uses conforming to the general pattern of the area.

# ENVIRONING INFLUENCES:

This parcel is in a rural area. It adjoins the south boundary of the March Air Force Base and is across Highway 395 from the former Camp Haan, which is now a part of March Air Force Base. The land to the south and east is predominantly devoted to irrigated agriculture and that to the west across the highway and extending in the nearby low hills is dry farmed or idle, with many rural homesites about 2 miles to the west.

There is some light commercial development along the east margin of the highway at points where lateral streets intersect and have access to the highway. On the east side at intermittent intervals there are short frontage roads, also with light commercial development such as a small cafe, trailer park, beer parlor, etc. There is a Texaco Service Station at the southwest corner of Nandina Avenue and the highway.

The agriculture to the south and east is mostly irrigated general farming, with considerable emphasis on potatoes during the past 10 to 12 years, in which period the area has come within the Metropolitan Water District system through the Eastern Metropolitan Water District of Riverside County. Lines have gradually been extended to near the subject parcel. This water system provides Colorado River water to the Perris Valley generally.

# TOPOGRAPHY:

This parcel is nearly level with a slight slope to the south. The elevation is approximately 1520' above sea level.

SOILS:

Soils on this parcel are mapped as San Joaquin loam and sandy loam and are of a somewhat reddish-brown color. The soil is generally old valley filling material formed by unconsolidated water laid deposits derived from many different kinds of rocks. The San Joaquin soils commonly have very compact subsoils of darker color and heavier texture and often impervious hardpan is encountered.

Agricultural utility of these soils has largely been confined to dry farming for cereal grains and grain hay in the past, however, present uses are for irrigated crops usually including a cash crop of potatoes or onions on occasional years, but mainly cereal grain and alfalfa hay production. Considerable fertilizer is required for irrigated agricultural uses.

Fertility, adaptability and durability of this soil series are rated only fair. There is no salinity problem.

EASEMENTS:

Mone known.

IMPROVEMENTS:

None.

PRESENT USE:

Presently used for agricultural purposes by Ira W. Clark, an adjacent owner, and has been in the same use for the past number of years, along with other parcels lying contiguous on the north, south and east.

HIGHEST & BEST USE:

This small parcel is best used for agricultural purposes along with the adjoining privately owned lands to the South. It could also be sold to a speculative purchaser for future rural homesite use and rented out for agricultural purposes pending conversion to such use.

FAIR MARKET VALUE:

\$6,000

Being: 4.90 Acres @ \$1,225 per acre

ALBERT L JOHNSON, M. A. I., S. R. A. RAY R. HASTINGS, M. A. I., S. R. A. 443 FOURTH STREET
SAN BERNARDINO, CALIF. 92401

# CONCLUSIONS:

The market data indicates a range of prices from \$1,065 to \$1,473 per acre for parcels ranging in size from 9.65 acres to 115 acres. A small parcel designated as Market Data #7 contains only 1.63 Acres and sold at \$1,227 per acre, abutting the highway and with State frontage road access. Thus, there is no indicated pattern and size influence from the data at hand.

The market for the subject parcel is primarily to the adjoining owner, due to its size and shape.

Market data on Highway #99 between Calimesa and Beaumont, recently investigated by your appraiser, indicates that small parcels with access openings are in demand and will command prices almost equal to similar sized parcels abutting frontage roads or local streets.

In this area there are many small parcels created by subdivisions put on many years ago. Nearby operators who farm the small parcels of land along with their own land purchase these parcels, when they are available in the market, at prices about equal to typical farm acreage prices. It is, therefore, indicated that the value of the subject parcels in the market closely approximates the sales prices indicated by the market data.

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		20 25 35 36					1		
APPRAISAL OF 4.9 ACRES OF LAND MARCH AIR FORCE BASE LIVERSIDE, CALIFORNIA	2 Lot 3	(B) 202	1320	000000000000000000000000000000000000000	51 61 61	(3)	3)		
D-CALIF-588-T		SUBJECT	PROPERTY	1			!		
Albert L. Johnson M.A.I. November 14,1963	54, SEMING				7023 97				
November 14,1963  153 AC WITHIN ACQUISION TRACT B201  3.27AC " " B2027									
•				/c	000				

STANDARD FORM 118
DECEMBER 1953
PRESCRIBED BY GENERAL
SERVICES ADMINISTRATION
REGULATION 2-IV-201.00
118-102

# RL. JRT OF EXCESS REAL PROPERTY

1. HOLDING NCY NO.

IA-56

S-37-63

2. DATE OF REPORT

26 August 1963

DATE RECEIVED (GSA use only)

GSA CONTROL NO. (GSA use only)

Conly)

Conly)

3. TO (Furnish address of GSA regional offices)					4. FROM (Name and address of holding agency) U. S. Army Engineer District, Los Angeles					
General Services Administration					•	-	•	-		
49 Fourth Street					Corps of Engineers, 751 So. Figueroa St.					
San Francisco 3, California					Los Angeles 17, California					
5. NAME AND ADDRESS OF REP L. B. Otterness, C Br., Real Estate I	RESENTATIVE	TO BE CONTAC	TED + 2. 7	Di cooca i	6. NAME AND ADDRESS	S OF CUSTODIAN				
Br., Real Estaté I	iv., U.	S. Army	Eng	ineer	Commander					
Dist., Los Angeles	، Comps و	of Engrs	• > 7	) So.	March Air Force Base Riverside, California					
Figueroa St., Los	Angeles	17, Cal	ifor	nia						
7. PROPERTY IDENTIFICATION					8. PROPERTY ADDRESS (Give full location)					
4.90 acres, more	or les	c of fee	OT TO	ed l	Located at M					
land, March Air					9 miles SE o					
Tailu, Naitui All	TOLGE D	عدد وعدد	T + O + 1	ııa	miles S of S	an Bernardin	T			
9.		SF	ACE DA	TA			10.	LAND		
USE	NUMBER OF BUILDINGS (1)	FLOOR AI (Sq. ft (2)	REA .)	NUMBER OF FLOORS (3)	FLOOR LOAD CAPACITY (4)	CLEAR HEADROOM (5)	(From SF 118b)	ACRE OR SQUARE FEET		
A. OFFICE	······································				,		A. FEE	4.90		
B. STORAGE							B. LEASED			
C. OTHER (See 9 F)							C. OTHER			
D. TOTAL (From SF 118a)	· · ·						D. TOTAL	4.90		
E. GOV'T INTEREST:					OTHER" USE ENTERED	IN C ABOVE				
(1) OWNER										
(2) TENANT	<del></del>									
11. co	ST TO GOVER	NMENT			12. LEASEHOLI	O(S) DATA (Use separ	ate sheet if ne	cessary)		
ITEM SCHEDULE COST				A. TOTAL ANNUAL RENTAL S						
A. BUILDINGS, STRUCTURES, UTILITIES, AND MISCELLANEOUS FACILITIES					B. ANNUAL RENT PER	SQ. FT. OR ACRE		\$		
		A (Col d)	s		C. DATE LEASE EXPIR					
B. LAND		B (Col. f)	1,035		D. NOTICE REQUIRED					
C. RELATED PERSONAL PROPER	C (Col. h)		-	E. TERMINAL DATE OF	F RENEWAL RIGHTS		İ			
D. TOTAL (Sum of 11A, 11B, and 11C) \$1,035			035	F. ANNUAL RENEWAL RENT PER SQ. FT. OR ACRE \$						
E. ANNUAL PROTECTION AND		E COST (Gove	rnmen	t-owned or	G. TERMINATION RIGHTS (in days)					
Rone				LESSOR GOVERNMENT						
13. DISPOSITION OF PROCEEDS					14. TYPE OF CONSTRUCTION					
₹ y v				Not applicable						
15. HOLDING AGENCY USE				16. RANGE OF POSSIB	LE USES					
					1			•		
None				Agricultural						
					<b>!</b>					
					i .					

No known federal agencies. See list attached.

18. REMARKS

See Narrative Summary.

19. REPORT AUTHORIZED BY	
NAME	SIGNATURE
L. B. OTTERNESS	
Chief, Management & Disposal Branch Real Estate Division	L. B. Ottirmin

APPENDIX C-4.8

STANDARD FORM 118
DECEMBER 1953
PRESCRIBED BY GENERAL
SERVICES ADMINISTRATION
REGULATION 2-IV-201.00
118-102

## REPORT OF EXCESS REAL PROPERTY

1. HC	10 10 10	
LA	NG AGENCY NO.	DATE RECEIVED (GSA use only)

2. DATE OF REPORT 21 Jul 78

GSA CONTROL NO. (GSA use 9-1)-Calif-1160

3. TO (Furnish address of			4. FROM (Name and address of holding agency)							
General Servic	ι, ΡΙ	1	Los Angeles District, Corps of Engineers							
Region 9, 525				PO Box 2711						
San Francisco,					Los Angeles,					
5. NAME AND ADDRESS OF R					6. NAME AND ADDRES					
Hester, Ch, Dispo					Commander, 2					
US Army Corps of				LA St,	ATTN: Ms. A		•	2867		
Los Angeles, CA	90012 (2)	13/688-5 <sub>-</sub>	569)		March AFB, Ca					
q7. PROPERTY IDENTIFICATIO	N				8. PROPERTY ADDRESS	•	•			
				İ	Perris, CA,	on the north	side of	San Jacinto		
ILS Outer Mark	er Annex,	March .	AFB,	CA	Avenue & 460	feet west o	f the cer	nterline of		
(PIN PDMY)					Dunlap Avenue	e, Riverside	County.			
9.		SF	ACE DA	TA			10.	LAND		
USE	NUMBER OF BUILDINGS (1)	FLOOR AI (Sq. ft (2)		NUMBER OF FLOORS (3)	FLOOR LOAD CAPACITY (4)	CLEAR HEADROOM (5)	(From SF 118b)	ACRE OR SQUARE FEET		
A. OFFICE		<del>, , , , , , , , , , , , , , , , , , , </del>		i			A. FEE	0.45		
B. STORAGE							B. LEASED			
C. OTHER (See 9 F)	1	293					C. OTHER			
D. TOTAL (From SF 118a)	1	293	,				D. TOTAL	0.45		
E. GOV'T INTEREST:				F. SPECIFY "C	OTHER" USE ENTERED	IN C ABOVE ILS	marker	beacon with		
(1) OWNER	1	293		related	facility cons	sisting of a	295 gal	lon storage		
(2) TENANT				tank.	**	_		_		
11.	OST TO GOVER	MENT		· · · · · · · · · · · · · · · · · · ·	12. LEASEHOLI	O(S) DATA (Use separ.	ate sheet if ne	cessary)		
ITEM		SCHEDULE	COST		A. TOTAL ANNUAL RE		s N/A			
A. BUILDINGS, STRUCTURES.	UTILITIES.				B. ANNUAL RENT PER	SQ. FT. OR ACRE		\$		
A. BUILDINGS, STRUCTURES, AND MISCELLANEOUS FAC	ILITIES	A (Co1 d)	\$7,982.00		C. DATE LEASE EXPIRE					
B. LAND		B (Col. f)	1	300.00	D. NOTICE REQUIRED FOR RENEWAL					
C. RELATED PERSONAL PROP	ERTY	C (Col. h)			E. TERMINAL DATE OF RENEWAL RIGHTS					
D. TOTAL (Sum of 11A, 11B,	and IIC)		\$8,	782.00	F. ANNUAL RENEWAL RENT PER SQ. FT. OR ACRE					
E. ANNUAL PROTECTION AN	D MAINTENANC	E COST (Gove	rnmen	t-owned or	G. TERMINATION RIGHTS (in days)					
none repo	orted			ļ	LESSOR	GOV	ERNMENT	•		
13. DISPOSITION OF PROCEED					14. TYPE OF CONSTRU					
<u> </u>					cement block	building, s	lab floo	r, corrugated		
	<u>_</u>				aluminum cov	•				
					ground, area		•			
15. HOLDING AGENCY USE					16. RANGE OF POSSIBI					
outer marker beac	con				unde	termined				
				}						

17. NAMES AND ADDRESSES OF INTERESTED FEDERAL AGENCIES AND OTHER INTERESTED PARTIES

### none

18. REMARKS Air Force states "the Department of the Air Force has no further requirement for the March AFB ILS Outer Marker Annex." It was further reported that due to the facilities functional obsolescence it was believed further DOD screening would serve no useful purpose.

19. REPORT AUTHORIZED BY	
NAME	SIGNATURE
, DOUGLAS E. GLASS	61 11 10 00
TITLE	Idga H. Miller
Chief, Real Estate Division	pajor 11 mil

### DESCRIPTION

1. GSA Control Number:

9-D-Calif-1160

2. Property Identification & Location: 1LS Outer Marker Annex

ILS Outer Marker Annex March Air Force Base Riverside County, CA

The property is located approximately 6 miles southeast of March Air Force Base; two miles east of the community of Perris, on the north side of San Jacinto Avenue and just west of Dunlap Drive (vicinity map attached).

Name of Holding Agency:

Corps of Engineers Los Angeles, CA

4. Custodian:

Ms. A. J. Hildebrandt 22nd Civil Engineering Squadron March Air Force Base, California Telephone: (714) or FTS 797-4858

5. Space Data & Type of Construction:

The site is improved with a cement block 293 sq. ft. building with a slab floor.

6. Land Data:

The property is a narrow rectangular shaped parcel that contains 0.45 acre. In addition to the building, the site, which has asphalt covering, is improved with a 295 gallon storage tank and boundary fencing.

The property is situated in an area surrounded by open fields and a scattering of residences. The site is subject to flooding.

7. Related Personal Property:

None reported.

8. Holding Agency Use:

Outer Marker beacon.

9. Range of Possible Uses:

Agricultural storage or residential.

10. Utilities:

Utilities are available.

11. Transportation:

Property is in proximity to State Highway 395.

12. Outstanding Interests:

Transfer subject to any easements, licenses or permits now existing or of record.

13. Limitations on Use:

Certain building restrictions may apply due to the flooding.

14. Occupancy:

None.

15. Reimbursement:

Reimbursement to the holding agency is required except where the head of an executive agency or military department, or his designee not below departmental level, has determined and informed GSA pursuant to FPMR 101-47.203-7(f)(2) that funds are not available for reimbursement. A determination of the extent of reimbursement will be made and upon request, this information will be furnished to an agency having a need for the property.

16. Expressed Interest:

None of record.

17. Historical Data:

The property has no known historical significance.

18. GSA Representative:

Diane S. Kah, Realty Specialist Real Property Division, PBS, (9PK) 525 Market Street - M/S 41 San Francisco, California 94105 FTS 556-6875 or (415) 556-6875



APPENDIX C-4.9

IR TEL TY

#### EXCESS PLAN

Subject:

March VOR Annex, Riverside County, California GSA Control No. 9-D-CA-1188

Pertinent Data:

The Air Force has reported as excess to its requirements 2.19 acres of land. improved with one building on the containing an electric power-plant.

The Air Force and the Federal Aviation Administration (FAA) both have responsibility of control of air traffic near the March VOR. For many years the Air Force owned and operated the March VOR and supplied information from it to the FAA. Due to equipment age and Air Force staffing reductions, the Air Force transferred through GSA, the equipment to FAA on January 22, 1981. FAA now provides the information to the Air Force.

FAA has requested transfer of the property to maintain control of air traffic at full fair market value.

Economic Aspects:

Acquisition of this property by the FAA will have no adverse affect on local tax revenues nor will continued Federal use be incompatible with the surrounding area.

Environmental Assessment:

The transfer letter will cite that compliance with the National Environmental Policy Act of 1969 is the responsibility of the acquiring agency (FAA).

Summary of Values:

Acquisition Cost (prorated): \$866.97 FMV: \$10,000.00 Fair Value for Transfer: \$10,000.00 Conclusions and Recommendations:

It is concluded that a substantial benefit will accure to the Government by the proposed Federal use. The rquirement of the FAA is reasonable and part of a continuing program. It is recommended that this property be transferred to FAA at reimbursement of \$10,000.00.

Prepared by:

Realty Specialist

Approved by:

Theodore M. Bunten

SF 113 No. LA 123 March VOR Annex March AFB, CA 10 September 1980

### 18. Remarks:

- a. <u>Introduction</u>: March AFB is an active military installation assigned to Strategic Air Command. An area of that installation contains a Very High Frequency OMNI Range, known as the March VOR, which is a part of the air navigation system and which has been declared excess. March VOR is presently outgranted to the Federal Aviation Administration and that agency has expressed a desire to acquire the facility.
- b. General Description and Location: The excess property reported herein consists of 1.43 acres fee, 4.36 acres easements and permits, and
  282.38 leased acres. See Schedule B-1 for status of leases. This
  leased area has been acquired for safety purposes. The facility is
  housed in a 417 sq. foot building which contains an electric powerplant; it is surrounded by a security fence and has a parking area.
- c. Minerals: The Air Force reports there is no indication of mineral development in the vicinity of the property being declared excess.
- d. Historic or Artistic: The Air Force States "there is no possible historic or artistic value to this property." However, pursuant to E.O. 1159, 13 May 1971, Protection and Enchancement of the Cultural Environment, Federal Regulation, volume 36, No. 95, the District on 10 July 1980 queried the State Historical Preservation Officer as to any known historical significance connected to the excess property and to date we are not in receipt of a reply.
- e. Potential Flood Hazard: Pursuant to E.O. 11988, the site is subject to inundation by the overflow from the San Jacinto River in the event of a 100-year flood. The 100-year water surface elevation is 1419.5 feet above mean sea level (MSL) and the average elevation of the real estate on Drawing 654-M-7 is 1414 feet above MSL.
- f. Muniments of Title: The Chief, of Engineers, HQDA (DAEN-REP-S), Washington, D.C. 20314, legal custodian, has been requested to transfer the applicable muniments of title covering the reported Property to GSA.
- g. <u>Jurisdiction</u>: See paragraph 3, Report on Government Title, marked as Schedule B-5.
- h. Provisions of Title 10, Section 2662, are not applicable.
- i. It has been determined that due to FAA's continued operation of the excess VOR site, screening of the reported property would serve no useful purpose.

## CORRECTION

STANDARD FORM 118 DECEMBER 1953 PRESCRIBED BY GENERAL SERVICES ADMINISTRATION FPMR (41 CFR) 101-47202

## REPORT OF EXCESS REAL PROPERTY

1. HOLDING AGENCY NO.

LA-123B

DATE RECEIVED (GSA use only 3-12-84

2. DATE OF REPORT 7 March 1984 GSA CONTROL NO. (GSA use

3. TO (Furnish address of GSA regional offices)
General Services Administration
Federal Property Resources Service
525 Market Street
San Francisco, CA 94105

4. FROM (Name and address of holding agency)
Los Angeles District, Corps of Engineers
PO Box 2711
Los Angeles, CA 90053

5. NAME AND ADDRESS OF REPRESENTATIVE TO BE CONTACTED
Demey Quismorio
Real Estate Div, LA Dist, Corps of Engrs
300 N, Los Angeles St, Rm 8411
Los Angeles, CA 90012 FTS 798-5583

6. NAME AND ADDRESS OF CUSTODIAN
CDR,22d Civil Engrg Sq
ATTN: Barbara White
March AFB, CA (FTS 797-2867)

7. PROPERTY IDENTIFICATION March VOR Annex, Portion of March AFB, Riverside County, CA 8. PROPERTY ADDRESS (Give full location)

9.		10.	LAND				
USE	NUMBER OF BUILDINGS	FLOOR AREA (Sq. ft.) (2)	NUMBER OF FLOORS (3)	FLOOR LOAD CAPACITY (4)	CLEAR HEADROOM (5)	(From SF 118b)	ACRE OR SQUARE FEET
A. OFFICE						A. FEE	1.43
B. STORAGE						B. LEASED	
C. OTHER (See 9 F)	1	417				C. OTHER	76
D. TOTAL (From SF 118a)	1	417				D. TOTAL	2_19
E. GOV'T INTEREST: (1) OWNER	1	417	F. SPECIFY "OT	THER" USE ENTERED	IN C ABOVE		

11. COST TO GOVE	RNMENT		12. LEASEHOLD(S) DATA (Use separate sheet if necessary)				
ITEM	SCHEDULE	COST	A. TOTAL ANNUAL RENTAL	\$			
A. BUILDINGS, STRUCTURES, UTILITIES,			B. ANNUAL RENT PER SQ. FT. OR ACRE	\$			
AND MISCELLANEOUS FACILITIES	A (Col d)	\$ 33,504	C. DATE LEASE EXPIRES				
B. LAND	B (Col. f)	867	D. NOTICE REQUIRED FOR RENEWAL				
C. RELATED PERSONAL PROPERTY	C (Col. h)	0	E. TERMINAL DATE OF RENEWAL RIGHTS				
D. TOTAL (Sum of 11A, 11B, and 11C) \$ 34,371			F. ANNUAL RENEWAL RENT PER SQ. FT. OR ACRE \$				
E ANNUAL PROTECTION AND MAINTENA			C TERMINATION PICHTS (:_ dama)				

E. ANNUAL PROTECTION AND MAINTENANCE COST (Government-owned or leased)

G. TERMINATION RIGHTS (in days)

LESSOR

14. TYPE OF CONSTRUCTION

N/A

13. DISPOSITION OF PROCEEDS

(2) TENANT

Very high frequency range (VHF OMNI Range) at present operated by FAA under Permit DACA09-4-80-6, 5 Dec 79 (entire facility)

16. RANGE OF POSSIBLE USES

Same as Item 15; agriculture.

GOVERNMENT

17. NAMES AND ADDRESSES OF INTERESTED FEDERAL AGENCIES AND OTHER INTERESTED PARTIES

Federal Aviation Administration, Western Region

PO Box 92007, Worldway Postal Center

Chief, Real Estate Division

Los Angeles, CA 90009 ATTN: Mr. Michael J. Spitt (FTS 966-6176)

18. REMARKS

This corrected report deletes all the leases shown on SF-118B and Schedules B-1 and B-1a through B-1h. FAA is paying for the leases and will negotiate for their renewal

Also deleted are Tract 115-P and Schedule B-7 covering the said tract.

19. REPORT WILLIAM P. CHEADLE, JR.

Milny

ORF(T) 60: 1979 0-281-187 P.O. 4374

118-103 **(** 

				CO	DDECT	MOI		***	
DECE	DARD FORM				Me	101		1. HOLDING AGENCY NO. LA-123B	2. PAGE 1 OF 1 PAGES OF THIS SCHEDULE
SERVI	RIBED BY GE CES ADMINIS (41 CFR) 101-	TRATION	LAN	D				3. GOVERNMENT-INTEREST  LEASE LICENSE	GSA CONTROL NO. (GSA use only)
		SCHEDULE B-SUPPLEMEN	T TO REPO	RT OF EXC	ESS REAL PROP	ERTY		PERMIT X EASEMENT INFORMAL AGREEMENT	
			TRACT	E	XCESS REAL PROPERT	ΓY			
LINE NO.	TRACT NO.	NAME OF FORMER OWNER OR LESSOR AND ADDRESS	ACQUIRED	ACRES OR SQUARE FEET	COST	ANNUAL RENTAL	TYPE OF ACQUISITION	RESTRICTIONS ON US GOVERNMENT	INTEREST
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	401	Frank Lauda, et ux	1.43	1.43	466.97		fee/condemn		
2	402E		.76	.76	400.00		fee/condemn		
3						ļ			
· 4						<u> </u>			
5			2.5.			ļ			
6		SCHEDULES '			1000				
7	* B-2	CE Dwg 654-M-7 March VC	R Annex,	17 June	1980.				
	* B-3	Legal description File	No. 654-	M-7, 17	June 1980.				
9	* B-4	Report on Government Ti	tle	1090	<u></u>		:		
10	B-5	Jurisdiction Summary 18	rebruar	y 1980.	1054	·			
11	B-6	Attorney General's Titl	e Opinio	n 20 Jun	e 1954				
12		w/Final Judgment and I	ecree in	Condemn	ation.	<del> </del>			
13	B-8	Permit No. DACA09-4-80-	65, 5 DE	c /9, FA	A-USAF	<del></del>			
14				<u> </u>		<del> </del>			
15	·								
16	ļ	NOTE: Schedules B-1, B-	la thru	B-1h		<del> </del>		<del> </del>	1
17		& Schedule B-7 origin	ally sur	mittea		<del> </del>			
18	ļ <u> </u>	with Reports LA-123 a	na LA-12	JA are		-		-	
, 19	<u> </u>	hereby deleted and sl	ould be	removea.		<del> </del>			
۵	ļ		·5	<b></b>		ļ .		<del></del>	
21	ļ <u>.</u>	*Those portions perta	ining to	the lea	ses	·	<u> </u>		
22	ļ	and the Encroachment	Permit	pre dele	ted.	<u> </u>	<del> </del>		•
23	<u> </u>								-
24			<u> </u>	ļ		-			
25	ļ			.					
26	ļ		<u> </u>	<u> </u>					
27	<u> </u>		<del> </del>	<u> </u>		<del></del>	1		
<sup>,</sup> 28	ļ <u>.</u>								
29						<del></del>	<del> </del>		
30	<u> </u>		ļ	<u> </u>	ļ				
31	<u> </u>		<del> </del>		<u> </u>	<del> </del>			
32	1		ļ <u></u>	<u> </u>		<del> </del>		<u> </u>	
		TOTAL	2.19	2.19	866.97		- Ann		

**☆**U.S. Government Printing Office: 1977—241-530/3497

118-303

STANDARD FORM 118
DECEMBER 1953
PRESCRIBED BY GENERAL
SERVICES ADMINISTRATION
REGULATION 2-IV-201.00 118-102

REPORT OF EXCESS REAL PROPERTY

OLDING AGENCY NO. LA-123

DATE RECEIVED (GSA use only) 9-15-80

GSA CONTROL NO. (GSA use 2. DATE OF REPORT 10 Sept 80

3.	TO (Furnish address of GSA regional offices)
	General Services Administration (9DR)
	Federal Property Resources Service
	525 Market Street San Francisco, CA 94105
	San Francisco, UA 94105

4. FROM (Name and address of holding agency)
Los Angeles District, US Army Corps of Engineers, PO Box 2711, Los Angeles, CA 90053

5. NAME AND ADDRESS OF REPRESENTATIVE TO BE CONTACTED Ms. Aleta Lee, Chief, Disposal Section, Real Estate Div. L.A. District, Army Corps of Engineers 300 No. Los Angeles St. LA. CA 90612, (Fts) 798-5567, Comm 213-688-5569 6. NAME AND ADDRESS OF CUSTODIAN Commander, 22d Civil Engineering Squadron ATTN: Barbara White

March AFB, CA (FTS) 797-2867

7. PROPERTY IDENTIFICATION

March VOR Annex, Portion of March AFB,

8. PROPERTY ADDRESS (Gire full location)

18 miles S.E. of Riverside, 2 miles E. of Perris, County of Riverside, CA

9.		· SP/	ACE DATA	<u> </u>		10.	LAND			
USE	NUMBER OF BUILDINGS (1)	FLOOR AR (Sq. ft.		FLOOR LOAD CAPACITY (4)	CLEAR HEADROOM (5)	(From SF 118b)	ACRE OR SQUARE FEET			
A. OFFICE		1, 3				A. FEE	1.43			
B. STORAGE						B. LEASED	94.95 *			
C. OTHER (See 9 F)	1	417	1			C. OTHER	4.36			
D. TOTAL (From SF 118a)	1	417				D. TOTAL	100.74			
E. GOV'T INTEREST:				F. SPECIFY "OTHER" USE ENTERED IN C ABOVE						
(I) OWNER	1	417	Hi Po	• •						
(2) TENANT										
11.	OST TO GOVER	NMENT		12. LEASEHOLD(S) DATA (Use separate sheet if necessary)						
ITEM SCHEDULE			COST	A. TOTAL ANNUAL RE	ENTAL_		\$4.055			
A DUM DINGS CEDUCEUDES		34054	B. ANNUAL RENT PER	R SQ. FT. OR ACRE		\$ -				
A. BUILDINGS, STRUCTURES, UTILITIES, AND MISCELLANEOUS FACILITIES		A (Col a)	\$ <del>33,504</del>	C. DATE LEASE EXPIR	RES	See	Schedule B-			
B. LAND B (Col. f)			867	D. NOTICE REQUIRED	FOR RENEWAL		None			
C. RELATED PERSONAL PROF	C (Col. h)	8	E. TERMINAL DATE C	None						
	200000000000000000000000000000000000000		E ANNUAL DENDUAL	DELIT DED CO. ET. O.	D ACDE					

F. ANNUAL RENEWAL RENT PER SQ. FT. OR ACRE D. TOTAL (Sum of 11A, 11B, and 11C) G. TERMINATION RIGHTS (in days)

E. ANNUAL PROTECTION AND MAINTENANCE COST (Government-

LESSOR None GOVERNMENT

13. DISPOSITION OF PROCEEDS

N/A

15. HOLDING AGENCY USE

Very High Frequency Range (VHF OMNI Range) at present operated by FAA under Permit DACA09-4-80-6, 5 Dec 79 (entire facility)

16. RANGE OF POSSIBLE USES

14. TYPE OF CONSTRUCTION

Same as Item 15; agriculture

17. NAMES AND ADDRESSES OF INTERESTED FEDERAL AGENCIES AND OTHER INTERESTED PARTIES

Federal Aviation Administration, Western Region

P.O. Box 92007, Worldway Postal Center

Los Angeles, CA 90009

Mr. Michael J. Spitt (FTS) 966-6176 ATTN:

18. REMARKS

See attached

\*10.b - See Schedule B-1

19. REPORT AUTHORIZED BY NAME

DOUGLAS E. GLASS

Chief, Real Estate Division

SIGNATURE

STANDARD FORM 118-A
DECEMBER 1953
PRESCRIBED BY GENERAL
SERVICES ADMINISTRATION
REGULATION 2-IV-201.00

## BUILDINGS, STRUCTURES, UTILITIES, AND MISCELLANEOUS FACILITIES

118-20

1. HOLDING AGENCY NO.

PAGE 1 OF 1 PAGES
OF THIS SCHEDULE

LA-123

3. ANNUAL RENTAL

GSA CONTROL NO. (GSA use only)

SCHEDULE A-SUPPLEMENT TO REPORT OF EXCESS REAL PROPERTY

LINE	HOLDING AGENCY BUILDING		T	EXCESS REAL				<del>,</del>	
NO.	NO.	DESCRIPTION	COST	OUTSIDE DIMENSIONS	FLOOR AREA (Sq. ft.)	NO. OF FLOORS	CLEAR HEAD- ROOM	FLOOR LOAD RANGE	RESTRICTIONS ON USE OR TRANSFER OF GOVERNMENT INTEREST
(a)	(b)	(c)	(d)	(e)	(f)*	(g)*	(h)*		GOVERNMENT INTEREST
1		BUILDING		<del>  ``</del>	(1)	(R)	(11)*	(i)*	(j)
2						<del> </del>			
3	3053	Hi Pwr VHF OMNI Reg	6,754		(-) 417				
4			0,704	<del> </del>	(c)417	1	UNK	UNK	jer jer
5				<del>                                     </del>		<del> </del>			
6		UTILITIES & MISCELLANEOUS FACILITY	FS:						
7				l					
8	3054	Electric E/Pwr Plt	3,000					<del></del>	
9	3053	A/C Window Units (3)	550	·		[]		· · · · · · · · · · · · · · · · · · ·	
10	9033	Prim Dist Line U/G	23,450	3,050 LF				······································	
11	21016	Fence, Security	23,430	226 LF					
12	16008	Road		7 770 CV	(2500 -				
13	23017	Veh Pkng/N Organ	300	3,330 SY 78 SY	(1500 L	F)			
14			300	78 31	<del></del>				
15									
16									
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31			<del></del>	<del></del>					
32									
			34054						
*P.	afix flavor	TOTAL with symbols to denote the of	33 .504		417				

<sup>\*</sup>Prefix figures with symbols to denote type of space, as follows: (a) for office; (b) for storage; (c) for other.

APPENDIX C-4.10

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EXPLOSIVES STORAGE SAFETY ZONS-AMARCH AFB (YOUR MSG, Siic45Z SUPUL JAN 831; FOLLOWING ARE THACTS ACQUIRED TO MEET QUANTITY SAFETY DISTANCE ERIA: 462, 467, 468, 460, 471-1, 461-2, 488, 496-2, CRITERIAL

, SØ AURES 0-462 --60 ACQUIRED RY DIT AY DIT 457 RES ACRES ACQUIRED ADQUIRED BY D/T 458

40.08 ACRES ACCUIRED BY DIRECT PURCHASE 480 AND 481=1 - 41.91 ACRES 20.00 ACRES ACQUIRED BY U/T 481 = 2

482 25,89 ACRES ACQUIRED BY DIT 498+2

ACQUIRED BY DIT 149:33 ACRES

TRACT D#493##165[17 ACRES IS UNDER GRASE HHICH WILL EXPIRE

PAGE - 62 - PUBLERA1841 UNCLAS

33 SEP 53. THE ABOVE TRACTS WERE ACQUIRED TO SUPPORT A QUARTITY DISTANCE REDUCED; REMENT FOR EXPLOSIVE STORAGE WHICH WAS NOW REED REDUCED; EXTENT OF THE PERMOTION HAS NOT BEEN DETERMINED, BUT WE ANTIGIPATE THAT TRACTS DEGAS, 482; 481-1, AND 496+2 MAREOUTREMENTS IF SAFETY DISTANCES ARE RESET; . AND 496+2 MAY BE EXCESS TO OUR

WE WILL RECOMMEND THAT STORAGE BE REMOVED TO ALTERNATE LOCATIONS SAFETY DISTANCE CRITERIA CANNOT BE MET WITHOUT THESE TRACTS;

PÉRKANENT RETENTION OF TRACTS D#467, 468, 481-2 AND 482 IS REQUIRED BECAUSE OF DOG KENNEL SUPPOST PACILITIES AND DEMOLITION BURN FACILITY LOCATED THEREON.

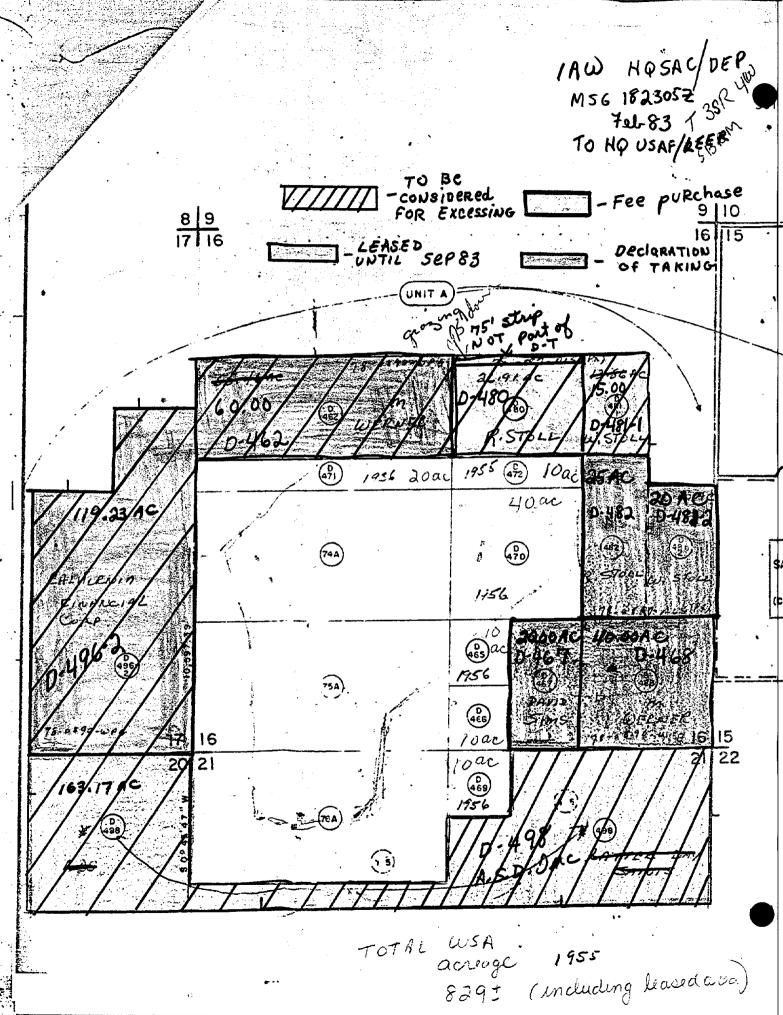
A DECLARATION OF EXCESS ASSEMBLY WILL BE SUBMITTED IN SEMPONDAYS OUR REDUCTION PLANS ARE VERIFIED.

A. IF YOU CONCUP, WE WILL REQUEST THE LOS ANGELES DISTRICT ENGINEER TO TERMINATE THE LEASE ON THACT 498. RECOMBEND ACQUISITION REPORTS BE DISCONTINUED ON THIS TRACT.

11

41641

UNCLAS



APPENDIX C-4.11

Refer To

Langley Air Force Base Hampton, Virginia 26 Janal WNRC (FRC) RG 341 ACC # 61-A-144, BOX 6/31

ALD 601-Misc

**2**5 -

SDELIKOT: Acquisition of Weel Estate, Camp Hean, California

Chief of Staff
United States Air Force
Fashington 25, D. C.
ATTEMPTOR: Director of installations

- I. Reference is made to "Report of Disposition Roard Covering Camp Bean, California," dated 29 January 1947, with particular attention to Paragraph C therein and, also, to War Department Seneral Staff Directive 12444, "Withdrawal of Additional Facilities, Camp Bean, California," to the Chief of Engineers, dated 2 April 1947.
- 2. Information contained in the above referenced correspondence indicates certain facilities located at Camp Haan, California, were not included in the original surplus report prepared by the Los Angeles Heal Catate Sub-Office to the Har Assets Administration or were later\_withdrawn from surplus, the intent being to transfer those facilities withheld to Harsh Air Force Hase under the jurisdiction of the Chief of Staff, United States Air Force.
- 3. Further reference is made to letter, this headquarters, AIS 671, subject, "lake Mathews Water Supply System," to the Chief of Staff, United States hir Force, dated 29 March 1948, wherein certain facilities located on Samp Hean were requested to be designated Class III activities and assigned to March Air Force Base.
- 4. It is requested that the following facilities as marked in red on the inclosed map (Inclosure 1), legated at Camp Haan, be designated Class III activities and assigned to March Air Force Mass:
  - a. 16 magazines, T-15001 to T-15016, inclusive.
  - b. Ordnance assumition office, T-15017.
  - c. Sutment, 7-15021.
  - d. Guard tower, T-15018.

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Subjection of seal State, Camp Sean, California

- e. 2 sentry houses, T-15019 and T-15020.
- f. 3 automotive sidps, T-3989, T-5995 and T-3994.
- g. Salvage shed, I 5982.
- h. Gun repair shop, T-4027.
- i. Ordnance warehouse, 1-4081.
- j. 2 loading ramps, 7-6516 and T-6516.
- k. Mash rack, T-3991.
- 1. 2 pump houses, 7-5990 and 7-5992.
- m. Lubrication rack, T-5986.
- n. Inspection shed, T-3985.
- O. 11 warehouses, T-4040 to T-4046, inclusive, T-4048, T-4049,
  - p. Quartermaster office, I-4058.
  - q. 4 post utilities storage sheds, T-4058 to T-4061, inclusive.
  - r. Post Engineer office, T-4057.
  - s. Bakery, T-4068. /
  - t. Cold storage plants, T-4050, T-4052 and T-4053.
  - u. Ice storage building, T-4055.
  - w. Propane plant, T-4054.
  - w. datehouse, T-4085.
  - x. Locomotive shelter, 7-4062.
- y. Electrical distribution system to include lines from Sandra sub-station through distribution center to all facilities requested herein.

He Pac, Langley at Mase, Campton, .a.

Subject in a cal detate, Camp Hean, California

- z. Sewage s) stem to include sewer lines connecting all facilities requested herein with the sewage disposal plant.
- as. Cas distribution system to include any existing lines connecting propens plant with buildings requested.
- bb. Gailroad track to include all turnouts and sidings in Camp Hean.
  - co. Fancing to include all fencing in and around Camp haan.
  - 5. It is further requested that action be taken as outlined below:
- a. All Government owned land comprising Camp Easn and the magazine area (as indicated on Drawing No. 48-27, Inclosure 2), 4,218.601 acres, be transferred from Department of the Army to Department of the Air force and
- b. Transfer leases for those land areas as indicated in yellow (presently leased to the Department of the Army), and, renew leases for that area marked in blue (land that was previously leased to the War Department, lease cancellation baving been effected in 1945) as indicated on Drawing No.
  - 6. Request for above additional facilities is submitted due to:
    - a. Reed for additional storage space for organizational equipment.
- b. Heed for additional ordnance and transportation shops and storage facilities.
- c. Land areas required for installation of combined communication site; training area for engineer troops; safety some aurrounding igloc area, and railroad spur trackage for loading and unloading of assumition; avigation easements for Sunways 2, 3 and 4, March Air orce Base, and, rights-of-way essements for utility service lines.
- 7. Request for additional leased lands as outlined in Paragraph Sb, above, required for safety area surrounding the Government owned magazine
- a. Storage facilities at the Camp Haan assumition area presently erving March Air force Base consist of 16 igloo type magazines, each with a floor space of 20' x 40'. The igloos are wooden construction, earthcovered and unbarricaded. The conclusion that all igloos are unbarricaded is based upon interpretation of the term "barricade" as defined in Til 9-1904.

re Do, Langley as case, campton, two

Subject; Acquisition of eal estate, Camp Sean, California

- b. In order to comply with quantity distance regulations governing the storage of assumition and explosives as set forth in TH U-1900, an area greater than that now owned by the Government is required. The following factors have been considered:
  - (1) Amount of explosives that can be stored per iglee by volums and/or weight.
  - (2) Inner magazine distance.
  - (3) Mission of March Air Morce Base.
  - (4) Wagazine to boundary distance.
  - o. The amount of explosives that can be stored per igloo by volume or weight is limited to 100,000 lbs. The amount of explosives that can be stored per iglos based on inner magazine distance is, also, 100,000 lbs. The present mission of March Air force wase does not require a concentration of explosives in excess of 100,000 lbs. per igloo.
  - d. Quantity distance regulations as set forth in TH 9-1900 for Classes 9 and 10 explosives require a distance of 5,680' between igloos containing 100,000 lbs. of explosives and inhabited buildings. This distance is calculated on an unbarricaded igloo (reference green line on Drawing No. 48-27, Inclosure 2). In the event housing projects or other activities should be constructed in the vicinity of the present amounition storage area on property not controlled by the Government, a limitation of 5,630' between the nearest magazine and such property should be imposed to protect life and property in the event of an explosion.
    - e. The above listed requirement of 5,650' can be reduced by constructing barricades around each of the 16 igloos, and distance requirements between the iglees and the nearest inhabited building can be reduced to 1,816' (reference red line on Priwing No. 48-27, Inclosure 2).
    - f. The construction of barricades around each igloo would involve new work and expenditure of approximately \$4,587.50 for each igloo, or, \$72,910.00 for the total of 16, the barricades consisting of a concrete retaining wall, backfilled with earth.
    - g. The safety area, which extends across Allessandro Boulevard to the North of the magazine area, can be reduced by restricting the first 4 igloos located on the extreme North and of the magazine area to the storage of Classes 1, 2, 5, 4, 5 and 8 ammunition. By accomplishing this, the North boundary of the area required will be the South side of Allessandro Boulevard.



eq Tag, langley of Gase, samptos, a.

Subject: Acquisition of sal satate, Jamp Fash, Salifornia

h. The present and possible future commitments for ordnance ammunition storage assigned March Air Force Base, the high cost of constructing barricades as outlined in Paragraph 7f above, and the fact that the magazine area of Camp Hean has been included in the master plan for March Air Force Base, necessitate the acquisition of additional lands required for safety areas. It is believed that leasing these lands would involve less expense to the Government than the cost of new construction required for barricades.

FOR THE COMMANDING GENERAL:

2 Incls

1. Hap of Camp Haan (in trip)

2. Drawing No. 48-27(in trip)

Copies furnished: CG, Twelfth AF CO, 1st Ftr Wg

5

APPENDIX C-4.12

Payona Niguel PE, 290 Pamp+lan: Class Surpius Data [2/5] Box No. 57

25 August 1947 Camp Haan Additional Area to be Transferred to March Field File: 260

A parcel of land situate in the County of Riverside, State of California, being a portion of Sections 15, 22 and 23 all in Township 3 South, Range 4 West, S.B.B.&M. described as follows:

Beginning at the point of intersection of the East - West quarter section line of said Section 15 with the Westerly line of the 100 foot wide right of way of the Atchison, Topeka and Santa Fe Railway Company, said point being N. 890 13: E. 2041.10 feet along said quarter section line from the center of said Section 15; thence S. 190 56' E. along said Westerly right of way line 1270.3 feet; thence, at right angles to said right of way line, S. 700 041 W. 352 feet; thence, parallel with said right of way line, S. 190 56. E., 3128 feet; thence, at right angles, S. 700 04' W., 394 feet; thence, parallel with said right of way line, N. 190 56; W., 4593.9 feet, more or less, to an intersection with a line that is parallel with and distant Southerly 60 feet, measured at right angles, from the said East - West quarter section line of Section 15; thence Westerly along said last above mentioned parallel line 3912 feet, more or less, to the West line of said Section 15; thence Northerly along the West line of Section 15 to the Northwest corner of san section; thence Easterly 3692.5 feet, more or less, along the North line of said Section 15 to its intersection with said Westerly right of way line of the Atchison, Topeka and Santa Fe Railway Company; thence along said right of way line S. 190 56' E. 2786.45 feet to the point of beginning.

EXCEPTING from the above described parcel of land the portion thereof described as follows:

The West 935 feet of the North one-half  $(N\frac{1}{2})$  of the Northwest one-quarter  $(NW\frac{1}{4})$  of Section 15, Township 3 South, Range 4 West, S.B.B.&M.

Containing 281 acres, more or less, including portions thereof within public roads or streets.

Written by <u>J.C. P.</u>
Checked by <u>A.5</u>

### APPENDIX C-5.1

SITE INSPECTION SAFETY PLAN

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

March AFB Site # J09CA001100
March AFB Rifle Range Site # J09CA047600
March AFB Poorman Range Site # J09CAT82600

#### 1. REFERENCES:

- a. Safety Manual, CELMS-PM-M, 16 Sep 93 w/ Ch 1
- b. SOP for Reporting Ordnance and Unexploded Ordnance (UXO), CELMS-PM-M, 15 Nov 93
- 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 material 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 the operation. All Actions must comply with the common sense rule!
- b. A map of the nearest hospital will be attached to the final, signed version of this SSHP and will be in the hands of the team prior to arriving at the site.
- 3. MISSION: Reconnoiter, document, and photograph areas on March AFB, the Rifle Range and the Poorman Range suspected to have been used in conjuction with explosive munitions and/or chemical warfare material and may be potentially contaminated with UXO and/or chemical warfare material. Selected portions of these sites will be walked as determined by the current physical characteristics of the site.
- 4. SAFETY PRECAUTIONS: All team members will stay withing sight of each other while on site. A first aid kit will be on hand at all times when on site. 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, drinking, or smoking while conducting the site survey. 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 and within hearing distance. Cellular telephones should be carried to facilitate and expedite calling for emergency medical services.
- 6. NATURAL HAZARDS: March AFB is located in developed urban area and no unusual natural hazards are anticipated. However, each team member is responsible for maintaining an awareness of her/his surroundings and anticipating potentially hazardous situations.
- 7. ORDNANCE HAZARDS: No specific ordnance hazard areas have been identified. The team will inspect training areas for the potential of training munitions (to include components of chemical agent identification kits) remaining on the site.
- 8. EMERGENCY PROCEDURES: Each team member is responsible for rendering first aid as required. In the event of an injury caused by an explosion, no one will approach the injured until signaled by the safety officer. If the safety officer is the one injured the project manager assumes responsibilty for site safety until all personnel are removed from the site.
- 9. Safety is everyone's business. No unnecessary risks will be taken to obtain photos or other data. Team members are responsibel 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 a team who can have a severe allergic reaction to a bee sting.

### Improtant Phone Numbers

EMT/Fire Department - 911 Law Enforcement - 911

Huntsville Safety - (205) 955-4968

SSHP reviewed by

\_

Encls

Safety Briefing Attendance

2. Hospital Strip Map

### SITE SURVEY SAFETY BRIEFING

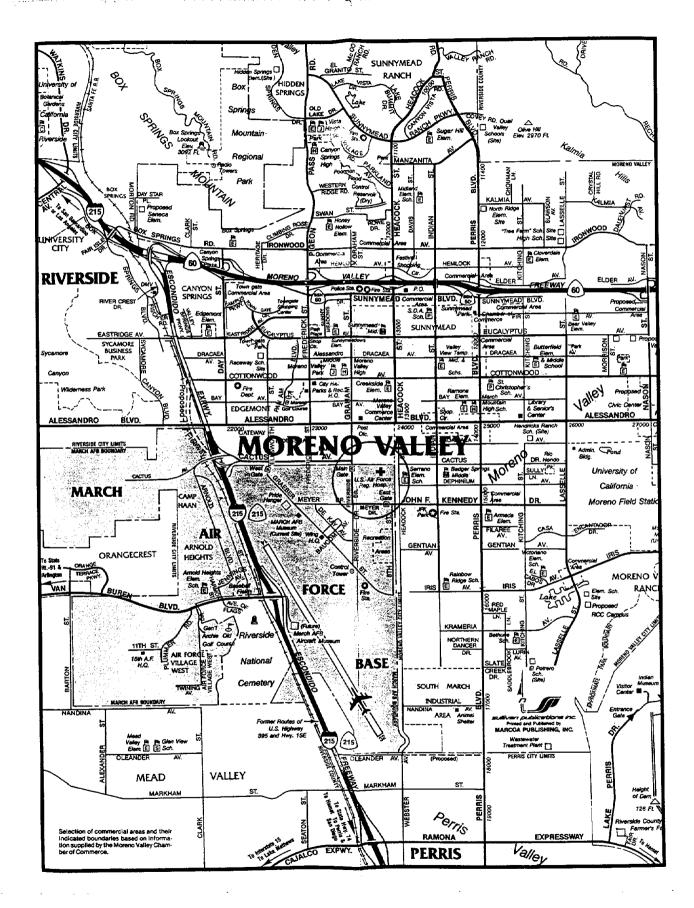
Site: March AFB, March AFB Rifle Range, and March AFB Poorman Range Safety Officer: George Sloan Personnel Protective Equipment (PPE) Site Hazards \_\_\_ Work Clothing \_\_\_OEW \_\_\_ Gloves \_\_\_CSM \_\_\_ Hardhat \_\_\_\_ HTW \_\_\_ Hearing Protection \_\_\_ Slips, Falls, Trips \_\_\_ Safety Shoes \_ Wildlife \_\_\_ Safety Glasses \_\_\_\_ Vegetation Weather Precautions \_\_\_ Cold/Heat \_\_\_\_ Severe Weather Attendees Print Name and Organization Signature Chelles App

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APPENDIX C-5.2

SITE VISIT TRIP REPORT

CELMS-PM-M 28 April 1994

### MEMORANDUM FOR: Mike Dace

SUBJECT: Research conducted at Laguna Niguel Regional Archives and Site Visit to Camp Haan and March Air Force Base, Site Numbers J09CA027900 and J09CA001100, Riverside, California on 19 - 22 April 1994.

### 1. SLD personnel on trip:

Rochelle Ross PM-M George Sloan PM-M

The two personnel above flew to Orange County, California to conduct research at Laguna Niguel Regional Archives for March Air Force Base and Camp Haan. Research and a site visit would also be conducted at March Air Force Base.

- 2. On 19 April, the team arrived in Orange County and drove to the archives to begin research. Record Group 270, Boxes 57-60 were researched for Camp Haan. The findings aids were reviewed for additional information to be copied on 20 April.
- 3. On 20 April, the team conducted and finished research at the Regional Archives. Record Group 77, Boxes 77-88 were reviewed for information on March AFB and Camp Haan. Several drawers of maps were also reviewed for information on March AFB. Information copied consisted of Class and Surplus Data for Camp Haan (information is also valuable for March AFB) and maps for both Camp Haan and March AFB.
- 4. On 21 April, the team drove to March AFB to conduct interviews and research at the Environmental Office with John Sabol and the Real Estate Office with Benedetta Caiazza. First, George Sloan and Rochelle Ross met with John Sabol to review information discovered on March AFB including a Poorman's Range (no site number) east of the base, a Rifle Range (Site Number, J09CA047600) north of the base, and activities which occurred just south of the Weapons Storage Area (WSA). John confirmed locations of both ranges and that an ammunition disposal area was south of the WSA. This property is no longer owned by DOD. The Real Estate Officer, Benedetta, had pulled some files for our review prior to our arrival. The files discussed the land south of the WSA. Included in these files was a map identifying the location of an ammunition disposal area within this area.
- 5. After the research was completed, the team acquired Quad maps and performed a site visit on the FUDS properties of March AFB. The team drove to the Poorman Range first. This area is now a small park near a residential area. No ordnance was discovered. Next, the team drove to the rifle range. This area is all residential. No ordnance was discovered at this FUDS location either. Just north of March AFB was property which was used as a safety fan for a skeet range. This area is still an open field. A portion of this field had been

plowed and was in crop. No ordnance was found. The team then drove to the location of the ammunition disposal area. The exact location is still an open field. Just to the south is residential. Within the open field, in the area of the former disposal area, were several children playing and riding their dirt bikes. No ordnance was discovered on the surface.

6. The team returned to St. Louis on 22 April.

ROCHELLE ROSS

Bochen A

Project Manager

GEORGE SLOAN Safety Officer

### **APPENDIX C-6**

ADDITIONAL REPORTS, STUDIES, LETTERS, AND MEMORANDUMS NOT OFFICIALLY INCLUDED IN THE BODY OF THE REPORT

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

**FOR** 

### MARCH AIR FORCE BASE AND ASSOCIATED SITES

### RIVERSIDE, CALIFORNIA

### DERP-FUDS SITE NO. J09CA001100, J09CA047600 AND J09CAT82600

### APPENDIX C-6

## ADDITIONAL REPORTS, STUDIES, LETTERS, AND MEMORANDUMS NOT OFFICIALLY INCLUDED IN THE BODY OF THE REPORT

- C-6.1 Commanding Officer March Field.
  - 1949 Correspondence to Chief Chemical Warfare Service regarding chemical loading facilities, dated August 29. Record Group 175, Entry 1, Box 33, File 121.2, National Archives and records Administration (NARA), Suitland, MD.
- C-6.2 Gardenhire, S.C. Colonel, Q.M.C., Constructing Quartermaster. 1931 Correspondence regarding completion report for the Air Corps Warehouse, dated December 21. Record Group 77, Entry 391, Box 194, File: March Field, 2-A, NARA, Suitland, MD.
- C-6.3 Hardy, Donald L., Asst Lieut, Air Corps, Ass't Adjutant.
  1947 Correspondence to Chief Chemical Warfare Service regarding storage facilities for smoke material, dated April 3.
  Record Group 175, Entry 1: General Correspondence, Box 556, File: 600.1/41-70, NARA, Suitland, MD.
- C-6.4 Porter, William N.
  - 1941 Letter to Major Norman C. Gillett, CWS, regarding trucks and trailers for the Chemical Companies, dated February 24. Record Group 175, Entry 1, Box 328, File: 600.1/207, NARA, Suitland, MD.
- C-6.5 U.S. Army Corps of Engineers.
  - 1934 "Completion Report of Ordnance Warehouse at March Field," dated September 25. Record Group 77, Box 195, File: 4, NARA, Suitland, MD.

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

**FOR** 

### MARCH AIR FORCE BASE AND ASSOCIATED SITES

### RIVERSIDE, CALIFORNIA

### DERP-FUDS SITE NO. J09CA001100, J09CA047600 AND J09CAT82600

### **APPENDIX C-6**

## ADDITIONAL REPORTS, STUDIES, LETTERS, AND MEMORANDUMS NOT OFFICIALLY INCLUDED IN THE BODY OF THE REPORT

C-6.6	1936 "Completion Report, Target Range, including Demolition of Buildings," dated June 30. Record Group 77, Engry 391, Box 195, File: 5, NARA, Suitland, MD.
C-6.7	1941 "Completion Report on the Design and Construction of March Field Additions," dated June 15. Record Group 77, Entry 391, Box 196, File: 8, NARA, Suitland, MD.
C-6.8	1952 "Design Analyis, March Air Force Base, Ammunition Storage," dated March 7. Record Group 77, Box 77, File: Military Construction Projects, Administration, Pacific Southwest Region, Laguna Niguel, CA.

AIR BASE HEADQUARTERS

CT: 470.71

Office of the Commanding Officer MARCH FIELD, RIVERSIDE, CALIFORNIA.

Aparest 29, 1939.

Juitlan Rbn 1775 80x 33

Subject: 0 ... Funds for Charical Localing Facilities.

Chief. Chemical Mariere Jervice. Anchimaton, 3.0. 1'O:

1. Meference radio this office, above subject, this date. the following detailed information is furnished in support of the request for ninety-four dollers, C. b.d. funds for chemical leading facilities at this base:

> &. Sptimates for the required material are as follews: (1) Pipe, pipe fittings, welves and other accessories. exclusive of the required monel-matal home, is estimated (2) Materials required for a loading ramp, twelve masil convayor racks, and three large storage racks, is esti-

b. The material as in La (1) shows is deemed urgently speeded at this base for leading chemical spray tanks with the various chemical agents. Jeweral unsatisfactory attempts two been made in the most by the Base Chemical Section to load these tanks with FS snoke material woing garden bese or other rubber hose, and such odd and aged pipe, fiftings, wilves and other antiquated in terial as available.

c. The material as in 1 a (2) above is necessary to provide-12 small conveyor racks.

l loading ramp.

3 large storage racks.

(1) 5mall conveyor racks are resential to made chorical epray tanks, especially when filled with chemicals. Twelve of those will be sufficient for a mission of six mirpleness (2) One loading ramp is mecessary to permit personnel to handle the drums of chemicals such as TS smoke material which weight approximately 850 pounds each. The apecification for this rack, which are already drawn up, provide it to be portable or attachable to any of the tures storage racks. (3) Three storage racks are necessary to storing the chemical drums at a sufficient height from the ground to permit the transfer of chemicals from drums to syray tanks with a gravit flow. Also due to no storage abod or protection emilable for those draws, it is very desirable to mye them elevated in this manner from the ground for protection during inclement wastaer.

## Signal Corps, United States Army

### Received at

War Department Message Center, Room 3441, Munitions Building, Washington, D. C.

3-9313 П. в. сотянивые размина оста

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LARCHFIELD CALIFORNIA 10604 AVOILT SITH 1970

CHIEF CHEMICAL MARFARE SERVICE

EASHINGTON D C

TWO FOUR SIX NAUGHT REQUEST NINETY FOUR DOLLARS CWS FUNDS

TO PURCHASE MATERIALS FOR LOADING EQUIPMENT AND FACILITIES OF BULK

CHEMICALS FOR THIS BASE FOR FREE LABOR WILL BE FURNISHED

BY THE AIR CORPS UTILITIES AT THIS STATION STOP LETTER

TITH DETAILED IMPORMATION FOLLOWS STOR REQUEST RADIO REPLY END

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## OFFICE OF THE CONSTRUCTING QUARTERMASTER MARCH FIELD, RIVERSIDE, CALIFORNIA.

December 21, 1931

in reply refer to:

Completion Report. SURIECT:

Installing Steel Partitions in Air Corps Contract W-6694-qm-304, dated Sept. 26, 1931, 4000 Field. Calif.

The Quartermaster General, Washington, D.C. TO:

Attn: Construction Division:

GENERAL: This contract is for installing steel partitions in 1. Air Corps Warehouse, Contract W-6694-qm-304, with Cresmer Manufacturing Company, 2801 Third St., Riverside, California.

#### CONSTRUCTION DATA: 2

- The Government furnished steel sash and windows which had (a) been salvaged out of wrecked hangars for the installation of partitions in Air Corps Warehouse, as shown in plans and specifications and drawings attached.
- The purpose for this installation is to keep out dust and (b) make this building completely fire proof.
- Bids were invited for this steel partition, but it was (c) deemed that the price was toohigh, and as a consequence new bids were asked for specifying lighter grade of steel Bids were opened the second time on September 11, 1931, low bidder, Cresmer Manufacturing Company.
  - (d) The Cresmer Manufacturing Company did the installing, and the steel was manufactured by Soule Manufacturing Company. Installation was made in a very satisfactory manner.

#### 3. FINANCIAL DATE:

\$4600.00 Amount of Contract (a)

Raid from \*ppropriation: ACA.N.(E) AC 619-P-425 A 50 NY

Work Started October 1, 1931. Work Completed: December 10, 1931. Date of Final Payment - December 11, 1931. 4. RECOMMENDATIONS: None.



W. C. GARDENHIRE, Colonel, Q.M.C., Constructing Quartermaster.



SUTTLAND, MD

R6:175

Box: 55%

Folder: 600.1/41-76

Entry: 1

AIR BASE HEADQUARTERS
Office of the Commanding Officer
March Field, California.

DLH/ ipc

600

April 3, 1937.

19346

SUBJECT: Funds.

TO : Chief Chemical Warfare Service, War Department. Washington, D. C.

- l. Request information as to whether the Chemical Warfare Service has any funds available for the construction of a magazine or warshouse for chemical munitions at March Field, California. Attention is invited to the fact that this Base must have storage facilities for a maximum of 45,000 lbs of smoke material in peace time and a much larger amount of space for the storage of toxic chemicals during an emergency.
- 2. Further request information as to whether such funds, if available, might also be used in the construction of a permanent gas chamber.

For the Commanding Officer:

DONALD L. HARDY. 1st Lieut., Air Corps. Ass't. Adjutant.

1937

M&S/HILL, el

april 3/m

CHS 600.1/46 let Ind.
War Dept., 0-C of CHS, April 8, 1937. To: Commanding Officer, Air Base Head-quarters, March Field, California.

- l. The Chemical Marfare Service has no funds available applicable to the construction of magazines or warehouses for chemical munitions, and it is believed that no such funds will become available to this Service in the future.
- 2. The construction of such buildings is a function of The Quartermaster General and request for funds for this purpose should be forwarded through the proper channels to The Adjutant General.

For the Chief, Chemical Marfare Service:

MAIG DHEMONJIAN Lieutement Colonel, Chemical Marfare Service Executive

APR 9 1837

Suit Knol Pb 1975 Box 328 Entry #1

#### HEADQUARTERS GHQ AIR FORCE

OFFICE OF THE CHEMICAL OFFICER

Langley Field, Virginia February 24, 1941

Major Norman C. Gillett, CWS Office of the Chief of Chemical Warfare Service Washington, D. C.

Dear Norman:

As to the trucks and trailers at Edgewood, I would be glad if you would send two of each to Savannah, which will give the Chemical platoons there one each. One pair should go to the First Chemical Platoon of the First Chemical Company now at Selfridge Field. I understand that this outfit already has some transportation. The fourth pair can be held at Edgewood Arsenal until the Manchester platoon is organized and at its station. If you have anything that shows where transportation has been distributed, I would be glad if you would let me have a copy of it.

Something should be done about gas chambers for the Air Force. There are some makeshifts at the old stations but nothing at all at the twenty-three new ones. Do you have any plans and specifications for such structures? Heretofore what have gone up have been chiseled out of post funds, but I think we should start a regular program and would be glad to have your advice as to how to do it.

I understand there are some collective protectors at Edgewood Arsenal. A letter this morning from McLeod asks how he can obtain two for a gas proof dugout that is being built by the Engineers for the Air Force at March Field. He is anxious to get two by rail in order that they may get there in time to be installed properly. He also wanted some funds for use in connection with this somewhat elaborate installation. The amount he specified was \$500. I have told him to try and get the money from Air Corps training funds. Do we have any money of our own that could be used for such a purpose?

Thanks for all your trouble.

WILLIAM N. PORTER Colonel, C. W. S.

File 144m

February 25, 1941

Colonel William M. Porter, CWS Headquarters GHO Air Force Langley Field, Virginia

Dear Colonel Porter:

In connection with the distribution of trucks and trailers mentioned in your letter of February 24, Jerry Kellogg tells me that there are already two trucks and two trailers at Savannah. These tracks and trailers, according to Kellogg, accompanied certain Air Corps organisations when they were transferred from Barkedale Field to Sevenneh. Our records do not indicate whether or not this is correct. Heither so our records show what transportation is on hand at Selfridge Field. We are attempting to verify this by radio. When definite information has been received I will pass it on to you so that you can give us definite instructions as to the distribution of the trucks and trailers.

With reference to the gas chambers, I am enclosing a drawing 700 - 278, which I borrowed from the Training Division, showing the details of a gas chamber. Colonel Wallington requests that you return the drawing to us after you have looked it over. I think proper procedure is for GHQ Air Force to submit a letter to The Adjutant General requesting the construction of gas chembers at the post at which these installations are required. The letter will then be forwarded to us for comment and we will concur in your recommendations (I think the front office will).

The only collective protectors at the Edgewood Chemical Warfare Depot are those in the continental War Reserve for use in coast artillery installations. These are not the type for use in a degout at Earch Field; neither are they available for that purpose. A field collective protector has been developed for use in degouts. However, none have been manufactured up to the present time and, of course, none are available for shipment to March Field. I understand that the Fourth Supplemental Estimate for the Fiscal Year 1941, now being considered by Congress, provides for a certain number of field collective protectors for the Air Corps. When this bill is passed, procurement of these protectors will begin immediately.

I think the above covers about everything you mentioned from your letter.

Sincerely.

26 1941 HORMAN D GILLET Major, C. W. 8.

l Encl.

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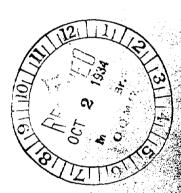
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LARCH PERLD, RIVLRSIDE, CALIFORNIA.

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1 9 5 4.

Building No. 28



## WAR DEPARTMENT OFFICE OF THE CONSTRUCTING QUARTERMASTER MARCH FIELD, RIVERSIDE, CALIFORNIA

Jordanber 25, 1954

IN REPLY REFER TO: 030 J 1.5 ....

Joughation Asport, Ordnande Arshause, Larch Field.2 Subject:

To:

The Quartermaster General, Construction Division, Washington, D.J.

(1). General. - This contract, % 6394-qm-561, is for the construction and completion of an Ordnance Warehouse, at March Field, California, with Hyers Bros., of Bos Angeles, Calif.

(2). Description of Jompleted Project .- The Ordnance Warehouse is a one story building 122' 10" long and 68' 3" wide. The building consists of a storage room, repair shop and an .. office room. Footings and floor slab are composed of reinforced concrete. Above the floor slab is a steel frame with hollow concrete block units to top of window frames, then a copper cornice and A.F. ... roofing (Gable).

In addition to the work required by the contract, Change Order "." was issued for the construction of an additional partition and room in the storage room; additional room in office room; a steel sliding window between the office and

repair shop.

Jhange Order "E" was issued for the construction and installation of guard bars to three windows.

The water piping from main to building consisted of 120' 0" of 13" Gal. ... pipe.

Gas piping consists of 150' of 12" W.I. pipe from 1ding.

main to building.

Sewer lines consists of 46' of 6" T.C. pipe and 10' - 4 Ex. H.C.I. pipe from new manhole to building.

b. Roads and walks. - New 6" reinforced concrete roads were constructed around three sides of the building. Sidewalks 5'-0" wide was constructed from the building to the main road, in front of building to "S" street.

c. Railroads .- Provision was made for the removal of sidewalks and roads where the railroad may be extended.

d. Electric distribution - Transformer was placed on pole and connected to building with parkway cable underground. 135' of cable with 5 #4 wires was ased.

- chering small arms igania kanta•
- consists of 049 acres of Jovernment owned land on prising the Lag of sec ab, and highor Sec. 24, It is located about ten miles postabast of kiverside, Flifernia, on the Liverside - San Ji jo stutu Hijuway.
  - (b). Flot plan attabled.
  - (o). Lame plate data.~

Alectrical: - Fransformer.

Infgd. by Penn. Trans. Co., S MVA Sing. Phase, Oisc. 60 dyc. 55° C. Voltage 2150-2360-2400-4160-120-240. Spec. 1010-8 Ser.ho. 699-4. Located on pole at "3" street.

Meter: "Westinghouse"

Single Phase, volts 115-230 3 tire, 60 cyc. 15 amp., Ser. lo. 11635272. Located in repair shop.

Jirquit breaker: - "Lestinghouse"

Type MK-31, 125-250 volts, 15-50 amps. Located in repair shop Panel Boards: "Westinghouse"

Type L.L.J., main amps. 100, velts 125-250, Ser. No. 522740. Located in repair shop.

Motors (4): (One on each celing type heater Size 1/15 HP. Type KH "GE". Volts 110, 60 cyc. 860 RPM, model 5KH53CA128.

Heaters:-

Pacific Gas Radiator Co. Size 75 UI. Max. hourly input 75000 ETU. hax. hourly output 56250 BTU.

Heating Jabinet .- "Thermolator" mfgd. by Pac. Gas. Rad. Co. Size 2, No. 815, 15000 BTU hourly input Gas Meter. - Metric Metal Works. #877166. Jut-out. "Reliance" Type A. Regulator .- "Reliance" Type H.

(d).

- Photographs attached to miscolland Soil data. The soil consists of hard decomnosed granite with about two feet of top soil. No piling necessary. Bearing capacity 3 to 5 tons per square foot. The minimum depth of ground water below the surface is approximately 60 feet. Bed rock is encountered at approximately 250 feet.
- Jonstructed in accordance with plans No's. 3694-155, 652-312, -313, -314, -315, -316, 634, 2-161, 652-316.1, 634.2-163.2, 695-281, 6694-203MF and specific ations No. 9760-D.
  - (g). Guarantee attached.

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# COLPLETION REPORT

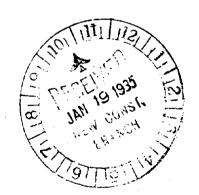
OF

ordnance Magazines

March Field, Riverside, California.

1 9 3 4





Thomas In

# WAR DEPARTMENT OFFICE OF THE CONSTRUCTING QUARTERMASTER MARCH FIELD, RIVERSIDE, CALIFORNIA

January 15, 1935.

IN REPLY REFER TO: 633 C-NB NF

Subject: Completion report, Ordnance Magazines.

To: The Quartermaster General, Construction Division, Washington, D.C.

(1). General. This contract, W 6694-qm-579, is for the construction and completion of four Ordnance Magazines, sump and fence, located near the south west corner of the field at March Field, California, with De Camp Hudson Co. 1td., 1277 West 24th St., Los Angeles, California as contractors.

(2). Description of completed project.

l. (g). This project consists of four concrete magazines, 3 units of which contain 64 sqft. each and one unit 120 sqft. of storage space, the major part of which are underground. They are thoroughly damp-proof with four inches of sand between them and the original earth. At the base of the sand fill is a drain tile 4" in diameter with joints wrapped with burlap. This drain tile together with cast iron drain at entrance to magazines are connected to a 6" vitrified pipe sewer which leads to a concrete sump. The sump is draine by means of an automatic electric driven pump which empties out on the surface of the field.

Water for this project was furnished by the U.S.

and hauled to the site by the contractor.

Electricity was brought to this project by means of a 3500 V., 2 conductor #10 wire, rubber insulated parkway cable to a  $1\frac{1}{2}$  KV transformer. This in turn was connected to the electric motor driven pump.

The border lights of the field were tapped and connected to a 6.6 amp. 60 cycle transformer to operate six 100 watt, 115 volt lamps on secondary to operate the fence obstacle lights by means of a 2 conductor #8 wire 600 volt parkway cable.

3. Constructed for the Ordnance Department.

4. Constructed for the storage of Ordnance material.

5. March Field consists of 640 acres of Government owned land, comprising the E 1 of Sec. 23, and the W 2 of Sec. 24, T 3 S, R 4 W., S.B.B.M. It is located about ten miles southeast of Riverside, Calif., on the Riverside-San Diego State Highway.

(c). Summ pump. - Wesso seles Jo., 951 Folsom st. San Prancisco, Unlif.

deneral electric, dual volt type. Lodel 5 SCR 75 AA 4, Type SCR Frame 75 A ...oto22.-3/4 HP, 750 RPH, 60 Cyc. 110 V., 10 Amp. 220 V. 5 amp. Serial Lo. 1812748 40° Copen.

Westinghouse 348295 Safety Coil G (Fence Lights) 66 amp. 60 cyc. 750 watts 115 volts.

Sec. 6.5 normal L voltage 6900

1을 KVA continuous 55° č rise Transformer.-3.70 impedence @ 2400 V 750 C (Pump)  $2\frac{1}{2}$  gals. oil. Style 804040

Serial 2001711, voltage rating 2400/4160 - 120/240 60 cyc. 2500/4330 -125/250

Westinghouse, type O.B. 5 amp. 115 volts single phase. K.H. 1/31 S 425952 Meter.-Serial 10 177 167, 2 wire 60 cyc. Newark, N.J.

Photographs attached.

Soil data .- The soil consists of hard decomposed granite with about two feet of top soil. No piling necessary. Bearing capacity 3 to 5 tons per square foot. The minimum depth of ground water below surface is approximately 60 feet, and bed rock is encountered at approximately 250 feet.

Plans consist of drawings No's. 6694-183 and

6694-183, and specifications No. 51-E.

(g). All work guaranteed for a period of one year from (3)date of acceptance.

Construction data - The conditions existing at the commendement of the work were that the ordnance supplies were stored in the open in the sewarage disposal plant enclosure. The southwest corner of the field was clear of other structures.

Work was started September 1, 1934 and completed Novem-

ber 14, 1934.

(b).1. The contractors organization consisted of Mr. C.D. Hudson as superintendent, 1 cappenter foreman, ditch diggers and laborers. Laborers were secured from the local National

Employment agency in Riverside.

2. Excavation was done with a Barber-Greene vertical boom crawler mounted ditcher. Concrete was poured with a 2-bag Koenig mixer. Forms were built of ply wood in Los Angeles and transported KD to the field and assembeled. work was done with a road grader, Caterpillar 30 tractor, tumble bug and scarifier.

3. No serious difficulties were encountered except that the ground was exceptionally hard.

The contractor executed the work in a very satisfactory manner.

Progress chart attached. (c).

Supervision was under the Constructing Quartermaster and Superintendent of Construction.

## Tinansini Tyy

Benkins on,- 0-3 n - n san De. Et ., 1276 - Sett Ut., Les Linklis, Dolla.

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Jonthast.... J8841.00 D/Mass Miscl. 659.00 J8500.00

Date of final payment Fov. 14, 1954.

Jontain, J. M. Jorps, Jonstructing Quartermaster

1. There ), an explained right showing location of producted in accordance with attached leads, regressible for notation on the posture.

JIMOK

2 Incis.

MEMORANDUM FOR Mr. Wilcox

May 16, 1935

SUBJECT: Corrections to map - March Field.

1. Notation has been made on the boundary map of March Field, Calif., showing the location of Ordnance Magazine No. P-100, in accordance with the attached blueprints.

KPG 2 incls n/c ANDERSON

. 5

Sin

DE CAMP HUDSON CO. LTD.

Construction Engineers
and
General Contractors.

1277 West Twentyfourth St.
Los Angeles, Jalif.
FRUspect 3382

Movember 14, 1934.

The Constructing Quartermaster, March Field, Riverside, Calif.

Dear Sir:

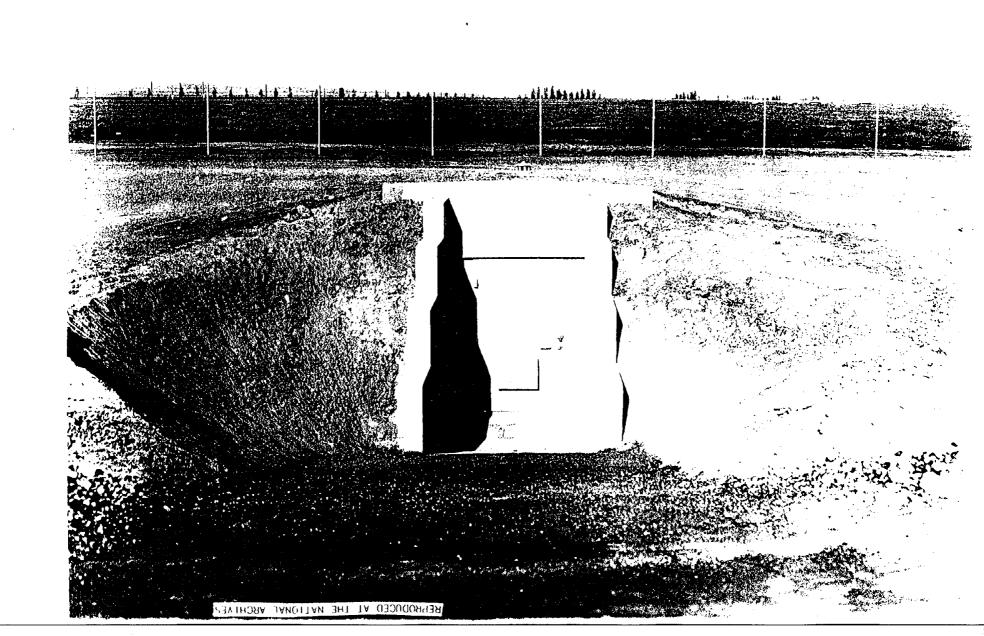
You are hereby advised that the work contemplated by contract W 6694-qm-579 dated August 17, 1934, has this date been completed according to the terms of the contract and awaits your final inspection and acceptance.

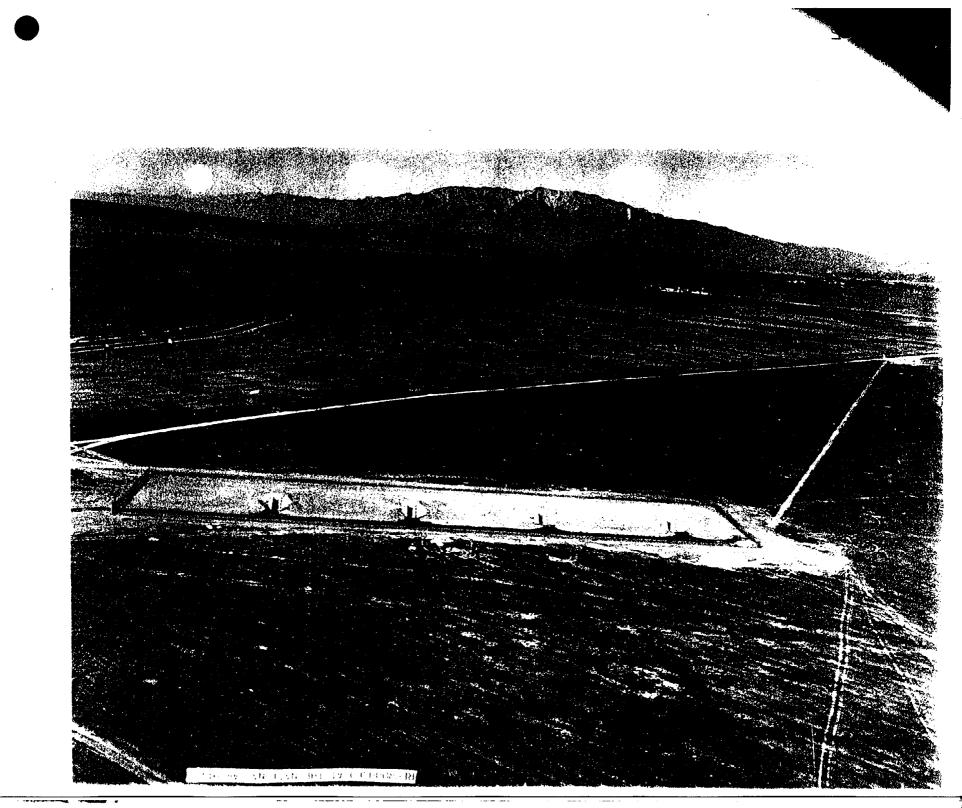
All materials and workmanship entering into the construction and completion of this contract are hereby guaranteed for a period of one year from date of acceptance.

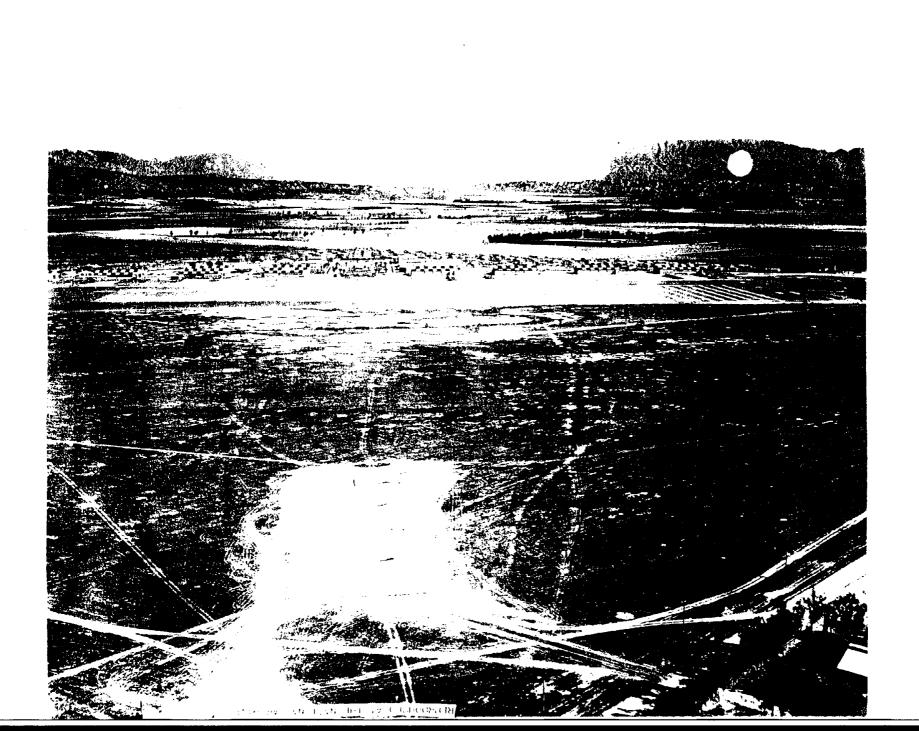
The United States Government is hereby guaranteed against any claims arising or to arise by virtue of this contract for labor or materials or both or for any other reason.

Very truly yours,

Carroll D. Hudson, Secretary.







## Tarca Fiell, Calif.

#### . Book Ma. 5

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18, East-West Runway	

Completion Report, h-x, Target Range, Including Demolition of Buildings.

The Quartermaster General, Washington, D.C. Attention Construction Division.

- 1. General:- This work was done on sub-project h-x of Procurement Authority QM 8358 for the construction of Target Range, Including Demolition of Buildings.
- Description of Completed Project: I. A mound of earth was thrown up, covered on one side with 12" of sand and on the other side with Mesembryanthemms plants. In one end of mound is a reinforced concrete store room. In front of mound is a reinforced concrete pit with hatch covers to permit of the raising and lowering of targets. In this pit is also installed the mechanism for operating silhonette targets. which are controlled from pits at the end of 61-00 wide concrete platforms located 15 and 25 yards back of targets. In the rear of 25 yard platform is a concrete platform 50' x 50' for the synchronization of airplane machine guns. Both ends of the mound are contained and suported by a reinforced concrete retaining wall. The pit butts contain six (6) 6' x 6' targets end five (5) silhouette targets. Telephone connections are installed from platform pits to target butt pit. A sprinkler system is instal ac at the top of the mound for watering the Mesembryanthemuns plants
  - II. Constructed for Ordnance Department.
- III. Constructed for pistol practice of Air Corps Personnel and airplane machine gun synchronization.
- IV. a. March Field consists of 640 acres of Government owns land, comprising of E 1 of Sec. 23, and W 2 of Sec. 24, T 3 S, R W, S.B.B.M. It is located about ten miles southwest of Riverside California, on the Riverside-San Diego State Highway.
  - b. Photo attached.
- c. Soil data: The soil consists of hard decomposed granite with about two feet of top soil. No piling necessary. Bearing capacity 3 to 5 tons per square feet. The minimum depth of ground water below surface is approximately 60 feet, and bed rock is encountered at approximately 250 feet.
- d. Target Butts were constructed in accordance with drawings No.'s 6694-249 MF; 6694-276 MF; 6694-277 MF.
- a. An old mound existed at the beginning of this sub-project, which was not layed out paralell to the boundry lines of the Post. This difficulty was corrected in the new structure. Store room is wired for electric lights but not connected. Mound on east side

- b. Progress chart attached,
- c. Work as accomplished by purchase and hire from funds allotted from W.P.A. ER 1935.
- d. Supervision of the sub-project was under the Constructing Quartermaster, Superintendent of Construction and one Inspector.

is equipped with a sprinkler system controlled by valves at the

#### 4. Financial data:-

base of mound.

Official Project No. 13-189 Federal Project No. D 19 ER Type of Work Symbol No. 2990 Work Project No. QM 8358 P-99 A 119-57 N. E. C. No. 2227

Original Allotment for sub-project h- Transferred to other sub-projects Obligated balance	x.	•	•	 •	•	•	•	\$ 13,000.00
Transferred to other sub-projects	• , •	•	•	 •	•	•	•	1,623.85
Obligated balance		•	•	 •	•	•	•	\$ 11,376.15

LABOR	HOURS	AM OUNT OBLIGATED							
Unskilled	13316	\$ 5,444.75							
Skilled	3936	2,265.17							
Technical & Clerical	580	260.00							
Superintendence	•	390•00							
Supplies, Material & Equipment		2,904.45							
Contingent expense	· · ·	111.78							
TOTAL	17832	\$ 11,376.15							

Work started November 1, 1935 and was completed June 1, 1936.

Contractor - Purchase and Hire.

Major, Q.M. Corps

Constructing Quartermaster.

GHW/cb

Suitiand 26,77 Box 196 Entry 391 File 8

COMPLCTION REPORT

on the

DESIGN & CONSTRUCTION OF

MARCH FIELD ADDITIONS

RIVERSIDE COUNTY, Calif.

1941

Completed guest 44

1. Description:

frame buildings with necessary utilities were constructed on four different areas at March Field, an old established station of the Army Air Corps. These buildings and utilities were constructed under Supplement No. 2 of the main contract for the construction of Camp Haan. Two of these areas, i. e., Blocks A and B, are located within the March Field reservation as it existed prior to the construction of Camp Haan. Blocks C and D are located outside of the original reservation on new lands recently acquired for the expansion of March Field.

## 2. Topography

(a) March Field is located on a broad flat plane known as the "Moreno Valley" lying within the drainage basin of the San Jacinto River about 8 miles southeasterly from the City of Riverside, California.

## 3. S o i l s =

(a) Most of the soils on the March Field reservation consist of fairly coarse and loose material derived from the decay of the granitic rocks from the nearby hills. In some areas the surface top soil is eclian in character.

### 4. Climate

(a) The climate in this area is typical of the moderately elevated interior, basins of Southern California. It is characterized by the division of the year into a wet and dry season, generally low pre-

cipitation, large portions of clear days, moderately high summer temperatures, and absence of low winter temperatures. U.S. Weather Bureau observations have been maintained in the City of Riverside and the town of San Jacinto located approximately 18 miles southeasterly from March Field. These records indicate the average annual precipitation of March Field to be approximately 12 inches, varying from a minimum of less than 4 inches to a maximum in excess of 25 inches. The average annual temperature is approximately 62.5 deg. with an average maximum temperature of 79.5 deg. and an average minimum temperature of 46 deg.

## 5. History

(a) This project was constructed under Supplement No. 2 of the Camp Haan contract and was authorized on November 19, 1940. The Architect-Engineer immediately started the preparation of the plans and specifications for the buildings and utilities and construction on Block A began on November 25, 1940. Construction on Blocks C and D was delayed until January 18, 1941 due to the delays attending the acquisition by the United States of the property on which these two blocks were located. The work was substantially delayed due to the heavy rainfall which occurred in the winter season of 1940-41, which was the heaviest in 75 years of record. The progress was further hampered by the delays in securing some of the vital materials. This project was ultimately completed on June 7, 1941.

REPRODUCED AT THE NATIONAL ARCHIVES

## 6. Buildings

(a) The construction of additional buildings at March Field presented much the same problems as at Camp Hean. The design and materials selected had to conform to existing temporary buildings and certain materials which had not proven altogether satisfactory at Camp Haan were replaced with more suitable materials. As a consequence typical buildings were constructed with concrete pier footings with corner bracer walls, wood floor systems, wood The exterior walls were covered with plyframe walls and roofs. wood with battens over joints, to conform to existing buildings, using 3/8" - 5-ply resin-glued exterior material. On interior walls the joints between the 1" boards used for wainscoting at Camp Haan had opened up appreciably so another material was sought. Being as suitable and as board was finally selected and approved. cheap as gypsum board for wall finishes the "Wpson" board was then extended to cover the entire wall surface. Gypsum board was again The opening up of joints used on ceilings and to line heater rooms. in wall and ceiling finish in toilets and kitchens was even more objectionable than in wainscoting so again a new material was sought. Tempered fiber board was finally selected, approved and used. Wood chair rails were introduced over the "Upson" board at points of extreme wear to prevent scuffing, and the tempered fiber board was installed with small mestic joints to provide for expansion and to prevent buckling. With these precautions both materials have proven satisfactory. Heavy roofing felt was nailed on to the roofs, and steel sash and wooden doors were used.

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- (c) Towerment plans were also adjusted by the Architect-Engineer on other buildings as directed by the C.Q.L. In the Officers' Quarters the mess hall and kitchen were converted into a lounge. In the runses' quarters the MQ-38 was directed to be enlarged by the additions of dining and kitchen facilities from the OQ-40. The available site for this building necessitated an "L" shaped structure, which in turn required some architectural and structural design. The resulting building follows for Department structures and budget and meets the site and directive requirements quite nicely. As at Camp Haan, all structures were checked and redesigned where required, by the Architect-Engineer's structural men. The work was given careful inspection by the forces of the Architect-ingineer, who worked in close cooperation with the contractor to effect savings and sound construction and finish in the field.
- (d) The accompanying Table No. ) is a schedule of buildings constructed at Earch Field, together with the Government drawing number applicable thereto, the Architect- engineer drawing number and the number of buildings constructed.

## SCHEDULE SHOWING

# BUILDINGS CONSTRUCTED

	Gov't.	Go <b>v¹t</b>	Job	No. of
Name	Туре	Sh. No.	Sh. No.	Bldgs.
Flight Surgeon's Clinic	FS-1	<b>4</b> 66	<b>4</b> 03	1
Barracks - 45 men	Std.	1175	↑ <b>404</b>	2
Barracks - 63 men	Std.	1165	<b>4</b> 05	9
Recreation	A-5	<b>37</b> 8	<b>4</b> 06	1
Nurses' Quarters	HQM-38	1242		
Mar 302 Gaar vor 2		1257	407	1
Post Exchange	E-3	297	408	1
Storehouse, M.D.	SH-7	<b>4</b> 61	<b>4</b> 09	1
Storehouse	SH-8	322	410	2
Warehouse	SH-18	326	411	1
Warehouse	SH-18A	326	422	1
Day Room	AC	1110	412	2
E. M. Mess	M-170	1127	413	2 <sup>-</sup> 1 1
E. M. Cafeteria	M-500	1331	414	1
Officers' Quarters	0.Q.40 R	1257	415	3
Officers' Quarters	0.2.40 C	1257	416	2
Officers' Quarters	0.Q.40 CA	1257	417	2 1
School	A-21	399	418	1
Officers' Mess	M-250	1127	<b>41</b> 9	1
Officers Club			_	
Addition to Kitchen (note - by W.P.A.)			420	1

Lagure Niguel

R6177, Box 77

Military const

Projects: March 4FB

D. R. Johnson 51 20 Fy 51 #8

D. R. W. Job No. 51 39 Fy 5/ #8 March 7, 1952

## DESIGN ANALYSIS

#### MARCH AIR FORCE BASE

## AMMUNITION STORAGE

Directive No. March A.F.B. 50,51-ACRP-Adv. D-Directive 1 and 3.

- 1. This analysis covers the design of additional Ammunition storage facilities authorized by the above directives and engineering instructions dated 12 July 195, and 7 December 1951. Facilities to be provided include eight (8) Standard igloos size 26'-6" x 81' and one (1) Standard igloo size 26 -6" x 40'-4" of Office Chief of Engineers design, unloading facilities, access roads, and fencing as required.
- 2. Accompanying this analysis are preliminary drawings, outline specifications, and a preliminary control estimate. Standard OCE Drawing No. E-33-15-04 entitled, "Mounded Concrete Igloo: Type MA-5" (6 sheets) shall become a part of the project drawings.
- 3. General Planning. The igloos have been sited west of the existing ammunition storage area in West M.A.F.B. and with the approval of the base command and Air Force Representative. An unloading area with rail service has been provided since rail delivery of ammunition is contemplated. A minimum distance of 3200 feet has been maintained from Allesandro Street which is a county road, to the sites. Other clearances as specified in the Engineering Instructions have been complied with as described hereinafter.
- 4. Igloos are located in line 360' clear of the service road to existing igloos which provides a minimum clearance 400' between existing and new igloos. 200' clearance between new igloos has been maintained except where existing topography required increasing the spacing. Finish floor elevations are based on the use of shallow type footings as detailed on the standard plans for igloos. Fill slopes will be mulched and seeded, since the surrounding ground cover is sparce. Sodding, as prescribed on the standard plans, is not warranted.
- 5. The Unloading Area is located between a line which is 2700 from authorized future construction and the limit of government owned land. The elevation of the pavement will be the same as the railroad spur adjacent to it, and will be sloped 2% in the direction of drainage. The unloading area is adequate

in length to unload any one of four railroad cars and will provide sufficient width for a 180° turn of a two axle truck (turning radius - 39.8'). A paved road has been provided from the unloading area to the existing igloo access road.

4300 due East of the unloading site. The alignment shown on the definitive drawings is based on the best topographical information available. Since some areas have been built over, a survey is being made to establish alignment in the field based on a maximum rate of grade of 3% between the unloading area site and the existing road bed Existing trackage between 40th Street and the end of track "B" (approximately 2770 L.F.) will be removed and salvageable rail from tracks A, B, C, and D, will be re-used. On the basis of field measurement this rail is 65# - 70# rail. This rail is felt satisfactory in view of the low speeds and the relatively light traffic contemplated. In the area of existing trackage 4" of ballast will be placed over the existing road, which will provide a minimum of 8" under the ties after tamping.

The design of new railroad is in accordance with Engineering Manual, Fart X, Chapter 2, and will be installed with a 5" D. G. sub-ballast and a minimum of 8" of gravel ballast. Grading will be such that a minimum amount of cut is required, since rock outcroppings frequent the area and borrow material is available immediately adjacent to the roadbed. A reverse grade of 0.4% has been used at the unloading area to prevent cars from rolling onto the 3% grade towards the main line.

7. Roads have been designed as Class C in compliance with the Engineering Manual, Part X, Chapter 1. Alignment of the igloo service road is based on the igloo location since turnouts are required for unloading of each igloo. Grade was established to give a maximum theoretical grade of 5% from the concrete igloo apron to the edge of the road and to provide an excess of fill material to be used for igloo mounds. The pavement for roads will be as follows:

3" Bituminous Plant Mix Surfacing

6" D. G. Base Course

12'-0" Pavement

4 -0" Shoulders of compacted native soil

The above total thickness is approximately 80% of the Engineering Manual requirements based on CBR values obtained in

the airfield area. This reduction is justified on the basis of the low traffic densities contemplated. Paving of the unloading area will be of the same design as that given above for roads. Weed killer will be used under paved areas to reduce the amount of future maintenance.

- 8. Drainage culverts and road side ditches will be provided for removal of surface runoff calculated by a combination of the Rational Method for large areas with numerous slopes and the Engineering Manual Method for areas with more uniform slopes. A design storm of 0.5" per hour was used as the basis of design, with an equivalent infiltration rate of 0.3 for unpaved areas. In general, the limiting factor on culvert size was the minimum diameter required for satisfactory maintenance or 15". All culverts will be corrugated metal pipe without headwalls. A diversion ditch will be provided above igloo #3 to divert surface runoff into existing channels. Ditches with slopes over 2½ will be lined with 1½" of plant mix, based on an eroding velocity of 3 feet per second.
- 9. Fencing of the security type will be provided around the new igloo area and will be connected to the existing fence. The existing fence in the area of the new igloos will be removed, but is not in satisfactory condition to salvage and re-use. As a fire preventative measure, an area 25 wide outside the new fence will be cleared of vegetation and treated with weed killer.

## OUTLINE SPECIFICATIONS

Project: Ammunition Storage

Job No. March AFB-50, 51-ACRP-Adv. D Directives 1 & 3

AT March Air Force Base,

Riverside, California

## 1. Scope.

- 1.1 Work Included. Construction contract will include the following:
- a. Igloos of reinforced concrete arch type construction, with shallow type concrete foundations, concrete slab floor, and exterior concrete slab at entrance, including clearing, excavation, backfilling and mounding.

## (1) Required.

- (a) Eight Igloos 26'-6" wide x 81'-0" long (b) One Igloo 26'-6" wide x 40'-4" long
- b. Pavement. Bituminous hot-plant-mix paving over select material base course on a prepared earth sub-grade for assess roads, parking, and unloading areas.
- c. Railroad Facilities including-removal and salvage of a portion of existing railroad track, reconditioning of sections of existing road bed and constructing additional trackage.
- d. Drainage Facilities of corrugated metal pipe culverts and clay pipe sub-surface drains.
- e. Security Fencing including removing and disposal of existing fencing, and the furnishing and installation of new steel fencing.
- f. Seed and Mulching of earth mound over concrete igloos.
  - 1.2 Work Not Included. None.
- 1.3 Government-Furnished Property. The following property will be furnished by the government for installation by the Contractor: All materials designated to be removed and/or reinstalled.

- 2. Excavation, Filling, and Backfilling for Building Construction shall include all excavation, filling, backfilling, and embankment required for the igloos and concrete slabs as shown on the drawings. Top soil shall be removed to a depth of 6 inches in the area bounded by conform lines outside igloos and stockpiled. Fill under floor slabs on ground shall be 6 inches of compacted gravel.
- 3. Concrete for Building Construction shall include all concrete for igloos and entrance slabs and shall have a compressive strength of not less than 2500 pounds per square inch after 28 days.
- 3.1 Materials for concrete shall comply with the following specifications:

Portland Coment-Fed. Spec. SS-C-192, Type I, IA, II, or IIA Aggregates-Fed. Spec. SS-A-281a

Bar Reinforsement-Fed. Spec. QQ-B-71a, Type B, Grade 2 Welded Wire Fabric-A.S.T.M. A185-37, 5x6/10x10

- 3.2 General. Membrane curing compounds shall pass all requirements of specification CRD-C-300-49, Corps of Engineers, U. S. Army. Except where placing of concrete against excavated earth is approved, forms for unexposed concrete surfaces shall be No. 2 or better lumber. Plywood shall conform to the requirements of Specification MIL-P-66A, at least 9/16 inch thick. Floors shall receive a smooth, hard trowel monolithic finish.
- proofing shall be asphalt type and shall be installed at the locations shown on the drawings. Materproofing at all locations shown on the drawings shall consist of one ply of glass fabric, 3 plies of felt and a final ply of glass fabric. Each ply shall be laid in hot asphalt. Waterproofing shall not be applied when the ambient temperature is 40 degrees F. or below. Waterproofing on walls with openings shall not be installed until after the flashing around the openings has been installed. Flashing thus installed shall be lapped into the plies of the waterproofing and mopped in thereto in a manner that will assure a waterproof joint. Materials shall conform to the following Federal Specifications:

HE-C-581a HE-F-191a Cotton Fabric; Woven, Asphalt-Saturated Feit; Asphalt-Saturated (for) Flashings, Roofing, and Waterproofing

FR-F-221a

Pensing, Mire (Barbed, Moven-Wire and Wire-Netting)

SS-A-666
Asphalt; (for) Built-Up Roofing, Waterproofing, and Damp-Proofing, with
Amendment 1
SS-A-701
Asphalt-Primer; (for) Roofing and
Waterproofing
SS-C-153
Cement; Bituminous, Plastic
SS-C-192
Cement; Portland
LLL-F-321b
Fiberboard; Insulating, with Amendment 1

of the stationary types of aluminum alloy or galvanized ferrous metal, manufactured by nationally recognized ventilator manufacturers. Steel dampers shall be fabricated and installed complete with acreens, angle iron frames and anchors. Roof dampers and wall ventilators shall be of steel plate and shall be provided with heat fuses for automatic closing of dampers and ventilators at 160 to 165 degrees F., and shall have Underwriters Laboratories Incorporated approval. Materials shall conform to the following Federal Specifications:

Aluminum; sheets, strips QQ-A-355a Galvanized iron QQ-I-716 Steel; sheets, strips QQ-S-636 Wire Screen RR-C-451a Steel, plates, angles QQ-S-741 or A.S.T.M. A7-50T.

details shown on the drawings, with asbestos core, boiler plate front, hinges, foot and head bolts, are locking bar, and angles. Doors shall be installed complete with anchors, westherstripping, and angle sills and bucks as shown. Material shall conform to the following Federal Specifications:

Bolts and Muts

Asbestos Felt

Brass, Bars, Plates, Strips

Steel, Boiler Plates

Steel, Angles, Plates

A7-50T.

- 7. Caulking. Ventilator and door frames shall be calked with a caulking compound conforming to the requirements of Federal Specification TT-C-598, grade 1. Compound shall be applied by the gun method using nozzles of the proper size to force out all the air and to solidly fill the joint.
- 8. Painting; Protective on Metal. All exterior and interior exposed ferrous metal except metals with nonferrous coatings shall be given a shop coat of rust inhibitive paint conforming to Federal Specifications TT-P-20, TT-P-31a and TT-P-86a; and two coats of oil base metal paint conforming to Federal Specification TT-P-104, applied in the field.

432

51-39 P 9. Excavation, Embankment and Preparation of Subgrade for Roadways, Loading Areas and Railroads shall include all earthwork connected with the preparation of subgrades, shoulders and drainage ditches. Fills shall be placed in not greater than 6 inch layers. Soil shall be uniformly moistened to optimum moisture content. Subgrade compaction with approved pneumatic rollers shall be performed with 4 passes per layer. Additional rolling may be required to obtain the desired compaction and shall be as directed by the Contracting Officer.

- 10. Railroad Work shall consist of the removal of existing track and reconditioning of rails and accessories for re-use, the preparation and reconditioning of old roadbed and the construction of additional railroad track.
- 10.1 Materials. Whenever possible ties, rails and joint-bars, salvaged from existing track to be removed shall be used in the laying of new railroad facilities. Relayer rail shall be used for construction of additional tract, no new rail will be used. All salvaged materials to be placed in the track shall be subject to approval by the Contracting Officer.
- 10.11 Ballast shall conform to the applicable A.R.E.A. Specifications for quality, soundness and grading.
- 10.12 Relayer Rail shall be in standard lengths with not more than 10 per cent of shorts varying in length by one foot with a minimum length of 22 feet. Top wear measured at the center shall not exceed 1/8 inch, and side wear measured at the side of the head 5/8 inch below the original top of the rail shall not exceed 8 per cent of the original width of the head. Rail shall weigh not less than 65 pounds per lineal yard.
- 10.13 Joint-Bers shall conform to U. S. Army Specification No. 43-3.
- 10.14 Ties shall conform to the requirements of Federal Specification AM-T-371a for type I and shall be treated. Type I, crossties, shall be form B, 8 feet long, 5 inches thick, and of 8 inch nominal width.
- 10.15 Track Bolts, Ruts, and Spikes shall conform to the A.R.E.A. Specifications and standards.
- 11. Pipe Culverts and Sub-Drains. The work covered by this section consists of the furnishing and installation of corrugated metal pipe culverts and unglazed clay pipe subsurface drains. Unglazed clay pipe shall be standard strength, butt joint type, and shall be laid with open joints. Gravel bed and fill for sub-drains shall all be retained on a 1 inch square mesh and shall be not larger than 3 inches. Materials shall conform to the following specifications:

a. Pederal Specifications.

Culvert Pipe Clay Pipe QQ-C-806a SS-P-361a

b. American Association of State Highway Officials
Standards:

Corrugated Metal Culvert Pipe M-36-47

12. Pavement, Flexible, Select Material Ease Course for bituminous paving shall be disintegrated granite material placed on approved subgrade in the thickness shown on the drawings. The gradation shall conform to the following sizes:

Sieve

Persentage by Weight
Passing Square Openings

3" No. 200 100 0-20

and shall conform to the following specifications tests:

A.S.T.M. D75-48, and A.A.S.H.O. T99-49.

- 13. Pavement; Flexible, Bituminous Frime Coat. Asphalt shall conform to the requirements of Federal Specification SS-A-671a, Designation MC-1 and shall be applied to a previously prepared and approved subgrade or base course at a temperature of 80 to 125 degrees F., in quantities of not less than 0.20 gallon nor more than .50 gallon per square yard.
- 14. Pavement; Flexible, Bituminous Tack Coat. Asphalt emulsion shall conform to the requirements of Federal Specification SS-A-674a, Type V, and shall be applied to a previously prepared binder course, or existing pavement at a temperature of 100 to 130 degrees F., in quantities of not less than 0.10 gallon nor more than 0.25 gallon per square yard.
- 15. Pavement, Flexible, Central Plant Hot-Mix. The work covered by this section of the specifications shall include the furnishing of all labor, plant, materials and equipment for the placing of the plant-mixed paving on a previously prepared base course for the access roads, paved gutters and other areas to receive central plant hot-mix bituminous paving as indicated on the drawings.
- 15.1 Description. Plant-mix pavings shall consist of binder and surface courses of fine and coarse mineral aggregate uniformly mixed with hot bituminous material, placed and compacted on a prepared base course, binder course or existing pavement.

15.2 <u>Materials</u> shall conform to the following specifications:

Asphalt-Fed. Spec. - SS-A-706b, AP-3 Sand - A.A.S.H.O. - M-29-42 Mineral Filler - A.S.T.M. - D242-39 Coarse Aggregate - A.S.T.M. - C131-47

- 16. Seeding. Hounded embankment over concrete igloos and other areas as shown on the drawings shall be seeded. Seed shall be furnished in sealed standard containers and shall be labeled in accordance with V. S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the date of invitation for bids. Seed shall be composed of Ferennial Rye and Bersuda grass totaling not less than 90 percent by weight, of the total seed mixture.
- 17. Mulching. Straw shall be used for mulching seeded areas and shall be applied uniformly at the rate of 4 tons per zore. Mulch shall be out to lengths of not more than 8 inches and shall be secured in place with a shallow covering of earth or by other suitable means that will not be detrimental to subsequent maintenance.
- 18. Steel Fencing Work shall consist of removal and disposal of existing fencing and the furnishing and erection of new fencing as indicated on the drawings. New fencing shall be 6 foot chain link security fencing with 3 strands of barbed wire mounted on angular extension arms. Materials shall conform to the following specifications:

Posts, gates, accessories Fed. Spec. RR-F-183 Chain link Tabric Fed. Spec. RR-F-191 Barbed Wire Fed. Spec. RR-F-221a Galvenizing test A.S.T.H. A-239-41

19. Contract Specifications. Sections of specifications proposed for inclusion in fart IV, "Technical Provisions" of the contract specifications, with OCE Guide Specification to be used in the development of each, are as follows:

Section No.	<u>Title</u>	CCE Guide Specification
1.	Excavation, Filling and Back-	
	filling for Buildings	203
2.	Concrete for Building Construction	204
2. 3.	Materproofing; Bituminous Membrane	<del></del>
	and Parging	212
Ŀ.	Ventilators, Gravity Type	220.09
4. 5.	Doors for Igloos	None
6.	Caulking	239
7	Painting; Protective on Metal	249
S.		
٥.	Lightning Protection System	303.9

Section No.	<u>Title</u>	OCE Guide Specification
9.	Excavation, Embankment, and Preparation	•
	of Subgrade for Roads and Railroads	805
10.	Railroads	804
	Pipe Culverts and Sub Drains	805
	Payement: Flexible, Select-Material	
	Base Course	807.1
	Pavement; Flexible, Bituminous	
_	Tack Coat	807.10
14.	Pavement; Flexible. Bituminous Binder and Surface Courses	
,	(Central Plant Hot Mix)	807.12
15.	Pavement; Flexible, Bituminous Prime	
=	Coat	807.9
16.	Seeding	810
17.	Mulching	813
18.	Steel Fencing	None
T.A.	AAAA	- · <del></del>

19. <u>Drawings</u>. The following list of definitive drawings shall form a part of these outline specifications:

Number	Description
1165/52	General Location Plan
1165/52 1165/53	Service Road - Plan and Profile Sta. 0+00 to Sta. 12+00
1165/54	Service Road - Plan and Profile Sta. 12+00 to Sta. 26+10
1165/55	Road and Railroad Details and Typical Sections
1165/60	Igloo #9 Access Road - Plan & Profile

20. Unit Price Schedule. The following items are proposed for the Unit Price Schedule in the Bid Form:

Schedule A - Ammunition Storage, 8 Igloos and Railroad

tem No.	Description	Estimated Quantity	Unit
1A	Stripping	4,270	Cu.Yd.
2A	Excavation and Grading for Railroad	28,850	Cu.Yd.
3A	Excavation and Grading for		
,,,,,	Magazine Service Road	5,790	Cu.Yd.
4A	15" CMP Culvert	78	Lin.Ft.
	18" CMP Culvert	100	Lin.Ft.
5A 6A	30" CMP Culvert at R. R.	42	Lin.Ft.
7A	Remove Existing Fence	2,335	Lin.Ft.
8A	Furnish and Install Chain Link Fence		Lin.Ft.

tem No.	Description	Estimated Quantity	Unit
9A	Remove and Salvage Rail Joint Bars		
•	& Tie Plates	5,400	Lin.Ft.
IOA	Remove and Salvage Turnouts	2	Each
11A	Renovate Existing Roadbed	2,770	Lin.Ft.
	Gravel Ballast	2,840	Cu.Yd.
	Furnish New Cross Ties	4,010	Each"
14A	Furnish Railroad Rail Joint Bars,		
	Tie Plates, & Spikes	10,630	Lin.Ft.
15A	Install Railroad Track	8,020	Lin.Ft.
	Install Railroad Crossings	2	Each
17A	Disintegrated Granite Sub-Ballast		
- [ C	and Base Material	2,500	Cu.Yd.
18A	Bituminous Prime Coat	2,450	Gal.
	Bituminous Tack Coat	1,300	Gal.
	85-100 Penetration Paving Asphalt	53	Ton
21A	Plant-Mixed Surfacing	<b>7</b>	<del>-</del>
C T W	(Binder Course)	530	Ton
004	Plant-Mixed Surfacing	<b>, , , , , , , , , , , , , , , , , , , </b>	
22A	(Surface Course)	530	Ton
02A	13" Plant-Mixed Ditch Lining	280	Sq.Yd.
23A	Preparation of Site for Magazines	200	
24A	Incl. Excavation	6,000	Cu.Yd.
or.		3,000	Each
25A	Magazine - 81' Long	8,900	Cu.Yd.
26A	Igloo Embankment	0,500	Odita.

Schedule B - Ammunition Storage and Railroad Unloading Area

Item No.	Description	Estimated Quantity	Unit
1B	Stripping	700	Cu.Yd.
28	Excavation and Grading for Railroad Unloading Area	4,150	Cu.Yd.
<b>3</b> 8	Excavation and Grading for Magazine Service Road	359 165	Cu.Yd.
48	Remove Existing Fence	105	Lin.Ft.
5B	Furnish and Install Chain Link Fence	300	Lin.Ft.
6B	Disintegrated Granite Base Material	600	Cu.Yd.
	Bituminous Prime Coat	1,450	Gal.
7B 8B	Bituminous Tack Coat	772	Gal.
98	85-100 Penetration Paving Asphalt	30 288	Ton
10B	Plant-Mixed Surfacing (Binder Course)		Ton
118	Plant-Mixed Surfacing (Surface Course)	288	Ton

Item No.	Description	Estimated Quantity Unit
128	Preparation of Site for Magazines, Incl. Excavation	400 Cu. Yd.
138 148	Magazine - 40'-4" Long Igloo Embankment	1 Each 500 Cu. Yd.

CORPS OF ENGINEERS, U.S. ARMY LOS ANGELES DISTRICT

DONALD R. WARREN CO.
Architect - Engineer

7 March 1952

#### APPENDIX D

HISTORICAL PHOTOGRAPHS (NOT USED)

APPENDIX E

**INTERVIEWS** 

SUBJECT: Interview with Mr. John Sabol, Environmental Office, March Air Force Base, Riverside, CA during a Site Visit the week of 1 March for Camp Haan and Camp Haan Rifle Range, Site Numbers J09CA0279 and J09CA0280.

- 1. Tuesday, March 1, 1994 Rochelle Ross, George Sloan, and Jim Luebbert of the St. Louis District arrived in Ontario, California for a site visit to Camp Haan and Camp Haan Rifle Range. Prior to arriving in Riverside, Rochelle Ross had contacted a few different people in the environmental office. Joe Kissane of the St. Louis District had provided names who he had been dealing with on the Installation Restoration Program. That afternoon, Rochelle Ross contacted Mr. Sabol to confirm a time to meet to discuss the former Camp Haan.
- 2. The afternoon of Wednesday, March 2, the inspection team travelled to the Environmental Office on March Air Force Base to meet with John Sabol. The inspection team was still puzzled about the different stories concerning the rifle range(s) at Camp Haan. When asked about this subject, Mr. Sabol said that he had heard there was a rifle range in the Box Springs Mountain area and that those stationed at Camp Haan "...fired artillery into the mountain side from the skeet ranges located on the base map." To all those on the inspection team, this seemed unlikely due to the distance and the fact that they would be firing over the camp itself. He had not heard of any rifle range located east of the base.
- 3. The next verification required concerned the FUDS locations and boundaries. He confirmed the boundaries of the Air Force Village West and the VA cemetery and also informed the inspection team of two other FUDS locations. These are located south of and adjacent to the magazine area. One corner is on the western corner and one on the eastern corner.
- 4. Mr. Sabol is involved with the Installation Restoration Program (IRP) and identified several IRP sites (including a dump site) located within the VA cemetery boundaries. One is located in the southeast corner. He does not recall what these IRP sites were, but does know they are no longer on the site.
- 5. Before leaving, the inspection team informed Mr. Sabol a site visit would be conducted the following day. Mr. Sabol offered to go along and escort the team to those two areas south of the magazine area.

Rochelle Ross Project Manager SUBJECT: Interview with Mrs. Benedetta Caiazzo, Real Estate Officer, March AFB, Riverside, CA during a Site Visit the week of 1 March for Camp Haan and Camp Haan Rifle Range, Site Numbers J09CA0279 and J09CA0280.

- 1. Tuesday, March 1, 1994 Rochelle Ross, George Sloan, and Jim Luebbert of the St. Louis District arrived in Ontario, California for a site visit to Camp Haan and Camp Haan Rifle Range. That afternoon, Rochelle Ross set up an appointment with Mrs. Caiazzo at March Air Force Base (909-655-2669) for Wednesday morning.
- 2. Mrs. Benedetta Caiazzo gave the above personnel real estate documents describing 2 of the FUDS properties which had been part of Camp Haan and later March Air Force Base. These FUDS properties are the Veterans Administration Cemetery and a retirement community, Air Force Village West. The inspection team also received a map identifying March AFB boundaries.
- 3. During prior research, a map dated 1943 identifying an area approximately 10 miles east of the AFB proposed to be used as a rifle range. A different area, located on March AFB property, for the rifle range was identified by the Los Angeles District Corps of Engineers. Mrs. Caiazzo had not heard of a rifle range located east of the Air Base but did mention a rifle range in the Box Springs Mountain area north of the base.

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

SUBJECT OF CONVERSATION  CAMP HAAN AND CAMP HAAN RIFLE RANGE			
	INCOMING CALL		
PERSON CALLING	ADDRESS	PHONE NUMBER AND EXTENSION	
PERSON CALLED	OFFICE	PHONE NUMBER AND EXTENSION	
	OUTGOING CALL		
PERSON CALLING	ADDRESS	PHONE NUMBER AND EXTENSION	
Rochelle Ross	CELMS-PM-M	314-331-8784	
PERSON CALLED	OFFICE	PHONE NUMBER AND EXTENSION	
H. Posey	Investigator, Riverside County Sheriff's Dept., Bomb	909-275-2581	

#### SUMMARY OF CONVERSATION:

The county has not recovered any munitions on the former Camp Anza but has recovered .50 cal ammunition in the former Camp Haan/March AFB property a few years back.

Tech

MEMORANDUM FOR Commander, U.S. Army Engineer District, Los Angeles, ATTN: CESPL-EN-MI, 300 North Los Angeles Street, Los Angeles, CA 90012

SUBJECT: Defense Environmental Restoration Program, Formerly Used Defense Sites, Ordnance and Explosive Waste, Chemical Warfare Materials, Archive Searches

- 1. The St. Louis District has been performing research and preparing Archives Search Reports (ASR) on Chemical Warfare Material (CWM), at Formerly Used Defense Sites (FUDS), for the Huntsville Division since October 1992. While researching Camp Haan (J09CA0279) and Camp Haan Rifle Range (J09CA0280) located in your district, information on formerly used properties associated with March Air Force Base was discovered. Due to the discovered information, it is recommended an Inventory Project Report (INPR) be started if one has not already been completed. Per Huntsville, U.S. Army Corps Engineers (USACE) Mandatory Center of Expertise (MCX), the St. Louis District is proeceeding with and ASR for this site.
- 2. Enclosed for your use is the discovered documentation on this site. Site number 25, as annotated in the enclosure, is the main area of concern. For further information please contact Rochelle Ross, Project Manager at (314) 331-8784 or the undersigned at (314) 331-8031.

FOR THE COMMANDER:

Encl

WILLIAM R. SUTTON Chief, Project Management Branch

CF: CEHND-PM-OT

#### APPENDIX F

NEWSPAPERS/JOURNALS (NOT USED)

## APPENDIX G PRESENT SITE PHOTOGRAPHS

## ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS

FOR

#### MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

#### DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

#### APPENDIX G

#### PRESENT SITE PHOTOGRAPHS

#### Page G-1

- PHOTO #1 TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA (Facing East Towards Water Tower)
- PHOTO #2 TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA (Facing South)

#### Page G-2

- PHOTO #3 TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA (Facing West)
- PHOTO #4 TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA (Facing North Towards Magazine Area)

#### Page G-3

PHOTO #5 - SKEET RANGE (Facing West, Down Cactus Avenue)

PHOTO #6 - SKEET RANGE (Facing North)

#### Page G-4

PHOTO #7 - SKEET RANGE (Facing Northeast)

PHOTO #8 - SKEET RANGE (Facing South Towards Base)

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

#### DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

#### APPENDIX G

#### PRESENT SITE PHOTOGRAPHS

#### Page G-5

PHOTO #9 - RIFLE RANGE (Facing South)

PHOTO #10 - RIFLE RANGE (Facing South)

#### Page G-6

PHOTO #11 - RIFLE RANGE (Facing North)

PHOTO #12 - POORMAN RANGE (Facing North)

#### Page G-7

PHOTO #13 - POORMAN RANGE (Facing South)

PHOTO #14 - POORMAN RANGE (Facing East)

#### Page G-8

PHOTO #15 - POORMAN RANGE (Facing Northeast)

PHOTO #16 - POORMAN RANGE (Facing Northwest)



PHOTO #1
TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA
(Facing East Towards Water Tower)



PHOTO #2
TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA (Facing South)



PHOTO #3
TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA
(Facing West)



PHOTO #4
TRENCH (AMMUNITION DISPOSAL PIT) SOUTH OF MAGAZINE AREA
(Facing North Towards Magazine Area)



PHOTO #5
SKEET RANGE
(Facing West, Down Cactus Avenue)



PHOTO #6 SKEET RANGE (Facing North)

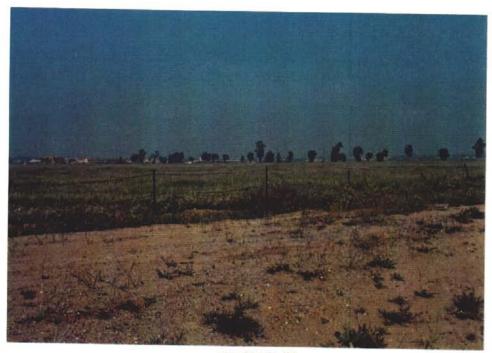


PHOTO #7 SKEET RANGE (Facing Northeast)



PHOTO #8
SKEET RANGE
(Facing South Towards Base)



PHOTO #9 RIFLE RANGE (Facing South)

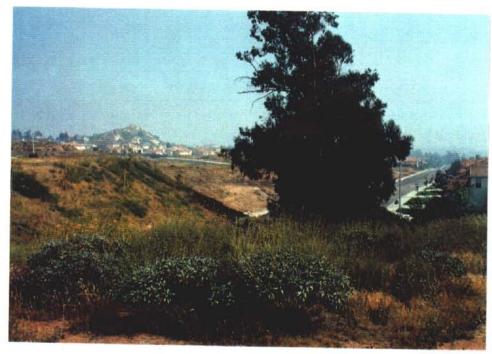


PHOTO #10 RIFLE RANGE (Facing South)

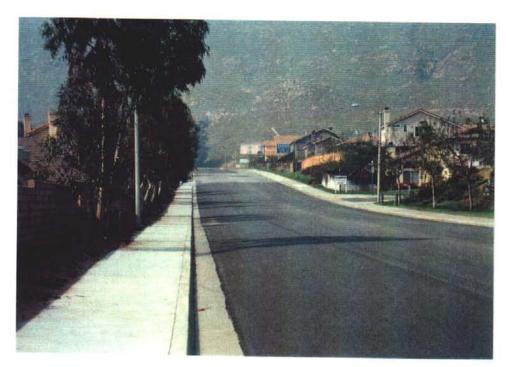


PHOTO #11 RIFLE RANGE (Facing North)



PHOTO #12 POORMAN RANGE (Facing North)

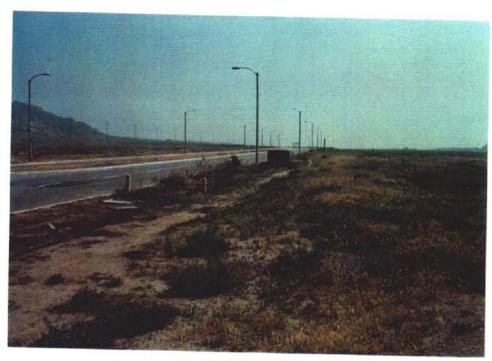


PHOTO #13 POORMAN RANGE (Facing South)

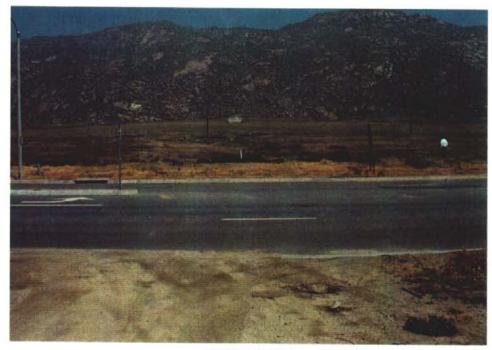


PHOTO #14 POORMAN RANGE (Facing East)

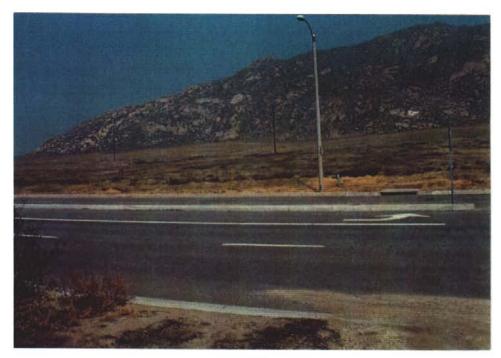


PHOTO #15 POORMAN RANGE (Facing Northeast)



PHOTO #16 POORMAN RANGE (Facing Northwest)

#### APPENDIX H

HISTORICAL MAPS/DRAWINGS (NOT USED)

#### APPENDIX I

OEW RISK ASSESSMENT CODE FORM

### RISK ASSESSMENT PROCEDURE FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITE

Site	Name .	MARCH AIR FORCE BASE	Rater's Name	ROCHELLE ROSS
Site	Location	RIVERSIDE, CA	Phone No.	314-331-8784
DERP	Project#	J09CA001100	Organization	CELMS-PM-M
Date	Completed	SEPTEMBER 27, 1994	RAC Score	2

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

### TYPE OF ORDNANCE (Circle all values that apply)

A.	Conventional Ordnance and Ammunition	
		VALUE
	Medium/Large Caliber (20mm 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)	<u>6</u>
	Grenades, Practice (w/spotting charges)	4
	Landmines, Practice (w/spotting charges)	4
	Small Arms (.22 cal50 cal)	1
	Conventional Ordnance and Ammunition (Select the largest single value)	_6

What evidence do you have regarding conventional OEW? Research did not disclose types of ordnance stored, but small arms ranges were associated with the base, and a bomb storage facility was located on the base.

в.	Pyrotechnics (For munitions not described above)	VALUE
	Munitions (Container) containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
	Munitions Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
	Flares, Signals, Simulators, Screening Smokes (other than WP)	4
	Pyrotechnics (Select the largest single value)	_4
	What evidence do you have regarding pyrotechnics? <u>Screening</u>	smokes had
	been used and stored at the base.	
	Bulk High Explosives (Not an integral part of conventional containerized.)	
		VALUE
	Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
	Demolition Charges	10
	Secondary Explosives (PETN, Compositions A, B, C Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
	Military Dynamite	6
	Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
	High Explosives (Select the largest single value)	_0
	What evidence do you have regarding bulk explosives? None	of the
	research disclosed any of the above hazards. No hazards were the site visit.	e found during
D. oth	Bulk Propellants (Not an integral part of rockets, guided mister conventional ordnance; uncontainerized)	
		VALUE
	Solid of Liquid Propellants	6
	Propellants	_0
	What evidence do you have regarding bulk propellants?	

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 and Miscellaneous (Vomiting, Tear)	5
Chemical and Radiological (Select the largest single value)	_0_
What evidence do you have regarding chemical/radiological OEW	? <u>Gas ID</u>
sets were at the base. None were found during the site visit known where these sets were stored.	. It is not

Total Hazard Severity Value

(Sum of the 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 Valu
CATASTROPHIC	I	21 and greater
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		0

<sup>\*\*</sup>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. <u>Hazard Probability</u>. 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.	Location of OEW Hazards	
		VALUE
	On the surface	5
	Within Tanks, Pipes, Vessels or Other confined locations	4
	Inside walls, ceilings, or other parts of Buildings and Structures	3
	Subsurface	2
	Location (Select the single largest value)	2
	What evidence do you have regarding location of OEW? Lo	cated during
	research was an ammunition disposal pit.	
в.		kely to be at risk
fro	m OEW hazard (roads, playgrounds, and buildings).	VALUE
	Less than 1250 feet	5
	1250 feet to 0.5 miles	4
	0.5 miles to 1.0 miles	3
	1.0 miles to 2.0 miles	2
	Over 2 miles	1
	Distance (Select the single largest value)	_5
	What are the nearest inhabited structures? Roads and h	ousing are less
	1250 feet away	

c.	Numbers of buildings within a 2 mile radius measured from the	OEW hazard
ar e	, not the installation soundary.	VALUE
	26 and over	<u>(5)</u>
	16 to 25	4
	11 to 15	3
	6 to 10	2
	1 to 5	1
	0	0
	Number of Buildings (Select the single largest value)	_5
	Narrative <u>Residential housing subdivision across a street</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 (Select the largest single value)	5_
	Describe types of buildings in the area. Residential	

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	<u>(5)</u>
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 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)  Describe the site accessibility. No barrier to location disposal pit.	
F. Site Dynamics - This deals with site conditions that are in the future, but may be stable at the present. Examples we soil erosion by beaches or streams, increasing land developmed reduce distances from the site to inhabited areas or otherwise accordibility.	ould be excessive ent that could
accessibility.	VALUE
Expected	5
None Anticipated	<b>©</b>
Site Dynamics (Select largest value)	0
Describe the site dynamics.	

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.

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#### 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 I	Level to Table 3.	

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

TABLE 3

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

#### RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND Immediately call CEHND-ED-SY--commercial (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.

RAC 2. Several sources identified an ammunition disposal pit just south of the weapons storage area. This is located across the street from a housing subdivision. Research did not disclose what has been stored in the weapons storage complex. Based on aerial photos, it appears that a drainage structure is in the vicinity. During the site visit, drainage creeks were seen in the vicinity. This property's lease was terminated in 1967 and is now used as a play area by children on dirt bikes.

## RISK ASSESSMENT PROCEDURE FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITE

Site	Name _	RIFLE RANGE	Rater's Name _	ROCHELLE ROSS
Site	Location	RIVERSIDE, CA	Phone No	314-331-8784
DERP	Project# _	J09CA047600	Organization _	CELMS-PM-M
Date	Completed _	SEPTEMBER 23, 1994	RAC Score _	5

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

## TYPE OF ORDNANCE (Circle all values that apply)

A.	Conventional Ordnance and Ammunition	VALUE
	Medium/Large Caliber (20mm 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 cal50 cal)	1
	Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? Research disclosed that machine guns, rifles, and pistols were fired at the range. No hazards were found during the site visit. No reports of any hazard.

в.	Pyrotechnics (For munitions not described above)	VALUE
	Munitions (Container) containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
	Munitions Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
	Flares, Signals, Simulators, Screening Smokes (other than WP)	4
	Pyrotechnics (Select the largest single value)	O
	What evidence do you have regarding pyrotechnics? Research	did not
	disclose the use or storage of any pyrotechnics.	
	Bulk High Explosives (Not an integral part of conventional containerized.)	rdnance;
		VALUE
	Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
	Demolition Charges	10
	Secondary Explosives (PETN, Compositions A, B, C Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
	Military Dynamite	6
	Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
	High Explosives (Select the largest single value)	_0_
	What evidence do you have regarding bulk explosives? Research	ch did not
	disclose the use or storage of any bulk explosives.	
D. oth	Bulk Propellants (Not an integral part of rockets, guided mister conventional ordnance; uncontainerized)	ssiles, or VALUE
	Solid of Liquid Propellants	6
	Propellants	
	What evidence do you have regarding bulk propellants? Resear	rch did not
	disclose the use or storage of any bulk propellants.	

Ε.	Chemical Warfare Material and Radiological Weapons	VALUE
	Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
	War Gas Identification sets	20
	Radiological	15
	Riot Control and Miscellaneous (Vomiting, Tear)	5
	Chemical and Radiological (Select the largest single value)	_0_
	What evidence do you have regarding chemical/radiological OEW?  Research did not disclose the use or storage of any chemical	
	material.	

Total Hazard Severity Value
(Sum of the 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	ategory Hazard Severity Valu	
CATASTROPHIC	I	21 and greater	
CRITICAL	II	10 to 20	
MARGINAL	III	5 to 9	
NEGLIGIBLE	IV	1 to 4	
**NONE		0	

<sup>\*\*</sup>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.

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Part II. <u>Hazard Probability</u>. 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.	Location of OEW Hazards	VALUE
	On the surface	5
	Within Tanks, Pipes, Vessels or Other confined locations	4
	Inside walls, ceilings, or other parts of Buildings and Structures	3
	Subsurface	2
	Location (Select the single largest value)	<u></u>
	What evidence do you have regarding location of OEW? _	
B. fro	Distance to nearest inhabited locations or structures m OEW hazard (roads, playgrounds, and buildings).	likely to be at risk
	Less than 1250 feet	<b>5</b> .
	1250 feet to 0.5 miles	4
	0.5 miles to 1.0 miles	3
	1.0 miles to 2.0 miles	2
	Over 2 miles	1
	Distance (Select the single largest value)	
	What are the nearest inhabited structures?	

c.	Numbers of buildings within a 2 mile radius measured from the	OEW hazard
area	a, not the installation boundary.	VALUE
	26 and over	5
	16 to 25	4
	11 to 15	3
	6 to 10	2
	1 to 5	1
	0	0
	Number of Buildings (Select the single largest value)	
D.	Narrative	
		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
	<del>-</del>	
	Types of Buildings (Select the largest single value)	
	Types of Buildings (Select the largest single value)  Describe types of buildings in the area.	

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 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)  Describe the site accessibility.	O
F. Site Dynamics - This deals with site conditions that are in the future, but may be stable at the present. Examples wo soil erosion by beaches or streams, increasing land developme reduce distances from the site to inhabited areas or otherwis accessibility.	uld be excessive nt that could
-	VALUE
Expected	5
None Anticipated	0
Site Dynamics (Select largest value)	
Describe the site dynamics.	

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.

#### TABLE 2

#### HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	В	21 to 26
OCCASIONAL	С	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8
* Bools Hogged Dechability Lave	to Toble 3	

<sup>\*</sup> Apply Hazard Probability Level to Table 3.

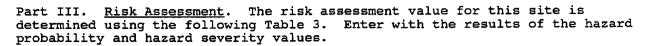


TABLE 3

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

#### RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND Immediately call CEHND-ED-SY--commercial (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.

RAC 5.	Concur	with	this	asses	sment.	Resea	arch	disc	Losed	the u	ıse (	of carb	ines,
sub-mach	nine qun	s, M19	03 ri	fles,	pisto.	s, and	1.50	)-cal	grour	nd mad	chine	e quns.	
No hazai	ds were	found	duri	ng th	e site	visit	and	none	have	been	rep	orted.	This
area is				_									
				-					- · <del></del>				

# RISK ASSESSMENT PROCEDURE FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITE MARCH AIR FORCE BASE

Site	Name .	POORMAN RANGE	Rater's Name	ROCHELLE ROSS
Site	Location	RIVERSIDE, CA	Phone No.	314-331-8784
DERP	Project#	J09CAT82600	Organization .	CELMS-PM-M
Date	Completed	SEPTEMBER 23, 1994	RAC Score	5

#### 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. <u>Hazard Severity</u>. 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)

70.	Conventional Ordnance and Ammunition	
n.	Convencional Ordinance and maintained	VALUE
	Medium/Large Caliber (20mm 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 cal50 cal)	1
	Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? Research

disclosed that the range consisted of .30 and .50 cal turnet machine
quns. No hazards were found during the site visit.

RAC Worksheet - Page 1

В.	Pyrotechnics (For munitions not described above)	VALUE
	Munitions (Container) containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
	Munitions Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
	Flares, Signals, Simulators, Screening Smokes (other than WP)	4
	Pyrotechnics (Select the largest single value)	0
	What evidence do you have regarding pyrotechnics? Research of	lid not
	disclose the use of any pyrotechnics.	
	Bulk High Explosives (Not an integral part of conventional containerized.)	ordnance;
4110	0.1042.102.20047)	VALUE
	Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
	Demolition Charges	10
	Secondary Explosives (PETN, Compositions A, B, C Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
	Military Dynamite	6
	Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
	High Explosives (Select the largest single value)	0
	What evidence do you have regarding bulk explosives? Research	rch did not
	disclose any use or storage of bulk explosives.	
D. oth	Bulk Propellants (Not an integral part of rockets, guided miner conventional ordnance; uncontainerized)	ssiles, or VALUE
	Solid of Liquid Propellants	6
	Propellants	0
	What evidence do you have regarding bulk propellants? Rese	arch did not
	disclose any use or storage of bulk propellants.	

E.	Chemical Warfare Material and Radiological Weapons	VALUE
	Toxic Chemical Agents	25
	(Choking, Nerve, Blood, Blister)	20
	War Gas Identification sets	20
	Radiological	15
	Riot Control and Miscellaneous (Vomiting, Tear)	5
	Chemical and Radiological (Select the largest single value)	_ 0
	What evidence do you have regarding chemical/radiological OEW?	Research
	did not disclose any use or storage of any chemical warfare m	aterial.
===		

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

TABLE 1
HAZARD SEVERITY\*

escription	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		· 0

<sup>\*\*</sup>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. <u>Hazard Probability</u>. 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.	Location of OEW Hazards	VALUE
	On the surface	5
	Within Tanks, Pipes, Vessels or Other confined locations	4
	Inside walls, ceilings, or other parts of Buildings and Structures	3
	Subsurface	2
	Location (Select the single largest value)	
	What evidence do you have regarding location of OEW? _	
B. fro	Distance to nearest inhabited locations or structures m OEW hazard (roads, playgrounds, and buildings).	likely to be at risk
	Less than 1250 feet	5
	1250 feet to 0.5 miles	4
	0.5 miles to 1.0 miles	3
	1.0 miles to 2.0 miles	2
	Over 2 miles	1
	Distance (Select the single largest value)	
	What are the nearest inhabited structures?	

Numbers of buildings within a 2 mile radius measured from the	e OEW hazard
sa, 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
o	0
Number of Buildings (Select the single largest value)	
Narrative	
Types of Buildings (within a 2 mile radius)	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0
Types of Buildings (Select the largest single value)	
Describe types of buildings in the area.	

Ε.	Acces	ssibi	ility	to	site	refers	to	access	рÀ	humans	to	ordnance	and	explosive
						g guida								

	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  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)  Describe the site accessibility.	
in soi red	Site Dynamics - This deals with site conditions that are s the future, but may be stable at the present. Examples wou l erosion by beaches or streams, increasing land developmen uce distances from the site to inhabited areas or otherwise	ld be excessive t that could
acc	essibility.	VALUE
	Expected	5
	None Anticipated	0
	Site Dynamics (Select largest value)	<del></del>
	Describe the site dynamics.	

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.

TABLE 2

#### HAZARD PROBABILITY

Description	Level	Hazard Probability Value			
FREQUENT	A	27 or greater			
PROBABLE	В	21 to 26			
OCCASIONAL	С	15 to 20			
REMOTE	D	8 to 14			
IMPROBABLE	E	less than 8			
* Apply Hazard Probability Level to Table 3.					



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

#### TABLE 3

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

#### RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND Immediately call CEHND-ED-SY--commercial (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.

RAC 5. Concur with th	is assessment.	Research discl	osed that on	ly small	arms
ammunition was used at	this site. No	hazards were fo	und during t	<u>he site</u>	
visit and aerial photog	raphy did not	identify any pot	ential hazar	ds	
TIDEC CHA COLLEGE PROTECTION					

#### APPENDIX J

REPORT DISTRIBUTION LIST

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS

FOR

## MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

#### DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

#### APPENDIX J

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# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVES SEARCH REPORT FINDINGS

**FOR** 

# MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

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APPENDIX K
ARCHIVES ADDRESSES

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS

**FOR** 

# MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

#### DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

#### APPENDIX K

#### ARCHIVES ADDRESSES

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   Suitland, MD
   (301) 763-7410
- Federal Records Center, Pacific Southwest Region 24000 Avila Road
   P.O. Box 6719
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- Washington National Records Center
   4205 Suitland Road
   Suitland, MD
   (301) 763-7430

# ORDNANCE AND EXPLOSIVE WASTE CHEMICAL WARFARE MATERIALS ARCHIVE SEARCH REPORT FINDINGS FOR MARCH AIR FORCE BASE AND ASSOCIATED SITES

#### RIVERSIDE, CALIFORNIA

#### DERP-FUDS SITE NOS. J09CA001100, J09CA047600 AND J09CAT82600

#### APPENDIX K

#### **ARCHIVES ADDRESSES**

#### 6. National Personnel Records Center

9700 Page Boulevard St. Louis, MO 63132 (314) 538-4216

#### 7. March Field Museum

16222 I-215 Building 1917 March Air Force Base, California 92518-2400

#### 8. Riverside Press Enterprise

Research Room P.O. Box 792 Riverside, California 92502-0792

