



US Army Corps
of Engineers
Rock Island District



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

Archives Search Report

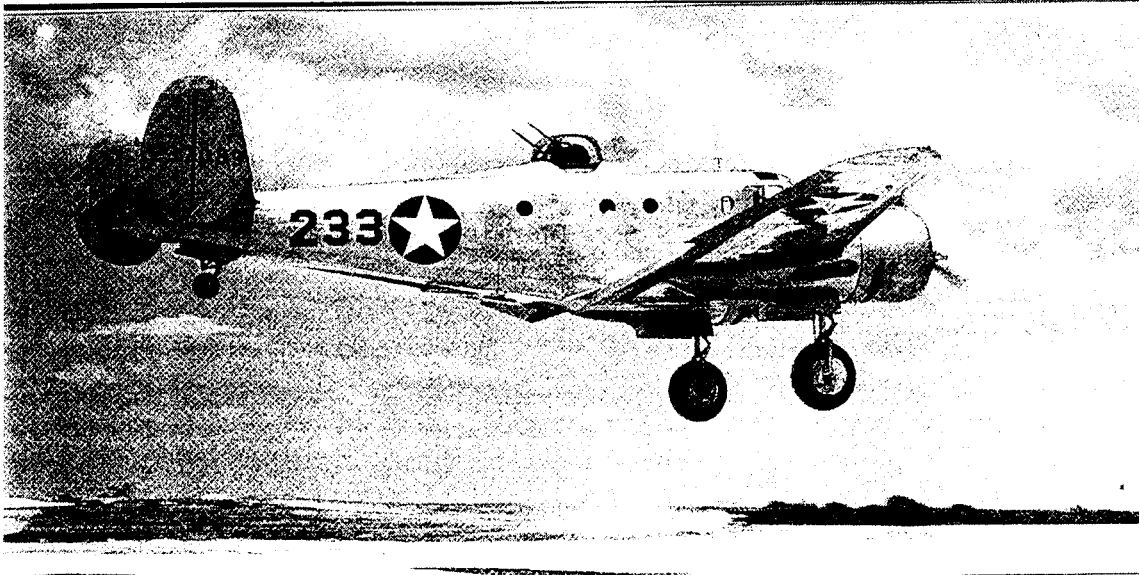
FINDINGS

for
the former

VICTORVILLE PRECISION BOMBING RANGE No. 19

Joshua Tree, California
Project Number J09CA068500

April 1998



DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
for
FORMERLY USED DEFENSE SITES

FINDINGS

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR
VICTORVILLE PRECISION BOMBING RANGE #19
SAN BERNARDINO COUNTY, CALIFORNIA
PROJECT NUMBER J09CA068500

April 1998

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ORDNANCE AND EXPLOSIVES
 ARCHIVES SEARCH REPORT
 FOR
 VICTORVILLE PRECISION BOMBING RANGE #19
 SAN BERNARDINO COUNTY, CALIFORNIA
 PROJECT NUMBER J09CA068500

ACKNOWLEDGMENTS

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FINDINGS

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1. INTRODUCTION

a. **Subject and Purpose**

(1) This report presents the findings of an historical records search and site inspection for ordnance and explosives (OE) located at the former Victorville Precision Bombing Range (PBR) #19, Joshua Tree, California (see plate 1 for general location map). The investigation was performed under the authority of the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP FUDS).

(2) This investigation focused on 640 acres of land that were used by the Victorville Army Air Field (AAF) from 1942 to 1945 as a precision bombing range for bombardier students. The site was officially owned by the War Department from 1943 to 1949.

(3) The purpose of this investigation was to characterize the site for potential OE presence, to include conventional ammunition and chemical warfare material (CWM). This investigation was conducted by experienced ordnance experts through thorough evaluation of historical records, interviews and on-site visual inspection results.

b. **Scope**

(1) This report presents the site history, site description, real estate owner information, and confirmed ordnance presence, based on available records, interviews, site inspections and analyses. It further provides a complete evaluation of all information to assess potential ordnance presence where ordnance presence has not been confirmed.

(2) For the purposes of this report, OE presence is defined as live ammunition or components, debris derived from live ammunition, CWM or explosives which have been lost, abandoned, discarded, buried, fired or thrown from

demolition pits or burning pads. These items were either manufactured, purchased, stored, used and/or disposed of by the War Department/Department of Defense. Such ammunition/components are no longer under accountable record control of any DoD organization or activity.

(3) **Expended** small arms ammunition (.50 cal or smaller), does **not** constitute an OE presence. OE further includes "explosive soil" which refers to any mixture in soil, sand, clays, etc., such that the mixture itself is explosive. Generally, 10% or more by weight of secondary explosives in a soil mixture is considered explosive soil.

2. PREVIOUS INVESTIGATIONS

a. **1991 Preliminary Assessment**

(1) A Preliminary Assessment of Victorville PBR #19 was conducted under DERP FUDS by the U.S. Army Corps of Engineers, Los Angeles District (see document E-1). At that time, the Findings and Determination of Eligibility (FDE), dated 23 July 1991, concluded that the site had been formerly used by the War Department.

(2) This investigation also concluded that there were eligible categories of hazards under the DERP FUDS program. Table 2-1 summarizes the projects recommended in the preliminary assessment.

Project Number	DERP Category	Present Phase	Comments	Location
J09CA068500	OE	SI	OE presence	Entire site

b. **Other Previous Investigations**

No other investigations of Victorville PBR #19 were discovered during the historical records search or site inspection.

3. SITE DESCRIPTION

a. **Existing Land Usage**

Currently, half of the site is controlled by the U.S. Department of the Interior, Bureau of Land Management (BLM). The other half of the site is privately owned, but all individual lots are currently vacant. Table 3-1 represents the current land usage of the site.

AREA	FORMER USAGE	PRESENT OWNER	PRESENT USAGE	SIZE/ ACRES*	COMMENTS
A	Bomb Target Impact Area	Private/BLM	Vacant lots, BLM public land	160	See plate 3
B	Buffer Zone	Private/BLM	Vacant lots, BLM public land	200	See plate 3
C	Remaining Land	Private/BLM	Vacant lots, BLM public land	280	See plate 3
				640	TOTAL

* Indicates approximated acreage

b. **Climatic Data**

(1) Available climatological data came from the city of Victorville, located approximately 60 miles northwest of the site. Because of the similar environments between the two, it was assumed that the climatological data for Victorville would be similar to that of the former Victorville PBR #19.

(2) The San Bernardino climate is typified by long and very hot summers indicative of a high plains desert. The average annual temperature is 60.3 degrees Fahrenheit (F). The warmest month, July, has an average daily temperature of 79.6 degrees F, with an average maximum temperature of 97.8 degrees F. January, the coldest month, has an average daily temperature of 43.7 degrees F, with an average daily minimum temperature of 29.3 degrees F. The extreme maximum and minimum temperatures are 109 degrees F and 11 degrees F, respectively (reference B-5).

(3) The average yearly rainfall is 4.49 inches. The wettest months are November through February and the driest months are May through August. Thunderstorms occur on average three (3) days a year, with most of the storms occurring during the summer. The average annual snowfall is

1.8 inches, with the greatest recorded snow depth at any one time being 17 inches (reference B-5).

(4) The prevailing wind is from the west and the average wind speed is highest, 8 mph, in summer. However, strong, dry winds can come from varying directions throughout the year. The average relative humidity in midafternoon is about 20 percent. Humidity is higher at night, and the average at dawn is 50 percent (reference B-5).

c. Topography

The site is generally flat and gently slopes downward in northeasterly direction. Elevation runs from approximately 3,150 feet above sea level in the southwestern corner of the site to 3,000 feet above sea level at the northeastern corner of the site. This results in an approximate grade of 2% from the southwest corner to the northeast corner. Mountains exist immediately to the west and southwest, while the flatness and gentle down-sloping continue to the north and east for several miles.

d. Geology and Soils

Detailed soil maps for Victorville PBR #19 were not available. According to a general soils report for the area, the predominant soil types of the project area, in descending order of prominence, are identified as follows:

(1) Mohave-Adelanto variants association, 0 to 15 percent slopes: consists of well drained, moderately slowly permeable, sandy loams; moderately deep to deep caliche developed in stratified clay loam alluvium. Mohave variant soils make about 45% and Adelanto variant soils make up about 35% of this association. The remaining 20% consists of Sunrise (10%), Cajon and Arizo (10%) soils. These soils are used mainly for recreation, urban development and wildlife purposes. Limited grazing is possible where rainfall is sufficient to produce adequate foliage.

(2) Rock land association: consists of excessively drained, very stony or very rocky, sand loams to sands developed from bedrock. Rock land makes up about 70% of the association. Calvista, Adelanto and Mohave soils comprise 10% of the association, while Sunrise and Ramona soils comprise 20%. Rock land is formed on hard bedrock from all types of rock origin. There is seldom more than 10 inches of surface soil. Rock land is used mainly for recreation,

watershed and wildlife purposes, as they have no value for either cropland or grazing.

e. Hydrology

(1) The aquifers in San Bernardino County primarily belong to a vast network of aquifers known as the Basin and Range Province. Basin and Range aquifers are characterized by internally drained basins and exist in areas where the potential annual water loss through evaporation exceeds the annual water gain through precipitation.

(2) Within the Basin and Range Province, aquifers are not continuous, or regional, because of the complex faulting in the region. Three principal types of aquifers exist in the province: volcanic-rock aquifers, carbonate-rock aquifers and basin-fill aquifers. Collectively the three are called the Basin and Range aquifers.

(3) The Victorville PBR #19 site lies within or near an area underlain by a basin-fill aquifer. Basin-fill aquifers are primarily unconsolidated sand and gravel of Quaternary and Tertiary age. Over a period of millions of years, streams that eroded and transported sediments from nearby mountains deposited the sand and gravel to create the medium for the aquifer.

(4) Typical depth to groundwater in the area is approximately 150 to 250 feet. There are no permanent surface water features within site boundaries.

f. Natural Resources

(1) Table 3-2 lists the threatened or endangered, permanent or transient species that are known to exist within proximity of the site area as supplied the U.S. Fish and Wildlife Service (see document F-22). Document F-23 is a complete listing of all threatened or endangered species that are known to exist in San Bernardino County. None of these species are known to exist within the site boundaries itself.

(2) Prior to any remedial action at the site, it is recommended that the California Department of Fish and Game be contacted for an up-to-date listing of protected wildlife species (see Appendix A).

g. Historical/Cultural Resources

(1) The San Bernardino Archeological Information Center stated there was one pending "military site" within the site boundaries. This "military site" has not been formally recorded, and is most likely the bomb target itself (see document F-21). Historical and cultural resources for the site are located in Table 3-2.

(2) In the event of remediation on the site, it is recommended that the SHPO and/or the San Bernardino Archeological Information Center be contacted for a current re-evaluation of site conditions and remediation guidelines. (see Appendix A).

Resource Classification	Type	Comment
Natural Reptile	Desert Tortoise	Federal threatened
Historical	Military	Not formally recorded; is most likely the bomb target itself
Cultural	(None identified)	

4. HISTORICAL ORDNANCE USAGE

a. **Chronological Site Summary**

(1) October 1941 to May 1943

(a) On 1 October 1941, the Air Corps Advanced Flying School (ACAFS) was activated in Victorville, California. The mission of ACAFS was to conduct Bombardier and Advanced Twin-Engine Pilot Training programs. ACAFS was later designated as Victorville Army Flying School (VAFS) on 6 February 1942 and as Victorville Army Air Field (VAAF) on 23 April 1943. Throughout the changes in name, the mission of the air field remained the same (see document F-20).

(b) In December 1941, the West Coast Air Corps Training Center (WCACTC) initiated actions to acquire 18 bombing ranges for ACAFS in Victorville. A contractor in San Bernardino, California, was hired to construct the

targets, including PBR #19, in March 1942 (see document F-2). Improvements made to PBR #19 included clearing and grading, asphalt target rings of 100, 200 and 300 foot diameter, one (1) mile of fencing and a wooden target structure (see documents F-9 and G-5). All work on the ranges were completed and accepted by VAFS on 1 May 1942 (see documents F-2 and F-3).

(c) The first bombardier class at VAFS started on 22 February 1942 and graduated on 22 May 1942 (see document F-20). The bombardiers primarily flew in AT-11 aircraft during training and utilized 100 pound sand filled practice bombs on the bombing ranges (see documents F-1 and F-4 through F-6). In order to graduate, the bombardiers had to have an average circular error of 275 feet on their bombing runs; meaning that at least ½ of their bombs dropped had to be within 275 feet of the target (see document F-2).

(d) The bombing ranges at VAFS were arranged to create four series of bombing ranges grouped together so that a bombardier would make bombing runs at a series of targets instead of one singular target. PBR #19 was part of series "D", which was put into operation on 10 March 1943. Series "D" was a series of day targets that included PBRs #17, #18, #19 and #20. Bombing runs for series "D" would begin at PBR #19, entering the target flying on a 105 degree azimuth (see document F-5). The bombing runs were conducted at low, mid and high altitudes and PBR #19 was used on average approximately 10 hours a day. No night bombing was conducted on PBR #19 (see documents F-2 and F-4).

(2) May 1943 to July 1949

(a) The land for PBR #19 was not officially acquired until 1943, well after improvements were made to the site and bombing on the range had commenced. On 11 May 1943, 320 acres were obtained from the Southern Pacific Land Company by condemnation (see document G-5). The remaining 320 acres were acquired on 20 May 1943 from the Department of Interior, Bureau of Land Management (BLM) through Public Land Order (PLO) 125 (see documents F-18, G-1 and G-5).

(b) The training of bombardiers at VAAF continued into 1944. Ordnance utilized during the bombing runs included M38A2 100 pound practice bombs, M85 100 pound concrete practice bombs and M47A2 100 pound chemical bombs (see document F-6). It is believed that the M47A2 chemical bombs were filled with sand and used as practice bombs.

(c) In late 1944, VAAF changed their training from bombardier to radar observer (bombardment). The radar observer (bombardment) training was established at VAAF in October 1944. The last class of bombardiers trained at VAAF graduated on 23 December 1944, making the total number graduated at VAAF since 1942 to be 5,317. The radar observer (bombardment) training continued for about a year, and was suspended on 24 September 1945 (see document F-20).

(d) Victorville PBR #19 was made available to the Fourth Air Force around October 1945, but it is unknown if it was ever used by them (see document F-8). The site was declared excess to the needs of VAAF on 7 December 1945 and declared surplus on 23 January 1946 (see documents F-9 and G-2). On 20 March 1946, the Army Air Forces (AAF) requested that PBR #19 be removed from surplus in order to support the P-80 jet training program at March Field, California (see document F-10). The site was re-established on 15 April 1946, but it was never used by March Field (see documents F-11, F-14 and G-3).

(e) On 31 January 1947, the South Pacific Division of the Corps of Engineers requested the site be declared excess as it had not been used in approximately two (2) years, vandals had looted the site and the site was littered with bomb debris and duds (see document F-13). Because of this, PBR #19 was declared surplus on 13 August 1947 (see document G-4).

(f) From 20 October 1947 to 24 January 1948, the 9800th TSU-CE Detachment No. 14 conducted dedudiving operations of several VAAF bomb targets including PBR #19. A surface and subsurface clearance was conducted, and all discovered unexploded ordnance was destroyed in place. All remaining debris and non-hazardous ordnance was left on the site (see documents F-15 through F-17).

(g) The War Assets Administration (WAA) assumed custody of PBR #19 on 10 May 1948. On 19 May 1948, PLO 125 was revoked and the 320 acres were returned to BLM (see document F-18). The remaining 320 acres were disposed of by quitclaim deed to Norman M. and Cora E. Imbertson on 7 July 1949 (see document G-6).

(3) July 1949 to Present

(a) The land that comprised the Victorville PBR #19 has undergone little change in the last 50 years. It remains undeveloped except for dirt roads in the western half of the site. The eastern half, 320 acres, is still

owned by BLM and is undeveloped. A small number of residences have been built to the north of the site.

(b) No incidents involving OE have been reported to local law enforcement officials since site closure. Currently, a local resident is clearing the surface of practice bomb debris to sell for scrap (see document I-2).

b. Ordnance Records Review

An historical document search was conducted by the site inspection (SI) team to obtain ordnance related records relevant to Victorville PBR #19. Research sites included, but were not limited to, National and State Archives, state, county and local libraries, historical centers and societies, local newspapers, state, county and local law enforcement agencies and current owners of the site (see appendix A for a complete listing of contacts). All documents obtained were thoroughly reviewed by the SI team. The following documents are important to the verification of real property use by the War Department and the presence or non-presence of ordnance:

(1) A 13 February 1942 memorandum provides general information about the bomb targets being acquired for ACAFS. It states that 100 pound, sand filled practice bombs will be used by the bombardier students (see document F-1).

(2) An excerpt from an historical record of VAAF from 8 December 1941 to 1 January 1943 gives contracting data for the bombing range construction as well as historical information on the first bombardier classes (see document F-2).

(3) A memorandum, dated 30 April 1942, confirms that the contract to construct the bombing ranges for VAFS has been completed (see document F-3).

(4) A July 1943 range data table states AT-11s were used on precision bombing ranges and that PBR #19 was used approximately 10 hours a day, but not at night (see document F-4).

(5) An excerpt from an historical record of VAAF from 1 January 1943 to 1 March 1944 describes how the bombing ranges were configured in a series. It also includes a map and aerial photo of series "D", which PBR #19 was a part of (see document F-5).

(6) An excerpt from an historical record of VAAF from 1 November to 31 December 1944 lists the ordnance supply at VAAF (see document F-6).

(7) A 1 September 1945 version of "Army Air Forces Installations Directory" shows that PBR #19 contained only one target and was a day precision target only (see document F-7).

(8) A 6 October 1945 memorandum states that PBR #19 was made available for use by the Fourth Air Force (see document F-8).

(9) A memorandum, dated 7 December 1945, states that PBR #19 was declared excess to the needs of the San Bernardino Air Technical Service Command (see document F-9).

(10) A 20 March 1946 memorandum requests that PBR #19 be withdrawn from excess to be used by March Field for the P-80 Jet Training Program (see document F-10).

(11) A 15 April 1946 memorandum withdraws PBR #19 from surplus (see document F-11).

(12) A memorandum dated 10 October 1946 discusses decontamination of bombing and gunnery ranges. It provides policy stating that certain lands may be declared surplus without all unexploded duds being cleared from the site (see document F-12).

(13) A memorandum, dated 31 January 1947, and first endorsement, expresses the adverse conditions at PBR #19, which included vandalism to the improvements and existence of unexploded ordnance (see document F-13).

(14) A 18 February 1947 memorandum states that PBR #19 was never used by March Field (see document F-14).

(15) The 4 February 1948 deduinding report details the operation of clearing the VAAF bombing ranges (see document F-15).

(16) The 22 March 1948 Certificate of Clearance certifies that PBR #19 was cleared of all explosive or dangerous material (see document F-16).

(17) A letter, dated 28 April 1948, states the general conditions of PBR #19 at that time (see document F-17).

(18) A letter, dated 19 May 1948, revokes PLO 125 and returns 320 acres of land to BLM (see document F-18).

(19) A 21 May 1948 memorandum states that WAA had assumed custody and accountability of the site (see document F-19).

(20) An excerpt from "Brief History of George Air Force Base 1941-1950" provides a detailed account of the bombardier training program (see document F-20).

(21) Public Land Order 125, dated 20 May 1943, transfers 320 acres from the BLM to the War Department for PBR #19 (see document G-1).

(22) A warning notice, dated 6 February 1946, places PBR #19 in a surplus status effective 23 January 1946 (see document G-2).

(23) A warning notice, dated 13 May 1946, places PBR #19 in a re-established status effective 15 April 1946 (see document G-3).

(24) A warning notice, dated 19 August 1947, places PBR #19 in a surplus status effective 13 August 1947 (see document G-4).

(25) WAA Form 1005, Declaration of Surplus Property, dated 3 March 1948, with attachments, lists improvements made to the site, the site's current condition and real estate history of the site (see document G-5).

(26) A 7 July 1949 quitclaim deed transfers 320 acres from the United States of America to Norman M. and Cora E. Imbertson (see document G-6).

(27) Two aerial photos, dated 16 December 1954 and 25 July 1989 clearly show the remains of target circles at PBR #19 (see documents K-1 and K-2).

(28) Two historic maps, dated 19 September 1945 and 14 November 1950 provide the boundaries and real estate history of the site (see documents L-1 and L-2).

c. Interviews with Site Related Personnel

(1) Several area law enforcement officials and EOD units were contacted during the historical records search and/or the site inspection.

(a) The 759th Ordnance Company at Fort Irwin, the 95th CEG/CED at Edwards Air Force Base and the Marine EOD unit at Twentynine Palms had no knowledge of any incidents involving OE at Victorville PBR #19 (see documents I-3 and I-4).

(b) The San Bernardino County Sheriff's Department also had no reports of any incidents involving OE at the site (see document I-1).

(2) Other interested parties were also interviewed during the site inspection.

(a) Mr. Glenn Brooks, a former airman stationed at VAAF from September 1941 to April 1943, stated that 100 pound sand-filled practice bombs were used on the ranges. The pilots flew AT-11 aircraft during their bombardier training and Mr. Brooks was certain that HE bombs or rockets of any kind were never used on any of the Victorville PBRs (see document I-5).

(b) Mr. Owen Cooper was in bombardier class 43-3 at VAAF. Mr. Cooper stated that he flew AT-11 aircraft on the bombing runs and only dropped 100 pound sand filled practice bombs with a spotting charge. He never saw an HE bomb while at VAAF and was unaware of any other bombardier cadets dropping HE bombs during training (see document I-6).

(c) Mr. Jay Conway is a local resident living near the site. He has owned property in the area for 28 years and has ridden motorcycles in the area since he was 12 years old. Mr. Conway is currently collecting the practice bomb debris at the site to sell for scrap. Mr. Conway stated that he had never found an intact spotting charge in all his years of visiting and living near the site. Mr. Conway had no knowledge of any incidents involving OE at the site (see document I-2).

5. SITE ELIGIBILITY

a. **Confirmed Formerly Used Defense Sites**

Former land usage and/or ownership of Victorville PBR #19 by the War Department has been confirmed and summarized in the COE Findings and Determination of Eligibility dated 23 July 1991 (see document E-1). According to the FDE, the site consisted of 640 acres obtained by transfer of public lands and by deed and used

for a precision bombing range from 1942 to 1945. The War Department officially owned the site from 1943 to 1949.

b. Potential Formerly Used Defense Sites

No potential formerly used defense sites were discovered by the SI team during the historical records search and site inspection.

6. VISUAL SITE INSPECTION

a. General Procedures and Safety

(1) During the period 26 - 30 January 1998, members of the SI team traveled to the site of the Victorville PBR #19, San Bernardino County, California. This travel was in support of and in accordance with references B-1 through B-4. The primary task of the SI team was to assess OE presence and potential. The site inspection was limited to non-intrusive methods, i.e., subsurface sampling was not authorized or performed.

(2) Real Estate rights-of-entry were not obtained by the SI team due to the willingness of the current owners to grant access to the site.

(3) A site safety plan was developed and used by the SI team to assure an injury-free site inspection. A briefing was conducted prior to the SI stressing that OE should be handled only by military EOD personnel.

(4) Prior to the site visit, a thorough review of available reports, historical documents, texts and maps gathered during the historical records search was performed.

b. Area A: Bomb Target Impact Area

(1) Area A consists of 160 acres and is the area immediately surrounding the bomb target and extending to $\frac{1}{4}$ mile from the bomb target in the four primary directions (see plate 4). Historical documentation indicates bombardiers from Victorville AAF conducted low, mid and high altitude bombing utilizing 100 pound practice bombs at the site. Historical documentation also provides that this area was cleared of surface and subsurface unexploded ordnance by EOD units prior to site closure.

(2) Today, Area A remains undeveloped desert land. Vegetation is sparse. The only remains of the bomb target

itself are white stones where the actual target was placed and the three concentric rings and cross-hairs on the ground used to identify the target from the air (see photos J-1 through J-15).

(3) Several pieces of OE residue were discovered by the SI team during the site inspection. The OE residue was found to be within approximately $\frac{1}{4}$ mile in all directions from target center by the SI team. Among the items discovered were: M38A2 100 pound practice bomb debris, Mk15 100 pound practice bomb debris, and M47 100 pound chemical bomb (configured as a practice bomb) debris (see photos J-16 through J-24, J-26 through J-31). The debris seemed to be more heavily concentrated to the north and east of the bomb target. No hazardous material such as intact spotting charges or complete practice bombs were discovered by the SI team.

(4) An owner of property in the area who has been visiting or living in the area for 28 years has recently been collecting the practice bomb debris to sell for scrap. He has never found any intact spotting charges or complete practice bombs. No incidents involving hazardous materials in Area A have been reported to local law enforcement officials.

c. Area B: Buffer Zone

(1) Area B consists of 200 acres and is a buffer zone around Area A extending $\frac{1}{8}$ of a mile beyond the boundaries of Area A (see plate 4). Area B is an area of transition between where OE exists or is expected to exist (Area A) to where OE does not or should not exist (Area C).

(2) This area is also undeveloped desert land with sparse vegetation. The only signs of human presence in Area B are dirt roads in the western half of the area.

(3) No OE or OE residue was discovered by the SI team in Area B during the site inspection. No incidents involving OE in Area B have been reported to local law enforcement officials.

d. Area C: Remaining Land

(1) Area C consists of 280 acres and is the remaining land inside site boundaries and outside of Areas A and B (see plate 4). Historical documentation indicates that no activities involving ordnance occurred in this area,

as it is located 3/8 of a mile away from the bomb target center.

(2) As with Areas A and B, Area C is undeveloped desert land with sparse vegetation. Dirt roads exist along the perimeter of the area and in the western half of the area. The SI team discovered no evidence of OE or evidence of any past military activities involving OE. No incidents involving OE in Area C have been reported to local law enforcement officials.

7. EVALUATION OF ORDNANCE HAZARDS

a. **General Procedures**

(1) Each area was evaluated to determine confirmed, potential or uncontaminated ordnance presence. Confirmed ordnance and explosives (OE) presence is based on verifiable historical evidence or direct witness of OE (with explosive components and/or inert debris/fragments) since site closure. Additional field data is not required to identify a confirmed site. Verifiable historical records evidence is based on OE items actually seen on site since site closure and authenticated by: historical records (Archive Records, Preliminary Assessment Reports, Site Investigation Reports), local fire departments and law enforcement agencies/bomb squads, military Explosive Ordnance Disposal (EOD) units, newspaper articles, photographs or maps. Direct witness of OE items consists of the site inspection team(s) and other credible witnesses as determined by the ASR Research Team Leader (landowners, workers on-site, soldiers who served there, etc,) verifying that they have seen OE presence on the surface or subsurface since site closure.

(2) Potential ordnance and explosives (OE) presence is based on a lack of confirmed OE ordnance. Potential OE presence is inferred from records, present day site features, non-verifiable direct witness or indirect witness. Additional field data is needed to confirm potential OE sites. Inference from historical records is based on no OE items actually seen on site since site closure and would include documentation (records, aerial photographs, maps) indicating possible OE presence derived from common practice in production, storage, use, or disposal at that time and from records indicating known OE usage. Inference from present day site features would be the indication of possible OE presence from such obvious features as target circles, depressions, mounds/backstops, OB/OD areas/pits,

etc. Indirect witness would be people who have stated that they have heard of OE presence on-site (hear-say evidence).

(3) Uncontaminated ordnance areas are based on a lack of confirmed or potential ordnance and explosives (OE) presence. All historical records and present day site inspections do not indicate confirmed or potential ordnance presence. There is no reasonable evidence, either direct or inferred, to suggest present day OE presence. Additional field data is not needed to assess uncontaminated ordnance areas.

b. Area A: Bomb Target Impact Area

Area A is considered to have a **confirmed** ordnance presence because debris from M38A2, Mk15 and M47 100 pound practice bombs were discovered in the area by the SI team. Although no intact spotting charges or complete practice bombs were found, such energetic material may exist below the surface. It is not likely for energetic material to exist on the surface since the surface was cleared of hazardous ordnance prior to site disposal. Because a local resident is gathering all the practice bomb debris to sell for scrap, the surface debris remaining in the area may soon be gone. Local law enforcement officials have no record of any incidents involving OE in Area A.

c. Area B: Buffer Zone

Area B is considered to have a **potential** ordnance presence because some of the practice bombs dropped at the target in Area A may have missed by over a ¼ mile and therefore impacted in Area B. Given this, there is a slight potential for intact spotting charges and/or practice bombs to exist on the surface or subsurface in Area B. The SI team did not find any OE in the area. A local resident is currently clearing the surface of practice bomb debris to sell for scrap. No incidents involving OE in Area B have been reported to the local authorities.

d. Area C: Remaining Land

Area C is considered **uncontaminated** because there is no historical or present day evidence of OE presence in the area. Historical documentation indicates Area C was idle land surrounding the bomb target and buffer zone. No OE or evidence of past ordnance related activities was discovered by the SI team during the site inspection. There have been no reports of incidents involving OE occurring in Area C.

8. SITE ORDNANCE TECHNICAL DATA

a. **End Item Technical Data**

(1) Table 8-1, a listing of ammunition and explosive fillers potentially used at the Victorville PBR #19 site and Table 8-2, a summary of site ordnance fillers, have been developed. These tables are based on a review of historical documentation with specifications stated at Appendix D. Exact models/types have been included as documentation has permitted. Inclusion of this table does not insinuate any OE presence at Victorville PBR #19.

TABLE 8-1 AMMUNITION USED AND EXPLOSIVE/CHEMICAL FILLER			
ITEM	MODEL/TYPE	FILLER/WEIGHT	FUZE/TYPE
Bomb, practice, 100 pound	M38A2	Body - sheet metal Filler - sand Spotting charge - M1A1	Mk 247 (inert)
	Mk 15 Mod 2	Body - sheet metal Filler - sand or water	None
	Mk 15 Mod 3	Body - sheet metal Filler - sand or water Signal - Mk 7	Mk 247 (inert)
	M85	Body - concrete with sheet metal tail assembly Spotting charge - M1A1	None
Bomb, chemical, 100 pound (metal parts)	M47A1*, M47A2*	Body - sheet metal Filler* - sand	Unknown*
Charge, spotting	M1A1	Filler - 3 lbs black powder	N/A
Signal, practice bomb	Mk 7	Filler - 1 lb black powder	N/A
* The M47A1 and M47A2 chemical bombs used at Victorville PBR #19 were configured as practice bombs and inertly filled with sand. It is unknown if inert fuzes were used in this configuration.			

b. **Chemical Data of Ordnance Fillers**

Table 8-2 has been developed to provide information on the explosive/chemical compounds used in the ordnance cited in Table 8-1.

TABLE 8-2 CHEMICAL DATA OF ORDNANCE FILLERS		
FILLER	SYNONYM(S)	CHEMICAL FORMULA
Black Powder	Saltpeter, Niter	
75% Potassium Nitrate		KNO ₃
10% Sulfur		S
15% Charcoal		C

9. EVALUATION OF OTHER ENVIRONMENTAL HAZARDS

a. **Hazardous, Toxic and Radiological Waste**

There are no apparent HTRW or CON HTRW hazards at Victorville PBR #19.

b. **Building Demolition/Debris Removal**

There are no apparent BD/DR hazards at Victorville PBR #19.

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of Defense			
Headquarters			
Defense Technical Information Center (DTIC) 8725 John J. Kingman Road Suite 0944 Fort Belvoir, VA 22060-6218	DTIC Computer	(703)767-8274	On-line computer search No information obtained
Defense Library on Disk Pentagon Library, Room 1A518 Washington, DC 20310-6080	DLOD Computer	(703)697-4658	On-line computer search No information obtained
Department of Defense Explosive Safety Board 2461 Eisenhower Avenue Alexandria, VA	DDESB Computer	(703)325-8624	On-line computer search No information obtained
National Imagery and Mapping Agency, Philadelphia Depot 5801 Tabor Avenue Philadelphia, PA 19120-5095	Staff	(800)826-0342 (301)227-2495	Aeronautical and nautical charts
Department of Army			
759 th Ordnance Company (EOD) BLDG 520 Fort Irwin, CA 92310	CPT Grimes, 1SG Fortney SFC Woods	(760)380-4092	Interview I-3
U.S. Army Ordnance Museum Aberdeen Proving Ground, MD 21005-5201	Mr. Roger Godin	(410)278-3602	Source of old ordnance and Navy publications
Defense Logistics Studies Information Exchange (DLSIE) U.S. Army Logistics Management College Fort Lee, VA 23801-6043	DLSIE Computer	(804)734-4007	On-line computer search No information obtained

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Defense (Continued)			
Department of Army (Continued)			
U.S. Army Corps of Engineers Office of History 7701 Telegraph Road Alexandria, VA 22310-3865	Contractor	(703)355-3558	See Appendix B, Section II
U.S. Army Engineer District Los Angeles 911 Wilshire Blvd Los Angeles, CA 93043	Ms. Deb Castens Mr. Greg Boghossian Mr. Jeff Armentrout Mr. Richard Nagle Mr. Delores Henderson	(213)452-3719 -3722	General site information Real estate information
U.S. Army Engineer District Los Angeles Southern California Area Office 10845 Rancho Bernardo Road Suite 204 Rancho Bernardo, CA 92127	Mr. Jim Walker Mr. B.J. Allen	(619)674-6789 -6765	
U.S. Army Center for Military History ATTN: DAMH-RAS 1099 14th Street, NW Franklin Court Building Washington, DC 20005-3402	Contractor	(202)761-5416	See Appendix, Section II
Industrial Operations Command Historical Office ATTN: AMSIO-EAH, Bldg 390 Rock Island Arsenal Rock Island, IL 61299	Mr. Tom Slattery	(309)794-1450	No information obtained

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The following organizations and personnel are acknowledged for their support.

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GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Defense (Continued)			
Department of Army (Continued)			
U.S. Military History Institute Carlisle Barracks Carlisle, PA 17013-5008	Mr. Richard Sommers (Archives Branch)	(717)245-3601	No information obtained
	Mr. John Slonaker (Library)	(717)245-3611	General VAAF information
	Mr. Mike Winey (Photo Archives)	(717)245-3434	No information obtained
U.S. Army Chemical and Biological Defense Command Aberdeen Proving Ground, MD 21010-5423	Ms. Kathleen Ciolfo	(410)671-4430	No evidence of chemical use at this site
Rock Island Arsenal Museum Rock Island Arsenal Rock Island, IL 61299	Mr. Chris Leinicke	(309)794-3518	Source of old technical manuals
U.S. Army Chemical School Fisher Library - Bldg 1081 Ft. McClellan, AL 36205-5000	Mr. Dick Fastorett	(205)848-4414	No information obtained
USATCES Library ATTN: SIOAC-ESM Savanna, IL 61074	Mr. Chris Holiday	(815)273-8772	Reference sources available
U.S. Military History Institute Photo Archives Carlisle Barracks Carlisle, PA 17013	Mr. Mike Winey	(717)245-3434	No information obtained

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Defense (Continued)			
Department of Air Force			
95 th CEG/CED 501 N. Rosamond Blvd Edwards AFB, CA 93524	MSGT Hepner, TSGT Glinka	(805)277-2162	Interview I-4
Air Force Historical Research Agency 600 Chennault Circle Maxwell AFB, AL 36112-6424	Mr. Joe Carver IRIS Computer	(334)953-2395 (334)953-2437	Microfilm reels Microfilm reels
Air University Library 600 Chennault Circle Maxwell AFB, AL 36112	Mr. Leroy Bell	(334)953-2888	No information obtained
Air Force Times 6883 Commercial Drive Springfield, VA 22159	Locators staff	(800)368-5718	Published notice seeking pilots trained/stationed at Victorville AAF.
Department of Navy			
Navy Historical Center Building 57 Washington Naval Yard Washington, DC 20374	Contractor	(202)433-3171	See Appendix B, Section II
Marine Corps Historical Center BLDG 58 Washington Navy Yard Washington, DC 20373	Contractor	(202)433-3483	See Appendix B, Section II
NAVEODTECHDIV Technical Library 2008 Stump Neck Road Indian Head, MD 20640-5070	Ms. Betty Arbogast Ms. Dawn Risko	(301)743-6834	Source of Navy publications

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Defense (Continued)			
Department of Navy (Continued)			
Naval Construction Battalion Center ATTN: Code 10H - NAVFAC Historian 10 23 rd Avenue Port Hueneme, CA 93043	Dr. Vince Transano Ms. Carol Marsh	(805)982-5913	No information obtained
Naval Construction Battalion Center ATTN: Code 72 - Technical Information Center 1100 23 rd Avenue Port Hueneme, CA 93043	Mr. Brain Thompson	(805)982-1124	No information obtained
Naval Construction Battalion Center ATTN: Code 15 - Civil Engineering Support Office 1000 23 rd Avenue Port Hueneme, CA 93043	Ms. Mona Leon-Guerrero	(805)982-3057	No information obtained
USMC EOD Unit, MCAGCC Twenty-Nine Palms, CA 92272	MAJ Allston	(760)830-7215 -6885	No OE incidents for site on file
Department of Agriculture USDA Aerial Photography Field Office P.O. Box 30010 Salt Lake City, UT 84130-0010	Ms. Sherrie Holyoak	(801)975-3503	Historic aerial photos available

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Agriculture (Continued)			
USDA - CFSA 44811 Date Avenue West Lancaster, CA 93534	Mr. Doug Brand	(805)942-9549	Aerial photos available
USDA - NRCS 18484 Hwy 18, Suite 195 Apple Valley, CA 92307	Ms. Jackie Lindgren Mr. Rick Aguayo	(760)242-2906	Soil survey, soil map sheets, Aerial photos available
USDA - NRCS P.O. Box 788115 Bldg 1456, Griffin Road Twenty-Nine Palms, CA 92278	Mr. John Rule	(760)830-7011	Aerial photos available
Department of Interior			
USGS Denver Federal Center P.O. Box 25286 Denver, CO 80225	Staff	(303)203-4700	Topographic maps
USGS EROS Data Center Sioux Falls, SD 57198	Staff	(605)594-6151	Aerial photos
Bureau of Land Management 6221 Box Springs Blvd Riverside, CA 92507	Mr. John Keyes	(909)697-5383	No information obtained
Bureau of Land Management Barstow Resource Area 150 Coolwater Lane Barstow, CA 92311	Mr. Tim Reab	(619)255-8700	BLM real estate records

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
Department of Interior (Continued)			
U.S. Fish and Wildlife Service Ecological Services 2493 Portola Road, Suite B Ventura, CA 93003	Mr. Ray Branfield	(805)644-1766	Endangered/threatened species list
USGS (ESIC) Box 25046, Bldg 810 Denver Federal Center Denver, CO 80225	Ms. Paula Erickson Mr. Steve Reiter	(303)202-4200	Aerial photos and orthophotoquads available
Department of Commerce			
National Oceanic and Atmospheric Administration National Climatic Data Center Federal Building, Room 305 Asheville, NC 28801	Mr. Sam McCowen Ms. Yolanda Goosch	(704)271-4272	Climatological data
NOAA Air Force Weather Service 151 Patton Avenue, Room 120 Ashville, NC 28801	Ms. Janet Wall	(704)271-4404	Climatological data
National Archives and Records Administration			
NARA - Pacific Region (Laguna Niguel) 24000 Avila Road Laguna Niguel, CA 92607	Ms. Suzanne Dewberry	(714)360-2641	See Appendix B, Section II
NARA - Pacific Region (San Francisco) 1000 Commodore Drive San Bruno, CA 94066-2350	Mr. Bill Greene Ms. Lisa Miller	(415)876-9015	See Appendix B, Section II

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL (Continued)			
National Archives and Records Administration (Continued)			
Archives I Modern Military Pennsylvania and 7th Washington, DC 20408	Contractor	(202)501-5385	See Appendix B, Section II
Archives I Navy Pennsylvania and 7 th Washington, DC 20408	Contractor	(202)501-5671	See Appendix B, Section II
Archives I Old Military Pennsylvania and 7 th Washington, DC 20408	Contractor	(202)501-5390	See Appendix B, Section II
Archives II Cartographic & Architectural Branch 8601 Adelphi Rd. College Park, MD 20740-6001	Contractor	(301)713-7040	See Appendix B, Section II
Archives II Still Picture Branch 8601 Adelphi Rd. College Park, MD 20740-6001	Contractor	(301)713-6660	See Appendix B, Section II
Archives II Motion Picture, Sound and Video Branch 8601 Adelphi Rd. College Park, MD 20740-6001	Contractor	(301)713-7060	See Appendix B, Section II

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GOVERNMENT AGENCIES			
FEDERAL (Continued)			
National Archives and Records Administration (Continued)			
Archives II Civil Reference Branch 8601 Adelphi Rd. College Park, MD 20740-6001	Contractor	(301)713-7250	See Appendix B, Section II
Archives II Textual Branch 8601 Adelphi Rd. College Park, MD 20740-6001	Contractor	(301)713-7250	See Appendix B, Section II
Suitland Reference Branch 4205 Suitland Parkway Washington, DC 20409	Contractor	(301)457-7190	See Appendix B, Section II
National Personnel Records Center 9700 Page Ave. St. Louis, MO 63132	Mr. Wilson Sullivan	(314)538-4085	See Appendix B, Section III
Washington National Records Center 4205 Suitland Road Suitland, MD 20409	Contractor	(301)457-7000	See Appendix B, Section II
Smithsonian Institute Smithsonian Institute Historical Research Division Washington, DC 20560	Contractor	(202)357-3133	See Appendix B, Section II
Congress Library of Congress Geography and Map Division Washington, DC 20536	Contractor	(202)707-5522	See Appendix B, Section II

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
STATE			
California State Historic Preservation Office San Bernardino Archaeological Information Center 2024 Orange Tree Lane Redland, CA 92374	Ms. Robin Laska	(909)792-1497	Historical, cultural and archaeological information
California State Archives 1020 East O Street Sacramento, CA 92415	Mr. Metzger	(916)653-2246	No information obtained
California State Library 914 Capitol Hall Library and Courts Bldg Sacramento, CA 94237	Mr. John Gonzales (CA history section) Mr. Brent Murphy (Gov documents section)	(916)654-0176 (916)654-0069	No information obtained No information obtained
California State University San Bernardino Library 5500 University Parkway San Bernardino, CA 92407	Reference Librarian	(909)880-5084	No information obtained
California Department of Fish and Game 1416 9 th Street Sacramento, CA 95814	(Internet)		Endangered species list
University of California Library P.O. Box 19557 Irvine, CA 92110	Reference Desk Mr. Jeff Schneidewind (Govt documents dept)	(714)824-6836 (714)824-7234	No information obtained No information obtained
University of California Archives P.O. Box 19557 Irvine, CA 92110	Ms. Mary Ellen Goddard	(714)824-7193	No information obtained

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
COUNTY			
San Bernardino County Archives 777 East Rialto Avenue San Bernardino, CA 92415	Mr. Jim Hoffer	(909)387-2030	No information obtained
San Bernardino County Assessor 172 West 3 rd Street San Bernardino, CA 92415	Staff	(909)387-8307	Property plat maps
San Bernardino County Flood Control 825 East 3 rd Street San Bernardino, CA 92415	Mr. Gary Duncan	(909)387-2529	Source of aerial photos
San Bernardino County Library Victorville Branch 15011 Circle Drive Victorville, CA 92392	Mr. Booker	(619)245-4222	George AFB material
San Bernardino County Library Lucerne Valley Branch 33103 Old Woman Springs Road Lucerne Valley, CA 92356	Reference desk	(619)248-7521	No information obtained
San Bernardino County Museum 2024 Orange Tree Lane Redlands, CA 92374	Ms. Robin Laska Ms. Noella Benvenuti Ms. Pamela Frost	(909)798-8570	No information obtained
San Bernardino County Planning 385 North Arrowhead Avenue San Bernardino, CA 92415	Ms. Marla Taub	(909)387-4131	Land use and hazard information
San Bernardino County Sheriff's Department Barstow Station 225 East Mountainview Barstow, CA 92311	SGT Jecusco	(760)256-4841	No record of OE incidents at site

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
COUNTY (Continued)			
San Bernardino County Sheriff and Bomb Squad 655 East 3 rd Street San Bernardino, CA 92415	Mr. Bill Myers Mr. Bob Hall	(909)387-3598 -3606 -3601	Interview I-1
San Bernardino Public Library 555 West 6 th Street San Bernardino, CA 92415	Mr. Chris Shovey	(909)381-8208	Collection of WWII era files
CITY/TOWNSHIP (None)			
NON GOVERNMENT AGENCIES			
NATIONAL			
Scientific & Technical Information Library System 689 Discovery Drive Huntsville, AL 35806	Computer (STILAS)	(205)922-9820	On-line computer search Old ASRs for other PBRs
Online Computer Library Center 6565 Frantz Rd. Dublin, OH 43017-3395	Computer (OCLC)	(800)848-5878	On-line computer search No information obtained
Northern Illinois Library System 4034 East State Street Rockford, IL 61108	Computer (NILS)	(815)229-0330	On-line computer search No information obtained
Knight-Ridder Information, Inc 2440 El Camino Real Mountain View, CA 94040	Computer (DIALOG)	(800)334-2564	On-line computer search No information obtained
Council on America's Past 518 Why Worry Lane Phoenix, AZ 85021	Heliogram Publication	(800)398-4693	Source of military history articles; no information obtained

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
NON GOVERNMENT AGENCIES			
NATIONAL (Continued)			
Coast Defense Study Group, Inc 731 Baltimore Pike Bel Air, MD 21014	Publication		Source of military history articles; no information obtained
STATE			
California Historical Society 678 Mission Street San Francisco, CA 94105	Ms. Beth Graham	(415)357-1848	No information obtained
State Historical Society of Wisconsin Library 816 State Street Madison, WI 53706	Staff	(608)264-6534	Victorville AAF newspapers
LOCAL			
Mojave Historical Society P.O. Box 68 Victorville, CA 92392	Staff		Referrals
San Bernardino Visitor and Convention Bureau 201 North E Street San Bernardino, CA 93603	Staff	(909)889-8937	General area information
Victorville Chamber of Commerce 14174 Greentree Blvd Victorville, CA 92392	Ms. Sally Martinez	(760)245-6506	General area information
Victorville Museum 11873 Apple Valley Road Apple Valley, CA 92307	Mr. Walter Day Mr. Wayne Fowlie	(619)240-2111	No information obtained
PRIVATE INDIVIDUALS			
40 Oak Shadows Court Baltimore, MD 21228	Mr. Owen Cooper	(410)747-5991	Interview I-6

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The following organizations and personnel are acknowledged for their support.

Organization	Name	Telephone	Nature of Support
NON GOVERNMENT AGENCIES			
PRIVATE INDIVIDUALS (Continued) 3109 N. Glenvalley Drive Midwest City, OK 73110	Mr. Glenn Brooks	(405)732-8877	Interview I-5
Via Maria Raod Landers, CA	Mr. Jay Conway	(None)	Interview I-2

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APPENDIX B

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SECTION I

BIBLIOGRAPHIES

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B-1 Army Regulation 200-1, Environmental Quality, Environmental Protection and Enhancement, DA, 23 April 1990

B-2 Mandatory Plan for Ordnance and Explosive Waste (OEW) Mandatory Center of Expertise (MCX) and Design Center, CEHND 1105-3-9, U.S. Army Corps of Engineers, Huntsville Division, 10 August 1992

B-3 Defense Environmental Restoration Program for Formerly Used Defense Sites, Ordnance and Explosive Waste Archives Search Report Instructions, Version 1.0 with changes, U.S. Army Corps of Engineers, Rock Island District, 21 December 1992

B-4 Site Safety Plan for OEW Investigations (Appendix A-209, only), U.S. Army Corps of Engineers, Rock Island District, January 1998

B-5 Soil Survey of San Bernardino County, California, United States Department of Agriculture, February 1986

B-6 Complete Round Charts No. 5981, U.S. Army Ordnance Department, 1 May 1947 (D-1, D-3, D-4)

B-7 Ammunition Inspection Guide, TM 9-1904, War Department, 2 March 1944 (D-1, D-4, D-5)

B-8 Bombs for Aircraft, TM 9-1980, War Department, November 1944 (D-1, D-4)

B-9 Bombs and Bomb Components, TM 9-1325-200 to 11-1-28, Departments of Army, Air Force and Navy, April 1966 (D-2, D-6, D-7)

B-10 U.S. Explosive Ordnance, NAVSEA OP 1664, Department of Navy Sea Systems Command, 28 May 1947 (D-5, D-6, D-7)

B-11 DERP-FUDS Inventory Project Report (INPR) for Site No. J09CA0685, Victorville Precision Bombing Range No. 19, U.S. Army Corps of Engineers, Los Angeles District, 23 July 1991 (E-1)

B-12 Memorandum, Headquarters ACAFS to WCACTC, Subject: Information Pertaining to Bombing Ranges, ACAFS, Army Air Base, Victorville, California, 13 February 1942, National

Personnel Records Center, RG 342, 342-53A-4077, 06-23-58-9-3
(F-1)

B-13 Historical Record of Victorville Army Air Field,
Victorville, California from 8 December 1941 to 1 January
1943, January 1943, Center for Air Force History, Microfilm
Rolls B2647-B2649 (F-2)

B-14 Memorandum, United States Engineer Office to VAAF,
Subject: Victorville Army Flying School, Victorville,
California - Contract W-509-Eng.-2196 - Bombing Targets -
Notice of Completion and Release, 30 April 1942, National
Personnel Records Center, RG 342, 342-53A-4077, 06-23-58-9-3
(F-3)

B-15 Range data, circa July 1943, NARA II, RG 18, Entry
292, Box 1641 (F-4)

B-16 Historical Record of Victorville Army Air Field,
Victorville, California from 1 January 1943 to 1 March 1944,
March 1944, Air Force Historical Research Agency, Call No.
289.40, IRIS 00179294 (F-5)

B-17 Historical Record of Victorville Army Air Field,
Victorville, California from 1 November to 31 December 1944,
January 1945, Air Force Historical Research Agency, Call No.
289.40, IRIS 00179308 (F-6)

B-18 Army Air Forces Installations Directory, 1 September
1945 (F-7)

B-19 Memorandum, Army Air Forces Western Flying Command to
AAF Training Command, No subject, 6 October 1946, NARA II,
RG 18, Entry 1, Box 292 (F-8)

B-20 Memorandum, San Bernardino Air Technical Service
Command to Air Technical Service Command, Subject:
Declaration as Excess, Auxiliary Installations of
Victorville Army Air Field, Victorville, California, 7
December 1945, NARA, Pacific Region - Laguna Niguel, RG 77,
Box 48 (F-9)

B-21 Memorandum, Headquarters, Army Air Forces to Chief of
Engineers, Subject: Withdrawal of Victorville Bombing
Targets from Surplus, 20 March 1946, NARA, Pacific Region -
Laguna Niguel, RG 77, Box 48 (F-10)

B-22 Memorandum, Headquarters of the Army Air Forces to
Division Engineer, Subject: Withdrawal of Victorville
Bombing Targets from Surplus, South Pacific Division, 15
April 1946, NARA, Pacific Region - Laguna Niguel, RG 77, Box
48 (F-11)

B-23 Memorandum, Headquarters, Army Air Forces to San Bernardino Army Air Field, Subject: Decontamination of Bombing and Gunnery Ranges, 10 October 1946, *National Personnel Records Center, RG 342, 342-53A-4077, 06-23-58-9-3* (F-12)

B-24 Memorandum, South Pacific Division Corps of Engineers to Chief of Engineers, Subject: Adverse Conditions at Bombing Target Sites, Victorville, Calif., 31 January 1947, *NARA II, RG 18, Entry 2, Box 2798* (F-13)

B-25 Memorandum, Real Estate Division, South Pacific Division, Corps of Engineers to Division Engineer, South Pacific Division, Subject: Transfer of Victorville Army Air Field Bombing Targets, 18 February 1947, *NARA, Pacific Region - Laguna Niguel, RG 77, Box 48* (F-14)

B-26 Memorandum, 9800 TSU Detachment No. 14 to South Pacific Division, Corps of Engineers, Subject: Report of the dedudding of Victorville Bombing Targets, San Bernardino, County, California, 4 February 1948, *NARA, Pacific Southwest Region, RG 270, Box 162* (F-15)

B-27 Certificate of Clearance, 22 March 1948, *NARA, Pacific Region - San Francisco, RG 121, Box 47* (F-16)

B-28 Memorandum, unknown author, No Subject, 28 April 1948, *NARA, Pacific Region - San Francisco, RG 121, Box 47* (F-17)

B-29 Letter, Office of Real Property Disposal to BLM, 19 May 1948, *NARA, Pacific Region - Laguna Niguel, RG 270, Box 162* (F-18)

B-30 Memorandum, Office of Real Property Disposal to Property Management Division, Subject: Victorville Precision Bombing Target No. 19, W-Cal-258(WD-1264), 21 May 1948, *NARA, Pacific Region - Laguna Niguel, RG 77, Box 48* (F-19)

B-31 Brief History of George Air Force Base 1941-1950, USAF Historical Division, April 1956, *Air Force Historical Research Agency, IRIS 00905362* (F-20)

B-32 Letter, California Archaeological Inventory to SIOAC-ESL, 11 November 1997 (F-21)

B-33 Letter, U.S. Fish and Wildlife Service to SIOAC-ESL, 19 December 1997 (F-22)

B-34 List of endangered/threatened species for San Bernardino County, undated (F-23)

B-35 Public Land Order 125, 20 May 1943, *NARA, Pacific Region - San Francisco, RG 121, Box 47* (G-1)

B-36 Eng Form 1128, Warning Notice, 6 February 1946, NARA, Pacific Region - Laguna Niguel, RG 77, Box 27 (G-2)

B-37 Eng Form 1128, Warning Notice, 13 May 1946, NARA, Pacific Region - Laguna Niguel, RG 77, Box 27 (G-3)

B-38 Eng Form 1128, Warning Notice, 19 August 1946, NARA, Pacific Region - Laguna Niguel, RG 77, Box 27 (G-4)

B-39 WAA Form 1005, Declaration of Surplus Property, 3 March 1948, NARA, Pacific Southwest Region, RG 270, Box 162 (G-5)

B-40 Quitclaim Deed, United States of America to Norman M. Imbertson and Cora E. Imbertson, 7 July 1949, NARA, Pacific Region - San Francisco, RG 121, Box 47 (G-6)

B-41 Assessor's Map, Book 631, Page 17, San Bernardino County, 23 June 1992 (G-7)

B-42 San Bernardino County Parcel List, 1998 (G-8)

B-43 Aerial photo, VV FS M69 AMS, No. 5541, 16 December 1954 (K-1)

B-44 Aerial photo, NAPP 1790-197, 25 July 1989 (K-2)

B-45 Map, Real Estate Victorville Army Air Field Bombing Ranges, 15 September 1945, NARA, Pacific Southwest Region (L-1)

B-46 Map, Real Estate, Victorville Precision Bombing Range No. 19, 12 December 1947, NARA, Pacific Region - Laguna Niguel (L-2)

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VICTORVILLE PRECISION BOMBING RANGE NO. 19, CA

Also Researched Under Joshua Tree, CA; Southern Pacific Land Company; San Bernardino County, CA; Victorville Army Airfield; and George Air Force Base.

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Comprehensive History of Victorville Air Force Base, Victorville,
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Historical Record of Victorville Army Airfield, Victorville, California,
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Historical Record of Victorville Army Airfield, Victorville, California,
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Historical Record of Victorville Army Airfield, Victorville, California,
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Historical Record of Victorville Army Airfield, Victorville, California,
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Historical Record of Victorville Army Airfield, Victorville, California,
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Historical Record of 3035th A.A.F. Base Unit, Victorville Army Airfield,
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Also Researched Under Joshua Tree, CA; Southern Pacific Land Company; San Bernardino County, CA; Victorville Army Airfield; and George Air Force Base.

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Entry 54: Highway Traffic Advisory Committee to the War Department, 1941 -
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Entry 110: Office, Administrative Assistant to the Secretary of War, Decimal File, February 1946 - June 1947

Entry 127: Office, Special Consultant to the Secretary of War, John D. Russell's File, 1942 - January 1946

Entry 159: Special Assistant for Construction, M. J. Madigan, Projects, 1940 - 1945

Entry 211: Office, Assistant Secretary of War for Air, Establishment of Airfields and Airbases, 1940 - 1945

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Entry 25: Army Field Forces, Headquarters, General Staff, G-3 Operations Group, Organization and Equipment Division, General Decimal File, 1943 - 1948

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Paper, Declaration of Surplus Real Property, Re: Victorville

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Paper, Victorville Precision Bombing Range #19, Project FCA

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Paper, Appraisal Report, Tract 191, March 1 1943

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RG 18, Records of the Army Air Forces

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Dwg, Regional Map of VAAF & Satellite Facilities, Sept. 1943

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Memo, Subj: Information Pertaining to Bombing Ranges, ACAFS,
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Memo, Subj: Victorville Army Flying School, Victorville,
California - Contract No. W-509-Eng.-2196 - Bombing
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Memo, Subj: Transfer of Real Property, 21 May 1946

Memo, Subj: Decontamination of Bombing and Gunnery Ranges,
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Paper, Deduinding Report on Bombing Targets Formerly Assigned
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Memo, From 4196th AAF Base Unit to Sub-Station Sheriff's
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Memo, Status of Assignment of Bombing and Gunnery Ranges,
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Memo, Subj: Removal of Military Scrap from Artillery,
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Memo, Subj: Status of Assignment of Bombing and Gunnery
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Memo, Subj: Teletype SBCON-2-2 dated 4 Feb 47, 10 Feb 1947

Paper, Statistical Data Bombing Ranges, Victorville Army Air
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Memo, From ASF, HQ 9th Service Command to Commanding Officer, Camp Haan, Re: Movement of 65th Ordnance Bomb Disposal Squad to Victorville, 1 August 1945, w/Indorsements

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Memo, Subj: Withdrawal of Victorville Bombing Targets from Surplus, 20 Mar 1946 w/Indorsements

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Warning Notice, Declaring Bombing Target 19 as Surplus Property, 6 Feb 1946

Memo, Subj: Reclassification of Victorville Bombing Ranges, 18 Apr 1946

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Memo, Subj: Transfer of Surplus Facilities, Pacific Div, No. 4197-3 (Victorville AAF), 11 Aug 1947

Memo, Subj: Disposal of Bombing Target Sites at Victorville AAF, 14 Aug 1947

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Military Acquisition Project Report, Victorville PBR #19, w/Tract Register, 14 Nov 1947

Memo, Subj: Report of the Deduinding of Victorville Bombing
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3, 7, 10, 11, 12, 13, 14, 16, 17, 19, and 20, 22 Mar 1948
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Memo, Subj: Return of Public Domain Land to DOI, 9 Aug 1948
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Memo, Subj: Inspection by the Los Angeles District Joint
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Memo, Subj: Victorville Bombing Target Areas 3, 7, and 19,
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Memo, Subj: Return to Public Domain - Victorville Bombing
Target Sites 3, 7, and 19 (W. Calif 259), (W. Calif 260),
and (W. Calif 258), respectively, 14 May 1948

Memo, From WAA to BLM, Re: Return of Land to Public Domain,
19 May 1948

Memo, Subj: Victorville PBR #19, Assumption of Custody and
Accountability, 21 May 1948

SECTION III
REGIONAL NATIONAL ARCHIVES FINDINGS
PART B
NEGATIVE FINDINGS

VICTORVILLE PBR NO. 19

NARA, PACIFIC REGION (LAGUNA NIGUEL)
LAGUNA NIGUEL, CA

RG 30, Records of the Bureau of Public Roads
All Entries
Nothing Found

RG 49, Records of the Bureau of Land Management
All Entries
Nothing Found

RG 71, Records of the Bureau of Yards and Docks
All Entries
Nothing Found

RG 77, Records of the Office of the Chief of Engineers
Accession #077-96-0134
Box #5
Nothing of Value to this ASR Found

RG 92, Records of the Quartermaster General
All Entries
Nothing Found

RG 156, Records of the Chief of Ordnance
All Entries
Nothing Found

RG 219, Records of the Office of Defense Transportation
All Entries
Nothing Found

RG 269, General Records of the General Services Administration
All Entries
Nothing Found

RG 336, Records of the Office of the Chief of Transportation
All Entries
Nothing Found

RG 338, Records of U.S. Army Commands
All Entries
Nothing Found

RG 342, Records of U.S. Air Force Commands, Activities, and
Organizations
All Entries
Nothing Found

**NARA, NATIONAL PERSONNEL RECORDS CENTER
ST LOUIS, MO**

RG 342, Records of U.S. Air Force Commands, Activities, and
Organizations
Accession #342-54A4118
Box #06-38-18-1-1
Nothing of Value to This ASR Found

Accession #342-46A4076
Box #06-38-18-2-1
Nothing of Value to This ASR Found

Accession #342-50A4042
Box #06-38-18-1-3, 2 Boxes
Nothing of Value to This ASR Found

**NARA, PACIFIC REGION (SAN FRANCISCO)
SAN BRUNO, CA**

RG 18, Records of the Army Air Forces
All Entries
Nothing Found

RG 30, Records of the Bureau of Public Roads
All Entries
Nothing Found

RG 49, Records of the Bureau of Land Management
All Entries
Nothing Found

RG 77, Records of the Office the Chief of Engineers
Accession #75Q1061
Boxes #1-3
Nothing of Value to This ASR Found

RG 92, Records of the Office of the Quartermaster General
All Entries
Nothing Found

RG 111, Records of the Chief Signal Officer
All Entries
Nothing Found

RG 112, Records of the Surgeon General (Army)
All Entries
Nothing Found

RG 121, Records of the Public Buildings Service
Accession #9NSS-121-87-001
Boxes #1 and 9
Nothing of Value to This ASR Found

Accession #9NSS-121-85-009
Box #12
Nothing of Value to This ASR Found

Accession #9NSS-121-85-004
Box #72
Nothing of Value to This ASR Found

RG 156, Records of the Office of the Chief of Ordnance
All Entries
Nothing Found

RG 219, Records of the Office of Defense Transportation
All Entries
Nothing Found

RG 269, General Records of the General Services Administration
All Entries
Nothing Found

RG 270, Records of the War Assets Administration
All Entries
Nothing Found

RG 291, Records of the Federal Property Resources Service
Accession #9NSS-291-93-002
Box #19
Nothing of Value to This ASR Found

RG 338, Records of U.S. Army Commands
All Entries
Nothing Found

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX C

GLOSSARY

APPENDIX C

GLOSSARY

ACAFS	Air Corps Advanced Flying School
AN	Army-Navy
BD/DR	Building Demolition/Debris Removal
BLM	Bureau of Land Managment
CEHNC	U.S. Army Engineering and Support Center, Huntsville
CEMVR	U.S. Army Corps of Engineers, Rock Island District
CESPL	U.S. Army Corps of Engineers, Los Angeles District
COE	Corps of Engineers
CON HTRW	Containerized Hazardous Toxic and Radiological Waste
CWM	Chemical Warfare Material
DA	Department of Army
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive Ordnance Disposal
F	Fahrenheit
FDE	Findings and Determination of Eligibility
FUDS	Formerly Used Defense Sites
HTRW	Hazardous, Toxic and Radiological Waste
INPR	Inventory Project Report
IRA	Interim Removal Action
lb	Pound

M	Model
Mk	Mark
NOFA	No Further Action
OE	Ordnance and Explosives
PA	Preliminary Assessment
PBR	Precision Bombing Range
PLO	Public Land Order
POC	Point of Contact
SHPO	State Historical Preservation Officer
QASAS	Quality Assurance Specialist Ammunition Surveillance
RAC	Risk Assessment Code
SAA	Small Arms Ammunition
SI	Site Investigation or Site Inspection
SIOAC	Defense Ammunition Center
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
VAAF	Victorville Army Air Field
VAFS	Victorville Army Flying School
WCACTC	West Coast Air Corps Training Center
WD	War Department

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range
San Bernardino County, California
Project Number J09CA068500

APPENDIX D

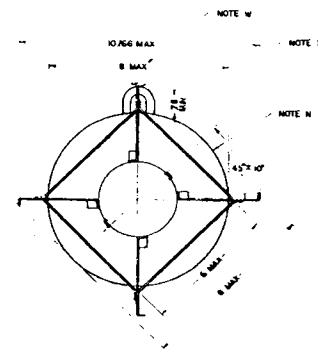
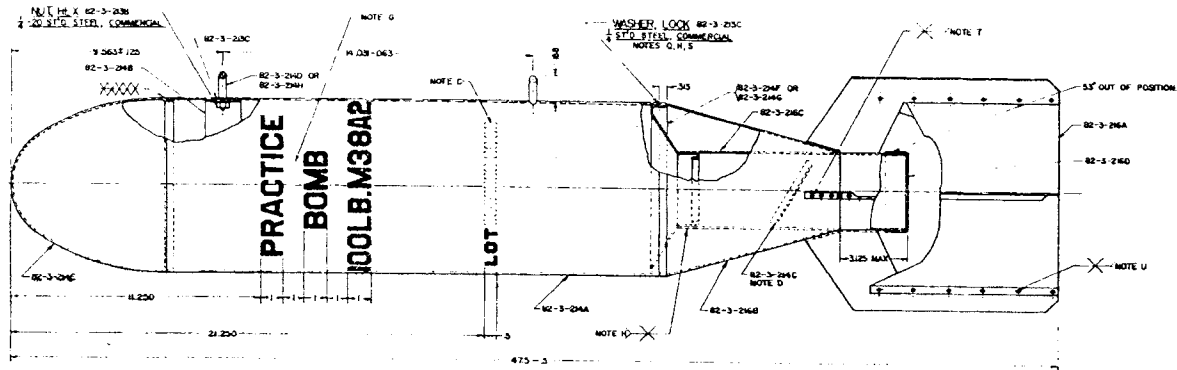
TEXTS/MANUALS

APPENDIX D
TEXTS/MANUALS

Table of Contents

- D-1 M38A2 100 pound practice bomb (B-6, B-7, B-8)
- D-2 Mk15 100 pound practice bomb (B-9)
- D-3 M85 100 pound practice bomb (B-6)
- D-4 M47A2 100 pound chemical bomb (metal parts) (B-6, B-7, B-8)
- D-5 M1A1 spotting charge (B-7, B-10)
- D-6 M7 signal (B-9, B-10)
- D-7 M247 fuze (B-9, B-10)

THIS DRAWING IS THE PROPERTY OF THE GOVERNMENT AND IS LOANED TO YOUR ORGANIZATION; IT AND ITS CONTENTS ARE NOT TO BE DISTRIBUTED OUTSIDE YOUR ORGANIZATION.



METAL PARTS ASSEMBLY AND MARKING DIAGRAM 82-3-213A

- NOTES—
- A—COAT ENTIRE EXTERIOR SURFACE WITH BLUE NO 3550, ENAMEL. NOTES L,M
 - B—MARK WITH WHITE MARKING INK, NO 370
 - C—BOLT LOT NUMBER OF BOMB AND DATE, MONTH AND YEAR OF MANUFACTURE
 - D—PLACE HEAD COVER LOOSELY IN SLEEVE FOR SHIPMENT
 - E—THE CENTERLINE OF THE COMPLETE BOMB ASSEMBLY SHALL NOT DEPART FROM THAT OF THE BODY BY MORE THAN $\frac{1}{32}$ IN MEASURED AT THE EXTREME ENDS OF THE FINS
 - F—SLEEVE COVER SHOULD NOT BE SHIPPED OVER PROJECTION TAGS
 - G—LETTERS, NUMBERS AND SPACING $\frac{1}{8}$ INCH HIGH, PERMISSIBLE
 - H— $\frac{1}{8}$ DIA SPOT WELDS OR $10 \times \frac{1}{8}$ DIA PROJECTION WELDS, EQUALLY SPACED (OPTIONAL)
 - K—COAT ENTIRE INTERIOR SURFACE WITH A/D-PROOF BLACK PAINT, TYPE I, NOTE L
 - L—PREPARE THE EXTERIOR SURFACES IN ACCORDANCE WITH GRADE E, SPEC MIL-C-1190, BEFORE COATING. THE INTERIOR SURFACE IS TO BE PREPARED OR CLEANED BY ANY METHOD ACCEPTABLE UNDER SPEC MIL-C-490 BEFORE PAINTING.
 - M—PLATED SUSPENSION LINES NOT REQUIRED TO BE FINISHED
 - N—OUT OF ROUND TOLERANCE .025 ON DIAMETER
 - P—ALTERNATIVE— $24 \times \frac{1}{8}$ DIA PROJECTION WELDS
 - Q—WELD HEAD TO BODY WITH $12 \times \frac{1}{8}$ DIA SPOT WELDS EQUALLY SPACED. NOTE P
 - R—WELDS TO BE LOCATED APPROX AT CENTER OF LAP HEIGHT OF WELD METAL $\frac{1}{4}$ MAX AT ANY POINT OF DISCONTINUENCE
 - S—WELD CONE TO HEAD WITH $12 \times \frac{1}{8}$ DIA SPOT WELDS EQUALLY SPACED BETWEEN WELDS JOINING HEAD TO BODY. NOTE P
 - T— $6 \times \frac{1}{8}$ DIA SPOT WELDS, EQUALLY SPACED $\frac{1}{4}$ FROM EACH END. ALTERNATIVE— $10 \times \frac{1}{8}$ PROJECTION WELDS, EQUALLY SPACED, STAGGERED IN TWO ROWS
 - U— $6 \times \frac{1}{8}$ DIA SPOT WELDS OR $10 \times \frac{1}{8}$ PROJECTION WELDS EQUALLY SPACED, $\frac{1}{4}$ FROM EACH END. ALTERNATIVE— $4 \times \frac{1}{8}$ PROJECTION WELDS AND $4 \times \frac{1}{8}$ SPOT WELDS
 - W—THIS DIMENSION DOES NOT INCLUDE HEIGHT OF WELDING METAL
 - X—END OF FIN BLADE TO BE IN ALIGNMENT WITH CENTER OF SUSPENSION LUG WITHIN $\frac{1}{8}$ INCH

NO	LIST OF DRAWINGS	DRAWING NUMBER
1	METAL PARTS ASSEMBLY	82-3-213
2	DETAILS	82-3-214
3	DETAILS	82-3-216
4	WIRES, ALIGNING FOR BOMBS	82-3-234
5	CARTON, PACKING	78-8-62
6	PACKING AND MARKING	20-4-184

NOTICE: This drawing shall not be used in manufacturing without the approval of the Ordnance Corps. Changes shall be indicated by the appropriate revision procedure.

WITH 82-3-213A SUPERSEDES 82-3-213
WITH CHANGE SEPTEMBER 23, 1955



DEC 24 1955 11 11 527016 11 11	BOMB, PRACTICE, MOULB, M38A2, METAL PARTS ASSEMBLY AND MARKING DIAGRAM	ORDNANCE CORPS Dept of the Army 82-3-213
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PRACTICE AND TARGET BOMBS

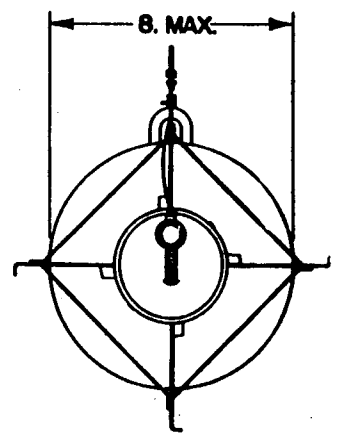
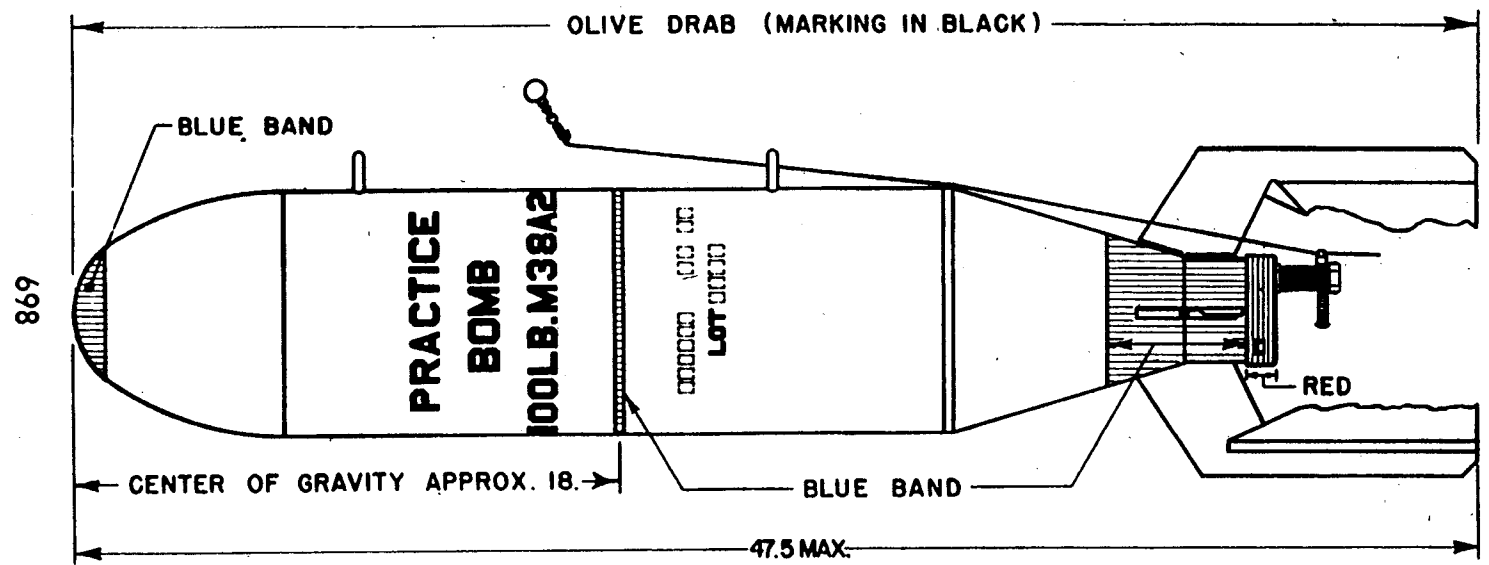
NOTES	BOMB										ADAPTER-BOOSTERS		FUZES					PRIMER-DETONATORS				PACKING					Assembly No.	
	TYPE	Assembley Complete Drg. No.	DRG. NO.	Weight Loaded and Fuzed Lb.	Spotting Charge			Inert Charge		TAIL		NOSE		TAIL			NOSE		TAIL		BOMB Body Drg. No.	FUZE		PRIMER-DETONATORS				
					Type	Drg. No.	Wt. Lb.	Wt. Lb.	Kind	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation		Drg. No.	Nose Drg. No.	Tail Drg. No.	Nose Drg. No.	Tail Drg. No.		Container Drg. No.
S	Prac., 23 Lb., M71 h	82-0-91	82-3-253	21.1		None						None		None							20-4-386							1
S & M	Prac., 23 Lb., M71A1 h	82-0-91	82-3-253	21.1		None						None		None							20-4-386							2
																												3
S	Prac., 23 Lb., M73 j	82-0-91	82-3-253	21.		None						None		None							20-4-386							4
S	Prac., 23 Lb., M73A1 j	82-0-91	82-3-253	21.		None						None		None							20-4-386							5
																												6
S & M	Prac., 100 lb., M36A2	82-0-23	82-3-213	100.	M1A1 ^a	82-3-228	4.25	80	Sand			None	a	82-3-228							76-16-391		76-16-214					7
S	Prac., 100 Lb., M85 c	82-0-96	82-3-405	103.5	M1A1 ^a	82-3-228	4.25	95	b			None	a	82-3-228							82-3-407		76-16-214					8
																												9
S	Target, Prac., 100 lb., M75 m	82-0-97	82-3-409	101.2		82-14-45	72. ^d					M106 ^e	73-8-44		None						76-16-409	76-16-236						10
S & M	Target, Prac., 100 Lb., M75A1 m	82-0-97	82-3-409	101.2		82-14-45	72. ^d					M106 ^e	73-8-44		None						76-16-409	76-16-236						11
																												12
																												13
																												14

S - Issue.
M - Manufacture.
Prac. - Practice.

(a) - Spotting Charge, M3 and M4 also may be used. Drgs. 82-3-402 and 82-3-496 respectively.
(b) - Bomb is made of reinforced concrete.
(c) - Uses Fin Assembly, M105, Drg. 82-3-406.
(d) - Uses Red Iron-Oxide (Hematite).
(e) - Fuze uses Pressure Plate, Drg. 82-3-410.
(h) - Parachute Unit M3, Drg. 82-3-265.
(j) - Parachute Unit, M4, Drg. 82-3-400.
(m) - Uses Burster, A1-M4, Drg. 82-3-281.

ISSUED - September 6, 1924

REVISED - 1 May 1947



RA FSD 436A

Figure 274 — BOMB, Practice, 100-pound, M38A2

BOMBS FOR AIRCRAFT

discussed are those which are in use at the present time and were developed for practice in the use of specific types of service bombs.

Drill Bombs and Gage Bombs. Drill bombs are provided for training and practice in assembling, fuzing, handling, and loading on planes, and for the study of logistics. They are fitted with adapters to receive inert fuzes of standard models. Drill bombs are of the same size, shape, and weight as the corresponding service bombs. These bombs contain no explosive and are painted black or olive drab with black bands and are appropriately marked to distinguish them from explosive bombs.

Manufacturers of the various types of bombers and manufacturers of bomb racks are chiefly interested in gage bombs. These are either empty standard bombs or wooden forms used in the testing of planes for clearances, or in testing racks for capacity or proper function.

BOMB, PRACTICE, 100-POUND, M38A2.

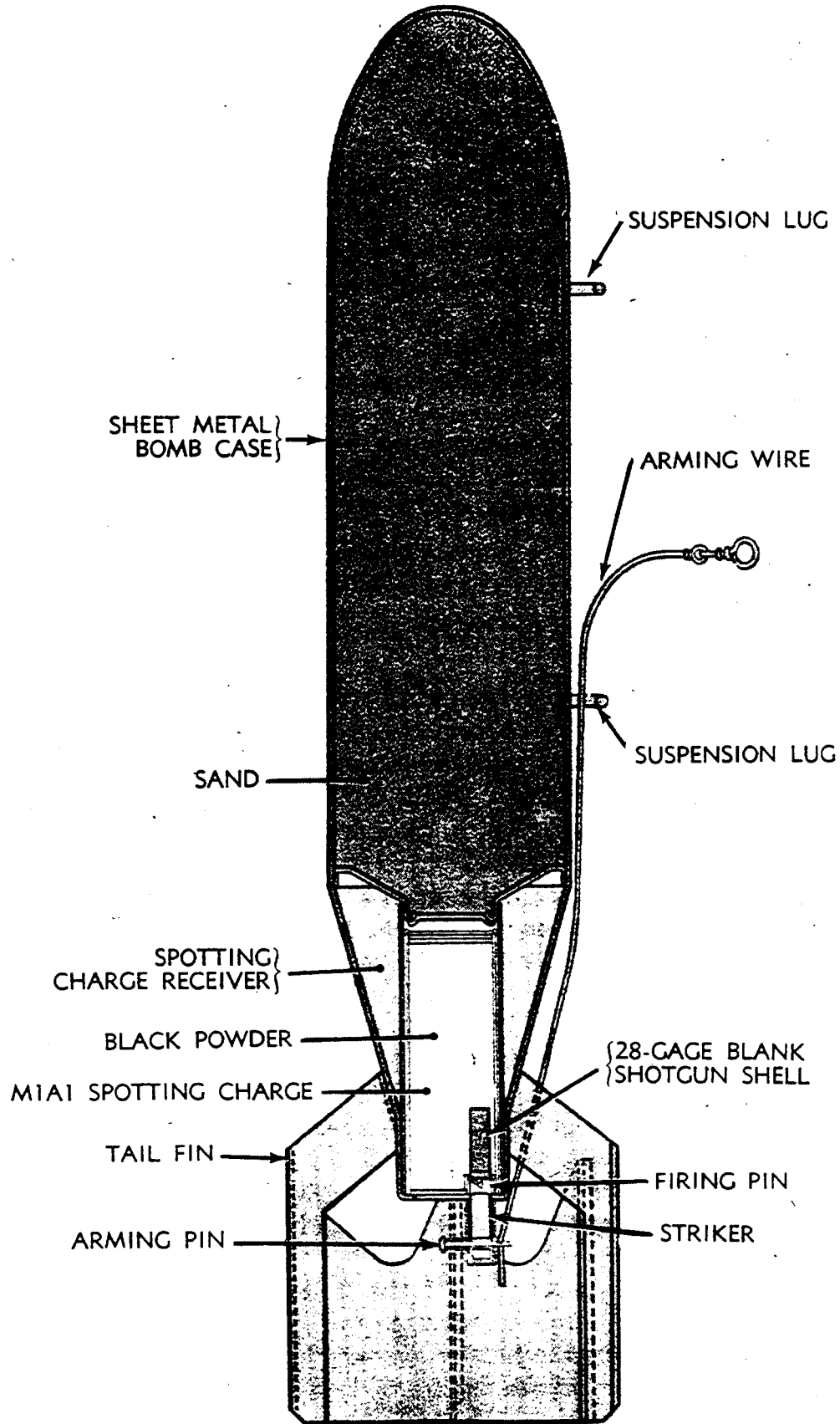
General. This bomb is used to give practice in demolition bombing. It is a thin case bomb, easy to manufacture, cheap in cost, and accurate in use. The bomb case cannot be reused after it has once been dropped in practice.

Body Description. It is constructed of light sheet metal, approximately 22 gage. The body is formed by rolling a rectangular sheet of metal into the form of a cylinder 8 inches in diameter, and spot-welding the seam at 2-inch intervals. The rounded nose is pressed from the same metal, as is the tail which is formed in the shape of a cone. Inside of the smaller end of the conical tail section is welded the spotting charge receiver. It extends about 7 inches into the cone and projects about 2 inches out of the tail end. The inner end of this receiver is fitted with a shoulder which supports a thin metal cover which is inserted after sand loading to protect the spotting charge from the sand in the bomb. At the outer end of the receiver are two projecting ears which serve to lock the spotting charge in place.

The receiver may be equipped with a cover cap. This is sometimes removed because it tends to stick tightly and make insertion of the spotting charge difficult in the field. Since the bombs are protected from the elements by at least a tarpaulin, this procedure does not appreciably harm the bombs.

Two suspension lugs are bolted to the bomb body during fabrication. The tail portion ends in a box type tail fin which has one blade in line with the suspension lugs. The over-all length of the bomb body is 47 $\frac{1}{4}$ inches. When empty, the bomb body weighs approximately 14 pounds. When completely loaded with sand (approx. 80 lb) and spotting charge, the weight of the bomb is approximately 100 pounds. The cost of the empty bomb body is approximately \$1.50. When

AMMUNITION INSPECTION GUIDE



RA PD 23024

Figure 275 — BOMB, Practice, 100-pound, M38A2—Sectioned
700

c. **Assembly.** In order to assemble the spotting charge it is only necessary to remove the cotter pin in the nose of the bomb, remove the firing pin, insert the signal or cartridge, and replace the firing pin and cotter pin.

✓ 121. **BOMB, PRACTICE, 20-LB., M48.** This bomb represents a fin-stabilized fragmentation bomb. It is 21.8 inches in length and weighs 19.7 pounds. This bomb is intended to simulate to **BOMB, fragmentation, 20-lb., AN-M41.** It resembles the latter except that the body has a sheet metal closing disk in the side, and the charge is 2 ounces of black powder. The fuzes authorized for this bomb are **FUZE, bomb, AN-M110A1 (nose),** or **FUZE, bomb, M110 (nose).** **BOMB, practice, 20-lb., M48** is issued only in **CLUSTER, practice bomb, M2** and **CLUSTER, practice bomb, M2A1.** (See sec. XVII.)

✓ 122. **BOMB, PRACTICE, 23-LB., M71 AND M71A1.** These bombs represent parachute type fragmentation bombs for assembly in clusters. The complete bomb consists of **BODY, bomb, for 23-lb., practice bomb, M71 and M73, or M71A1 and M73A1** and parachute unit, assembly, **M3 (modified from M4 by removal of suspension assembly, band assembly, and pull wire container).** Note that fuze and spotting charge are unnecessary since the parachute is ample for spotting purposes. **BOMB, practice, 23-lb., M71,** is 26.8 inches long and weighs 21 pounds. The **M71A1** is modified by the addition of the shoulder to the nose of the bomb. It is used only in **CLUSTER, practice bomb, M5.** (See sec. XVII.)

✓ 123. **BOMB, PRACTICE, 23-LB., M73.** **BOMB, practice, 23-lb., M73,** simulates a parachute type fragmentation bomb intended for individual suspension. The complete round consists of an empty service bomb body and a parachute unit assembly. It is assembled by setting back the set screw in the collar on the base of the bomb body, screwing in the coupling of the case assembly and tightening the set screw. No fuze or spotting charge is necessary since the parachute serves for spotting purposes. The bomb, 28.5 inches long, weighs 21.1 pounds.

✓ 124. **BOMB, PRACTICE, 100-LB., M38A2.** α. **Data.** **BOMB, practice, 100-lb., M38A2,** is a round-nosed cylindrical bomb designed to simulate general-purpose bombs. (See fig. 117.) It is 47.5 inches long and 8.13 inches in diameter. As issued, the fins are assembled to the bomb body which is empty for sand loading in the field. The empty bomb weighs 15.7 pounds, sand filled; with spotting charge assembled, it weighs 100 pounds. The spotting charge is assembled in a sleeve at the base of the bomb, within the fin box.

b. Spotting charge. The authorized spotting charges are **CHARGE**, spotting, assembly, **M1A1**, **M3**, and **M4**. These assemblies consist of a 3-pound charge and an integral fuze consisting of an inertia type firing pin restrained by an arming pin, with a blank loaded shotgun shell for a primer. The **M3** produces a large amount of black smoke and is authorized for use over ranges completely covered with snow. The **M4** is authorized for use on ranges equipped with sonic spotting devices. The **M1A1** is authorized for all other uses.

c. Assembly. To assemble the complete round, the following procedure may be used:

(1) *Load with sand to weight:* Remove the bomb from the carton and inspect for serviceability. Remove the closing cover from its place in the sleeve. Place the bomb upright and fill completely with a uniform sand mixture. Shake the load down well so that there will be no room for it to shift. If a lighter loading is desired, mix sawdust or sifted ashes with the sand. The bomb must be filled, and the loading material must be uniform. Press the closing cap into place.

(2) *Assembly spotting charge:* Insert spotting charge assembly and seat firmly with arming pin pointing away from bomb suspension lugs. Pass arming wire through rear suspension lug and then through eyelet in arming pin. Adjust to protrude 2 to 3 inches.

125. BOMB, PRACTICE, TARGET, 100-LB., M75. a. Data. **BOMB**, practice, target, 100-lb., **M75**, is provided to furnish a target reference for practice bombing over snow covered ranges. The bomb resembles the 100-pound chemical bomb and consists of a light sheet metal case, a charge of red iron ore (hematite), a burster, and a fuze. The bomb is 47 inches long and 8 inches in diameter. It weighs 101.3 pounds of which 72 pounds is hematite. Upon impact the burster distributes the charge over an area 35 feet in diameter.

b. Complete round. The complete round consists of the bomb, unfuzed, without burster, **BURSTER**, **M4**, **FUZE**, bomb, **M108** (nose), with pressure plate, and **WIRE**, arming, assembly. The complete round, except burster, is shipped unassembled in a wooden box.

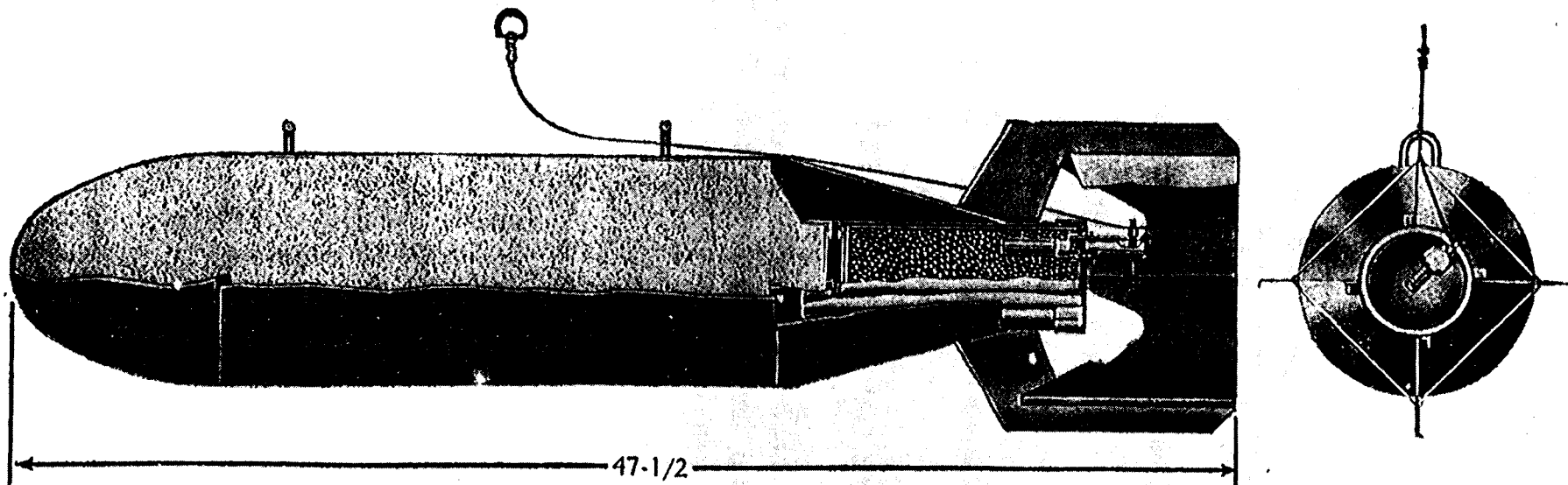
c. Assembly. To assemble the complete round, the following sequence should be observed:

(1) Remove components from packing and inspect for serviceability.

(2) Remove the fuze seat and adapter sleeve from the adapter.

(3) Insert the burster in the burster well; push it in until the shoulder of the burster seats against the shoulder of the burster well. Use no force.

(4) Replace the adapter sleeve and screw firmly against the burster.



RA PD 26798

Figure 117. BOMB, practice, 100-lb., M38A2.

195

D-1

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

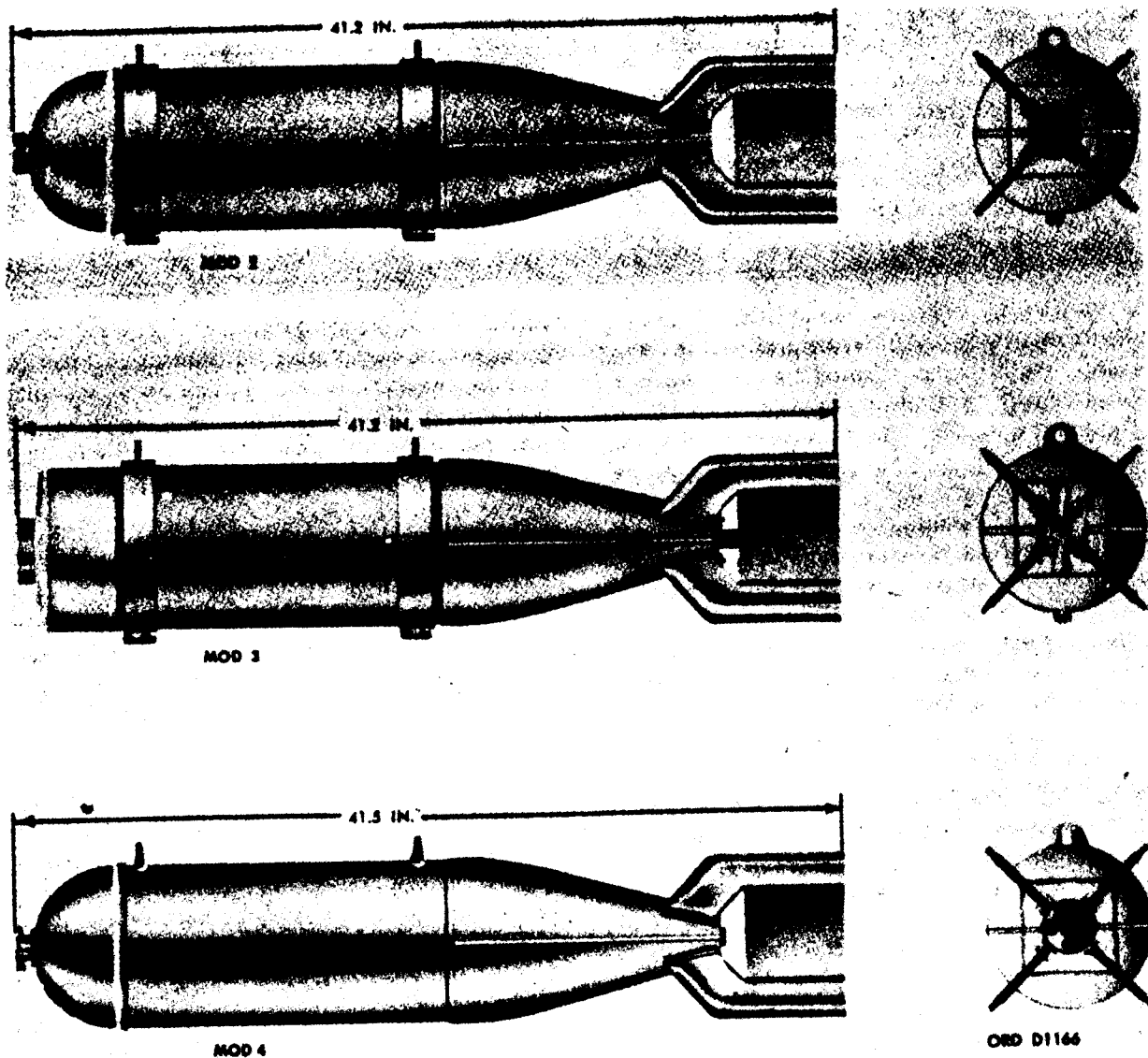


Figure 2-62. Bomb, practice: 100-pound, MK15 Mods 2, 3, and 4.

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

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

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

Mark Mod	15	15	15
	2	3	4
Wet Sand Filler (lb).....	76.0.....	77.4.....	76.0
Water Filler (lb).....	39.0.....	40.0.....	39.0
Water Filler (gal).....	4.6.....	4.7.....	4.6
Signal.....	None.....	MK7 Mod 0.....	MK4 Mods 0, 1, 2, 3, 4
Fuze.....	None.....	MK247 Mod 0.....	None
Firing-Pin Assembly.....	None.....	None.....	MK1 Mod 0
Arming-Wire Assembly.....	MK1 or AN-M6A2.....	MK 1 or AN-M6A2.....	No Arming Wire

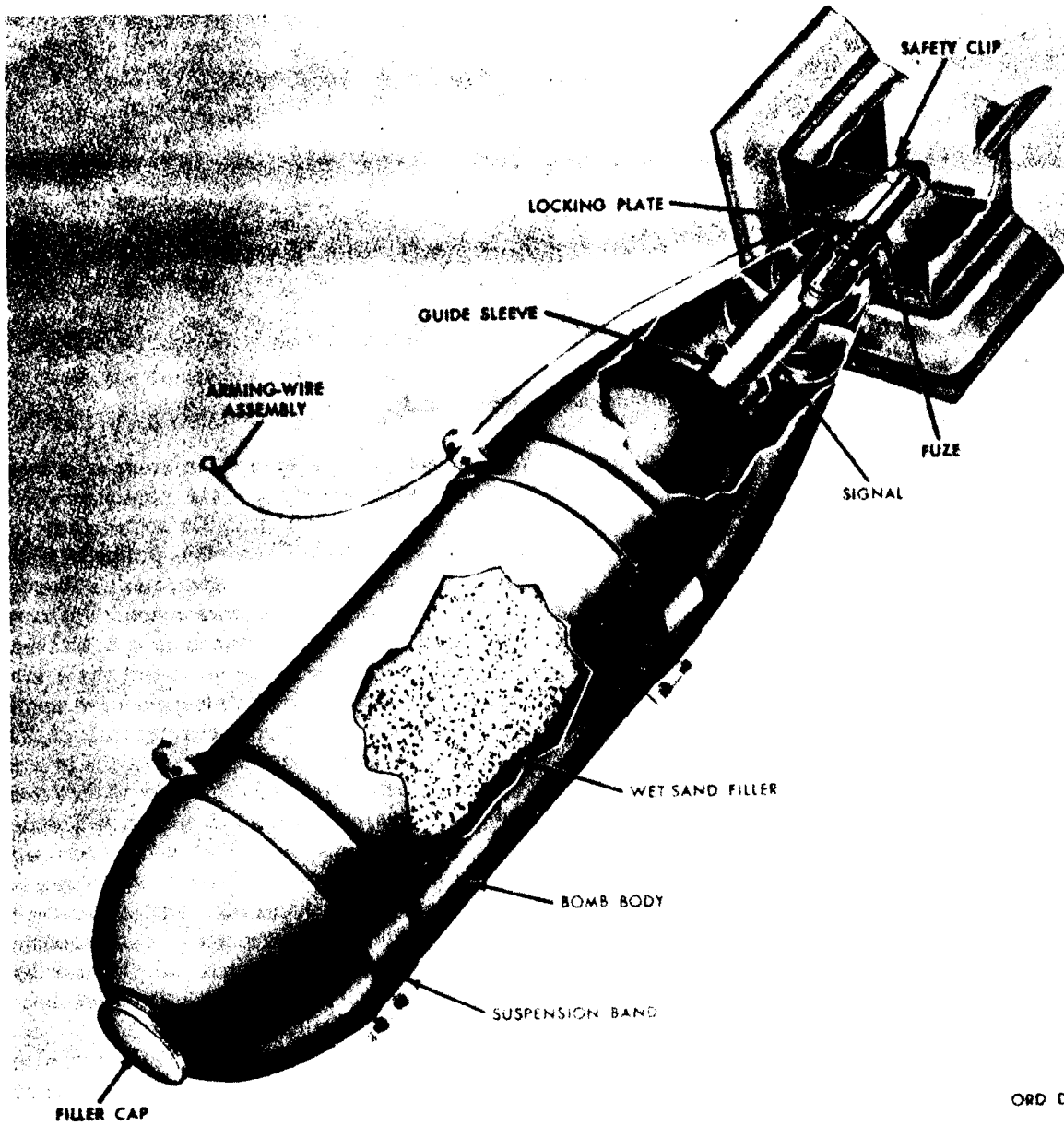
a. *Description.* Practice bomb MK15 Mod 2 (fig. 2-62 and table 2-50) is identical to the Mod 3 except that it is not adapted for the use of a fuze and signal. It is filled with water or a mixture of sand and water (fig. 2-63) for spotting purposes. For training purposes, a small washer may be soldered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

b. *Bomb, Practice: MK15 Mod 3.* Practice bomb MK15 Mod 3 has a light-cased, cylindrical body with a threaded filling hole in its rounded nose. A box-fin assembly consisting of four metal vanes attached to a cone is welded to the aft end of the body. The bomb has two metal suspension band assemblies (each consisting of a circular clamp, a suspension lug, and two cap screws) for tightening the band to the bomb. The bands may be adjusted for double suspension of the bomb by orienting to suit the rack or shackle to which the bomb is to be attached. A flat nose attachment that reduces

ricochet of the bomb at entrance angles as low as 90 degrees is used during antisubmarine practice. The attachment is secured in place by a cap which threads onto the filling hose. The bomb is used with practice bomb signal MK7 Mod 0 and inert fuze MK247 Mod 0 both of which are secured to the aft end of the bomb.

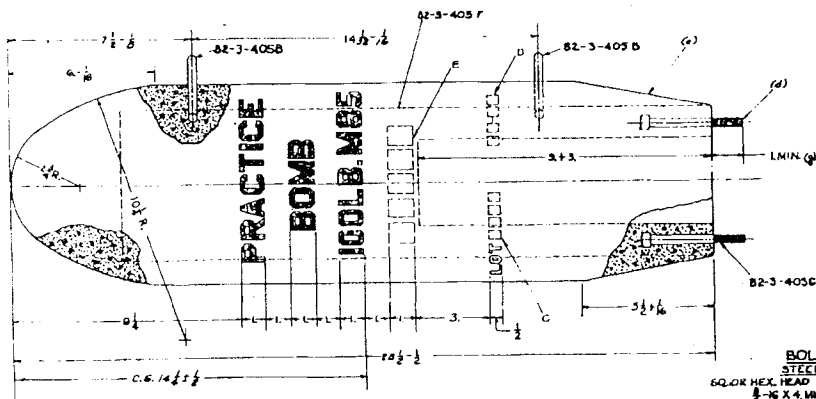
c. *Bomb, Practice, 100-Pound: MK15 Mod. 4.* The practice bomb MK15 Mod 4 is a light-cased, cylindrical bomb with a round nose and an integral box fin and cone. A flash tube, extending through-out its transverse axis, houses a pyrotechnic signal and firing-pin assembly. Two suspension lugs are welded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

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



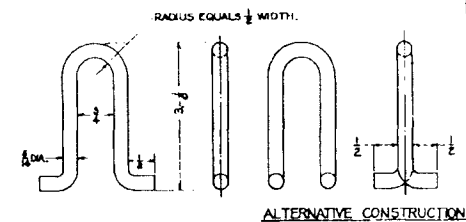
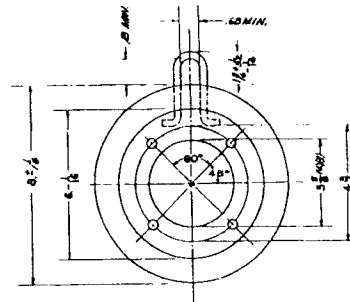
ORD D1167

Figure 2-63. Bomb, practice: 100-pound, MK15, Mods 2, 3 and 4, cutaway.



BODY ASSEMBLY, 82-3-405 A2
REINFORCED CONCRETE
WEIGHT 195 ± 3 LBS.

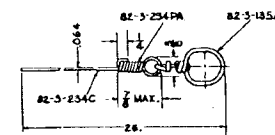
BOLT, TAIL, 82-3-405 C2
STEEL, COMMERCIAL.
6/16 HEX HEAD MACH. BOLT OR ROUND HEAD BOLT.
5/8 - 16 X 4 MIN. LONG, THREADED 1.
CADMIUM OR ZINC PLATE.



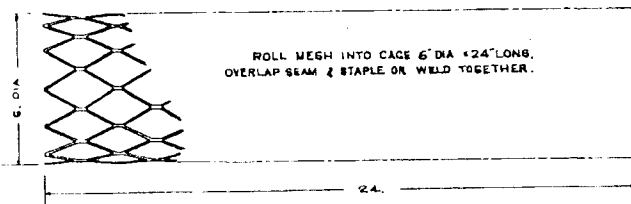
LUG, SUSPENSION, 82-3-405 B2
STEEL W/IRON
COAT ALL SURFACES WITH PRIMER,
SYNTHETIC, LACQUER-RESISTING.

NOTES:-

- B-MARK WITH BLACK LACQUER ENAMEL OR BLACK STENCIL INK
- C-INSERT LOT NUMBER OF BOMB
- D-INSERT DATE (MONTH AND YEAR) OF MANUFACTURE
- E-INSERT A.I.C. CODE.



ARMING WIRE ASSEMBLY 82-3-405 D



CAGE, REINFORCING, 82-3-405 F
EXPANDED STEEL, 1/8 GA., 1 1/2 X 2 1/2 DIAMOND MESH, COMMERCIAL.

LINE NO.	DESCRIPTION	SPEC. NUMBER	REQUIRED BY
1	AMMUNITION, EXCEPT SMALL ARMS AMM, GENERAL SPEC. FOR.	80-0-1	DRG. 82-3-405
2	BOMB, PRACTICE, 100LB, M85	AK3-1870	DRG. 82-3-405
3			
4			
5	INK, STENCIL, OPACID, FOR MARKING POROUS SURFACES (WOODEN BOXES, ETC.)	TY-T-559	DRG. 82-3-405
6	LACQUER ENAMEL, LUSTRELESS	JAN-L-73	DRG. 82-3-405
7	METAL, GEN. SPEC. FOR INSPECTION OF	QQ-M-151	67-136
8	PAINTS AND RELATED MATERIALS, GENERAL SPEC. FOR	3-1	JAN-L-73
9	PRIMER, SYNTHETIC, LACQUER-RESISTING	JAN-P-72	DRG. 82-3-405
10	STEEL, CARBON & ALLOY, BARS	67-107	DRG. 82-3-405

* THE SPECIFICATION NUMBERS SHOWN ARE BASIC NUMBERS ONLY. WHEN A SPECIFICATION IS REVISED A LETTER IS AFFIXED TO ITS BASIC NUMBER. SPECIFICATIONS REFERRED TO IN THESE SPECIFICATIONS AND NOT LISTED HEREON, SHALL NOT APPLY.

NOTICE THIS DRAWING SHALL NOT BE USED FOR REPRODUCTION UNLESS SPECIALLY ORDERED BY THE OFFICE OF THE CHIEF OF THE BOMB DIVISION WITH UNITED STATES GOVERNMENT PROCUREMENT.

LINE NO.	NAME OF PART	NUMBER MADE PER COMPONENT	PHICEMARK	SIZE OR FORM	MATERIAL			APPROXIMATE UNIT WEIGHT (POUNDS).	APPROXIMATE QUANTITY PER 1000 ASSEMBLIES	REMARKS
					KIND	GRADE	SPEC. NUMBER			
1	BODY ASSEMBLY	1	82-3-405A	CASTING	CONCRETE		93.00			
2	LUG, SUSPENSION	2	82-3-405B	BAR	STEEL	WD 100.	17	170.00		
3	BOLT, TAIL	4	82-3-405C	1/2 X 4 LONG	STEEL	COMMERCIAL			(a)	
4	ARMING WIRE ASSEMBLY	1	82-3-405D		STEEL, EXPANDED	COMMERCIAL				
5	CAGE, REINFORCING	1	82-3-405F		PRIMER, SYNTHETIC, LACQUER-RESISTING	JAN-P-72				
6					LACQUER ENAMEL, BLACK	JAN-L-73			(b)	
7										
8										
9										

- (a) SEE DRAWINGS 82-3-254A AND 82-3-254A FOR METAL PARTS DETAILS, SPECIFICATIONS AND SHIPPING ASSEMBLY. DIMENSION "E" ON SHIPPING ASSEMBLY EQUALS 5 1/2.
- (b) ALTERNATIVE MATERIAL- BLACK STENCIL INK, SPEC. TY-T-559.
- (c) 3/8 INCH CAVITY SHALL BE CONCENTRIC WITH 4 TAIL BOLTS 82-3-405C WITHIN 1/8 INCH (1/2 INCH DIAL INDICATOR READING).
- (d) 1/2 INCH CAVITY SHALL BE CONCENTRIC WITH CONICAL SURFACE FOR A DISTANCE OF 2 1/2 INCHES FROM THE TAIL END OF THE CONCRETE PORTION OF THE BOMB WITHIN 1/8 INCH (1/2 INCH DIAL INDICATOR READING).
- (e) MAY BE 3/4 DIA PROVIDED 3/4 DIA CAVITY IS CONCENTRIC WITH CONICAL SURFACE FOR A DISTANCE OF 2 1/2 INCHES FROM TAIL END OF THE CONCRETE PORTION OF THE BOMB.
- (f) EXPOSED PORTION OF TAIL BOLTS MUST BE COMPLETELY THREADED.

SCALE, INCHES, 1/2.

BOMB, PRACTICE, 100LB, M85 BODY ASSEMBLY, DETAILS AND MARKING DIAGRAM.			
DATE	CLASS	VISION	FILE
AUGUST 17, 1944	82	3	405
REVISIONS			
1	(17-8-44)		
2	10-29-45		
VALUANCE OF DIMENSIONS SEE OTHERS SPECIFIED			
SECTION 1 FUNCTIONAL & ASSEMBLY			
APPROVED	DATE	BY	
E.J.S.			
DRG. PERTAINS TO			
SUBMITTED BY C.H. Heflinger 100 PER. REP. U.S.A.			
APPROVED BY ORDER OF THE CHIEF OF THE BOMB DIVISION C.H. Heflinger 100 PER. REP. U.S.A.			
D	ORDNANCE DEPT U.S.A.		

OBSOLESCE

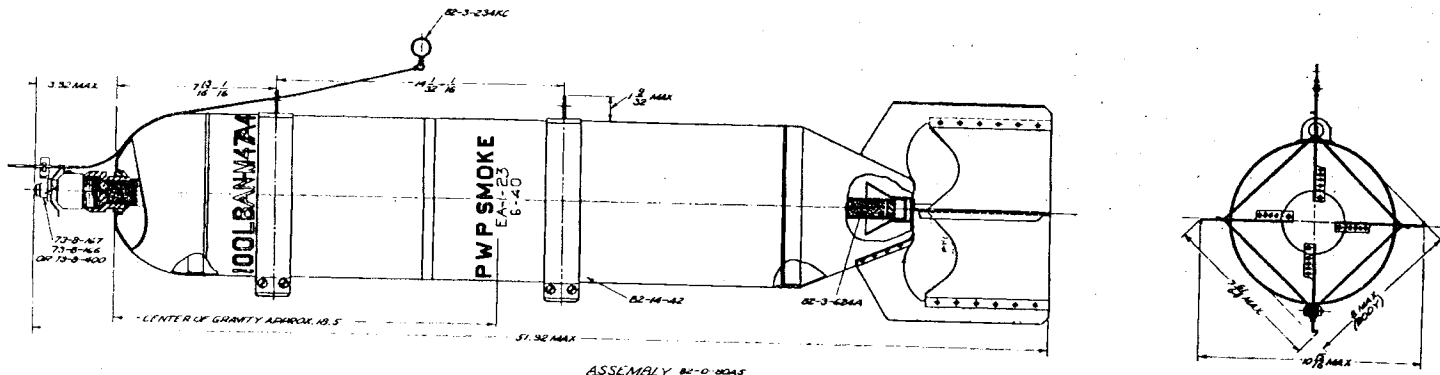
PRACTICE AND TARGET BOMBS

NOTES	BOMB										ADAPTER-BOOSTERS		FUZES				PRIMER-DETONATORS			PACKING					Assembly No.			
	TYPE	Assembly Complete Drg. No.	DRG. NO.	Weight Loaded and Fuzed Lb.	Spotting Charge			Inert Charge			TAIL		NOSE		TAIL		NOSE		TAIL		BOMB Drg. No.	FUZE		PRIMER-DETONATORS				
					Type	Drg. No.	Wt. Lb.	Wt. Lb.	Kind	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation		Drg. No.	Nose Drg. No.	Tail Drg. No.		Nose Drg. No.	Tail Drg. No.	Container Drg. No.
S	Prac., 23 Lb., M71 h	82-0-91	82-3-253	21.1		None							None		None						20-4-386							1
S & M	Prac., 23 Lb., M71A1 h	82-0-91	82-3-253	21.1		None							None		None						20-4-386							2
																												3
																												4
S	Prac., 23 Lb., M73 j	82-0-91	82-3-253	21.		None							None		None						20-4-386							5
S	Prac., 23 Lb., M73A1 j	82-0-91	82-3-253	21.		None							None		None													6
																												7
S & M	Prac., 100 lb., M36A2	82-0-23	82-3-213	100.	M1A1 ^a	82-3-228	4.25	80	Sand				None	n	82-3-228						76-16-391		76-16-214					8
S	Prac., 100 Lb., M85 ^c	82-0-96	82-3-405	103.5	M1A1 ^a	82-3-228	4.25	95	b				None	a	82-3-228						82-3-407		76-16-214					9
																												10
S	Target, Prac., 100 lb., M75 ^m	82-0-97	82-3-409	101.2		82-14-45	72. ^d						M108 ^e		73-8-44		None				76-16-409		76-16-238					11
S & M	Target, Prac., 100 Lb., M75A1 ^m	82-0-97	82-3-409	101.2		82-14-45	72. ^d						M108 ^e		73-8-44		None				76-16-409		76-16-238					12
																												13
																												14

S - Issue.
M - Manufacture.
Prac. - Practice.

(a) - Spotting Charge, M3 and M4 also may be used. Drgs. 82-3-402 and 82-3-496 respectively.
(b) - Bomb is made of reinforced concrete.
(c) - Uses Fin Assembly, M105, Drg. 82-3-406.
(d) - Uses Red Iron-Oxide (Hematite).
(e) - Fuze uses Pressure Plate, Drg. 82-3-410.
(h) - Parachute Unit M3, Drg. 82-3-265.
(j) - Parachute Unit, M4 Drg. 82-3-400.
(m) - Uses Bursting, AK-M4, Drg. 82-3-281.

ISSUED - September 6, 1924
REVISED - 1 May 1947



ASSEMBLY 82-0-80A3

NOTE: THIS DRAWING SHALL NOT BE USED
 NOR REPRODUCED EITHER WHOLLY OR IN
 PART EXCEPT WHEN AUTHORIZED BY COM-
 MAND WITH UNITED STATES GOVERN-
 MENT PROCUREMENT.

ITEM NO.	NAME OF COMPONENT	DRAWING NUMBER OR ITEM MARK	APPROX. WEIGHT (POUNDS)	WEIGHT (LBS)		DESIGN DATA
				W/P	D/W	
1	ASSEMBLY, COMPLETE	82-0-80	130.6	130.6		1 BODY/TAIL PARTS ASSEMBLY WITHOUT BURSTER WELL ASSEMBLY
2	BOMB LOADING ASSEMBLY (WITHOUT FUZING COMPONENTS AND CLOSURE PLUG)	82-14-62	87.2	87.2		2 BURSTER WELL ASSEMBLY WITHOUT BURSTER WELL ASSEMBLY
3	ARMING WIRE ASSEMBLY	82-3-234AC	.04	.04		3 ARMING WIRE ASSEMBLY
4	BURSTER, M10	82-3-624	2.8	2.8		4 BURSTER, M10
5	BURSTER, M10	82-3-624	2.8	2.8		5 BURSTER, M10
6	FUZE, BOMB, NOSE, AN-M13-9	71-8-400	1.13	1.13		6 FUZE, BOMB, NOSE, AN-M13-9
7	FUZE, BOMB, NOSE, AN-M13-9	71-8-400	1.13	1.13		7 FUZE, BOMB, NOSE, AN-M13-9
8	FUZE, BOMB, NOSE, AN-M13-9	71-8-400	1.13	1.13		8 FUZE, BOMB, NOSE, AN-M13-9
9						9
10						10
11						11
12						12
				TOTAL	130.6	130.6
				PERCENTAGE OF CHEMICAL CHARGE BY WEIGHT	76.5%	76.5%

(A) BURSTER M10 USED WHERE REQUIRED.

BOMB SMOKE PWR100LBANW74
 ASSEMBLY, COMPLETE

REV.	DESCRIPTION	DATE
1	INITIAL DESIGN	12/30/48
2	REVISION	
3	REVISION	
4	REVISION	
5	REVISION	

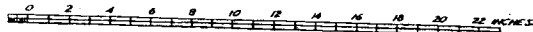
CLASS: 82 0 80

DESIGN PARTS TO: W/P, D/W, S/W, P/W, F/W, C/W, T/W, B/W, H/W, M/W, L/W, N/W, O/W, P/W, Q/W, R/W, S/W, T/W, U/W, V/W, W/W, X/W, Y/W, Z/W

APPROVED BY: J. H. H. (Signature)

ORDNANCE DEPT., U. S. A.

SUPERSEDES 82-0-80 WITHOUT CHANGE DEC 30, 1948



CHEMICAL FORMS

NOTES	BOMB					ADAPTER-BOOSTERS OR BURSTERS				FUZZES				FIN ASSEMBLY		PRIMER-DETONATORS		ARMO WIRE		PACKING				Assembly No.				
	Type	Assemble Complete Drg. No.	Drg. No.	Weight Loaded and Fused lb	Charge		Nose		Tail		Nose		Tail		Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Bomb Drg. No.	Fin Assembly Drg. No.	Fuse		Bursting Drg. No.	Primer-Detonator Drg. No.		
					Weight lb	Kind	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation	Drg. No.	Designation									Drg. No.				Nose Drg. No.	Tail Drg. No.
S	100-Lb M47A2	82-0-40	82-5-277	99	70	HD**	82-14-24	AN-M4	82-5-281		AN-M159 ^{bc}	73-8-400			#	82-5-279			#	82-5-254KC	20-4-244	#	20-4-577		20-4-259	1		
S	100-Lb M47A5 ^f	82-0-80	82-5-277	129	100	WP	82-14-42	AN-M4 ^a	82-5-281		AN-M159 ^{bc}	73-8-400			#	82-5-279			#	82-5-254KC	20-4-464	#	20-4-577		20-4-259	2		
S & M	100-Lb AN-M47A4	82-0-80	82-5-277	129	100	WP	82-14-42	AN-M4 ^a	82-5-281		AN-M159 ^{bc}	73-8-400			#	82-5-279			#	82-5-254KC	20-4-464	#	20-4-577		20-4-259	3		
S & M	100-Lb AN-M47A4	82-0-80	82-5-277	100	74	PWP	82-14-42	AN-M4 ^a	82-5-281		AN-M159 ^{bc}	73-8-400			#	82-5-279			#	82-5-254KC	20-4-464	#	20-4-577		20-4-259	4		
S & M	100-Lb M47A4C ^g	GA-2576	82-5-277	100	70	HD**	82-14-24	AN-M4	82-5-281		AN-M159 ^{bc}	73-8-400			#	82-5-279			#	82-5-254KC	20-4-598	#	20-4-577		20-4-259	5		
S & M	115-Lb M70A1 ^h	82-0-85	82-5-282	128	60	HD**	82-14-44	M10	82-5-385		AN-M158 ^{kb}	73-8-590		M10SA1 ^t	82-5-437				#	82-5-254KC	76-59-21	PC-52	20-4-577		20-4-259	6		
																										7		
																											8	
S	500-Lb AN-M78	82-0-115	82-5-487	389	100	AC	82-14-51	AN-M15	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-181	M10SA1 ^r	82-5-359	M14 ^a	73-8-70	M5 ^{ff}	82-5-254HB	76-59-17	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	9
S & M	500-Lb AN-M78	82-0-115	82-5-487	496	205	CG	82-14-51	AN-M15	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-181	M10SA1 ^r	82-5-359	M14 ^a	73-8-70	M5 ^{ff}	82-5-254HB	76-59-17	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	10
S & M	500-Lb AN-M78	82-0-115	82-5-487	487	176	CK	82-14-51	AN-M15	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-181	M10SA1 ^r	82-5-359	M14 ^a	73-8-70	M5 ^{ff}	82-5-254HB	76-59-17	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	11
																											12	
																											13	
S & M	1000-Lb AN-M79	82-0-98	82-5-416	728	195	AC	82-14-46	AN-M16	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-72	M15SA1 ^u	82-5-365	M14 ^a	73-8-70	M7 ^{ff}	82-5-254ZA	76-59-18	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	14
S & M	1000-Lb AN-M79	82-0-98	82-5-416	948	415	CD	82-14-46	AN-M16	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-72	M15SA1 ^u	82-5-365	M14 ^a	73-8-70	M7 ^{ff}	82-5-254ZA	76-59-18	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	15
S & M	1000-Lb AN-M79	82-0-98	82-5-416	884	551	CK	82-14-46	AN-M16	82-5-422	M15SA1 ^o	82-5-356	AN-M10SA1 ^d	73-8-14	AN-M10A2 ^{oo}	73-8-72	M15SA1 ^u	82-5-365	M14 ^a	73-8-70	M7 ^{ff}	82-5-254ZA	76-59-18	20-4-288	20-4-186	20-4-467	20-4-453	20-4-272	16
																											17	
																											18	
																											19	
																											20	

S - Issue
M - Manufacture
AC - Hydrocyanic acid
CC - Phosgene
CK - Cyanogen chloride
H - Mustard
HD - Purified Mustard
PWP - Plasticized White Phosphorus
WP - White Phosphorus

a - Bursting, M28, Drg. 82-5-516, also used. For packing box, see Drg. 20-4-259.
b - Detonator, M20, Drg 75-2-187.
c - Fuse, Bomb, Nose, AN-M126 or AN-M126A1, Drg 73-8-167 may be used. For packing box see Drg. 20-4-417.
d - Fuse, M105, AN-M105, and AN-M105A1, suitable for instantaneous use only, may be used; Also, Fuzes M263, M264, M265, AN-M139A1 and AN-M140A1 may be used.
e - Adapter-Booster, M115, may be used. For packing box see Drg. 20-4-465.
f - Can, Packing, Drg 76-7-649.
g - Alternative Fin Crates; 500-Lb, Drg 20-4-328 1000-Lb, Drg 20-4-329
h - For Fuse Container see Drg 76-1-262.
k - Fuse, Bomb, Nose, AN-M10A1, Drg 73-8-77 may be used. For packing box see Drg. 20-4-417.
o - Fuse, Bomb, Tail, AN-M10A2, w/Primer-Detonator, M14, Non-delay; Container, Drg 76-1-224.
p - Fuse, Bomb, Tail, AN-M10A2, w/Primer-Detonator, M14, Non-delay; Container, Drg 76-1-225.

oo - Fuzes, Bomb, Tail, M161 and AN-M10A1, w/Primer-Detonator, M14, Non-delay, may be used for 500-Lb.
p - Fuse, Bomb, Tail, M162 and AN-M10A1, w/Primer-Detonator, M14, Non-delay, may be used for 1000-Lb.
ooo - Bombs, designated M47A2C and M47A3C, also on hand.
* - Primer-Detonator, M14, Non-delay, issued with fuzes for this bomb.
** - M is a substitute filler for "M".
- Bombs, designated M47A2, also on hand.
^ - WP is substitute standard for PWP.
~ - Bomb is substitute standard for M70, or M70A1.
\$ - Fin is welded to bomb. No M number is assigned to this fin.
% - For packing box see Drg 20-4-479.
& - All bombs on hand designated W70. Bombs of future manufacture will have an interior coating of phenolic varnish and will be designated M70A1.
r - Fin assembly, M109, may be used.
u - Fin assembly, M113, may be used.
t - Fin assembly, M102 and M102A1, may be used.

ISSUED - 2 January 1950
Revised - 1 May 1947

AMMUNITION INSPECTION GUIDE

H filler. The H filler has been found to leak when loaded into this bomb and the M47A1, and is not to be loaded into the M47 or M47A1 Bombs at the present time. When loaded with H, the entire weight of the bomb is 93 pounds of which 73 pounds is H.

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

1. *LA-60*. Consists of crude latex or sap in combination with caustic soda, cocoanut oil, and water.

2. *Crepe rubber (CR)*. This is crude latex but is reduced to a solid by precipitation and kneading.

3. *LA-100*. This is crude latex dried until it is approximately 100 percent solid.

4. *Smoked rubber sheets (SR)*. This is crude latex which has been dried over a smoky fire until it is approximately 100 percent solid.

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

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

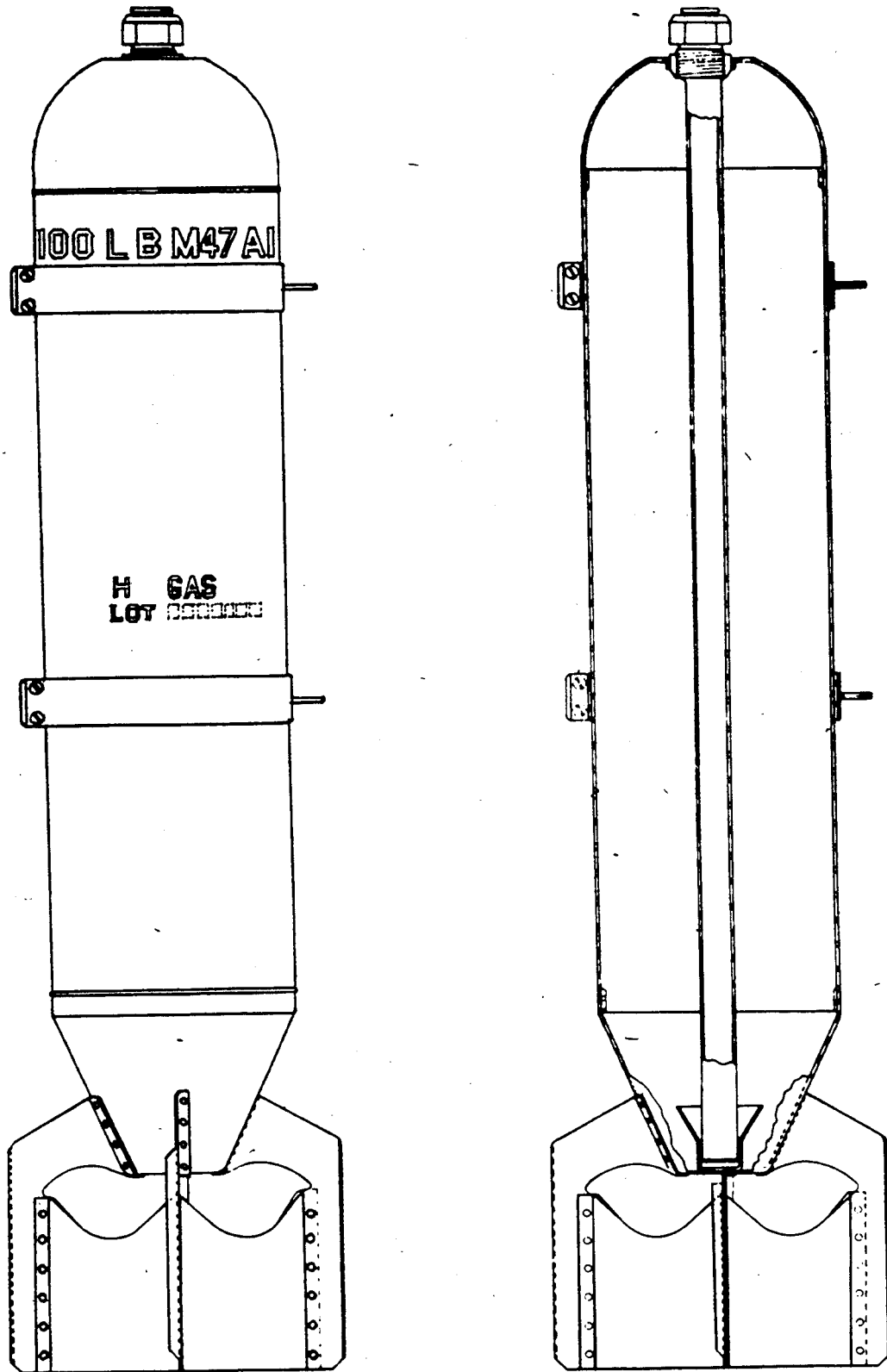
Packing. This bomb is packed in a wooden box, one per box without fuze, arming wire or burster charge. Incendiary oils are loaded in the field into the empty bombs.

BOMB, CHEMICAL, 100-POUND, M47A1.

General. This bomb was designed to replace the 100-pound M47. The 100-pound M47 was found to have too thin a wall section, and in handling and storage, it developed leaks due to corrosion and rough treatment. Consequently, the wall thickness was increased from 1/32 inch to 1/16 inch, and the case was protected by coating inside with acidproof black.

Comparison. In design, it is similar to the 100-pound M47. It is, however, approximately 9 pounds heavier and weighs, when loaded with H, 102 pounds, of which 73 pounds is H. When loaded with

BOMBS FOR AIRCRAFT



RA PD 23019

Figure 264 — Bomb, Chemical, 100-pound, M47A1

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AMMUNITION INSPECTION GUIDE

incendiary oil, it weighs 94 pounds, of which 65 pounds is incendiary oil.

In fillers, fuze, painting and packing, it is exactly the same as the 100-pound M47. It has a special inside coat of paint which provides a resistance of 100-pound pressure. However, H was still found to leak from the bomb case as with the previous bomb and is not to be loaded in empty 100-pound M47A1 Bomb Cases. The only standard fillers are WP or incendiary oils.

An additional fuze which may be found used with this chemical bomb is Fuze Bomb M126 (Nose).

BOMB, CHEMICAL, 100-POUND, M47A2.

General. This bomb was designed to be able to receive the chemical filler mustard (H) without leaking. It was coated on the inside with a special oil which proved in theoretical tests to be resistant to filler pressure having a resistance of 400-pound pressure.

Comparison. It does not differ from the 100-pound M47A1 in any appreciable way. It has the inside wall painted, however, with the special oil to make it resistant to H. It was found, however, that this bomb was also subject to leaking, but not to such an extent as its predecessors. H is still to be loaded into this bomb as a temporary emergency filler. Other fillers are WP and incendiary oils. The fuze is the Nose Bomb Fuze M108 or Fuze Bomb M126 (Nose). When the M126 Fuze is used, the special adapter for the M108 Fuze is removed, as the M126 Fuze can screw directly in the burster well. In all other components, the bomb is exactly the same.

BOMB, CHEMICAL, 115-POUND, M70.

General. This bomb was designed to receive a chemical filler of mustard (H) without any possibility of leaking. It is a thick case bomb as compared to the bombs which preceded it.

Comparison. In shape, construction, and weight, the bomb resembles the 100-pound general purpose bomb. It is somewhat longer, however. It is cylindrical, having a rounded nose and tapered tail. The body is constructed in one piece without any welds. At the base, however, a closed base plug which has a threaded protrusion is welded to the bomb body. The threaded protrusion receives a fin lock nut which seats the fin assembly snugly on the bomb. The nose of the bomb is unthreaded but receives a long burster which is press-fit into the nose to form a gastight seal.

Welded to the bomb body are three lugs. Two lugs 14 inches apart are provided for horizontal suspension, and a third lug on the opposite side at the center of gravity is provided for single suspension.

c. Issue. BOMB, incendiary, oil, 6-lb., AN-M69, is issued in CLUSTER, incendiary bomb, AN-M12 (100-pound) and AN-M13 (500-pound). This bomb may also be assembled in an aimable cluster.

98. BOMB, CHEMICAL, 100-LB., M47A2 (METAL PARTS). *α*. Data. BOMB, chemical, 100-lb., M47A2 (metal parts), is the designation of the bomb case before it is loaded with gas, smoke, or incendiary filler. (See pars. 99-101.) It is a round-nose, cylindrical type with fins attached. (See figs. 110-111.) The bomb is 48.92 inches maximum length and 8.125 inches diameter. The body is constructed of sheet steel and is coated on the inside with oil; unloaded, it weighs 26 pounds.

b. Other models. BOMB, chemical, 100-lb., M47A1, differs only from the M47A2 in that the interior is coated with acidproof black paint.

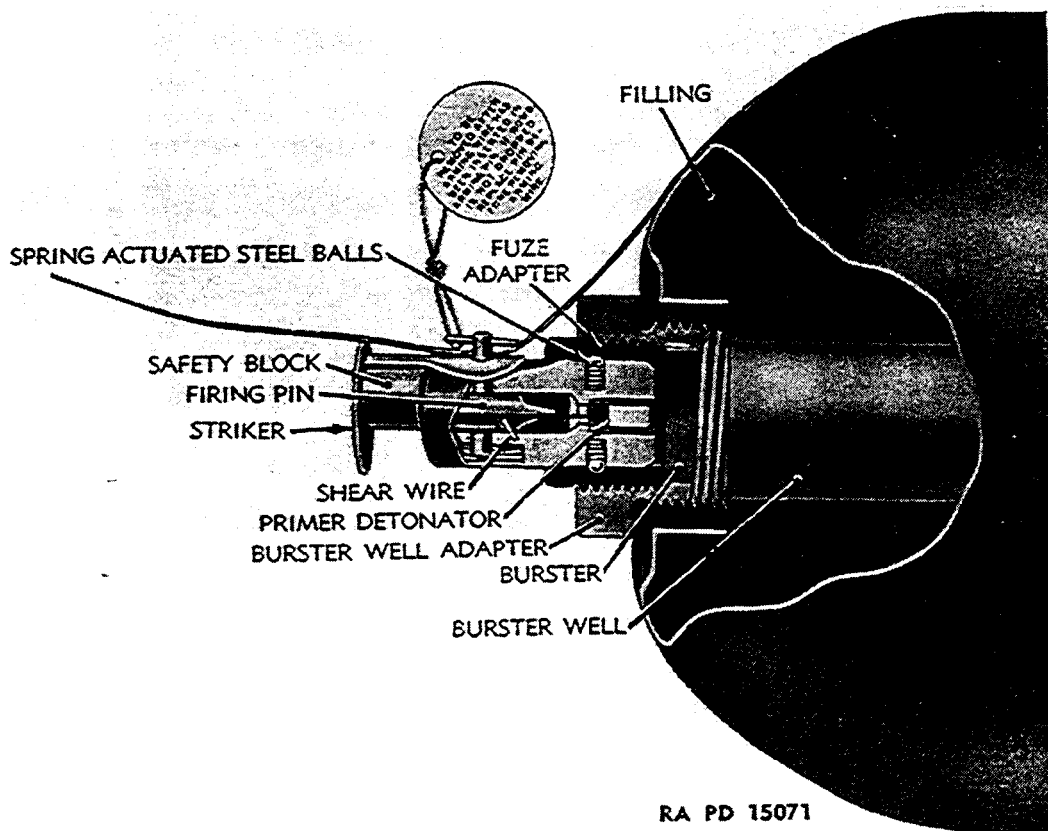
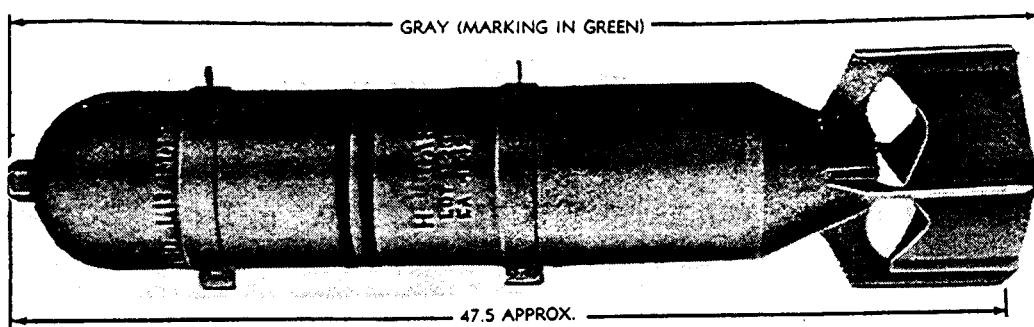


Figure 110. BOMB, chemical, 100-lb., section of nose.

99. BOMB, GAS, PERSISTENT, H, 100-LB., M47A2. *α*. Data. BOMB, gas, persistent, H, 100-lb., M47A2, is loaded with a 68.5-pound charge of mustard gas. The complete round weighs 98 pounds. (See fig. 111.)



RA PD 15093

Figure 111. BOMB, gas, persistent, H, 100-lb., M47A2.

b. **Fuzes, and burster authorized.** BURSTER, M4, is authorized for use in this bomb with H filling. As originally designed, this bomb is adapted for FUZE, bomb, M108 (nose). However, if FUZE, bomb, AN-M126 or AN-M126A1 is available, it is preferred to the M108 and may be used by omitting the fuze seat after assembling the burster. (See par. 95.)

c. **Other models.** BOMB, gas, persistent, H, 100-lb., M47A1, differs from the M47A2 only in that the interior is coated with acidproof black paint instead of oil. The M47 is not used for H filling.

100. BOMB, SMOKE, PHOSPHORUS, WP, 100-LB., M47A2. a. **Data.** BOMB, smoke, phosphorus, WP, 100-lb., M47A2, is loaded with a 100-pound charge of phosphorus. The complete round weighs 127 pounds.

b. **Fuzes and burster authorized.** BURSTER, M4, is authorized for high-altitude bombing; BURSTER, M18 is authorized for low-altitude bombing. BURSTER, M7, may be substituted for either. As originally designed, this bomb is adapted for FUZE, bomb, M108 (nose). However, if FUZE, bomb, AN-M126 or AN-M126A1 is available, it is preferred to the M108 and may be used by omitting the fuze seat after assembling the burster. (See par. 95.)

c. **Other models.** BOMB, smoke, phosphorus, WP, 100-lb., M47A1, differs in that it carries a charge of 100 pounds of phosphorus and weighs 127 pounds.

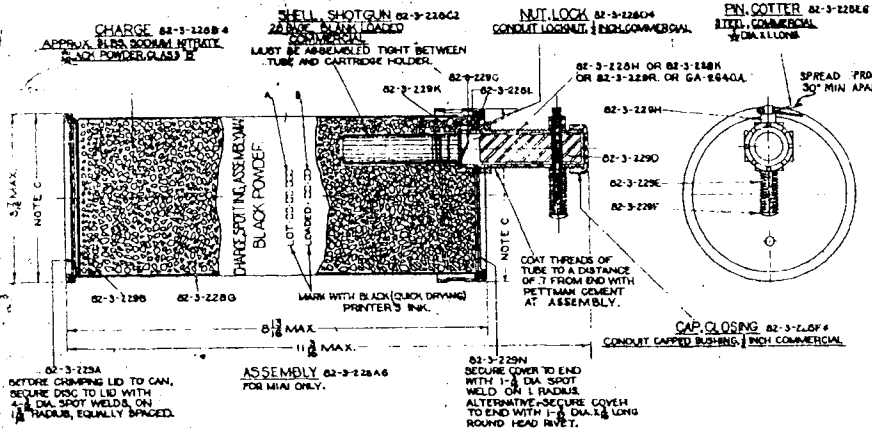
101. BOMB, INCENDIARY, 100-LB., AN-M47A2. a. **Data.** BOMB, incendiary, 100-lb., AN-M47A2, is loaded with a 40-pound charge of gelled gasoline IM or NP. The complete round weighs 69 pounds.

b. **Fuzes and bursters authorized.** BURSTER AN-M13 and Igniter, AN-M9 are authorized for use in this bomb with incendiary filler. As originally designed this bomb is adapted for FUZE, bomb, M108 (nose). However, if FUZE, bomb, AN-M126 or AN-M126A1,

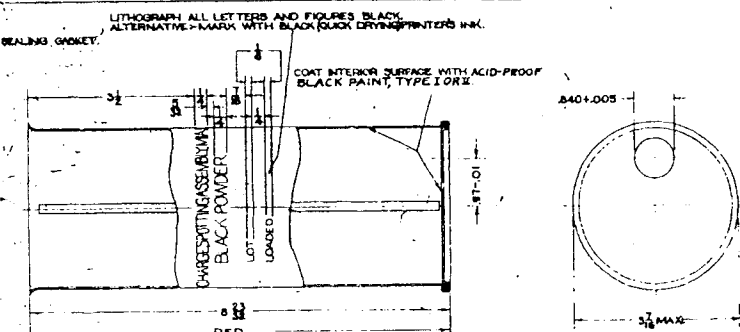
3-228

LIST OF PARTS

LINE NUMBER	NAME OF PART	QUANTITY PER COMPLETE COMPONENT	PIECE-MARK	SIZE OR FORM	MATERIAL	GRADE	SPEC. NUMBER	APPROXIMATE UNIT WEIGHT (POUNDS)	APPROXIMATE VOLUME (CUBIC INCHES)	REMARKS
1	ASSEMBLY		82-3-228A				MIL-C-2983	4.25		
2	TUBE ASSEMBLY (ALTERNATIVE)		82-3-228K							
3	TUBE ASSEMBLY (ALTERNATIVE)		GA-2640A				COMMERCIAL	.36		(1)
4	BODY	1	82-3-228G	SHEET	TIN PLATE		COMMERCIAL	.03		(1)
5	CAP CLOSING	1	82-3-228F	CASTING						(1)
6	TUBE ASSEMBLY (ALTERNATIVE)	1	82-3-228G	SHEET	TERNE SHEETS (LONG TERNE) TYPE II, CLASS 'B'	2	QQ-T-711			(1)
7	CHARGE	1	82-3-228G	SHEET	BLACK POWDER (SODIUM NITRATE)	CLASS 'B'	JAN-P-362	3.00		(1)
8	COVER	1	82-3-228H	SHEET	STEEL	FS-1009	QQ-S-00640	.27		(1)
9	DISC	1	82-3-228A	SHEET	STEEL	FS-1009	QQ-S-00640	.14		(1)
10	HOLDER, CARTRIDGE	1	82-3-228H	CASTING			COMMERCIAL	.02		(1)
11	NUT, LOCK	2	82-3-228D	STEEL			COMMERCIAL	.02		(1)
12	PIN, FIRING	1	82-3-228E	SHEET	STEEL		COMMERCIAL	.07		(1)
13	PIN, COUPLER	1	82-3-228E	SHEET	STEEL		COMMERCIAL	.07		(1)
14	PIN, FIRING	1	82-3-228C	SHEET	STEEL		COMMERCIAL	.07		(1)
15	PLUNGER	1	82-3-228D	BAR	STEEL	FS-1009	QQ-S-00640	.21		(1)
16	SEPARATOR	1	82-3-228B	SHEET	CHIPBOARD		COMMERCIAL	.02		(1)
17	SHELL, SHOTGUN (BLANK LOADED)	1	82-3-228C	2B GAGE			COMMERCIAL	.02		(1)
18	SPACER	1	82-3-228H	TUBING	STEEL		COMMERCIAL	.01		(1)
19	SPRING, SAFETY PIN	1	82-3-228J	WIRE	STEEL WIRE, MUSIC SPRING		QQ-W-470	.01		(1)
20	TUBE	1	82-3-228I	PIPE	IRON		COMMERCIAL	.14		(1)
21	TUBE (ALTERNATIVE)	1	82-3-228L	PIPE	BLACK IRON PIPE		COMMERCIAL	.14		(1)
22	TUBE (ALTERNATIVE)	1	82-3-228M	PIPE	BLACK IRON PIPE		COMMERCIAL	.14		(1)
23	WASHER	2	82-3-228L	SHEET	STEEL	FS-1009	QQ-S-00640	.01		(1)
24	CEMENT, PETTYMAN				JAN-C-99		COMMERCIAL			(1)
25	INK, BLACK, PRINTERS						COMMERCIAL			(1)
26	ENAMEL, RED, NO. 3115				MIL-E-10687		COMMERCIAL			(1)
27	PAINT, ACID-PROOF, BLACK				TYPE I or II	JAN-P-450	COMMERCIAL			(1)
28	RIVET, STEEL, ROUND HEAD						COMMERCIAL			(1)



NOTE - A - INSERT LOT NUMBER.
B - INSERT DATE OF LOADING (MONTH AND YEAR).
C - SAMPLE MARKING - LOT RA-12-345 LOADED 8-43"
D - COAT ENTIRE EXTERIOR SURFACES OF LID AND COVER WITH RED, NO. 3115 ENAMEL.



QTY	DESCRIPTION	SPEC. NUMBER	REQUIRED BY
1	AMMUNITION, EXCEPT SMALL ARMS AMMUNITION, GENERAL SPEC. FOR	MIL-C-2550 DRG 82-3-228	
2	CEMENT, PETTYMAN	JAN-C-99 DRG 82-3-228	
3	CHARGE SPOTTING ASSEMBLY (BLACK POWDER ASSEMBLING AND PACKING)	MIL-C-2583 DRG 82-3-228	
4	ENAMEL, LUSTRELESS, QUICK-DRYING (FOR AMMUNITION)	MIL-E-10687 DRG 82-3-228	
5	PAINT, ACID-PROOF, BLACK	JAN-P-450 DRG 82-3-228	
6	PLATING, CADMIUM (ELECTRODEPOSITED)	QQ-P-416 DRG 82-3-228	
7			
8			
9	POWDER, BLACK, SODIUM NITRATE	JAN-P-362 DRG 82-3-228	
10	STEEL, CARBON, BARS (GENERAL PURPOSE)	QQ-S-633 DRG 82-3-228	
11	STEEL, CARBON, SHEET AND STRIP	QQ-S-00640 DRG 82-3-228	
12	WIRE, STEEL, HIGH CARBON, SPRING, BRIGHT MUSIC	QQ-W-470 DRG 82-3-228	
13	TERNE SHEETS (LONG TERNE)	QQ-T-711 DRG 82-3-228	
14	ZINC PLATING (ELECTRODEPOSITED)	QQ-Z-225 DRG 82-3-228	
15			

THE SPECIFICATION AND STANDARD NUMBERS SHOWN ARE BASIC NUMBERS ONLY. IF A REVISION LETTER IS AFFIXED TO ITS BASIC NUMBER.

LIST OF DRAWINGS

DRAWING NUMBER	DATE	BY	CHKD BY	APP'D BY
ASSEMBLY	82-3-228			
DETAILS	82-3-228			
BOX PACKING	78-15-216			
PACKING AND MARKING OF BOX	207-2-209			
HOLDER CARTRIDGE (ALTERNATIVE)	68-26257			
TUBE ASSEMBLY (ALTERNATIVE)	68-26258			
	68-26259			

SUPERSEDES OLD TRACING: 82-3-228 UNDER REVISION DATE OF NOV. 26, 1943.

CHARGE, SPOTTING ASSEMBLY, MIAI (BLACK POWDER), AND DETAILS FOR MIAIM3 AND M4.

REVISIONS	CLASS	DESCRIPTION	DATE
1	82	3	228

DRG PERTAINS TO

APPROVED: [Signature]

PREPARED BY: [Signature]

DATE: [Date]

ORDNANCE DEPT. 45

D-5

ARMY PRACTICE BOMBS

3-pound AN-Mk 5 Mod 1

See Navy practice bombs.

20-pound M48

This is a dummy of the 20-pound Fragmentation Bomb AN-M41. It has a two-ounce black-powder charge and uses the Fuze M110 or AN-M110A1 in the nose. It is 21.8-inches long; weighs 19.7 pounds. It is issued in practice bomb clusters M2 and M2A1.

23-pound M71 and M71A1

These are parachute-type practice fragmentation bombs for clustering. They do not have a fuze or spotting charge, because of the presence of the parachute. The parachute assembly is the M3, modified from the M4 by removal of the suspension assembly, hand assembly, and pull wire container. M71 is 26.8 inches long; weighs 21 pounds. M71A1 differs by the addition of the shoulder to the bomb nose.

100-pound M38A2

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

This bomb simulates a G.P. bomb of the same size. The spotting charge is assembled in a sleeve at the base of the bomb, within the fin box. Authorized spotting charges are M1A1, M3, and M4.

100-pound M75

Length, inches	47.0
Diameter, inches	8.0
Filler, hematite, pounds	72
Total weight, pounds	101.3

This bomb is designed to provide a target reference for practice bombing over snow-covered ranges. Resembling the chemical bomb of the same size, it consists of a light, sheet-metal case; a charge of red iron ore (hematite); a Burster M4; and a Fuze M108 in the nose.

100-pound M85

This model is a reinforced concrete design ordered to relieve a temporary shortage of the Practice Bomb M38A2 during the war.

Spotting Charges (Army)

M1A1

Over-all length, inches	11.18
Diameter, inches	3.13
Weight, pounds	4.25
Black-powder charge, pounds	3.0
Bomb used in	M38A2
Fuze	Integral inertia-type

This type of spotting charge fits in the after end of the 100-pound Practice Bomb M38A2. It produces a flash of flame and white smoke for observation of bombing accuracy. When assembled in the bomb, the can of the charge protrudes two to three inches out of the bomb body.

The fuze is an integral part of the spotting charge assembly. When the arming wire is pulled, the spring-loaded arming pin jumps out, leaving the inertia weight supported only by the combination firing pin and creep spring. On impact, the inertia weight drives this firing pin into the shotgun-type primer, which, in turn, ignites the black powder.

M3: The Spotting charge M3 has a 2 1/4-pound dark smoke filling and a black-powder igniter. It is 5/8 inch longer than the Spotting Charge M1A1, but otherwise is like it. The M3, with

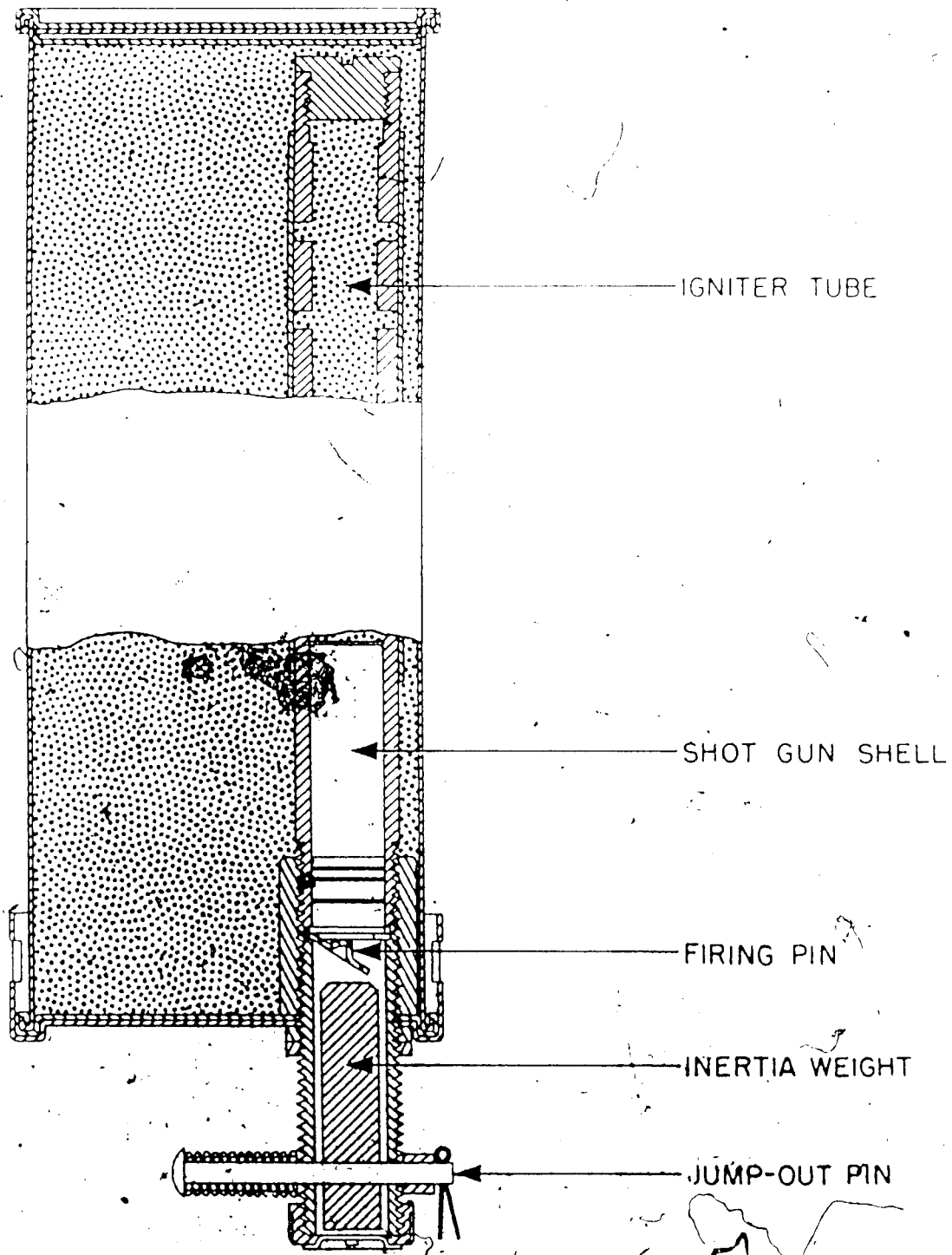


Figure 315. Spotting Charge M1A1

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BOMBS FOR AIRCRAFT

completely loaded, the cost of the complete round is approximately \$3.00. It receives the M1A1 Spotting Charge which houses both the spotting charge and firing mechanism. The Suspension Band M1 is provided for single suspension. The band is a separate component.

CHARGE, Spotting, M1A1. The M1A1 Spotting Charge is used to provide a charge and a firing mechanism. It is made from a large size tin can which has 3 pounds of black powder assembled loosely within. At the top of the can is a cover which has a hole in it for the insertion of a 28-gage blank shotgun shell and firing mechanism. The blank shotgun shell serves as a primer and igniting charge.

The firing mechanism consists of a fuze housing which has within it a striker held in position by an arming pin. Below the striker is a separate firing pin. The arming pin is always being forced outward by its spring but it is held in position by a cotter pin or arming wire located in one of the two eyelets in the small end of the arming pin. A small freely fitting sleeve is assembled over the end of the arming pin which is held in place by a cotter pin in the outer of the two holes. This sleeve makes the cotter pin more accessible and provides for proper arming wire resistance. It is important that this sleeve is always in place and that it is a loose fit on the arming pin. An inner hole through which the arming wire is threaded is exposed by a slight pressure on the head of the arming pin. The complete assembly is moistureproof and must not be disassembled under any circumstances. It is painted red with black stencil.

To assemble the spotting charge, about 80 pounds of sand is first added to the bomb. This requires filling to within $\frac{1}{4}$ inch of the receiver with sand. No water is ever to be added to the sand. The receiver cover disc is then inserted and the spotting charge is placed in the receiver so that the cotter pin is alined with the two suspension lugs. The two holes in the spotting charge cap are alined with the two ears projecting from the receiver sleeve. A slight force will cause the spotting charge cap holes and receiver ears to engage. A wooden tool is used to facilitate this action. This prevents longitudinal or rotational motion of the spotting charge in the receiver. The arming wire is placed through the inner hole of the arming pin after being threaded through the rear suspension lug. The arming wire is adjusted so as to protrude 2 to 3 inches beyond the arming pin. No safety clip is to be used.

Function. The bomb is dropped and the arming wire is retained in the plane. The arming pin ejected by its spring allows the striker to move down and come to rest on the firing pin.

On impact, the force of inertia causes the striker to move down against the firing pin. The firing pin strikes the primer of the 28-gage blank shotgun shell, igniting it. The flame produced ignites the igniting charge in the blank shotgun shell which in turn ignites the black

5-33. Signal, Practice Bomb: MK7 Mod 0

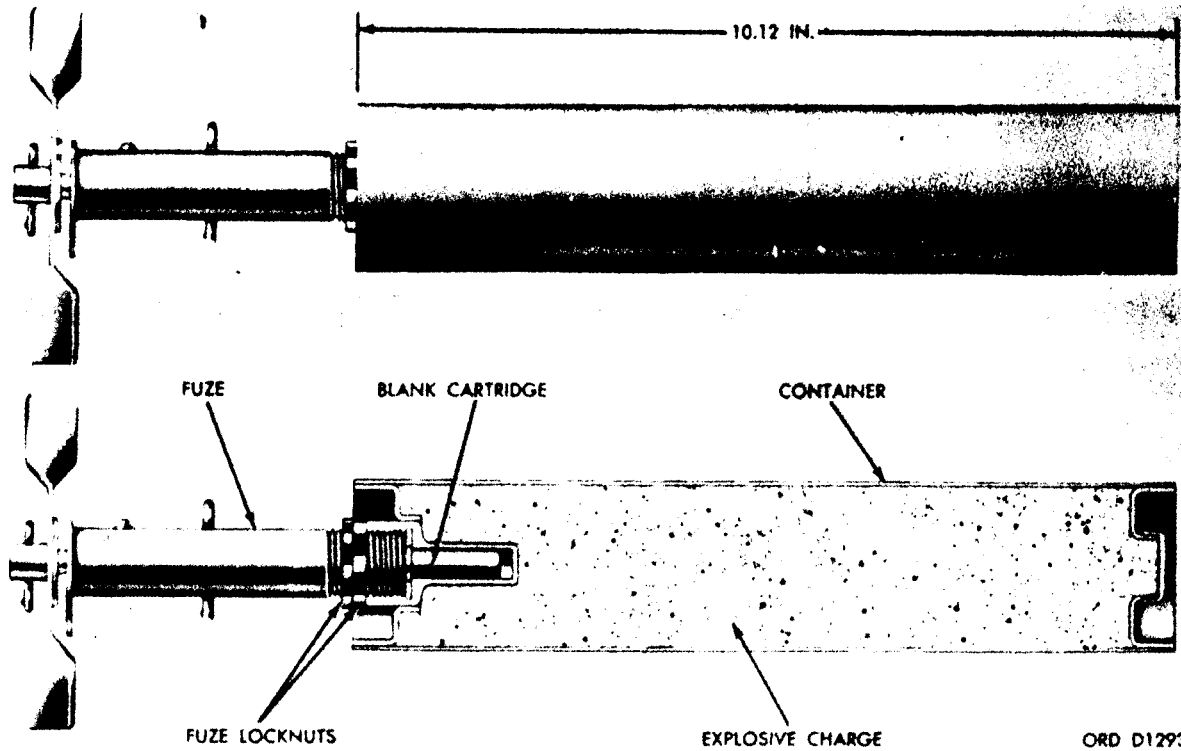


Figure 5-26. Signal, practice bomb: MK7 Mod 0 w/fuze.

Table 5-27. Signal, Practice Bomb: MK7 Mod 0

Mark.....	7
Mod.....	0
Length of Assembly (in.).....	10.12
Diameter of Body (in.).....	2.0
Weight of Assembled Signal (lb).....	2.5
Container Material.....	Steel
Explosive Charge.....	Black Powder
Weight (lb).....	1.0

a. *Description.* Practice bomb signal MK7 Mod 0 (fig. 5-26 and table 5-27) consists of a can of black powder fitted with inert fuze AN-MK247 Mod 0 and a blank .38-caliber cartridge which is used as a detonator. Signal MK7 is used with practice bombs for observation of bombing accuracy.

b. *Functioning.* Upon release of the bomb from the aircraft, the arming wire is withdrawn, per-

mitting the fuze arming vane to rotate and arm the signal. Upon impact, the firing pin in the fuze overcomes a creep spring and impinges upon the primer of the blank cartridge which, in turn, ignites the black-powder charge. The resulting explosion produces a flash of light and a large puff of gray smoke.

c. *Differences.* The MK7 is generally the same as the MK6 except that the fuze is mounted off-center in the MK6 and its black-powder filling weighs about 1 pound more.

5-34. Spotting Charges

Spotting charges function in the same manner and for the same purpose as the signal cartridges; however, they consist of relatively larger amounts of filler.

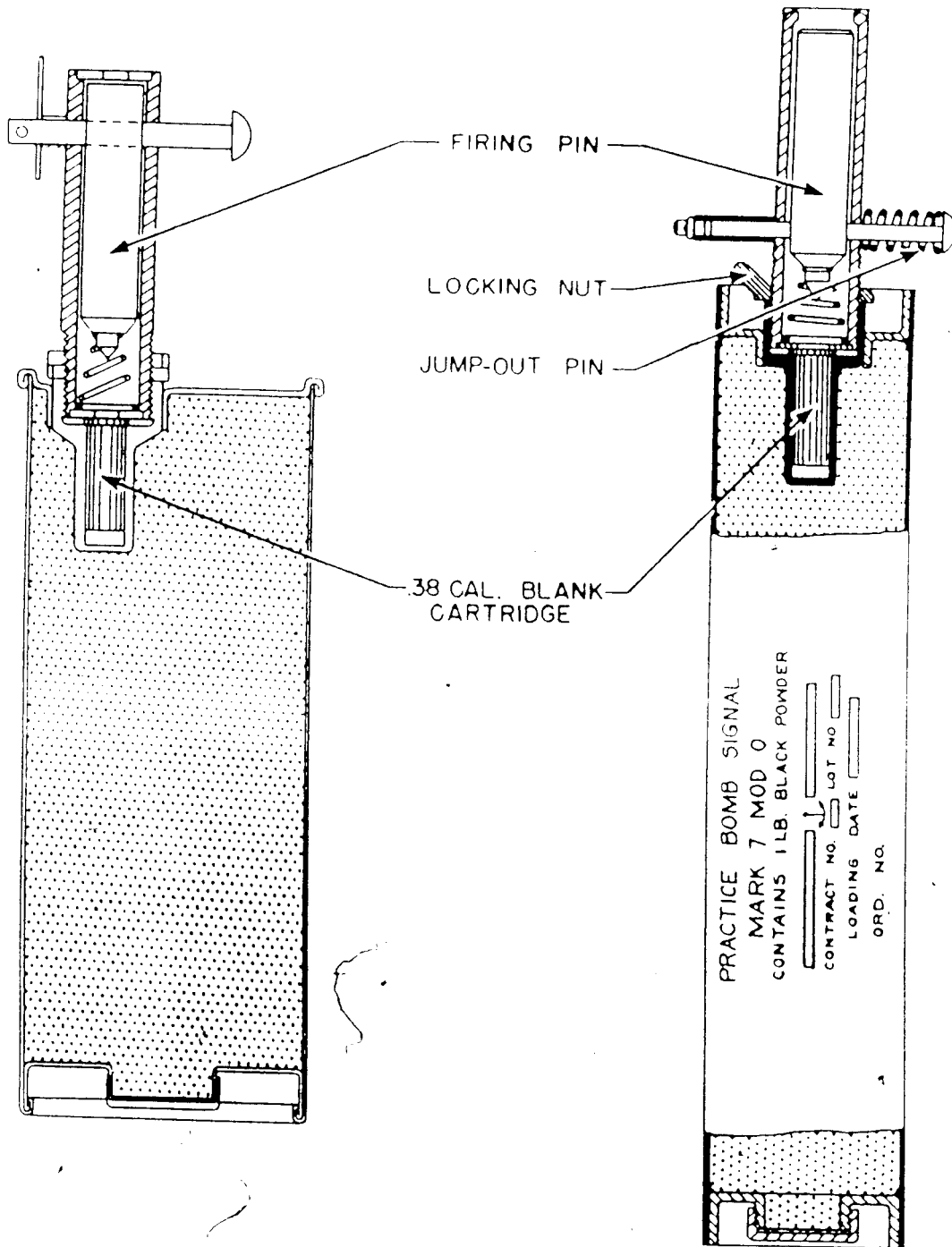


Figure 312. Practice Bomb Signals Mk 6 Mod 0 (left) and Mk 7 Mod 0 (right)

4-15. Fuze, Bomb: Tail, AN-MK247 Mod 0

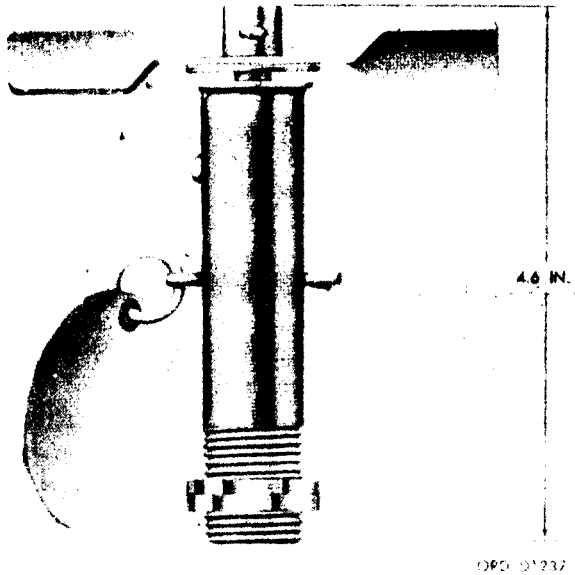


Figure 4-84. Tail fuze AN-MK247.

Table 4-9. Tail Fuze AN-MK247 Mod 0

Mark.....	247
Mod.....	0
Firing Action.....	Impact-Inertial
Firing Delay (sec).....	None
Arming:	
Type.....	Direct
Revolutions to Arm.....	13
Air Travel to Arm (ft).....	60 to 240 (depending upon launching conditions)
Overall Length (in.).....	4.6
Protrusion from Bomb (in.).....	3.85
Vane Span (in.).....	4.0
Weight (oz).....	10.0
Number of Vane Blades.....	2

a. *Description.* This type of tail fuze (figs. 4-34 and 4-35, and table 4-9) is vane operated and inertia fired, and requires from 60 to 240 feet of air travel to arm, depending upon launching conditions. It acts instantaneously upon impact to detonate the signal of a practice bomb.

b. *Explosive Components.* There are no internal explosive components in this type of fuze since it serves only as a trigger for firing the signal in a practice bomb. The explosive elements are external; they consist of a black-powder-filled signal and a .38-caliber blank cartridge, both of which are shipped in the same container with the fuze.

Upon impact, the fuze firing pin strikes the blank cartridge and the exploding cartridge fires the signal.

c. *Safety Features.* A safety (cotter) pin, with pull ring and instruction tag attached, extends through the fuze body. This safety (cotter) pin locks the arming mechanism and firing mechanism so that the fuze will not accidentally detonate the signal during fuzing. The safety (cotter) pin should not be removed until the fuze is completely installed and the arming wire attached. The fuze is shipped assembled to the practice bomb signal, except for the blank cartridge which is installed at the time of fuzing. When the fuze is properly installed in the signal, and the signal is in place in the bomb, the arming wire of the bomb prevents the arming-vane assembly of the fuze from rotating and arming the fuze. The unarmed fuze cannot function.

d. *Functioning.*

(1) *General.* When the fuzed bomb is dropped, the arming wire is withdrawn from the fuze and retained in the bomb rack. This frees the arming-vane assembly which rotates in the airstream. The arming-vane assembly arms the fuze after approximately 13 revolutions, which require from 60 to 240 feet of air travel, depending upon launching conditions. When the arming-vane assembly completes approximately 25 revolutions, it is freed into the airstream. Upon impact, the fuze firing pin is driven into the blank cartridge, igniting the signal.

(2) *Arming.* The arming-vane assembly is connected to the arming screw, which is threaded into the firing plunger. As the arming-vane assembly rotates, it causes the arming screw to unscrew itself from the firing plunger. This raises the arming-vane assembly outward from the fuze. The firing plunger rides vertically in the fuze body, and is prevented from rotating by a pin which passes through the fuze body into a vertical groove in the plunger. The antireep spring supports the weight of the plunger, the arming screw, and the arming-vane assembly. The spring is only strong enough to offset this weight; any added force will cause the spring to compress and the firing plunger to ride toward the blank cartridge in the signal. Until the

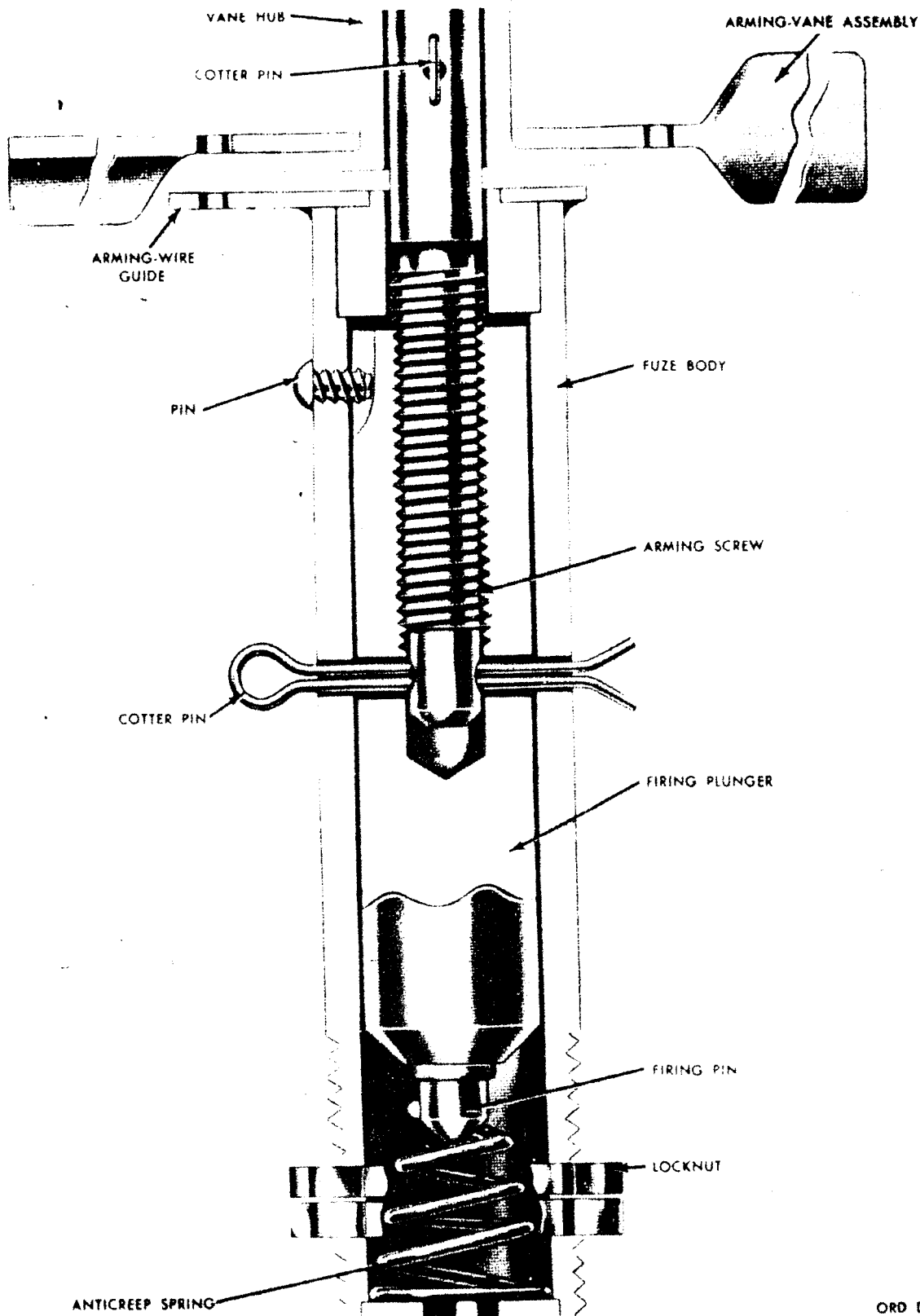


Figure 4-85. Tail fuze AN-MK247—cross section.

ORD D1233

arming-vane assembly has made the necessary 13 revolutions, the fuze cannot fire the signal because the arming-vane assembly has not¹ raised sufficiently from the fuze to allow the firing plunger and pin to reach the blank cartridge. When 13 revolutions are completed, the plunger can move inward far enough to allow the firing pin to strike the blank cartridge. Continued rotation of the arming-vane assembly causes the arming screw to free itself from the firing plunger. Both the arming-vane assembly and the arming screw are released into the airstream.

- (3) *Action.* When the bomb strikes a target, the inertia of the firing plunger compresses the anticreep spring and drives the plunger toward the blank cartridge.

- (4) *Detonation.* The firing pin strikes the .38-caliber blank cartridge which ignites the signal.

e. Safe Release. When the bomb is to be released unarmed, the aircraft arming controls are set in the SAFE position. The arming wire is then released with the bomb when the bomb is jettisoned. With the arming wire in place, the arming-vane assembly cannot rotate and arm the fuze. The unarmed fuze will not function on impact.

f. Accidental Arming. If the arming-vane assembly and the arming screw are missing, or if the arming-vane assembly is raised from the fuze $\frac{1}{2}$ inch or more, the fuze is armed.

Warning: Armed or partially armed fuzes should be handled by authorized and qualified munitions personnel only.

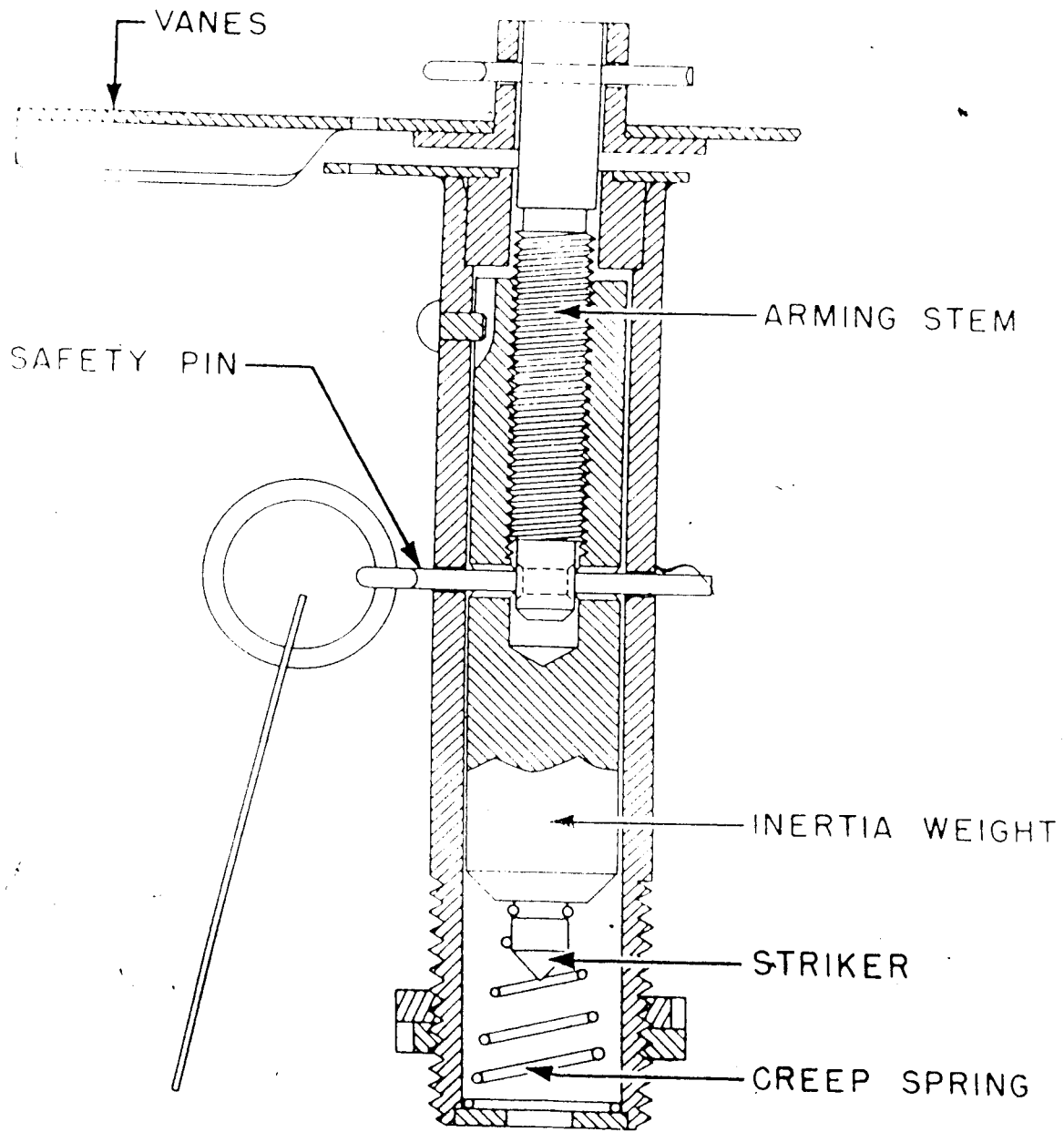


Figure 313. Fuze Mk 247 for Practice Bomb Signals
Mk 6 Mod 0 and Mk 7 Mod 0



Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX E

REPORTS/STUDIES

APPENDIX E

REPORTS/STUDIES

Table of Contents

E-1 INPR for Site No. J09CA0685, 23 July 1991 (B-11)

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR FORMERLY USED SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY
VICTORVILLE PRECISION BOMBING RANGE NO. 19
SAN BERNARDINO COUNTY, CALIFORNIA
PROJECT NO. J09CA068500

FINDINGS OF FACT

1. In May 1943, 320 acres were transferred from the U.S. Department of the Interior to the War Department through Public Land Order (PLO) 125. Another 320 acres were obtained by fee acquisition from Southern Pacific Land Company for a total of 640 acres.

2. Victorville PBR No. 19 was used by the Army Air Forces based at Victorville Airfield as a practice bombing area. There were no buildings on the site. The Department of Defense (DOD) improvements on the site consisted of frame butts and appurtenances, fences and gates, and a bombing target. The bombing target, located in the center of the site, was composed of asphalt strips approximately 5 feet wide configured as three concentric circles with approximate radii of 100, 200, and 300 feet. In addition, there were two strips of asphalt which transected the concentric circles at right angles to each other.

3. On 10 May 1948, accountability for Victorville PBR No. 19 was assumed by the War Assets Administration. On 12 May 1949, jurisdiction over and administration of 320 acres of Victorville PBR No. 19 was transferred to the U.S. Department of the Interior through PLO 581. The site was declared dedded and certified to be free and clear of all explosives and explosive objects reasonably possible to detect by visual inspection on 22 March 1948. Currently, 320 acres of the site are controlled by the U.S. Department of the Interior, Bureau of Land Management, and the other 320 acres are owned by private land owners.

DETERMINATION

Based on the foregoing findings of fact, the site has been determined to have been formerly used by the DOD. It is therefore eligible for the Defense Environmental Restoration Program For Formerly Used Defense Sites established under 10 U.S.C. 2701 et seq.

23 July 91

Date

J. F. Yankoupe LTC EJ

for ROGER F. YANKOUBE
Brigadier General, U.S. Army
Commanding

SITE SURVEY SUMMARY
FOR
DERP PROJECT NO. J09CA068500

SITE NAME: Victorville Precision Bombing Range (PBR) No. 19

LOCATION: The former Victorville PBR No. 19 is located approximately 7 miles north of Joshua Tree, California.

SITE HISTORY: In May 1943, 320 acres were transferred from the U.S. Department of the Interior to the War Department through Public Land Order (PLO) 125. Another 320 acres were obtained by fee acquisition from Southern Pacific Land Company for total of 640 acres. The site was used by the Army Air Forces based at Victorville Airfield as a practice bombing area. In May 1948, accountability for Victorville PBR No. 19 was transferred to the War Assets Administration. In May 1949, 320 acres of Victorville PBR No. 19 were transferred back to the U.S. Department of the Interior through PLO 581. Currently, 320 acres of the site are controlled by the U.S. Department of the Interior, Bureau of Land Management and the other 320 acres are owned by private land owners. The site is undeveloped desert land. The only DOD improvements still on the site are the weathered remains of the asphalt bombing target. There is no visible evidence of unsafe debris, hazardous or toxic waste, or unexploded ordnance resulting from DOD use of the site. However, there are the fragments, approximately 2-7 inches in diameter, from exploded ordnance dropped on the bombing target scattered throughout the site. The fragments are spaced approximately 15-20 feet apart within the 300 foot bombing target and 75-100 feet throughout the remainder of the site. San Bernardino County Environmental Health and Fire Departments, the California Regional Water Quality Control Board No. 7, and the George Air Force Base EOD Office records do not indicate any hazards associated with the site.

SITE VISIT: Dennis Parker and Paul Robinson, The Earth Technology Corporation visited the site on 21 November, 1988.

CATEGORY OF HAZARD: During the site visit, no visible evidence of hazardous or toxic waste, unexploded ordnance, or unsafe building debris was observed at the site. However, there are fragments of exploded ordnance dropped on the bombing target.

PROJECT DESCRIPTION: None

AVAILABLE STUDIES AND REPORTS: A real estate file is maintained by the Real Estate Division, Los Angeles District, Army Corps of Engineers. The real estate file contains partial acquisition and disposal records for the site. The real estate file also contains a document declaring the bombing target to be free and clear of explosives and explosive objects reasonably possible to detect by visual inspection.

POC/DISTRICT: Debra Castens, (213) 894-2865, Los Angeles District, Corps of Engineers.

PROJECT SUMMARY SHEET
FOR
DERP-FJDS OE PROJECT NO. J09CA068500
VICTORVILLE PRECISION BOMB RANGE NO. 19
SAN BERNARDINO COUNTY, CALIFORNIA
SITE NO. J09CA068500

PROJECT DESCRIPTION: The Victorville Precision Bombing Range (PBR) No. 19 was used by the U.S. Army Air Corps as a practice bombing target for aircraft from the Victorville Army Air Field (now George AFB).

PROJECT ELIGIBILITY: The property has formerly been used by the U.S. Army Air Corps. No military improvements are known to have occurred. The site is nearly flat with about 24 feet of relief and is covered with light brush, and grass. The site is remote, undeveloped desert, covered with brush and visited by off-road vehicles.

POLICY CONSIDERATIONS: N/A

PROPOSED PROJECT: Recommend the Corp's Mandatory Center of Expertise (MCX) for OEW at the Huntsville Division make a determination if further action is appropriate.

RAC: Attached

DISTRICT POC: Request CEHNC inform Ms. Debra Castens at (213) 894-2865 when a determination is made regarding project status.

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX F

LETTERS/MEMORANDUMS/MISCELLANEOUS ITEMS

APPENDIX F

LETTERS/MEMORANDUMS/MISCELLANEOUS ITEMS

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- F-2 Historical Record of Victorville Army Air Field, Victorville, California from 8 December 1941 to 1 January 1943, January 1943 (B-13)
- F-3 Memorandum, United States Engineer Office to VAAF, 30 April 1942 (B-14)
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- F-5 Historical Record of Victorville Army Air Field, Victorville, California from 1 January 1943 to 1 March 1944, March 1944 (B-16)
- F-6 Historical Record of Victorville Army Air Field, Victorville, California from 1 November to 31 December 1944, January 1945 (B-17)
- F-7 Army Air Forces Installations Directory, 1 September 1945 (B-18)
- F-8 Memorandum, Army Air Forces Western Flying Command to AAF Training Command, 6 October 1946 (B-19)
- F-9 Memorandum, San Bernardino Air Technical Service Command to Air Technical Service Command, 7 December 1945 (B-20)
- F-10 Memorandum, Headquarters, Army Air Forces to Chief of Engineers, 20 March 1946 (B-21)
- F-11 Memorandum, Headquarters of the Army Air Forces to Division Engineer, South Pacific Division, 15 April 1946 (B-22)
- F-12 Memorandum, Headquarters, Army Air Forces to San Bernardino Army Air Field, 10 October 1946 (B-23)
- F-13 Memorandum, South Pacific Division Corps of Engineers to Chief of Engineers, 31 January 1947 (B-24)
- F-14 Memorandum, Real Estate Division, South Pacific Division, Corps of Engineers to Division Engineer, South Pacific Division, 18 February 1947 (B-25)

- F-15 Memorandum, 9800 TSU Detachment No. 14 to South Pacific Division, Corps of Engineers, 4 February 1948 (B-26)
- F-16 Certificate of Clearance, 22 March 1948 (B-27)
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- F-18 Letter, Office of Real Property Disposal to BLM, 19 May 1948 (B-29)
- F-19 Memorandum, Office of Real Property Disposal to Property Management Division, 21 May 1948 (B-30)
- F-20 Brief History of George Air Force Base 1941-1950, USAF Historical Division, April 1956 (B-31)
- F-21 Letter, California Archaeological Inventory to SIOAC-ESL, 11 November 1997 (B-32)
- F-22 Letter, U.S. Fish and Wildlife Service to SIOAC-ESL, 19 December 1997 (B-33)
- F-23 List of endangered/threatened species for San Bernardino County, undated (B-34)

HEADQUARTERS
AIR CORPS ADVANCED FLYING SCHOOL
Victorville, California GFH:KSW:gr

February 13, 1942

SUBJECT: Information Pertaining to Bombing Ranges, ACAFS, Army Air Base, Victorville, California.

TO: Commanding General, WCACTC, Moffett Field, California.

1. Reference WC684, letter dated February 9, 1942, subject, Request for Information Pertaining to Bombing and Gunnery Ranges, West Coast Air Corps Training Center, and letter, Office Chief of the Air Corps, dated January 31, 1942, same subject, paragraph 1, a, of the latter, there are no bombing ranges in operation at this station.
2. Reference paragraph 1, b, no bombing target sites have been acquired.
3. Reference paragraph 1, c, all bombing target sites are in the process of being acquired. A plat of each site is inclosed.
 - a. The range will be known as the Victorville Bombing Range.
 - b. Its location and approximate size are shown on the accompanying map. It is situated east of Victorville, California, and is comprised of a strip approximately twenty (20) miles wide and sixty-five (65) miles long.
 - c. The targets will be used for training aerial Bombardiers using one hundred pound (100 lb.), sand loaded, practice bombs.
 - d. There are no existing facilities.
 - e. Sites are being acquired for eighteen (18) targets to be located as shown on the plats. Plat number sixteen (16) will not be used. The targets will be of the type used for solid ground with wooden pyramids for centers. It is believed that both the photographic and triangulation methods of spotting will be used.
 - f. Approximately ten (10) of the targets will be lighted for night bombing.
 - g. The range will be used by the ACAFS, Victorville, California.

Copy

February 13, 1942

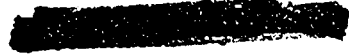
4. Reference paragraph 1, d, the flying field at the Victorville Military Airport will be used as a base for all bombing operations on the range. Its location is shown on the accompanying map.)

5. No additional Ordnance storage facilities will be required for range operation.

/s/ Donald B. Phillips
DONALD B. PHILLIPS
Lieut. Col., Air Corps
Commanding

3 Incls.
19-Plats
1-Map
1-List of target sites

Copy

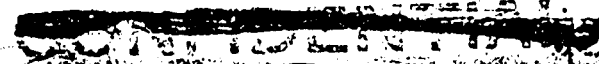
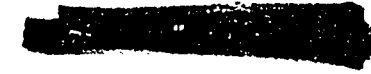


10/4/43
10/11/43
10/11/43

**HISTORICAL RECORD
OF
VICTORVILLE ARMY AIR FIELD
VICTORVILLE, CALIFORNIA
FROM
8 DECEMBER 1941 TO 1 JANUARY 1943**

CLASSIFICATION CHANGED
By: [Redacted]
Date: 10/11/43
By: WILLIAM G. WORKMAN
Lt. Col., U. S. C.

DECLASSIFIED
EO 11652



0004

CONFIDENTIAL

Contract No. W-509-Eng-2051, Auxiliary Fields No. 3 & 4. ¹⁸

1. Contractor - Basich Brothers, Torrance, California.
2. Construction of 8 runways, four to each field, drainage facilities, fencing and access roads. Aux. #3 located approximately 11 miles East VAAF; Aux. #4 located approximately 15 miles East VAAF.
3. Date of commencement - 7 Feb 1942
Date of completion - 14 Jul 1942
Date of acceptance - 15 Aug 1942
4. Total extensions of 112 days due to unsuitable weather and non-delivery of essential materials.
5. Total cost - \$385,040.00.

Contract No. W-509-Eng-2196, Bombing Targets (18). ¹⁹

1. Contractor - George Herz Co., San Bernardino, California.
2. Targets within radius of 5 to 75 miles from VAAF. Eighteen targets constructed--cleared and grubbed approximately 26.4 acres at each site. Shacks (pyramidal). 24 1/2 miles of access road to connect various targets to existing roads. Fencing.
3. Date of commencement - 11 Mar 1942
Date of completion - 1 May 1942
Date of acceptance - 1 May 1942
4. Total Cost - \$73,171.21.

18. Completion Report, Contract No. W-509-Eng-2051. (Contract No. 2051, VAAF Post Engineer Files).
19. Completion Report, Contract No. W-509-Eng-2196. (Contract No. 2196, VAAF Post Engineer Files)

CONFIDENTIAL

0013

CONFIDENTIAL

Some trouble had been experienced in having bombing targets sufficiently completed for the first class of bombardiers, even though WCACTC Headquarters had initiated action for their acquisition in December of 1941. Quoted herewith is a portion of the request:

"5. Eighteen bombing range sites should be selected for immediate use. Six additional sites should be selected for subsequent acquisition, to bring the total number to twenty-four (24) for each station. Bombing range sites will be located on Federal lands wherever possible in order to expedite acquisition. Eighteen bombing range sites for immediate use need only be selected at Albuquerque, Roswell, Hialeah, and Victorville ..."²⁰

Information contained in a letter report of the Commanding Officer to Headquarters, WCACTC on 13 February 1942 indicated that acquisition and construction was still being delayed on the targets:

"1. ... there are no bombing ranges in operation at this station.

"2. ... no bombing target sites have been acquired.

"3. ... all bombing target sites are in the process of being acquired

"a. The range will be known as the Victorville Bombing

20. Ltr, Hq, WCACTC, Moffett Field, Calif., 14 Dec 1941, (WC 600 Aux Fld) subject: Auxiliary Landing Fields and Bombing Range Sites. TO: U. S. District Engineers, Sacramento, Los Angeles, and Caddoa. (copy, w/incl) (586 Aviation Fields, etc. - TAAF Hq Files)

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

Range.

"b. Its location and approximate size are shown on the accompanying map. It is situated east of Victorville, California, and is comprised of a strip approximately twenty (20) miles wide and sixty-five (65) miles long."²¹

Contract No. W-509-Eng-2233, Railroad Spur.²²

1. Contractor - Owls Truck & Materials Co., Compton, California.
2. 6.55 miles of track and all appurtenances.
3. Date of commencement - 7 April 1942
Date of completion - 25 March 1943
Date of acceptance - Not yet accepted.
4. Delays totalling 293 days granted due to delays in procuring government allocated materials.
5. Original contract - \$157 993.00.

Action to provide Victorville with a needed spur railroad line was begun on 21 May 1941, by the U. S. Engineer Office at Los Angeles. Several surveys were made as to the amount of freight which would be hauled and the costs of construction against the cost of pipe lines and loading sidings before the project was finally disapproved by 10th Indorsement on the 24th of October.²³

- 21 Ltr, Hq ACAFS, Victorville, Calif., 13 Feb 1942, Subject: Information Pertaining to Bombing Ranges; ACAFS, Army Air Base, Victorville, California. TO: CG, WCACTC, Moffett Field, Calif. (copy) (684 Target Ranges - VAAF Hq Files)
- 22 Completion Report, Contract No. W-509-Eng-2233.. (Contract No. 2233, VAAF Post Engineer Files)
- 23 Ltr, U.S. Engineer Office, Los Angeles, Calif., 21 May 1941, subject: Preliminary Plot Plan, Victorville Site. TO: CG, WCACTC, Moffett Field, Calif. (11 Inds.) (686 Aviation Fields, VAAF Hq Files)

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

0020

CONFIDENTIALBombing Progress of Students

Originally the pilot officers, who were in command of training squadrons, gave the flight instructors the responsibility for supervising the bombardier instructors in their work with bombardier students, although after the appointment of a Chief Bombardier Instructor, he assumed this supervising function. Each instructor taught his students during the three weeks on the trainer and continued with them through the solo phase on to graduation. The classes were so scheduled that each instructor would have four or more students of one class on the trainer and four or more students of a more advanced class in flight training. When students gave evidence of failing to make satisfactory progress they were given check rides by the Flight Instructors. Upon failure to pass these check rides, they were recommended to meet the Faculty Board for elimination.¹⁴³

The bombing training for Class 42-7 was conducted in accordance with TM 1-250.¹⁴⁴ Each student was to be given ten practice and 200 record bombs. The average number of record bombs dropped per student during the course was one 105. This was due to shortages in equipment and personnel. These bombs were dropped at altitudes of 1,000, 4,000, 14,000 and 19,000 feet. The average circular error for the class was 265.63.

No bombs were scored by photographs. Arbitrary conversion factors were

143. Reminiscence, Capt. L. C. Ahndt, Assistant Air Inspector, WAFB, Victorville, California, 5 November 1963.

144. War Department Technical Manual, Precision Bombing Practice, 7 Mar 1944.

CONFIDENTIAL

0104

used because of the extreme turbulence during the flying phase of training and limited instruction received by this class. Students were graduated in this class whose circular errors were above the maximum allowed (275 feet) but were otherwise considered good bombardiers. ¹⁴⁵

A comparison of the bombing progress of classes graduating during 1942 is presented in Table IX. It will be noted that it was not until Class 42-10 that the average number of releases approached anything like the number of prescribed releases. From 42-10 on through 42-17, each class averaged the prescribed number of record releases. The circular errors reported in column 6 for Classes 42-7 and 42-8 cannot be compared fairly with later classes, since arbitrary conversion factors were used to compensate for turbulence and other irregular conditions which occurred in the training of these two classes. ¹⁴⁶

In spite of this compensation a larger proportion of these two classes were above the curve than was true in later classes.

None of the bombs released by 42-7 was scored photographically. ¹⁴⁷

Only 100 percent of those dropped by 42-8 were scored photographically. ¹⁴⁸

- 145. Letter, Statistical Section, Department of Bombardier Training, 14 Aug 1942, subject: Class Summary, WC 42-7. TO: Air Force Board, Eglin Field, Wallops, Florida.
- 146. Letter, Statistical Section, Department of Bombardier Training, 16 Aug 1942, subject: Class Summary WC 42-7. TO: Air Force Board, Eglin Field, Wallops, Fla.
- Letter, Statistical Section, Department of Bombardier Training, 14 Aug 1942, subject: Report of Bombing, Class WC 42-8. TO: Air Force Board, Eglin Field, Wallops, Fla.
- 147. Letter, Statistical Section, Department of Bombardier Training, 13 Aug 1942, subject: Class Summary WC 42-7. TO: Air Force Board, Eglin Field, Wallops, Fla.
- 148. Letter, Statistical Section, Department of Bombardier Training, 14 Aug 1942, subject: Report of Bombing Class WC 42-8. TO: Air Force Board, Eglin Field, Wallops, Fla.

0105

This proportion increased with each class up to 42-16, in which 28 percent of the releases were photographed.¹⁴⁹ This low proportion of photographic records was caused by shortage of suitable cameras and lack of night lighting equipment.

The proportion of bomb releases with turbulence rough varied from class to class. The highest reported proportion, 56 percent, occurred during the training of classes 42-7 and 42-12. The lowest reported proportion, 13 percent, occurred during the bombing training of 42-15. The average proportion of releases reported with turbulence rough for all classes graduated during 1942 was 25 percent.¹⁵⁰

The comparison of causes for cancellations of missions, reported in Table X, is not complete since such comparative data are not available for the first four classes (42-7 through 42-10). It will be noted in Table X that personnel, mechanical failure of airplanes and weather were causes of failure. The largest proportion, 66.3 percent, of failures to release the scheduled number of bombs. Most personnel failures were caused by absence of pilot because of illness, other duties (officer of the day, officer of the guard, and airplane officer) and reporting late for duty. "Other reasons" as reported in column A, Table X, included such causes as lack of time, lack of targets

149. Letter, Statistical Section, Department of Bombardier Training, 23 Nov 1942, subject: Report of Bombing Class WC 42-12, 33d AAF Flying Training Command, Bombardier Section, Texas Pacific Base, Fort Worth, Tex.
150. Reports of Bombing Classes WC 42-7 to 42-17, Statistical Section, Department of Bombardier Training, VAFB, Victorville, California.

Address Reply To
"The District Engineer,
U. S. Engineer Office,
751 South Figueroa Street,
Los Angeles, Calif."

WAR DEPARTMENT

UNITED STATES ENGINEER OFFICE
751 SOUTH FIGUEROA STREET
LOS ANGELES, CALIF.

0-3

April 30, 1942.

SUBJECT: Victorville Army Flying School, Victorville, California -
Contract W-509-Eng.-2196 - Bombing Targets - Notice of
Completion and Release.

TO
The Commanding Officer,
Victorville Army Flying School,
Victorville, California.

1. Confirming letter, dated April 15, 1942, from the Area Engineer, you are informed that Bombing Targets Numbered 15, 17, 18 and 19, under the above-numbered contract, have been completed and are hereby released to you for use and maintenance.

2. It is requested, that formal acceptance of the above-mentioned Bombing Targets be submitted to this office in writing.

Edwin C. Kelton,
Colonel, Corps of Engineers,
District Engineer.

0-5

1st Ind.

Headquarters, Victorville Army Flying School, Victorville, California,
13 May 1942. To: The District Engineer, U. S. Engineer Office, 751
South Figueroa Street, Los Angeles, California.

Hereby accepting Bombing Targets 15, 17, 18 and 19,
for this Station.

For the Commanding Officer:

THOMAS J. GENT, JR.
Lt. Col., Air Corps
Executive

ARR

UNCLASSIFIED
AUTHORITY: NDY 30061
By K.C. NARA Date 7/8/97

9

RANGE DATA

1. Name of field: Victorville Army Air Field
2. Type of training from this field: Bombardier Training (student)
3. Types of planes using ranges:
 - a. Precision Bombing Ranges AT-11's
 - b. Air-to-Ground Ranges none
 - c. Air-to-Air Ranges none
4. Ranges available to this field:

Latitude & Longitude	Approx. Area	Miles from Field	Average Daily Hours of Use	
			Daylight	Dark

a. Precision Bombing:

1. See attached list.
- 2.
- 3.
- 4.

b. Air-to-Ground:

1. None
- 2.
- 3.
- 4.

c. Air-to-air:

1. None
- 2.
- 3.
- 4.

5. Can any of these ranges be shared by another command? No If so, indicate on separate sheet which ones and to what extent.

6. Can any ranges be abandoned? No If so, indicate whether immediately or at some definite time in the future.

Incl. 21

REPROUCED BY LTC
22 Jul 1943

*KC18
P 292
#1641
25-72 12-1-43
12 copies*

DECLASSIFIED
 Authority: ND730061
 By K.C. NARA Date 7/8/97

4, a. Precision Bombing:

<u>Latitude & Longitude</u>	<u>Approx. Area</u>	<u>Miles from Field</u>	<u>Average Daily Hours of Use</u>	
			<u>Daylight</u>	<u>Dark</u>
34° 32' N 117° 10' W	1 mile square	13	10	8
34° 34' N 117° 05' W	1 mile square	16	10	8
34° 28' N 117° 08' W	1 mile square	14	10	8
34° 39' N 117° ' W	1 mile square	22	10	8
34° 30' N 116° 58' W	1 mile square	23	10	8
34° 33' N 116° 52' W	1 mile square	28	10	8
34° 25' N 116° 52' W	1 mile square	30	10	8
34° 33 1/2' N 116° 45' W	1 mile square	35	10	8
34° 27' N 116° 43' W	1 mile square	37	10	8
34° 34' N 116° 38' W	1 mile square	42	10	8
34° 27 1/2' N 116° 35' W	1 mile square	46	10	8
34° 23' N 116° 36' W	1 mile square	49	10	8
34° 34 1/2' N 116° 30' W	1 mile square	50	10	8
34° 24' N 116° 30' W	1 mile square	54	10	8
34° 27 1/2' N 116° 30' W	1 mile square	53	10	8
34° 24' N 116° 22' W	1 mile square	63	10	--

DECLASSIFIED
 Authority: ND 730061
 By: K.C. NARA Date: 7/8/97

<u>Latitude & Longitude</u>	<u>Approx. Area</u>	<u>Miles from Field</u>	<u>Average Daily Hours of Use</u>	
			<u>Daylight</u>	<u>Dark</u>
34° 20' N 116° 18' W	1 mile square	69	10	--
34° 16' N 116° 20' W	1 mile square	71	10	--
34° 18' N 116° 25' W	1 mile square	65	10	--
34° 59' N 117° 13' W	1 mile square	28	10	8
34° 59' N 117° 05' W	1 mile square	34	10	8
35° 04' N 117° 09' W	1 mile square	36	10	8
34° 35' N 116° 27' W	6 miles square	52	10	8
34° 25' N 116° 30' W	3 1/2 mi. sq.	54	10	8
34° 27' N 116° 35' W	3 miles square	46	10	8
34° 27' N 116° 43' W	3 miles square	38	10	8

Practice bombing targets - 22
 Demolition bombing targets - 4

HISTORICAL RECORD
OF
VICTORVILLE ARMY AIR FIELD
VICTORVILLE, CALIFORNIA

FROM

1 January 1943 to 1 March 1944

00179294

ENC

DECLASSIFIED
EO 11652

1324-9

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

Electric Light Plants; one (1) General Electric Light Plant; one (1) Radio Control Truck; two (2) Tow Target Trucks; and four (4) Moving Targets, although all of the night lighting equipment had not been installed.²³

During the year a number of targets were equipped with lights for night bombing. Series A, consisting of five (5) targets was equipped with Kohler Light Plants and made ready for night bombing the early part of February. Series B, consisting of three (3) targets was equipped during the latter part of February, and Series C, consisting of three (3) targets was equipped with lights during the early part of March. Series D, a four (4) target day series, was constructed with combat type targets and put into operation 10 March 1943. Series N, a three (3) target series, was constructed with record and combat type day and night targets. A part of these targets were available for use in July and the remainder were not available for use until September.²⁴ (See Appendices VIII, 21, 22, 23, 24, 25, 26, & 27).

One of the big problems encountered in maintaining the targets has been the distance which must be traveled in getting around each series. The round trip distance to Series A is one hundred twenty-five (125) miles; Series B, one hundred forty (140) miles; and Series C, one hundred fifty-three (153) miles. Much of the maintenance crew's time each day must be spent in travel.²⁵

23. Reminiscence, Capt. Bernard L. Magnusson, Range Officer, VAAF, 28 Jan 1944.
24. Reminiscence, Sgt. O. H. Carrier, Bombardier Range Dept., VAAF, 28 Jan 1944.
25. Reminiscence, Sgt. O. H. Carrier, Bombardier Range Dept., VAAF, 28 Jan 1944.

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

VICTORVILLE ARMY AIR FIELD
AIRCRAFT ASSIGNED DURING 1943

<u>Date</u>	<u>AT-6A</u>	<u>AT-11</u>	<u>CG-4A</u>	<u>L-3C</u>	<u>L-4A</u>	<u>BT-15</u>	<u>L-1C</u>	<u>RA-25A</u>	<u>28</u>
31 Jan 1943		94	39						<u>29</u>
28 Feb 1943		93	55	1	11				<u>30</u>
31 Mar 1943		88	52			2			<u>31</u>
30 Apr 1943		86				3			<u>32</u>
31 May 1943		76				3			<u>33</u>
30 Jun 1943		75				7			<u>34</u>
31 Jul 1943		79				7	1		<u>35</u>
31 Aug 1943		77				7	1		<u>36</u>
30 Sep 1943		94				7	1		<u>37</u>
31 Oct 1943	1	102				8	1		<u>38</u>
30 Nov 1943		107				8	1		<u>39</u>
31 Dec 1943		100				8	1		<u>40</u>
31 Jan 1944		111				8	1	1	

28. Analysis of Flying Hours of Assigned Airplanes for the month ending 31 Jan 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
29. Analysis of Flying Hours of Assigned Airplanes for the month ending 28 Feb 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
30. Analysis of Flying Hours of Assigned Airplanes for the month ending 31 Mar 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
31. Analysis of Flying Hours of Assigned Airplanes for the month ending 30 Apr 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
32. Analysis of Flying Hours of Assigned Airplanes for the month ending 31 May 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
33. Report of Flying Hours of all Assigned Airplanes for the month ending 30 Jun 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).
34. Report of Flying Hours of all Assigned Airplanes for the month ending 31 Jul 1943, Victorville, Calif., (452.1 Airplanes - VAAF Hq Files).

RESTRICTED

BOMBING TARGETS EAST RANGE VICTORVILLE ARMY AIR FIELD

RESTRICTED

VICTORVILLE
ARMY AIR
FIELD

FIELD ALTITUDE

TARGET ALL.	2861'
2	2940'
3	3210
4	3080
5	3265
6	2845
7	3040
8	3155
9	3305
10	2895
11	3410
12	2745
13	2885
14	2885
15	2600
16	2935
17	2355
18	2480
19	3060
20	3180
Y	2570
Z	2700

OFFICE OF DIRECTOR
OF FLIGHT TRAINING

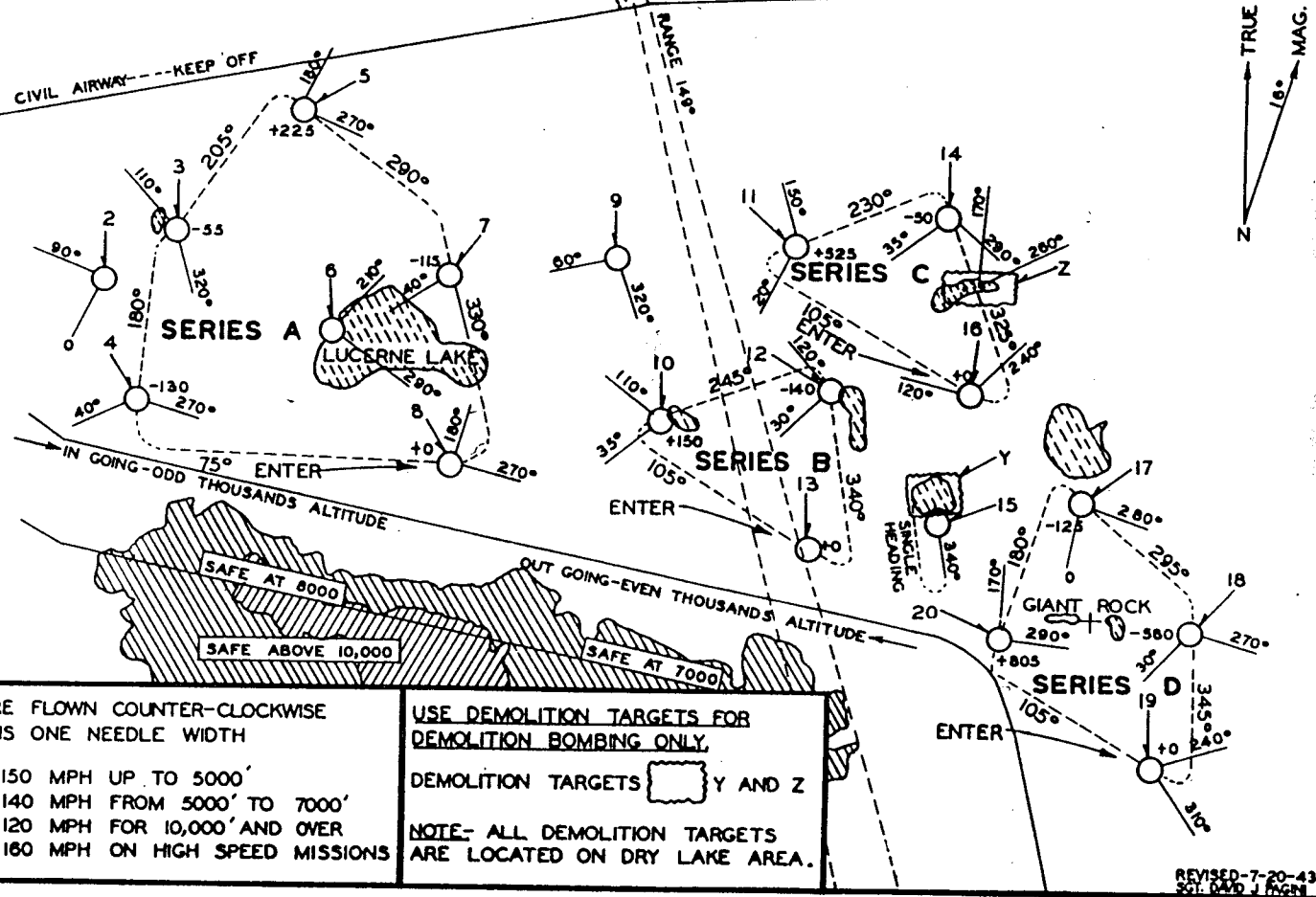
SERIES ARE FLOWN COUNTER-CLOCKWISE
ALL TURNS ONE NEEDLE WIDTH

AIRSPED 150 MPH UP TO 5000'
AIRSPED 140 MPH FROM 5000' TO 7000'
AIRSPED 120 MPH FOR 10,000' AND OVER
AIRSPED 160 MPH ON HIGH SPEED MISSIONS

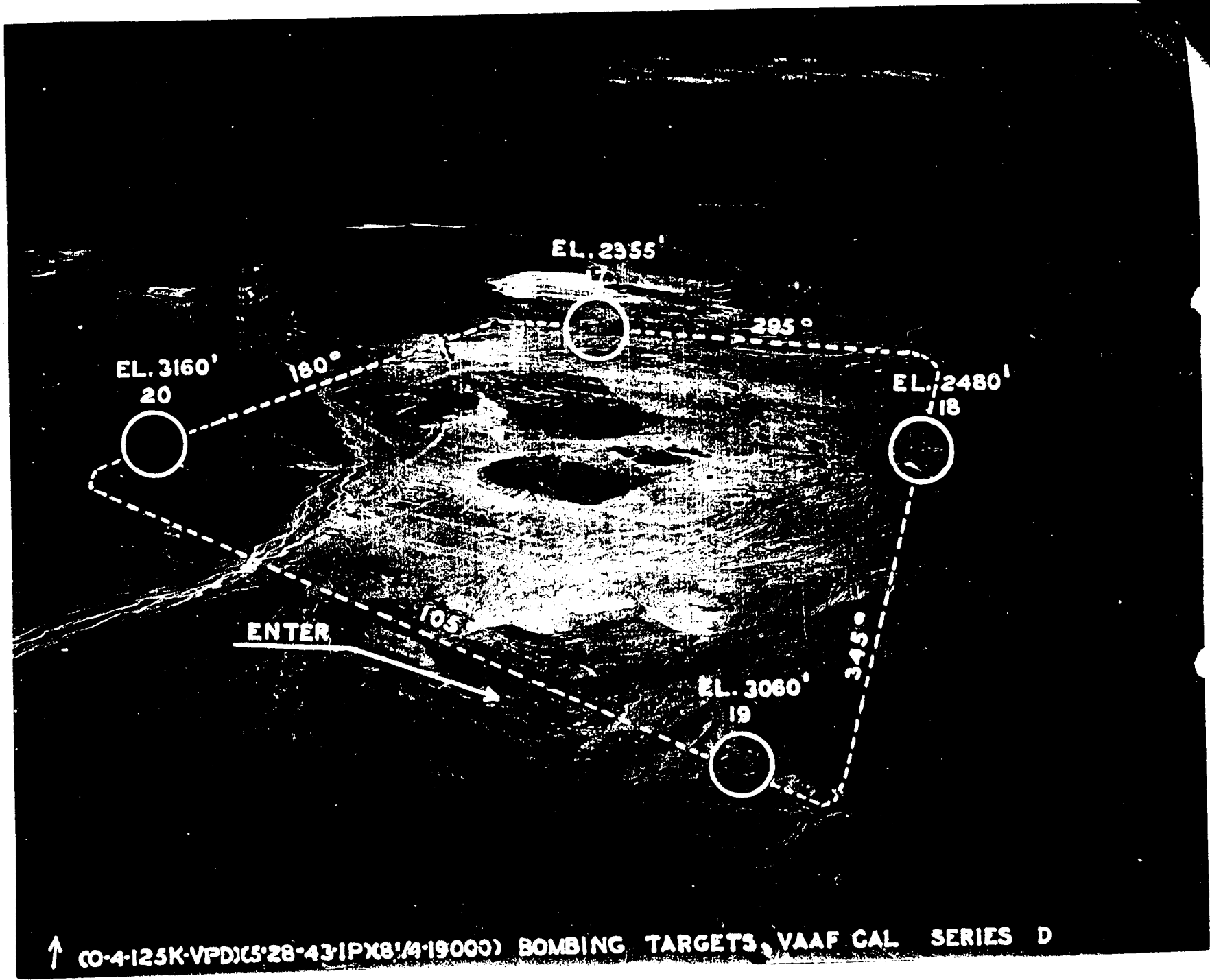
USE DEMOLITION TARGETS FOR
DEMOLITION BOMBING ONLY.

DEMOLITION TARGETS Y AND Z

NOTE: ALL DEMOLITION TARGETS
ARE LOCATED ON DRY LAKE AREA.



REVISED-7-20-43
SGT. DAVID J. FAGIN



↑ (O-4-125K-VPD)(S-28-43-1PX8'4-19000) BOMBING TARGETS, VAAF CAL SERIES D

F-5



HISTORY

OF

VICTORVILLE ARMY AIR FIELD

VICTORVILLE, CALIFORNIA

FROM

1 NOVEMBER to 31 DECEMBER 1944

P.R.C.

00179308

DECLASSIFIED
EO 11652



2093-4

S E C R E T

Air Corps Supply

1. Received 892,000 pounds of supplies.
2. Shipped 557,531 pounds of supplies.
3. Received and issued 1,890,123 gallons of gasoline.
4. Received and issued 24,174 gallons of oil.
5. Maintained approximately 15,000 stock record cards.
6. Processed 472 debit memorandum receipts.
7. Processed 405 credit memorandum receipts.
8. Initiated 40 purchase requests.
9. Submitted 1162 requisitions.
10. Processed 4,925 vouchers to the S/R account.
11. Average number of airplanes grounded daily for parts -
November, 11; December, 16.

53

General Supply

1. Received 122,733 pounds of freight.
2. Shipped 20,048 pounds of freight.
3. Processed 929 Property Issue Slips.
4. Processed 136 property turn-in slips.
5. Issued 227 debit Memorandum Receipts.
6. Issued 188 credit Memorandum Receipts.
7. Submitted 96 requisitions for supplies.
8. Initiated 26 Purchase Requests, amounting to \$18,888.08. 54

Ordnance Supply

1. Bombs practice 100 #M38a2: Received 18,000.
2. Bombs chemical 100 #M47a2; Received 10,000.
3. Bombs concrete 100 #M85; Received 18,879. 55
4. Duds reported: .02% . 56
5. Expended 1500 Bombs practice 100 #M38A2.
6. Expended 8500 Bombs chemical 100 #M47A2. 57
7. Small Arms Ammunitions: Received 58 Expended 59

Cartridge, ball, cal.22 LR	0	13,500
Cartridge, ball, cal.45 M1911	3,500	29,710
Cartridge, ball, cal. 30 ML	2,581	4,800

53. Stock Records, Vouchers, Requisitions and Purchase Request Files, Air Corps Supply, VAAF, Victorville, Calif., 1 Nov thru 31 Dec 1944.
54. Vouchers to General Supply Stock Record Account, Requisition File, and Purchase Request File, VAAF, Victorville, Calif., 1 Nov to 31 Dec 1944.
55. Ordnance Debit Voucher File, VAAF, Victorville, Calif., 1 Nov to 31 Dec 1944.
56. Squadron Operations Forms, VAAF, Victorville, Calif., 1 Nov to 31 Dec 44.
57. Certificate of Expenditure, Bombs, Ordnance Office Credit Voucher File, VAAF, Victorville, Calif., Nov and Dec 1944.
58. Ordnance Debit Voucher File, VAAF, Victorville, Calif., Nov and Dec, 1944.
59. Property Issue Slip, Certificate of Expenditure, Ammunition, VAAF, Victorville, Calif., Nov and Dec 1944.

-126-

S E C R E T

ARMY AIR FORCES

INSTALLATIONS DIRECTORY

HEADQUARTERS, ARMY AIR FORCES, WASHINGTON D.C.

**CONTINENTAL
UNITED STATES**

**DATE OF RELEASE
1 SEPTEMBER 1945
RESTRICTED**

RESTRICTED

SECTION IV A A F BOMBING AND GUNNERY RANGES



NAME AND LOCATION OF PARENT FIELD AND TYPE OF RANGE	DIST & DIRECTION FROM PARENT FIELD	REAL ESTATE CODE	AREA (ACRES)	JURISDICTION		TARGETS							RUNWAYS		REMARKS	
				COMMAND	CONTROL (JOINT USE)	DAT PRECISION	HIGHT PRECISION	TARGET GROUP	SKIP	DEMOLITION	OTHER	GROUPS OF SPOTTING TOWERS	ELEVATION	NUMBER		LONGEST ADD-00
VICTORVILLE A A FLD (CONT)				VFTC												
VICTORVILLE #7, CALIF FBR	28 ESE	1,100	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	3040			
VICTORVILLE #10, CALIF FBR	39 ESE	10	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2835			
VICTORVILLE #11, CALIF FBR	42 ESE	2,10	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	3410			
VICTORVILLE #12, CALIF FBR	46 ESE	10	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2745			
VICTORVILLE #13, CALIF FBR	46 SE	10	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2885			
VICTORVILLE #14, CALIF FBR	50 E	10	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2885			
VICTORVILLE #16, CALIF FBR	50 ESE	16	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2935			
VICTORVILLE #17, CALIF FBR	58 ESE	10	640	VFTC	VICTORVILLE A A FLD	1		1				NO	2355			
VICTORVILLE #18, CALIF FBR	64 ESE	10	640	VFTC	VICTORVILLE A A FLD	1		1				NO	2480			
VICTORVILLE #19, CALIF FBR	64 SE	2,10	640	VFTC	VICTORVILLE A A FLD	1		1				NO	3060			
VICTORVILLE #20, CALIF FBR	57 SE	16	640	VFTC	VICTORVILLE A A FLD	1		1				NO	3160			
VICTORVILLE E-3, CALIF FBR	28 ESE	16	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2300			
VICTORVILLE E-1, CALIF FBR	32 SE	16	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2420			
VICTORVILLE E-2, CALIF FBR	34 ESE	16	640	VFTC	VICTORVILLE A A FLD	1	*	1				NO	2305			
W																
WALKER A A FLD, KANS				2AF												
WALKER #1, KANS FBR	42 W	4	2560	2AF	WALKER A A FLD	1	*					NO	2275			FORMERLY WALKER FBR #2
WALKER #2, KANS FBR	31 SW	4	2536	2AF	WALKER A A FLD	1	*					NO	2190			FORMERLY SMOKEY HILL FBR #7
WALKER #3, KANS FBR	48 SW	4	2560	2AF	WALKER A A FLD	1	*					NO	2850			FORMERLY SMOKEY HILL FBR #8
WALKER, KANS A-G GR	64 SW	10	11,920	2AF	WALKER A A FLD (FRATT A A FLD)						12	NO	2600			1 A-G COURSE
SNOOKY HILL, KANS A-A GR	76 W	10	21,832	2AF	WALKER A A FLD (SNOOKY HILL A A FLD) (GREAT REED A A FLD) (MCCOOK A A FLD)											8 NIGHT LIGHTING MARKERS
WALLA WALLA A A FLD, WASH				NAF												
BOARDMAN (GR) FBR	75 WSW	1,149,538	NAF	WALLA WALLA A A FLD	4		1					NO	600	1	62	INCLUDES ABLETTON RANGES
COED SPRINGS (GR) FBR	41 WSW	2,10	2621	NAF	WALLA WALLA A A FLD	1						NO	600			
MOSES LAKE, WASH FBR	75 SW	1.4	2560	NAF	WALLA WALLA A A FLD											SONIC TARGETS
RAEDER, WASH FBR	54 E	2	2560	NAF	WALLA WALLA A A FLD							YES	1575			RANGE NOT IN USE
DAVENPORT, WASH FBR	105 E		3840	NAF	WALLA WALLA A A FLD											RANGE NOT IN USE
WALLA WALLA, WASH A-G GR	70 SW		7680	NAF	WALLA WALLA A A FLD (Lower Field)											
Central Oregon (Ore) A-A GR				NAF	Walla Walla A A Fld											
WALTERBORO A A FLD, S C				LAF												
HEATHERSBOROUGH, S C FBR	8 SW	2	1988	LAF	WALTERBORO A A FLD	1										YES
BOTANY BAY, S C A-G GR	35 SE	2	328	LAF	WALTERBORO A A FLD											6 YES 0
WAYCROSS A A FLD, GA				NAF												
HOCKEYVILLE, GA B & GR	27 SSW	2,10	32270	NAF	WAYCROSS A A FLD	1		1		2		NO	124			1 SPOTTING RANGE 1 A-G RANGE

NOTES: FBR - PRECISION BOMBING RANGE A-G GR - AIR TO GROUND GUNNERY RANGE B & GR - BOMBING AND GUNNERY RANGE * - NIGHT LIGHTING FACILITIES ON DAY FIELDS

RESTRICTED

5-1079, 1-52

F-7

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

AIR MAIL HEADQUARTERS
 ARMY AIR FORCES WESTERN FLYING TRAINING COMMAND AGC 13H-LG-NMB
 1104 West Eighth Street, Santa Ana, California
 AG S/R 686.2 (Victoville) 6 Oct45

SUBJECT:

TO: COMMANDING GENERAL, AAF Training Command, Texas and Pacific Building,
 Fort Worth 2, Texas.

In compliance with Section IV, AAF Reg. 85-3, 12 May 45, The Bombing Target Sites attached to Victorville Army Air Field, Victorville, California, are declared to be of no further use to the needs of this Command. The following information is submitted in accordance with Section IV, Paragraph 11, AAF Reg. 85-3.

- a. Victorville AAF Bombing Target Sites
- b. See Schedule (Incl. #1) inclosed.
- c. See Schedule (Incl. #1) inclosed.
- d. Outline of targets was bladed on target site locations.
- e. Outline of targets in fair condition.
- f. Target Sites used for bombardier Training.
- g.
- h. None
- i. None, except those provided for in the leases, such as the 30-day notice to be submitted before termination and the restriction requiring use of the site by the Government for military purposes while under lease.
- j. Targets No. 18 and 19 were made available for use by the Fourth Air Force.
- k.

For the Commanding OFFICER:

FRED D. HALL,
 Maj, AC
 Acg Asst Adjutant General.

2 Incls
 Incl 1 - Schedule (trip)
 2 - Dwg V-4 (trip)

Incl 6

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

SCHEDULE OF VICTORVILLE AAF SINKING TARGET SITES

Target No.	Location Lat. Long.	Distance from Home Field	Ownership	Approx. Acres	Remarks
2	34° 32' 30" 117° 09'	12 mi. east	Public Domain	200	Sec 12, T5N, R2W, SBB&M
		"	Govt Owned	440	
3	34° 34' 30" 117° 05'	16 mi. east	Public Domain	80	Portion of Sec 27, 28, 23 & 34
		"	Govt Owned	560	T6N, R2W, SBB&M
4	34° 27' 30" 117° 07' 30"	16 mi. S.E.	Govt Owned	640	Portions of Sec 5, 6, 7 & 8
		"	"	"	T4N, R2W, SBB&M
5	34° 38' 30" 116° 59'	21 mi. E.	Public Owned	640	Sec 4, T6N, R1W, SBB&M
7	34° 33' 116° 52' 30"	28 mi. E.	Public Domain	240	Portions of Sec 3, 4, 9 & 10
		"	Govt Owned	400	T5N, R1E, SBB&M
10	34° 27' 30" 116° 42' 30"	38 mi. E.S.E.	Public Domain	640	Portions of Sec 1, 6, 7, & 12
		"	"	"	T4N, R2E, SBB&M
11	34° 34' 116° 37' 30"	42 mi. E.	Public Domain	320	E-1/2 Sec 35(
		"	(Lease Nol	320	W-1/2 Sec 36(T6N, R3E, SBB&M
			WO4-193-eng-5327		(\$9.60 per annum)
12	34° 28' 30" 116° 35'	45 mi. E.	Public Domain	640	N-1/2 Sec 5, T4N, R4E(
		"	"	"	S-1/2 Sec 32, T5N, R4E(SBB&M
13	34° 22' 30" 116° 36'	45 mi. E.S.E.	Public Domain	640	Sec 6, T6N, R4E, SBB&M
14	34° 35' 116° 30'	49 mi. E.	Public Domain	640	Sec 30, T6N, R5E, SBB&M
17	34° 24' 30" 116° 22' 30"	57 mi. E.S.E.	Public Domain	640	Sec 29, T4N, R6E, SBB&M
18	34° 19' 30" 116° 18'	61 mi. E.S.E.	Public Domain	640	Portion of Sec 25 & 25, T3N, R6E
		"	"	"	Portion of Sec 19 & 20, T3N, R7E
		"	"	"	all in SBB&M
19	34° 13' 30" 116° 20'	63 mi. E.S.E.	Public Domain	320	E-1/2 Sec 27(
		"	Govt Owned	320	W-1/2 Sec 26(T2N, R6E, SBB&M
N-1	34° 59' 117° 05'	32 mi. N.E.	Public Domain	640	Sec 4, T10N, R2W, SBB&M
2	35° 04' 117° 09'	35 mi (E.	Public Domain	640	Sec 11, T8N, R2W, SBB&M
	34° 58' 117° 13'	28 mi. N.E.	Public Domain	640	Sec 8, T8N, R2W, SBB&M

By K4 NARA Date 11/17



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HEADQUARTERS
SAN BERNARDINO AIR TECHNICAL SERVICE COMMAND

SBCON2A/CEB/ry

IN REPLY REFER TO

SAN BERNARDINO ARMY AIR FIELD, CALIFORNIA.

SBATSC 601.53

DEC 7 1945

SUBJECT: Declaration as Excess, Auxiliary Installations of Victorville
Army Air Field, Victorville, California

TO: Commanding General
Air Technical Service Command
Wright Field, Dayton, Ohio
ATTN: Air Installations Division, TSCON

1. In accordance with War Department Circulars No. 89, dated 20 March 1945, and No. 326, dated 25 October 1945, the auxiliary installations of Victorville Army Air Field, Victorville, California, consisting of a. Auxiliary Landing Fields, b. Bombing Targets, c. Demolition Targets, d. Mirage Lake Glider School, all as described below, are no longer required and are declared excess to the needs of this Command. It is requested that appropriate action be taken to dispose of the Government-owned facilities, to cancel all pertinent leases and transfers and to restore the original premises to the respective lessors or to the Public Domain.

a. Auxiliary Landing Fields: (Regional Map VAAF File No. 256, revised 8 March 1945, inclosure No. 1).

- (1) Field No. 1, located approximately 2 1/2 miles North of VAAF in T 10 N, R 5 W, SB B&M, comprising 640 acres Public Domain; Government-owned facilities include 4 field mix surfaced runways, 3 buildings and 4 miles of 4-strand barbed wire fence.
- (2) Field No. 2, located 15 miles North of VAAF in T 9 N, R 4 W, SB B&M, comprising 640 acres in fee; Government-owned facilities include 4 field mix surfaced runways, 3 buildings, skeet range, and 4 miles of 4-strand barbed wire fence.
- (3) Field No. 3, located 11 miles West of VAAF in T 6 N, R 7 W, SB B&M, comprising 640 acres in fee; Government-owned facilities include 4 field mix surfaced runways, 3 buildings and 4 miles of 4-strand barbed wire fence.

Classification cancelled by authority Acty. Asst. Chief of Staff,
G-6 WDGA, Memorandum WDECT 331 (3 Jan 44) dated 3 January

~~RESTRICTED~~

GRAYSON HEADLEY, II, COL, G-6
Legislative & Liaison Division, WDGA

RE 4754
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24 Jan 1946
19

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Basic: Ltr fr SBATSC to CG, ATSC, 601.53, Subj: "Declaration as Excess, Auxiliary Installations of Victorville Army Air Field, Victorville, California". (Cont'd)

- (4) Field No. 4, located 16 miles West of VAAF in T 6 N, R 8 W, SB B&M, comprising 640 acres leased land, (Lease No. W 868-Eng-2070, State of California, Lessor); Government-owned facilities, 4 field mix surfaced runways, 4 miles of 4-strand barbed wire fence and 2 small buildings installed by Marine Corps.

b. Bombing Targets: (Regional Map VAAF File No. 256, revised 8 March 1945, inclosure No. 1).

- (1) Target No. 1, located 8 miles East of VAAF in T 6 N, R 3 W, SB B&M, comprising 160 acres, Lease No. W 04-193-Eng-2623 (expired), Lessor, Carrie Kyles.
- (2) Target No. 2, located 12 miles East of VAAF, T 5 N, R 3 W, SB B&M, comprising 640 acres, 440 acres in fee and 200 acres Public Domain; Government-owned facilities include field mix surfacing, portable power shed, target frame and 1 mile of 2-strand barbed wire fence.
- (3) Target No. 3, located 16 miles East of VAAF in T 6 N, R 2 W, SB B&M, comprising 640 acres, 560 acres in fee and 80 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (4) Target No. 4, located 16 miles East of VAAF in T 4 N, R 2 W, SB B&M, comprising 640 acres in fee; Government-owned facilities are the same as Target No. 2.
- (5) Target No. 5, located 21 miles East of VAAF in T 6 N, R 1 W, SB B&M, comprising 691.96 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (6) Target No. 6, located 16 miles East of VAAF in T 5 N, R 1 W, SB B&M, comprising 640 acres, 240 acres in fee, 320 acres Public Domain, 80 acres surplus, Lease No. W 04-193-Eng-5550, Lessor, William Bruce Young.
- (7) Target No. 7, located 28 miles East of VAAF in T 5 N, R 1 E, SB B&M, comprising 640 acres, 400 acres in fee, 240 acres Public Domain; Government-owned facilities are the same as Target No. 2.

Classification cancelled by authority Acty. Asst. Chief of Staff,
G-3 WDGE, Memorandum WDCCT 331 (3 Jan 44) dated 3 January 1944

~~RESTRICTED~~

GRAYSON HEADLEY, Lt. Col., USA
Legislative & Liaison Division, WDCS

RE 4754

24 Jan 1945

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Basic: Ltr fr SBATSC to CG, ATSC, 601.53, Subj: "Declaration as Excess, Auxiliary Installations of Victorville Army Air Field, Victorville, California". (Cont'd)

- (8) Target No. 8, located 29 miles Southeast of VAAF in T 4 N, R 1 E, SB B&M, comprising 640 acres Public Domain; Government-owned facilities include 3 circular areas surfaced with field mix.
- (9) Target No. 9, located 34 miles East of VAAF in T 5 & 6 N, R 2 E, SB B&M, comprising 657.28 acres Public Domain.
- (10) Target No. 10, located 38 miles Southeast of VAAF in T 4 N, R 2 & 3 E, SB B&M, comprising 649.54 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (11) Target No. 11, located 42 miles East of VAAF in T 6 N, R 3 E, SB B&M, comprising 640 acres, 320 acres Public Domain and 320 acres leased--Lease No. W 04-193-Eng-5327, Lessor, State of California; Government-owned facilities are the same as Target No. 2.
- (12) Target No. 12, located 45 miles East of VAAF in T 4 & 5 N, R 4 E, SB B&M, comprising 617.12 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (13) Target No. 13, located 45 miles Southeast of VAAF in T 3 N, R 4 E, SB B&M, comprising 636.30 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (14) Target No. 14, located 49 miles East of VAAF in T 6 N, R 5 E, SB B&M, comprising 640.46 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (15) Target No. 15, located 51 miles Southeast of VAAF in T 4 N, R 5 E, SB B&M, comprising 640 acres Public Domain (surplus).
- (16) Target No. 16, located 50 miles East-Southeast of VAAF in T 4 & 5 N, R 5 E, SB B&M, comprising 640 acres Public Domain; Government-owned facilities same as Target No. 2.

Classification cancelled by authority Acty. Asst. Chief of Staff
CG WDCB. Memorandum WDCT 331 (3 Jan 44) dated 3 January 1944

~~RESTRICTED~~

RAYSON HEADLEY, Lt. Col., GSC
Legislative & Liaison Division, WDGS

~~RESTRICTED~~

Basic: Ltr fr SBATSC to CG, ATSC, 601.53, Subj: "Declaration as Excess, Auxiliary Installations of Victorville Army Air Field, Victorville, California". (Cont'd)

- (17) Target No. 17, located 57 miles Southeast of VAAF in T 4 N, R 6 E, SB B&M, comprising 640 acres Public Domain; Government-owned facilities same as Target No. 2.
- (18) Target No. 18, located 61 miles Southeast of VAAF in T 3 N, R 6 & 7 E, SB B&M, comprising 627.42 acres Public Domain; Government-owned facilities same as Target No. 2.
- (19) Target No. 19, located 55 miles Southeast of VAAF in T 2 N, R 6 E, SB B&M, comprising 640 acres, 320 acres in fee and 320 acres Public Domain; Government-owned facilities include field mix surfaced targets, a frame target and 1 mile of 2-strand barbed wire fence.
- (20) Target No. 20, located 55 miles Southeast of VAAF in T 3 N, R 5 E, SB B&M, comprising 640 acres Public Domain; Government-owned facilities same as Target No. 2.
- (21) Target N-1, located 28 miles North of VAAF in T 10 N, R 2 W, SB B&M, comprising 644.75 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (22) Target N-2, located 33 miles North of VAAF in T 11 N, R 3 W, SB B&M, comprising 640 acres Public Domain; Government-owned facilities are the same as Target No. 2.
- (23) Target N-3, located 26 miles North of VAAF in T 10 N, R 3 W, SB B&M, comprising 640 acres Public Domain; Government-owned facilities are the same as Target No. 2.

c. Demolition Targets: (Regional Map VAAF File No. 256, revised 8 March 1945, inclosure No. 1).

- (1) Target "Y", located 50 miles Southeast of VAAF in T 4 N, R 4 E and R 5 E, SB B&M, comprising 2240 acres Public Domain.

Classification cancelled by authority Acty. Asst. Chief of Staff,
G-3 WDCS, memorandum WDAG 331 (3 Jan 44) dated 7 January 1944

~~RESTRICTED~~

Garmon
THOMSON HEADLEY, Lt. Col., GSO
Legislative & Liaison Division, WDCS

Date 24 Jan 1945 **E-9**

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Basic: Ltr fr SBATSC to CG, ATSC, 601.53, Subj: "Declaration as Excess, Auxiliary Installations of Victorville Army Air Field, Victorville, California". (Cont'd)

- (2) Target "Y" (1), located 45 miles Southeast of VAAF in T 4 N, R 4 E, SB B&M, comprising 1280 acres.
- (3) Target "Z", located 50 miles East of VAAF in T 5 N, R 4 E, SB B&M, comprising 2,762.95 acres Public Domain and 1449.12 acres leased--Lease No. W 04-193-Eng-4536, Lessor, Southern Pacific Land Company.

d. Mirage Lake Glider School, (OCE Drawing No. 147-P, dated 27 September 1945, inclosure No. 2), located 10 to 13 miles West of VAAF in T 6 & 7 N, R 7 W, SB B&M, comprising 1,936.91 acres, 1,292.72 acres Public Domain and 644.19 acres leased. Tract Register with list of leases is shown on drawing. There is no Government construction.

2. The following pertinent information concerning said auxiliary installations of VAAF is submitted.

a. Location: The auxiliary installations are located in San Bernardino County, California, except Landing Field No. 4 which is located in Los Angeles County; all are within a 63 mile radius of VAAF which is located 6 miles Northwest of Victorville, California.

b. Description: All auxiliary facilities are described in the preceding paragraph 1.

c. Use: On inactive status.

d. Recommendations: It is recommended that both the land and facilities be declared surplus and that the appropriate Division Engineer be directed to take over necessary accountability and protection of the above installations if no other governmental agency has use for the property.

e. Degree of Readiness: Not applicable.

f. Use by Other Army or Federal Agencies: It is not known whether any other Army or Federal agencies have use for all or any portion of these auxiliary installations.

g. Date Available: Immediately.

h. Contractual Commitments: None known to this Headquarters except those provided for in the leases.

Classification cancelled by authority Acty. Asst. Chief of Staff,
CG WDCB, Memorandum WDCGT 231 (3 Jun 46) dated 2 January 1949

~~RESTRICTED~~

GRAYSON HEADLEY, Lt. Col., CGC
Legislative & Liaison Division, WDCB

24 Jan 1949

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Basic: Ltr fr SBATSC to CG, ATSC, 601.53, Subj: "Declaration as Excess, Auxiliary Installations of Victorville Army Air Field, Victorville, California". (Cont'd)

i. Auxiliary Facilities: As described in preceding paragraph 1.

j. Commitments to Other Army or Federal Agencies: Records of the Air Installations Office, SBATSC, disclose no commitments to other Army or Federal agencies.

k. Necessity for Service Detachment: Not applicable.

3. It is requested that this declaration of excess be processed as soon as practicable in order that appropriate directives may be published authorizing the Division Engineer to take over disposal of the property.

4. It is further requested that this Headquarters be advised of action taken on this declaration of excess.

James W. Spry
JAMES W. SPRY
Brigadier General, USA
Commanding

- 2 Incls.
- Incl 1 - Regional Map VAAF 256 (in dup).
- Incl 2 - OCE Dwg 147-P (in dup).

Classification cancelled by authority Acty. Asst. Chief of Staff,
G-3 WDCR, Memorandum WDCR 331 (3 Jun 44) dated 3 January 1946

Raymond Headley
RAYMOND HEADLEY, Lt. Col., USA
Legislative & Liaison Division, WDCR

Date 24 Jan 1946

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RE 4754

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ADDRESS REPLY TO
COMMANDING GENERAL ARMY AIR FORCES
WASHINGTON 25, D. C.

AFDIN-30/3

ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON



20 MAR 1946

SUBJECT: Withdrawal of Victorville Bombing Targets from Surplus.

TO: Chief of Engineers.

O'Neill
621900
SPELT

1. Reference is made to 2d Indorsement from this headquarters to the Commanding General, Army Service Forces, dated 15 January 1946, wherein certain auxiliary facilities of Victorville Army Air Field, Victorville, California, were declared excess to the Army Air Forces. The records of this headquarters indicate that the facilities reported therein were declared surplus by the War Department on 23 January 1946.

2. It has now been determined that Bombing Target Sites 2, 3, 4, 5, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19 and 20, reported as excess in the above referenced 2d Indorsement, will be required for use in connection with March Field, Riverside, California, and Castle Field, Merced, California, for the P-80 Jet Training Program. It is necessary to have an aerial gunnery range as near March Field as possible due to the short endurance of the P-80 aircraft. It is also desirable to have an aerial gunnery range near the home base since the P-80 is still in the development and test stage, and it is believed that the safety factor will be increased an infinite amount during firing tests. The P-80 uses far more fuel on this type of firing near the ground than at altitude, making it mandatory to establish the range within a short radius of March Field. The Victorville Range System will be used jointly by March Field and Castle Field, Merced, California.

3. It is therefore requested that the War Assets Corporation be requested to release these sites from the category of surplus for reassignment to the Army Air Forces.

FOR THE COMMANDING GENERAL:

Leo J. Erler

LEO J. ERLER, Col., A. C.
Deputy Chief, Air Installations Division
Assistant Chief of Air Staff-4

19 April
1081 SPELT

MAR 21 1946
F-10

HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

ADDRESS REPLY TO:
AAF LIAISON OFFICE
PACIFIC DIVISION, U. S. ENGINEERS
351 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA

15 April 1946.

MEMORANDUM TO: Division Engineer, South Pacific Division, 351 Cali-
fornia Street, SAN FRANCISCO, CALIFORNIA.

ATTN: Mr. Sullivan, Real Estate Section.

SUBJECT: Withdrawal of Victorville Bombing Targets From Surplus.

1. Attention is invited to the following information
contained in Headquarters AAF, Air Installations Division, Daily Diary
of 3 April 1946.

a. WITHDRAWAL OF VICTORVILLE BOMBING TARGETS FROM
SURPLUS. The Office of the Chief of Engineers was advised that Bomb-
ing Target Sites ② 3, ④ ⑤ 7, 10, 11, 12, 13, 14, 16, 17, ⑮ 19,
and 20 previously reported as excess on 15 January 1946 will be requir-
ed for use in connection with March Field, Riverside, California, and
Castle Field, Merced, California, for the P-80 Jet Training Program.
It was therefore requested that the War Assets Corporation be requested
to release these sites from the category of surplus for reassignment to
the Army Air Forces.

2. Further attention is invited to item in Daily Diary of
26 March 1946 as follows:

a. EXCESS DECLARATION, CAL AERO AIRPORT, CALIFORNIA.
The Commanding General, Army Service Forces, was advised that the pre-
mises known as the Cal-Aero Airport, Ontario, California, are no longer
required for use by the Army Air Forces. In accordance with Cir. 89,
WD, 1945, recommendation was made that the premises be declared surplus.

Albert J. Wehrell

ALBERT J. WEHRELL,
Lt. Col., A.C.,
Senior AAF Liaison Officer,
No. & So. Pacific Divisions.



In Reply Address Both
Communication and En-
velope to Attention of
Following Office Symbol:

ARMY AIR FORCES
HEADQUARTERS
AIR MATERIEL COMMAND

TSCON3C/DFO/jll
Wright Field, Dayton, Ohio
Oct. 10, 1946

TSCON3C

SUBJECT: Decontamination of Bombing and Gunnery Ranges.

TO: Commanding General
San Bernardino Air Materiel Area
San Bernardino Army Air Field
San Bernardino, California

ATTN: Air Installations Office

1. Attention is invited to the contents of paragraphs 3 and 4 of War Department Circular No. 195 relating to statements concerning decontamination action required in connection with all declarations of excess covering Bombing and Gunnery Ranges.

2. For your information, advice is informally furnished that the War Department General Staff will declare surplus Army Air Forces Bombing and Gunnery Ranges even though same have not been policed and all unexploded "duds" thereat have not been disarmed. It is, therefore, requested that any of subject ranges which are under your jurisdiction and are excess to the needs of your Command be so reported to this Headquarters together with all information regarding such policing and decontamination action as already may have been accomplished or remains to be accomplished. In the event that such ranges are thereafter determined to be surplus to the needs of the War Department, the appropriate Division Engineer then will assume responsibility for such further policing and decontamination as may be feasible and warranted.

3. In this connection it is understood that funds available to the Chief of Engineers for decontamination of surplus lands are extremely limited. It is, therefore, imperative that the Commanding Officer of each installation, or the tactical commander having responsibility for the operation of an area for which an installation commander is not otherwise responsible, make persistent and continuous effort with the means at hand to police and decontaminate range lands to the maximum extent possible.

BASIC: Ltr fr AMC subj: "Decontamination of Bombing and Gunnery Ranges."

4. In view of the foregoing, all declarations of excess covering bombing and gunnery ranges should be submitted to this Headquarters in accordance with the provisions of War Department Circular No. 89, dated, 20 March 1945, and also include the information required by paragraph 2 above.

BY COMMAND OF LIEUTENANT GENERAL TWINING:

/s/Kirk H. Scott, Lt. Col.C.E.
for:JOHN G. GRIGGS
Colonel, Air Corps
Chief, Air Installations Division

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WAR DEPARTMENT
CORPS OF ENGINEERS
OFFICE OF THE DIVISION ENGINEER
SOUTH PACIFIC DIVISION
351 CALIFORNIA STREET
SAN FRANCISCO 19, CALIFORNIA

Refer to file: PSDRM-U 319.1
(Victorville AAF - Bombing
Target Nos. 2, 3, 4, ,2, 13,
16, 17, 18, 19, and 20)

31 January 1947

SUBJECT: Adverse Conditions at Bombing Target Sites, Victorville, Calif.

TO: The Chief of Engineers
War Department
Washington 25, D. C.
ATTENTION: Chief, Real Estate Division

1. A review of Real Property Utilization Inspection Reports covering recent inspections of ten bombing targets adjacent to Victorville Army Air Field, Victorville, California (formerly satellite facilities to the Airfield but now assigned (since June 1946) to the Tactical Air Command, Langley Field, Virginia) reveals the following:

- a. The targets have not been used for approximately two years.
- b. Movable improvements, including fences, have recently been looted by vandals.
- c. The ground on and surrounding the target areas for a considerable distance is heavily littered with bombs and fragments, and some of the bombs are duds.
- d. Warning and danger signs have not been posted in conspicuous locations.

2. The using agency, Twelfth Air Force, March Field, Riverside, California, has been requested to give consideration to declaring as excess those targets not required by the Command for operational purposes. Also, attention has been called to the need of posting warning or danger signs at the target sites.

3. A copy of the inspection report pertaining to each bombing target has been furnished the Army Air Forces Liaison Officer, Los Angeles, California.

4. It is believed that the above should be brought to the attention of the Commanding General, Army Air Forces.

/s/ E. H. MARKS
Colonel, CE
Division Engineer

602 (Victorville Army Airfield, Calif.) ENGLU

1st Ind.
Bas. 31 Jan. 47

SUBJECT: Bombing Target Sites.

OCE, WASHINGTON 25, D. C., 17 February 1947.

TO: The Commanding General, Army Air Forces, Washington, D. C.
ATTENTION: AFDIN

1. In connection with the basic letter, attention is invited to 5th Indorsement from this office dated 11 October 1946, (basic: 10 July 1946) Subject: Transfer of Surplus Facilities, Pacific Division No. 4197-3, suggesting that your office recommend to War Department, General Staff that certain bombing target sites at Victorville Army Airfield, California, be placed in surplus status.

2. The following sites were placed in surplus status, but withdrawn and reestablished on 15 April 1946: Bombing Targets 2, 3, 4, 5, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19 and 20.

3. In view of the fact that at least ten (10) of the targets have not been used for approximately two years; that the area is being looted by vandals; and that the area is unsafe due to the existance of unexploded bombs and has not been posted as a danger zone, it is recommended that further consideration be given to the possibility of placing the targers in a surplus status.

FOR THE CHIEF OF ENGINEERS:

/s/ PETER P. GOERZ
Colonel, Corps of Engineers
Director of Real Estate

602.3(Victorville AAF,
Calif. Bombing Targets)
LA PSDRE-D 7.60 JLM

WAR DEPARTMENT
CORPS OF ENGINEERS
OFFICE OF THE DIVISION ENGINEER
SOUTH PACIFIC DIVISION
REAL ESTATE DIVISION
LOS ANGELES SUB-OFFICE
621 SOUTH HOPE STREET
LOS ANGELES 14, CALIFORNIA

18 February 1947

SUBJECT: Transfer of Victorville Army Air Field Bombing Targets

TO: Division Engineer
South Pacific Division
SAN FRANCISCO 19, CALIFORNIA

ATTENTION: Real Estate Division

1. Reference is made to Surplus Real Estate Directive, South Pacific Division No. 4197-3, Los Angeles District No. 2075-3, dated 12 June 1946, wherein the District Engineer is directed to transfer Bombing Targets 2, 3, 4, 5, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19 and 20 to the Air Tactical Command, March Field, Riverside, California.

2. Attempts were made to transfer these targets as directed but the Air Tactical Command at March Field refused to accept the transfer of all of the targets. A meeting was had with the representative at March Field and as a matter of expedience, request was made for the immediate transfer of the Targets 2, 4 and 5.

3. By agreement with the District Engineer, in order to cooperate with March Field, the transfer of Targets 2, 4, and 5 was accomplished.

4. Transmitted herewith is letter received from Headquarters, March Field dated 14 February 1947 requesting copies of documents on the transfer of Targets 2, 4, and 5. This is forwarded for compliance by your office.

JOHN J. SHIPLEY
Chief, Management & Disposal Branch
Los Angeles Sub-Office

1 Incl:
Ltr fr March Fld,
dtd 14 Feb 47.

RECEIVED
LOS ANGELES
FEB 19 1947

FEB 19 1947

1115

#19

WAR DEPARTMENT
Office of the Chief of Engineers
9800 TSU DETACHMENT NO. 14
BOMB AND SHELL DISPOSAL TEAM 4 February 1948

SUBJECT: Report of the dedudding of Victorville Bombing Targets, San Bernardino County, California.

TO: Division Engineer
South Pacific Division
Corps of Engineers, War Dept
Oakland Army Base
Oakland 14, California.

1. The 9800th TSU-CE Detachment #14, Bomb & Shell Disposal Team was assigned the clearing of the Victorville Bombing Targets, Victorville, California under Surplus Real Estate Directive, South Pacific Division Number: 4892-3 and Los Angeles District Number 2364-3. This directive covers the dedudding of target Numbers: 3, 7, 10, 11, 12, 13, 14, 15, 17, 18, and 20, a total of 7,022 acres. The dedudding of said targets began 20 October 1947 and were completed 24 January 1948.

2. Six laborers, hired through the Los Angeles District Engineers and the personnel of the Detachment made up the searching party. Two Project Engineers were also furnished by the Los Angeles District Engineers.

3. The total man hours, including civilian and Detachment labor, were 7176 hours. The total civilian field cost (salary, per diem and vehicle repairs) was \$7,547.

4. A team made up of one Project Engineer and one Sergeant from the Detachment surveyed and marked the boundaries of each range ahead of the search crew. The other Project Engineer, in conjunction with a Detachment Sergeant, controlled the search crew.

5. It is estimated that there is approximately 840 tons of scrap on subject targets.

6. The method of searching was as it has been in similar reported jobs. However, the immediate target areas were more heavily impacted and a large percentage of the bombs were buried or partially buried necessitating several passes of the search crew and considerable excavating. The excavating was done with non-sparking picks cutting down the danger of setting off a bomb by accidentally digging into one.

7. All blasting was done after the searchers were out of the range or at a later date. The dud bombs were rid of by placing a sufficient size charge of Composition C-3 on them so as to explode the bomb or completely demolish it. After detonation the demolition men checked the surrounding area to see that the object in question had been destroyed.

8. A list of duds found and destroyed are given below:

- (a) 2,860 Bombs, Practice, M38-A2
- (b) 32 Bombs, Flare, Aircraft, Parachute, M20

9. I believe the 7,022 acres covered by this report to be free from explosive material for the purpose of grazing, mining and/or agricultural purposes.

10. The location of this area is designated by the enclosed map of:

Real Estate
Victorville Army Air Field Bombing Ranges
Drawing No. 65-FP
State: California
County: San Bernardino

JOSEPH P. SAINATO
1st Lt., CE
9800th TSU CE Det #14
Bomb & Shell Disposal Team
Commanding

CERTIFICATE OF CLEARANCE
VICTORVILLE BOMBING TARGETS NOS. 3, 7, 10, 11, 12, 13, 14, 16, 17, 19, AND 20

22 March 1948

This is to certify that the areas known as Victorville Bombing Targets Nos. 3, 7, 10, 11, 12, 13, 14, 16, 17, 19 and 20, as shown on Real Estate Map of Victorville Army Air Force Bombing Ranges, Drawing No. 65-FF, were completely dedudded during the period from 20 October 1947 to 24 January 1948.

2860 dud practice bombs M38-A2 and 32 dud flare bombs, aircraft parachute M26, were found and destroyed during the course of the dedudding.

To the best of our knowledge and belief, the entire area covered by these 11 bombing targets is clear of all explosive or dangerous material and the land is safe for the purpose of grazing, mining or other agricultural purposes.

B. C. Hedrick
B. C. HEDRICK
Engineer, Civil
Los Angeles District

JOSEPH P. SAINATO
1st Lt., C. E.
9800th TSU-CE Det. #14
Bomb & Shell Disposal Team
Commanding

Approved

James A. Forney
James A. Forney, Special Assistant
Property Management Division
War Assets Administration

Date

Sept. 8, 1948

Victorville Precision Bombing Range #19
Victorville, California
W-Calif-258
Complete Classification

WD-1246

April 28, 1948

The Los Angeles District Joint Property Survey Team No. 9, B. B. Evans, Captain, inspected this facility on March 17, 1948, and made the following report of inspection, dated April 27, 1948:

- "(1) No buildings, structures or saleable betterments existed at subject Site at the time of inspection.
- (2) The general appearance of the land and cover growth is much the same as the surrounding land, except for numerous small impact holes up to 30" in diameter and approximately 12" deep.
- (3) The land is cluttered up with numerous expended bomb cases and fragments.
- (4) The asphalt target area referred to in the Declaration was not found, possibly due to its destruction by the bombs and covered over by wind-blown sand.
- (5) No roads were found to enter the target area. Access was made by use of automobile trails which were presumably made by the engineer deduoding team's equipment."

Attention is called to the fact that there has been considerable activity in this general area, in developing desert home sites and it is advisable to call this fact to the attention of the Farm Credit Administration when making assignment of this property.

Classification Map of Site Area is Attached as Exhibit "A".

Public Domain land to be returned to the Department of the Interior.

In reply refer to: PNI-3 PD
Victorville Bombing Target Site 19
Victorville, California
(W-Cal-258)

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MAY 19 1948

3

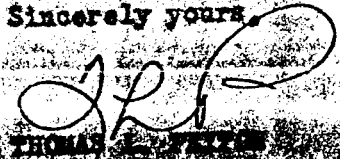
Director
Bureau of Land Management
Department of the Interior
Washington 25, D. C.

Dear Sir:

In accordance with the authority in Section 3 (d) of the Surplus Property Act, the War Assets Administration has found suitable for return to the public domain, and hereby returns to the Department of the Interior for administration under the Public Land laws, 320 acres described as the W 1/2 of Section 26, T2N, R6E, S.B.B. and M, withdrawn by Public Land Order No. 125, dated May 20, 1943, for the establishment of the Victorville Bombing Target Site 19, Victorville, California.

The Office of the Chief of Engineers, Department of the Army, by letter dated February 4, 1948, has certified that the returned land area has been decontaminated.

Sincerely yours,



THOMAS L. FITCH
Director, Industrial Division
Office of War Property Disposal

CC: Deputy Admin - PD
Regional Director - San Francisco, Cal.
Director - Mr. Peyton

ELBridges *YH* AGR *Huller*
FEWelsh *FW* PNI-3
AKHaines *AK* PNI-3

AKHaines/4939-ajm
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Rm. 1312 Temp I
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MAY 19 10 45 AM '48

WAR ASSETS ADMINISTRATION
OFFICE OF REAL PROPERTY DISPOSAL

Region 10
1182 Market Street
San Francisco 2, California

PPM

Hancock

In reply refer to:
RSF10-RD-P

one copy

May 21, 1948

TO: Director, Property Management Division, PPM
Office of Real Property Disposal
Washington 25, D. C.

FROM: V. I. Graham, Director
Property Management Division
Office of Real Property Disposal

5

SUBJECT: Victorville Precision Bombing Target No. 3, W-Cal-259(WD-1247)
Victorville Precision Bombing Target No. 7, W-Cal-260(WD-1248)
Victorville Precision Bombing Target No. 19, W-Cal-258(WD-1264)

Victorville, California

Please be advised that custody and accountability of the subject installations was assumed as of 12:01 May 10, 1948.

Protection and maintenance will be by periodic inspection only, inasmuch as there are no personal property or utilities involved.

MAIL CONTROL

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CBAL

BRIEF HISTORY OF GEORGE AIR FORCE BASE

1941 - 1950

AFSIRC MAXWELL AFB AL 36112	RETURN TO
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MICROFILMED BY TIM

Prepared by
USAF Historical Division
Research Studies Institute
Maxwell Air Force Base, Alabama
April 1956

005805122

Commanding General, West Coast Air Corps Training Center. At that time two officers and fourteen enlisted men arrived from Mather Field, California, to form a provisional headquarters detachment. Most of the buildings were still under construction when these men arrived, and therefore they worked under made-shift conditions. The Base was first organized as an Advanced Twin-Engine Pilot Training School and a Bombardier Training School. With the arrival of the 86th Air Base Group (SP) from Mather Field, California, on 24 November 1941, administrative offices and departments began to function on a larger scale. The 86th Group was made up of Headquarters and Headquarters Squadron (SP), 87th Air Base Squadron (SP), and 301st Materiel Squadron (SP). By 7 December 1941 two staff offices were established, and the Office of the Director of Training began to function. At that time 44 officers and 250 enlisted men were on duty at the Base. Although the Bombardier and Advanced Twin-Engine Pilot Training Programs did not officially get under way until the latter part of February 1942, several officers were assigned to various duties in these training programs prior to 9 December 1941. Preliminary plans were formulated for the organization and establishment of the two schools. Areas in which students would fly and bomb were established, and bombing targets, range sites, and auxiliary fields were constructed.

The first group of instructors for the training schools reported from Mather, Hiner, and Stockton Fields, California, in February 1942. Advanced twin-engine pilot training started on 24 February, when the first class of cadets reported for training. A few days later, 28 February, the first class of bombardier cadets reported. The Advanced Twin-Engine

Pilot School used AT-9's, AT-6's, and AT-17's for training, while the Bombardier School trained in AT-11's and BT-13's. Cadet pilots trained for a period of nine weeks, with a new class reporting every four and one-half weeks. Bombardier cadets, on the other hand, trained for a period of 13 weeks, with a new class reporting every three weeks. The first class of flying cadets graduated on 24 April 1942, and at the same time the Base was formally dedicated. About one month later, 22 May, the first class of bombardiers graduated.

On 25 November 1942 the last class of twin-engine pilots graduated and twin-engine pilot training was discontinued. During the time the Twin-Engine Pilot School was maintained at the Base, 1,066 pilot students reported for training, and 1,034 students graduated. The Twin-Engine Pilot School was replaced by an advanced glider pilot school, which began operations on 23 November 1942. Two squadrons (the 9th and 52d) of the 63d Troop Carrier Group moved to George from Stuttgart, Arkansas, in December to assist with the program. Glider pilots were trained in the art of cargo flying, and emphasis was placed on towing technique, spot landing proficiency, and night flying. Glider pilot classes trained here for a period of three weeks.

The advent of 1943 found the Advanced Glider Pilot Training Program in full swing and bombardier training progressing at full capacity. The Base was also undergoing the process of expansion as extensions and additions were made to existing facilities and special purpose buildings were built. A great amount of work was done to control dust, which caused aircraft engines to deteriorate rapidly. Also at that time the organization

of the Bombardier School was revamped, suitable targets for both day and night low altitude bombing were constructed, and field training for bombardier students was inaugurated.

Advanced glider pilot training was discontinued at this Base on 7 April 1943, and the remaining glider pilot students were transferred to Lubbock, Texas. During the history of the Advanced Glider Pilot School at this Base, a total of 764 glider pilots were graduated.

In addition to the regular bombing and training planes, the following types of aircraft were assigned to the Base during 1943: C-60A, C-47, C-53, L-4A, L-4E, L-3B, L-3C, PT-15, and CG-4A gliders. In April, when the glider school was discontinued, all ships and gliders were transferred to other stations, and only AT-11's and BT-15's were assigned to the Base.

In March 1944 this Base received notice that it was to place in operation a transition school for training P-39 single-engine pursuit pilots. This training program was inaugurated on 12 March; the first students arrived on 14 March; and the first class, consisting of 311 officer-students, began training on 15 March. The school gave newly graduated pilots a maximum of ten hours of P-39 transition, plus ground school courses on the Allison engine, the Bell P-39, and the Curtiss and Aero-Products propellers.

Effective 1 May 1944 all existing squadrons and detachments on the Base were disbanded or discontinued and personnel thereof were absorbed into the 3035th Army Air Force Base Unit (Bombardier School), which was activated at that time. Personnel and activities were subsequently re-grouped into sections.

In the fall of 1944 the bombardier program was modified to include more extensive navigation training in order to train the graduates of this school for medium bombardment in B-25's. On 10 August a B-25 Transition School was established to train bombing pilots to fly the B-25's used in this program. The Transition School was activated with trained personnel from Mather Field, California, but it was canceled before it got well underway.

Shortly thereafter, on 11 October 1944, the single-engine P-39 Transition School was transferred to Luke Field, Arizona. The last class graduated on 16 October 1944. During the time that this school operated at this Base, 1,887 P-39 pilots were graduated.

Cadet bombardier training was discontinued in September with the last class graduating on 23 December 1944. While here the Bombardier School graduated 5,371 bombardiers. With the close of this type of training, all cadet-student personnel were transferred to Gardner Field, Taft, California.

During September and October 1944 the Bombardier School underwent a change in the type of training to be given. George was designated one of three schools in the United States to train radar bombardier observers and a new program, Radar Observer (Bombardment) Training, was initiated. On 6 October 1944 Colonel Daniel B. White and Major B. F. Paschall arrived from Headquarters, Western Flying Training Command to establish the radar training program. Pilots were assigned as officer-students for bombardier, navigation, and radar training in the B-24 type aircraft. Because of the

change in schools, many alterations had to be made in the maintenance and training personnel. In view of maintenance requirements of the B-24 training program, enlisted men were sent to the Army Air Force Technical School at Keesler Field, Mississippi, for training in B-24 maintenance.

The new Radar Observer (Bombardment) Program was divided into Basic and Advanced Radar Training. The bombardier training, carried on since the Base opened for cadets, was placed under Basic Radar, which utilized the AT-11 type aircraft. In this phase of training officer-students were taught the fundamentals and only those subjects which dealt directly with the bombing problem were presented. In Advanced Radar, which utilized B-24 type aircraft, these officer-students received the final training that prepared them for combat duty. Missions were planned so that all students received a thorough background in radar navigation and bombing by actual experience in all types of weather, targets, and terrain. By the end of 1944 the program was well underway and radar bombardiers were being graduated.

On 23 December 1944 the 3035th Army Air Force Base Unit (Bombardier) was redesignated 3035th Army Air Force Base Unit (Technical School). Since this Base was the parent Radar Observer (Bombardment) Training School in the Western Flying Training Command, it had the highest priority rating on manpower and material. As of 1 January 1945 there were 7,405 officers and enlisted men assigned to the Base.

The Basic Radar Program was discontinued on 16 June 1945. Personnel and equipment were either transferred to other fields or absorbed by this Base. On 15 August 1945 all radar training was stopped, but training was

resumed on 22 August 1945 to permit classes already in session to complete their training. However, all radar training was suspended on 24 September 1945, and the students were transferred to Williams Army Air Field, Chandler, Arizona. During its term of operation the Radar Observer (Bombardment) School graduated approximately 2,204 men.

With the cessation of hostilities and the resultant curtailment of the training activities of the Army Air Force, this installation was no longer needed as a training base. Consequently, on 12 October 1945, all flying operations ceased and the Base was placed on standby (temporary inactive) status. The 3035th Base Unit was redesignated 3035th Army Air Force Base Unit (Standby). The Army Air Force wanted to get rid of its excess bases, but it was fairly slow in giving them up until the needs of redeployment could be ascertained. In general the AAF preferred to retain all of its airfields which had housing and third echelon maintenance facilities until the needs of redeployment could be settled. Most of its excess fields were thus put on a standby status.

Transfers reduced the base strength to 1,226 officers and 2,656 enlisted men. Half of the personnel on the Base were separated. Surplus bombardier-navigators who desired to remain in the service were transferred to Minter Army Air Field, California, and Williams Army Air Field, Arizona. Surplus rated pilots were transferred to Luke Field, Arizona, and Minter Field, California. Maintenance enlisted personnel were assigned to Williams Army Air Field, Arizona. A standby force of 83 civilians was allocated to carry on essential functions following completion of the reduction in force.

A. ORGANIZATIONAL STATUS

Constituted

Air Corps Advanced Flying School, Victorville, California, 26 June 1941. WD Ltr. AG 580 (6-19-41) MR-M, dated 23 June 1941.

Activated

At Victorville, California, on 1 October 1941. GO 1, Hq., Air Corps Advanced Flying School, Victorville, California, 1 October 1941, pursuant to WD Ltr. AG 322.2 AAF (6 Aug 41) MR-M-AF, dated 12 August 1941.

Redesignated

Victorville Army Flying School, Victorville, California, 6 February 1942. WD Ltr. AG 680.9 (1-31-42) MR-M-AAF, dated 6 February 1942.

Victorville Army Air Field, Victorville, California, 23 April 1943. GO 5, Hq., Victorville Army Air Field, Victorville, California, 23 April 1943.

Placed on Standby (Temporary Inactive) Status

On 12 October 1945. GO 113, Hq., Army Air Force Western Flying Training Command, 12 October 1945, in accordance with par. 5, WD Cir. 195, 1945, and AFTRC TWX V2904, 25 September 1945.

Redesignated

Victorville Air Force Base, Victorville, California, 23 January 1948. (No authority available.)

Placed on Minimum Operational Status

On 31 December 1948. (No authority available.)

Redesignated

George Air Force Base, Victorville, California, 2 June 1950. GO 42, Department of the Air Force, 2 June 1950.

B. ASSIGNMENTS

Army Air Force Flying Training Command; West Coast Air Corps Training Center: 26 June 1941

The West Coast Air Corps Training Center was redesignated Army Air Force Western Flying Training Command.

Army Air Force Flying Training Command; Central Flying Training Command: 15 October 1945

Army Air Force Air Technical Service Command; San Bernardino Air Technical Service Command: 1 November 1945

The Air Technical Service Command was redesignated Air Materiel Command; the San Bernardino Air Technical Service Command was redesignated San Bernardino Air Materiel Area.

Air Materiel Command; Sacramento Air Materiel Area: 15 May 1947

Air Materiel Command; San Bernardino Air Depot: 11 February 1949

Air Materiel Command; San Bernardino Air Materiel Area: 1 December 1949

Continental Air Command; Fourth Air Force: 1 April 1950

Continental Air Command; Western Air Defense Forces: 1 August 1950

Air Defense Command: 1 January 1951

Tactical Air Command; Ninth Air Force: 15 November 1951



11 November 1997

Larry Dauphin, SIOAC-ESL
Defense Ammunition Center
3700 Army Depot Road
Savanna, IL 61074-9639

Dear Mr. Dauphin,

Here is your record search for the formerly used defense sites in order of request. I checked the whole sections of all the areas even if your mapped APE did not cover it so that you would have a better idea of any cultural resources nearby. For a complete bibliography listed by NADB numbers, see the enclosed bibliography.

- 1) PBR N-3/PBR #44 USGS Hinkley 7.5' Quad
There are no recorded sites within T10N R3W Sec 8, however, there are two reports covering that area numbered NADB 1061035 & 1061479 in the bibliography. There are many prehistoric sites in the vicinity including Black & Inscription Canyon Rock Art District which is currently being nominated to the National Register.
- 2) PBR #3 USGS Fairview Valley 7.5' Quad
There are two lithic reduction sites in T6N R2W Sec 27, 28, 33, 34 designated SBR-2132 & SBR-2135. There are no reports recorded within the project area.
- 3) PBR #4 USGS Apple Valley South & Fifteenmile Valley 7.5' Quads
There are no recorded sites in T4N R2W Sec 5, 6, 7, 8. Two reports, 1060629 & 1062515, are inside the APE and four reports, 1060240, 1060900, 1060901 & 1062158, skirt the SE corner of Sec 8.
- 4) PBR #5 USGS West Ord Mtn 7.5' Quad (APE is not on USGS Stoddard Well)
There are no sites and no survey reports for T6N R1W Sec 4.
- 5) PBR #6 USGS Lucerne Valley & White Horse Mtn 7.5' Quads
There are no sites recorded For T5N R1W Sec 22, 23, 26, 27. One pipeline report, 1060046, passes through the APE.
- 6) PBR #9 USGS Fry Mtn & Grandview Mine 7.5' Quads
There are no sites and no surveys recorded for T5N R2E Sec 2, 3 & T6N R2E Sec 34, 35.
- 7) PBR #10 USGS Old Woman Springs 7.5' Quad
There is one lithic scatter, SBR-1883, and no reports recorded in the T4N R2E Sec 1, 12 & T4N R3E Sec 6, 7.
- 8) PBR #11 USGS Fry Mtn & Iron Ridge 7.5' Quads
There is one isolate on the Fry Mtn Quad and three isolates on the Iron Ridge Quad. All are flakes. Two reports cross the APE, 1060240 & 1063065.

9) PBR #12 USGS Melville Lake 7.5' Quad

There are no sites recorded for T4N R4E Sec 5 & T5N R4E Sec 32, however, there are two reports, 1062257 & 1060956.

10) PBR #14 USGS Galway Lake & Iron Ridge 7.5' Quads

There are no recorded sites in T6N R5E Sec 30, however, there is rock art recorded in the vicinity. Two reports, 1060701 & 1062257, are in the APE.

11) PBR #15 USGS Emerson Lake & Melville Lake 7.5' Quads

There are no sites or surveys within T4N R5E Sec 30, 31. Report 1062257 is adjacent to the APE on the west.

12) PBR #16 USGS Emerson Lake & Melville Lake 7.5' Quads

There are no sites in T4N R5E Sec 6 & T5N R5E Sec 31. There is one report, 1060956, on the Emerson Lake Quad.

13) PBR #19 USGS Joshua Tree North 7.5' Quad

There is one pending military site dead center of T2N R6E Sec 26, 27 designated P1031-1H. A pending site is one that has not been formally recorded, but we have some information on. One report, 1061724, is in the APE.

None of these areas has been well surveyed, however, I noted "abandoned target" on some of the maps within the APE. Also, you might check the old George AFB records (previously known as Victorville Army Airfield) for more information. Someone talked to my father-in-law last year about some of the areas. He was stationed there in 1945-7.

If you have any further questions, please, call me at (909) 792-1497 Tuesday through Friday between 8 AM & 4 PM. Have a great day!

Sincerely,



Robin E. Laska
Acting Coordinator



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

December 19, 1997

Director
Defense Ammunition Center
Attn: SIOAC-ESL (R.Hale)
3700 Army Depot Road
Savanna, Illinois 61074-9639

Subject: Species List for the Former Victorville Precision Bombing Range, San Bernardino County, California

Dear Mr. Hale:

This letter is in response to the Department of the Army's (DOA) request, dated November 10, 1997 and received by us on November 17, 1997, for information on listed, proposed, and candidate species that may occur in the vicinity of the former Victorville Precision Bombing Range in San Bernardino County, California. The Army's Defense Ammunition Center is assisting the U.S. Army Corps of Engineers in assessing formerly used defense sites for potential contamination by ordnance and explosives.

The threatened desert tortoise (*Gopherus agassizii*) occurs in the vicinity of the Victorville Precision Bombing Range. Critical habitat for the desert tortoise has been designated and portions of the bombing range occur within the Ord-Rodman critical habitat unit. No species proposed for listing or candidate species occur within the area of the bombing range.

This letter fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (Act). If the subject project may affect a listed species, the DOA has the responsibility to prepare a biological assessment if the project is a construction project which may require an environmental impact statement^{1/}. If a biological assessment is not required, the DOA still has the responsibility to review its proposed activities and determine whether the listed species will be affected.

During the assessment or review process, the DOA may engage in planning efforts, but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act. If a threatened or endangered species may be affected, the DOA should request, in writing through our office, consultation pursuant to section 7 of the Act.

Richard Hale

2

Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species prior to a written request for formal consultation.

Should you have any questions, please contact Denise Washick of my staff at (805) 644-1766.

Sincerely,



Diane K. Noda
Field Supervisor

^{1/} "Construction Project" means any major Federal action which significantly affects the quality of the human environment designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.

Listed Species in SAN BERNARDINO County

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS
-----	-----	-----	-----
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	Threatened	Endangered
SWAINSONS HAWK	BUTEO SWAINSONI	None	Threatened
YUMA CLAPPER RAIL	RALLUS LONGIROSTRIS YUMANENSIS	Endangered	Threatened
WESTERN SNOWY PLOVER	CHARADRIUS ALEXANDRINUS NIVOSUS	Threatened	None
WESTERN YELLOW BILLED CUCKOO	COCCYZUS AMERICANUS OCCIDENTALIS	None	Endangered
ELF OWL	MICRATHENE WHITNEYI	None	Endangered
GILA WOODPECKER	MELANERPES UROPYGIALIS	None	Endangered
WILLOW FLYCATCHER	EMPIDONAX TRAILLII	None	Endangered
CALIFORNIA GNATCATCHER	POLIOPTILA CALIFORNICA	Threatened	None
ARIZONA BELLS VIREO	VIREO BELLII ARIZONAE	None	Endangered
LEAST BELLS VIREO	VIREO BELLII PUSILLUS	Endangered	Endangered
MOHAVE TUI CHUB	GILA BICOLOR MOHAVENSIS	Endangered	Endangered
UNARMORED THREESPINE STICKLEBACK	GASTEROSTEUS ACULEATUS WILLIAMSONI	Endangered	Endangered
MOHAVE GROUND SQUIRREL	SPERMOPHILUS MOHAVENSIS	Sp of Concern (C2)	Threatened
STEPHENS KANGAROO RAT	DIPDOMYS STEPHENSI	Endangered	Threatened
DESERT TORTOISE	XEROBATES AGASSIZII	Threatened	Threatened
SOUTHERN RUBBER BOA	CHARINA BOTTAE UMBRATICA	Sp of Concern (C2)	Threatened
ARROYO SOUTHWESTERN TOAD	BUFO MICROSCAPHUS CALIFORNICUS	Endangered	None
CALIFORNIA RED-LEGGED FROG	RANA AURORA DRAYTONII	Threatened	None
DELHI SANDS FLOWER-LOVING FLY	RHAPHIOMIDAS TERMINATUS ABDOMINALIS	Endangered	None
PARISH'S DAISY	ERIGERON PARISHII	Threatened	None
MOHAVE TARPLANT	HEMIZONIA MOHAVENSIS	Sp of Concern (C2*)	Endangered
NEVIN'S BARBERRY	BERBERIS NEVINII	Proposed Endangered	Endangered
SAN BERNARDINO MTNS BLADDERPOD	LESQUERELLA KINGII SSP BERNARDINA	Endangered	None
GAMBEL'S WATERCRESS	RORIPPA GAMBELLII	Endangered	Threatened
SLENDER-PETALED THELYPODIUM	THELYPODIUM STENOPETALUM	Endangered	Endangered
CUSHENBURY MILK-VETCH	ASTRAGALUS ALBENS	Endangered	None
PARISH'S CHECKERBLOOM	SIDALCEA HICKMANII SSP PARISHII	Candidate	Rare
BIRD-FOOTED CHECKERBLOOM	SIDALCEA PEDATA	Endangered	Endangered
THORNE'S BUCKWHEAT	ERIOGONUM ERICIFOLIUM VAR THORNEI	Sp of Concern (C1)	Endangered
CUSHENBURY BUCKWHEAT	ERIOGONUM OVALIFOLIUM VAR VINEUM	Endangered	None
CUSHENBURY OXYTHECA	OXYTHECA PARISHII VAR GOODMANIANA	Endangered	None
SLENDER-HORNED SPINEFLOWER	DODECAHEMA LEPTOCERAS	Endangered	Endangered
SANTA ANA RIVER WOOLLYSTAR	ERIASTRUM DENSIFOLIUM SSP SANCTORUM	Endangered	Endangered
THREAD-LEAVED BRODIAEA	BRODIAEA FILIFOLIA	Proposed Threatened	Endangered

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX G

REAL ESTATE DOCUMENTS

APPENDIX G

REAL ESTATE DOCUMENTS

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- G-5 WAA Form 1005, Declaration of Surplus Property, 3 March 1948 (B-39)
- G-6 Quitclaim Deed, United States of America to Norman M. Imbertson and Cora E. Imbertson, 7 July 1949 (B-40)
- G-7 San Bernardino County Assessor's Map, 23 June 1992 (B-41)
- G-8 San Bernardino County Parcel List, 1998 (B-42)

CALIFORNIA

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WITHDRAWING PUBLIC LANDS FOR USE OF THE
WAR DEPARTMENT AS BOMBING TARGET SITES

By virtue of the Authority vested in the President and pursuant to
Executive Order No. 9337 of April 24, 1943: IT IS ORDERED, As follows:

Subject to valid existing rights, the public lands in the following-
described areas are hereby withdrawn from all forms of appropriation under the
public-land laws, including the mining and mineral-leasing laws, and reserved for
the use of the War Department as bombing target sites:

San Bernardino Meridian

- T. 5 N., R. 1 W.,
Sec. 22, E1/2SW1/4 and SE1/4;
- Sec. 23, W1/2SW1/4;
- Sec. 26, W1/2NW1/4;
- Sec. 27, NE1/4 and E1/2NW1/4.
- T. 6 N., R. 1 W., Sec. 4.
- T. 4 N., R. 2 W.,
Sec. 5, SW1/4;
- Sec. 6, SE1/4;
- Sec. 7, NE1/4;
- Sec. 8, NW1/4;
- T. 6 N., R. 2 W.,
Sec. 27, S1/2SW1/4;
- Sec. 28, S1/2SE1/4;
- Sec. 33, NE1/4 and W1/2SE1/4;
- Sec. 34, NW1/4 and N1/2SW1/4.
- T. 5 N., R. 3 W., Sec. 12.
- T. 6 N., R. 3 W., Sec. 21.
- T. 4 N., R. 1 E.,
Sec. 21, E1/2;
- Sec. 22, W1/2.
- T. 5 N., R. 1 E.,
Sec. 3, SW1/4;
- Sec. 4, SE1/4;
- Sec. 9, NE1/4;
- Sec. 10, NW1/4.
- T. 4 N., R. 2 E.,
Sec. 1, SE1/4SE1/4;
- Sec. 12, E1/2NE1/4 and NE1/4SE1/4.

- T. 5 N., R. 2 E.,
Sec. 2, lot 4, SW1/4NW1/4;
- Sec. 3, lots 1, 2, 3, S1/2NE1/4, and SE1/4NW1/4.
- T. 6 N., R. 2 E.,
Sec. 34, E1/2SW1/4 and SE1/4;
- Sec. 35, W1/2SW1/4.
- T. 4 N., R. 3 E.,
Sec. 6, S1/2SW1/4 and SW1/4SE1/4;
- Sec. 7, W1/2 NE1/4, NW1/4, N1/2SW1/4, and
NW1/4SE1/4.
- T. 6 N., R. 3 E.,
Sec. 35, E1/2;
- Sec. 36, W1/2.
- T. 3 N., R. 4 E., Sec. 6
- T. 4 N., R. 4 E., Sec. 5, N1/2.
- T. 5 N., R. 4 E., Sec. 32, S1/2.
- T. 4 N., R. 5 E.,
Sec. 30, S1/2, unsurveyed.
- Sec. 31, N1/2, unsurveyed.
- T. 6 N., R. 5 E., Sec. 30.
- * T. 2 N., R. 6 E.,
* Sec. 26, W1/2;
- * Sec. 27, E1/2.
- T. 4 N., R. 6 E., Sec. 29.
- T. 3 N., R. 6 E.,
Sec. 24, SE1/4;
- Sec. 25, NE1/4.
- T. 3 N., R. 7 E.,
Sec. 19, SW1/4;
- Sec. 30, NW1/4.

* Lands covered by this report.

The areas described, including both public and non-public lands, aggregate 11,560.08 acres.

This order shall take precedence over, but shall not rescind or revoke, the withdrawal for classification and other purposes made by Executive Order No. 6910 of November 26, 1934, as amended, so far as such order affects the above-described lands.

It is intended that the public lands described herein shall be returned to the administration of the Department of the Interior, when they are no longer needed for the purpose for which they are reserved.

ABE FORTAS,
Acting Secretary of the Interior

May 20, 1943.

(F. R. Doc. 43-8566; Filed, May 27, 1943; 9:34 a.m.)

ARMY SERVICE FORCES
~~XXXXXXXXXXXX~~
OFFICE OF THE CHIEF OF ENGINEERS
REAL ESTATE

WN # 1817
DATE 6 Feb 1946

WARNING NOTICE

(Continental United States)

TO: DIRECTOR OF REAL ESTATE, OFFICE OF THE CHIEF OF ENGINEERS
CHIEF, PLANNING BRANCH, ACQUISITION DIVISION, REAL ESTATE, O.C.E.
CHIEF, REALTY CONTROL BRANCH, REQUIREMENTS DIVISION, REAL ESTATE, O.C.E.
CHIEF, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, MANAGEMENT BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, DISPOSAL BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, OFFICE SERVICE DIVISION, O.C.E. (Surplus Properties)
DIRECTOR OF MILITARY CONSTRUCTION, O.C.E. Attention: Mr. Gates
CHIEF, REDISTRIBUTION & SALVAGE DIVISION, READJUSTMENT, O.C.E.,
Attention: Major Walker
CHIEF, MILITARY RESERVATION DIVISION, OFFICE OF JUDGE ADVOCATE GENERAL,
(Surplus Government Owned Properties)
DIVISION ENGINEER, PACIFIC DIVISION, Attention: REAL ESTATE OFFICER,
For Information Only

1. Notice was received on 6 February 1946 that, effective

23 January 1946, the following described property has been classified as

INACTIVE _____ STANDBY _____ EXCESS _____ SURPLUS X REESTABLISHED _____ REDISTRIBUTED _____

Name of Installation: Victorville A. A.F., Bombing Targets
San

Location nearest: Victorville (City) Bernardino (County) Calif. (State)

Acreage: Total _____ Owned _____ * W.D. _____ Public _____ Lands _____ Lesser _____ Interests _____ Leased _____

Entire Installation X Portion of Installation _____

Land Only _____ Land and Improvements X Improvements Only _____

Industrial Installation _____ Command Installation X

Property Used By A.T.S.C. For Bombing Targets

2. Proposed disposition and remarks: _____

* Correct Area to be determined.
Declaration covers Bombing Targets Nos. 1, 2, 3, 4, 5, 7, 10, 11, 12,

13, 14, 16, 17, 18, 19 and 20, Demolition Target "Y" (1), and

Mirage Lake Glider School.

Copy

ARMY SERVICE FORCES
OFFICE OF THE CHIEF OF ENGINEERS
REAL ESTATE

WE-1817-H
DATE 13 May 1946

WARNING NOTICE

(Continental United States)

TO: DIRECTOR OF REAL ESTATE, OFFICE OF THE CHIEF OF ENGINEERS
CHIEF, PLANNING BRANCH, ACQUISITION DIVISION, REAL ESTATE, O.C.E.
~~CHIEF, REALTY CONTROL BRANCH, REQUIREMENTS DIVISION, REAL ESTATE, O.C.E.~~
CHIEF, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, MANAGEMENT BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, DISPOSAL BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
CHIEF, OFFICE SERVICE DIVISION, O.C.E. (Surplus Properties)
DIRECTOR OF MILITARY CONSTRUCTION, O.C.E., Attention: Mr. ~~James E. Bates~~
CHIEF, REDISTRIBUTION & SALVAGE DIVISION, READJUSTMENT, O.C.E.,
Attention: Major Walker
CHIEF, MILITARY RESERVATION DIVISION, OFFICE OF JUDGE ADVOCATE GENERAL,
(Surplus Government Owned Properties)
DIVISION ENGINEER, ~~SOUTH PACIFIC~~ DIVISION, Attention: REAL ESTATE OFFICER,
For Information Only

1. Notice was received on 10 April 1946 that, effective

15 April 1946, the following described property has been classified as

INACTIVE _____ STANDBY _____ EXCESS _____ SURPLUS _____ REESTABLISHED REDISTRIBUTED _____

Name of Installation: Victorville Precision Bombing Range #19
San

Location nearest: Victorville (City) Bernardine (County) Calif. (State)

Acres: Total 640.0 W.D. 0.0 Public 0.0 Lesser 0.0
Owned 320.0 Lands 320.0 Interests _____ Leased _____

Entire Installation Portion of Installation _____

Land Only Land and Improvements _____ Improvements Only _____

Industrial Installation _____ Command Installation

Property Used By AAF For Victorville AAF, bombing target

2. Proposed disposition and remarks: WE-1817, dated 2/8/46, is amended to

withdraw the above area from category of surplus and place this facility in an active

status. Subject facility comprises all of: E¹ Sec. 27, T2N, R5E; W¹ Sec. 26, T2N,

R5E, S.R.D. & M. Public land acquired by transfer under P.L.G. #125.

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ENGINEERS
REAL ESTATE

DATE 19 Aug 47

WARNING NOTICE

(Continental United States)

TO: DIRECTOR OF REAL ESTATE, OFFICE OF THE CHIEF OF ENGINEERS
 CHIEF, PLANNING BRANCH, ACQUISITION DIVISION, REAL ESTATE, O.C.E.
 CHIEF, REALTY CONTROL BRANCH, REQUIREMENTS DIVISION, REAL ESTATE, O.C.E.
 CHIEF, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
 CHIEF, MANAGEMENT BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
 CHIEF, DISPOSAL BRANCH, MANAGEMENT AND DISPOSAL DIVISION, REAL ESTATE, O.C.E.
 CHIEF, OFFICE SERVICE DIVISION, O.C.E. (Surplus Properties)
 DIRECTOR OF ARMY CONSTRUCTION, O.C.E., Attention: Mr. Carter
 CHIEF, REDISTRIBUTION & SALVAGE DIVISION, READJUSTMENT, O.C.E.
 Attention: Major Walker
 CHIEF, MILITARY RESERVATION DIVISION, OFFICE OF JUDGE ADVOCATE GENERAL
 (Surplus Government Owned Properties)
 DIVISION ENGINEER, South Pacific DIVISION, Attention: REAL ESTATE OFFICER,
 FOR INFORMATION ONLY

Notice was received on 15 August 1947 that, effective

13 August 1947, the following described property has been classified as

INACTIVE STANDBY EXCESS SURPLUS 7 REESTABLISHED REDISTRIBUTED

Name of Installation: Victorville AFld, Bombing Target Site #19

San

Location nearest: Victorville (City) Bernardino (County) Calif. (State)

W.D. Public Lesser

Acres: Total 540 Owned 320 Lands 320 Interests Leased

Entire Installation 1 Portion of Installation

Land Only 7 Land and Improvements Improvements Only

Industrial Installation Command Installation 1

Property Used By AF For Bombing Target Sites

2. Proposed disposition and remarks: CGR No. 125, dated 20 May 1947.

ppb
See #3 for re-endorsement of WPT's

PAP

WAA Form 1005
(5-20-46)

UNITED STATES OF AMERICA
WAR ASSETS ADMINISTRATION

Form approved.
Budget Bureau No. 16 R005.3.

DECLARATION OF SURPLUS REAL PROPERTY
(TO THE WAR ASSETS ADMINISTRATOR, WASHINGTON 25, D. C.)

IMPORTANT

SEE INSTRUCTIONS ON REVERSE FOR COMPLETING THIS FORM

1. REPORTING AGENCY: DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
WASHINGTON 25, D. C.

2. PROPERTY IDENTIFICATION: San Bernardino County, California
approximately 55 miles east and 22 miles
south of Victorville, California

3. AREA: 640 acres

4. USE OF PROPERTY PRIOR TO ACQUISITION: Semi arid grazing land

5. DEFINITION OF BEST FUTURE USE: Grazing land possible winter home sites

6. DATE OF ACQUISITION: PRIOR TO 11/1/40 MIXED SUBSEQUENT TO 12/31/39

7. FORMER OWNER: See Block 8 Schedule D

9. DATE: 3 March 1948

10. REPORTING AGENCY (NO.): WD 1246

11. WAA NO.: W. Calif. 2584

12. DISPOSAL AGENCY NO.:

13. REPRESENTATIVES TO CONTACT: Division Engineer, South Pacific
Divn, Corps of Engrs, Dept of the
Army, Oakland Army Base, Oakland 11,
Calif. Tel: TW 4100 (See Blk 13 Sch)

14. LOCATION OF TITLE PAPERS:

15. COST OF PROPERTY:

ACQUISITIONS \$	800.00
BETTERMENTS \$	3,180.00
TOTAL \$	3,980.00

15. PROCEEDS:

8. REMARKS

VICTORVILLE BOMBING TARGET SITE 19
VICTORVILLE, CALIFORNIA

This installation as portrayed and described in the schedules attached
is hereby declared surplus in its entirety.

The area consists of 320 acres Public Domain land and 320 acres
owned land acquired at a cost to the Government of \$800,

RECEIVED
WAA

MAR 3 1 31 PM '48

230257

DO NOT FILL IN

DATE OF ASSIGNMENT: _____ ASSIGNED TO: _____

ASSIGNED BY: _____
(SIGNATURE)

(DIVISION)

17. AUTHORIZED BY Chief of Engineers:

Edward J. Fanklin
(SIGNATURE OF REPORTING OFFICIAL)
EDWARD J. FANKLIN
Chief, Management & Disposal Division
Pacific Southwest Region
Real Estate

Reproduced from the holdings of the National Archives
Pacific Southwest Region

(NAME AND TITLE) Please type

VICTORVILLE BOMBING TARGET SITE 19
VICTORVILLE, CALIFORNIA

WAA-1005

ESTIMATED COST OF GOVERNMENT IMPROVEMENTS

BLOCK 8 SCHEDULE C

<u>Description</u>	<u>Est. Total Cost Owned Land (Fee)</u>
Road Grading	\$ 710.00
Grading Target Area	1,160.00
Oiled Surface Stripes	600.00
Asphalt	650.00
Clearing Fire Breaks	60.00
	<hr/>
Total - -	\$ 3,180.00

The Government spent the following sums for items listed which do not exist at this time on the site:

Gate, 4' x 12'	\$ 50.00
Fencing	635.00
Target Structure (wood)	200.00
	<hr/>
Total - -	\$ 885.00

BLOCK 8 SCHEDULE C

VICTORVILLE BOMBING TARGET SITE 1^c
VICTORVILLE, CALIFORNIA
WAA-1005

ENG FORM 1294
 26 Aug 46

BLOCK 8 - SCHEDULE D

Victorville, California

ORIGINAL TRACT NUMBER (1)	NAME AND ADDRESS OF FORMER OWNER (2)	ORIGINAL ACREAGE (3)	ORIGINAL COST (Estimated if not known) OF ACREAGE DECLARED SURPLUS (4)	ACREAGE REPORTED FOR DISPOSAL (5)	ACQUISITION			TITLE EVIDENCE (9)	LOCATION OF LAND (10)	OUTSTANDING INTEREST (including those granted by the Government) (11)
					DATE (6)	(P) PURCHASE (D) DECLARATION OF TAKING (7)	CHARACTER OF INTEREST HELD BY GOV'T. (F) Fee (O) Other (L) Leasehold (E) Easement (8)	(A) ABSTRACT (C) CERTIFICATE OF TITLE (9)	NAME AND ADDRESS OF TITLE OR ABSTRACTING COMPANY (10)	
192	Public Domain Land	320	-	320	5-20-1913					Public Land Order 125 See Block 8 Schedule F.
191	Southern Pacific Land Co.	320	1300	320	11-11-1913	D	F	C	Pioneer Title Insurance and Trust Company San Bernardino, California	See Block 8 Schedule D-1

BLOCK 8 SCHEDULE D

VICTORVILLE BOMBING TARGET SITE 19
VICTORVILLE, CALIFORNIA

WAA-1005

BLOCK 8 SCHEDULE E

Narrative Report

Victorville Bombing Target Site 19 is located approximately 55 miles east and 22 miles south of Victorville, California.

The area consists of 640 acres acquired in accordance with Public Land Order No. 125 dated 20 May 1942, subject to valid rights which effect 320 acres.

The target consisted of an hexagonal shaped, fenced and cleared area of approximately 900' to each side and has three concentric circular rings of field-mix oil surfacing with a frame target in the center. All moveable improvements including the fence have been removed by vandals.

The target is located at an approximate elevation of 2600' above mean sea level. The terrain is fairly uniform with a slope to the northeast. The land is semi arid desert. Cattle grazing is probably the highest possible use with the possibility that the area will be developed for winter home sites.

BLOCK 8 SCHEDULE E

QUITCLAIM DEED

THIS INDENTURE made this 7th day of July, 1949, between the UNITED STATES OF AMERICA, acting by and through the Federal Farm Mortgage Corporation, under and pursuant to Executive Order 9689, dated January 31, 1946 (11 F. R. 1265); the powers and authority contained in the provisions of the Surplus Property Act of 1944 (58 Stat. 765); Regulation No. 1 of the Surplus Property Board (10 F. R. 3764); Regulation No. 1 of the War Assets Administration, as amended; Order of the Secretary of Agriculture dated April 26, 1945 (10 F. R. 4647); and Order of the Governor of the Farm Credit Administration dated April 28,

1945 (10 F. R. 4694); party of the first part, and Norman M. Imbertson and Cora E. Imbertson

of Los Angeles, County of Los Angeles, and State of California
party of the second part,

WITNESSETH: That the said party of the first part, for and in consideration of the sum of ONE THOUSAND FIVE HUNDRED
ONE AND 20/100 Dollars (\$ 1,501.20),

of the United States of America, to it in hand paid by the said party of the second part, the receipt of which is hereby acknowledged, has remised, released and forever quitclaimed, and by these presents does remise, release and forever quitclaim, subject to the exception and reserva-

tion of fissionable materials and rights hereinafter set out, unto the said party of the second part, their heirs and assigns, all that certain

piece or parcel of land situate, lying and being in the County of San Bernardino, State of California, and more particularly described as follows, to-wit:

The East half of Section 27, Township 2 North, Range 6 East, SAN BERNARDINO BASE AND MERIDIAN, in the County of San Bernardino, State of California, according to Government Survey.

Subject to easements and rights of way now existing or reserved.

Subject also to the following:

The property hereinbefore described was declared surplus to the needs of the United States of America pursuant to the provisions of the Surplus Property Act of 1944 (58 Stat. 765) as amended; and War Assets Administration Regulation No. 1 as amended (11 Fed. Reg. 408); that said property was a part of Bombing Target No. 19 of Victorville Army Airfield, a military installation, used in part as a training and maneuvering area for combat troops, portions of which area were subjected to contamination by the introduction of unexploded and dangerous bombs, shells, rockets, mines, and other charges, either below or upon the surface thereof; that the Party of the First Part, by and through the Corps of Engineers, War Department, has caused the property to be inspected and has decontaminated the same to the extent deemed reasonably necessary in the opinion of the Party of the First Part, and consistent with economic limitations, and has made certain recommendations pertaining to the use to which the land may be devoted; that the said recommendations are contained in a certificate, copy of which is attached and made a part hereof; that the Party of the First Part by attaching such certificate does not intend to make, nor shall it be construed to have made, any representations or warranties pertaining to the condition of the land; and that the Party of the Second Part has evinced their desire to purchase such property with full knowledge of, and notwithstanding the foregoing recitals which are incorporated for the purpose of disclosing to the Party of the Second Part the former use made of the property hereinbefore described.

Excepting and reserving to the United States of America, in accordance with Executive Order No. 9908, approved on December 5, 1947 (12 F. R. 8223), all uranium, thorium, and all other materials determined pursuant to section 5 (b) (1) of the Atomic Energy Act of 1946 (60 Stat. 761) to be peculiarly essential to the production of fissionable material, contained, in whatever concentration, in deposits in the lands covered by this instrument are hereby reserved for the use of the United States, together with the right of the United States through its authorized agents or representatives at any time to enter upon the land and prospect for, mine, and remove the same, making just compensation for any damage or injury occasioned thereby. However, such land may be used, and any rights otherwise acquired by this disposition may be exercised, as if no reservation of such materials had been made; except that, when such use results in the extraction of any such material from the land in quantities which may not be transferred or delivered without a license under the Atomic Energy Act of 1946, as it now exists or may hereafter be amended, such material shall be the property of the United States Atomic Energy Commission, and the Commission may require delivery of such material to it by any possessor thereof after such material has been separated as such from the ores in which it was contained. If the Commission requires the delivery of such material to it, it shall pay to the person mining or extracting the same, or to such other person as the Commission determines to be entitled thereto, such sums, including profits, as the Commission deems fair and reasonable for the discovery, mining, development, production, extraction, and other services performed with respect to such material prior to such delivery, but such payment shall not include any amount on account of the value of such material before removal from its place of deposit in nature. If the Commission does not require delivery of such material to it, the reservation hereby made shall be of no further force or effect.

Together with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in any wise appertaining and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof; and also all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in, or to the foregoing described premises, and every part and parcel thereof, with the appurtenances, excepting the fissionable materials and rights excepted and reserved above.

Said land was duly declared surplus and was assigned to the Federal Farm Mortgage Corporation as disposal agency, pursuant to the provisions of the above-mentioned Act, Regulation and Orders.

TO HAVE AND TO HOLD all and singular the said premises, together with the appurtenances, unto the said party of the second part, and to their heirs and assigns, forever, excepting the fissionable materials and rights excepted and reserved above.

IN WITNESS WHEREOF, the party of the first part has caused these presents to be executed in its name by the Federal Farm Mortgage Corporation, and the seal of said Corporation to be hereunto affixed this 7th day of July, 1949

(Corporate Seal)

UNITED STATES OF AMERICA

By Federal Farm Mortgage Corporation

By s/ R. H. Billings
Vice President

Attest: s/ H. W. Hess
Assistant Secretary

STATE OF CALIFORNIA }
COUNTY OF ALAMEDA } ss

I, G. E. Campbell, a Notary Public in and for said State and County aforesaid, do certify that on this 7th day of July, 1949, before me appeared

R. H. Billings, to me personally known, and known to me to be Vice President of the Federal Farm Mortgage Corporation, who being by me duly sworn did say that he is such officer; that the seal affixed to the foregoing deed is the corporate seal of said Corporation and was affixed by order of the Board of Directors of said Corporation and that he signed his name to the instrument by like order; that said deed was signed and sealed by him for said Corporation on behalf of the United States of America; and that said Vice President acknowledged the execution of said deed to be his free act and deed as such officer, the free act and deed of the United States of America by the Federal Farm Mortgage Corporation, and the free act and deed of the Federal Farm Mortgage Corporation acting for the United States of America.

IN WITNESS WHEREOF, I hereunto set my hand and seal at Berkeley, in the County and State aforesaid, on the date last above written.

My commission expires May 17, 1951

s/ G. E. Campbell
Notary Public

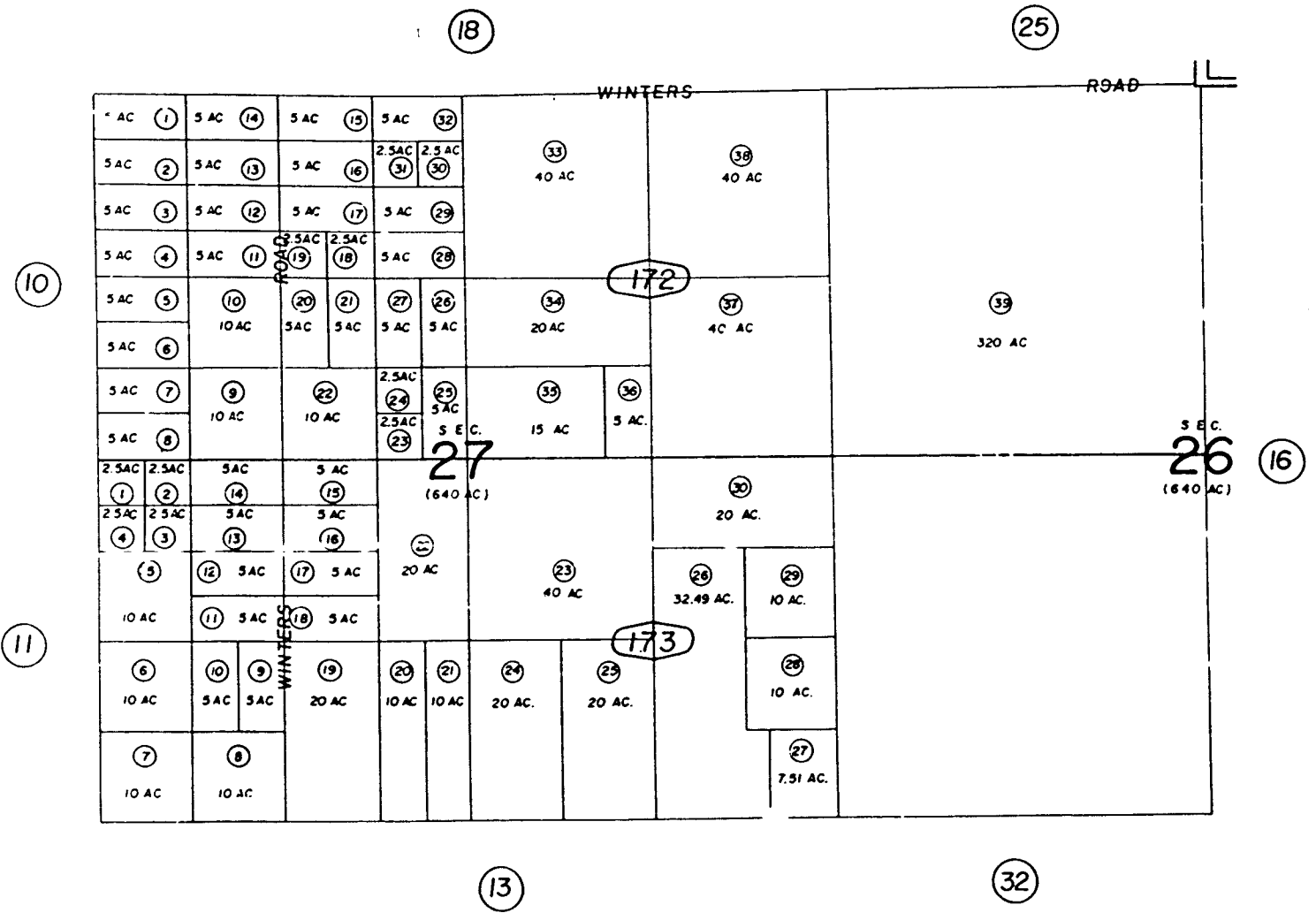
QUIT CLAIM DEED
TO
UNITED STATES OF AMERICA



W. 1/2 Sec. 26 & Sec. 27, T.2N., R.6 E., S.B.B.&M.

Morongo Unified
Tax Rate Area
94070

631- 17



5-7
NET 1670

Assessor's Map
Book 631, Page 17
San Bernardino County

REVISE:
1/11/72 G
6/23/92 G

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SAN BERNARDINO COUNTY PARCEL LIST BY PARCEL NUMBER

1998 EDITION

PARCEL	OWNERS NAME(S) MAILING ADDRESS SITUS ADDRESS PROPERTY DESCRIPTION	PHONE ZIP PROPERTY TYPE LEGAL DESCRIPTION	TRACT	USE CODE YB BLK	HT/AC PARK POOL	BR BA RC ST	SQ FT LOT SZ NUM ROOF	1ST TD 2ND TD TAXES FP	LAND VAL IMPR VAL ASSD VL VIEW	REC DATE DOC NO TFR VAL EX
0631-172-25	DEL VALLE, BARBARA J 122 PELICAN LN+GUADALUPE CA --VACANT--	93434 RECREATIONAL E 1/2 SE 1/4 SE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	126	3,668 3,668 Y	NOSTRAM
0631-172-26	EGE, SHALWYN E 58290 DEL MAR ST+YUCCA VALLEY CA --VACANT--	92284 RECREATIONAL E 1/2 NE 1/4 SE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	120	3,257 3,257 Y	06/13/97 211199 10,000F
0631-172-27	CAMPBELL, ERVIN R & VIRGINIA M STONEMALL #7+IRVINE CA --VACANT--	92720 RECREATIONAL W 1/2 NE 1/4 SE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	115	2,886 2,886 Y	NOSTRAM
0631-172-28	WELLS, JOHN A & ALICE Y 268 SMITH ST+OXNARD CA --VACANT--	93033 RECREATIONAL S 1/2 SE 1/4 NE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	117	2,994 2,994 Y	NOSTRAM
0631-172-29	JENSEN, CHESTER A & MARIE H 22917 OXNARD ST+WOODLAND HILLS CA --VACANT--	91367 RECREATIONAL N 1/2 SE 1/4 NE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	117	2,994 2,994 Y	07/05/84 158340 NOSTRAM
0631-172-30	GERVAIS, NORMAN & BETTY J PO BOX 18041+SPOKANE WA --VACANT--	99208 RECREATIONAL SE 1/4 NE 1/4 NE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX M		000			2.50A	74	2,396 2,396 Y	NOSTRAM
0631-172-31	BURELLE, MARIO R PO BOX 2123+SAN DIMAS CA --VACANT--	91773 RECREATIONAL SW 1/4 NE 1/4 NE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX M		000			2.50A	79	2,769 2,769 Y	09/07/90 358903 2,500F
0631-172-32	LUCKY, DAVID B & DANA H 4557 MOONRAKER RD+PALMDALE CA --VACANT--	93552 RECREATIONAL N 1/2 NE 1/4 NE 1/4 NW 1/4 SEC 27 TP 2N R 6E EX MN		000			5.00A	6,000 115	2,880 2,880 Y	02/08/89 45218 7,000F
0631-172-33	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL NW 1/4 NE 1/4 SEC 27 TP 2N R 6E 40 AC		000			40.00A	844	18,075 18,075 Y	04/24/92 174462 NOSTRAM
0631-172-34	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL N 1/2 SW 1/4 NE 1/4 SEC 27 TP 2N R 6E 20 AC		000			20.00A	422	9,011 9,011 Y	04/24/92 174463 NOSTRAM
0631-172-35	NORRIS, DON B & KAREN R 1056 HEATHER DR+VISTA CA --VACANT--	92084 RECREATIONAL W 1/2 E 1/2 S 1/2 SW 1/4 NE 1/4 AND W 1/2 S 1/2 SW		000			15.00A	405	13,356 13,356 Y	05/01/84 101492 NOSTRAM

0631-172-25

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0631-172-36	YABON, NORMAN E 3563 MOTOR AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL		000			5.00A	131	4,089 4,089	NOSTRAN
0631-172-37	MORRIS, DON B & KAREN R 1056 HEATHER DR+VISTA CA --VACANT--	92084 RECREATIONAL		000			40.00A	875	20,400 20,400 Y	05/01/84 101491 NOSTRAN
0631-172-38	OFTELIE, JANE C 660 NW 20TH AVE #115+GRAND RAPIDS MN --VACANT--	55744 RECREATIONAL		000			40.00A	949	25,951 25,951	08/13/87 280599 NOSTRAN
0631-172-39	GOVERNMENT LAND #FILE+ --VACANT--			000						NOSTRAN
0631-173-01	ASKERMAN, RALPH W 1613 E CHERRY AVE+LOMPOC CA --VACANT--	93436 RECREATIONAL		000			2.50A	70	2,139 2,139	08/27/96 314593 7,000
0631-173-02	WERNER, ROBERT A TR/SHEPARD, NIHA TR PO BOX 2236+TACOMA WA --VACANT--	58401 RECREATIONAL		000			2.50A	70	2,139 2,139	05/19/95 176854 NOSTRAN
0631-173-03	GRAMERI, LEWIS H PO BOX 20594+LONG BEACH CA --VACANT--	90801 RECREATIONAL		000			2.50A	69	2,057 2,057	NOSTRAN
0631-173-04	GRAMERI, LEWIS H PO BOX 20594+LONG BEACH CA --VACANT--	90801 RECREATIONAL		000			2.50A	69	2,057 2,057	01/09/92 8213 NOSTRAN
0631-173-05	PALISADES, LUTHER 15905 W SUNSET BLVD+PACIFIC PALISADES CA --VACANT--	90272 RECREATIONAL		000			10.00A	445	8,500 8,500	07/03/96 236528 NOSTRAN
0631-173-06	HAWKINS, CHARLES E & FRANCES A 5613 LONE STAR DR+SAN DIEGO CA --VACANT--	92120 RECREATIONAL		000			10.00A	485	5,297 5,297	NOSTRAN
0631-173-07	BURAS, EDWARD A ETAL 736 REDONDO AVE+LONG BEACH CA --VACANT--	90804 RECREATIONAL		000			10.00A	506	6,818 6,818	06/24/97 222949 NOSTRAN

0631-172-36

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0631-173-19	GONZALEZ, JULIAN G & DEBORAH D 119 FOSTER LN+IRVINE CA --VACANT--	92618 RECREATIONAL		000			20.00A	9,000 839	20,488 20,488	07/26/90 294333 14,000F Y
0631-173-20	HOLMES, ROBERT E ETAL 19388 WYLER RD+LAKE MATTHEWS CA --VACANT--	92370 RECREATIONAL		000			10.00A	485	5,297 5,297	06/19/97 217035 NOSTRAM
0631-173-21	HOLMES, ROBERT E & ELON G 19388 WYLER RD+LAKE MATTHEWS CA --VACANT--	92370 RECREATIONAL		000			10.00A	485	5,297	NOSTRAM
0631-173-22	RASMUSSEN, RICHARD G & DORA G 22315 BLACK BEAUTY TRL+WILDOMAR CA --VACANT--	92595 RECREATIONAL		000			20.00A	576	20,488 20,488	07/17/90 278832 18,500F
0631-173-23	OLSEN, FRANKLIN D 421 HOLMWOOD DR+NEWPORT BEACH CA --VACANT--	92663 RECREATIONAL		000			40.00A	25,200 1,136	39,869 39,869	05/24/91 178154 36,000F
0631-173-24	COURTNEY, EDWARD C & O INVESTME 22074 DE BERRY ST+GRAND TERRACE CA --VACANT--	92313 RECREATIONAL		000			20.00A	772	15,470 15,470	04/04/97 119349 NOSTRAM
0631-173-25	GOTTI, JOE W & PATRICIA A 2306 W HETZEL RD+IMPERIAL CA --VACANT--	92251 RECREATIONAL		000			20.00A	825	19,465 19,465	09/20/82 187337 10,750P Y
0631-173-26	NORRIS, KAREN R 1056 HEATHER DR+VISTA CA --VACANT--	92084 RECREATIONAL		000			32.48A	989	17,728	NOSTRAM
0631-173-27	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL		000			7.50A	167	3,930 3,930	04/24/92 174464 NOSTRAM
0631-173-28	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL		000			10.00A	223	5,297 5,297	04/24/92 174465 NOSTRAM
0631-173-29	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL		000			20.00A	223	5,297 5,297	04/24/92 174465 NOSTRAM Y

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0631-173-30	TABOR, HABEL V TR 3630 MENTONE AVE+LOS ANGELES CA --VACANT--	90034 RECREATIONAL N 1/2 NE 1/4 SE 1/4 SEC 27 TP 2N R 6E 20 AC		000			20.00A	422	9,011 9,011	04/27/92 4465 NOSTRAN
0631-181-02	SCOEFFEL, GEORGE J TR 10649 MEADOW GLEN WAY+ESCONDIDO CA --VACANT--	92026 RECREATIONAL N 1/2 SW 1/4 SW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5 AC		000			5.00A	63	2,513 2,513	02/17/95 51070 NOSTRAN
0631-181-03	MURPHY, MELODY K ETAL & GEORGE P 1940 MESA WAY+SANTA ROSA CA --VACANT--	95407 RECREATIONAL S 1/2 NW 1/4 SW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5 AC		000			5.00A	79	3,456 3,456	02/10/89 49440 NOSTRAN
0631-181-04	KOLIBAS FAMILY L 2811 LEXINGTON AVE+EL MONTE CA --RECREATION CABIN--	91733 RECREATIONAL N 1/2 NW 1/4 SW 1/4 SW 1/4 SEC 22 TP 2N R 6E EX MI		600			480 5.00A 1	199	3,798 2,864 6,662	05/09/97 166586 NOSTRAN
0631-181-05	STOCKMAN, EARL D 14808 STANTON AVE+LA MIRADA CA --RECREATION CABIN--	90638 RECREATIONAL S 1/2 SW 1/4 NW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5. AC		600			408 5.00A 1	273	6,485 4,542 11,227	NOSTRAN
0631-181-06	GOVERNMENT LAND #FILE+ --VACANT--	INSTITUTE/ANNUAL EXMPT S 1/2 NW 1/4 NW 1/4 SW 1/4 AND N 1/2 SW 1/4 NW 1/4		000						NOSTRAN
0631-181-07	DURBIN, MARY A & HENRY E 170 SANTA CLARA CIR+HEMET CA --VACANT--	92543 RECREATIONAL N 1/2 NW 1/4 NW 1/4 SW 1/4 SEC 22 TP 2N R 6E EX MI		000			5.00A	84	3,798 3,798	NOSTRAN
0631-181-09	DROHEN, JAMES C & FLORA 235 S ROBIN RD+WEST COVINA CA --RECREATION CABIN--	91791 RECREATIONAL S 1/2 NE 1/4 NW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5. AC		600			400 5.00A 1	203	3,798 3,127 6,925	NOSTRAN
0631-181-10	PLOUFFE, HAROLD D 206 E 185TH ST+CARSON CA --RECREATION CABIN--	90746 RECREATIONAL N 1/2 SE 1/4 NW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5. AC		600			400 5.00A 1	12,000 302	7,601 5,427 13,028	11/15/91 435754 12,000P
0631-181-11	REINHARD, ROBERT R & BETTY J 3638 NW OLEANDER PL+CORVALLIS OR --VACANT--	97330 RECREATIONAL S 1/2 NE 1/4 SW 1/4 SW 1/4 SEC 22 TP 2N R 6E 5 AC		000			5.00A	71	2,994 2,994	NOSTRAN
0631-181-12	HANKINS, EVERETT W TR 2534 BATSON AVE+ROWLAND HEIGHTS CA --RECREATION CABIN--	91748 RECREATIONAL N 1/2 SE 1/4 SW 1/4 SW 1/4 SEC 22 TP 2N R 6E EX NW		600			280 5.00A 1	174	2,565 2,565 5,130	01/26/94 33317 NOSTRAN

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX H

NEWSPAPERS/JOURNALS

(Not Used)

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX I

INTERVIEWS

APPENDIX I

INTERVIEWS

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- I-1 Conversation Record with Mr. Bill Myers and Mr. Bob Hall, San Bernardino County Sheriff's Department, and SI team, 22 January 1998
- I-2 Conversation Record with Mr. Jay Conway, local resident, and SI team, 27 January 1998
- I-3 Conversation Record with CPT Grimes, 1SG Fortney and SFC Woods, 759th EOD, and SI team, 28 January 1998
- I-4 Conversation Record with MSGT Hepner and TSGT Glinka, 95th CEG/CED, and SI team, 29 January 1998
- I-5 Conversation Record with Glenn Brooks, former airman, and SI team, 2 March 1998
- I-6 Conversation Record with Mr. Owen Cooper, former bombardier cadet, and SI team, 4 March 1998

CONVERSATION RECORD	TIME 0930 PST	DATE 22 January 1998
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TYPE

VISIT CONFERENCE

TELEPHONE
 INCOMING
 OUTGOING

NAME OF PERSON CONTACT WITH Bill Myers Bob Hall	ORGANIZATION San Bernardino Sheriff's Department	TELEPHONE NO. (401) 789-8947 (909) 397-3598/3606/3601
--	--	---

SUBJECT Victorville Precision Bombing Ranges

SUMMARY Messrs. Hall and Myers are special detectives assigned to the San Bernardino Sheriff's Bomb Squad. Members of the assessment team met with the detectives at the Sheriff's Department. The detectives were shown a map of the Victorville bomb targets and were asked if any they had any knowledge of ordnance being discovered at these sites.

They explained that they receive over 200 calls per year regarding military munitions due to the large military presence in San Bernardino County. Most the munitions recovered have been moved a number of times before they are notified, so there is no way of determining the origin location of the ordnance.


Mr. Myers stated that a 5-inch rocket had been recovered in the vicinity of bomb target 6, 7 or 8. He was unable to identify which target contained the rocket, but he recalled seeing a number of fins sticking out of the ground.

He stated that a 100-lb. practice bomb was recovered from target 14 about seven years ago.

Mr. Myers stated that he had hunted in the area surrounding target N-3, but he did not notice any ordnance in that area.

ACTION REQUIRED

ACTION TAKEN

NAME OF PERSON DOCUMENTING CONVERSATION George Ofslager	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309) 794-6024
SIGNATURE 	TITLE QA Spec (Ammo)	DATE 22 January 1998

CONVERSATION RECORD	TIME 1100	DATE Tue 27 Jan 1998
----------------------------	---------------------	--------------------------------

TYPE

VISIT CONFERENCE

TELEPHONE
INCOMING
OUTGOING

NAME OF PERSON CONTACT WITH Jay Conway	ORGANIZATION Via Maria Road Landers, CA	TELEPHONE NO.
--	--	----------------------

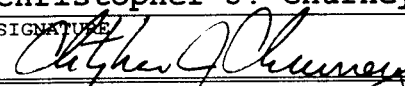
SUBJECT
Victorville Precision Bomb Target #19

SUMMARY

Mr. Conway is a local resident who has owned property there for 28 years. He has been riding motorcycles in the area since he was 12 years old. Mr. Conway was collecting practice bomb debris on the site while the SI team was conducting the site inspection. Mr. Conway stated he had been gathering the debris for a few weeks to sell for scrap. The SI team informed Mr. Conway that the practice bomb debris could possibly contain a spotting charge and that spotting charge could be potentially dangerous. Mr. Conway acknowledged the SI team's warning and stated that he has never found any debris with an intact spotting charge. He also stated that the debris seemed to be more heavily concentrated east of the target center. Lastly, Mr. Conway stated that he had no knowledge of any incidents involving OE ever occurring at the Victorville PBR #19.

ACTION REQUIRED

ACTION TAKEN

NAME OF PERSON DOCUMENTING COVERSATION Christopher J. Churney	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309) 782-1491
SIGNATURE 	TITLE Chem Engineer	DATE 28 Jan 1998

CONVERSATION RECORD	TIME 0930	DATE Wed 28 Jan 1998
----------------------------	---------------------	--------------------------------

TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	TELEPHONE INCOMING OUTGOING

NAME OF PERSON CONTACT WITH CPT Grimes, 1SG Fortney SFC Woods	ORGANIZATION 759 th EOD Ft. Irwin, CA	TELEPHONE NO. (760)380-4092
---	--	--------------------------------

SUBJECT
Victorville Precision Bomb Targets

SUMMARY

CPT Grimes, 1SG Fortney and SFC Woods were questioned by the SI team whether they had any specific knowledge of OE presence at any of the Victorville PBRs. Neither of the 3 could recall the 759th responding to any OE incidents in the Victorville area. They had no knowledge any OE being discovered on any of the PBRs. SFC Woods referred the SI team to B.J. Allen, a former EOD in the COE San Diego Area Office, and the EODs at Edwards AFB.

ACTION REQUIRED

ACTION TAKEN

NAME OF PERSON DOCUMENTING COVERSATION Christopher J. Churney	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309) 782-1491
SIGNATURE <i>Christopher J. Churney</i>	TITLE Chem Engineer	DATE 28 Jan 1998

CONVERSATION RECORD	TIME 0845	DATE Thu 29 Jan 1998
----------------------------	---------------------	--------------------------------

TYPE

VISIT CONFERENCE

TELEPHONE
INCOMING
OUTGOING

NAME OF PERSON CONTACT WITH MSGT Hepner TSGT Glinka	ORGANIZATION 95 th CEG/CED Edwards AFB, CA	TELEPHONE NO. (805)277-2162
---	---	--------------------------------

SUBJECT
Victorville Precision Bomb Targets

SUMMARY

MSGT Hepner and TSGT Glinka have been with the 95th CEG/CED for a few months and 5 ½ years respectively. Although they have responded to OE incidents at George AFB (formerly Victorville AAF), neither could recall ever responding to OE incidents at any of the Victorville PBRs. Neither had any knowledge of any OE incidents occurring at the Victorville PBRs. Both stated the EODs at Fort Irwin would normally respond to any incidents in the area of the PBRs.

ACTION REQUIRED

ACTION TAKEN

NAME OF PERSON DOCUMENTING COVERSATION Christopher J. Churney	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309)782-1491
SIGNATURE <i>Christopher J. Churney</i>	TITLE Chem Engineer	DATE 29 Jan 1998

CONVERSATION RECORD		TIME 11:00 AM	DATE 2 March 1998
TYPE			
<input type="checkbox"/> VISIT		<input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/>	TELEPHONE
			INCOMING
		X	OUTGOING
NAME OF PERSON CONTACTED Glenn Brooks	ORGANIZATION Former Airman	TELEPHONE NO. (405) 732-8877	
SUBJECT Victorville PBRs			

SUMMARY:

Mr. Brooks said that he was part of the initial enlisted cadre and arrived at Victorville AAF in September of 1941. He was in the aircraft maintenance branch and remembered working on the Beechcraft AT-7 and AT-11 as well as the Lockheed P-38. He said the P-38s arrived straight from the plant in early 1942. The P-38 pilots carried both .50 caliber and 20mm machine guns, but these were fired only at the Muroc Dry Lake range near what is now Edwards AFB.

He knew specifically of 4 Victorville AAF bombing ranges that were in dry lakes. He said there were large circles around the target center to assist the bombardier cadets. Mr. Brooks said the AT-11s were used for this training, and all they ever dropped were 100 lb sand filled bombs with a small smoke charge. As a maintenance man, he used to go up on some of the training missions. He was certain there were never any HE bombs or any kinds of rockets used when he was there. He added that the 100 lb practice bombs were stored out in the open, and that small arms and spotting charges were the only items stored in one small igloo on the AAF.

Mr. Brooks left Victorville AAF as a 2LT in April of 1943 and went on to spend an additional 30 years in the Air Force.

ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION Ronald Plante	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309) 782-1481
SIGNATURE <i>Ronald Plante</i>	TITLE QASAS	DATE 2 March 1998

CONVERSATION RECORD		TIME 1:00 PM	DATE 4 March 1998						
TYPE									
<input type="checkbox"/> VISIT		<input type="checkbox"/> CONFERENCE							
		<table border="1"> <tr> <td></td> <td>TELEPHONE</td> </tr> <tr> <td></td> <td>INCOMING</td> </tr> <tr> <td>X</td> <td>OUTGOING</td> </tr> </table>			TELEPHONE		INCOMING	X	OUTGOING
	TELEPHONE								
	INCOMING								
X	OUTGOING								
NAME OF PERSON CONTACTED Owen Cooper		ORGANIZATION Former Bombardier Cadet	TELEPHONE NO. (410) 747-5991						
SUBJECT Victorville PBRs									

SUMMARY:

Mr. Cooper said that he joined the Army Air Forces as an aviation cadet but washed out of flight school and then trained as a bombardier. He was in class 43-3 at Victorville Army Air Field, graduating in March of 1943. He trained in the AT-11 and flew practice bombing missions to ranges all around the Victorville area, including some on the dry lake bed of Lake Lucerne (PBR #6). Mr. Cooper said all he ever dropped were 100 pound sand filled bombs with a spotting charge. He never saw an HE bomb at Victorville and was unaware of any other cadets dropping HE bombs. He recalled that the standard procedure was to drop one practice bomb on a target, and then follow specific compass headings to other targets to drop additional practice bombs one at a time.

After completing bombardier training, Mr. Cooper joined a B-17 crew for further training in Utah and eventually flew missions over Germany as a lead bombardier with the 91st Bomb Group.

ACTION REQUIRED None		
NAME OF PERSON DOCUMENTING CONVERSATION Ronald Plante	ORGANIZATION CEMVR-ED-DO	TELEPHONE NUMBER (309) 782-1481
SIGNATURE <i>Ronald Plante</i>	TITLE QASAS	DATE 4 March 1998

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX J

PRESENT SITE PHOTOGRAPHS

APPENDIX J

PRESENT SITE PHOTOGRAPHS

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- J-2 Area A: Stake and survey marker at target center
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- J-4 Area A: Looking north from target center
- J-5 Area A: Looking east from target center
- J-6 Area A: Looking south from target center
- J-7 Area A: Looking west from target center
- J-8 Area A: East-west crosshair of bomb target
- J-9 Area A: Looking north from first target ring
- J-10 Area A: Looking south from first target ring
- J-11 Area A: Looking north from second target ring
- J-12 Area A: Looking south from second target ring
- J-13 Area A: Looking north from third target ring
- J-14 Area A: Looking south from third target ring
- J-15 Area A: North-south crosshair of bomb target
- J-16 Area A: M38A2 100 pound practice bomb debris
- J-17 Area A: M38A2 100 pound practice bomb debris
- J-18 Area A: M47A2 100 pound chemical bomb (metal parts) debris
- J-19 Area A: M38A2 100 pound practice bomb debris
- J-20 Area A: Cap to M1A1 spotting charge
- J-21 Area A: M38A2 100 pound practice bomb debris
- J-22 Area A: Large pile of practice bomb debris
- J-23 Area A: Large pile of practice bomb debris

- J-24 Area A: Mk15 100 pound practice bomb debris
- J-25 Area A: Large crater east of bomb target
- J-26 Area A: Band to Mk15 100 pound practice bomb
- J-27 Area A: M38A2 100 pound practice bomb debris
- J-28 Area A: Partially buried unknown practice bomb debris
- J-29 Area A: M47A2 100 pound chemical bomb (metal parts) debris
- J-30 Area A: M47A2 100 pound chemical bomb (metal parts) debris
- J-31 Area A: Unknown type 100 pound practice bomb debris
- J-32 Truckload of 100 pound practice bomb debris
- J-33 Practice bomb debris in yard of local resident



J-1 Area A: White stones indicating target center; see plate 6.



J-2 Area A: Stake and survey marker at target center; looking southeast; see plate 6.



J-3 Area A: Close-up view of survey marker at target center, see plate 6.



J-4 Area A: View of range from target center; looking north; see plate 6.



J-5 Area A: View of range from target center; looking east; see plate 6.



J-6 Area A: View of range from target center; looking south; see plate 6.



J-7 Area A: View of range from target center; looking west; see plate 6..



J-8 Area A: East-west crosshair of bomb target; looking west; see plate 6.



J-9 Area A: First target ring 100 feet from target center; looking north; see plate 6.



J-10 Area A: First target ring 100 feet east of target center; looking south; see plate 6.



J-11 Area A: Second target ring 200 feet east of target center; looking north; see plate 6.



J-12 Area A: Second target ring 200 feet east of target center; looking south; see plate 6.



J-15 Area A: North-south crosshair looking north from 300 feet south of target center; see plate 6.



J-16 Area A: M38A2 100 pound practice bomb debris 15-20 yards northeast of target center; see plate 6.



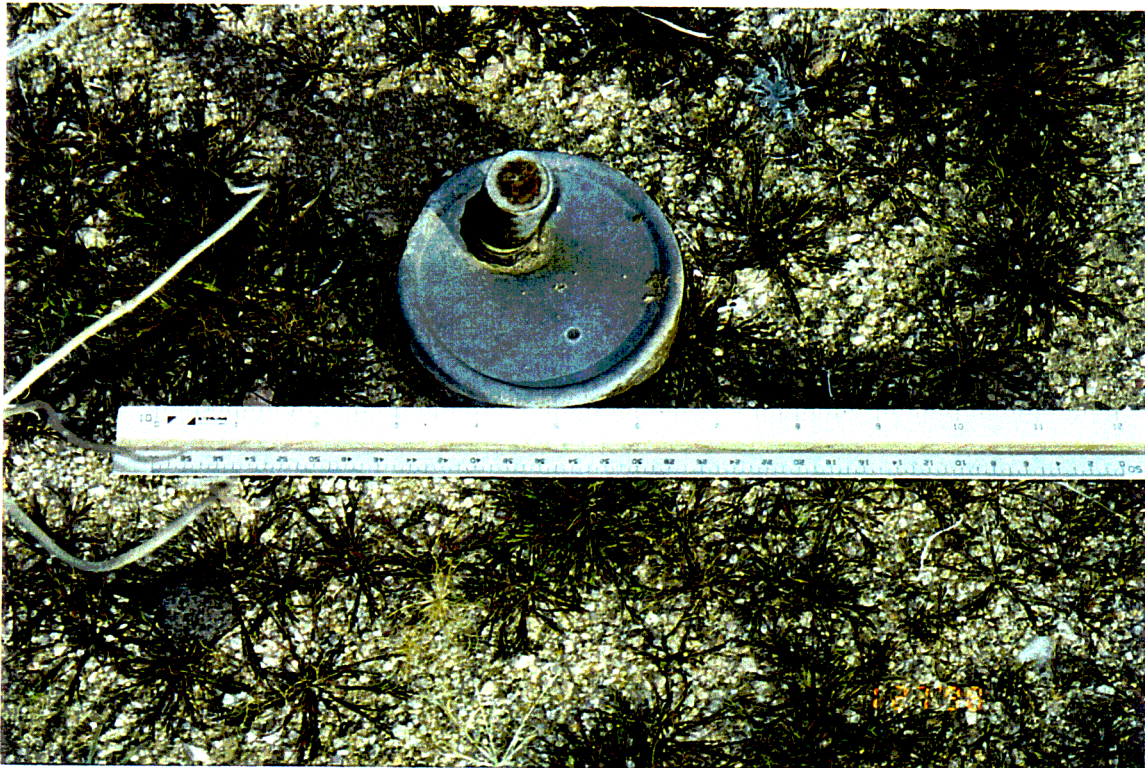
J-17 Area A: M38A2 100 pound practice bomb debris 15 yards east of target center; see plate 6.



J-18 Area A: M47A2 100 pound chemical bomb (metal parts) debris; used as practice bomb; 25-30 yards east of target center; see plate 6.



J-19 Area A: M38A2 100 pound practice bomb debris about 100 feet northeast of target center; see plate 6.



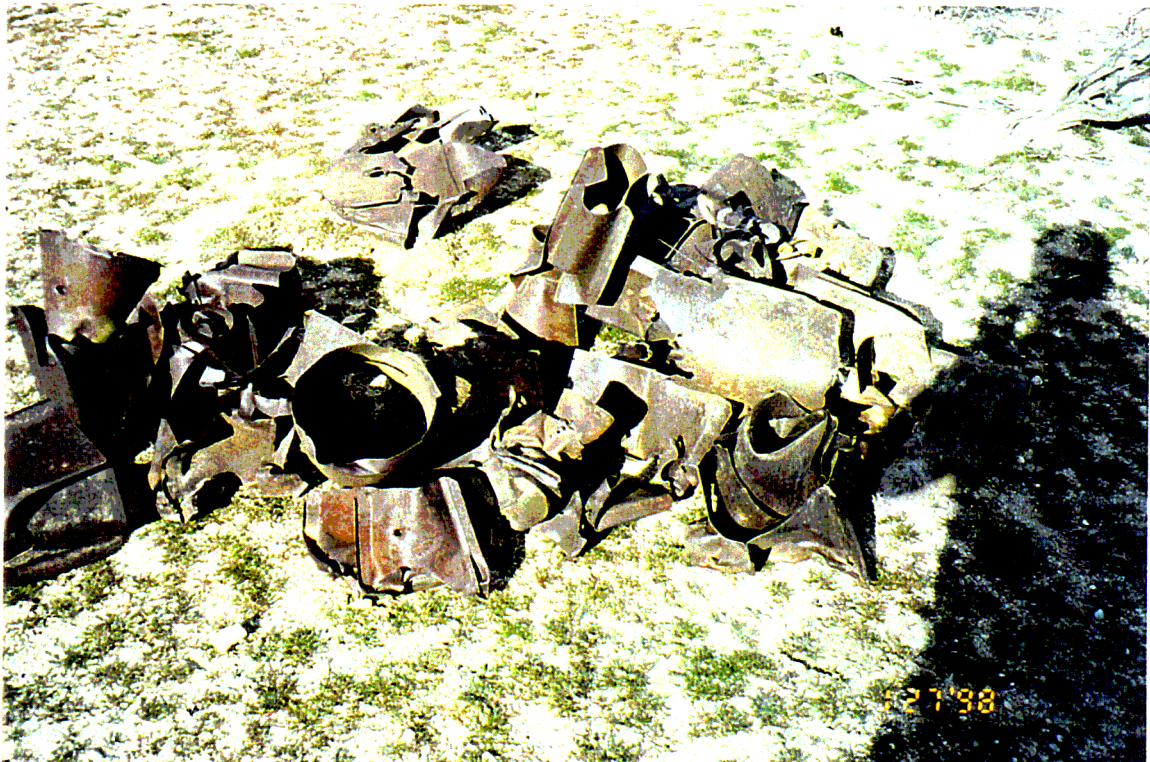
J-20 Area A: Cap to M1A1 spotting charge 400 feet east northeast of target center; see plate 6.



J-21 Area A: M38A2 100 pound practice bomb debris 600 feet east northeast of target center; see plate 5.



J-22 Area A: Pile of various 100 pound practice bomb debris 900 feet east northeast of target center; see plate 6.



J-23 Area A: Pile of various 100 pound practice bomb debris 900 feet east northeast of target center; see plate 6.



J-24 Area A: Mk15 100 pound practice bomb debris in debris pile; see plate 6.



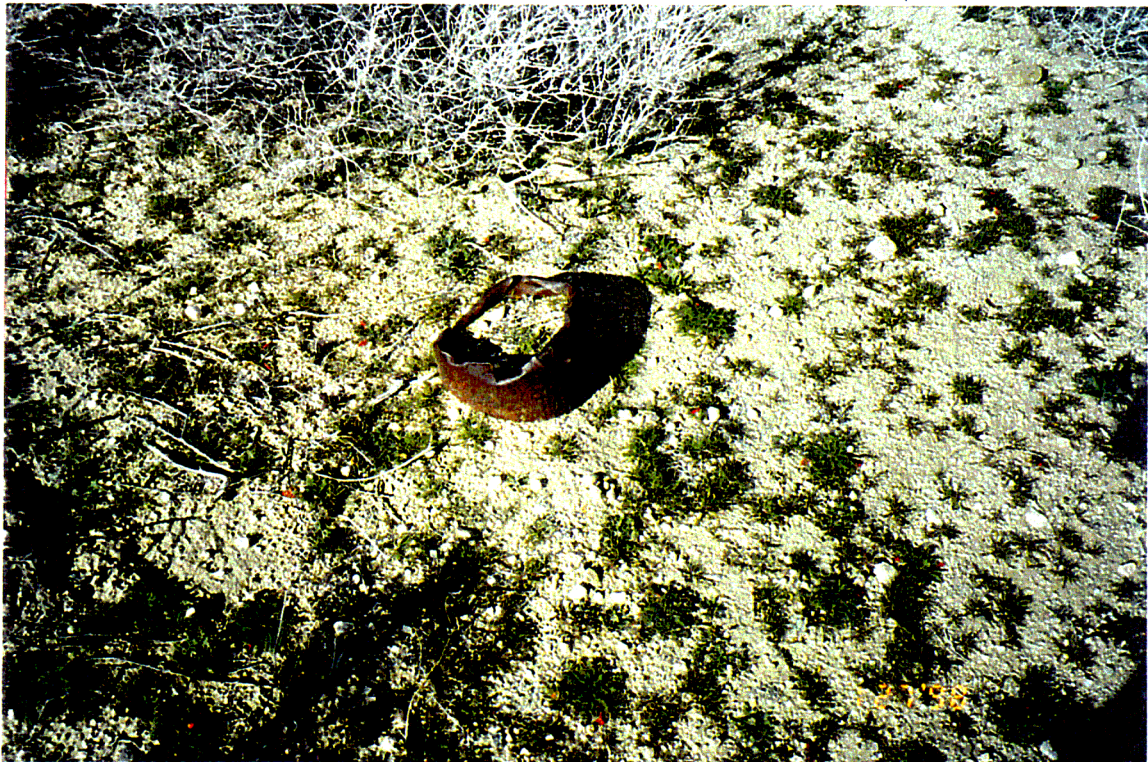
J-25 Area A: Large crater about 1,350 feet east northeast of target center; looking north; see plate 6.



J-26 Area A: Band to Mk15 100 pound practice bomb located near large crater; see plate 6.



J-27 Area A: M38A2 practice bomb debris 450 feet north of target center; see plate 6.



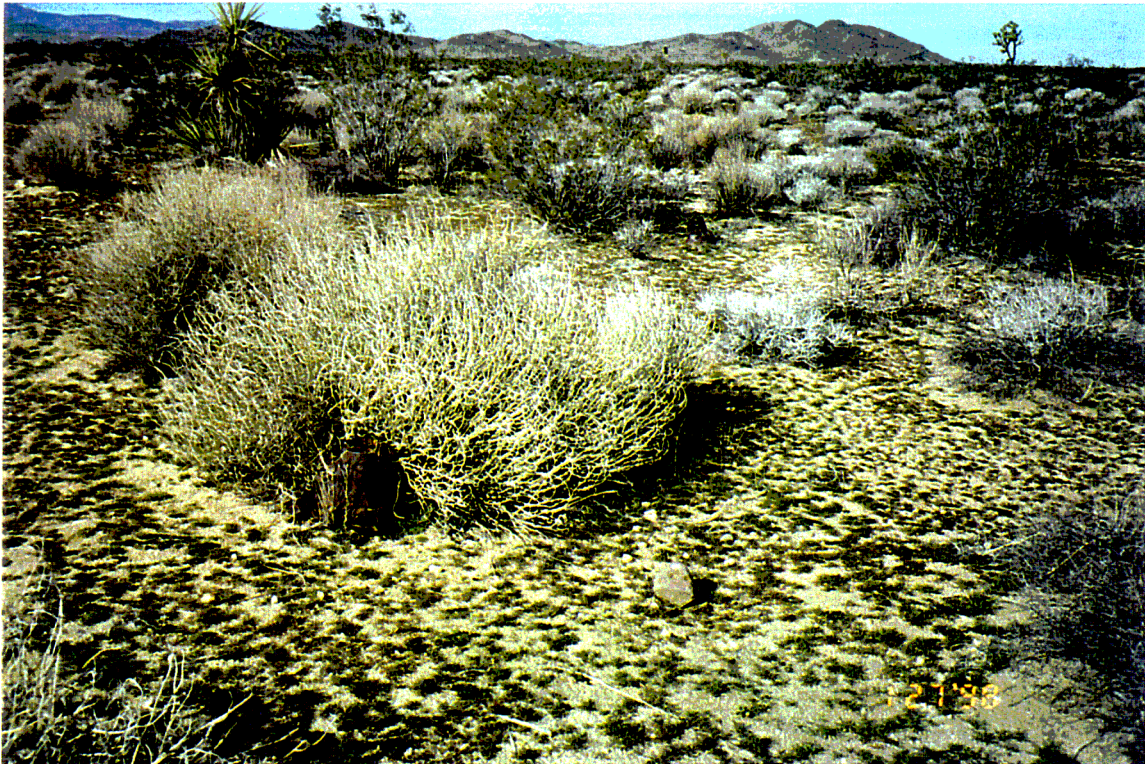
J-28 Area A: 100 pound practice bomb debris 600 feet north of target center; see plate 6.



J-29 Area A: M47A2 100 pound chemical bomb (metal parts) debris; used as practice bomb; 950 feet north of target center; see plate 6.



J-30 Area A: M47A2 100 pound chemical bomb (metal parts) debris; used as practice bomb; 650 feet south southwest of target center; see plate 6.



J-31 Area A: 100 pound practice bomb debris about 1,300 feet south of target center; see plate 6.



J-32 Truckload of 100 pound practice bomb debris collected by local resident to sell for scrap.



J-33 Practice bomb debris in yard of local resident living north of the site.

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

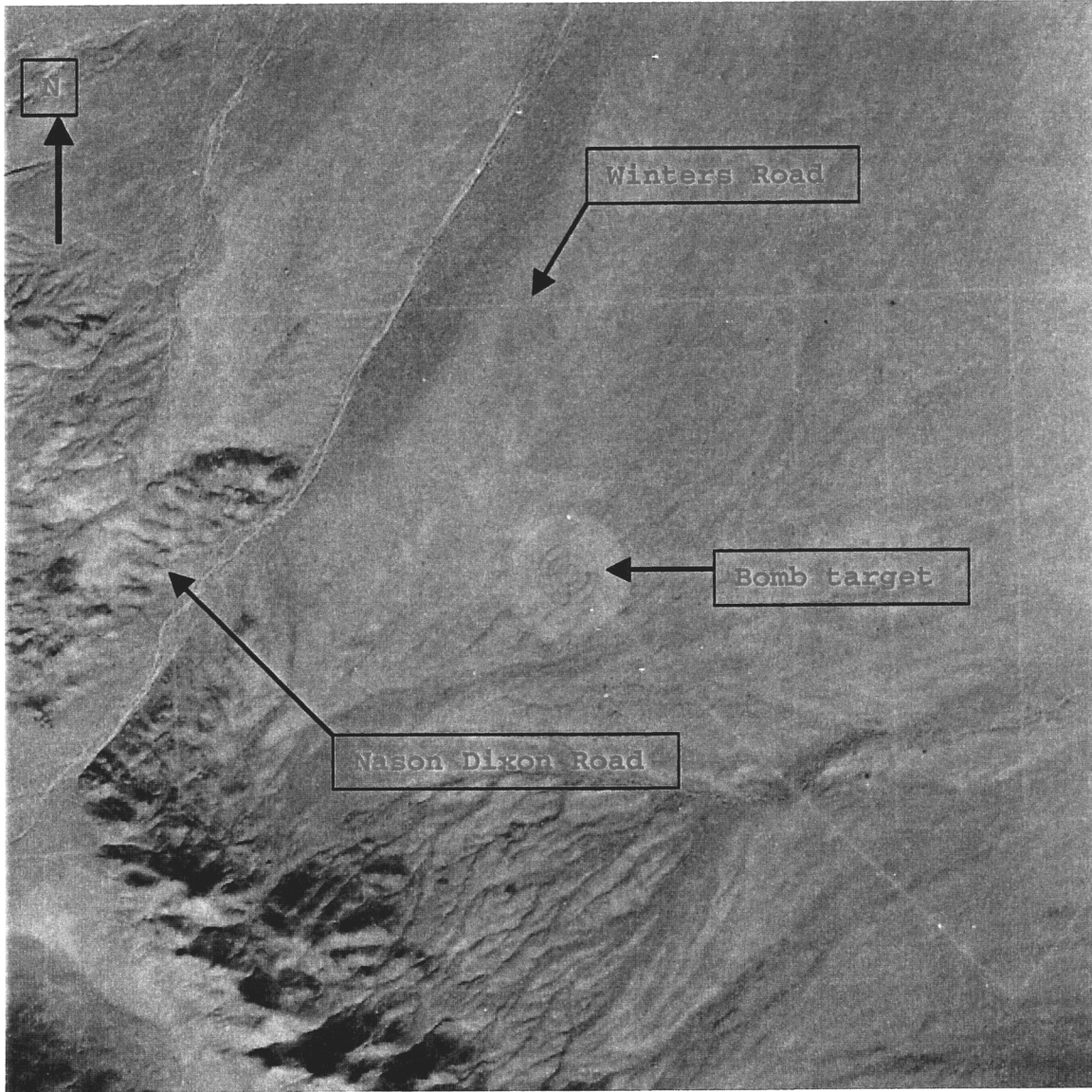
APPENDIX K

HISTORICAL PHOTOGRAPHS

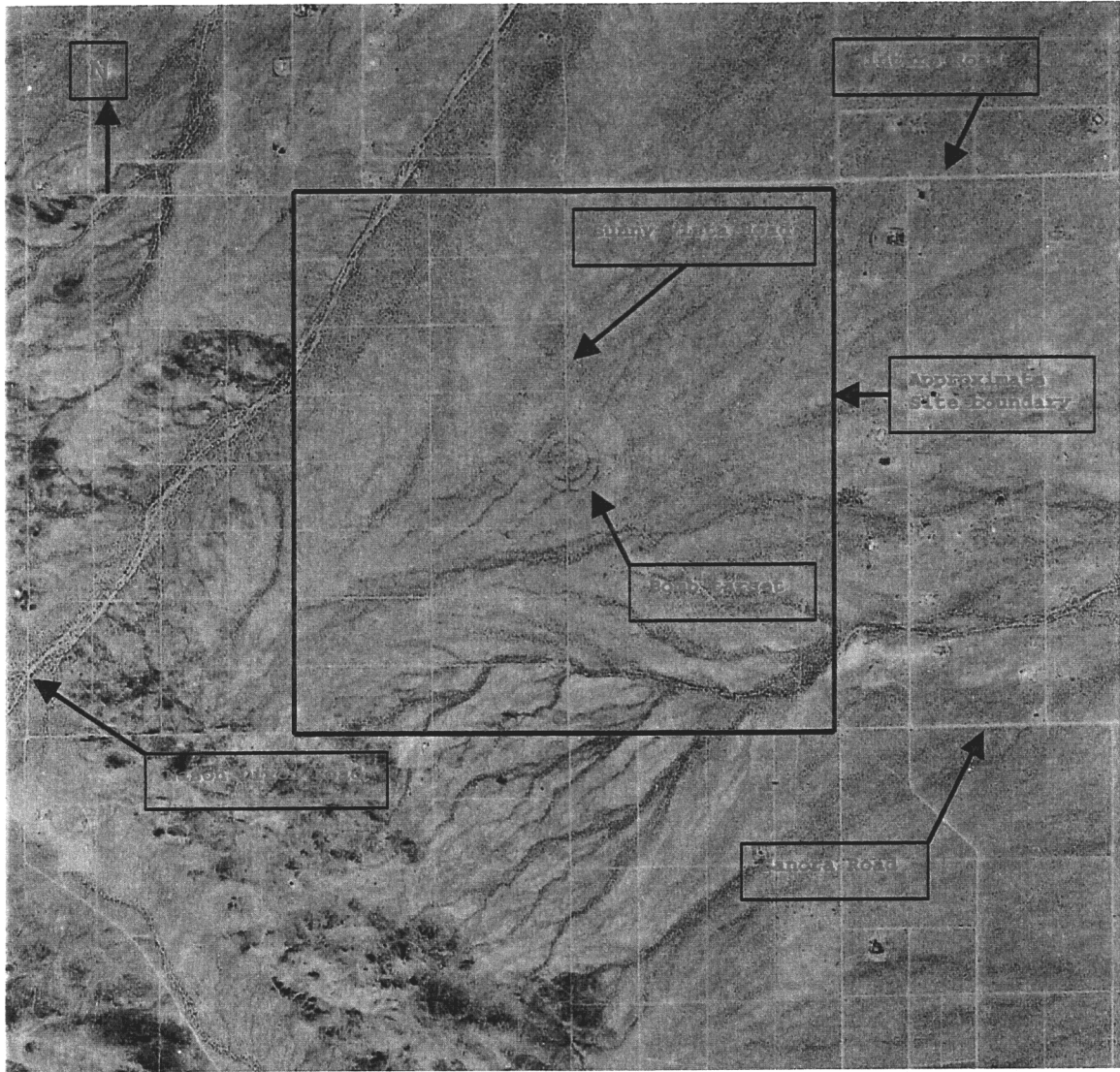
APPENDIX K
HISTORICAL PHOTOGRAPHS

Table of Contents

- K-1 Aerial photo close-up, 16 December 1954 (B-43)
K-2 Aerial photo close-up, 25 July 1989 (B-44)



16 December 1954 aerial photo of Victorville PBR #19.



25 July 1989 aerial photo of Victorville PBR #19.

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX L

REFERENCE MAPS/DRAWINGS

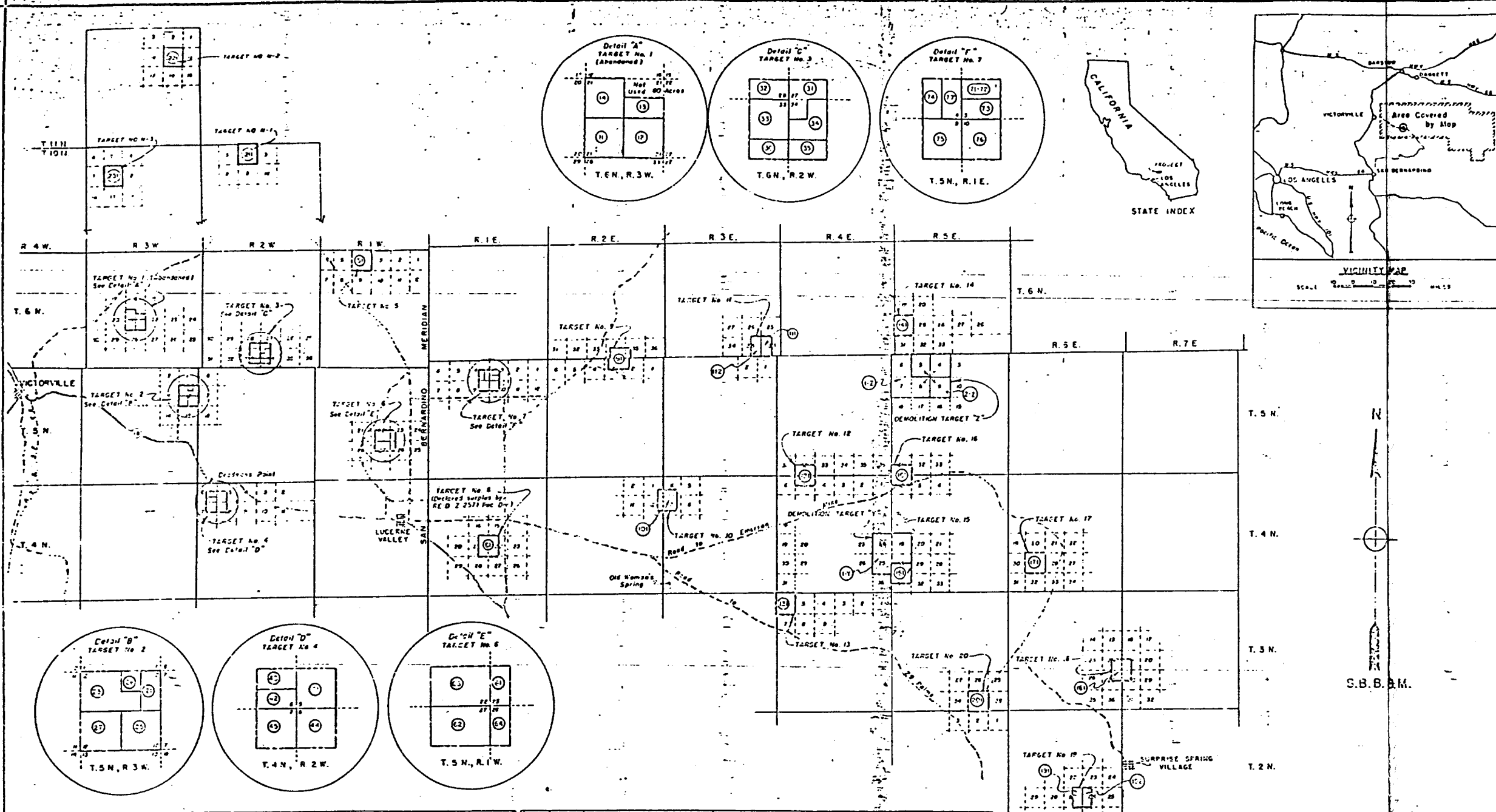
APPENDIX L

REFERENCE MAPS/DRAWINGS

Table of Contents

L-1 Map, Real Estate Victorville Army Air Field Bombing Ranges, 19 September 1945 (B-45)

L-2 Map, Real Estate Victorville Precision Bombing Range No. 19, 12 December 1947 (B-46)



FINAL PROJECT OWNERSHIP MAP
 STATE CALIFORNIA
 COUNTY SAN BERNARDINO
 DIVISION PACIFIC
 DISTRICT LOS ANGELES
 SERVICE COMMAND NINTH
 USING AGENCY
 5-55 MILES E. OF VICTORVILLE
 18-45 MILES S. OF BARSTOW

TRANSPORTATION FACILITIES
 A, T. & S.F. RAILROAD
 18 STATE ROAD
 66 FEDERAL ROAD
 AIRLINE

LAND AREA
 ACRES OWNED BY W.D.
 ACRES LEASED BY W.D.
 ACRES LEASED FROM W.D.
 ACRES TRANSFERRED TO W.D.
 ACRES DONATED TO W.D.

DISPOSALS
 ACRES SOLD
 ACRES TRANSFERRED
 ACRES EXCHANGED
 ACRES OTHERWISE

LEGEND
 BOUNDARY LINE
 STATE OR PROVINCE LINE
 COUNTY LINE
 CIVIL DISTRICT PRECINCT
 LAND GRANT LINE
 CITY, VILLAGE, OR BOROUGH
 CEMETERY, SMALL PARK, ETC.
 TOWNSHIP LINE
 SECTION LINE

Scale
 1 inch = 2 1/2 miles

TRACT NO.	TARGET NO.	VENDOR/LESSOR	ACREAGE	RECORD DATA / LEASE NO.
			FEES	
11		CARRIE STILES	160	Lease no. W. 04 1939 5227 (repealed)
12		ARBE, C. F. NICHOLS ET UX	160	W. 04 1939 5227 (repealed)
13		LUCILLE L. HURD ET UX	160	W. 04 1939 5227 (repealed)
14		PUBLIC DOMAIN	160	Public Land Order no. 125 dated 20 May 1943
21		ELMER MITCHELL	160	Deed Taking filed 22 December 1942
22		WALTER L. CARMON	160	Deed Taking filed 22 December 1942
23		G. L. JAMES ET UX	160	Deed Taking filed 22 December 1942
24		PUBLIC DOMAIN	40	Public Land Order no. 125 dated 20 May 1943
27		PUBLIC DOMAIN	160	Public Land Order no. 125 dated 20 May 1943
31		RUTH WARE HILSON	120	Public Land Order no. 125 dated 20 May 1943
32		GEORGE & M. SHIELD	80	Public Land Order no. 125 dated 20 May 1943
33		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
34		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
35		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
36		PUBLIC DOMAIN	80	Public Land Order no. 125 dated 20 May 1943
41		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
42		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
43		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
44		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
45		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
46		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
47		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
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49		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
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51		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
52		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
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59		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943
60		WILLIAM L. SISCO	80	Public Land Order no. 125 dated 20 May 1943

TRACT NO.	TARGET NO.	VENDOR/LESSOR	ACREAGE	RECORD DATA / LEASE NO.
			FEES	
81		PUBLIC DOMAIN	640	Public Land Order no. 125 dated 20 May 1943
91		PUBLIC DOMAIN	657.28	Public Land Order no. 125 dated 20 May 1943
101		PUBLIC DOMAIN	649.54	Public Land Order no. 125 dated 20 May 1943
111		STATE OF CALIFORNIA	320	Lease no. W. 04 1939 5227
121		PUBLIC DOMAIN	320	Public Land Order no. 125 dated 20 May 1943
131		PUBLIC DOMAIN	617.12	Public Land Order no. 125 dated 20 May 1943
141		PUBLIC DOMAIN	636.30	Public Land Order no. 125 dated 20 May 1943
151		PUBLIC DOMAIN	640.46	Public Land Order no. 125 dated 20 May 1943
161		PUBLIC DOMAIN	640.1	no record of transfer
171		PUBLIC DOMAIN	640.1	Public Land Order no. 125 dated 20 May 1943
181		PUBLIC DOMAIN	640.	Public Land Order no. 125 dated 20 May 1943
191		SOUTHERN PACIFIC LAND CO.	320	Deed Taking filed 11 May 1943
201		PUBLIC DOMAIN	320	Public Land Order no. 125 dated 20 May 1943
211		PUBLIC DOMAIN	640.	no record of transfer
221		PUBLIC DOMAIN	2240.1	no record of transfer
231		PUBLIC DOMAIN	2240.1	no record of transfer
241		SOUTHERN PACIFIC LAND CO.	2242.95	no record of transfer
251		PUBLIC DOMAIN	1448.12	Lease no. W. 04 1939 5227
261		PUBLIC DOMAIN	1448.12	Lease no. W. 04 1939 5227

TRANSFER DATA
 Withdrawn for use of War Department subject to
 void rights by Public Land Order no. 125 dated 5/20/43
 Valid rights - fee accrued by W.D. 2600.00
 Justify Target no. 1 shown as leased 400.00
 Justify Target no. 2 shown as leased 80.00
 Leases - Tracts 61 & 111 400.00
 Total of valid rights 3480.00
 Public Domain transferred to W.D. by P.L.O. no. 125 3480.00
 Public Domain in use - no record of transfer
 Total Public Domain in use by War Department 3480.00

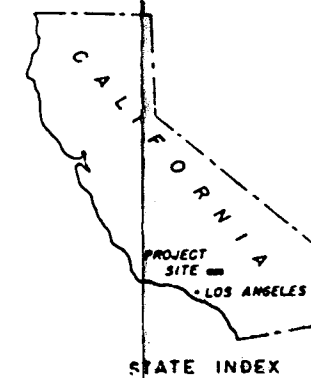
DIRECTIVE DATA
 Directive no. RE-D 1554 dated 4 Sept 1942 20 to Targets 2-15 Incls. 6 & 17-19 Incls.
 RE-D 4199 27 Nov. 1944 amends above directive to revert title to Tract 61
 in former owner and a curtesy in fee interest to leasehold interest
 RE-D 4199-A dated 11 June 1945 amends RE-D 1554 as to Tract 11 nullifying a
 leasehold interest accrued as for acquisition.

Subject to an easement to the public over the State and County Roads and highways. As to Tracts 40-45, 61, 62 & 191
 Reservations contained in Patents from the United States. Subject to any vested and accrued water rights for mining etc.
 and rights in ditches and reservoirs used in connection with water rights and/or a right of way or ditches or canals
 constructed by authority of the United States. As to all fee acquisition tracts.

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 Pacific Southwest Region

WAR DEPARTMENT, O.C.E.
 CONSTRUCTION DIVISION
 REAL ESTATE
 VICTORVILLE ARMY AIR FIELD
 BOMBING RANGES
 MILITARY RESERVATION
 RECOMMENDED DATE 13/5/43
 APPROVED DATE 13/5/43
 COMPILED J.C.P. TRACED J.C.P. CHECKED J.C.P.
 DATE BY REVISIONS APPROVED
 SHEETS 1 OF 1 DRAWING NO. 65-PP
 BLOCK B SCHEDULE-B

ACQUISITION TRACT REGISTER				
TRACT NO.	LAND OWNER	ACREAGE		REMARKS
		TRANS.	FEE	
A	DEPT. OF INTERIOR	320.00		PLD No 125 dated 20 May 1943
1	SOUTHERN PACIFIC LAND COMPANY		320.00	Formerly known as Tract 191 in L/T



FINAL PROJECT OWNERSHIP MAP
(TYPE OF MAP)
 STATE CALIFORNIA
 COUNTY SAN BERNARDINO
 DIVISION SOUTH PACIFIC
 DISTRICT LOS ANGELES
 SIXTH ARMY AREA
 USING AGENCY T.A.G.
 60.5 MILES SE OF BARSTOW
 59 MILES E OF VICTORVILLE

TRANSPORTATION FACILITIES
 A.T. & S.F. RAILROAD
 18 STATE ROAD
 66 FEDERAL ROAD
 AIRLINE

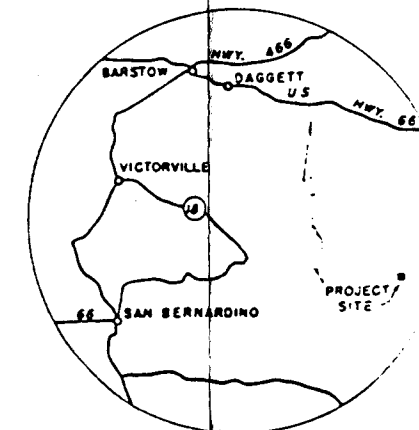
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 TOTAL ACRES ACQUIRED.....640.00
 ACRES OWNED BY W.D. 320.00
 ACRES LEASED BY W.D.
 ACRES LEASED FROM W.D.
 ACRES TRANSFERRED TO W.D. 320.00
 ACRES DONATED TO W.D.

DISPOSALS
 TOTAL ACRES DISPOSED OF.....640.00
 ACRES TRANSFERRED TO WAA 320.00
 ACRES FEE TO WAA 320.00
 ACRES OTHERWISE

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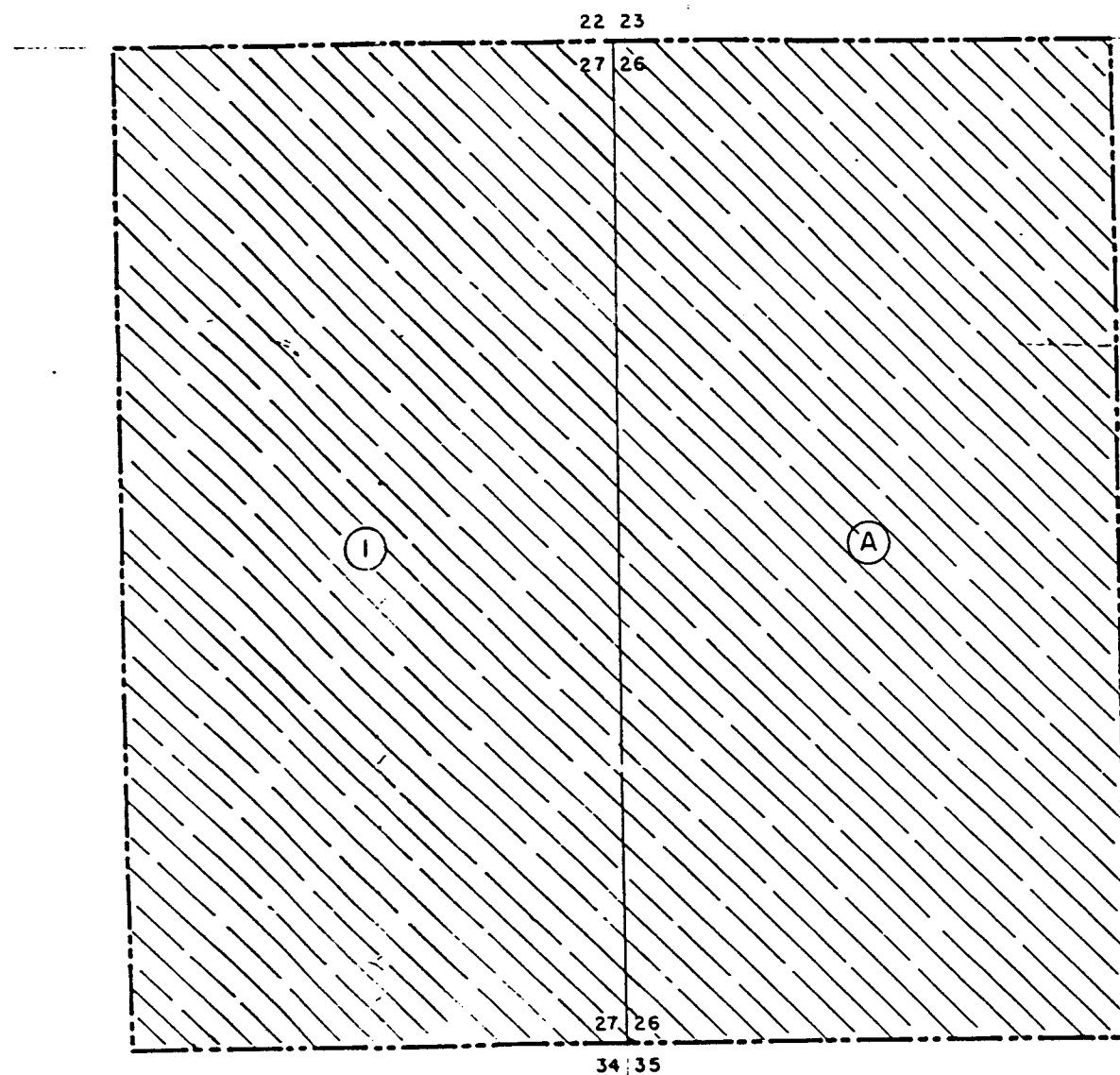
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STATE OR PROVIDENCE LINE	-----
COUNTY LINE	-----
CIVIL DISTRICT PRECINCT	-----
LAND GRANT LINE	-----
CITY, VILLAGE, OR BOROUGH	-----
CEMETERY, SMALL PARK, ETC.	-----
TOWNSHIP LINE	-----
SECTION LINE	-----

600 0 600 1200
 SCALE OF FEET



VICINITY MAP
 0 10 20 30
 SCALE IN MILES

T.2N., R.6E., S.8.88M



 ACCOUNTABILITY ASSUMED BY WAA ON 640.00 ACRES, 10 MAY 1948.

Reproduced from the original map by the
 National Archives and Records Administration
 Pacific Region (Laguna Niguel)

ACQUISITION	AUTHORIZATION
RED 1554	dated 2 Sept 1942

1884
AUDITED

DEPARTMENT OF THE ARMY
 CORP OF ENGINEERS

REAL ESTATE VICTORVILLE PRECISION BOMBING RANGE NO. 19
 MILITARY RESERVATION

RECOMMENDED BY *[Signature]* DATE 12-3-47
 CHIEF OF CADASTRAL SECTION
 APPLIED BY *[Signature]* DATE 7-12-47
 CHIEF, REAL ESTATE DIVISION

COMP BY *[Signature]* CHECKED *[Signature]*
 DATE 10-3-47

10-3-47
 DISPOSAL ADDED

1 SHEET OF DRAWING NO 55-F.P.-5

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX M

ARCHIVES SEARCH REPORT CORRESPONDENCE

(Not Used)

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX N

PROJECT AREA BIBLIOGRAPHY

**APPENDIX N
PROJECT AREA BIBLIOGRAPHY**

Document ID	Project Area(s)	OE Classification	Document Name	Document Date	Document Source	Description and Comments
1	A	Confirmed	Information Pertaining to Bombing Ranges	13-Feb-42	National Personnel Records Center	F-1: States 100 pound practice bombs to be used
1	B	Potential	Information Pertaining to Bombing Ranges	13-Feb-42	National Personnel Records Center	F-1: States 100 pound practice bombs to be used
2	A	Confirmed	Range Data	22-Jul-43	NARA II	F-3: Lists 10 hrs/day use; no night use
2	B	Potential	Range Data	22-Jul-43	NARA II	F-3: Lists 10 hrs/day use; no night use
3	A	Confirmed	Historical Record of VAAF 1 Jan 43 - 1 Mar 44	1-Mar-44	Air Force Historical Research Agency	F-5: Map shows flight patterns for bombing runs
3	B	Potential	Historical Record of VAAF 1 Jan 43 - 1 Mar 44	1-Mar-44	Air Force Historical Research Agency	F-5: Map shows flight patterns for bombing runs
4	A	Confirmed	Historical Record of VAAF 1 Nov - 31 Dec 44	1-Jan-45	Air Force Historical Research Agency	F-6: Ordnance supply list at VAAF
4	B	Potential	Historical Record of VAAF 1 Nov - 31 Dec 44	1-Jan-45	Air Force Historical Research Agency	F-6: Ordnance supply list at VAAF
5	A	Confirmed	Adverse Conditions at Bombing Target sites	31-Jan-47	NARA II	F-13: States site littered with bombs, fragments and duds
5	B	Potential	Adverse Conditions at Bombing Target sites	31-Jan-47	NARA II	F-13: States site littered with bombs, fragments and duds
6	A	Confirmed	Dudding Report	4-Feb-48	NARA - Pacific Southwest Reg	F-15: States surface and subsurface clearance performed; UXO blown in place; M38A2 practice bombs (duds) found
6	B	Potential	Dudding Report	4-Feb-48	NARA - Pacific Southwest Reg	F-15: States surface and subsurface clearance performed; UXO blown in place; M38A2 practice bombs (duds) found
7	A	Confirmed	Clearance Certificate	22-Mar-48	NARA - Pacific Region	F-16: States area is clear of explosive of dangerous material
7	B	Potential	Clearance Certificate	22-Mar-48	NARA - Pacific Region	F-16: States area is clear of explosive of dangerous material
8	A	Confirmed	Victorville PBR #19	28-Apr-48	NARA - Pacific Region	F-17: States site has numerous impact holes and is cluttered with expended bomb cases and frag
8	B	Potential	Victorville PBR #19	28-Apr-48	NARA - Pacific Region	F-17: States site has numerous impact holes and is cluttered with expended bomb cases and frag
9	A	Confirmed	Conversation Record	22-Jan-98	CEMVR-ED-DO	I-1: Interview with local Sheriff

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

APPENDIX O

REPORT DISTRIBUTION LIST

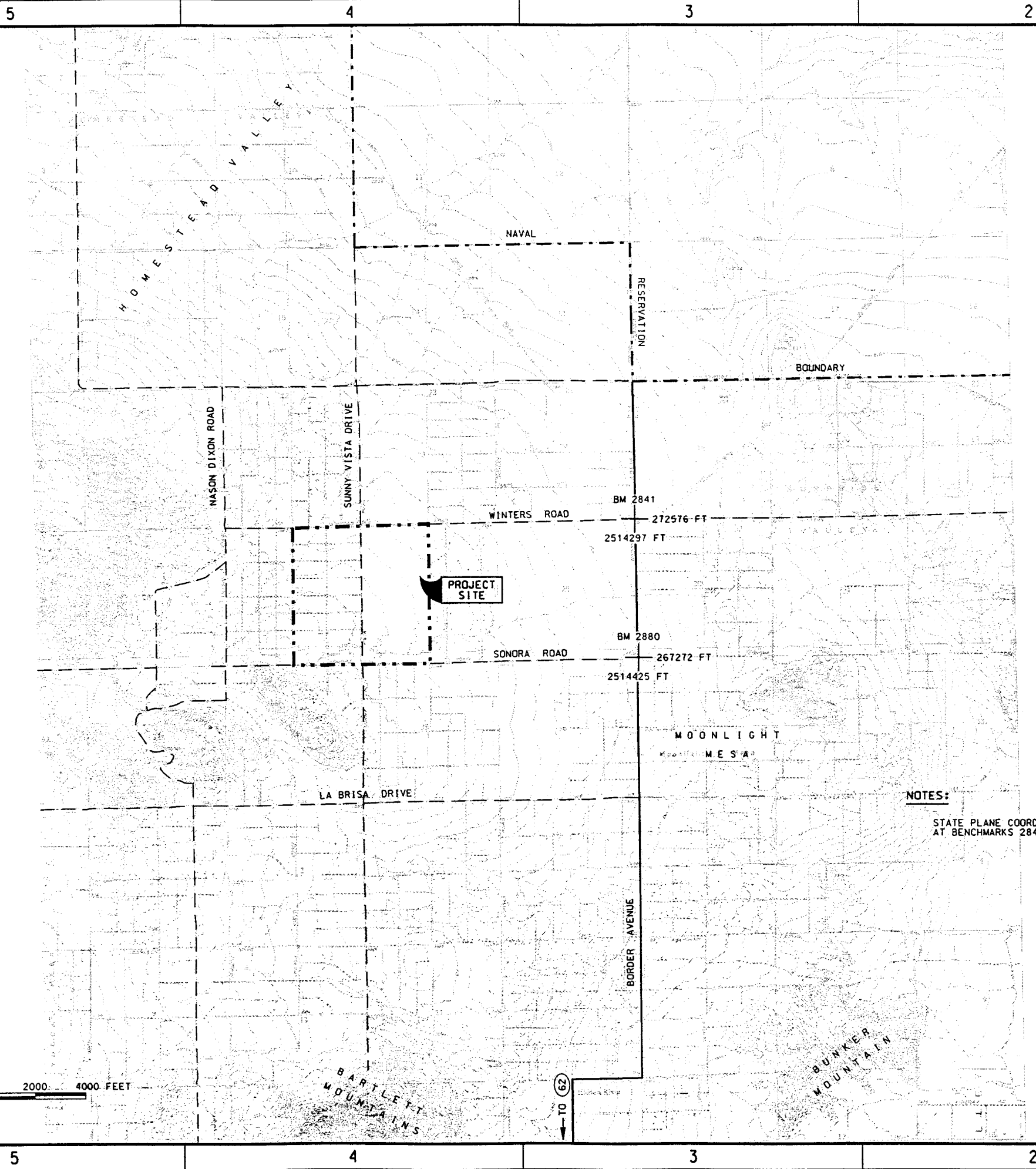
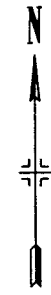
APPENDIX O

REPORT DISTRIBUTION LIST

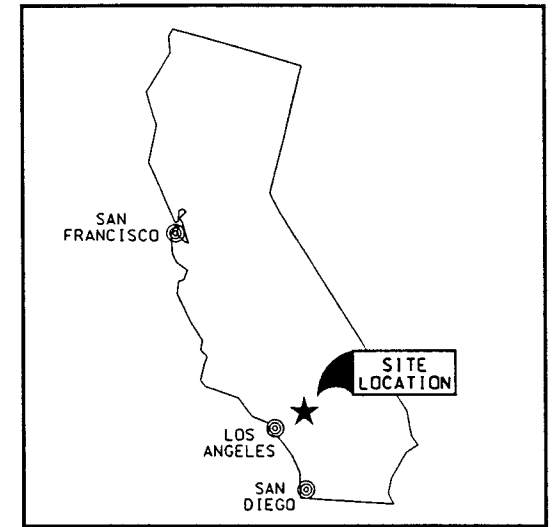
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Commander, U.S. Army Engineering Division, Mississippi Valley ATTN: CEMVD-PM-E (Sills) P.O. Box 80 Vicksburg, Mississippi 39181-0080 (cover letter only w/o enclosures)	0	-	-
Commander, Defense Ammunition Center ATTN: SIOAC-ESL Savanna, Illinois 61074-9639	3	-	-
Commander, U.S. Army Engineer District, Los Angeles ATTN: CESPL-ED-MI (Boghossian) 911 Wilshire Blvd Los Angeles, CA 90017	1	-	-
Commander, U.S. Army Engineer District, Los Angeles ATTN: CESPL-PM-M (Casten) 911 Wilshire Blvd Los Angeles, CA 90017	1	-	-
Commander, U.S. Army Engineer District, Los Angeles ATTN: CESPL-CO-SS (Walker) 10845 Rancho Bernardo Road, Suite 200, Room 204 Rancho Bernardo, CA 92127	1	-	-

Ordnance and Explosives
Archives Search Report
for
Victorville Precision Bombing Range #19
San Bernardino County, California
Project Number J09CA068500

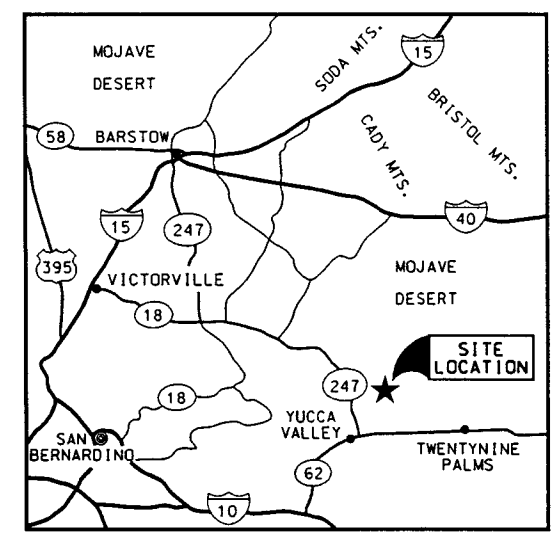
REPORT PLATES



NOTES:
STATE PLANE COORDINATES LOCATED AT BENCHMARKS 2841 AND 2880.



STATE MAP OF CALIFORNIA



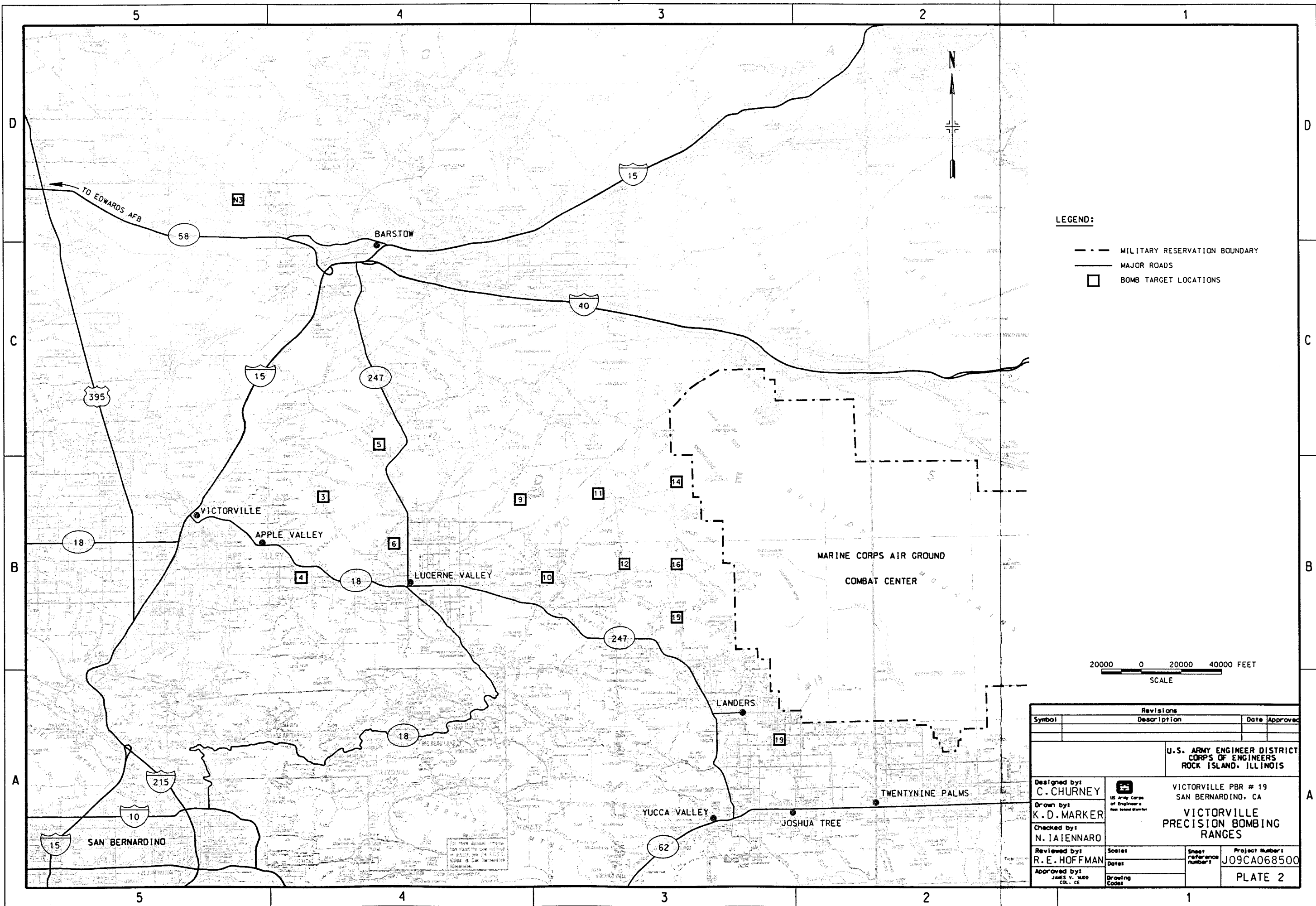
VICINITY MAP

- LEGEND:**
- FORMER VICTORVILLE PBR # 19 SITE BOUNDARY
 - - - NAVAL RESERVATION BOUNDARY
 - IMPROVED ROAD
 - - - UNIMPROVED ROAD
 - + STATE PLANE COORDINATE

Revisions		Date	Approved
Symbol	Description		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by: C. CHURNEY	VICTORVILLE PBR # 19 SAN BERNARDINO, CA		
Drawn by: K. D. MARKER	SITE MAP		
Checked by: N. IAIENNARO			
Reviewed by: R. E. HOFFMAN	Scale:	Sheet reference number:	Project Number:
Approved by: JAMES V. MUDG COL., CE	Date:		JO9CA068500
	Drawing Code:		PLATE 1

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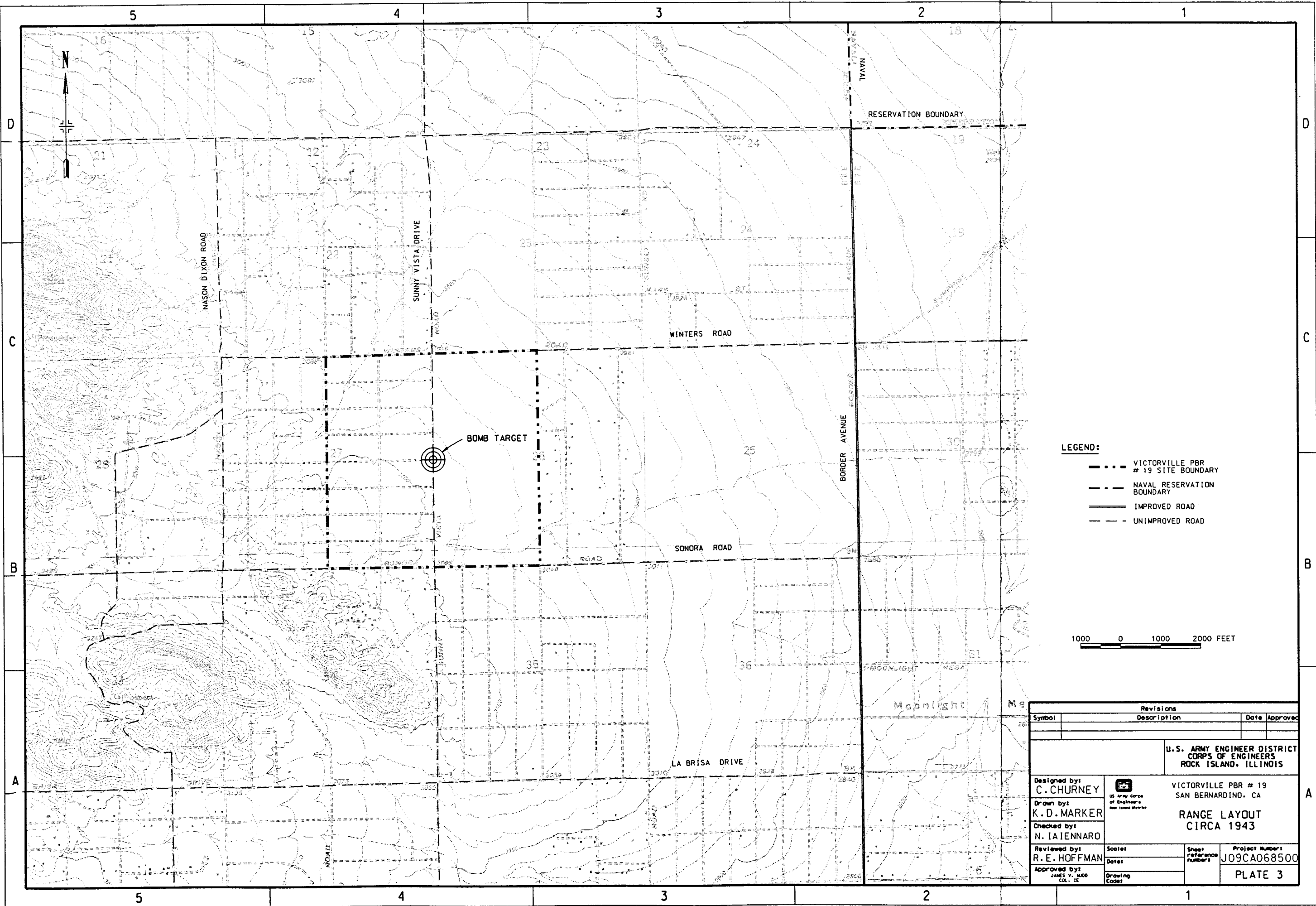
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- MAJOR ROADS
- BOMB TARGET LOCATIONS

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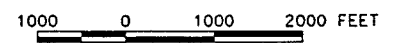
Revisions			
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Designed by C. CHURNEY	 VICTORVILLE PBR # 19 SAN BERNARDINO, CA	VICTORVILLE PRECISION BOMBING RANGES	
Drawn by K. D. MARKER			
Checked by N. IAIENNARO	Scale:	Sheet reference number:	Project Number:
Reviewed by R. E. HOFFMAN	Date:		JO9CA068500
Approved by JAMES V. WOOD COL., CE	Drawing Code:		PLATE 2

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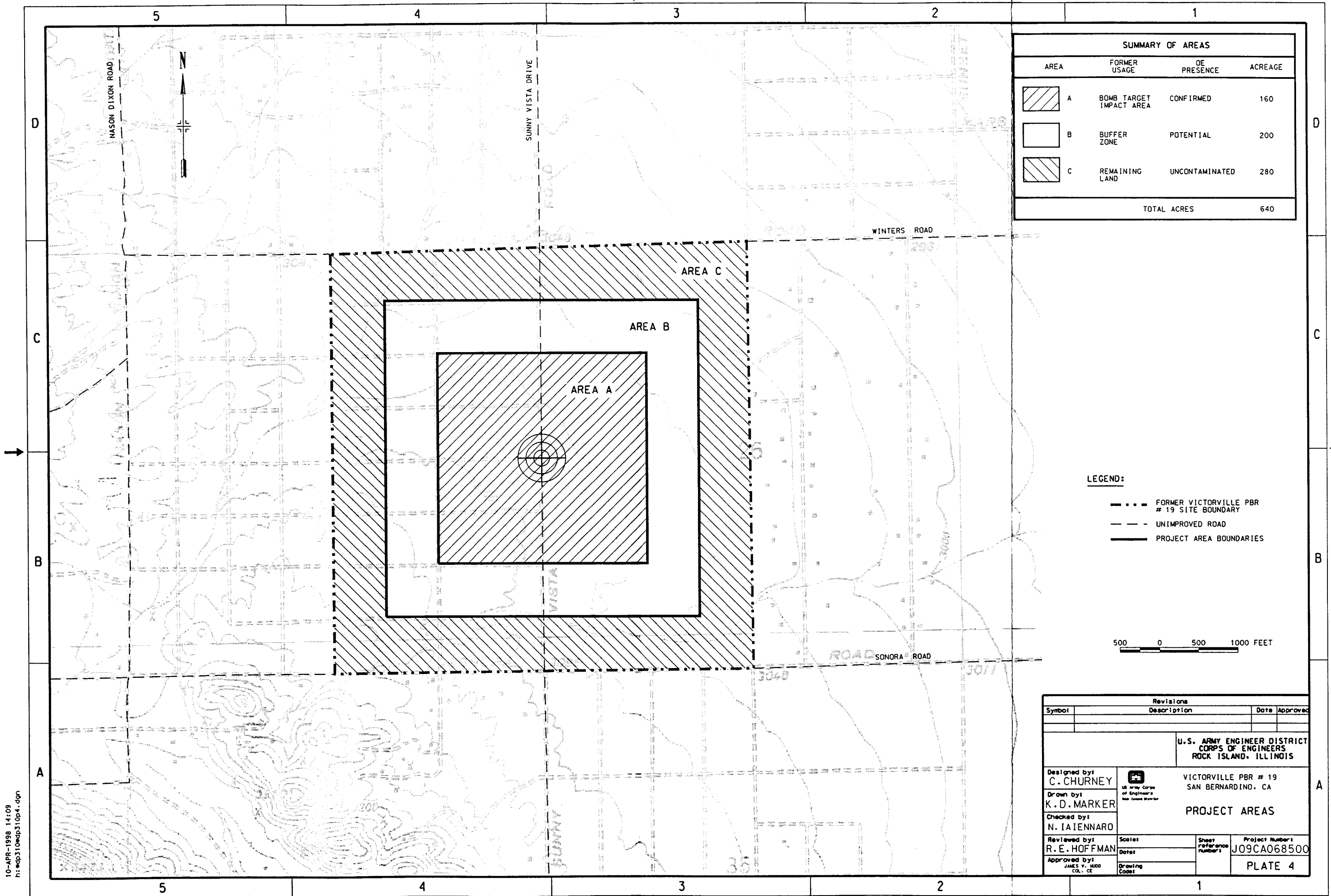


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- - - UNIMPROVED ROAD

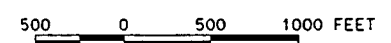


Revisions		Date		Approved	
Symbol	Description				
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS					
Designed by: C. CHURNEY		VICTORVILLE PBR # 19 SAN BERNARDINO, CA			
Drawn by: K. D. MARKER					
Checked by: N. IAIENARO		RANGE LAYOUT CIRCA 1943			
Reviewed by: R. E. HOFFMAN		Scale:	Sheet reference number:	Project Number:	
Approved by: JAMES V. MOON COL., U.S. ARMY		Date:	Drawing Code:	JO9CA068500	
				PLATE 3	



SUMMARY OF AREAS			
AREA	FORMER USAGE	OE PRESENCE	ACREAGE
	A BOMB TARGET IMPACT AREA	CONFIRMED	160
	B BUFFER ZONE	POTENTIAL	200
	C REMAINING LAND	UNCONTAMINATED	280
TOTAL ACRES			640

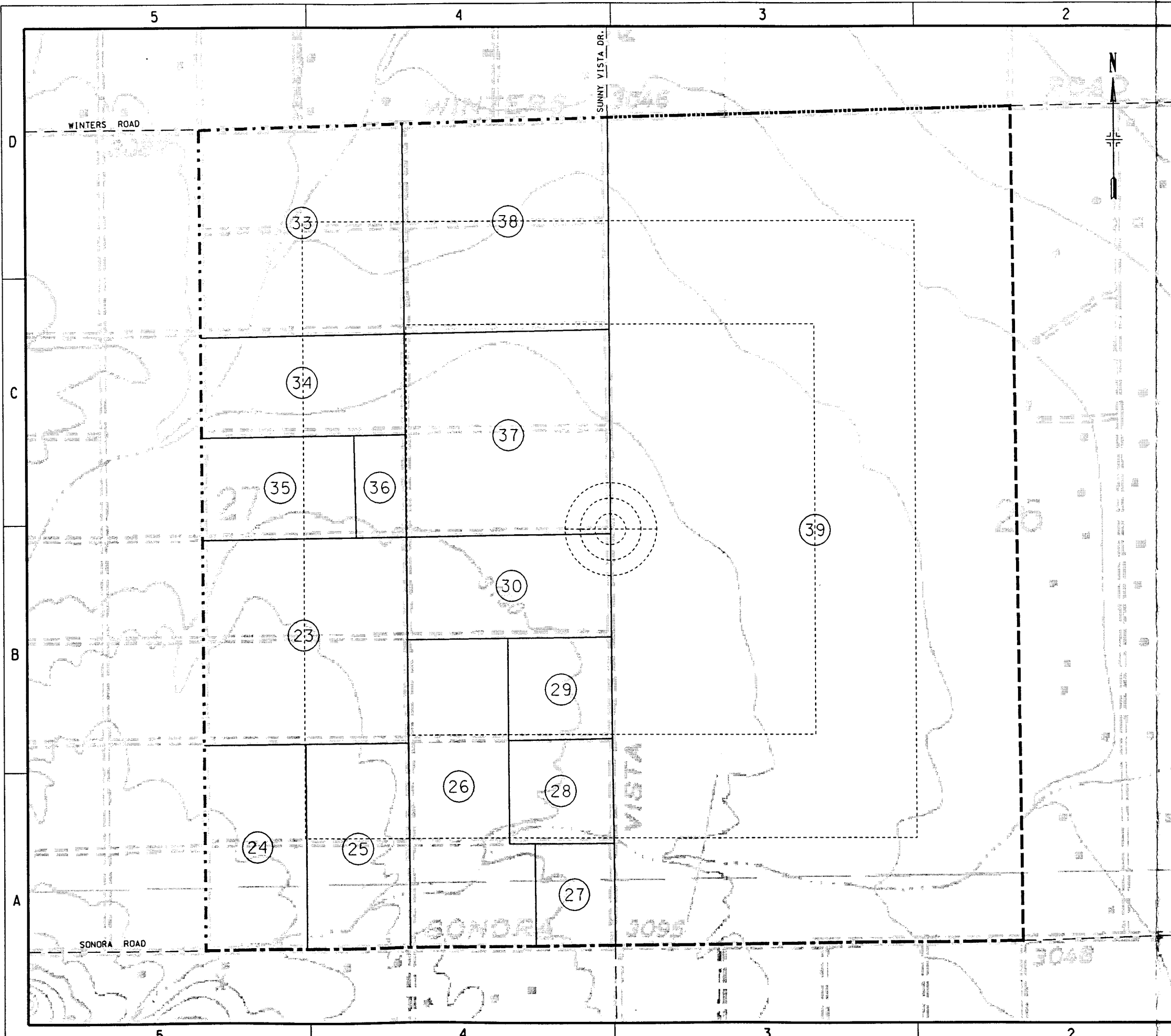
- LEGEND:**
- - - - - FORMER VICTORVILLE PBR # 19 SITE BOUNDARY
 - - - - - UNIMPROVED ROAD
 - PROJECT AREA BOUNDARIES



Revisions			
Symbol	Description	Date	Approved
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by: C. CHURNEY	U.S. ARMY CORPS OF ENGINEERS Rock Island District	VICTORVILLE PBR # 19 SAN BERNARDINO, CA	
Drawn by: K. D. MARKER		PROJECT AREAS	
Checked by: N. IAIENNARO	Scale:	Sheet reference number:	Project Number:
Reviewed by: R. E. HOFFMAN	Date:	J09CA068500	PLATE 4
Approved by: JAMES V. HADD COL, CE	Drawing Code:		

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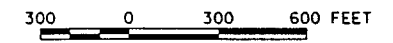


OWNERSHIP SUMMARY		
TRACT	CURRENT OWNER	ACREAGE
23	FRANKLIN OLSEN	40.00
24	C&D INVESTMENTS	20.00
25	JOE & PATRICIA GOTTI	20.00
26	KAREN NORRIS	32.50
27	MABEL TABOR	7.50
28	"	10.00
29	"	10.00
30	"	20.00
33	"	40.00
34	"	20.00
35	DON & KAREN NORRIS	15.00
36	NORMAN TABOR	5.00
37	DON & KAREN NORRIS	40.00
38	JANE OFTELIE	40.00
39	U.S. DEPT. OF INTERIOR (BLM)	320.00
TOTAL ACRES		640.00

NOTE:
 TRACT BOUNDARIES AND NUMBERS
 TAKEN FROM DOCUMENTS G-7 AND G-8.

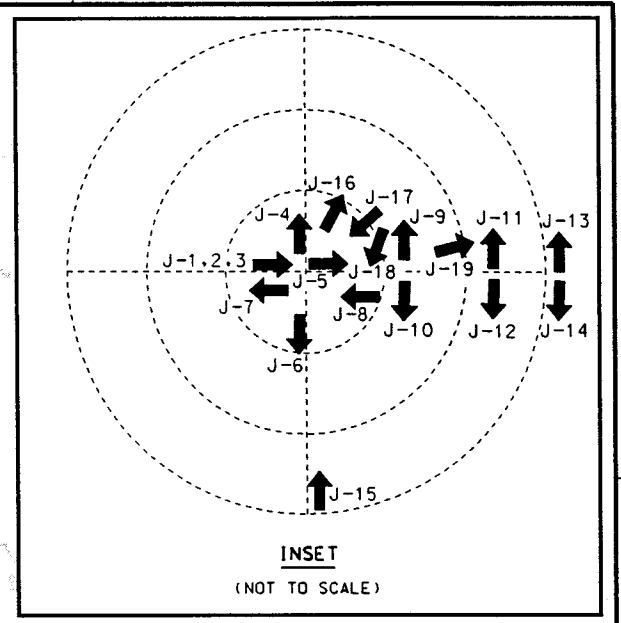
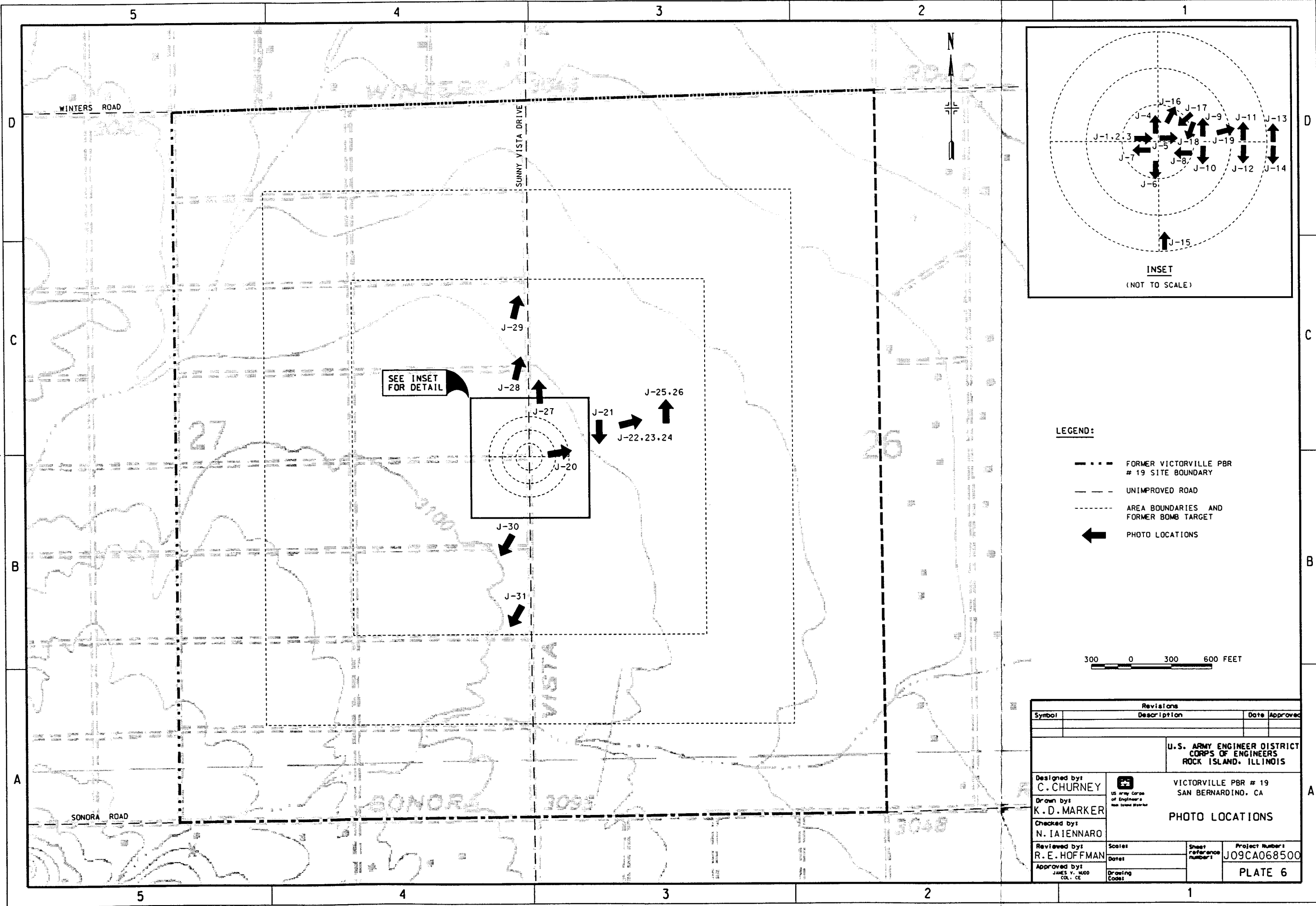
LEGEND:

- FORMER VICTORVILLE PBR # 19 SITE BOUNDARY
- - - UNIMPROVED ROAD
- PROPERTY BOUNDARIES
- - - - AREA BOUNDARIES AND FORMER BOMB TARGETS



Revisions		Date Approved	
Symbol	Description		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by C. CHURNEY	VICTORVILLE PBR # 19 SAN BERNARDINO, CA		
Drawn by K. D. MARKER	CURRENT OWNERSHIP 1998		
Checked by N. IAIENNARO			
Reviewed by R. E. HOFFMAN	Scale:	Sheet reference number:	Project Number:
Approved by JAMES V. MUD COL. CE	Date:		J09CA068500
	Drawing Code:		PLATE 5

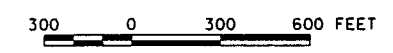
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SEE INSET FOR DETAIL

LEGEND:

- FORMER VICTORVILLE PBR # 19 SITE BOUNDARY
- - - UNIMPROVED ROAD
- AREA BOUNDARIES AND FORMER BOMB TARGET
- ← PHOTO LOCATIONS



Revisions		Date Approved	
Symbol	Description		
		U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS	
Designed by C. CHURNEY	 U.S. ARMY CORPS OF ENGINEERS ROCK ISLAND DISTRICT	VICTORVILLE PBR # 19 SAN BERNARDINO, CA	
Drawn by K.D. MARKER		PHOTO LOCATIONS	
Checked by N. IAIENNARO			
Reviewed by R. E. HOFFMAN			
Approved by JAMES V. MOO COL., CE	Scale: Date:	Sheet reference number:	Project Number: J09CA068500
	Drawing Code:		PLATE 6