



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 Dry Canyon Artillery Range

Dry Canyon, Ventura County, California
PROJECT NUMBER J09CA034801

September 1997



RESTORATION INFORMATION MANAGEMENT SYSTEM
FORMERLY USED DEFENSE SITES (FUDS)
PROJECT FACT SHEET
SEPTEMBER 1997
HNC REVISION: 7 JANUARY 1998
TAG REVIEW DATE: 3 FEBRUARY 1998

1. SITE NAME: Dry Canyon Artillery Range

SITE NUMBER: J09CA034800

LOCATION:

City: Ventura
County: Ventura
State: California

PROJECT NUMBER: J09CA034801

CATEGORY: OE

INPR RAC: 3

ASR RAC: 3

TAG RAC: 3

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3. SITE DESCRIPTION: The former Dry Canyon Artillery Range consists of 2,880 acres located 53 miles northwest of Ventura, California in and adjacent to Dry Canyon. The historical document at Appendix L, drawing L-1, shows that the 2,880 acres are located in Range 22 West, Township 8 North, in sections 29 - 32 and in the southern quarters of sections 19 and 20. The ASR

site inspection team identified 1,200 additional acres to the south of the range, which was also used by the Army, for a total of 4,080 acres. The site is currently a small part of the two million acre Los Padres National Forest. The area is used for camping and hiking. The land is owned and managed by the U.S. Department of Agriculture.

The area is a semi-desert in the lower elevations and covered with chaparral and conifer trees in the higher elevations. The National Forest contains 28 sensitive plant communities and wildlife habitats. The general location of the former range has an elevation of approximate 4,800 feet above mean sea level and rises to approximately 5,000 feet above mean sea level in the surrounding area. Topography is rugged with slopes, cliffs, and hills. There are no lakes or streams located in the area.

Rainfall is 10 to 15 inches a year. Average annual snowfall is 20 inches. Summer temperatures are 70 to 80 degrees Fahrenheit. Winter temperatures average in the lower 30's to upper 20's.

4. **SITE HISTORY:** The Department of the Army acquired 2,880 acres of land in a transfer from the Department of Agriculture by Use Permit to the 161st Field Artillery dated 12 August 1942. The acreage was to be utilized as an artillery training range and was named Dry Canyon Artillery Range. This Use Permit was superseded by Use Permits, dated 26 May 1943, 23 August 1943, and 15 January 1944. Other units using the site were the 170th Field Artillery Battalion, the 174th Infantry, and the 6th Armored Division.

No records were found which indicated where targets were located or what training was conducted at this range. No Army improvements were made. On 27 May 1952, the land was declared excess by the Army and was relinquished back to the Department of Agriculture.

5. **PROJECT DESCRIPTION:**

AREA A

Size, Acres:	1,695 (EE/CA team is to determine if additional 430 acres of Area A should be added to this project)
Former Use:	Impact Area
Present Use:	National Forest
Probable End Use:	National Forest
Ordnance Presence:	Confirmed
Type:	37mm and 105mm

AREA B

Size, Acres: 1,185
Former Use: Buffer Zone
Present Use: National Forest
Probable End Use: National Forest
Ordnance Presence: Confirmed: 105mm
Potential: 37mm

AREA C

Size, Acres: 770 (Acreage not included in INPR)
Former Use: Firing Point/Bivouac Area
Present Use: National Forest
Probable End Use: National Forest
Ordnance Presence: None
Type: Not Applicable

6. **CURRENT STATUS:** The Archives Search Report (ASR) for Dry Canyon Artillery Range was completed by the U.S. Army Corps of Engineers, Rock Island District, in September 1997.

7. **STRATEGY:**

AREA A: RAC 3;EE/CA
AREA B: RAC 3;EE/CA
AREA C: RAC 5;NOFA

8. **ISSUES AND CONCERNS:** The Huntsville Center Technical Advisory Group reviewed this ASR and Concurred with EE/CA, RAC 3 for Areas A (1695 acres included in the INPR) and B and NOFA, RAC 5 for Area C. The ASR recommends that the FDE be amended to include 1,200 additional acres consisting of 430 acres of Area A and the 770 acres in Area C. The 430 acres of Area A should be considered for inclusion in this project during EE/CA. The TAG determined that there was no justifiable reason to recommend inclusion of Area C as part of the site acreage. Rational for each area is described below.

Area A, Impact Area, 1695 acres: Concur with an ASR strategy of EE/CA for Area A based on Site Inspection team findings of a 37mm cartridge and 37mm/105mm shrapnel. Also, the deduinding document of December 1951 at Appendix F of the ASR Findings, F-8 supports EE/CA by stating that there were many craters in evidence for the areas marked blue and green on a map and described as the target area, which corresponds to Area A. The ASR states that OE shrapnel was found on slopes, which must have been target points. The TAG determined that ASR comments regarding confirmed OE in Area A could not be ascribed with reasonable certainty to the additional 430 acres. Recommend that further investigation of the 430 acres be accomplished during the EE/CA phase to determine

if OE is present and that this acreage be added to site at that time.

Area B, Buffer Zone: Concur with an ASR strategy of EE/CA for Area B based on the aforementioned deduinding document, which states that 105mm HE was found in the area marked yellow on the map, which corresponds to Area B. It also recommended that this area be inspected at frequent intervals because of the sandy slopes present. Based on the historical document, this area is designated as having a confirmed OE presence rather than potential. The site inspection team did not thoroughly inspect this area due to the 80-degree slopes and: no OE was found.

Area C, Firing Point/Bivouac Area: The ASR recommends EE/CA for this area based solely on a lack of information of where the firing point was located or what else will be found on other site acreage. Recommend NOFA for the following reasons: (1) Area C is not part of the FUDS acreage. (2) The Site Inspection team did not find any evidence of OE at the site. (3) There has never been a report of any OE ever being found in this area. (4) Area C is flat and was probably used for bivouac as mentioned, not as a target area or buffer zone. (5) If guns were fired from this area, it was probably on the perimeter facing north and rounds would have landed in Area A.

Natural Resources: Federally- and State-threatened species occur within the site area and are listed in ASR Findings, page 5, paragraph 3f and Table 3-2. An on-site inspection by appropriate State and Federal personnel may be necessary to verify the presence, absence or location of listed species, or natural communities.

Historical Resources: Records indicate prehistoric archeological resources and historical resources are located within the Los Padres National Forest. Due to the sensitive nature of cultural resources, archaeological site locations are not released. Contact the South Central Coastal Information Center, UCLA Institute of Archaeology, Fowler Museum of Cultural History, Los Angeles, California before beginning the project.

9. SCHEDULE SUMMARY:

<u>Phase</u>	<u>Original Start</u>	<u>Schedule Start</u>	<u>Actual Start</u>	<u>Original Complete</u>	<u>Schedule Complete</u>	<u>Actual Complete</u>
EE/CA						

10. FUNDING/BUDGET SUMMARY:

<u>Year</u>	<u>Phase</u>	<u>Exec FOA</u>	<u>In-House Required</u>	<u>Contract Required</u>	<u>Funds Obligated</u>

ED-ES provides estimate of EE/CA based on number of samples, size of area, plan of action, etc. This is a programming estimate to be used for programming project start in appropriate FY.

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

FINDINGS

September 1997

Prepared For

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ORDNANCE AND EXPLOSIVES
 ARCHIVE SEARCH REPORT
 FOR
 FORMER DRY CANYON ARTILLERY RANGE
 DRY CANYON, VENTURA COUNTY, CALIFORNIA
 PROJECT NUMBER J09CA03401

ACKNOWLEDGMENTS

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ORDNANCE AND EXPLOSIVES
ARCHIVE SEARCH REPORT
FOR
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

FINDINGS

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ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

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) presence located at the former Dry Canyon Artillery Range, Dry Canyon, Ventura County, 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) The investigation focused on approximately 4,080 acres (2,880 FUDS acres and 1,200 additional acres that may have been utilized as explained in this report) located approximately 53 miles northwest of the City of Ventura, California. The United States Army leased this site from 1942 until 1952 (see plates 1 and 2).

(3) The purpose of this investigation was to characterize the site for potential OE presence, to include conventional ammunition, missiles, and chemical warfare material (CWM). This was achieved by a 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 ownership information, and confirmed ordnance presence (prior to and after site closure), based on available records, interviews, site inspections, and analyses. The analyses provide a complete evaluation of all information to assess current day potential ordnance presence, where actual ordnance presence has not been confirmed.

(2) For the purpose of this report, OE presence consists of live ammunition, live ammunition components, 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 (DOD). 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) is **not** considered OE presence. OE further includes "explosive soil" which refers to any mixture in soil, sands, clays, etc., such that the mixture itself is explosive. Generally, 10 percent or more by weight of secondary explosives in a soil mixture is considered explosive soil.

2. PREVIOUS INVESTIGATIONS

a. **1994 Preliminary Assessment**

A preliminary assessment was performed at the former Dry Canyon Artillery Range, which consisted of approximately 2,880 acres of land, located approximately 53 miles northwest of Ventura, California. The site was determined to be qualified under the DERP-FUDS program by the Los Angeles District Corps of Engineers. The Findings and Determination of Eligibility was signed 27 October 1994. The approximate 2,880 acres that made up the former site were found to be eligible under the DERP-FUDS. The following projects were proposed at the former site (see table 2-1 and document E-1).

TABLE 2-1 1994 PRELIMINARY ASSESSMENT				
Project Number	DERP Category	Present Phase	Comments	Location
J09CA034801	OE	SI		Entire Site See Plate 2
	CON/ HTRW		NONE	
	HTRW		NONE	
	BD/DR		NONE	

b. **Other Investigations**

There were no other investigations that were brought to the attention of the inspection team during this investigation.

3. SITE DESCRIPTION

a. **Existing Land Usage**

The 2,880 acres of land that made up the former Dry Canyon Artillery Range are currently a small part of the two million acres that makes up the Los Padres National Forest. The area is used for camping and hiking. The land is owned and managed by the U.S. Department of Agriculture. See table 3-1 and paragraph 5. b. for information concerning Area A.

TABLE 3-1 LAND USAGE					
AREA	FORMER USAGE	PRESENT OWNER	PRESENT USAGE	SIZE/ ACRES	COMMENTS
A	Impact Area	U.S. Department of Agriculture	National Forest	1,695	See plates 3
B	Buffer Zone Area	U.S. Department of Agriculture	National Forest	1,185	See plate 3
			TOTAL	2,880	

b. **Climatic Data**

(1) Ventura County has considerable range in climate because of differences in topography between one part of the county and another. This site is located in the eastern part of the county.

(2) The eastern part of the county summer average maximum temperature ranges around 70 to 80 degrees Fahrenheit with highs reaching as much as 100 degrees Fahrenheit. In the winter the temperatures average in the lower 30's to upper 20's (see reference B-1).

(3) Ventura County has an average annual rainfall of approximately 10 to 15 inches a year. Measurable amounts of rainfall are reported on 30 to 35 days a year and half an inch or more on only 6 to 12 days a year. The area where the former range lies will average around 20 inches of snowfall a year (see reference B-1).

c. **Topography**

(1) The area of the Los Padres National Forest that made up the former artillery range is a semi-desert in the

lower elevations and covered with chaparral and conifer trees in the higher elevations (see reference B-1).

(2) The National Forest contains 28 sensitive plant communities and wildlife habitats (see reference B-1).

(3) The general location of the former range has and elevation of approximate 4,800 feet above mean sea level and rises to approximately 5,000 feet above means sea level in the surrounding area (see reference B-1).

d. Geology and Soils

(1) Most of the landscape in Volusia County was formed during the Pleistocene Epoch period. The broad nearly level marine terrace, relict shorelines, and karst ridges that characterize the landscape are of the Pleistocene age (see reference B-1).

(2) The area in which the former range lies is made up of three soil associations, the Daytona-Paola-Astatula, Myyakka-Smyrna-Immokalee and the Pomona-Wauchula associations (see reference B-1).

(a) The Daytona-Paola-Astatula association are mostly long, narrow sand ridges of moderately well drained, grayish sandy soils that have an organic-stained subsoil and excessively drained, grayish and brownish sandy soils, interspersed with areas of poorly drained and very poorly drained soils (see reference B-1).

(b) The Myyakka-Smyrna-Immokalee association are nearly level, poorly drained soils that have a dark, organic-stained subsoil underlain by sandy materials; interspersed with swamps and poorly defined drainage.

(c) The Pomona-Wauchula associations are nearly level poorly drained soils that have a dark, organic-stained subsoil underlain by loamy material; interspersed with swamps and depressions.

e. Hydrology

With no lake or tributaries located in the general area of the former site the main source water for the area comes from precipitation and runoff from the higher elevations (see reference B-1).

f. **Natural Resources**

There are endangered, threatened species that may exist in the area around the former Dry Canyon Artillery Range. The table below is a listing of endangered or threatened species that may exist in area of the former range (see document F-1 and table 3-2). If any projects are warranted in this area field surveys should be performed to verify presents of any of the species listed in the table below.

g. **Historical/Cultural Resources**

Records indicate prehistoric archeological resources and historical resources are located within the Los Padres National Forest. Due to the sensitive nature of cultural resources, archaeological site locations are not released. If any further information is required for completion of any projects the South Central Coastal Information Center, UCLA Institute of Archaeology, Fowler Museum of Cultural History, Los Angeles, California should be contacted (see document F-2 and table 3-2).

TABLE 3-2 Natural and Cultural Resources		
Resource Classification	Type	Comments
Invertebrates	Conservancy Fairy Shrimp	See document F-1 All are threatened or endangered species that have been mapped within the area and may be present.
Birds	American Peregrine Falcon and California Condor.	
Reptiles	Blunt Nose Leopard Lizard	
Amphibians	Arroyo Toad	
Vegetation	California Jewelflower	
Prehistoric Archeological Resources	Resources Recognized in the County.	See document F-2.
Historical Resources	Resources Recognized in the County.	See document F-2.

4. HISTORICAL ORDNANCE USAGE ON-SITE.

a. **Chronological Site Summary**

(1) In August 1942 the Department of Agriculture transferred approximately 2,880 acres of land by a Use Permit to the Department of the Army (see document F-3). The land was located in Ventura County, California approximately 53 mile northeast of Ventura, California. The acreage was to be utilized as an artillery training range and was named Dry Canyon Artillery Range.

(2) In August 1942 the Department of Agriculture issued Use Permit to the 161st Field Artillery for an indefinite period (see document F-4).

(3) In May 1943 the original Use Permit was superseded when the Department of Agriculture issued a Use Permit to the 170th Field Artillery Battalion for an indefinite period (see document F-5).

(4) In August 1943 the Department of Agriculture issued a Use Permit to the 174th Infantry Unit for an indefinite period (see document F-6).

(5) In January 1944 the Department of Agriculture issued a Use Permit to the Sixth Armored Division for a period of 17 January to 10 February 1944 (see document F-7).

(6) In December 1950 dedudding had been accomplished on the former artillery range. As shown in document F-8 several 105mm artillery rounds were found and destroyed.

(7) In May 1952 the land was declare excess by the Army and was relinquished back to the Department of Agriculture (see document G-1).

b. **Ordnance Records Review**

(1) An historical documents search was conducted by the site inspection (SI) team to obtain ordnance related records relevant to the former Dry Canyon Artillery, Ventura County, California. Research sites included, but were not limited to, the 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 former site (see Appendix A for a complete listing of contacts).

(2) There were no records found during this investigation to indicate where the targets were located or

what the actual training was that had been performed at the former range.

(3) Document F-8 is a deduinding report dated 1951. This report indicates that the OE Detachment #14 Bomb and Shell Disposal Team was assigned to inspect and dedud the former range. This document has a map attached showing the areas where the disposal team located and destroyed 105mm artillery rounds.

c. Interviews With Site-Related Personnel

(1) Contact was made with the 70th EOD Detachment, the 52nd EOD Group, local sheriff's and police departments as shown in Appendix A. None of these offices have ever been called to this area to retrieve any ordnance or explosives (OE) since the site was closed.

(2) The inspection team had found no personnel that were stationed at the former Dry Canyon Artillery Range or had first hand knowledge of the range while it was active. As shown in appendix A, many people were contacted during the on-site investigation. The inspection team gained no knowledge about the history of the former facility during these contacts.

(3) Interview I-1 is with Mr. John Kelly from the Los Padres National Forest Mt. Pinos Ranger District. The inspection team met with Mr. Kelly at the Chuchupate Ranger Station on the morning of 4 April 1997. The team briefed Mr. Kelly on the mission and asked him if he had any knowledge of the former range. He was aware that it had been an artillery range, but he never received any reports of any OE ever being found in the area. The only OE he was aware of was a fuze that another ranger had found a couple of years ago.

(4) Interview I-2 was with Mr. Larry Darlinger, another ranger at the same location. Mr. Darlinger was the ranger whom had found the fuze. He showed it to the inspection team and it was identified as an expended 37mm fuze. Mr. Darlinger had some knowledge of the former range but did not know what was fired there or where the target location may had been. He showed the inspection team the area where he had found the fuze.

5. Site Eligibility

a. Confirmed Formerly Used Defense Sites

A preliminary assessment was performed at the former Dry Canyon Artillery Range, Ventura County, California that consisted of approximately 2,880 acres of land, located 53

miles northwest of Ventura, California. The site was determined to be qualified under the DERP-FUDS program by the Los Angeles District Corps of Engineers. The Findings and Determination of Eligibility was signed 27 October 1997.

b. Potential Formerly Used Defense Sites

There was an additional 1,200 acres found during this investigation that may have been utilized by the Department of the Army (see table 5-1 and plate 3). There was OE debris found during this investigation in this additional areas, see paragraph 6 below.

TABLE 5-1 POTENTIAL FUDS SITES					
AREA	FORMER USAGE	PRESENT OWNER	PRESENT USAGE	SIZE/ ACRES	COMMENTS
A	Impact Area	U.S. Department of Agriculture	National Forest	430	See plate 3
C	Firing Point/Bivouac Area	U.S. Department of Agriculture	National Forest	770	See plates 3
TOTAL				1,200	

6. SITE INSPECTION

a. General Procedures and Safety

(1) During the period 31 March through 12 April 1997 the members of the SI team assessed the former Dry Canyon Artillery Range located 53 miles northwest of Ventura, California. The land that made up the former range is currently part of the Los Padres National Forest. The primary task of the inspection team was to assess the former site for OE presence. The site inspection was limited to non-intrusive methods, subsurface sampling was neither authorized nor performed.

(2) Real Estate rights-of-entry were not obtained by the SI team due to the willingness and cooperation of the Department of Agriculture personnel who authorized access to the acreage that made up the former site. Control of the former site therefore remained with the owners with safety oversight from the inspection team.

(3) A site safety plan (see reference B-2) was developed and utilized by the SI team to assure safety from injury during the site inspection of this facility. A

briefing prior to the inspection was conducted which stressed that OE should not be handled by anyone other than military EOD personnel.

(4) Prior to the site visit, a thorough review of all available reports, historical documents, texts, and technical ordnance reference materials gathered during the historical records search portion of the ASR was made to ensure awareness of potential ordnance types and hazards.

(5) The on-site inspection of the former range started at the Chuchupate Ranger Station where the inspection team met with Mr. John Kelly and Mr. Larry Darlinger (see above interviews).

b. Area A: Impact Area

(1) Area A shown in photo J-1 and plate 3 basically covers the center of the canyon running two and a half miles north including some slopes and part of this area is included in the additional land mentioned above (see plate 3).

(2) This additional (430 acres) land shown on plate 3, is the area that Larry Darlinger showed the inspection team where he had found the 37mm fuze (see photo J-2).

(3) As shown in photo J-3 residue was found throughout this additional 430 acres of land during the inspection. Most of the ordnance found during this investigation was found approximately half way to two thirds of the way up the slopes where the inspector is shown standing in the photo. Many pieces of 37mm residue were found on the east slopes of this Area A (see photo J-4).

(4) The 1,695 FUDS acreage (not including the 430 additional acres) that made up the impact range is mostly slopes. These slopes seem to be the target points that were used by the military during training. There was no OE residue found up the main part of the canyon by the inspection team. Standing at the entrance to the canyon, the inspection team picked out every slope that was visually exposed and drove to them and inspected these slopes. Every slope that was inspected had 37mm and 105mm shrapnel (see photo J-5) located about half way up the slope.

(5) During the inspection of these slopes the inspection team found a complete 37mm round (see photo J-6). The location of the round once again was approximately half to two thirds of the way up the slope (see photo J-7 and plate 3 for location).

(6) The above mention ordnance item was marked and the inspection team returned to the ranger station and reported the item and its location to Mr. John Kelly. Mr. Kelly called the Ventura County Bomb Squad. The inspection team then returned to the area and met with the Area County Sheriffs Officer and waited for the area Bomb Squad to arrive. The inspection team showed the officer the location of the marked OE item and departed. Talking with the Ventura County Sheriffs Department Bomb Squad, the team was told that the item was detonated in place. The inspection team is waiting to receive a copy of the demolition report and will file it with this report.

c. Area B: Buffer Zone

Area B (1,185 acres) is made up of mountain slopes (with about 80 degree slopes) that surround the impact area (see photo J-1). There was no ordnance or explosives found by the inspection team in this area during the inspection.

d. Area C: Firing Point/Bivouac Area

(1) Area C (770 additional acres) was not within the boundaries of the original range. When the inspection team turned off Lockwood Valley Road north into Dome Springs Campground (the location the former range) there is approximately one mile of road that does not lie within the former range. As shown in photo J-1, Area C was an open flat area at the south entrance to Dry Canyon. It is suspected to be a very good area for the military to set up their gun emplacements and camp and fire north into the canyon.

(2) There was no OE found by the inspection team in this area during the inspection.

7. EVALUATION OF ORDNANCE PRESENCE

a. General

(1) This land was evaluated to determine confirmed, potential, or uncontaminated ordnance presence. Confirmed ordnance and explosive (OE) presence is based on verifiable historical records evidence or direct witness of OE items (with explosive components and/or inert debris/fragments) since site closure. Additional field data are not needed to identify a confirmed site.

(a) Verifiable historical record 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/bombs

squads, military Explosive Ordnance Disposal (EOD) Units, newspaper articles, photographs, or maps.

(b) 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 presence. Potential OE presence is inferred from records, present day site features, non-verifiable direct witness, or indirect witness. Additional field data are needed to confirm potential OE sites.

(a) 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.

(b) 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.

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

(3) Uncontaminated ordnance areas are based on a lack of confirmed or potential ordnance evidence. All historical records evidence 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 ordnance presence. Additional field data are not needed to assess uncontaminated ordnance site.

b. **Area A: Impact Area**

With all the 37mm and 105mm residue that was found during this inspection, with the ordnance found during the dedudding of this area, and with the live 37mm round found during this investigation (see document F-8), Area B (2,125 acres) should be considered to have **confirmed OE presence**.

c. **Area B: Buffer Zone**

Due to the 80-degree slopes this area did not have a thorough inspection. There was no OE found by the inspection team in the areas that were inspected. Due to the closeness of the impact area and document F-8 indicating ordnance found in 1951, Area B (1,185 acres) should be considered to have confirmed **OE presence**.

d. **Area C: Firing Point/Bivouac Area**

(1) During this inspection of this area there was no OE found by the inspection team during this inspection. There has never been a report of any OE ever being found in this area.

(2) With the lack of information of where the firing point may have been and the knowledge of what has been found elsewhere on the site, Area C (770 acres) should be considered to have **potential OE presence**.

8. TECHNICAL DATA OF ORDNANCE AND EXPLOSIVES

Table 8-1 is a listing of the ordnance items that were found or used at the former range. Table 8-2 is a listing of the explosive fillers for the ordnance that were found or may have been used at the former Dry Canyon Artillery Range (see documents D-1 through D-3).

TABLE 8-1 End Item Technical Data			
ITEM	TYPE/MODEL	FILLER/WEIGHT	Fuze
37mm	HE/M63	TNT/.085lbs.	BD/M58 w/Tetryl Booster
	Practice/MK1	Black Powder	BD/M38 Less Booster
*75mm	HE/M48	TNT	PD/M48
105mm	HE/M1	TNT/4.80lbs.	PD/M48A2 TSQ/M54

* The 161st Field Artillery was a 75mm gun unit (see document F-4).

TABLE 8-2 SUMMARY OF SITE ORDNANCE FILLERS		
Explosive Material	Synonyms	Chemical Compounds
TNT	2,4,6-trinitrotoluene; triton; trotyl; trilite; trinol; tritolo	$\text{CH}_3\text{C}_6\text{H}_2(\text{NO}_2)_3$
Black Powder 74% Potassium Nitrate 11% Sulfur 16% Charcoal	Saltpeter; Niter	KNO_3 S C
Tetryl	Trinitrophenyl- methylnitramine	$(\text{NO}_2)_3\text{C}_6\text{H}_2\text{N}(\text{NO}_2)\text{CH}_3$

9. EVALUATION OF OTHER SITE HAZARDS

a. **HTRW**

There are no other potential HTRW projects recognized at the former Dry Canyon Artillery Range during this investigation.

b. **BD/DR**

There are no other potential BD/DR projects recognized at the former Dry Canyon Artillery Range during this investigation.

ORDNANCE AND EXPLOSIVES
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APPENDIX A

REFERENCE SOURCES

APPENDIX A
REFERENCE SOURCES

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of Defense			
Headquarters			
Department of Defense, Explosive Safety Board (DDESB) 2461 Eisenhower Avenue Alexandria, VA 61074-9639	Computer Search	(703) 325-8624	No information.
Defense Library on Disk (DLOD) Pentagon Library Room 1A518 Washington, DC 20301-6000	Computer Search	(703) 697-4658	No information.
Defense Technical Information Center (DTIC) Cameron Station Alexandria, VA 22304-6145	Computer Search	(202) 274-7633	No information.
Defense Mapping Agency ATTN: PMSC 6001 McArthur Blvd. Bethesda, MD 20816	Jim Thompsen	(301) 227-2495	No information.
Department of the Army			
Defense Logistics Studies Information Exchange (DLSIE) US Army Logistics Management College Fort Lee, VA 23801	Computer Search	(804) 734-4007	No information.
Center of Military History ATTN: DAMH-RAS 1099 14th Street Northwest Washington, DC 20536	Staff	(202) 761-5416	See Appendix B, Section II, Parts A and B.
Aberdeen Proving Ground Ordnance Museum Aberdeen Proving Ground, MD 21005	Roger Godin	(301) 298-3602	No information.

APPENDIX A
REFERENCE SOURCES

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of the Army (Cont.)			
IOC Historical Office ATTN: AMSIO-EAH Building 390 Rock Island Arsenal Rock Island, IL 61299	Tom Slattery	(309) 794-1450	No information.
Rock Island Arsenal Museum Rock Island Arsenal Rock Island, IL 61299	Chris Leinicke	(309) 794-3518	No information.
U.S. Military History Institute Archives Branch Carlisle Barracks Carlisle, PA 17013	Richard Sommers	(717) 245-3601	No information.
U.S. Military History Institute Photo Archives Carlisle Barracks Carlisle, PA 17013	Mike Winey Randy Hackenburg	(717) 245-3434	No information.
US Army Chemical School Fischer Library, Building 1081 Fort McClellan, AL 36205-5000	Dick Pastorett	(205) 848-4414	No information.
52nd Ordnance Group Fort Gillem, GA 30050-5000	Sgt. Maj. Cushman	(404) 363-5978	No information.
70 th Ordnance. Detachment-Eod Navy Sub Base, PO Box 6376 San Diego, CA 92166-0376	Sgt. Thompson Capt. Fiske	(619) 553-8500	No information.
US Army Chemical and Biological Defense Command Aberdeen Proving Ground, MD 21010-5423	Kathleen Ciolfi	(410) 679-4430	There is no evidence of chemical use on this site according to this organization's database.

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REFERENCE SOURCES**

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of the Army (Cont.)			
U.S. Army Ordnance Museum Attn: ATSL-DOS-M Building 2601 Aberdeen PG, MD 21005-5201	Dr. Atwater	(410) 278-3602	No information.
US Military History Institute Carlisle Barracks Building 22 Carlisle, PA 17013-5008	Dennis Vetock; John Slonaker	(717) 245-3611	No information.
USACE; US Army Construction Engineering Research Lab (CERL) Champaign, IL 61820	Pat Lacey	(217) 373-7217	No information.
USACE Office of History 7701 Telegraph Road Alexandria, VA 22310-3865	Dr. Martin Gordon	(703) 355-3558	See Appendix B, Section II, Parts A and B.
Department of the Air Force			
01-A, USAF Environmental Technical Applications Center 151 Patton Ave, Rm 120 Ashville, NC 28801	Janet Wall	(704) 271-4404	No information.
Air Force History Research Agency 600 Chennault Drive Maxwell AFB, AL 36112-6424	Lynn Gamma	(205) 953-2395	No information.

**APPENDIX A
REFERENCE SOURCES**

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of the Navy			
NAVEODTECHDIV Technical Library 2008 Stump Neck Road Indian Head, MD 20640-5070	Betty Arboghost Dawn Risko	(301) 743-6834	No information.
Marine Corps Historical Center Building 58 Washington Navy Yard Washington, DC 20374	Staff	(202) 707-3483	See Appendix B, Section II, Parts A and B.
Navy Historical Center Building 57 Washington Navy Yard Washington, DC 20374	Staff	(202) 433-3171	See Appendix B, Section II, Parts A and B.
Navy Historical Center Technical Library Washington Navy Yard Washington, DC 20374	Mark Wertheiner Curator	(202) 433-3607	No information.
National Archives and Federal Records Center			
NARA, Federal Records Center - Atlanta 1557 St. Joseph Ave. East Point, GA 30344	Tom Steinichen	(404) 763-7438	See Appendix B, Section III, Parts A and B.
National Archives-Southeast Region 1557 St. Josephs Avenue East Point, GA 30344	Charlie Reeves	(404) 763-7477	See Appendix B, Section III, Parts A and B.
National Archives Archives I (Modern Military) Pennsylvania Avenue & 7 th Washington, DC 20408	Staff	(202) 501-5385	See Appendix B, Section II, Parts A and B.

APPENDIX A
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Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
National Archives and Federal Records Center (CONT)			
National Archives Archives I (Navy) Pennsylvania Avenue & 7 th Washington, DC 20408	Staff	(202) 501-5671	See Appendix B, Section II, Parts A and B.
National Archives Archives I (Old Military) Pennsylvania Avenue & 7 th Washington, DC 20408	Staff	(202) 501-5390	See Appendix B, Section II, Parts A and B.
National Archives Archives II (Civil Reference Branch) 8601 Adelphi Road College Park, MD 20740	Staff	(301) 713-7250	See Appendix B, Section II, Parts A and B.
National Archives Archives II (Motion Picture Branch) 8601 Adelphi Road College Park, MD 20740	Staff	(301) 713-7060	See Appendix B, Section II, Parts A and B.
National Archives Archives II (Textual Branch) 8601 Adelphi Road College Park, MD 20740	Staff	(202) 501-5385	See Appendix B, Section II, parts A and B.
National Archives Archives II (Cartographic/Architectural Branch) 8601 Adelphi Road College Park, MD 20740	Staff	(301) 713-7040	See Appendix B, Section II, Parts A and B.
National Archives Archives II (Still Picture Branch) 8601 Adelphi Road College Park, MD 20740	Staff	(301) 713-6660	See Appendix B, Section II, Parts A and B.

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Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
National Archives and Federal Records Center (CONT)			
National Archives Suitland Branch (Civil and Military) 4205 Suitland Road Suitland, MD 20409	Staff	(301) 763-7410	See Appendix B, Section II, Parts A and B.
National Personal Records Center 9700 Page Avenue St. Louis, MO 63132	Bill Siebert	(314) 538-4085	See Appendix B, Section III, Parts A and B.
Library of Congress			
Library of Congress Washington, DC 20536	Staff	(202) 707-5522	See Appendix B, Section II, Parts A and B.
Smithsonian Institute			
National Museum of American History 14th Street & Constitution Avenue Washington, DC 20560	Tom Crouch	(202) 357-2515	No information.
Smithsonian Institution Historical Research Division Washington, DC 20560	Staff	(202) 357-3133	See Appendix B, Section II, Parts A And B.
Department of Agriculture			
Los Padres National Forest Mt. Pinos Ranger District HC1, Box 400 34580 Lockwood Valley Road Frazier Park, CA 93225	Junita Garcia John Kelly	(805) 245-3731	No information.
USDA Aerial Photography Field Office PO Box 30010 2222 West 2300 South Salt Lake City, UT 84130-0010	Sherrie Holyoak	(801) 975-3503	No information.

**APPENDIX A
REFERENCE SOURCES**

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
FEDERAL			
Department of Agriculture (cont.)			
USDA, Natural Resources Conservation Service PO Box 260 3380 Somis Road Somis, CA 93006	Pat	(805) 386-4489	No information.
Consolidated Farm Service Agency 920 East Stowell Road Santa Maria, CA 93454	Becky Sims	(805) 928-9269	No information.
Department of Commerce			
National Climatic Data Center NOAA Federal Building Ashville, NC 28801	Yolanda Goosch Sam McCowan	(704) 271-4272	Local Climatological Data Reports.
NGS, Information Services N/NGS 12, SSMC#, Station 9244 1315 E-W Highway Silver Spring, MD 20920-3282	Joan Rikon	(301) 443-8601 Fax 713-4172	No information.
Department of Interior			
U.S. Geological Survey EROS Data Center Sioux Falls, SD 57198	Staff	(606) 594-6151	Aerial photos
USGS Branch of Distribution Box 25286 Building. 810 Denver Federal Center Denver, CO 80225	Staff	(303) 236-7476	Topographical Maps.
Department of Interior U.S. Geological Survey EROS Data Center Sioux Falls, SD 57198	Staff	(605) 594-6151 Fax 594-6589	No information.

APPENDIX A
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Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
Department of Interior			
Department of Interior Geological Survey Reston, VA 22092	Dave Keys	(703) 648-5956 Fax 648-5548	No information.
U.S. Fish And Wildlife Service 2493 Portola Road Ventura, CA 93003	Kirk Waln	(805) 644-1766	Sent endangered animals and plant species list for the site.
U.S. Geological Survey Earth Science Information Center (ESIC) 1400 Independence Road Rolla, MO 65401	Staff	(573) 308-3500 Fax 308-3615	No information.
U.S. Geological Survey, (ESIC) Box 25046, Bldg. 810 Denver Federal Center Denver, CO 80225	Paula Erickson Steve Reiter	(303) 202-4200 Fax 202-4188	No information.
STATE			
California State Archives 1020 O St. Sacramento, CA 95814	Tony Hoffmann	(916) 653-2246	No information.
California State Library California History Section 914 Capital Mall Library And Courts Bldg. Sacramento, CA 94237-0001	Sybylle Zemitis	(916) 654-0176 Fax 654-8777	No information.
SHPO South Central Coastal Information Center Institute of Archaeology University of California, Los Angeles Al63 Fowler Bldg. Los Angeles, CA 90095	Phyllisa Eisentraut	(310) 825-1980 Fax 206-4723	Sent archeological and historical information.

APPENDIX A
REFERENCE SOURCES

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
STATE (cont.)			
University Of California PO Box 19557 Irvine, CA 92110	Reference Desk	(714) 824-6836	No information.
University Of California Government Documents Dept. PO Box 19557 Irvine, CA 92110	Jeff Schneidewind Kay Collins	(714) 824-7234	No information.
University of California Archives PO Box 19557 Irvine, CA 92713	Mary Ellen Goddard	(714) 824-7193	No information.
LOCAL			
Kern County Library Frazier Park Branch 3015 Mt. Pinos Way, Unit 101 Frazier Park, CA 93225	Staff	(805) 245-1267	No information.
Ventura County Assessor 800 South Victoria Avenue Ventura, CA 93009	Staff	(805) 654-2282	No information.
Ventura County Fire Department Ventura County Airport Camarillo, CA 93010	Joe Luna	(805) 389-9710/ 9736	No information.
Ventura County Library Foster Library 651 East Main Street Ventura, CA 93009	Reference Librarian	(805) 648-2716	No information.

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REFERENCE SOURCES

Organization	Name	Telephone	Nature of Support
GOVERNMENT AGENCIES			
LOCAL (cont.)			
Ventura County Library Ojai Library 111 East Ojai Avenue Ojai, CA 93023	Reference Librarian	(805) 646-1639	No information.
Ventura County Museum of History and Art 100 East Main Street Ventura, CA 93001	Charles Johnson	(805) 653-0323	No information.
Ventura County Recorder 800 South Victoria Avenue Ventura, CA 93009	Staff	(805) 654-2292	No information.
Ventura County Sheriff 800 South Victoria Avenue Ventura, CA 93009	Detective Desk	(805) 654-2340	Referral.
Ventura County Sheriff East County (Bomb Squad) 210 East Olsen Road Thousand Oaks, CA 91360	Joe Braga	(805) 494-8223	No knowledge of any reports of UXO from the area of site. Mr. Braga was Contacted on 3 April by the inspection team to remove a live round.

APPENDIX A
REFERENCE SOURCES

Organization	Name	Telephone	Nature of Support
NON-GOVERNMENT AGENCIES			
NATIONAL			
Council on America's Past 518 Why Worry Lane Phoenix, AZ 85021	Heliogram Publication	(800) 396-4693	No information.
Coast Defense Study Group, Inc. 731 Baltimore Pike Bel Air, MD 21014	Publication		No information.
Dynamac Corporation 230 Peachtree St. Atlanta, GA 30303	Beverly Williams	(404) 681-0933	No information.
Northern Illinois Library System 4034 East State St. Rockford, IL 61108	Computer Search (NILS)	(815) 229-0330	No information.
Online Computer Library Center 6565 Frantz Rd Dublin, OH 43017-3395	Computer Search (OCLC)	(800) 848-5878	No information.
Scientific & Technical Information Library System 689 Discovery Drive Huntsville, AL 35806	Computer Search (STILAS)	(205) 922-9820	No information.
Knight-Ridder Information Inc. 2440 El Camino Real Mountain View, CA 94040	Computer Search	(800) 334-2564	No information.
LOCAL			
California Historical Society 678 Mission Street San Francisco, CA 94105	Beth Graham	(415) 357-1848 Fax 357-1850	No information.
Ojai Valley Museum PO Box 204 Ojai, CA 93024	Mary Kay Porter	(805) 646-0445 Fax 646-4792	No information.

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Organization	Name	Telephone	Nature of Support
NON-GOVERNMENT AGENCIES			
LOCAL (Cont.)			
Bruce Rebenstorf 6016 Stanton Avenue Highland, California 92346	Historian	(909) 864-4302	No information.
Bruce Tinknell 8786 Betelgeule Way San Diego, California 92126	Retired EOD	(619) 578-9901	No information.

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
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APPENDIX B
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ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
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DRY CANYON, VENTURA COUNTY, CALIFORNIA
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- SECTION 2: NATIONAL CAPITAL REGION ARCHIVES RECORDS
- PART A: POSITIVE FINDINGS
- PART B: NEGATIVE FINDINGS

APPENDIX B

REFERENCES AND ABSTRACTS

SECTION I

BIBLIOGRAPHY

Table of Contents

B-1 Soil Survey of Los Padres National Forest Area, California,
US. Department of Agriculture, 1981.

B-2 Site Safety Plan For OEW Investigations, U.S. Army Corps of
Engineers, Rock Island District, dated 25 June 1992. Appendix
A-128, dated 8 January 1996.

B-3 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, dated 10 August 1992.

B-4 Defense Environmental Restoration Program for Formerly Used
Defense Sites Ordnance and Explosive Waste ARCHIVES SEARCH REPORT
MANUAL, Version 2.1, U.S. Army Corps of Engineers, Rock Island
District, dated 28 February 1994.

B-5 TM 9-1904, Ammunition Inspection Guide, War Department,
dated 2 March 1944, (D-1 and D-3).

B-6 TM 9-1901, Artillery Ammunition, War Department, dated 29
June 1944, (D-2).

B-7 FDE, SSS, And PSS for Dry Canyon Artillery Range, Ventura
County, California, Los Angeles District Corps of Engineers,
dated 27 October 1994, (E-1).

B-8 Species list for vicinity of Dry Canyon Artillery Range,
Ventura County, California, United States Department of Interior,
Fish and Wildlife Service, Ventura Field Office, Ventura,
California, dated 23 January 1997 (F-1).

B-9 Historical/Cultural Resource, Listing for Apache Canyon,
Reyes Peak, San Guillermo and Sawmill Mountain Quadrangles,
Ventura County, Regional Information Center, Los Angeles,
California (F-2).

B-10 Land Acquisition and Disposal Summary, Realty Control File
Summary (Land Acquisition and Disposal Subsequent to 1 July 1940)
Received from Las Angeles District Corps of Engineers (F-3).

B-11 Use Permits issued by the United States Forest Service, Los Padres National Forest to the United States of America Army (F-4 dated 12 August 1942) (F-5 dated 22 May 1943) (F-6 dated 24 August 1943) (F-7 dated 17 January 1944).

B-12 Report on the inspection and dedudding of Dry Canyon, California, Corps of Engineers Office of the Chief of Engineers, TSU Detachment No. 14 Bomb and Shell Disposal Team, Marieopa, California, dated 5 December 1951 (F-9).

B-13 Real Property Management and Disposal Report for Dry Canyon Artillery Range, Los Angeles District Corps of Engineers, Los Angeles, California, dated 1 June 1954 (G-1).

B-14 Drawing, Real Estate, Dry Canyon Artillery Range Military Reservation, Department of the Army Office of the Los Angeles District Engineers South Pacific Division, dated 13 May 1954, (L-1).

SECTION II
NATIONAL CAPITAL REGION ARCHIVES FINDINGS
PART A
POSITIVE FINDINGS
DRY CANYON ARTILLERY RANGE, CA

SECTION II
NATIONAL CAPITAL REGION ARCHIVES FINDINGS
PART A
POSITIVE FINDINGS

DRY CANYON ARTILLERY RANGE, CA

***LIBRARY OF CONGRESS - GEOGRAPHY AND MAP DIVISION
WASHINGTON, DC***

United States Department of the Interior

Geological Survey, Dry Canyon Quadrangle, 1991
Geological Survey Map of Dry Canyon

***US ARMY COPS OF ENGINEERS - OFFICE OF HISTORY
ALEXANDRIA, VA***

Real Estate Files

Dry Canyon Artillery Range, CA

SECTION II
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NEGATIVE FINDINGS
DRY CANYON ARTILLERY RANGE, CA

SECTION II
NATIONAL CAPITAL REGION ARCHIVES FINDINGS
PART B
NEGATIVE FINDINGS

DRY CANYON ARTILLERY RANGE, CA

***CENTER OF MILITARY HISTORY - HISTORICAL RESEARCH
BRANCH
WASHINGTON, DC***

Pertinent Collections

***LIBRARY OF CONGRESS - STILL PHOTOS DIVISION
WASHINGTON, DC***

Pertinent Collections

***NARA - ARCHIVES I
WASHINGTON, DC***

RG 77 (Records of the Office of the Chief of Engineers)

Entry 391: Construction Completion Reports, 1917 - 1943

Entry 393: "Historical Record of Buildings" and "Record of Equipment and
Condition of Buildings" at Active Army Posts, 1905 - 1942

RG 92 (Records of the Office of the Quartermaster General)

Entry 1891: General Correspondence (Geographic File), 1905 - 1942

RG 153 (Records of the Office of the Judge Advocate General)

Entry: Reservations File, 1800 - 1950

Subseries I

Subseries II

RG 175 (Records of the Chemical Warfare Service)

Entry 1: Central Correspondence File, 1918 - October 1942

Entry 4: Security and Confidential Central Correspondence Files, 1918 - October
1942

***NARA - ARCHIVES II - TEXTUAL BRANCH
COLLEGE PARK, MD***

RG 16 (Records of the Department of Agriculture)

Entry 17: General Correspondence of the Office of the Secretary of Agriculture,
1906 - 1975

RG 30 (Records of the Bureau of Public Roads)

Entry 54: Highway Traffic Advisory Committee to the War Department,
1941 - 1945

RG 48 (Records of the Office of the Secretary of the Interior)

Entry 749B: Central Classified Files, 1939 - 1953

RG 57 (Records of US Geological Survey)

Entry 27: Correspondence and Related Records, 1906 - 1948

RG 77 (Records of the Office of the Chief of Engineers)

Entry 1011: Security Classified Subject Files, 1940 - 1945

Entry 1013: General Correspondence with Districts, 1941 - 1945

Entry 1014: General Correspondence with Divisions, 1941 - 1945

RG 92 (Records of the Office of the Quartermaster General)

Entry 1892: General Correspondence (Geographic File), 1936 - 1954

RG 96 (Records of the Farmers Home Administration)

Entry 3: Correspondence Relating to Participation in the Defense Program, 1940 -
1942

RG 107 (Records of the Secretary of War)

Entry 102: Project Decimal File, 1943 - January 1946

Entry 155: Under Secretary of War, Special Assistant for Construction MJ
Madigan, Projects, 1940 - 1945

Entry 158: Under Secretary of War, Special Assistant for Construction MJ
Madigan, General Correspondence, 1940 - 1945

RG 111 (Records of the Office of the Chief Signal Officer)

Entry: Unclassified Central Decimal Files, 1941 - 1957

RG 112 (Records of the Office of the Surgeon General)

Entry 31: Geographic Series, 1938 - 1941

Entry 32: Geographic Series (Formerly Security Classified), 1938 - 1941

- RG 115 (Records of the Bureau of Reclamation)
Entry 7: General Administrative and Program Files, 1919 - 1945
- RG 121 (Records of the Public Buildings Service)
Entry 13: Records Concerning Federal Real Estate Inventory, 1936 - 1940
- RG 160 (Records of the Army Service Forces)
Entry 25: Director of Plans and Operations, Liaison and Control Branch, Subject Files, 1942 - 1944
Entry 27: Mobilization Division, Command Installations Branch, Correspondence File, 1942 - 1946
Entry 138: Readjustment Division, Central Decimal Files, 1943 - 1944
Entry 139: Readjustment Division, Central Decimal Files, 1943 - 1946
- RG 165 (Records of the War Department General and Special Staffs)
Entry 258: Installations Branch, Reports and Correspondence Relating to Construction, Utilization, and Disposal of Army Installations, 1944 - 1947
Entry 484D: Federal Works Agency Project Files, 1940 - 1946
Entry 484E: Security Classified Federal Works Agency Project Files, 1942 - 1945
- RG 168 (Records of the National Guard)
Entry 343: State Guard State File, 1941 - 1949
Entry 344: State Decimal File, 1941 - 1947
- RG 175 (Records of the Chemical Warfare Service)
Accession 67A-4900: General Correspondence, Station Files, Miscellaneous Files, 1946 - 1954
Entry 2A: General Correspondence (Subject Series), 1942 - 1945
- RG 218 (Records of the U.S. Joint Chiefs of Staff)
Entry: Series, 1942 - 1959 (Geographic File)
- RG 250 (Records of the Office of War Mobilization and Reconversion)
Entry 46: Surplus Property Disposal Records
- RG 269 (Records of the General Services Administration)
Entry 5: Real property Disposal Case Files Transferred from the Farm Credit Administration, 1945 - 1953
- RG 270 (Records of the War Assets Administration)
Entry 3: Office of Information, Subject Files, 1946 - 1959
- RG 291 (Records of the Federal Property Resources Service)
Entry 5: Real Property Disposal Case Files, 1962

RG 319 (Records of the Army Staff)

Entry 47: Army Intelligence Project Decimal File, 1941 - 1945

RG 336 (Records of the Office of the Chief of Transportation)

Entry: Historical Program Files, 1940 - 1950

RG 337 (Records of Headquarters Army Ground Forces)

Entry 1: Inspection Reports, Camps, Posts, and Stations, 1948 - 1950

Entry 30: General Staff, G3 Section, Inspection Reports, 1942 - 1944

Entry 47: Field Artillery Branch Decimal File, 1942 - 1945

Entry 57: General Correspondence, 1940 - 1942

Entry 57A: Project Files, Western Defense Command, 1940 - 1943

Entry 91: Ordnance Section, Classified Decimal Files, 1945 - 1948

RG 338 (Records of US Army Commands, 1942 -)

Entry: Camps, Posts, and Stations

RG 407 (Records of the Adjutant General's Office)

Entry: 1940 - 1947, Army - AG, Formerly Classified Project Decimal Files

Entry: 1940 - 1954, Army - AG, Unclassified Project Decimal Files

Entry 427: WW II Operations Reports, 1940 - 1948

***NARA - ARCHIVES II - CARTOGRAPHIC BRANCH
COLLEGE PARK, MD***

Pertinent Record Groups

***NARA - ARCHIVES II - MOTION PICTURE, SOUND AND VIDEO
BRANCH
COLLEGE PARK, MD***

Pertinent Record Groups

***NARA - ARCHIVES II - STILL PICTURES BRANCH
COLLEGE PARK, MD***

Pertinent Record Groups

***NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, DC***

Pertinent Collections

***SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM
WASHINGTON, DC***

Pertinent Collections

***US ARMY COPS OF ENGINEERS - OFFICE OF HISTORY
ALEXANDRIA, VA***

Pertinent Collections

***WASHINGTON NATIONAL RECORDS CENTER
SUITLAND, MD***

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SECTION III
REGIONAL NATIONAL ARCHIVES FINDINGS
PART A
POSITIVE FINDINGS

DRY CANYON ARTILLERY RANGE

***NARA, FEDERAL RECORDS CENTER
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RG 77, Records of the Office the Chief of Engineers

Accession #077-960133

Box # 11

Paper, Realty Control File Summary, Re: Dry Canyon Artillery
Range

Paper, Military Acquisition Project Report, Re: Dry Canyon
Artillery Range, 13 May 1954

Paper, Tract Register, Re: Dry Canyon Artillery Range, 13
May 1954

Paper, Real Property Management and Disposal Report, Re: Dry
Canyon Artillery Range, 1 June 1954

SECTION III
REGIONAL NATIONAL ARCHIVES FINDINGS
PART B
NEGATIVE FINDINGS

DRY CANYON ARTILLERY RANGE

NARA, PACIFIC SOUTHWEST REGION
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 77, Records of the Office the Chief of Engineers
All Entries
Nothing Found

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

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

RG 121, Records of the Public Buildings Service
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 270, Records of the War Assets 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

***NARA, NATIONAL PERSONNEL RECORDS CENTER
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All Entries
Nothing Found

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RG 77, Records of the Office the Chief of Engineers
Accession #077-76L1483
Boxes #115-130,132-134,136-148
Nothing of Value to This ASR Found

RG 121, Records of the Public Building Service
Accession #121-77-0003
Boxes #1,3-8,10-17,1a-5a
Nothing Of Value to This ASR Found

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

RG 291, Records of the Federal Property Resources Service
All Entries
Nothing Found

NARA, PACIFIC SIERRA REGION
SAN BRUNO, 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 77, Records of the Office the Chief of Engineers
Accession #077-83-004
Boxes #5-9,16-18
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 Office of the Chief Signal Officer
All Entries
Nothing Found

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

RG 121, Records of the Public Buildings Service
All Entries
Nothing Found

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

RG 175, Records of the Chemical Warfare Service
Box #1
Nothing of Value to This ASR Found

RG 211, Records of the War Manpower Commission
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
All Entries
Nothing Found

RG 319, Records of the Army Staff
All Entries
Nothing Found

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

RG 406, Records of the Federal Highway Administration
Accession #72A1388
Boxes #7,10-12,14,17
Nothing of Value to This ASR Found

RG 407, Records of the Adjutant General's Office
All Entries
Nothing Found

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX C

GLOSSARY

APPENDIX C

GLOSSARY

AR	Army Regulation
BD/DR	Building Demolition/Debris Removal
CAL	Caliber
CEHNC	U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville
CEMVD	U.S. Army Engineer, Mississippi Valley Division
CEMVR	U.S. Army Engineer, Rock Island District
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESPL	U.S. Army Engineer, Los Angeles District
CON/HTW	Containerized Hazardous and Toxic Waste
CWM	Chemical Warfare Material
DA	Department of Army
DACS	Defense Ammunition Center and School
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DOI	Department of Interior
EE/CA	Engineering Evaluation Cost Analysis
EOD	Explosive Ordnance Disposal
FDE	Findings and Determination of Eligibility
FM	Field Manual
FUDS	Formerly Used Defense Site(s)
GSA	General Services Administration
HE	High Explosive
HTRW	Hazardous, Toxic and Radiological Waste
HTW	Hazardous and Toxic Waste
INPR	Inventory Project Report
IRP	Installation Restoration Program
NARA	National Archives Records Administration
OE	Ordnance and Explosives
PA	Preliminary Assessment
PD	Point Detonating
PN	Project Number
PRP	Privately Responsible Party
PSS	Project Summary Sheet
QASAS	Quality Assurance Specialist Ammunition Surveillance

GLOSSARY (CONT.)

RA	Remedial Action
RAC	Risk Assessment Code
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RE	Real Estate
SAA	Small Arms Ammunition
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SIOAC-ES	Army Material Command Ammunition Center for Explosive Safety
SSS	Site Summary Survey
TSQ	Timed Super Quick
USA	U.S. Army
USACE	U.S. Army Corps of Engineers
USAEDH	U.S. Army Engineer Division, Huntsville
USATCES	U.S. Army Technical Center for Explosives Safety
UXO	Unexploded Ordnance

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX D
TEXTS/MANUALS

APPENDIX D
TEXTS/MANUALS

Table of Contents

- D-1 Ammunition for 37mm Gun, (B-5).
- D-2 Ammunition for 105mm Howitzer, (B-6).
- D-3 Ammunition for 75mm Gun, (B-5).

AMMUNITION INSPECTION GUIDE

1. Black with white stencil. Armor-piercing, canister and drill (all inert).
2. Olive drab with yellow stencil. High-explosive.
3. Blue with white stencil. Practice.
4. Red with black stencil. Low-explosive.

Packing and Marking. Details of packing and marking will be most accurate if obtained from Standard Nomenclature Lists (SNL) R-1, Parts 1 and 2, and ordnance drawings. The numbers of complete round drawings will be found in SNL R-1, Part 2. Numbers of packing drawings will be found in SNL R-1, Part 2. Only very general details of packing and marking will be given in this text.

AMMUNITION FOR 37-MM GUN M1916.

General.

Weapon. With the introduction of armored vehicles during World War I, and the need for light supporting weapons for the infantry, it became necessary to develop a light field gun. As a result, the 37-mm Gun M1916, often referred to as the famous "one pounder," was adopted. Because of its low power, the gun is incapable of penetrating anything except very light armor plate (it will not penetrate 0.375 inch of good armor plate at 500 yards with the high-explosive shell), so today its use is limited. The weapon is used primarily as subcaliber equipment for larger guns, being standard for 75-mm, 155-mm guns and howitzers, and 105-mm howitzers. An oddity of this gun is that it is the only artillery piece in the service to have a left-hand twist of the lands and grooves.

Since the M1916 Gun is low powered as compared to other 37-mm guns, a smaller cartridge case and less propelling charge is used. A muzzle velocity of 1,276 feet per second is achieved with the high-explosive shell. The gun has no automatic feeding and extractor mechanism, but instead must be hand operated. The cartridge case, therefore, has only a flange for extraction and no groove as do most rounds for automatic weapons.

Types of ammunition. The age and success of the M1916 Gun resulted in the development of many types of rounds, as follows:

Type	Filler
Low-explosive	Black powder
Practice	Sand
High-explosive	TNT
Practice	Black powder
Canister	Lead balls
Blank	Black powder (old type) 10 Ga blank shotgun shell containing EC powder (new type)
Drill	None

ARTILLERY AMMUNITION

Only two rounds, H.E. Mk. II, and Practice Round Mk. IIA1 which stimulates the high-explosive round, are the standard for issue and manufacture. All other rounds are standard for issue only.

Cartridge cases. The Cartridge Case Mk. I, was the first used in the M1916 Field Gun. It is short as compared to other 37-mm cases, measuring 3.64 inches in length. The length of the neck and amount of shoulder is very slight, giving the case the appearance of a cylinder having almost straight sides and a flange at the base. The primer seat hole is of a size to receive only the Mk. IIA1, 20-grain, Percussion Primer.

To derive Cartridge Case Mk. IA1, the A1 modification of the Mk. I Cartridge Case consisted of reboring the primer seat hole of cartridge cases in the field to a larger diameter to receive the M23-series Primers.

The Mk. IA2 Cartridge Case is identical to the Mk. IA1 except that it is manufactured with a primer seat hole large enough to take the M23-series Primers.

SHELL, Fixed, L.E., Mk. I.

Complete round. The low-explosive round was the first ammunition adopted for the M1916 Gun. It was designed for use against personnel and light targets. It is now standard for issue only and is used for practice firing only.

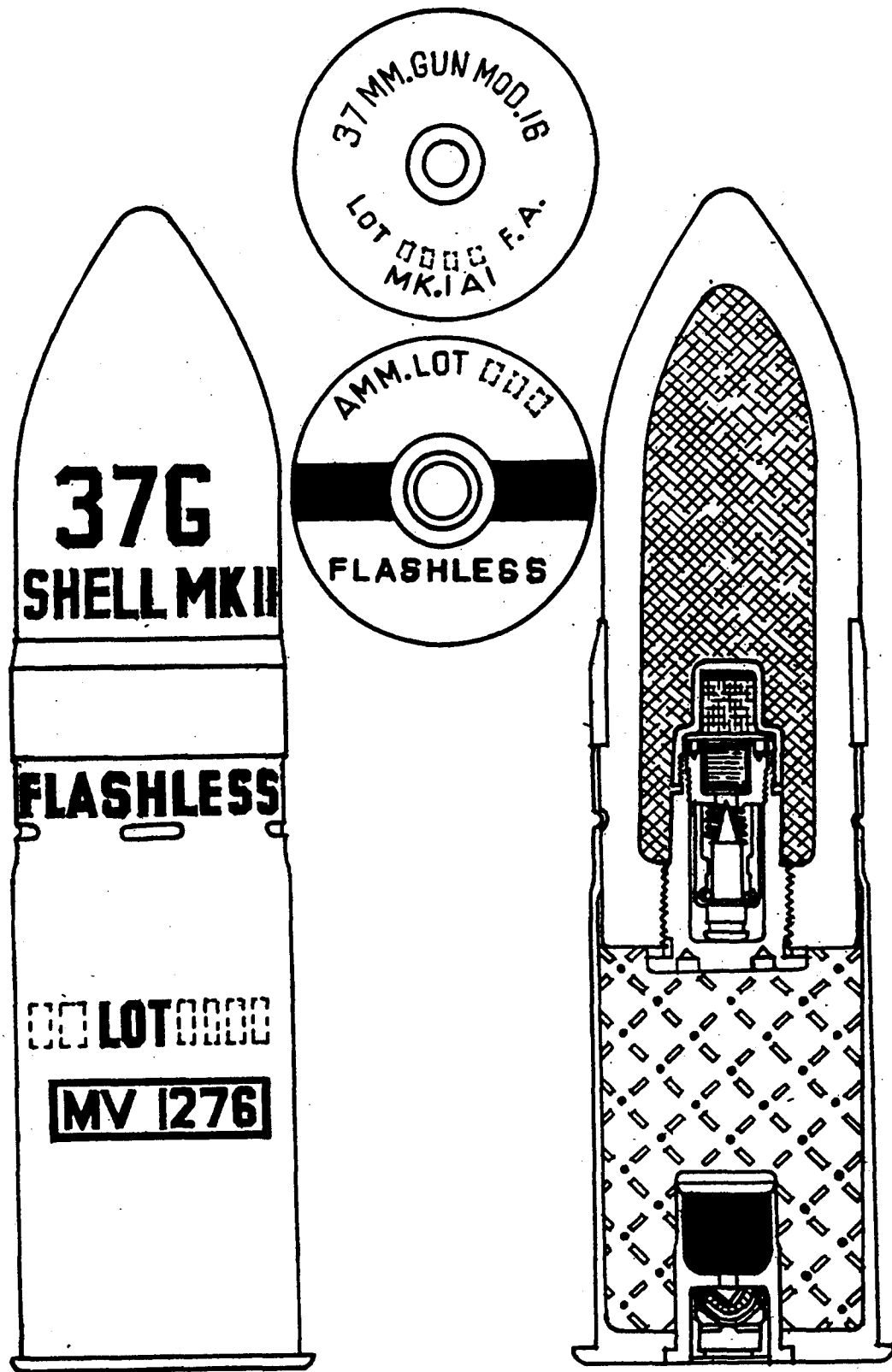
Cartridge case and primer. This round will probably be found with the old Mk. I Cartridge Case primed with the Mk. IIA1 Primer, since its manufacture has been discontinued for some time (cartridge cases, page 337 and primers, page 331).

Propelling charge. Approximately 550 grains of FNH powder is poured loosely into the cartridge case. This is sufficient to give the projectile a muzzle velocity of 1,312 feet per second, a maximum range of 4,500 yards, and an effective range of 1,200 yards.

Projectile. The projectile is made of bar steel and is filled with .034 pound of black powder. It weighs approximately 1 pound. Since it is adapted for a base fuze, its nose is continued to a rounded point. The projectile is about 3.56 inches long and has a radius of ogive of approximately 2.25 calibers.

FUZE, base percussion, Mk. I. The construction of the Mk. I Fuze differs from the M38A1 Base-detonating Fuze (page 340) in that it has a shear pin rather than the plunger and resistance-ring arrangement. Also, as indicated by "percussion" in the nomenclature, it is an igniting fuze and its explosive train consists of priming mixture and black powder which ignites the black powder bursting charge. The M38A1 is a detonating fuze in which the explosive train consists of a detonator of priming mixture, lead azide and tetryl, and a booster of tetryl.

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RA PD 22920

Figure 132 — SHELL, H.E., Mk. II, for 37-mm Gun M1916

AMMUNITION INSPECTION GUIDE

distinguished from other rounds by the can-like appearance of the projectile which is painted black (black painting indicates inert material).

SHELL, Fixed, H.E., Mk. II.

Complete round. The Mk. II High-explosive Shell is standard for issue and manufacture although it is not widely used for infantry support. It is only reasonably satisfactory as a substitute for armor-piercing shot against lightly armored targets since it will not penetrate .375 inch of good armor plate at 500 yards.

Cartridge cases and primers. The Mk. IA2 Cartridge Case with M23A2 Primer is standard for the high-explosive shell. However, older rounds may be found with the Mk. IA2 or Mk. IA1 Cartridge Case and M23A1 Primers, or possibly with Mk. I Cartridge Cases and Mk. IIA1 Primers (cartridge cases, page 337, and primers, page 331).

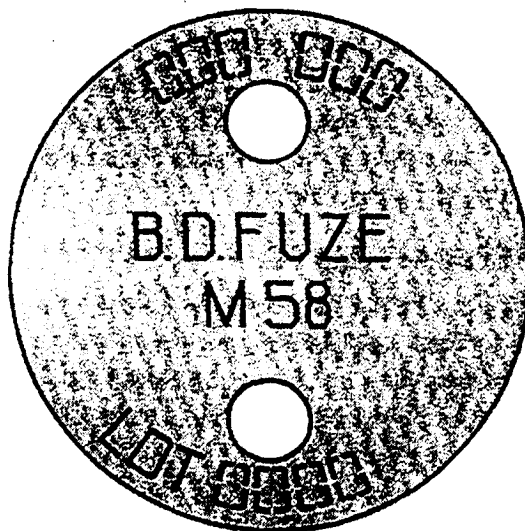
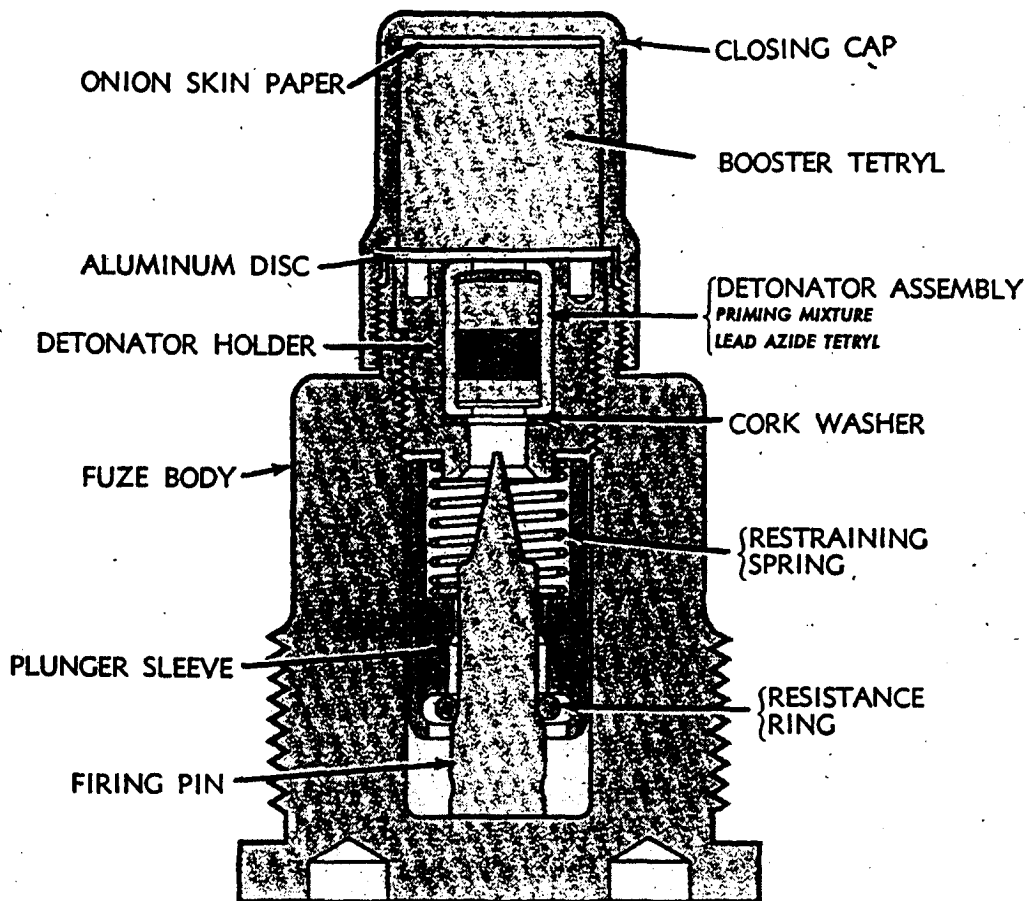
Propelling charge. Approximately 550 grains of FNH powder is poured loosely into the cartridge case.

Projectile. This shell is made of bar steel and has an explosive charge of 0.06 pounds of TNT. It is 4.45 inches long and has an ogive radius of 2.25 calibers. Since it is adapted for a base-detonating fuze, the nose is continued to a rounded point. The projectile is longer and has thinner walls than the low-explosive shell. The total weight of the projectile with fuze and bursting charge is about 1 pound.

FUZE, base-detonating, M38A1. The M38A1 Fuze is standard for the Mk. II Round. It is a typical nondelay fuze, being located in the base of the projectile and having no delay between the firing pin and the detonator. There is no positive separation between the detonating elements and the booster, so the fuze is not boresafe.

The fuze body is made of brass and forms a sleeve which contains the plunger assembly, restraining spring, and detonator assembly. A flange at the base prevents the fuze from being assembled flush with the base of the shell and provides enough thickness so that no base plate is required. The body has outside threads at the base for screwing into the projectile, outside threads at the top over which the closing cap is assembled, and inside threads at the top into which the detonator assembly holder is screwed. The plunger assembly consists of a firing pin, a resistance ring, and a sleeve. The sleeve is assembled over the resistance ring in such a manner that it will force the resistance ring over a shoulder and down into a groove at the base of the firing pin on set-back action. A restraining spring is interposed between the plunger assembly and detonator holder to restrain the firing pin during flight. The detonator holder containing the detonator assembly of priming mixture, lead azide, and tetryl is screwed into the fuze body directly over the firing pin. The closing cap con-

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RA PD 22921

Figure 133 — FUZE, Base-detonating, M58

AMMUNITION INSPECTION GUIDE

taining the booster pellet of tetryl then assembles over the outside threads at the top of the body. The booster pellet is separated from the detonator by a thin aluminum disc.

The function of the fuze begins when the projectile is propelled down the bore of the weapon. The set-back force caused by linear acceleration causes the plunger sleeve to force the resistance ring back over the shoulder into the groove at the base of the firing pin. This locks the plunger sleeve and firing pin together and leaves the point of the firing pin protruding far enough past the plunger sleeve head to penetrate the recess in the detonator holder and strike the priming mixture on impact. The plunger assembly is restrained from carrying the firing pin into the detonator during flight by a restraining spring. On impact, the firing pin is carried forward by inertia and initiates the explosive train of detonator consisting of priming mixture, lead azide and tetryl; booster of tetryl; and bursting charge of TNT.

FUZE, base detonating, M38. The M38 Fuze is limited standard for the High-explosive Mk. II Shell, having been replaced by its modification M38A1. The A1 modification was a change in the detonator assembly. The M38A1 contains priming mixture, lead azide, and tetryl in the detonator whereas the M38 Detonator is made up entirely of mercury fulminate. The M38 was designed, primarily, to replace the old Mk. IV Base-detonating Fuze which, when fired in conjunction with chamber pressures greater than 18,000 pounds per square inch, frequently prematured.

Identification. The complete round of SHELL, fixed, H.E., Mk. II, may be identified for the M1916 Gun by the length of the cartridge case (3.64 inches). The projectile is painted olive drab and is stenciled in yellow. (This painting and stenciling is common to ammunition loaded with high explosives.) Aside from painting and marking, the High-explosive Round Mk. II may be distinguished from the Low-explosive Round Mk. I by its length. The Mk. II is .549 inch longer than the Mk. I. The Complete Round Mk. II, is 6.92 inches long and weighs approximately 1.61 pounds.

SHELL, Fixed, Practice, Mk. II.

Complete round. This round was constructed to simulate the high-explosive shell for practice work. It is identical with the high-explosive round except that the bursting charge consists of 0.05 pound of black powder instead of 0.053 pound of TNT; and that FUZE, base-practice, M38 (a percussion type of fuze), is used instead of FUZE, base-detonating, M38A2. A percussion fuze is necessary to ignite the black powder charge. The Mk. II Practice Shell is standard for issue only, having been modified to Mk. IIA1.

The M38 Practice Fuze is similar to the M38A1. However, no booster is used so that the closing cap consists only of a threaded cup with a hole in the center which is closed with a paper disc. The

ARTILLERY AMMUNITION

detonator assembly becomes an igniter assembly containing priming mixture and black powder.

The function of the two fuzes are the same until the force of impact when, in the practice M38, the firing pin strikes the priming mixture which ignites the black powder igniting charge. The flame from the igniting charge flashes through the paper covered hole in the closing cap and ignites the black powder filler of the practice shell.

Identification. The Mk. II Practice Shell can be identified as an M1916 Gun round by the length of the cartridge case (3.64 inches). It is painted blue with white stencil as is most practice ammunition. Aside from its painting and marking, it cannot be distinguished from the High-explosive Mk. II Round on visual inspection. The round would have to be broken down for complete identification if the painting and marking were obliterated.

SHELL, Fixed, Practice, Mk. IIA1. The A1 modification of the Mk. II Practice Shell was the addition of 15 percent colloidal graphite to the black powder charge. The Mk. II Practice Round could not be fired over personnel due to the possibility of premature explosion. The adding of colloidal graphite was for the purpose of eliminating this possibility of premature explosion of the bursting charge. The Mk. IIA1 is standard for issue and manufacture since it is widely used with subcaliber mounts.

CARTRIDGE, Drill, M5. Drill cartridges are used to train troops in handling ammunition and in loading and unloading weapons. The drill cartridge is entirely inert being assembled from inert components of 37-mm Gun M1916 ammunition. The drill round may be identified by holes drilled through the cartridge case and through the projectile to show that both are empty. The projectile is also painted black to show that it is inert.

Blank Ammunition.

Old type. Typical blank ammunition of the old type is made up of 37-mm Cartridge Case Mk. I, Mk. IA1 or Mk. IA2 with appropriate primer; a cylindrically-shaped charge of black powder inclosed in a silk bag or moistureproof cellophane bag with a hole in the center for fitting over the primer; a cardboard wad for holding the black powder charge in place; and a paper closing cup sealed with Pettman cement.

New type. The new type of blank ammunition for 37-mm guns consists of the appropriate cartridge case adapted at either end for a central tube which is of a size to seat a 10-gage blank shotgun shell. This 10-gage blank shell (correct nomenclature is Cartridge, blank, 10-gage) is fired when the firing pin of the weapon strikes its primer. The blank round for the M1916 Gun consists of the Adapter M1

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

Section XIII

AMMUNITION FOR 105-MM HOWITZERS

202. GENERAL.

a. **General Discussion.** Two distinct types of 105-mm howitzer are now in use—the M2, M2A1, and M4 type and the M3 type. The M2 and M2A1 are the basic models making up the traditional light field howitzer mounted on split-trail type carriage. These models also are used as assault artillery by the armored forces. The M4 Howitzer is mounted in the medium tanks. The M3 is basically of the same design, being a stripped-down and shortened light-weight M2A1 Howitzer for infantry and air-borne service. Except that ammunition for the M3 model has a smaller quicker-burning propelling charge, rounds provided for the 105-mm howitzers are alike. All rounds are classified as semifixed ammunition, and all have adjustable propelling charges for zone firing, with one exception. The H.E., A.T. round is a special type in that the charge is fixed, that is, not adjustable, the cartridge case and projectile not being crimped together because of the method of packing and shipment. Standard projectiles are shipped with fuzes assembled.

b. **Identification.** Painting and marking for identification is in accordance with the basic scheme as prescribed in TM 9-1900. Rounds for the M2, M2A1, and M4 Howitzers may be readily identified from those for the M3 by the marking on the packing containers, and on the round itself, since the designation of the cannon is marked on containers and on base of cartridge case of each round (fig. 112).

c. **Fuzes.** FUZE, B.D., M62, or M62A1, is assembled in the base of the H.E., A.T. Shell M67. These are boresafe base-detonating fuzes which function with nondelay action. High-explosive shell are assembled as shipped with either FUZE, P.D., M48, M48A1, M48A2, or FUZE, TSQ, M54. The M48, M48A1, and M48A2 Fuzes are selective superquick-delay types. They function alike except for differences in the length of delay (0.05 sec in the M48, 0.15 sec in the M48A1 although modified fuzes with 0.05-sec delay are in existence, and 0.05 sec or 0.15 sec in the M48A2, depending on the lot). FUZE, TSQ, M54, is a combination time and superquick type in which the superquick action is always operative. It will function on impact unless prior functioning has been caused by time action. FUZE, P.D., M57, a single-action superquick type, is used with the chemical shell. This fuze is used in order to give surface bursts, and thereby, the most effective dissemination of the smoke or gas filler of the shell. For a complete description of the fuzes, see chapter 3, section I.

TM 9-1901
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ARTILLERY AMMUNITION

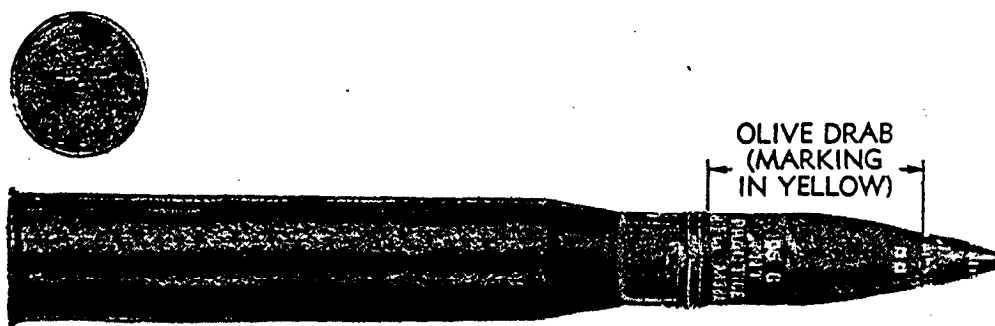
e. **Primers.** PRIMER, percussion, 300-grain, M28A2, is standard for 105-mm gun ammunition but earlier modifications may be found in rounds of less recent manufacture. An alternative is PRIMER, percussion, 300-grain, M28B1. The M21 Primer—a 330-grain type—was formerly used with the M38 Round (ch. 3, sec. III).

225. COMPLETE ROUND TABLE.

a. Data concerning the complete rounds of 105-mm gun ammunition, and components thereof, are given in table 20, chapter 5.

226. PACKING AND SHIPPING DATA.

a. Packing and shipping data for the ammunition are published in ORD 11 SNL's P-5 and P-8.



RA PD 80792

Figure 119 — SHELL, Fixed, H.E., M38A1, w/FUZE, Time, Mechanical, M43 (All Modifications), 105-mm Gun, M3

TABLE 19
COMPLETE ROUND TABLE FOR AMMUNITION FOR 105-MM HOWITZERS

(This table is not to be confused with official Complete Round Charts, Form No. 5981.)

Note References	Designation of Cannon	PROJECTILE						FUZE		Booster, Adapter-Booster, or Bursting	Cartridge Case	PROPELLING CHARGE		PRIMER	
		Kind	Type	Model	Filler		Weight as Fired (Lb.)	Type and Model	Action			Kind	Weight (Lb.)	Model	Type
					Kind	Weight (Lb.)									
Service Ammunition															
1, 2, 3, 9	M2, M2A1, M4	SHELL	H.E.	M1	TNT	4.80	33.00	P.D., M48A2	SQ & Delay	M20A1	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 9	M2, M2A1	SHELL	H.E.	M1	TNT	4.80	33.00	TSQ, M54	SQ & Time	M20A1	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 4	M2, M2A1, M4	SHELL	Chem., B.E.	M84	HC smoke	7.50	32.87	TSQ, M54	SQ & Time	None	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 4, 5	M2, M2A1	SHELL	Chem., B.E.	M84	Colored HC smoke	See note 5	See note 5	TSQ, M54	SQ & Time	None	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 6	M2, M2A1	SHELL	Chemical	M60	FS smoke	4.61	34.82	P.D., M57	SQ	M22	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 6	M2, M2A1	SHELL	Chemical	M60	WP smoke	4.10	34.31	P.D., M57	SQ	M22	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2, 3, 6	M2, M2A1	SHELL	Chemical	M60	H gas	3.17	33.38	P.D., M57	SQ	M22	M14	FNH, M1	3.04	M1B1A2	100-gr. perc.
2	M2, M2A1, M4	SHELL	H.E., A.T.	M67	Pentolite	2.93	29.22	B.D., M62 or M62A1	Nondelay	None	M14	FNH, M1	1.60	M28A2	300-gr. perc.
1, 2, 9	M3	SHELL	H.E.	M1	TNT	4.80	33.00	P.D., M48A2	SQ & Delay	M20A1	M14	FNH, M1	1.43	M1B1A2	100-gr. perc.
2	M3	SHELL	H.E., A.T.	M67	Pentolite	2.93	29.22	B.D., M62 or M62A1	Nondelay	None	M14	FNH, M1	1.40	M28A2	300-gr. perc.
2, 3, 4	M3	SHELL	Chem., B.E.	M84	HC smoke	7.50	32.87	TSQ, M54	SQ & Time	None	M14	FNH, M1	1.43	M1B1A2	100-gr. perc.
2, 3, 6	M3	SHELL	Chemical	M60	WP smoke	4.06	34.31	P.D., M57	SQ	M22	M14	FNH, M1	1.43	M1B1A2	100-gr. perc.

D-2

TM 9-1901

FUZES, PROPELLING CHARGES, PRIMERS, AND OTHER COMPONENTS**319. FUZE, P.D., M48A2, M48A1, AND M48.**

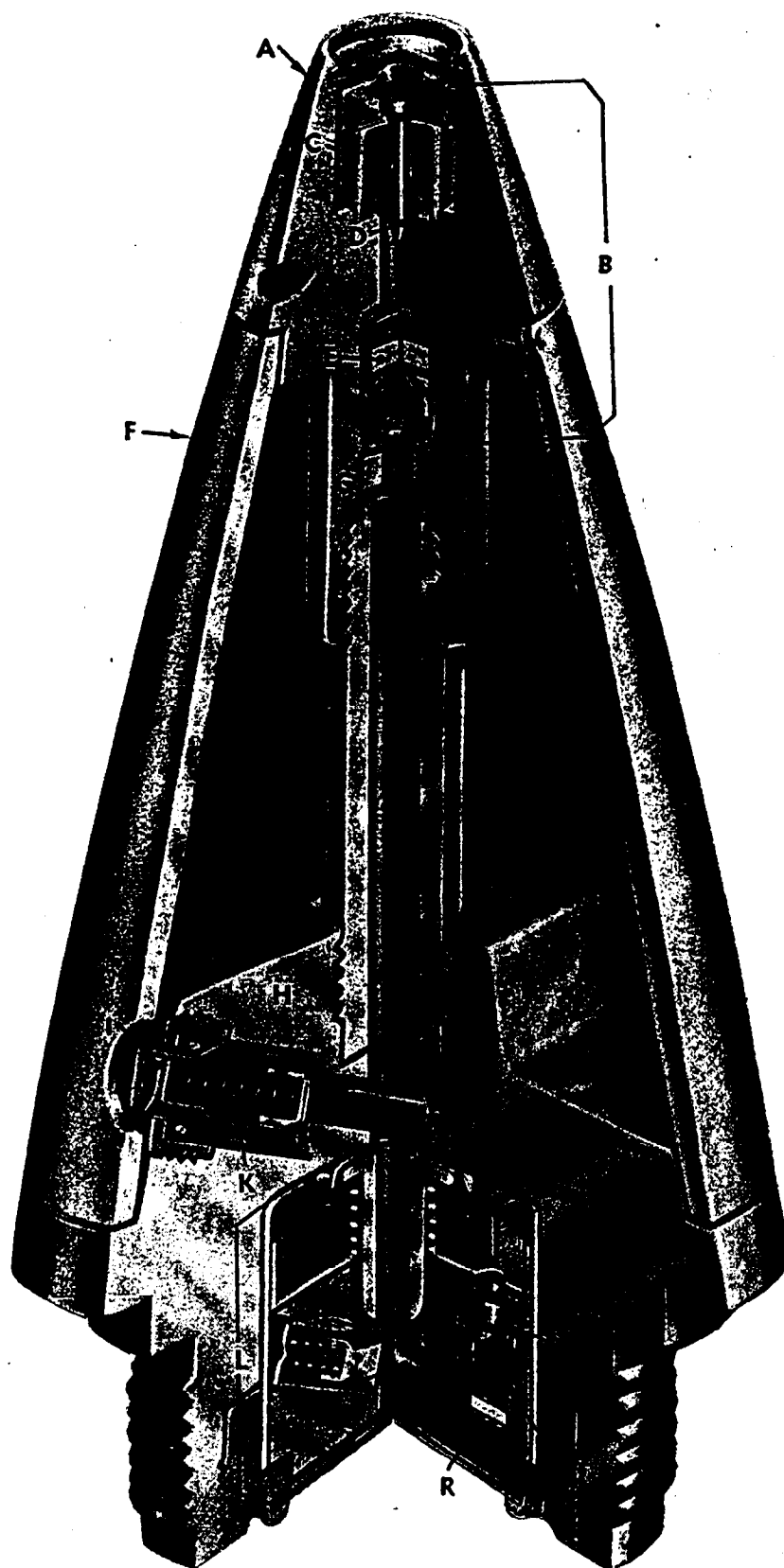
a. **General.** The M48A2 (fig. 163) is a selective superquick or delay fuze. Either action can be obtained, prior to firing, by turning a setting screw in the side of the fuze. The M48A2 Fuze has two models, one having a delay of 0.05 second, the other a delay of 0.15 second; the time of delay is stamped on the fuze body. The M48A1 Fuze was originally fitted with the 0.15-second delay, whereas the M48 Fuze has the 0.05-second delay. The M48A1 Fuze differs from the M48A2 in that the firing pin in the delay-action assembly is not secured against movement to the rear. This is also true of the M48 Fuze, which differs, in addition, in not having a centrifugal lock (P) to hold the centrifugal delay plungers (Q) apart at low velocities. The fuzes are adapted for use in conjunction with the M20 Booster (or modification) which is made a manufacturing component of the shell. Some M48A1 Fuzes modified to have 0.05-second delay elements are in existence.

b. **Data.** Length, visible, 3.74 inches, over-all, 4.55 inches; weight, 1.41 pounds; thread size, 1.7-14NS-1.

c. **Description.** The fuze consists of a head (A) which holds a superquick action (B), and a body (H) which houses a delay assembly (L) and a selective setting device. These main assemblies are connected by a tube (G) which holds the parts firmly in position, and are further supported by a thin-walled ogive (F) shaped to continue the sweep of the ogive of the shell. The superquick action comprises a firing pin (D) supported by a gilding metal cup (C), and a detonator (E). The firing pin support is strong enough to withstand ordinary blows on the firing pin as well as set-back forces upon firing, but collapses under the force of impact at the target. The delay assembly is an inertia plunger type and includes a firing pin (M), primer (N), black powder delay pellet (O), and a detonating relay charge (R).

d. **Setting.** The setting device is an eccentrically positioned plunger (J) and plunger spring (K), the functioning of which is regulated by a setting sleeve (I). The head of the sleeve is slotted to facilitate turning when adjusting the setting. To enable exact alinement, two register lines and the marking "S.Q." and "DELAY" are stamped on the ogive of the fuze. When the slot in the sleeve head is alined with the "S.Q." line (parallel to the fuze axis), or within 15 degrees either side, the sleeve, which is thicker on one side than on the other, is turned so that it does not interfere with movement of the plunger. The plunger is free, therefore, to move outward under centrifugal force, and thereby open the passage for superquick action. When the slot is alined with the "DELAY" line (at right angles to

ARTILLERY AMMUNITION



RA PD 80852

Figure 163 — FUZE, P.D., M48A2

ARTILLERY AMMUNITION

the inert head is solid brass, whereas the superquick head is closed by an aluminum disk, crimped in place. For shipment separately from the shell, the flash-tube hole in the body is closed by a body closing plug which is removed when the flash tube is to be assembled to the fuze. The appearance of the fuze when assembled to the shell is shown in figure 143; the mechanism is shown in the illustration of the M48A2 Fuze (fig. 163).

d. **Alternative Fuze.** A retaining screw, packed in the box with the projectile, is intended for use only with the inert head when this fuze is replaced by a time fuze. The time fuze does not have an extended flash tube, hence the retaining screw is necessary to secure the head to the windshield of the shell.

e. **Preparation for Firing.** Since the fuze is shipped arranged for delay action, the projectile is fired as shipped when delay action is required. To obtain superquick action:

(1) Unscrew the delay head from the point of the projectile with the fuze wrench provided for this purpose.

(2) Assemble superquick head in place of the delay head and tighten with the fuze wrench.

322. FUZE, P.D., M52, M52B1 AND M52B2.

a. **General.** The M52B1 and M52B2 are manufactured alternatives of the M52 (fig. 165). Whereas the M52 has an aluminum head and body, the M52B1 is made of plastic materials while the M52B2 has a plastic head and an aluminum body. In other respects the fuzes are identical. All models are standard for 60-mm and 81-mm mortar shell, having replaced the M45 Selective-action Fuze for current manufacture.

b. **Data.** Length, visible, 3.36 inches, over-all, 3.47 inches; weight M52, 0.45 pound, M52B1, 0.29 pound; thread size, 1.5-12NF-1.

c. **Description.** The fuze is a single-action superquick type with a direct-action firing device. It consists of two major parts: a head (D) which holds the firing pin assembly; and a body (L) which contains a slider mechanism (F), a detonator (I), a booster lead-in (J), and a tetryl booster pellet (K) in a booster cup (O) screwed into the base of the fuze body. The firing pin assembly consists of a firing pin (C) secured to a cup-shaped striker (A). The striker is supported by a spring (B) which holds the firing pin at a safe distance from the detonator during the flight of the projectile. The entire firing pin assembly is held within the fuze head by a pin (E) near the pointed end of the firing pin. Boresafety is provided for by means of a slider-type interrupter which, in the unarmed position, holds the detonator out of alignment with the firing pin and the booster lead-in. The slider is locked in the unarmed position by a safety pin (G);

ARTILLERY AMMUNITION

brought into alinement in the same manner as in the M52 Fuze (par. 356) and locked in the armed position by the lock pin (L), action of the relay charge is transmitted to the detonator and, thereby, to the booster lead (M) and booster charge (N). The booster charge in turn causes the shell to explode.

e. **Preparation for Firing.** There is no preparation other than removing the safety wire (O). This should be done just before firing, and at no other time.

324. FUZE, TSQ, M54.

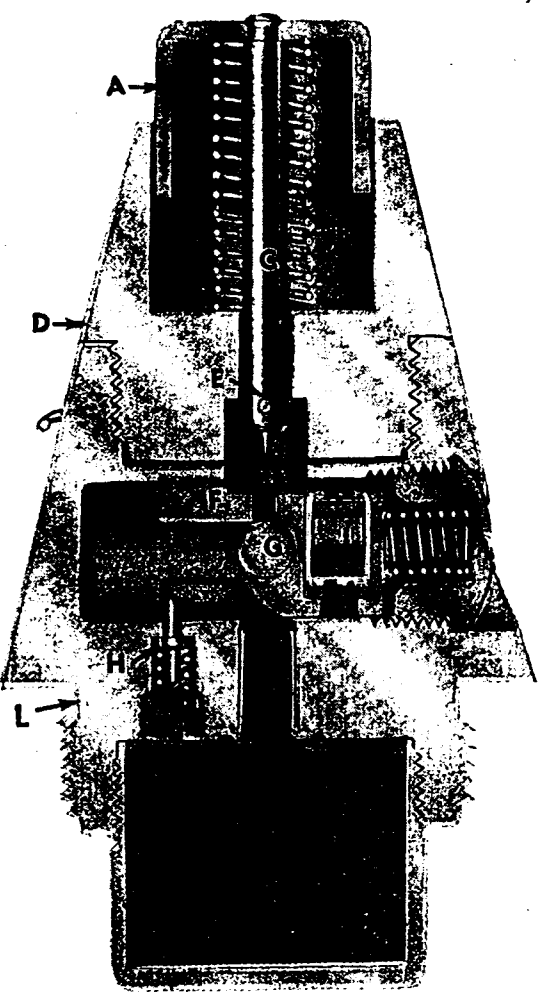
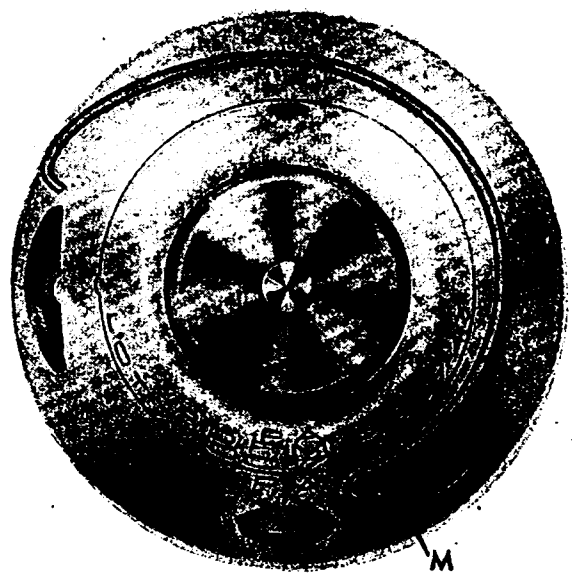
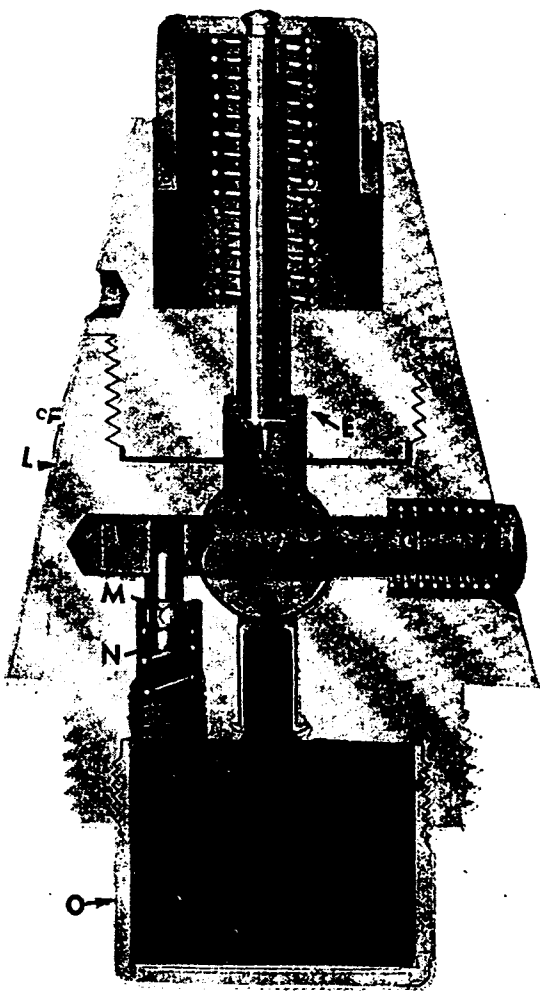
a. **General.** The M54 (fig. 167) is a selective superquick or time-action (to 25 sec) type. The fuze is usually used in conjunction with the M20 type booster, which is made a manufacturing component of the shell when the fuze is to be assembled thereto. The M54 is of the same size, shape, and weight as the M48, which is used with shell in the same calibers for impact functioning, and has the same ballistic values.

b. **Data.** Length, visible, 3.76 inches, over-all, 4.57 inches; weight, 1.42 pounds; thread size, 1.7-14NS-1.

c. **Description.** The fuze consists of three major parts: a closing cap or head (A) containing the superquick impact elements (B, C, E) and the time-action plunger (F); two time-train rings, one fixed (K) to the body and the other movable (P); and a body (R) containing a time-action striker (H) and primer (I), a magazine charge (T), and an interrupter (S). The superquick action is identical in construction and functioning with that in the M48 Fuze except that the interrupter incorporated in the body of the fuze has no setting sleeve, being automatic and always operative regardless of fuze setting. Hence, the fuze will function on impact unless prior functioning has been caused by the time action. The time action is typical of powder-train types and is initiated upon firing by the time-action plunger under set-back. The fixed upper and moveable lower time rings have a tunnel-shaped slot or groove in their lower surfaces which is filled with compressed black powder (N). One end of the lower-ring powder train is connected by a pellet (O) to the upper-ring train; one end of the upper train is connected by a pellet (L) to the time-action primer. Movement of the lower ring in relation to the fixed upper ring and a pellet (Q) in the body determines the time of functioning. Counterclockwise turning of the lower ring (viewed from the point of the fuze) lengthens the time by increasing the amount of powder which must burn in the upper and lower rings before the flame reaches the pellet in the body and is transmitted

FUZES, PROPELLING CHARGES, PRIMERS, AND OTHER COMPONENTS

RA PD 80854



D-2

Figure 165 — FUZE, P.D., M52

AMMUNITION INSPECTION GUIDE

SHELL, H.E., M48.

General. This complete round as issued may be used against personnel, for demolition of above-ground targets such as barbed wire, for penetration effects against heavier targets, and in barrages. The mean or average weights of the complete round are: for the supercharge, 19.3 pounds; for the normal charge, 18.5 pounds; and for the reduced charge 18.0 pounds.

Projectile M48. This projectile is of the streamlined type with a 9-degree tapered or boat-tailed base and a 7.5-caliber radius of ogive. The streamlining of the projectile is completed by a continuation of the projectile's radius of ogive over the exterior surface of the standard contour fuzes with which it is used. The projectile is made of forged steel; it has a rotating band of gilding metal, a fringing groove, and a steel base cover spot welded to its base. It is also provided with a single groove, between the fringing groove and the boat-tail, for stab crimping of the cartridge case. The booster and fuze assemble directly to the nose of the shell, the booster being tightened in place by a set screw which passes through one side of the nose, and the fuze by staking into notches cut in the rim of the nose. The standard bursting charge consists of 1.49 pounds of TNT and is sufficient to break the shell into approximately 400 effective fragments. The mean weight of the loaded and fuzed projectile is 14.6 pounds. The actual weights, for uniformity of ballistics, are classified into weight zones which are indicated by yellow crosses stenciled below the bourrelet of the shell (fig. 165). The zones and their limiting weights in pounds are shown below.

	Light (+)	Normal (+ +)	Heavy (+ + +)
Minimum	14.22	14.52	14.82
Maximum	14.52	14.82	15.12

The projectile is painted a lusterless olive drab and is stenciled in yellow with the designation of weapon (75G), the designation of filler (TNT), and the complete round designation (Shell M48). In the complete round, the following listed components may be associated with this projectile:

Fuzes M48, M48A1 and M54.

Boosters M20 and M20A1.

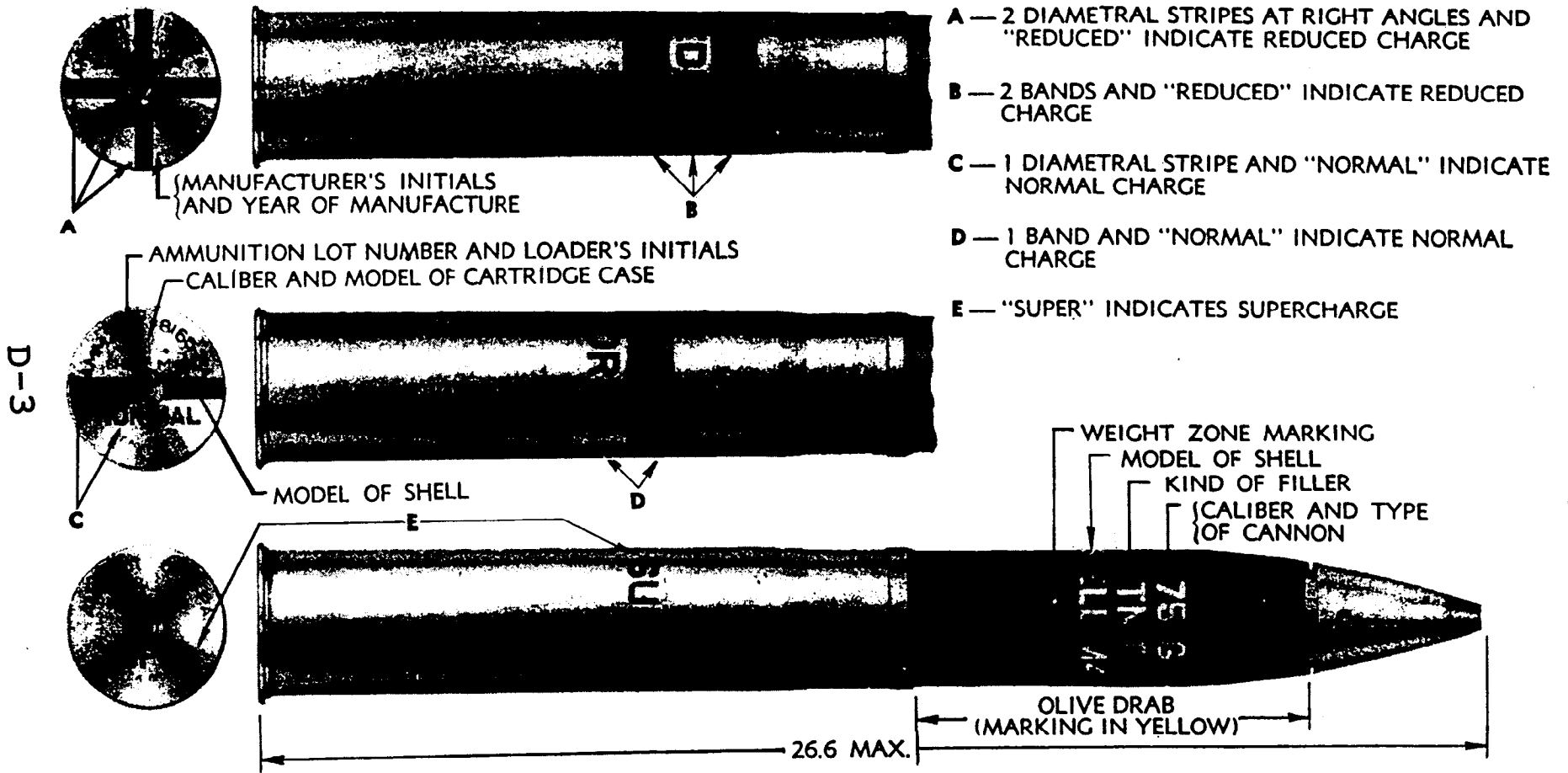
Cartridge Cases M18 and M18B1.

Propelling Charges. Reduced, normal, super.

Primers M22A3 (or others of M22-series) and M31.

Guns. This round is provided with all charges for the field guns; with the normal and the supercharges and only the M48 and M48A1

D-3



RA PD 49589B

Figure 165 — SHELL, H.E., M48, for 75-mm Guns

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX E
REPORTS/STUDIES

APPENDIX E

REPORTS/STUDIES

Table of Contents

E-1 FDE, SSS, and PSS for Dry Canyon Artillery Range, Ventura County, California, dated 27 October 1994 (B-7).

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

**DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
SITE NO. J09CA034800**

FINDINGS OF FACT

1. On 12 August 1942 the U.S. Army acquired 2,880 acres of property in and adjacent to Dry Canyon in Ventura County, California. The transfer was granted from the U.S. Department of Agriculture under a Use Permit dated 12 August 1942. Permission for military use of the parcel was maintained until 27 May 1952.

2. The military used the property for an artillery range from 1942 through 1944. Occupancy permits issued to the military 26 May 1943, state the acreage as approximately 3,000 (actual acreage 2,880). No Army improvements were made. Several visual ordnance inspections were conducted by the military between 1945 and 1951. Duds, up to 105mm, were found and destroyed during each inspection. After the inspection, conducted on 6 November 1950, records indicated that a 4 foot by 6 foot warning sign was installed. The Certificate of Clearance issued 8 December 1951, by the Army, states that the 2,480 acres dedudded in 1951 were given a careful visual search and duds were discovered and destroyed. However, the acreage (2,480) does not coincide with the accompanying data attached to the inspection and dedudding report dated 8 December 1951, which infers the entire property (2,880 acres) was cleared. The Certificate also notes that 1,200 acres of the area, consisting of sandy slopes, should be reinspected frequently and that the site should be restricted to surface use. No record of post-1951 reinspections was available.

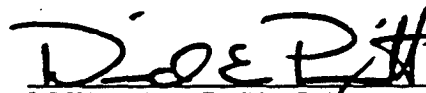
3. On 27 May 1952 the 2,880 acres were transferred to the U.S. Department of Agriculture by the U.S. Army.

DETERMINATIONS

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

[27 OCT 1994

DATE


DAVID E. PEIXOTTO
Colonel, EN
Commanding

**SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. J09CA034800
DRY CANYON ARTILLERY RANGE
20 AUGUST 1993**

SITE NAME: Dry Canyon, formerly Dry Canyon Artillery Range

LOCATION: Dry Canyon, Ventura County, California; see site location map.

SITE HISTORY: DoD use began on 12 August 1942 when the U.S. Army obtained an Occupancy Permit for approximately 3,000 acres (actual acreage 2,880) of forest land from the U.S. Department of Agriculture. The site was used numerous times as an artillery range during World War II. During use, the historic records indicated that no Army structures were installed. The site was declared excess by the Army in 1952 and retransferred to the Department of Agriculture. The site is currently part of the Los Padres National Forest, as such it is used for recreational purposes. Vehicle use is limited to posted roads.

SITE VISIT: A site visit was conducted on 3 June 1993. Peter Raftery and David Salter of Groundwater Technology, Inc.'s Ventura office visited the site after speaking with Ms. Lorreigh Brannan, a U.S. Department of Agriculture, Forest Service, ranger, whose District includes Dry Canyon. Site conditions encountered are detailed in the Field Trip Summary Sheet dated June 14, 1993.

CATEGORY OF HAZARD: OEW

PROJECT DESCRIPTION: The Corps' Mandatory Center of Expertise (MCX) for OEW at the Huntsville Division should evaluate the files and determine if the visual inspections, as recommended in the Certificate of Clearance dated 8 December 1951, are still warranted.

AVAILABLE STUDIES AND REPORTS: A real estate file for the Dry Canyon Artillery Range is maintained by the Real Estate Division, Los Angeles District, Corps of Engineers. In addition to real estate transaction records the file contains an Inventory project Report prepared in 1988. Contacts made to the Huntsville Division indicated that no additional information concerning any possible additional ordnance sweep of the site is available.

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

PROJECT SUMMARY SHEET
FOR
DERP-FUDS OEW PROJECT NO. J09CA034801
DRY CANYON ARTILLERY RANGE
SITE NO. J09CA034800
20 AUGUST 1993

PROJECT DESCRIPTION: The site is a former Army artillery range. Information on specific target and camp locations was not available for review and such records may not exist. After World War II the site was dedudded. Several dedudding operations were performed, during each, explosive projectiles were recovered and destroyed. After the dedudding inspections conducted by the military in November 1950, records indicate that a ordnance warning sign measuring 4 feet by 6 feet was posted. The last dedudding operation found during the records search occurred 8 December 1951. A Certificate of Clearance was issued for the property 8 December 1951. The certificate specified that the 2,480 acres dedudded should be restricted to surface use only, however, this acreage (2,480) does not coincide with the accompanying data attached to the inspection and dedudding report dated 8 December 1951, which infers the entire property (2,880 acres) was cleared. In addition, the 1,200 acres consisting of sandy slopes should be inspected "at frequent intervals" (no time frame specified). No records after the 1951 certificate were found. There is no record at the forest service or the police department of the public finding ordnance.

Dome Springs Campground was developed by the forest service in the former artillery range. The campground is a popular weekend recreation area. The presence of pistol and rifle shell casings at several locations near the campground indicate that those areas are used for target practice. As you move away from the campground evidence of recreational use decreases. No evidence of recreational use was observed more than 500 feet away from the campground and those roads were inspected during the field inspection. No evidence of military ordnance was observed during the field inspections, nor was the reported ordnance warning sign, reportedly installed at the site, found.

PROJECT ELIGIBILITY: The property was formerly used by The Army.

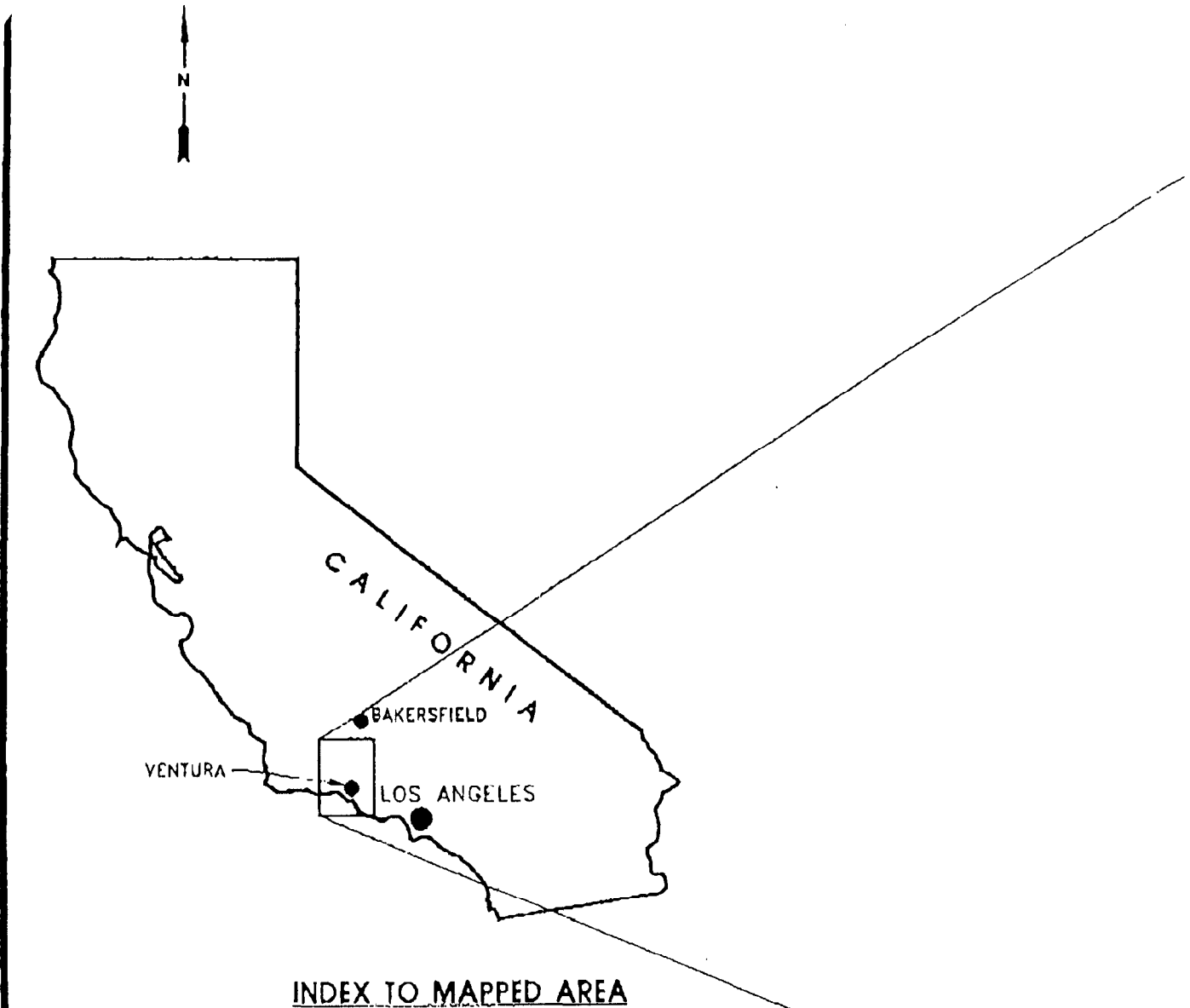
POLICY CONSIDERATIONS: The northern portions of Dry Canyon are in the Chumash Wilderness area. All forms of excavation are prohibited in wilderness areas.

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

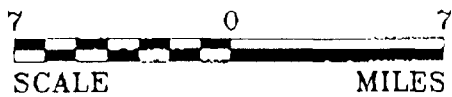
RAC FORM: Attached.

Site No. J09CA034800

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



SOURCE: AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA; VENTURA COUNTY



<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GROUNDWATER
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TECHNOLOGY

FILE: 060-INDX (8/19/93)

DRY CANYON ARTILLERY RANGE

J09CA034800
VENTURA COUNTY, CALIFORNIA
830011105

SITE INDEX MAP
FIGURE 1

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX F

LETTERS/MEMORANDUMS/MISCELLANEOUS

APPENDIX F

LETTERS/MEMORANDUMS/ MISCELLANEOUS

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F-1 Species list for vicinity of Dry Canyon Artillery Range, Ventura County, California 234 January 1997 (B-8).

F-2 Historical/Cultural Resource, Listing for Apache Canyon, Reyes Peak, San Guillermo and Sawmill Mountain Quadrangles, Ventura County, dated 29 January 1997 (B-9).

F-3 Land Acquisition and Disposal Summary, dated 27 May 1952 (B-10).

F-4 Use Permit dated 12 August 1942, (B-11).

F-5 Use Permit dated 22 May 1943, (B-11).

F-6 Use Permit dated 24 August 1943, (B-11).

F-7 Use Permit dated 17 January 1944, (B-11).

F-8 Report on the inspection and dedudding of Dry Canyon, California dated 5 December 1951, (B-12).



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Ventura Field Office
2493 Portola Road, Suite B
Ventura, California 93003

January 23, 1997

Mike Harper
ATTN: SIOAC-ESL (L, Dauphin)
Director
Defense Ammunition Center
Savanna, Illinois 61074-9639

Subject: Species List for Vicinity of Dry Canyon Artillery Range, Ventura County,
California

Dear Mr. Harper:

This letter is in response to your request, dated December 20, 1996, and received by us on December 27, 1996, for information on listed, proposed, and candidate species that may occur in the vicinity of Dry Canyon Artillery Range, Ventura County, California. The requested information will be used by the Department of the Army (Army) as part of its project analysis for assessing formerly used defense sites for potential ordnance and explosives contamination.

If the proposed project may affect a listed species, the Army, as lead Federal agency, 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 Army 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 Army 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 Endangered Species Act (Act). If a listed species may be affected, the Army should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

I have enclosed a list of threatened and endangered species. To the best of our present knowledge, no candidate species or species that are proposed for listing are known to occur in the vicinity of your project. Only listed species receive protection under the Act.

Please note that in the most recent review of candidates for listing under the Act (61 Federal Register 7596) the Service discontinued the use of candidate species categories. Candidates are now defined as only those species for which the Service has sufficient biological information to support a proposal to list as endangered or threatened. The Service considers former category 2 candidate species, found in earlier candidate reviews, to be species of concern. It is important to note that by dropping the category 2 candidate designation, the Service is not indicating that the biological status of these species has changed. The Service will work with the States and public and private interests in assessing the need for protection of such species under the Act. We recommend that you review information in the California Department of Fish and Game's Natural Diversity Data Base to determine whether any additional species of concern occur in your project area.

Should you have any questions regarding the species listed or your responsibilities under the Act, please contact Kate Symonds of my staff at (805) 644-1766.

Sincerely,



Diane K. Noda

Diane K. Noda
Field Supervisor

Enclosure

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 WHICH MAY OCCUR IN THE VICINITY OF
THE DRY CANYON ARTILLERY RANGE, VENTURA COUNTY, CALIFORNIA**

Listed Species

Birds

American peregrine falcon	<i>Falco peregrinus anatum</i>	E
California condor	<i>Gymnogyps californianus</i>	E

Reptiles

Blunt-nosed leopard lizard	<i>Gambelia silus</i>	E
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Amphibians

Arroyo toad	<i>Bufo microscaphus californicus</i>	E
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Invertebrates

Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E
--------------------------	---------------------------------	---

Plants

California jewelflower	<i>Caulanthus californicus</i>	E
------------------------	--------------------------------	---

Key:

E - Endangered

T - Threatened

Portions of the above list were generated through use of the California Department of Fish and Game's Natural Diversity Data Base. Verification of the accuracy of this information is the responsibility of the project proponent; field surveys during the appropriate seasons may be required. If you have any questions about the Natural Diversity Data Base, contact the California Department of Fish and Game at (916) 324-3812.



Regional Information Center
Los Angeles, Orange, Ventura Counties

January 29, 1997

Larry Dauphin
Department of the Army
Defense Ammunition Center
Savanna, IL 61074-9639

RE: Records Search for a formerly used defense, Apache Canyon, Reyes Peak, San Guillermo and Sawmill Mountain Quadrangles, Ventura County.

Dear Mr. Dauphin,

As per your request of December 20, 1996, we have conducted a records search for the above referenced project. This search included a review of all recorded historic and prehistoric archaeological sites within the project area, as well as a review of all known cultural resource survey and excavation reports. In addition, we have checked our file of historic maps, the California State Historic Resources Inventory, the National Register of Historic Places, the listing of California Historical Landmarks, and the California Points of Historical Interest. The following is a discussion of our findings for the project area.

Due to the sensitive nature of cultural resources, archaeological site locations are not released.

PREHISTORIC RESOURCES:

Fifteen prehistoric archaeological sites have been identified within the project area. CA-VEN-1111, -1162, -1163, -1181, -1182, -1183, -1184, -1185, -1186, -1187, -1188, -1189, -1190, -1194, and -1195.

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the project area.

The California State Historic Resources Inventory (HRI) lists two properties within the project area (see enclosed list). Both properties lack specific addresses and cannot be specifically located within Los Padres National Forest.

The National Register of Historic Places lists no properties within the project area.

The California Historical Landmarks (1990) of the Office of Historic Preservation, California Department of Parks and Recreation, lists no Landmarks within the project area.

The California Points of Historical Interest (1992), of the Office of Historic Preservation California Department of Parks and Recreation, lists no properties within the project area.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Five surveys and/or excavations, V-1116, 1234, 1261, 1365, and 1367 have been conducted within the project area.

If you have any questions regarding our results presented herein, please feel free to contact our office at (310) 825-1980.

Invoices are mailed approximately two weeks after records searches are completed. This enables your firm to request further information under the same invoice number. Please reference the invoice number listed below when making inquiries. Requests made after invoicing will involve the preparation of a separate invoice with a \$15.00 handling fee.

Sincerely,



Eileen Adamian
Historical resources Specialist

Enclosures:

- Site list
- HRI
- SIS list
- Invoice # 6540

REALTY CONTROL FILE SUMMARY
(Land Acquisitions and Disposals Subsequent to 1 July 1940)

3347

RESERVATION NAME:

Dry Canyon Artillery Range, California

OFFICIALLY DESIGNATED BY:

LOCATION:

In Ventura County, 53 miles Northeast of Ventura, California

TYPE:

Artillery Range

LAND OWNERSHIP AND COST DATA

ACQUISITION ACTIONS

Exhibits "A"

DISPOSAL ACTIONS

Exhibits "B"

NET AREA

2,880.00 acres, transfer *, total area acquired
2,880.00 acres, **
0.00

GROSS COST

-

JURISDICTION

Exhibit "C"

RELOCATIONS

FINAL PROJECT MAP:

Exhibits "F"

MISCELLANEOUS PAPERS:

REMARKS:

* Transferred from Dept. of Agriculture by Use Permit, dated 12 August 1942, superseded by Use Permits, dated 26 May 1943, 23 August 1943, and 15 January 1944.

** Relinquished to Dept. of Agriculture, 27 May 1952.

C O P Y
USFS-Los Padres
Campground & Kancuver Area
U.S.Army, 161st Art-
illery- 8-12-42

UNITED STATES FOREST SERVICE
Los Padres NATIONAL FOREST
UNITED STATES ARMY OCCUPANCY PERMIT

3 co U.S. Army
1 Supervisor's Fi
1 Cuyama District
File
1 Ojai District

Subject to the following conditions, permission is hereby granted to the United State
Army, 161st Field Artillery

(Specific description of detachment here)

whose headquarters address is Brig. Gen. C.G. Helmick, Division Artillery Officer,
A.F.O., #35, Attention S-3, Los Angeles, California.
to camp at Dry Canyon - Cuyama Ranger District, Los Padres National Forest

for the period from Indefinite period for Approx. 3000 Acres.

One man to be designated by CO as firewarden to see that the following rules are
carried out while within the National Forest.

The conditions under which this camping privilege is granted are as follows:

1. The Tactical or Bivouac location must be reported to the District Ranger.
2. The permittee must remove such grass, brush and other inflammable materials from the campsite as requested by the District Ranger for a distance of thirty feet from all living quarters, cook tents, latrines, etc. Debris from such clearing will not be burned during the summer months except in stoves or fireproof incinerators. If not burned, should be neatly piled at edge of clearing for disposal during winter months.
3. Campfires will be allowed only in the place designated by the District Ranger or qualified representative. Open fires to be used only when field stoves are not available. When open fires are used, should be built in a pit dug well into mineral soil so burning embers are not exposed to direct winds.
4. All stoves burning wood or coal as fuel must be equipped with approved spark arresters. For temporary quarters, $\frac{1}{4}$ " mesh wire will be approved. Where such stoves are located out of doors, all inflammable materials, such as leaves, grass, low brush etc., must be removed for a distance of at least ten feet from the stove. Authority is hereby granted to obtain dead wood from the Forest for fuel purposes.
5. The burning of rubbish or use of fire for any purpose except a campfire for cooking purposes or for heating of water will not be permitted unless a special permit is obtained from the District Ranger. All campfires must be kept small.
6. Permittee agrees not to leave fire unattended, even for a short period of time.
7. Permittee agrees to put out all fires before leaving camp by extinguishing with water and burying deeply with moist, clean dirt.
8. Permittee will have a shovel and axe, or mattock, at the scene of each campfire. Also to have a G.I. can full of water at the scene of each campfire, with necessary buckets of 1 gallon cans available for fire suppression work, should such campfires start a grass or brush fire.
9. Smoking will not be allowed while traveling through the National Forest except at approved and fireproofed campsites, posted smoking areas, occupied places of habitation and public camp and picnic grounds. Where smoking is permitted, grind the

EXHIBIT A

F-4

remains of any cigar, cigarette or pipe heel into mineral ash. Be sure it is out.

10. The campsite must at all times be kept neat and orderly, and kept in a sanitary condition. Garbage, cans and broken bottles must be placed in a flyproof garbage pail. Inflammable papers, cartons, and boxes should be burned in stoves or spark-proof incinerator which has approval of District Ranger. Sanitation pits used for latrines must be covered well at all times with chlorinated lime. All pits to be buried deeply with dirt before campsite is abandoned.

11. Contamination of water supply must be avoided. Keep garbage or refuse away. Do not bathe, wade, swim, wash clothes or dirty dishes in the streams.

12. Disorderly conduct shall be reported to the Superior Officers for investigation and disciplinary action.

13. Blasting will be permitted only when electric detonators are used under proper supervision. Destruction of green timber will not be permitted. Post guards around area in which blasting is taking place to prevent injury to others.

14. The permittee shall be expected to render aid in suppression of fires occurring within the area used for tactical purposes without request, and in other areas when requested through proper military channels.

15. Report all fires discovered to nearest Forest Officer and then make every attempt to extinguish same until help arrives. District Ranger will be in charge of fire suppression work upon his arrival at scene of fire.

16. All trucks and mobile equipment used in tactical purposes are to be equipped with a shovel and axe, or mattock, and a 1½-quart carbon tetrachloride fire extinguisher.

17. Do not park vehicles in grass or low brush without checking to see that the exhaust pipe clears same.

18. Exercise calling for use of fireworks or flares, tracer bullets, blasting fuse and caps or other flaming or glowing substances is prohibited except under special permit from the District Ranger.

19. When it is necessary to enter a road where locked gates have been placed to prohibit public use, a key to the lock on the gate shall be obtained from the nearest Forest Officer to allow entrance, thus eliminating the need for any damage to the gate or lock thereon.

20. SEE THAT ALL MEMBERS OF PARTY KNOW REGULATIONS AND ABIDE BY THEM.

21. Additional conditions _____

Date Permit Issued August 12, 1942

E.A. NASH-BOLDEN
Forest Supervisor

By K.W. HUESTIS, Acting

I, the undersigned, do hereby agree to all the terms and conditions of this permit:

Permittee C.O. HELMICK
Title Brig.Gen. U.S.A.
Commanding 35th Div. Atty.

USFS-Los Padres
Campground & Maneuver Area
U.S. Army, 170 FA BN
May 22, 1943

UNITED STATES FOREST SERVICE
Los Padres NATIONAL FOREST
UNITED STATES ARMY OCCUPANCY PERMIT

DISTRIBUTION
3 U.S. Army
1 Supervisor's File
1 Cuyama District File
1 Ojai District

Subject to the following conditions, permission is hereby granted to the United States Army, 170th Field Artillery Battalion
(Specific description of detachment here)

whose headquarters address is Lt. Col. A.R. Lolli, Ojai, California

to camp at Dry Canyon, Cuyama Ranger District, Los Padres National Forest

for the period from indefinite period for approximately 3000 acres.

One man to be designated by CO as firewarden to see that the following rules are carried out while within the National Forest.

The conditions under which this camping privilege is granted are as follows:

1. The tactical or bivouac location must be reported to the District Ranger.
2. The permittee must remove such grass, brush and other inflammable materials from the campsite as requested by the District Ranger for a distance of thirty feet from all living quarters, cook tents, latrines, etc. Debris from such clearing will not be burned during the summer months except in stoves or fireproof incinerators. If not burned, should be neatly piled at edge of clearing for disposal during winter months.
3. Campfires will be allowed only in the place designated by the District Ranger or qualified representative. Open fires to be used only when field stoves are not available. When open fires are used, should be built in a pit dug well into mineral soil so burning embers are not exposed to direct winds.
4. All stoves burning wood or coal as fuel must be equipped with approved spark arresters. For temporary quarters, $\frac{1}{4}$ " mesh wire will be approved. Where such stoves are located out of doors, all inflammable materials, such as leaves, grass, low brush, etc., must be removed for a distance of at least ten feet from the stove. Authority is hereby granted to obtain dead wood from the Forest for fuel purposes.
5. The burning of rubbish or use of fire for any purpose except a campfire for cooking purposes or for heating of water will not be permitted unless a special permit is obtained from the District Ranger. All campfires must be kept small.
6. Permittee agrees not to leave fire unattended, even for a short period of time.
7. Permittee agrees to put out all fires before leaving camp by extinguishing with water and burying deeply with moist, clean dirt.
8. Permittee will have a shovel and axe, or mattock, at the scene of each campfire. Also to have a G.I. can full of water at the scene of each campfire, with necessary buckets of 1 gallon cans available for fire suppression work, should such campfires start a grass or brush fire.

remains of any cigar, cigarette or pipe heel into mineral soil. Be sure it is out.

10. The campsite must at all times be kept neat and orderly, and kept in a sanitary condition. Garbage, cans and broken bottles must be placed in a flyproof garbage pit. Inflammable papers, cartons, and boxes should be burned in stoves or spark-proof incinerator which has approval of District Ranger. Sanitation pits used for latrines must be covered well at all times with chlorinated lime. All pits to be buried deeply with dirt before campsite is abandoned.

11. Contamination of water supply must be avoided. Keep garbage or refuse away. Do not bathe, wade, swim, wash clothes or dirty dishes in the streams.

12. Disorderly conduct shall be reported to the Superior Officers for investigation and disciplinary action.

13. Blasting will be permitted only when electric detonators are used under proper supervision. Destruction of green timber will not be permitted. Post guards around area in which blasting is taking place to prevent injury to others.

14. The permitted shall be expected to render aid in suppression of fires occurring within the area used for tactical purposes without request, and in other areas when requested through proper military channels.

15. Report all fires discovered to nearest Forest Officer and then make every attempt to extinguish same until help arrives. District Ranger will be in charge of fire suppression work upon his arrival at scene of fire.

16. All trucks and mobile equipment used in tactical purposes are to be equipped with a shovel and axe, or mattock, and a 1 1/2-quart carbon tetrachloride fire extinguisher.

17. Do not park vehicles in grass or low brush without checking to see that the exhaust pipe clears same.

18. Exercise calling for use of fireworks or flares, tracer bullets, blasting fuse and caps or other flaming or glowing substances is prohibited except under special permit from the District Ranger.

19. When it is necessary to enter a road where locked gates have been placed to prohibit public use, a key to the lock on the gate shall be obtained from the nearest Forest Officer to allow entrance, thus eliminating the need for any damage to the gate or lock thereon.

20. SEE THAT ALL MEMBERS OF PARTY KNOW REGULATIONS AND ABIDE BY THEM.

21. Additional conditions. The use of any or all tracer ammunition will be so directed and regulated that the target or impact area will coincide with the barren bluffs north of the Guyana River wash and northeast of Dry Canyon wash between the safety limits designated and marked by the District Ranger. And further, no tracer ammunition shall be used except when a Forest Officer is in attendance at maneuvers. Furthermore, if in the opinion of the District Ranger conditions of weather (humidity, fuel moisture, and wind) indicate a critical fire hazard condition, all use of tracer will be suspended upon his request until the critical condition subsides.

US(8-Los Padres

Campground & Manover Area

U.S. Army 174th Inf.

August 24, 1943

UNITED STATES FOREST SERVICE

Los Padres NATIONAL FOREST

C O F I

UNITED STATES ARMY OCCUPANCY PERMIT

Subject to the following conditions, permission is hereby granted to the United States Army, 174th Infantry

(Specific description of detachment here)

whose headquarters address is Headquarters 174th Inf. San Fernando, Calif.

to camp at Dry Canyon, Guyana Ranger District, Los Padres National Forest

for the period from indefinite period for indefinite period.

One man to be designated by CO as firewarden to see that the following rules are carried out while within the National Forest.

The conditions under which this camping privilege is granted are as follows:

1. The Tactical or Bivouac location must be reported to the District Ranger.
2. The permittee must remove such grass, brush and other inflammable materials from the campsite as requested by the District Ranger for a distance of thirty feet from all living quarters, cook tents, latrines, etc. Debris from such clearing will not be burned during the summer months except in stoves or fireproof incinerators. If not burned, should be neatly piled at edge of clearing for disposal during winter months.
3. Campfires will be allowed only in the place designated by the District Ranger or qualified representative. Open fires to be used only when field stoves are not available. When open fires are used, should be built in a pit dug well into mineral soil so burning embers are not exposed to direct winds.
4. All stoves burning wood or coal as fuel must be equipped with approved spark arresters. For temporary quarters, $\frac{1}{2}$ " mesh wire will be approved. Where such stoves are located out of doors, all inflammable materials, such as leaves, grass, low brush, etc., must be removed for a distance of at least ten feet from the stove. Authority is hereby granted to obtain dead wood from the Forest for fuel purposes.
5. The burning of rubbish or use of fire for any purpose except a campfire for cooking purposes or for heating of water will not be permitted unless a special permit is obtained from the District Ranger. All campfires must be kept small.
6. Permittee agrees not to leave fire unattended, even for a short period of time.
7. Permittee agrees to put out all fires before leaving camp by extinguishing with water and burying deeply with moist, clean dirt.
8. Permittee will have a shovel and axe, or mattock, at the scene of each campfire. Also to have a G.I. can full of water at the scene of each campfire, with necessary buckets of 1 gallon cans available for fire suppression work, should such campfires start a grass or brush fire.
9. Smoking will not be allowed while traveling through the National Forest except at approved and fireproofed campsites, posted smoking areas, occupied places of habitation and public camp and picnic grounds. Where smoking is permitted, grind the

9. Smoking will not be allowed while travelling through the National Forest except at approved and fireproofed campsites, posted smoking areas, occupied places of habitation and public camp and picnic grounds. Where smoking is permitted, grind the remains of any cigar, cigarette or pipe heel into mineral soil. Be sure it is out.

10. The campsite must at all times be kept neat and orderly, and kept in a sanitary condition. Garbage, cans and broken bottles must be placed in a flyproof garbage pit. Inflammable papers, cartons, and boxes should be burned in stoves or spark-proof incinerator which has approval of District Ranger. Sanitation pits used for latrines must be covered well at all times with chlorinated lime. All pits to be buried deeply with dirt before campsite is abandoned.

11. Contamination of water supply must be avoided. Keep garbage or refuse away. Do not bathe, wade, swim, wash clothes or dirty dishes in the streams.

12. Disorderly conduct shall be reported to the Superior Officers for investigation and disciplinary action.

13. Blasting will be permitted only when electric detonators are used under proper supervision. Destruction of green timber will not be permitted. Post guards around area in which blasting is taking place to prevent injury to others.

14. The permittee shall be expected to render aid in suppression of fires occurring within the area used for tactical purposes without request, and in other areas when requested through proper military channels.

15. Report all fires discovered to nearest Forest Officer and then make every attempt to extinguish same until help arrives. District Ranger will be in charge of fire suppression work upon his arrival at scene of fire.

16. All trucks and mobile equipment used in tactical purposes are to be equipped with a shovel and axe, or mattock, and a 1 1/2 quart carbon tetrachloride fire extinguisher.

17. Do not park vehicles in grass or low brush without checking to see that the exhaust pipe clears same.

18. Exercise calling for use of fireworks or flares, tracer bullets, blasting fuse and caps or other flaming or glowing substances is prohibited except under special permit from the District Ranger.

19. When it is necessary to enter a road where locked gates have been placed to prohibit public use, a key to the lock on the gate shall be obtained from the nearest Forest Officer to allow entrance, thus eliminating the need for any damage to the gate or lock thereon.

20. SEE THAT ALL MEMBERS OF PARTY KNOW REGULATIONS AND ABIDE BY THEM.

21. Additional conditions _____

Date Permit Issued May 26, 1943

S.A. NASH-BOULDEN (signed)
Forest Supervisor

By

I, the undersigned, do hereby agree to all the terms and conditions of this permit:

Permittee A.R. Lolli (signed)

Title Lt. Col. 170th FA Bn Commanding

U
USES - Los Padres
Campground Maneuver Area
U. S. Army - 6th Armored Division
1/17/44

O O P Y

Ojai, California

UNITED STATES ARMY OCCUPANCY PERMIT

Subject to the following conditions, permission is hereby granted to the United States Army, 6th Armored Division, Camp Cooke, California, to camp at DRY CANYON, Guyama Ranger District, Los Padres National Forest for the period January 17, 1944 to February 10, 1944.

The conditions under which this camping privilege is granted are:

1. The Tactical and Bivouac location must be reported and approved by the District Ranger.
2. The campsites must at all times be kept neat and orderly, and kept in a sanitary condition. Garbage, cans, and broken bottles must be placed in a fly proof garbage pit. Inflammable papers, cartons, and boxes should be burned in stoves or spark proof incinerator which has approval of the District Ranger. Sanitation pits used for latrines must be covered well at all times with unchlorinated lime. All pits to be buried deeply with dirt before campsite is abandoned.
3. Contamination of water supply must be avoided. Keep garbage or refuse away. Do not bathe, wade, swim, or wash clothes or dirty dishes in the streams.
4. Disorderly conduct shall be reported to the superior officers for investigation and disciplinary action.
5. The permittee shall be expected to render aid in the suppression of fires occurring within the area used for tactical purposes without request, and in other areas when requested through proper military channels.
6. Wherever it is necessary to let down or otherwise disturb any drift fences in the area, they will be restored to original condition, or better, immediately following each problem.
7. The permittee will notify the District Ranger at Ojai of the date and type of program planned at least forty eight (48) hours in advance of actual use of the area. (The Army will be advised at this time whether or not the use of tracer ammunition can be permitted and the Forest Service will be in a position to dispatch men, equipment and tools as needed.)

Date permit issued 1/15/44

S.A. WASH-BOULDER, Forest Supervisor

I, the undersigned, do hereby agree to all the terms and conditions of the permit:

Headquarters 6th Armored Division
Camp Cooke, California

Permittee Thomas R. Bruce Jr. (signed)
Title Lt. Col. F.A.

22. The permittee will notify the District Ranger at Ojai of the date and type of program planned at least forty-eight (48) hours in advance of actual use of the area. (The Army will be advised at this time whether or not the use of tracer ammunition can be permitted and the Forest Service will be in a position to dispatch men, equipment, and tools as needed).

Date Permit Issued Aug. 23, 1943.

E.A. WASE-FORLSEN
Forest Supervisor

By G.B. VANCE

I, the undersigned, do hereby agree to all the terms and conditions of this permit:

Headquarters, 174th Infantry
28 August 1943

Permittee W.F. BAGLEY, JR.
Colonel, Infantry
Title Commanding

CORPS OF ENGINEERS, U. S. ARMY

OFFICE OF THE CHIEF OF ENGINEERS
9800 TSU DETACHMENT NO. 14
BOMB AND SHELL DISPOSAL TEAM

Maricopa, California

8 December 1951

SUBJECT: Report on the inspection and dedudding of Dry Canyon,
California

TO: District Engineer
Los Angeles District
Corps of Engineers, U.S. Army
751 So. Figueroa Street
Los Angeles, California

TO: Division Engineer
South Pacific Division
Corps of Engineers, U.S. Army
130 Butter Street
San Francisco, California

1. The 9800th TSU-OF Det #14, Bomb & Shell Disposal Team, was assigned the inspection and dedudding of the area known as the Dry Canyon Project, which is located approximately seven (7) miles northeast of US Highway 809, near the Ozona Guard Station (Forestry Service), state of California.

2. The Detachment arrived here 10 October 1951 and began operations on 15 October 1951. Dedudding operations ceased on 8 December 1951, at which time the Detachment made final preparations to move vehicles and equipment to Los Angeles District Maintenance Yard.

3. The area searched proved to be extremely difficult because the terrain is very hilly, with sandy slopes and many isolated cliffs which drop off sharply. For this reason, the area was divided into many small sections, using natural boundaries. Approximately 750 acres of area previously dedudded by team from Los Angeles District (shaded in blue on inclosed highway map) was reinspected by the Detachment. Although no explosive material was found, many craters were in evidence. The area shaded in green, comprising 850 acres was inspected. No explosive materials were found, but again many craters gave evidence the area had been heavily impacted. The area shaded in yellow consists of 1200 acres, which was inspected and a portion of the area dedudded. This area surrounds the target areas and it is apparent that this had not been previously inspected. The following bombs were found and destroyed in this area; 7 - 105mm H.H. (complete round) and 4 - 105mm H.H., containing a portion of their original TNT charge.

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE CHIEF OF ENGINEERS
9800 TSU DETACHMENT NO. 14
BOMB AND SHELL DISPOSAL TEAM
Maricopa, California

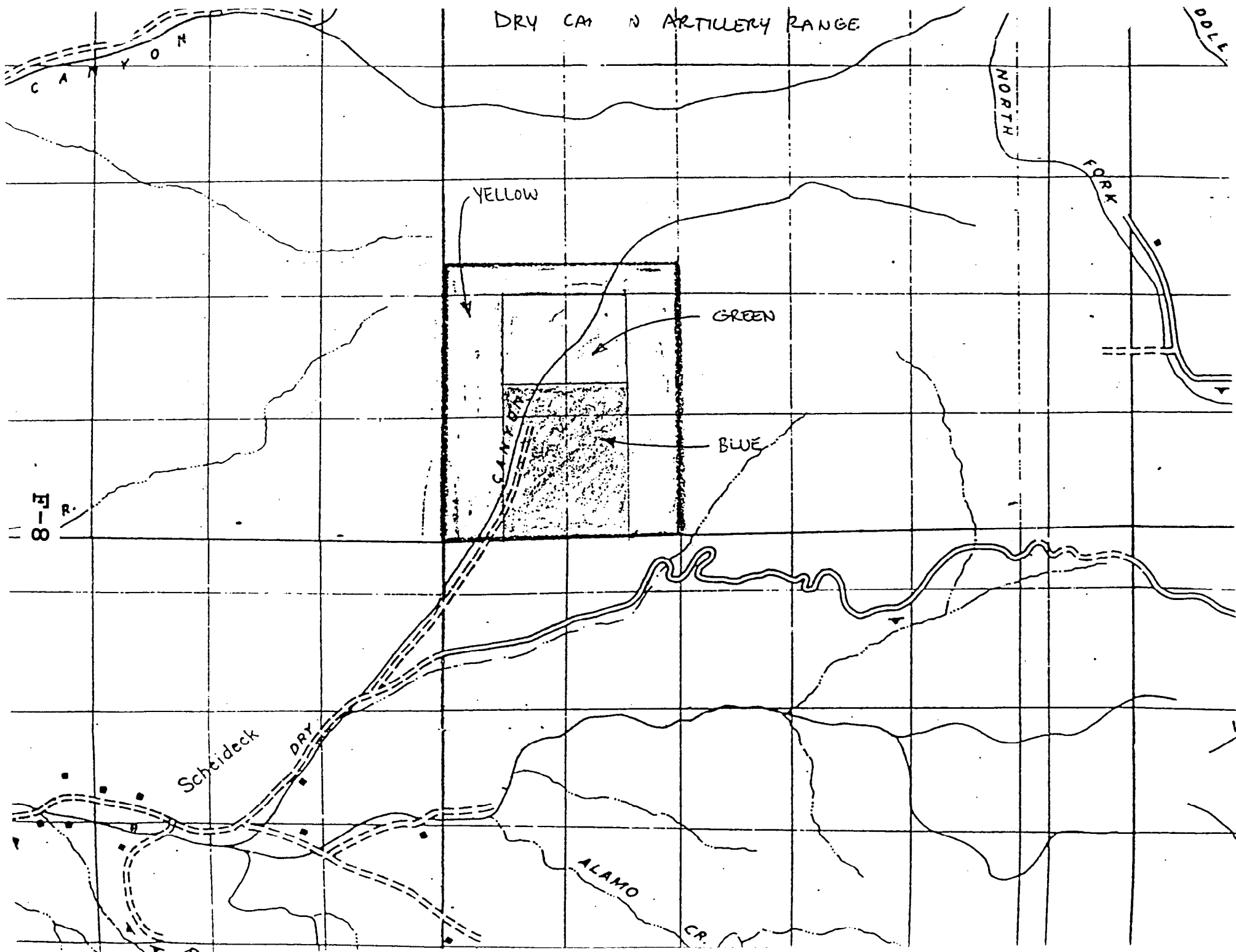
Subject: Report on the inspection and detubbing of Dry Canyon, -
California

4. All blasting was done by the demolition experts of the Detachment. The dud shells were disposed of in place, by placing a sufficient size charge of C-3 on them so as to explode the shell or completely demolish it. After detonation, the demolition man checked the surrounding area to assure that the object in question had been destroyed.

5. It is the opinion of the undersigned that the area shaded in yellow on the inclosed highway map, be reinspected at frequent intervals as duds may be uncovered on the sandy sloping areas from time to time; and that the entire area as outlined in black on the inclosed map be restricted to surface use only.

Incl:
Map

Glen R. Johnson
GLEN R. JOHNSON
Capt., CE
9800th TSU-CE Det #14
Commanding



ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX G
REAL ESTATE DOCUMENTS

APPENDIX G

REAL ESTATE DOCUMENTS

TABLE OF CONTENTS

G-1 Real Property Management and Disposal Report for Dry Canyon Artillery Range dated 1 June 1954, (B-13).

REAL PROPERTY MANAGEMENT AND DISPOSAL REPORT						REPORTS CONTROL SYMBOL ENGEL-12 (13)			
TO: Chief of Engineers ATTENTION: ENGLH Washington 25, D. C.		DIVISION South Pacific		DISTRICT Los Angeles		DATE OF REPORT 1 June 1954			
PART I INITIAL AND FINAL REPORT									
INSTALLATION Dry Canyon Artillery Range				LOCATION 53 miles NE of Ventura					
<input checked="" type="checkbox"/> ARMY		<input type="checkbox"/> AIR FORCE		<input type="checkbox"/> MILITARY		<input checked="" type="checkbox"/> CIVIL			
<input type="checkbox"/> ATOMIC ENERGY COMMISSION				<input checked="" type="checkbox"/> COMMAND		<input type="checkbox"/> FLOOD CONTROL			
				<input type="checkbox"/> INDUSTRIAL		<input type="checkbox"/> RIVERS AND HARBORS			
ACREAGE ENTIRE INSTALLATION		FEE OWNED -	PUBLIC LAND 2880	LEASED -	LESSER INT. -	COUNTY Ventura	STATE California		
PART II									
DATE	STATUS	E OR P	FEE OWNED (Acres) (1)	PUBLIC LANDS (Acres) (2)	LEASED (Acres) (3)	LESSER INT. (Acres) (4)	NATURE OF FACILITIES	COST TO GOVT. (Dollars)	CUSTODY BY C. E. (Date)
A 5/27/52	Excess	E	-	2880	-	-	Artillery Range	None	No
B									
C									
D									
E									
F									
G									
H									
I									
PART III									
TEMPORARY USE GRANTS									
REF.	IN PROCESS			GRANTED			PURPOSE		
	NO.	ACRES	CONSIDERATION (\$)	NO.	ACRES	CONSIDERATION (\$)			
REPORTED TO WAA OR GSA									
REF.	REPORTED TO WAA OR GSA	DESIGNATED DISPOSAL AGENCY		DATE DESIGNATED	DISPOSITION				
TRANSFER OR RETRANSFER TO OTHER GOVERNMENT AGENCIES									
REF.	DATE AUTHORIZED	RECEIVING AGENCY		DATE OF LTR FROM ARMY AF OR AEC	RESTORATION OR BLDG. DISP. COMPLETED (Date)	DATE CUSTODY ASSUMED			
A-2	5/27/52	Dept of Agriculture		5/27/52	-	*			
LEASE CANCELLATIONS									
REF.	NO.	ACRES	RENTAL (Dollars)	REPORTED TO GSA	CANCELED				
OTHER DISPOSALS									
REF.	CLASSIFIED	APPRAISED	ADVERTISED	DATE SET FOR OPENING OF BIDS	COMPLETED	CONSIDERATION (\$)			
SIGNATURE <i>A. P. Cameron</i> A. P. CAMERON		TITLE Chief, Reports, Records and Audits Section			ADDRESS 751 S. Figueroa Street Los Angeles, California				

INSTRUCTIONS

All numbers will be rounded to the nearest dollar or acre in preparing this report

- A. REPORTS WILL BE PREPARED MONTHLY AS OF THE 15TH DAY OF EACH MONTH.**
- B. REPORTS WILL BE PREPARED IN QUADRUPPLICATE FOR THE FOLLOWING DISTRIBUTION:** Original and one copy will be forwarded so as to reach the Chief of Engineers, ATTENTION ENGLM, not later than the 23d day of the month in which the report is prepared. One copy forwarded to the Division office and one copy retained in the preparing office.
- C. WHEN REQUIRED:** Reports will be required commencing with the month in which the installation or any portion thereof is placed in Standby, Inactive, Excess, or Surplus status and continued until excess or surplus property is disposed of by transfer, sale, termination of leases, or otherwise, but if another portion of the installation is placed in a management or disposal status at a later date and the report resumed, all previous actions subsequent to 1 July 1940, will be reflected; where the installation or portion thereof is Inactive or Standby, the report may be suspended when the granting of temporary use of facilities made available for such purposes shall have been completed or definite information shall have been received that temporary use of facilities at installations or portions thereof in Standby or Inactive status cannot be granted. Only military installations are definitively placed in a Standby or Inactive status; therefore, reports covering Civil Works or Atomic Energy Commission Projects are required only in connection with Excess or Surplus statuses. Where no progress has been made during a reporting period, a "Negative ENG Form 836" may be submitted identifying the installation, the State, the Division, the District, and the reporting period with the words, "No Progress since report dated . . .", posted in PART II of the report.
- D. PART I** will identify the installation as to name, location, department and type and set forth the entire acreage either acquired or being acquired. The acreage will be divided to show Fee Owned, Public Lands (Public Domain and Lands transferred from other Government Agencies), Leased, and Lesser Interests. If an installation is part Industrial and part Command, the acreages of these parts similarly broken down will be reflected in "Remarks." State, County or municipally owned lands will not be shown as Public Lands.
- E. PART II** will reflect information as to areas which have been placed in a "Standby," "Inactive," "Excess," or "Surplus" status. A separate line will be used for each report of status, but subsequent withdrawals or adjustments affecting an area will be reflected by net figures with an explanation under "Remarks." The date will be that on which the Appropriate Authority approved the status. A symbol P or E will be used to denote whether the area is a Portion of or the Entire installation. The acreage will be divided as explained in PART I above, but will cover only the actual area or areas involved, the nature or use of the area will be reflected under "Nature of facilities," i. e. Housing Area, Warehouse Area, Modification Center No. 2, POW Camp, etc. and if the installation is comprised of both Command and Industrial portions the Symbol I (Industrial) or O (Command) will be used to indicate to which portion the area belongs. The cost of both land and construction will be shown under "Cost to Government." If the Corps of Engineers assumed custody the date will be shown, otherwise "NO" will be entered in the last column.
- F. PART III** will reflect management or disposal actions taken in connection with areas listed under PART II. The reference column will indicate the area by referring to the line on which it is listed under PART II (A, B, C, etc.) and the appropriate column (1), (2), (3), or (4). No areas or portions of areas which were listed separately in PART II will be combined in a single line under PART III; however,

it may be necessary to use several lines under PART III to reflect separate actions taken in connection with an area listed on a single line under PART II. The latter occurrence will be explained under "Remarks" and if necessary a further division of acreage recited.

- (1) **TEMPORARY USE GRANTS** will be reported by cumulative figures showing the number of instruments, acres involved and annual consideration. When right of entry has been given but a formal instrument not executed and delivered it will be reported "In process" with appropriate footnote under "Remarks" including date right of entry granted. After delivery of the instrument it will be reported "granted." "Purpose" will reflect type of interest Le for Lease, Li for License and the proposed use of the area, such as agriculture, industrial, etc. Elaboration where necessary will be made under "Remarks."
- (2) **REPORTED TO WAA OR GSA** will include only property formally reported by Forms SPB-5, SPA-5, WAA 1005, or GSA Form 30 for disposal but will not include leases reported for clearance purposes only. The following will be recorded: date of report, name of disposal agency designated, and the date disposal agency designated. (In case of Declaration of Surplus to WAA and its predecessor agencies, the date of designation of disposal agencies need not be recorded unless readily available.) Disposition column will be utilized (a) to reflect assumption of custody by the disposal agency by recording the symbol "CT" followed by the date of assumption, or (b) to refer to further disposal actions recorded in subsequent portions of the report where the CE is designated disposal agency or is acting under specific direction of GSA. The symbol "TR" will refer to "Transfer to other Government Agencies." The symbol "LC" will refer to "Lease Cancellations." The symbol "OD" will refer to "Other Disposals."
- (3) **TRANSFERS TO OTHER GOVERNMENT AGENCIES** will include transfer, re-transfer, or relinquishment of all types of interests or estates to another Government Agency not acting as a disposal agency. If property has been reported to GSA and so recorded under "Reported to WAA or GSA" the entry in the reference column will be preceded by the symbol "R." Entries in the second, third, and fourth columns will be made from information or informational copies of documents received from OCE, except when leases are transferred at the direction of GSA Field Offices. The date restoration or building disposal (if required) is completed will be shown, otherwise the entry "none" will be made. The last column will reflect the date of written acceptance either from a field or departmental level with appropriate notation in "Remarks."
- (4) **LEASE CANCELLATIONS** will include all excess or surplus leases which have been canceled or are proposed for cancellation. If leases have been formally reported for disposal to GSA (GSA Form 30), entry in the "Reference" column will be preceded by the symbol "R" and no entry will be made in "Reported to GSA" column. If leases have been reported to GSA (GSA Form 30) for clearance purposes only, the symbol "R" will not be placed in the "Reference" column and the date they were "Reported to GSA" for clearance will be recorded. An explanatory entry, reflecting disposal status, reasons for delay and expected termination date, will be made in "Remarks" for any lease that has been in an excess status for a period of 90 days or longer.
- (5) **OTHER DISPOSALS** will include sales, termination of special contracts involving interests in realty, disposal of easements, etc. Entries most nearly applicable to the circumstances will be recorded with an explanation in "Remarks" to explain unusual actions. If the property has been formally reported to GSA (by GSA Form 30) the symbol "R" will precede the entry in the "Reference" column.

REMARKS			
<u>PART II</u>			
REF	AUTHORITY	P. L.	COST TO GOVT.
A-2	2nd Ind dtd 5/27/52 fr CE, Ref: 602 California- Installations, ENGLM, Subj: Report for Transfer" (Basic: 4/1/52)	2880 acres	None
<u>PART III</u>			
<u>TRANSFER TO OTHER GOVERNMENT AGENCY</u>			
A-2	*Use Permits from Dept of Agriculture dtd 8/12/42, 5/21/43, 8/21/43 and 1/15/44, relinquished 5/27/52.	2880 acres	None

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX H
NEWSPAPERS/JOURNALS

Not Used

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX I

INTERVIEWS

APPENDIX I

INTERVIEWS

Table of Contents

I-1 Conversation with Mr. John Kelly dated 4 April 1997.

I-2 Conversation with Mr. Larry Darlinger dated 4 April 1997

CONVERSATION RECORD	TIME 7:00	DATE 4 April 1997
----------------------------	---------------------	-----------------------------

TYPE

VISIT **CONFERENCE**

TELEPHONE INCOMING
 OUTGOING

NAME OF PERSON CONTACT WITH John Kelly	ORGANIZATION Mt Pinos Ranger District Frazier Park, CA	TELEPHONE NO. (805) 245-3731
--	---	--

SUBJECT Former Dry Canyon Artillery Range

SUMMARY John has been at the ranger station since 1978. He informed the inspection team that the area of the former artillery range was used for hunting/fishing/camping/hiking. It has a fairly high use especially during hunting season. Youth groups and area schools also use the area.

John has never had any report of any OE ever being found in the area of the former range other than a piece of a fuze found by another ranger at the station.

John has requested that we get back to him with the recommendations made for this FUDS Site.

ACTION REQUIRED
Let John Kelly know the results/recommendations with this FUDS site.

ACTION TAKEN
None at this time.

NAME OF PERSON DOCUMENTING COVERSATION Jodi L. Bausman	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER 319-794-6157
SIGNATURE <i>Jodi L. Bausman</i>	TITLE Ammunition Spec.	DATE 4/4/97

CONVERSATION RECORD	TIME 7:00	DATE 4 April 1997
--------------------------------	---------------------	-----------------------------

TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE INCOMING OUTGOING

NAME OF PERSON CONTACT WITH Larry Darlinger	ORGANIZATION Mt Pinos Ranger District Frazier Park, CA	TELEPHONE NO. (805) 245-3731
---	---	--

SUBJECT Former Dry Canyon Artillery Range

SUMMARY

Larry had found a fuze from a piece of OE near the southwest end of the former range. This item was identified by the inspection team as a 37mm fuze.

Larry had talked with a gentleman that was stationed at the old range but, could not remember the mans name. He had told Larry that troops had fired at the range. He could not remember what the troops had fired. Larry commented that he had talked with this man several years ago and that the man was in his 70s then.

After reading the SSP for the site and a short brief by the inspection team Larry proceeded to show the the inspection team where he had found the fuze. During this time the inspection team member found several pieces of 37mm shrapnel.

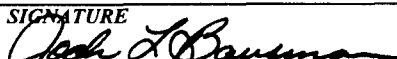
Larry also told the team that he had never had any report of any OE ever being found on site.

ACTION REQUIRED

None

ACTION TAKEN

None

NAME OF PERSON DOCUMENTING COVERSATION Jodi L. Bausman	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER 309-794-6157
SIGNATURE 	TITLE Ammunition Spec.	DATE

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
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APPENDIX J

PRESENT SITE PHOTOGRAPHS

APPENDIX J

PRESENT SITE PHOTOGRAPHS

Table of Contents

J-1 Looking westward from the east side of Area A across the former artillery range at all the Areas.

J-2 At the ranger station looking at the fuze that the ranger had found several years ago, 37mm base detonating fuze.

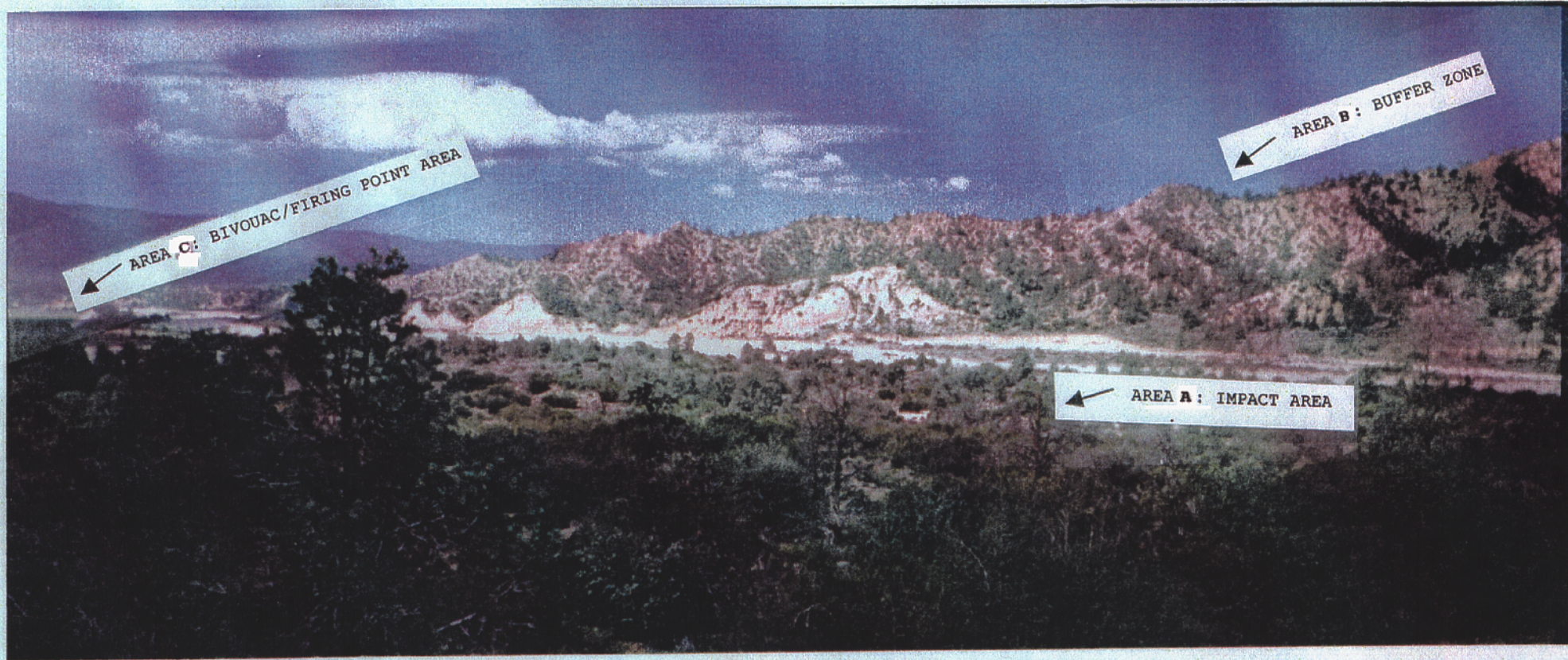
J-3 Looking eastward at one of the hill sides in Area A where most of the shrapnel was being found by the inspection team.

J-4 Shrapnel and rotating band from 37mm ammunition that was being found in Area A.

J-5 Shrapnel from 37mm ammunition and 105mm ammunition that was being found during this inspection in Areas A.

J-6 Live 37mm round found in Area A.

J-7 Location in Area A where live 37mm round was found.



J-1 Looking westward from the east side of Area A across the former artillery range at all the Areas.



J-2 At the ranger station looking at the fuze that the ranger had found several years ago, 37mm base detonating fuze.



J-3 Looking eastward at one of the hill sides in Area A where most of the shrapnel was being found by the inspection team.



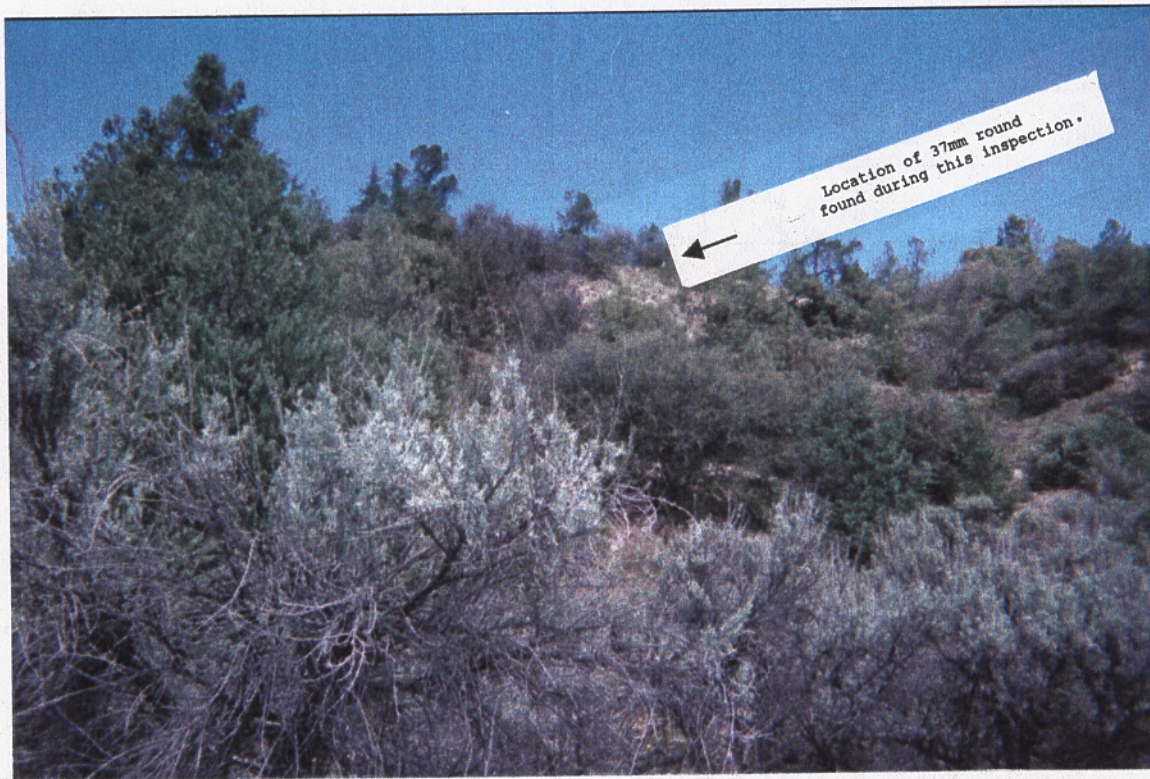
J-4 Shrapnel and rotating band from 37mm ammunition that was being found in Area A.



J-5 Shrapnel from 37mm ammunition and 105mm ammunition that was being found during this inspection in Areas A.



J-6 Live 37mm round found in Area A.



J-7 Location in Area A where live 37mm round was found.

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX K
HISTORICAL PHOTOGRAPHS

Not Used

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX L

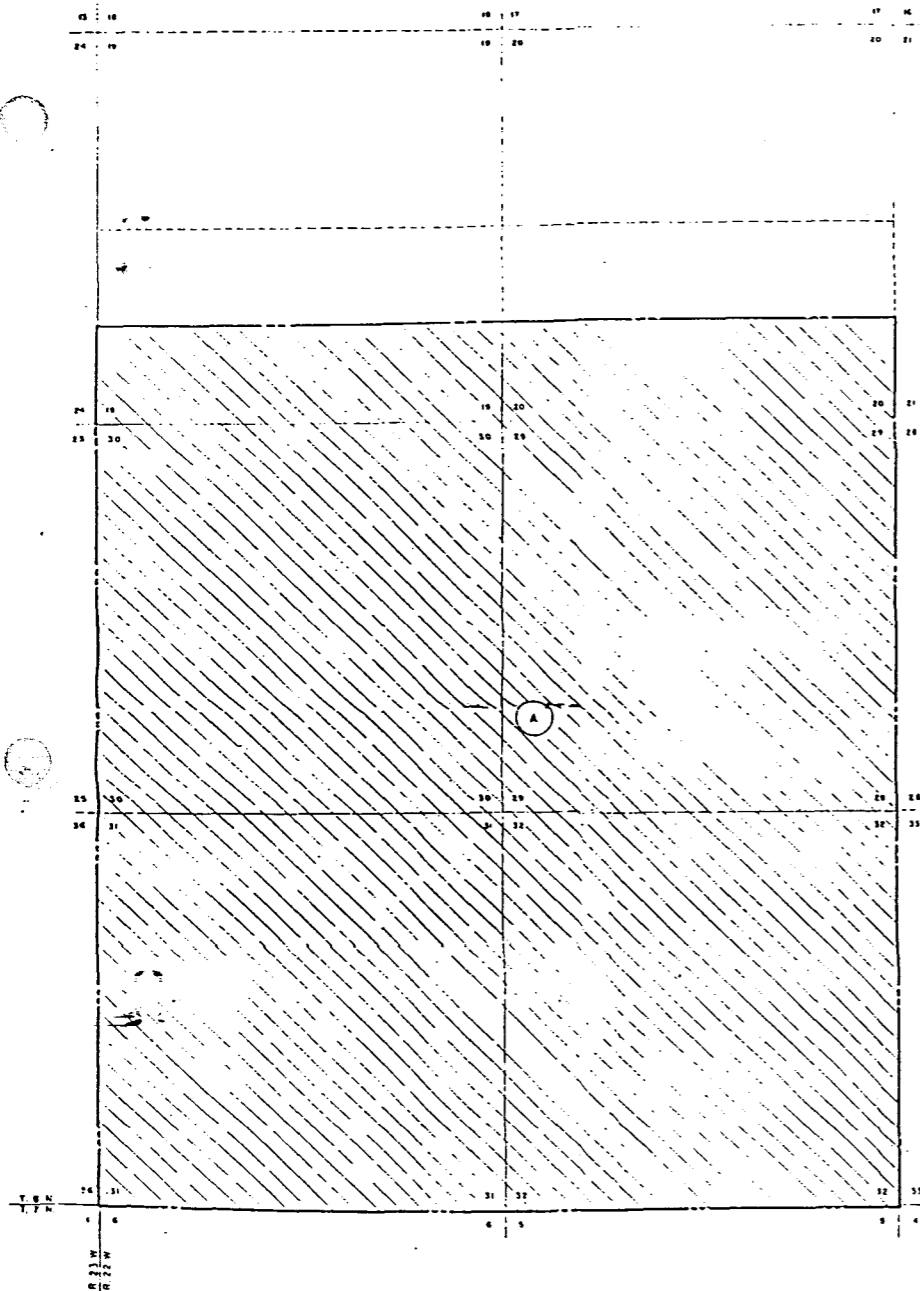
REFERENCE MAPS/DRAWINGS

APPENDIX L

REFERENCE MAPS/DRAWINGS

Table of Contents

L-1 Drawing, Real Estate Dry Canyon Artillery Range dated
13 May 1954, (B-14).



TRACT REGISTER OF ACQUISITION AFTER 1 JULY 1940				
TRACT NO.	LAND OWNER	ACREAGE		REMARKS
		TRANSFER	LESSER INTEREST	
A	DEPARTMENT OF AGRICULTURE	2880.00		See Form 1000, 8-11-40, for details of this project.

FINAL
PROJECT MAP
AGENCY: DEPARTMENT OF THE ARMY
STATE: CALIFORNIA
COUNTY: VENTURA
DIVISION: SOUTH PACIFIC
DISTRICT: LOS ANGELES
ARMY AREA: SIXTH

LOCATION OF PROJECT
53 MILES N.E. OF VENTURA
MILES OF

TRANSPORTATION FACILITIES
RAILROADS
STATE ROADS
FEDERAL ROADS 399
AIR LINES

ACQUISITION
TOTAL ACRES ACQUIRED 2880.00
ACRES FEE
ACRES TRANSFERRED 2880.00
ACRES LEASED
ACRES LESSER INTERESTS

DISPOSAL
TOTAL ACRES DISPOSED OF 2880.00
ACRES SOLD
ACRES TRANSFERRED 2880.00
ACRES LEASES TERMINATED

ACRES LESS INT'S TERMINATED
ACRES REASSIGNED
ACRES TO

LEGEND
EXCEPT FOR THE SPECIAL SYMBOLS SHOWN BELOW, MAP SYMBOLS ARE STANDARD IN ARMY MAP SERVICE TECHNICAL MANUAL NO. 11

RESERVATION LINE [Symbol]

RESERVATION LINE (Army Symbol) [Symbol]

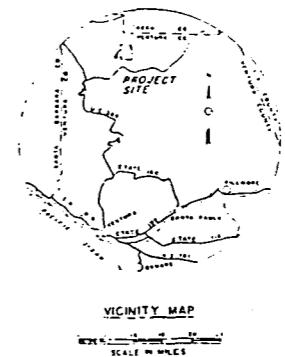
TRACT BOUNDARY LINE [Symbol]

TRACT NUMBER [Symbol] A

AVIGATION EASEMENT [Symbol]

CONTOUR LINE [Symbol]

DISPOSAL [Symbol]



NOTE
The boundary of this installation was compiled from Description contained in letter of relinquishment dated 27 May 1952.

ACQUISITION AUTHORIZATION
The Permit dated 12 Aug 1942 in law of original directive

2880.00 ACRES RELINQUISHED TO DEPARTMENT OF AGRICULTURE, 27 MAY 1952

DEPARTMENT OF THE ARMY
OFFICE OF THE LOS ANGELES DISTRICT ENGINEER
SOUTH PACIFIC DIVISION

REAL ESTATE
DRY CANYON ARTILLERY RANGE
MILITARY RESERVATION

DRAWN BY B D J
TRACED BY B D J
CHECKED BY I. S.

RECOMMENDED BY
Joseph P. Piffner
OFFICE CHIEF OF ENGINEERS, WASHINGTON 25, D. C.

APPROVED BY
Frederick E. Spickard
DATE 13 MAY 1954

OFFICE CHIEF OF ENGINEERS, WASHINGTON 25, D. C.
AUDITED 3347

SCALE IN FEET
1 IN. = 1000 FT.
0 500 1000 2000

DRAWING NO. 446-FP-1

DATE	REVISIONS

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX M

ARCHIVES SEARCH REPORT CORRESPONDENCE

Not Used

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR THE FORMER
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

APPENDIX N
DISTRIBUTION

APPENDIX N

DISTRIBUTION

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REPORT DISTRIBUTION LIST

	I	II	III
COMMANDER, U.S. Army Corps of Engineers Engineering and Support Center, Huntsville ATTN: CEHNC-OE-AI (MARDIS) P.O. Box 1600 Huntsville, AL 35807-4301	2		
COMMANDER, U.S. Army Corps of Engineers Division, Mississippi Valley ATTN: CEMVD-PM-E (Ethridge) P.O. Box 80 Vicksburg, MS. 39181-0080	0		
COMMANDER, U.S. Army Corps of Engineers Los Angeles District ATTN: CESPL-ED-MI (Boghossian) P.O. Box 2711 Los Angeles, California 90053-2325	1		
COMMANDER, U. S. Army Corps of Engineers Los Angeles District CESPL-PM-M (Knutson) 911 Wilshire Blvd. Los Angeles, Ca 90017	1		
COMMANDER U. S. Army Corps of Engineers Los Angeles District ATTN: CESPL-CO-SS 10845 Rancho Bernardo Road, 2nd Floor Suite 200, Room 204 Rancho Bernardo, CA 92127	1		
COMMANDER, Defense Ammunition Center ATTN: SIOAC-ESL Savanna, IL 61074-9639	3		

COMMANDER U.S. Army Corps of Engineers
Rock Island District
PO. BOX 1600
Rock Island, IL 61201

ATTN: CEMVR-

ED

1

ED-D

1

ED-DO

3

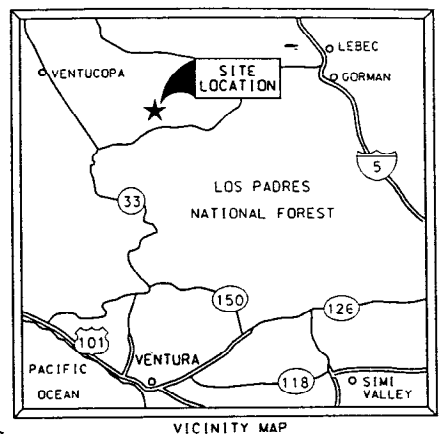
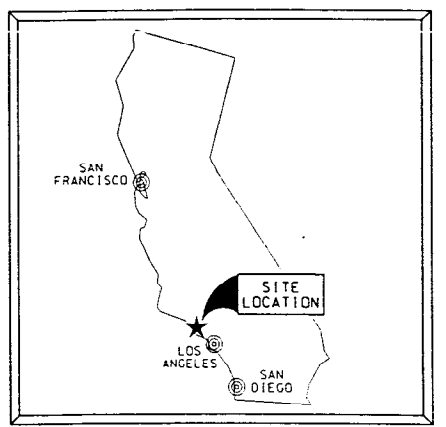
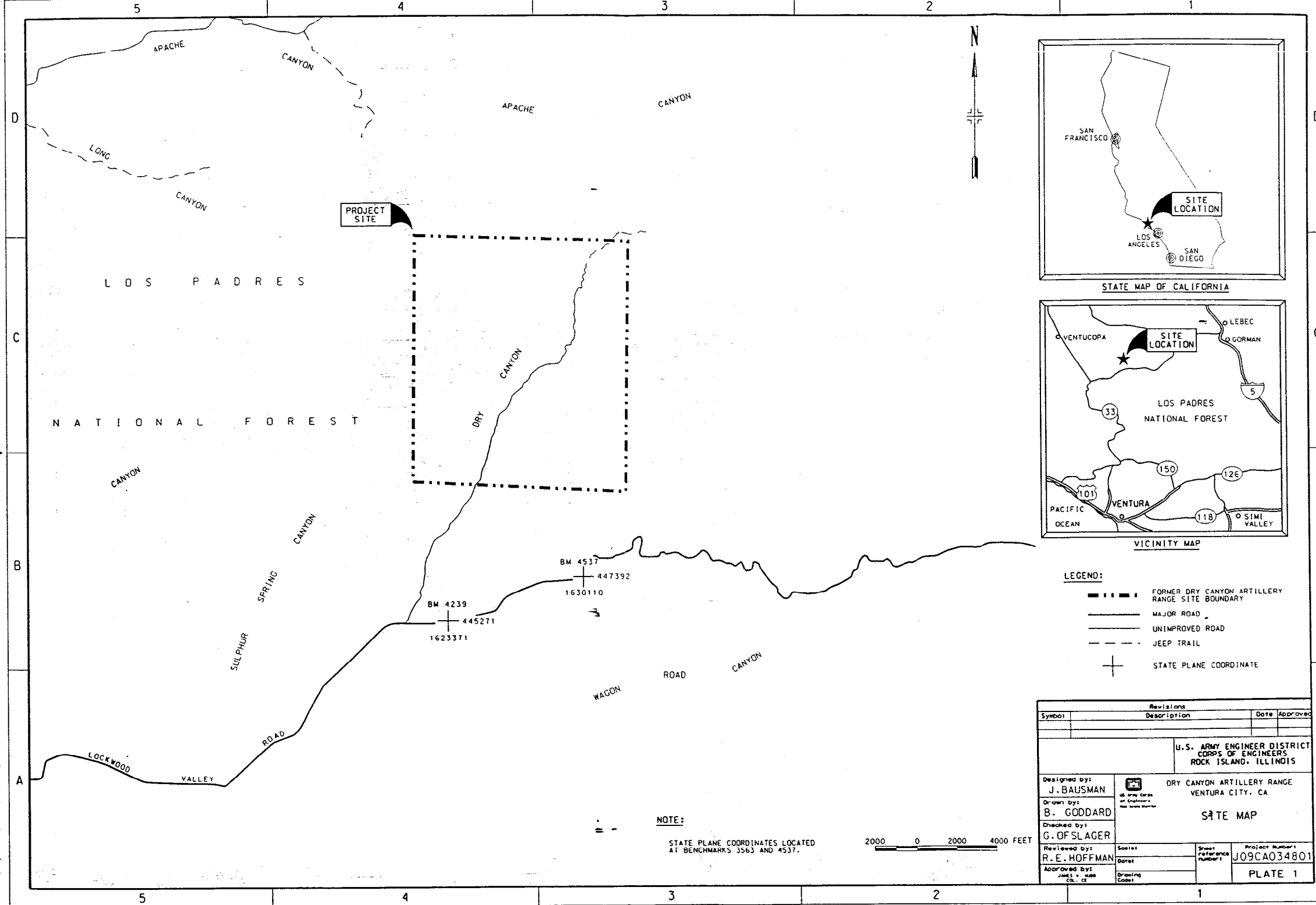
I = FINAL REPORT

II = FINDINGS REPORT

III = ROUTED FINAL REPORT

ORDNANCE AND EXPLOSIVES
ARCHIVE SEARCH REPORT
FOR
FORMER DRY CANYON ARTILLERY RANGE
DRY CANYON, VENTURA COUNTY, CALIFORNIA
PROJECT NUMBER J09CA03401

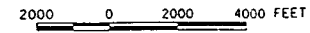
PLATES



- LEGEND:**
- FORMER DRY CANYON ARTILLERY RANGE SITE BOUNDARY
 - MAJOR ROAD
 - UNIMPROVED ROAD
 - - - - JEEP TRAIL
 - + STATE PLANE COORDINATE

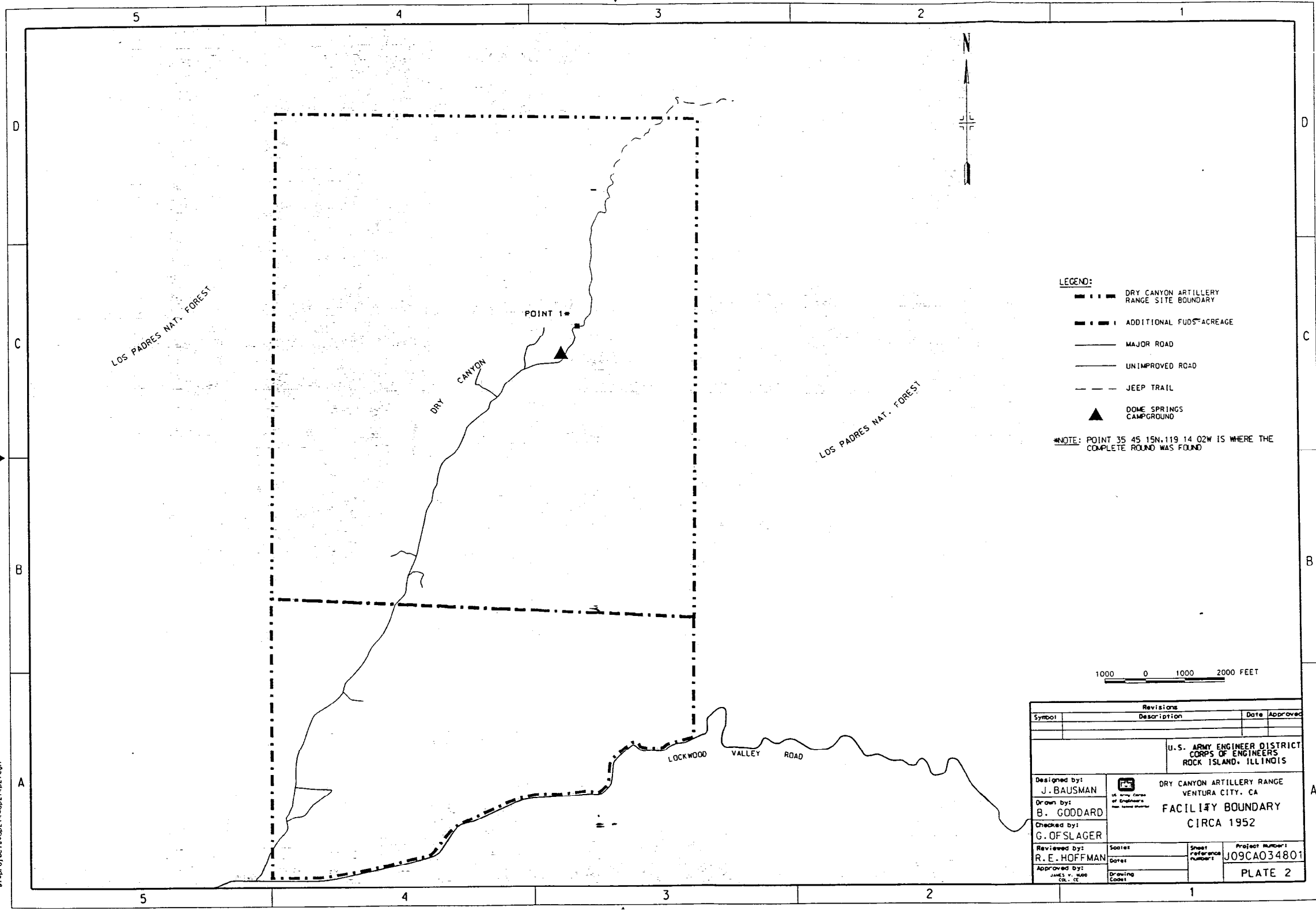
Revisions		Date	Approved
Symbol	Description		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by: J. BAUSMAN	 DRY CANYON ARTILLERY RANGE VENTURA CITY, CA	SITE MAP	
Drawn by: B. GODDARD			
Checked by: G. OF SLAGER			
Reviewed by: R. E. HOFFMAN			
Approved by: JAMES V. HISE Col., CE	Scale: Date: Drawing Code:	Sheet Reference Number: Date:	Project Number: JO9CA034801 PLATE 1

NOTE:
STATE PLANE COORDINATES LOCATED AT BENCHMARKS 4563 AND 4537.



02-SEP-1997 07:33
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02-SEP-1997 08:46
 B:\project\edp274\edp274.dgn



LOS PADRES NAT. FOREST

LOS PADRES NAT. FOREST

POINT 1


DRY CANYON

LOCKWOOD VALLEY ROAD

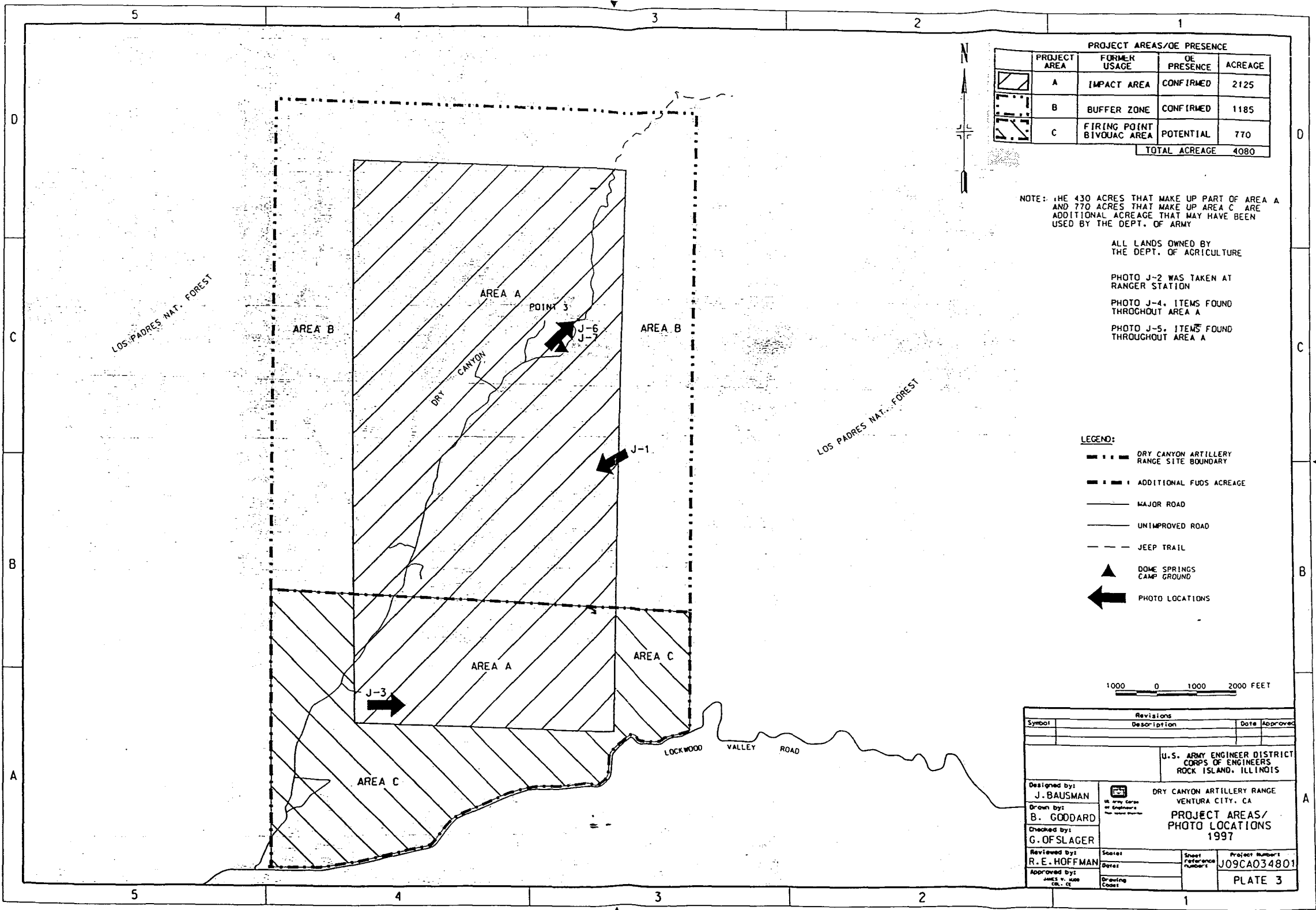
- LEGEND:**
- DRY CANYON ARTILLERY RANGE SITE BOUNDARY
 - · - · - ADDITIONAL FUDS ACREAGE
 - MAJOR ROAD
 - UNIMPROVED ROAD
 - - - JEEP TRAIL
 - ▲ DOME SPRINGS CAMPGROUND

*NOTE: POINT 35 45 15N.119 14 02W IS WHERE THE COMPLETE ROUND WAS FOUND

1000 0 1000 2000 FEET

Revisions		Date	Approved
Symbol	Description		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by: J. BAUSMAN	 U.S. Army Corps of Engineers Professional Engineer	DRY CANYON ARTILLERY RANGE VENTURA CITY, CA	
Drawn by: B. GODDARD		FACILITY BOUNDARY CIRCA 1952	
Checked by: G. OFSLAGER	Scale:	Sheet reference number:	Project Number:
Reviewed by: R. E. HOFFMAN	Date:		J09CA034801
Approved by: JAMES V. MOO COL., CE	Drawing Code:		PLATE 2

02-SEP-1997 08:24
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PROJECT AREAS/OE PRESENCE			
PROJECT AREA	FORMER USAGE	O/E PRESENCE	ACREAGE
A	IMPACT AREA	CONFIRMED	2125
B	BUFFER ZONE	CONFIRMED	1185
C	FIRING POINT BIVOAC AREA	POTENTIAL	770
TOTAL ACREAGE			4080

NOTE: THE 430 ACRES THAT MAKE UP PART OF AREA A AND 770 ACRES THAT MAKE UP AREA C ARE ADDITIONAL ACREAGE THAT MAY HAVE BEEN USED BY THE DEPT. OF ARMY

ALL LANDS OWNED BY THE DEPT. OF AGRICULTURE

PHOTO J-2 WAS TAKEN AT RANGER STATION

PHOTO J-4. ITEMS FOUND THROUGHOUT AREA A

PHOTO J-5. ITEMS FOUND THROUGHOUT AREA A

LEGEND:

- DRY CANYON ARTILLERY RANGE SITE BOUNDARY
- ADDITIONAL FUDS ACREAGE
- MAJOR ROAD
- UNIMPROVED ROAD
- - - JEEP TRAIL
- ▲ DOME SPRINGS CAMP GROUND
- ← PHOTO LOCATIONS

1000 0 1000 2000 FEET

Revisions		Date	Approved
Symbol	Description		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			
Designed by: J. BAUSMAN	DRY CANYON ARTILLERY RANGE VENTURA CITY, CA		
Drawn by: B. GODDARD	PROJECT AREAS/ PHOTO LOCATIONS 1997		
Checked by: G. OFSLAGER	Scale:	Sheet Reference Number:	Project Number: J09CA034801
Reviewed by: R. E. HOFFMAN	Date:	Drawing Code:	PLATE 3
Approved by: JAMES V. ...			