

REPLY TO
ATTENTION OF:

1-606

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

CESPD-ED-G (200-1c)

17 JAN '95

MEMORANDUM FOR

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

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

SUBJECT: Defense Environmental Restoration Program For Formerly
Used Defense Sites (DERP-FUDS), Inventory Project Report (INPR)
for Borrego Springs, Borrego Springs, California, Site No.
J09CA701100

1. I am forwarding the INPR for Borrego Springs for appropriate
action. The site is eligible for DERP-FUDS.
2. I recommend that CEHND determine the need for further
investigation and action at this site regarding the various
potential OEW projects. Los Angeles District has computed RAC
Scores of 3, 4 and 5 for various subareas.

Encl

for DERP Jt Col
BRUCE K. SCOTT
Brigadier General, U.S. Army
Commanding

CF:
CESPL-ED-MI (HTRW)

SCANNED/COPIED FOR DIGITAL STORAGE
SCANNED BY: ROCK ISLAND DISTRICT

DATE: 7/13/96

INITIALS: TO



DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

CESPL-ED-MI

13 October 1994

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

SUBJECT: DERP-FUDS Inventory Project Report (INPR) for Site No.
J09CA701100

1. Enclosed is the INPR for:

- J09CA701100 BORREGO SPRINGS

We determined that ordnance contamination (OEW) eligible under the DERP-FUDS Program may exist.

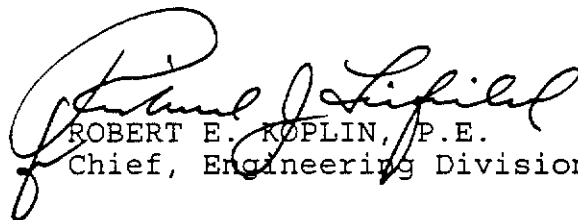
2. I recommend the following:

a. Findings and Determination of Eligibility be approved and signed.

b. Forward a copy of this INPR to Commander, Huntsville Division to determine if further action is appropriate. This District has calculated a RAC Score of 3, 4 and 5 for various areas within the site.

FOR THE COMMANDER:

Encl


ROBERT E. KOPLIN, P.E.
Chief, Engineering Division

**SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. J09CA701100**

**BORREGO SPRINGS
BORREGO SPRINGS, CALIFORNIA
6 JULY 1994**

SITE NAME: Borrego Springs, California (includes: Army - Borrego Maneuver Area, Navy - Benson Dry Lake, Navy - Borrego Hotel, Navy - Borrego Military Wash, Navy - Clark's Dry Lake, and Marines - Camp Ensign).

LOCATION: The majority of the site is located in the northern portion of Anza-Borrego Desert State Park. The Park is located in eastern San Diego County, west and southwest of the Salton Sea, California. The overall general area consists of desert terrain and dry lakes.

SITE HISTORY: The Borrego Springs site was a composite of several sub-sites within or immediately adjacent to the boundaries of the Anza-Borrego Desert State Park. Sub-sites that were formerly utilized by the Army, Navy or Marines include: Borrego Maneuver Area, Benson Dry Lake, Borrego Hotel, Borrego Military Wash, Clark's Dry Lake, and Camp Ensign. Each of these areas are discussed separately below.

Army - Borrego Maneuver Area The Borrego Maneuver area comprised of approximately 400 square miles of park land. The northern boundary extended to the Riverside County line, the eastern boundary was U.S. Highway 99, the southern boundary was State Highway 78, and the western boundary was a north-south line through Borrego P.O. The property was acquired by the Department of the Army through a Use Permit with the State of California dated 10 March 1942. This permit exempted three areas: portion of Township 9 South, Range 9 East, lying between U.S. Highway No. 99 and the Santa Rosa Mountains (this area is an Indian Reservation); Benson's Dry Lake lying north of Ocotillo (Naval landing field); and area adjacent to western boundary on which houses, fences and other improvements have been erected. It is not clear if private properties were also exempted. Records indicate the majority of the Maneuver area was returned to the State of California during the end of 1944.

The Department of the Army conducted extensive logistical preparations to build roads in the area but reportedly did not use the area as extensively as originally intended. Reported uses of the area by the Army included: force-on-force maneuvers (limited number of excursions) and anti-aircraft training for troops stationed at Camp Callan (San Diego, California). Historical references to the locations where Army training activities were conducted in the Borrego Maneuver area were vague. Areas used by the Army specifically identified in the documents include Coyote Canyon, the north face of Borrego Mountain, Borrego Military Wash, south of Borrego Sink, Yaqui Pass, Fish Creek Mountain, Carrizo Canyon, and Blair Valley.

SITE NO. J09CA701100

According to Jim Walker, OEW expert with the Army Corps of Engineers, the Army Maneuver Area has relatively high potential for ordnance hazards. Based on the areas history and reports of recovered ordnance, possible ordnance in the area includes: medium/large caliber arms (armor piercing), 100-pound practice bombs, 2 to 6 inch rockets, and various small arms (0.22 to .0.50 caliber).

Navy - Borrego (Military) Wash (inside the boundary of the Army's Borrego Maneuver Area) - This area lies approximately three miles due north of the town of Ocotillo Wells and Benson Dry Lake. No records were found that indicated the size of the property or when the Department of the Navy acquired it. Nevertheless, this property was located within the Borrego Maneuver Area which was acquired from the State of California by the Department of the Army in 1942.

According to the Navy records this area was used for level bombing. This was confirmed by ordnance fragments from both 100- and 250-pound bombs. The Navy and/or Army also used this area for aircraft gunnery practice as evidenced by the heavy concentration of 20mm and 0.50-caliber projectiles and clips and 2.75-inch rockets. The collapsed remains of two rake stations are present at Military Wash, only the concrete-reinforced platforms remain.

North and east of the rake stations is feature on the desert floor which consist of an east-west lineament running for about one to two miles. This feature may possibly have been the site of railroad tracts along which a target was either pulled or was self-driven. A heavy concentration of ordnance was found along this lineament. A large metal structure (8 feet by 8 feet) was located in Fault Wash (about 0.5 miles south west of the first rake station) and appears to have been a target.

Mr James Walker, OEW expert with the Army Corps of Engineers, noted that while all of the ordnance observed on this site visit presented no immediate danger, there was a distinct possibility that there could be a definite hazard presented by live ordnance that was either unobserved or buried. A week after the site visit to the area, State Park Ranger, Mr. Homer Townsend reported that the Army's 70th Ordnance Detachment for Explosive Ordnance Disposal (EOD) was sent to the intersection of Palo Verde Wash Road and Short Wash Road (approximately 3.5 miles north of the Military Wash site) and disposed of a high explosive 40mm round (Appendix 3 of 3, Section 5). Additional inquiries concerning ordnance were made to the San Diego Sheriff's Department, Borrego Springs Fire Department, former Yuma EOD contacts at the Yuma Proving Ground, and to Marine Corps EOD at Camp Pendelton. The contacts indicated that numerous sightings of various ordnance have been found at the site. The predominant type of ordnance recalled to be found in the area includes: practice bombs, spent small arms (0.50 caliber and 20mm), and some unidentified high explosive rockets or bombs. This area, in particular, is considered to be a high risk area for remaining ordnance.

Navy - Clark's Dry Lake (inside the boundary of the Army's Borrego Maneuver Area) - Clark's Dry Lake consisted of 640 acres located in Section 5, T10S, R7E. This section comprises most of the southeastern corner of the dry lake. The property was acquired by the Department of the Navy through Declaration of Taking dated 25 October 1943. This property was declared surplus on 30 November 1955. Ownership of the property was transferred to Bart J. Comer, through a Deed of Trust, on 21 September 1956. The property was subsequently granted to the State of Maryland for use as a radar telescope site. During the late 1980s the property was transferred to the State of California to be incorporated into Anza-Borrego State Park.

The Navy referred to its installation at Clark's Dry Lake as an outlying field or as an emergency landing field, although its primary function was as a target for practice bombing. Navy records alternatively describe it as a level bombing target and as a dual-purpose level and dive bombing target. The field was the responsibility of the Naval Auxiliary Air Station (NAAS) at Salton Sea. The NAAS-Salton Sea reported through the Naval Air Station - San Diego to the 11th Naval District headquartered in San Diego, California.

The facility included a target, two dirt landing strips, a wind sock and two bomb-proof rake stations. The target was constructed of stones placed in concentric circles and a majority of it was still intact. The landing strips consisted of sections of the desert floor that were cleared of brush. No pavement was installed, and evidence of these landing strips was not found during the site visit. The rake stations consisted of a reinforced concrete slab, three-feet thick by twelve-feet square, resting on four reinforced concrete pillars. Remnants of the rake stations are still present, including the four pillar supports for each station.

According to Jim Walker, OEW expert with the Army Corps of Engineers, the most likely ordnance expected at this site would be practice bombs with spotting charges. Remnants of ordnance spotted during the site visit included corroded remains of 6-inch and 100-pound practice bombs and 20mm shells. One source quoted in Orrell's account reports (Appendix 3 of 3, Section 3) that the amount of ordnance around the target was quite abundant at one time but today the remaining ordnance is relatively small. Orrell reports that evidence of 2.75-inch training rockets were found but none were noted during the site visit.

Additional inquiries concerning ordnance were made to the Army's 70th EOD, Park Rangers, San Diego Sheriff's Department, San Diego Fire Department, the Borrego Springs Fire Department, Yuma Proving Ground, and the Marine Corps EOD at Camp Pendelton. No specific accounts of unexploded ordnance were identified, but access to this area was restricted to the general public until the last couple of years.

Navy - Benson Dry Lake (also known as Ocotillo Dry Lake) (just outside the southern boundary of the Army's Borrego Maneuver Area) - This area lies just outside the boundary of Anza-Borrego Desert State Park at the northeast corner of Highway 78 and Split Mountain Road. The property acquired consisted of four parcels totalling 353.11 acres. Two of the parcels, 160 acres (Marvin Ben Couch) and 85.21 acres (Elbert and Chesta Benson) were purchased by the Department of Defense (DOD) on 19 November 1940. The other two parcels, 80 acres (John Sheran et al) and 27.90 acres (Elaine L. Wright et al) were acquired through a Declaration of Taking (condemnation) on 20 March 1941.

The property was used by the Department of the Navy as a dive bombing target and an emergency landing field. Use of the property during World War II is documented. Post World War II use of the property is not clear from the documentation. The property was declared excess 20 December 1955. Disposal documents indicate that the property contained no improvements and was transferred to the County of San Diego on 17 August 1956. San Diego County currently owns the property and operates a small airport at the site.

While the real estate documents indicates that no improvements were constructed at the site, two remnants of stone-reinforced bunkers were observed on the small hills immediately east of the landing field. These structures provided excellent viewing areas of the landing field to the west and the Military Wash target area approximately 3 miles to the north. No other structures were noted during the site visit and no ordnance was found.

According to Jim Walker, OEW expert with the Army Corps of Engineers, the most likely ordnance expected at a former bombing target would be practice bombs with spotting charges. According to the Borrego Springs Fire Department a 20-pound practice bomb has been recovered from the area.

Navy - Borrego Hotel (also known as Halfhill Dry Lake) (Outside the boundary of the Army's Borrego Maneuver Area) - The area is located approximately 1.5 miles south on Split Mountain Road from the intersection of Highway 78 and Split Mountain Road. The subject property comprised of 160 acres that consist of the southeast 1/4 of Section 26 Township (T) 12 South (S) and Range (R) 8 East (E) was acquired from Elmo Rowland Livingston via Declaration of Taking, dated 10 July 1941. The property was declared excess and sold to Ray Formost on 6 September 1956. Currently, the property is owned by multiple private parties (only one owner shown).

This location was designated as a dive bombing target. In the general area was the former site of the "Little Miracle Hotel" (also referred to as the "Borrego Hotel"). The hotel was deserted in the 1930s. Today only the slab of the 14 room hotel exists. An abandoned water well lies west of the former hotel. No ordnance was found in the area and the only structure observed which could present a hazard was the exposed casing of the water

SITE NO. J09CA701100

well extending about two to three feet above ground level. Date of the well is unknown. The slab of former hotel is now used extensively by campers as a level area for their trailers.

According to Jim Walker, OEW expert with the Army Corps of Engineers, the most likely ordnance expected at a dive bombing area would be practice bombs with spotting charges, medium caliber arms (20mm target practice and possibly high explosives), and small arms (0.50 caliber).

Marines - Camp Ensign (just outside the western boundary of the Army's Borrego Maneuver Area) - The Ensign Ranch, known as Camp Ensign, is situated in the western portion of Borrego Springs, California. The intersection of Palm Canyon Drive and Borrego Springs Road defines the northeast corner of the former Camp. In 1943 Marines established a formal base at the Ensign Ranch. No real estate documents were found that identified the amount of acreage the camp consisted of. The historical map indicates that the camp consisted of sections 4, 9, and 16 of T11S, R6E (estimated from maps to be 1920 acres).

Camp Ensign reportedly consisted of a tented area for trainees and an unoccupied dwelling for use as headquarters near the open area where the tents were set up. The facility was used to train large numbers of Marines as truck drivers who were to be readied for combat duty in short order. It is possible that the destination for these drivers after training made practice in desert driving essential.

The area once occupied by Camp Ensign is now a residential area containing residences and large open areas. No evidence of the former camp now exists. Real estate records indicate that the area of the former camp is owned by numerous (estimated over 200) private parties.

SITE VISIT: The site was visited 26 February 1994 and 26 March 1994 by Robert A. Davis, Jr. of Groundwater Technology, Inc., San Diego, California. Jim Walker, OEW expert with the Army Corps of Engineers was present during the site visit on 26 March 1994. Site conditions encountered are detailed in the Field Trip Summary Sheet dated 22 April 1994.

CATEGORY OF HAZARD: OEW

PROJECT DESCRIPTION:

a) OEW: Recommend the Mandatory Center of Expertise (MCX) for OEW at Huntsville Division make a determination regarding further investigation at this site.

AVAILABLE STUDIES AND REPORTS:

Pacific Sierra Region, National Archives San Bruno, California - Limited files and maps on Benson Dry Lake, Borrego Hotel and Clark's Dry Lake

SITE NO. J09CA701100

F.L. Orrell, recent Military Operations in the Anza-Borrego
Desert State Park, (a preliminary study of such activity from
1941 to 1959) 31 October, 1991 (Revised January 1992)

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

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

BORREGO SPRINGS
BORREGO SPRINGS, CALIFORNIA
SITE NO. J09CA701100

FINDINGS OF FACT

1) During the early 1940s the Army, Navy, and Marines acquired authorization to use six locations in the vicinity of Borrego Springs as primarily bombing targets and/or landing fields. Not all the real estate information was available, but the research conducted indicates that the property was acquired as follows. The largest area of property acquired consisted of the Army's Borrego Maneuver Area. The Maneuver Area consisted of 400 square miles (calculated 256,000 acres) that were acquired from the State of California via a Use Permit dated 10 March 1942. This permit exempted three areas: portion of Township 9 South, Range 9 East, lying between U.S. Highway No. 99 and the Santa Rosa Mountains (this area is an Indian Reservation); Benson's Dry Lake lying north of Ocotillo (Naval landing field); and area adjacent to western boundary on which houses, fences and other improvements have been erected. It is not clear if private properties were also exempted. Two of the Navy's properties were located within the Army's property and included: Borrego Military Wash and Clark's Dry Lake. No records were found that indicated the size of Borrego Military Wash or when the Department of the Navy acquired it. Clark's Dry Lake consisting of 640 acres was acquired from private parties through a Declaration of Taking dated 25 October 1943. Two additional Navy areas included Benson Dry Lake (353.11 acres) and Borrego Hotel (160 acres) and were acquired from private parties. Benson Dry Lake consisted of four parcels. Two of the parcels, 160 acres (Marvin Ben Couch) and 85.21 acres (Elbert and Chesta Benson) were purchased by the Department of Defense (DOD) on 19 November 1940. The other two parcels, 80 acres (John Sheran et al) and 27.90 acres (Elaine L. Wright et al) were acquired through a Declaration of Taking (condemnation) on 20 March 1941. Borrego Hotel was acquired from Elmo Rowland Livingston via Declaration of Taking, dated 10 July 1941. Finally, the Marines acquired an undefined amount of acreage (calculated 1920 acres) in the town of Borrego Springs known as Camp Ensign.

2) The Department of the Army acquired 400 square miles for use in force-on-force maneuvers and anti-aircraft training for troops stationed in the San Diego area. However, records indicate that the Army's use of the area may have been less than originally planned for. Referenced improvements to the Maneuver Area primarily included roads. The Navy sites were predominantly used as various bombing targets and emergency landing strips. Emergency landing strips were installed by the Navy at Benson Dry Lake and Clark's Dry Lake. Expected and or observed military improvements at the bombing targets include: remains of rake stations, remains of mobil target tracks, and remains of targets. The Marine site was reportedly used as a tent camp for trainees

from the San Diego area. No references of permanent structures or improvements were found for Camp Ensign.

3) Documentation detailing the Department of Defense (DOD) disposal activities were not available for all the sites. The records found indicated that the majority of the properties were relinquished during the 1950s. The 400 square miles which constituted the Maneuver Area were predominantly relinquished back to the State of California. Currently, the State of California owns this property as part of the Anza-Borrego Desert State Park. The 640 acres which comprises Clark's Dry Lake was transferred to Bart J. Comer, through a Deed of Trust, on 21 September 1956. The property was subsequently granted to the State of Maryland for use as a radar telescope site. During the late 1980s the property was transferred to the State of California to be incorporated into Anza-Borrego State Park. The 353.11 acres which constituted Benson Dry Lake was relinquished to the County of San Diego for use as a municipal airport. Disposal documents for Benson Dry Lake indicate that the property contained no improvements and was transferred to the County of San Diego on 17 August 1956. The 160 acres which comprised the former Borrego Hotel was declared excess and sold to Ray Formost on 6 September 1956. The former site of Borrego Hotel is currently owned by multiple private parties but only one owner is identified on the records. Site specific real estate records were not available for Camp Ensign. However the real estate records indicate that the undefined amount of acreage (calculated 1920 acres) which constituted Camp Ensign were sold to private parties and have subsequently been subdivided and are owned by multiple private parties.

DETERMINATION

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

17 Jan 95

Date

for DE Pitt col
 BRUCE K. SCOTT
 Brigadier General, U.S. Army
 Commanding

PROJECT SURVEY SUMMARY SHEET
FOR
DERP-FUDS OEW PROJECT NO. J09CA701106

BORREGO SPRINGS
BORREGO SPRINGS, CALIFORNIA
SITE NO. J09CA701100
6 JULY 1994

PROJECT DESCRIPTION: During World War II the Department of the Army, the Department of the Navy, and the Marines used sections of the Anza-Borrego Desert State Park and/or private property in the Borrego Springs area for military purposes. The area was used for multiple purposes which include: force-on-force maneuvers, anti-aircraft training, various kinds of bombing targets, emergency landing fields, and training camps.

The majority of the acreage acquired by the Department of Defense (DOD) entailed 400 square miles that constituted the Army's Maneuver Area. The Maneuver Area included acreage that the Navy used at Borrego Military Wash (acreage unknown) and Clark's Dry Lake (640 acres). Property acquired by the Navy included Benson Dry Lake (353.11 acres) and Borrego Hotel (160 acres). Finally, the Marines acquired an undetermined amount of property (calculated 1920 acres) known as Camp Ensign.

None of the historical records revealed what kinds of clearance activities were conducted in the area, if any. However, reported accounts and visual inspection of the property revealed that various types of ordnance has been found, including live rounds. Agencies and personnel contacted concerning ordnance in the area included Jim Walker, OEW expert with the Army Corps of Engineers; Anza-Borrego State Park Rangers; Army 70th Ordnance Detachment, Explosive Ordnance Disposal (EOD); San Diego Sheriff's Department; San Diego Fire Department; Borrego Springs Fire Department; Yuma Proving Ground; and the Marine Corps EOD at Camp Pendelton. Expected and/or reported ordnance sightings are listed below by area.

Navy - Benson Dry Lake (also known as Ocotillo Dry Lake) (just outside the southern boundary of the Army's Borrego Maneuver Area) - The property was used by the Department of the Navy during World War II as a dive bombing target and an emergency landing field. During the 1950s the property was transferred to San Diego County which operates a small airport at the site. Expected ordnance at a former bombing target would primarily include practice bombs with spotting charges. During the sites visit remnants of two stone-reinforced bunkers were observed on the small hills immediately east of the landing field. These structures provided excellent viewing areas of the landing field

to the west and the Military Wash target area approximately 3 miles to the north. No other structures were noted during the site visit and no ordnance was found. However, according to the Borrego Springs Fire Department a 20-pound practice bomb has been recovered from the area.

PROJECT ELIGIBILITY: The property was formerly owned and used by the DOD (Army, Navy and Marines). Any ordnance found could be the result of past DOD activity.

POLICY CONSIDERATIONS: No policy considerations are known to exist that would affect proposal of this project.

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

RAC FORM: Attached.

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

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

Site Name	<u>Navy Benson Dry Lake</u>	Rater's Name	<u>R. G. Harris</u>
Site Location	<u>Barrigo Springs, CA</u>	Phone No.	<u>(205) 895-1590</u>
DERP Project #	<u>7096A701106</u>	Organization	<u>CEHND-PM-50</u>
Date Completed	<u>7 Feb 95</u>	RAC Score	<u>2 (II, B)</u>

OEW RISK ASSESSMENT:

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

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

TYPE OF ORDNANCE
 (Circle all values that apply)

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

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

B. Pyrotechnics (For munitions not described above.)

VALUE

Munition (Container) Containing
White Phosphorus (WP) or other
Pyrophoric Material (i.e.,
Spontaneously Flammable) 10

Munition Containing A Flame
or Incendiary Material (i.e., Napalm,
Triethylaluminum Metal Incendiaries) 6

Flares, Signals, Simulators, Screening
Smokes (other than WP) 4

Pyrotechnics (Select the largest single value) 0

What evidence do you have regarding pyrotechnics? As reported in
INPR

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

VALUE

Primary or Initiating Explosives
(Lead Styphnate, Lead Azide,
Nitroglycerin, Mercury Azide,
Mercury Fulminate, Tetracene, etc.) 10

Demolition Charges 10

Secondary Explosives
(PETN, Compositions A, B, C,
Tetryl, TNT, RDX, HMX, HBX,
Black Powder, etc.) 8

Military Dynamite 6

Less Sensitive Explosives
(Ammonium Nitrate, Explosive D, etc.) 3

High Explosives (Select the largest single value) 0

What evidence do you have regarding bulk explosives? As reported in
INPR

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

VALUE

Solid or Liquid Propellants 6

Propellants 0

What evidence do you have regarding bulk propellants? As reported in
INPR.

E. Chemical Warfare Materiel and Radiological Weapons

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

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

=====

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

TABLE 1

HAZARD SEVERITY*		
Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	(II)	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		0

• Apply Hazard Severity Category to Table 3.

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

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

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

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	2
Location (Select the single largest value)	5
What evidence do you have regarding location of OEW? <u>As reported in INPR</u>	

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

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	5
What are the nearest inhabited structures? <u>As reported in INPR</u>	

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

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

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

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

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

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

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

	VALUE
Expected	5
None Anticipated	0
Site Dynamics (<u>Select largest value</u>)	<u>0</u>
Describe the site dynamics. <u>As reported in INPR.</u>	

TOTAL HAZARD PROBABILITY VALUE

(Sum of Largest Values for A through F--Maximum of 30)

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

21

TABLE 2

HAZARD PROBABILITY

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

* Apply Hazard Probability Level to Table 3.

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

TABLE 3

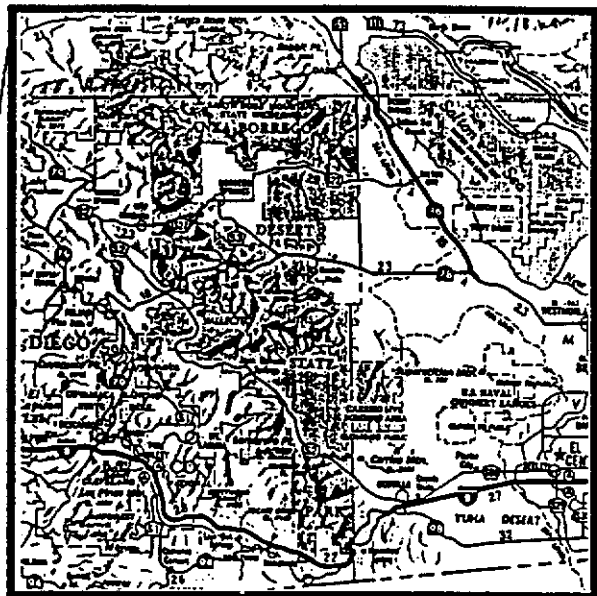
Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

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

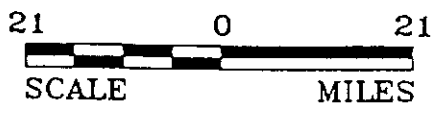
Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

This site was used for bombing target practice and is now occupied by San Diego County Airport. Site is located in the Borrego Maneuver Area, (Project #209CA701106)



INDEX TO MAPPED AREA

SOURCE: AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA; CALIFORNIA ROAD MAP



FILE: BGOS-SIM

BORREGO SPRINGS

JO9CA701100
BORREGO SPRINGS, CA
83001116

SITE INDEX MAP
FIGURE 1

10 Feb 93

Previous editions obsolete

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

Site Name	<u>NAVY BOUND DRY LAKE</u>	Rater's Name	<u>KATHY GERIBG12</u>
Site Location	<u>BOULDER SPRINGS</u>	Phone No.	<u>(505) 242-3113</u>
DERP Project #	<u>JO9CAT0650070106</u>	Organization	<u>GTI</u>
Date Completed	<u>27 MAY 94</u>	RAC Score	<u>2</u>

OEW RISK ASSESSMENT:

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

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

TYPE OF ORDNANCE
(Circle all values that apply)

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

What evidence do you have regarding conventional OEW? FOUND
FRAGMENTS AT SITE LOCATION

E. Radiological/Chemical Agent/Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear, incendiary and smoke)	<u>5</u>
Radiological/Chemical Agent (Select the largest single value)	<u>0</u>
What evidence do you have of chemical/radiological OEW?	<u>NO EVIDENCE</u>

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

TABLE 1

HAZARD SEVERITY*

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	II	≥10 <21
MARGINAL	III	≥5 <10
NEGLIGIBLE	IV	≥1 <5
**NONE		0

* Apply Hazard Severity Category to Table 3.

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

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

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

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	2
Location (Select the single largest value)	5

What evidence do you have regarding location of OEW? Buried OEW, situated in the rubble can become uncovered & exposed due to weather

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

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	5

What are the nearest inhabited structures? _____

B. Pyrotechnics (For munitions not described above.)

VALUE

Munition (Container) Containing
White Phosphorus or other
Pyrophoric Material (i.e.,
Spontaneously Flammable)

10

Munition Containing A Flame
or Incendiary Material (i.e.,
Napalm, Triethylaluminum Metal
Incendiaries)

6

Flares, Signals, Simulators

4

Pyrotechnics (Select the largest single value)

Ø

What evidence do you have regarding pyrotechnics? NONE

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

VALUE

Primary or Initiating Explosives
(Lead Styphnate, Lead Azide,
Nitroglycerin, Mercury Azide,
Mercury Fulminate, Tetracene, etc.)

10

Demolition Charges

10

Secondary Explosives
(PETN, Compositions A, B, C,
Tetryl, TNT, RDX, HMX, HBX,
Black Powder, etc.)

8

Military Dynamite

6

Less Sensitive Explosives
(Ammonium Nitrate, Explosive D, etc.)

3

High Explosives (Select the largest single value)

Ø

What evidence do you have regarding bulk explosives? NONE

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

VALUE

Solid or Liquid Propellants

6

Propellants

Ø

What evidence do you have regarding bulk propellants? NO EVIDENCE

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

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

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

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

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

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

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

	VALUE
Expected	5
None Anticipated	0
Site Dynamics (Select largest value)	<u>0</u>
Describe the site dynamics. <u>NONE EXPECTED</u>	

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

24

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥ 27
PROBABLE	B	$\geq 21 < 27$
OCCASIONAL	C	$\geq 15 < 21$
REMOTE	D	$\geq 8 < 15$
IMPROBABLE	E	< 8

• Apply Hazard Probability Level to Table 3.

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

TABLE 3

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

RISK ASSESSMENT CODE (RAC)

- RAC 1 Imminent Hazard - Expedite INPR - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.
- RAC 2 High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Recommend no further action. Submit NOFA and RAC to CEHND.

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

This site was used for bombing target practice and is now occupied by San Diego County Airport. No ordnances were observed, however, 20 lbs practice bomb has been found. Since the site has been developed, a RAC score of 4 is more appropriate than the calculated score of 2.