

**DEFENSE ENVIRONMENTAL
RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES**

REVISED INVENTORY PROJECT REPORT

**UTAH ORDNANCE PLANT
SALT LAKE CITY, UTAH**

PROJECT No. J08UT098900

Prepared by:
**ARMY CORPS OF ENGINEERS,
SACRAMENTO DISTRICT**
1325 J. Street,
Sacramento, California
95814-2922

Initially prepared:
November, 1994
Revised:
Dec. 14, 1998

REVISED SITE SURVEY SUMMARY
SHEET
for
DERP-FUDS SITE No. J08UT098900

SITE NAME: Utah Ordnance Plant.

LOCATION: The Utah Ordnance Plant is located two miles west of Salt Lake City, Utah. The plant encompassed three full sections in T1S, R1W, and three full and four partial sections in T1S, R1E. Geographically, it extended 6 ½ miles west, beginning at Redwood Road, and approximately 1 ½ miles north from 2100 South Street.

SITE HISTORY: The original site of the plant was part of a parcel of approximately 5,000 acres. The property was acquired by the United States in 1941. After DoD use title was transferred to the State of Utah by the War Assets Administration (WAA). Title to a twenty-one acre parcel was passed to Redwood Investment Company, who sold the property to Varian Associates in the same year (about 1950).

The Utah Ordnance Plant was operated by the Remington Arms Company under contract with the federal government. The plant was under construction in 1941 and began operation in early February, 1942. During the years of 1942 and 1943, the ordnance plant was in full operation. From December 1943 to late 1946, the plant was on standby status.

Although the Ordnance Plant property covered 5,000 acres, the acreage primarily affected by munitions production was the eastern most portion. Other portions of the property were used as a range.

Records and references indicate that Varian Associates used the property for light industrial purposes since its acquisition of a twenty-one acre parcel in about 1950.

The Sacramento District, U.S. Army Corps of Engineers received a CERCLA section 104(e) request for information from EPA Region VIII in June 1996. A timely response was provided to EPA in August 1996. Remington Arms filed a lawsuit seeking CERCLA response costs from the United States in October 1993. The lawsuit was dismissed without prejudice in April 1994.

SITE VISIT: This site has been documented by numerous

UTAH ORDNANCE PLANT
Site No. JO8UTO98900

reporting agencies. In December 1986, three members of the Sacramento COE visited the site. Included in the INPR file is a copy of the Final RCRA Facility Assessment Report, prepared by Jacobs Engineering Group, Inc., for the U.S. Environmental Protection Agency (EPA), and the sampling plan generated by the EPA as a result of the RCRA report.

The original INPR indicates that the ordnance plant produced .30 and .50 caliber ammunition during the time it was in operation, however, it does not contain any site maps by which specific processes and areas might be pinpointed. The INPR does indicate that the ammunition manufacturing area was located in approximately the same area as the Varian site. This revised INPR proposes a PRP/HTRW project since the DOD has received an information request under section 104(e) of CERCLA from EPA Region VIII and has been involved in litigation over the site.

CATEGORY OF HAZARD: PRP/HTRW, OE.

AVAILABLE STUDIES AND REPORTS: The following reports were utilized in the revision of this INPR and contain further references themselves. The RCRA Final Report, in particular, cites 27 references.

- a. Original INPR, prepared by U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California, 95814-2922, dated November 1994.
- b. Sampling Plan, Varian Associates - EIMAC Division, prepared by U.S. Environmental Protection Agency, EPA ID No. UTD009438359, submitted January 25, 1991.
- c. Final RCRA Facility Assessment Report for Varian Associates - EIMAC Division, prepared for U.S. Environmental Protection Agency by Jacobs Engineering Group, Inc., Lakewood, Colorado; submitted November 18, 1987.

PA POC: Mr. William Mullery, CESPK-ED-E (DERP), (916) 557-6944.

12Jun01

The location paragraph of the Revised Site Survey Summary Sheet should be modified because the township information is currently incorrect. The following is a modified location paragraph:

LOCATION: The Utah Ordnance Plant is located 2 miles west of Salt Lake City, Utah. The plant encompassed three full sections in ~~T1S, R1W~~ T1S, R2W, and three full and four partial sections in ~~T1S, R1E~~ T1S, R1W. Geographically, it extended 6½ miles west, beginning at Redwood Road, and approximately 1½ miles north from 2100 South Street.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
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FINDINGS AND DETERMINATION OF ELIGIBILITY

UTAH ORDNANCE PLANT
SALT LAKE CITY, UTAH
SITE NO. J08UT098900

FINDINGS OF FACT

1. In 1941, the United States acquired fee title of approximately 5,000 acres from over 3,200 separate owners. Approximately 189 buildings were constructed on the installation and most have been demolished or sold for off-site removal. The eastern end of the site appears to have been involved in ammunition production. Some other portions were used as a firing range.

2. The Utah Ordnance Plant was a small arms ammunition plant operated by the Remington Arms Company. The facility was in operation between February 1942 and December 1943. From December 1943 to August 1946, the plant was placed on standby status.

3 On August 21, 1946, the property was reported surplus to the War Assets Administration and fee title was transferred to the State of Utah by deed, dated 26 July 1950. The deed provided that the property be used only for wild life conservation purposes. Some of the site has been sold to Varian Associates with the majority owned by the State of Utah. Varian Associates produced vacuum tubes at the site. The Salt Lake City Planning Commission is presently preparing a General Development Policy Plan for this area. The city planning department is contemplating this former DOD site for light industrial development.

UTAH ORDNANCE PLANT
SALT LAKE CITY, UTAH
SITE NO. J08UT098900

DETERMINATION

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

Date

26 Apr 00

Peter T. Madsen
PETER T. MADSEN

Brigadier General, U S. Army
Commanding

PROJECT SUMMARY SHEET
FOR
DERP-FUDS PRP/HTRW PROJECT No. J08UT098901
UTAH ORDNANCE PLANT
Site No. J08UT098900

PROJECT DESCRIPTION: Pursue further investigation at the site to determine appropriate level of PRP involvement.

PROJECT ELIGIBILITY: The site is within the boundaries of a formerly used defense site. Receipt of the CERCLA 104(e) request makes this an eligible FUDS-PRP project.

POLICY CONSIDERATIONS: Site was subject of cost recovery litigation which was dismissed without prejudice as well as current EPA involvement.

COST ESTIMATE: \$350,000 to prepare a Site Ownership and Operational History report

PROPOSED ACTIVITIES: This proposed project should be referred to SPK for investigation and negotiation with regulatory agencies and other PRP's as appropriate.

PA POC: Mr. William Mullery, CESP-K-ED-E (DERP), (916) 557-6944.

PROJECT SUMMARY SHEET
FOR
DERP-FUDS OE PROJECT No. J08UT098902
UTAH ORDNANCE PLANT
Site No. J08UT098900

PROJECT DESCRIPTION: Pursue further investigation at the site to determine the probability ordnance is present.

PROJECT ELIGIBILITY: The site is within the boundaries of a formerly used defense site. Receipt of the CERCLA 104(e) request makes this an eligible FUDS-PRP project.

POLICY CONSIDERATIONS: Site was subject of cost recovery litigation which was dismissed without prejudice as well as current EPA involvement.

COST ESTIMATE: \$50,000 to prepare an Archives Search Report

RISK ASSESSMENT CODE: See Attached RAC report.

PROPOSED ACTIVITIES: This proposed project should be referred to HNC for a site investigation.

PA POC: Mr. William Mullery, CESP-K-ED-E (DERP), (916) 557-6944.



EPA

POTENTIAL HAZARDOUS WASTE SITE

SITE INSPECTION REPORT

I. IDENTIFICATION

01 STATE 102 SITE NUMBER

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS Utah Ordnance Plant, Salt Lake City, UT J08UT098901

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☒ OBSERVED (DATE 12/82) ☐ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

No recorded history. Nature of contaminant makes it possible for direct contact.

01 ☐ F. CONTAMINATION OF SOIL 02 ☒ OBSERVED (DATE 12/82) ☐ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 ☐ POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION



EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

J084T098901

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history.

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ M. UNSTABLE CONTAMINANT OF WASTES 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Movement of contamination in ground water was predicted to be 15' per year in the NE direction.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWPTs 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No recorded history

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

Possible contaminants from old munitions plant located on-site.

III. TOTAL POPULATION AFFECTED: 34,000 within a 3 mile radius of the site.

IV. COMMENTS

IV. SOURCES OF INFORMATION Previous INPR

APPENDIX B
RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OE) SITES

Site Name: Utah Ordnance Plant Rater's Name: William D. Mullery
Site Location: Salt Lake City, UT. Phone No. (916) 557-6944
DERP Project #: J08UT098902 Organization: CESPK-ED-E
Date Completed: 17 December 1998
Score: 5

OE 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 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 EXO hazards identified at the site. The risk assessment is composed of two factors, **hazard severity** and **hazard probability**. Personnel involved in visits to potential OE sites should view the CEHND videotape entitled "A Life Threatening Encounter: OE."

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 (20mm and larger)	10
	Bombs, Explosive	10
	Grenades, Hand and Rifle, Explosive	10
	Landmines, Explosive	10
	Rockets, Guided Missiles, Explosive	10
	Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
	Bombs, Practice (w/spotting charges)	6
	Grenades, Practice (w/spotting charges)	4
	Landmines, Practice (w/spotting charges)	4
	Small Arms, Complete Round (.22 cal - .50 cal)	1
	Small Arms, Expended	0
	Conventional Ordnance and Ammunition	1
	(Select the largest single value)	

What evidence do you have regarding conventional EXO? Reportedly, the ordnance plant produced .3 and .5 caliber ammunition during WWII. Complete nor expended rounds have not been found.

B.	Pyrotechnics (For munitions not described above.)	VALUE
	Munition (Container) Containing White Phosphorus (WP) or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
	Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
	Flares, Signals, Simulators, Screening Smokes (other than WP)	4
	Pyrotechnics <u>(Select the largest single value)</u>	0
	What evidence do you have regarding pyrotechnics? <u>None.</u>	

C.	Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized.)	VALUE
	Primary or Initiating Explosives (Lead Styphnate, Lead Azide Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
	Demolition Charges	10
	Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
	Military Dynamite	6
	Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
	High Explosives <u>(Select the largest single value)</u>	0
	What evidence do you have regarding bulk explosives? <u>None.</u>	

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? <u>None</u>	

E. Chemical Warfare Material and Radiological Weapons

VALUE

Toxic Chemical Agents
(Choking, Nerve, Blood, Blister) 25

War Gas Identification Sets 20

Radiological 15

Riot Control Agents
(Vomiting, Tear) 5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological
OE? None

=====

TOTAL HAZARD SEVERITY VALUE
(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 *

<u>Description</u>	<u>Category</u>	<u>Hazard Severity Value</u>
CATASTROPHIC	I	21 and greater
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
<u>NEGLIGIBLE</u>	<u>IV</u>	<u>1 to 4</u>
**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 OE HAZARD
(Circle all values that apply)

A. Locations of OE 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 <u>(Select the single largest value)</u>	<u>5</u>
What evidence do you have regarding location of OE?__None.	

B. Distance to the nearest inhabited locations or structures likely to be at risk from OE 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 <u>(Select the single largest value)</u>	<u>5</u>
What are the nearest inhabited structures?__Industrial facilities.	

C. Number of buildings within a 2 mile radius measured from the OE 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 (Select the single largest value)

5

Narrative__Industrial facilities.

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

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value)

4

Describe types of buildings in the
area.__Industrial._____

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

	VALUE
No barrier in 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)

5

Describe the site accessibility. Site is open to the public (no barriers).

- F. Site Dynamics - This deals with the 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>	0

Describe the site dynamics. None expected.

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 *

<u>Description</u>	<u>Level</u>	<u>Hazard Probability Value</u>
FREQUENT	A	27 or greater
<u>PROBABLE</u>	<u>B</u>	<u>21 to 26</u>
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		FREQUENT	PROBABLE	OCCASIONAL	REMOTE	IMPROBABLE
Level		A	B	C	D	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-OE-ES -- Commercial 205-895-1582.
- 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.

_Reference the INPR for the site. An archive search for OE is recommended for this project.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM - FORMERLY USED DEFENSE SITES

LIST OF ALL DATA FOR A SITE

Site Name: UTAH ORDNANCE PLANT

Site Number: J08UT0989

05/08/93

FFID: UT89799F503800

Geographical FOA : SPK City: SALT LAKE CITY

County: WEBER

State: UT

Zip Code: -

Former Service: OTHER

NPL Listed(Y/N/P): N EPA Listed(Y/N): N Latitude: d m sN Longitude: d m sW

Current Site Name:

Current Owner(s): STATE

PRIVATE

Current Owner Description:

Majority of property is owned by the State of Utan and
remaining property is owned by Varian Associates which
produces vacuum tubes.

POCS	Name	Office Symbol	Phone Number	Date Assigned
PROJ MGR:	N. STERLING	CESPK-ED-EB	(916)557-7227x	01/10/93
DISTRICT:	DON JONES	CESPK-ED-E	(916)557-7431x	01/10/93
DIVISION:	TONY MEI	CESPD-ED-GH	(415)705-1468x	01/10/93
HQ:	SARA ANGUS	CEMP-RF	(202)504-5223x	01/10/93
OTHER:			() - x	01/10/93

PRELIMINARY ASSESSMENT (PA) - INPR

	Schedule Start	Actual Start	Schedule Complete	Actual Complete
INITIAL:	11/15/91	11/15/91	09/30/94	--/--/--
AMEND:	--/--/--	--/--/--	--/--/--	--/--/--
AMEND:	--/--/--	--/--/--	--/--/--	--/--/--

Potential OEW: P Potential CSM: P INPR Status: U Underway Status:

Remarks:

AT SPK

FINDINGS AND DETERMINATIONS

Were hazards found (Y/N):

Site Eligible/Ineligible/Categorical Exclusion (E/I/C): E

Categorical Exclusion:

Ineligible Findings:

05/08/93

*Category	Project *Number	NOFA Y/N	Project Req	Approval Date	OEW RAC	Description
				--/--/--	0	