

B 1,242,009

S. Hrg. 102-1053

LEGISL

PUBLIC HEALTH

KF  
26  
G67  
1992L

# RADIOLOGICAL CONTAMINATION IN THE UNITED STATES

## HEARING

BEFORE THE

COMMITTEE ON

GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

ONE HUNDRED SECOND CONGRESS

SECOND SESSION

APRIL 9, 1992

Printed for the use of the Committee on Governmental Affairs



65-112 =

For sale by the U.S. Government Printing Office  
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402  
ISBN 0-16-040259-X

PUB  
KF  
26  
.G67  
1992L

COMMITTEE ON GOVERNMENTAL AFFAIRS

JOHN GLENN, Ohio, *Chairman*

SAM NUNN, Georgia

CARL LEVIN, Michigan

JIM SASSER, Tennessee

DAVID PRYOR, Arkansas

HERBERT KOHL, Wisconsin

JOSEPH I. LIEBERMAN, Connecticut

DANIEL K. AKAKA, Hawaii

WILLIAM V. ROTH, JR., Delaware

TED STEVENS, Alaska

WILLIAM S. COHEN, Maine

WARREN B. RUDMAN, New Hampshire

JOHN SEYMOUR, California

Leonard Weiss, *Staff Director*

Robert Alvarez, *Professional Staff Member*

Christopher R. Kline, *Professional Staff Member*

Franklin G. Polk, *Minority Staff Director and Chief Counsel*

Michal Sue Prosser, *Chief Clerk*

(II)





**Attachment 3****AIR FORCE RADIOACTIVE WASTE BURIAL SITES - BACKGROUND**

1. The following background information provides perspective on past Air Force radioactive waste burial practices. Unapproved disposals may have occurred on Air Force installations. Therefore, radioactive burial sites have been included in the Air Force's Installation Restoration Program (IRP) for identification and management of past hazardous waste disposal sites under the Resource Conservation and Recovery Act (RCRA).

a. Most sites were created during the 1950s in accordance with the Atomic Energy Commission (AEC) policy and general industrial practice of that time. Detailed records of disposals were not generally required because of the nature of the items authorized for disposal and the general records practices of that day. Wastes authorized for disposal consisted primarily of:

(1) Electron tubes containing both AEC and non AEC regulated radioactive material in a solid form;

(2) Non AEC regulated low level solid and liquid wastes from weapons maintenance;

(3) Radioactive self-luminous dials/gauges/circuit breakers containing non AEC regulated radium oxide paint; and

(4) Wastes from non AEC regulated radium dial painting operations.

Prior sampling of liquid waste tanks associated with weapons maintenance showed no detectable contamination, indicating liquid volumes generated were small and probably absorbed onto wipes and other materials used for cleaning and disposed of as damp solids rather than liquids. Tanks were primarily intended for catastrophic events requiring wash down of the maintenance bays and were, to the best of our knowledge, never used for such.

b. Some burials of licensed materials were made in accordance with conditions of a specific AEC [now Nuclear Regulatory Commission (NRC) license issued to a base organization or with prior NRC approval. Examples are medical research wastes at Randolph AFB, Texas, and Magnesium-Thorium alloy residues from BOMARC missile airframes destroyed during missile operations at Vandenberg AFB, California. No burials were ever made under the Air Force Master Materials License, NRC license 42-023539-01AF (which has existed only since 1985) or the Air Force specific license, NRC license 42-05834-04, Docket 34-01466-02, which was terminated when the Master License was issued.

c. Approved on site burial was discontinued within the Air Force by 1965 except for a few very unusual circumstances.

d. Guidance on constructing and maintaining typical sites was given in technical order procedures which included identifying site location on appropriate maps and posting and fencing to prevent unauthorized entry. The Air Force switched to disposal at licensed commercial sites in the 1958-1959 time frame and the technical order requirements for burial, and site maintenance requirements, were rescinded. Unfortunately, no alternate instructions were provided on maintaining existing sites and a gradual loss of site records ensued. In 1971, the Air Force initiated an effort to find and

consolidate existing site records and reestablish site maintenance requirements. Since that initial effort, guidance on maintaining sites on active Air Force installations has been periodically updated; most recently in a 9 August 1988 letter.

2. Sites located on active Air Force installations (includes Air National Guard and Air Force Reserve installations), and whose locations are known, are required to be maintained in compliance with current site maintenance guidance unless a specific waiver is granted by the USAF Radioisotope Committee. Such waivers are few and normally involve sites where:

a. There is no accessibility to digging equipment because of location or physical barrier such as a building;

b. Fencing creates a flight or traffic hazard such as in runway approach zones or congested vehicle traffic area; or

c. The actual site location is simply not known with sufficient accuracy to allow meaningful erection of a barrier.

The location of all sites must be annotated on Tab C-1 of the base master plan. Compliance with maintenance requirements or waiver conditions is verified and enforced as part of routine inspections by the Air Force Inspection Agency, Norton AFB, California. Corrective action is required in instances of noncompliance.

3. The Air Force IRP program is designed to interface with regional Environmental Protection Agency, State and Local authorities at the base level. State officials should have copies of the base IRP reports which contain the most current information on sites or alleged sites and their hazard potential and monitoring or remediation plan. The USAF Radioisotope Committee is involved with the IRP process for any identified site on installations currently owned by the Air Force, whether a previously approved site, or not. The Committee provides regulatory guidance and oversight for any invasive characterizations or site exhumations and coordinates licensing issues with NRC for such activities at a given site.

4. Aside from having some historical documentation (summarized in the attachments), the RIC is not involved with sites on installations formerly owned by the Air Force. These sites are managed as Formerly Used Defense Sites (FUDS).



AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site</u> <u>Name</u>	<u>Site</u> <u>Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Air Force Plant 3, Tulsa OK</u>			
BN09	Shallow Burial	Non-NPL RI/FS Compl	Radium-226 (Ra-226) dials
<u>Air Force Plant 4, Ft Worth TX</u>			
OT19	Res Contamination	NPL RI/FS Compl NFAP	Decommissioned reactors, no residual radioactivity found
<u>Air Force Plant BJKS, CO</u>			
LF04	Shallow Burial	NPL PA/SI Compl RI/FS FY93	Magnesium-Thorium (Mag-Thor) alloy parts in landfill
<u>Air Force Plant 67, GA</u>			
	Res Contamination	NFAP	Former reactor site under State control "Hot Cell" building and 3 acre parcel with Cobalt-60 residual contamination
<u>Altus AFB OK</u>			
	Shallow Burial	Non-IRP	Ra-226 dials/gauges
<u>Andrews AFB MD</u>			
	Shallow Burial	Non-IRP PA/SI 1985 NFAP	Concrete containers with electron tubes, Ra-226 dials
<u>Barksdale AFB (Bossier Base) LA</u>			
ST30	AEC Site	Non-NPL NFAP	Dry site with concrete cap (Uranium oxides). 2 Tanks clean; exhumed in 1990
9713	Shallow Burial	Non-IRP NFAP	Contaminated soil and debris from C-124 crash (Broken Arrow).
<u>Bergstrom AFB TX</u>			
BN24	"Pipe Site"	Non-NPL SI Compl	3 pipes with electron tubes, Ra-226 dials Exhumation planned for CY 92

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Brooks AFB TX</u>			
	Shallow Burial	Non-IRP NFAP	70 microCuries (1972) Iodine-125; activity decayed to negligible level
<u>Buckley ANGB CO</u>			
RW08	Shallow Burial	Non-NPL Not Listed	
<u>Carswell AFB TX</u>			
OT-15	"Pipe Site"	Non-NPL @ RI/FS RD/RA 1983	3 pipes; electron tubes, Ra-226 dials
<u>Castle AFB CA</u>			
LF04	"Pipe Site"	NPL @ RI/FS	Electron tubes, Ra-226 dials
<u>Chennault AFB LA</u>			
	"Pipe Site"	FUD Site	Exact location unknown; aircraft components (Ra 226)
<u>Clear AFB AK</u>			
RW09	Shallow Burial	Non-NPL @ RD/RA	
<u>Columbus AFB MS</u>			
LF08	Shallow Burial	Non-NPL SI Compl NFAP	Electron tubes, dials, and aircraft filters (fission products)
<u>Connally AFB TX</u>			
	Shallow Burial	NFAP	Unconfirmed site. Property given to Texas A&M in 1966.
<u>Craig AFB AL</u>			
	"Pipe Site"	NFAP	Opened 1977; no radioactive material

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<b><u>Davis-Monthan AFB AZ</u></b>			
RW16	"Pipe Site"	Non-NPL SI Compl NFAP	4 pipes; electron tubes, Ra-226 dials, medical X-ray tubes and X-ray equipment
Site 46	Res Contamination	Non-NPL 0 SI	Nuclear cloud sampling aircraft washdown (Fission products).
<b><u>Dobbins AFB GA</u></b>			
Lot 635	Shallow Burial	NFAP	Smyrna and Cobb County property Investigation with State, County and City failed to confirm alleged site
<b><u>Duluth MAP MN</u></b>			
RW10	Shallow burial	Non-NPL 0 RI/FS	Ra-226 dials/scope faces from SAGE system
<b><u>Edlin AFB FL</u></b>			
RW40	Res Contamination	Non-NPL 0 PA	Depleted Uranium (DU) munitions test residues
RW41	Res Contamination	Non-NPL 0 PA	DU munitions test residues Zinc-65 marker decayed to insignificance
RW42	Shallow Burial	Non-NPL SI Compl	BOMARC missile remains (Mag-Thor alloy) Exhumation planned
	Shallow Burial	Non-IRP	DU contaminated steel target plate disposed in base landfill
C-80B	Res Contamination		DU munitions test residues
TA-22	Res Contamination		DU munitions test residues
<b><u>Eielson AFB AK</u></b>			
	Shallow Burial	Non-IRP NFAP	Landfill disposal of Smoke Detectors containing Americium-241; similar units exempt (10 CFR 30.20).
<b><u>Ellsworth AFB (Bushmore AFS) SD</u></b>			
RW07	AEC Site	NPL 0 RI/FS	Dry site (Uranium oxides) under paving; 5 tanks - removal planned CY 92.



AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Elmendorf AFB AK</u>			
RW17	Shallow Burial	NPL ⊗ RI/FS	Exhumed Jul 92; no radioactive materials
<u>England AFB LA</u>			
RW19	Shallow Burial	Non-NPL SI Compl	Radioluminescent markers from aircraft (Ra-226, Tritium or Strontium-90) Exhumation planned CY 92
RW20	Shallow Burial	Non-NPL SI Compl	Electron tubes, Ra-226 dials; site existence unconfirmed
<u>Fairchild AFB (Deep Creek AFS) WA</u>			
RW11	AEC Site	NPL ⊗ PA/SI	Dry site (Uranium oxides); two tanks
RW25	Well Site	Non-NPL ⊗ PA/SI	Low level radioactive wastes
<u>George AFB CA</u>			
<b>RW09</b>	<b>Shallow Burial</b>	<b>NPL SI Compl</b>	<b>Electron tubes, Ra-226 dials. Exhumation planned</b>
<u>Grissom AFB IL</u>			
EF3.4	Shallow Burial	Non-IRP	B-58 aircraft remains - Mag-Thor alloy parts, Radium-226 dials/gauges/switches
JK9	Shallow Burial	Non-IRP	2 sites; B-58 and T-33 aircraft - Mag-Thor alloy parts, Radium-226 dials /gauges/switches
<u>Griffiss AFB NY</u>			
SD31	Pipe Site	NPL ⊗ RI/FS	Electron tubes, Ra-226 dials/gauges
<u>Hamilton AFB CA</u>			
	Pipe Site	NFAP	Exhumed 1988; site contents removed to licensed burial site.



AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<b><u>Holloman AFB NM</u></b>			
OT35	Res Contamination	Non-NPL SI FY93	Research laboratory contaminated waste solvent evaporation site
RW51	Well Site	Non-NPL PA/SI 1992	Research laboratory contaminated waste solvents; location unknown
RW42	Pipe Site	Non-NPL RI/PS 1992	Research laboratory wastes
OT32	Res Contamination	NFAP	Collapsed sewer line from research laboratory (Carbon-14).
SD27	Res Contamination	Non-NPL PA/SI FY93	Nuclear cloud sampling aircraft washdown (Fission products).
<b><u>Johnston Island</u></b>			
RW04	Res Contamination	Non-IRP SI Compl	Lagoon area (Plutonium)
	Res Contamination	Non-IRP	Contaminated launcher facility.
<b><u>Kessler AFB MS</u></b>			
RW15	Shallow Burial	Non-NPL 0 RI/PS	Concrete vault; medical radioisotopes (Iodine-125, Cobalt-57) and Ra-226 dials/scopes. Precise location unknown.
Lndfill	Shallow Burial	NFAP	Accidental disposal 4.5 microcurie Ra-226
<b><u>Kelly AFB TX</u></b>			
RW26	Pipe Site	Non-NPL SI Compl NFAP FY91	23 Pipes; electron tubes, Ra-226 dials, Cobalt-60 test sources. Site configuration waiver
RW27	Shallow Burial	Non-NPL PA/SI Compl NFAP FY92	Contaminated animal carcasses from research laboratory @ Brooks AFB
<b><u>Kincheloe AFB MI</u></b>			
	Shallow Burial	NFAP	Exhumed 1977; contents removed to licensed burial site

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<b><u>Kirtland AFB (Manzano Base) NM</u></b>			
LP06 Site No. 11	Shallow Burial	Non-NPL ⊙ RD/RA	Contaminated animal carcasses/solids - activation products/tracers with small amounts of acids, mercury, cyanides & silver; Configuration waiver granted
RW06	Shallow Burial	Non-NPL ⊙ RI/FS	Contaminated animal carcasses/solids - activation products/tracers with undetermined amount of mercury
LP11	Shallow Burial	Non-NPL ⊙ RI/FS	Contaminated animal carcasses/solids - activation products/tracers with chemical waste such as formaldehyde.
LP21 Site No. 7	Shallow Burial	Non-NPL ⊙ RI/FS	Uranium alloy swipes, gloves, respirator discs and dust; Site believed remediated in 1961.
OT10 TS-1 thru TS-8	Res Contamination	Non-NPL ⊙ RI/FS	Training sites under NRC License 42-23539-01AF - Thorium-232 oxides.
RW03		Non-NPL ⊙ RI/FS	
RW04 No. 1	Shallow Burial	Non-NPL ⊙ RI/FS	DOE site; low level fission/activation products, Tritium, Uranium, Thorium and some transuranics totalling 2835 Curies
RW 04	AEC Site	NFAP	Underground storage tank; never used
RW05 No. 3	Shallow Burial	Non-NPL ⊙ RI/FS	Active DOE site; Detailed records available - DU, mixed fission/activation products and some Plutonium totalling about 7530 Curies and 4380 kilograms of Uranium and Thorium).
RW 05	AEC Site	NFAP	Underground storage tank; never used
RW11 No. 10	Shallow Burial	Non-NPL ⊙ RI/FS	Sandia Nat'l Laboratory site containing contaminated animal carcasses from Lovelace facility
RW17 (RL-1)	Shallow Burial	Non-NPL ⊙ RI/FS	Reportedly exhumed in 1960's
RW 17	AEC Site	NFAP	Underground storage tank; never used



AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
RW19 (RL-2)	AEC Site	NFAP	Underground storage tank; never used
RW23	AEC Site	NFAP	Underground storage tank; never used
RW24 No. 4,5,6,8,9	Shallow Burial	Non-NPL 0 RI/PS	Sandia Nat'l Laboratory Site

"Dirt mounds" (DM 1-6) probably containing low level wastes have been identified. Mounds 1-3 are 2 miles south of the Manzano area and mounds 4-6 are 2 miles east of Manzano. DMs 1-3 were used by Sandia National Laboratory for chemical wipes.

"Mine shafts" (MS); 2 horizontal and 4 vertical used for disposal of low level wastes.

Site 1/2 mile south of Coyote Springs Rd and 1/2 mile east of Lovelace Rd.

Lackland AFB (Medina Base) TX

RW15	AEC Site	Non-NPL NFAP	Dry site; investigation showed no radioactive materials - site released
RW16	AEC Site	Non-NPL NFAP	Underground tank; investigation showed no radioactive materials - site released
RW17	AEC Site	Non-NPL 0 RI/PS	Dry site; additional data required to show absence of radioactive materials
RW18	AEC Site	Non-NPL NFAP	Underground tank; investigation showed no radioactive materials - site released
RW19	AEC Site	Non-NPL NFAP	Liquid disposal site; investigation showed no radioactive materials - site released
RW20	AEC Site	Non-NPL NFAP	Underground tank; investigation showed no radioactive materials - site released

Langley AFB VA

LF46	Shallow Burial	Non-NPL 0 SI	2 Cylinders; electron tubes, Ra-226 dials One exhumed; contents removed to licensed burial site, second not yet found
------	----------------	-----------------	--

Laredo AFB TX

	Shallow Burial	NFAP	Investigated in 1975; no radioactive materials - site released
--	----------------	------	--

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<b><u>Little Rock AFB AK</u></b>			
Facility 1395		NFAP	Concrete vault demolished 1964; no radioactive materials - site released
<b><u>Loring AFB (Caribou AFS) ME</u></b>			
RW24	AEC Site	NPL 0 RI/FS	Dry site (Uranium oxides); exhumation planned in FY93
RW25	AEC Site	NPL 0 RI/FS	Dry site (Uranium oxides); exhumation planned in FY93
RW26	AEC Site	NPL RI Compl	Underground tank; exhumation planned FY93
RW27	AEC Site	NPL RI Compl	Underground tank; exhumation planned FY93
RW28	AEC Site	NPL RI Compl	Underground tank; exhumation planned FY93
RW29	AEC Site	NPL RI Compl	Underground tank; exhumation planned FY93
RW30	AEC Site	NPL RI Compl	Underground tank; exhumation planned FY93
<b><u>Lowry AFB CO</u></b>			
LF02	Pipe site	NFAP	Electron tubes
<b><u>Luke AFB AZ</u></b>			
RW02	Shallow Burial	NPL 0 RI/FS	Electron tubes
<b><u>Malmstrom AFB MT</u></b>			
RW20	Pipe site	Non-NPL RI/FS Compl	4 pipes; electron tubes, Tritiated water
<b><u>Mather AFB CA</u></b>			
RW16	Shallow Burial	P-NPL NFAP 1990	Electron tubes



AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site</u> <u>Num</u>	<u>Site</u> <u>Type</u>	<u>Status</u>	<u>Remarks</u>
<u>McChord AFB WA</u>			
RW35	Disposal Well	NPL NPAP 1991	Investigation showed no radioactive materials
RW03	Shallow Burial	NPL NPAP 1990	Concrete vault - tubes (Krypton-85), Ra-226 dials and Strontium-90 markers
<u>McClellan AFB CA</u>			
DP30	Res Contamination	NPL @ RI/FS	Radioanalytical laboratory waste
SS32	Shallow Burial	NPL SI Compl	Radiologic and chemical wastes
<u>McConnell AFB KS</u>			
DP13	Shallow Burial	Non-NPL NPAP 1991	Electron tubes, Ra-226 dials
<u>McCoy AFB FL</u>			
	Shallow Burial	NPAP	Investigation could not find site
<u>McQuire AFB NJ</u>			
RW01	Res Contamination	Non-NPL @ RI/FS	Plutonium-239 from 1960 BOMARC missile accident
<u>Moody AFB GA</u>			
LF03	Shallow Burial	Non-NPL @ RI/FS	Electron tubes, Ra-226 dials
<u>Mountain Home AFB ID</u>			
RW14	Pipe site Shallow burial	NPL @RI/FS	1 pipe and possibly a drum; electron tubes, Ra-226 dials. Exhumation planned.
<u>Muniz ANG PR</u>			
OT02	Shallow Burial	Non-NPL @ SI	Aircraft wreckage possibly containing DU weights and Krypton-85 oil gauge source tubes. Exhumation directed.

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Myrtle Beach AFB SC</u>			
RW15	Shallow Burial	Non-NPL SI Compl NFAP	Concrete vault; electron tubes. Search unable to locate; possibly previously exhumed
<u>Nellis AFB (Lake Mead Base) NV</u>			
RW10	AEC Site	Non-NPL RI/FS Compl NFAP	Dry site (Uranium oxides); estimated 2650 lbs of contaminated process waste - gloves, desiccant, paper
RW21	AEC Site	Non-NPL RI/FS Compl	Underground tank; exhumation planned CY93
RW31	Res Contamination	Non-NPL SI Compl	Leach pit under concrete apron - 2 to 3 gal liquid waste
RW40	Shallow Burial	Non-NPL RI/FS Compl NFAP	Investigation found no evidence of radioactive material
SD-26	Res Contamination	Non-NPL RI/FS Compl NFAP	Nuclear cloud sampling aircraft washdown (Fission products).
SD-46	Res Contamination	Non-NPL RI/FS compl NFAP	Nuclear cloud sampling aircraft washdown (Fission products) at Indian Springs.
Range 63	Res Contamination	NFAP	Active DU test area; DU munitions debris
<u>Norton AFB</u>			
RW20	Shallow Burial	NPL RI/FS Compl	Radium-226 dial painting wastes; specific site not found
	Res Contamination		Nuclear cloud sampling aircraft washdown (Fission products).
<u>O'Hare AFB IL</u>			
RW11	Shallow Burial	Non-NPL Compl SI NFAP	Concrete vault; electron tubes Search unable to locate vault



AIAK FUNCK  
 RADIOACTIVE WASTE BURIAL  
 AND  
 POTENTIALLY CONTAMINATED SITES

<u>Site</u> <u>Num</u>	<u>Site</u> <u>Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Offutt AFB NE</u>			
EW08	Shallow Burial	Non-NPL NFAP	Small lead container; search failed to locate
<u>Osage ANG MS</u>			
LF07	Shallow Burial	NPL Compl SI	Electron tubes
<u>Patrick AFB (Cape Kennedy AFS) FL</u>			
CAFS Landfill	Shallow Burial	Non-IRP NFAP	3 animal carcasses; Chromium-51, Tritium Remaining activity insignificant
<u>Perrin AFB TX</u>			
	Shallow Burial	FUD Site	Can of electron tubes Grayson County TX owns property
<u>Randolph AFB TX</u>			
EW03	Shallow Burial	Non-NPL Compl SI	Research wastes, NRC licensed material - Carbon-14, Cerium-144, Cesium-137 Exhumation planned
<u>Richards-Gebaur AFB MO</u>			
IR005	Pipe Site	FUD site	Electron tubes, Ra-226 dials
<u>Robins AFB GA</u>			
EW15	Shallow Burial	Non-NPL 0 RA	Concrete vault; Ra-226 dial painting wastes
<u>Scott AFB IL</u>			
	Pipe Site	Non-IRP PA/SI FY93	Electron tubes, Ra-226 dials
<u>Sheppard AFB TX</u>			
EW07 (LLSW1)	Pipe Site	Non-NPL Compl RI/FS NFAP	Medical X-ray waste; search failed to locate site
EW08	Shallow Burial	Non-NPL Compl SI NFAP	Vault; radioactive tool Search failed to locate site

AIR FORCE  
RADIOACTIVE WASTE BURIAL  
AND  
POTENTIALLY CONTAMINATED SITES

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Sioux City ANG IA</u>			
RW02	Pipe Site	Non-NPL 0 RI/FS	Electron tubes; Ra-226 dials
<u>Sundance AFS NY</u>			
PM-1	Shallow Burial	NFAP	Decommissioned Nuclear Reactor; fuel and core removed - Activation products.
<u>Tinker AFB</u>			
RW25 (1030W)	Shallow Burial	Non-NPL Compl RA	Ra-226 dial painting wastes
RW26 (2018)	Shallow Burial	Non-NPL Compl RA	Ra-226 dials and paint solids
RW27 Area 62598	Shallow Burial	Non-NPL NFAP	Site exhumed; no radioactive material present
RW28 (4000)	Shallow Burial	Non-NPL SI Compl NFAP	Mag-Thor engine components Search found no indication of site
RW29 (1022E)	Shallow Burial	Non-NPL NFAP	Site exhumed; radioactive materials removed to licensed burial site
<u>Travis AFB (Fairchild AFS) CA</u>			
RW12 (RD-1)	AEC Site	NPL Compl SI	Underground tank
RW13 (RD-2)	AEC Site	NPL Compl SI	Dry site (Uranium oxides)
<u>Turner AFB (NAS Albany) GA</u>			
	Shallow Burial		
<u>Vandenberg AFB CA</u>			
B-7	Shallow Burial	Non-IRP	BOMARC missile remains (Mag-Thor alloy)
D-5	Shallow Burial	Non-IRP	BOMARC missile remains (Mag-Thor alloy)
<u>Volk Field MI</u>			
DP11	Pipe Site	Non-NPL 0 RI/FS	Electron tubes



AIR FORCE  
**RADIOACTIVE WASTE BURIAL  
 AND  
 POTENTIALLY CONTAMINATED SITES**

<u>Site Name</u>	<u>Site Type</u>	<u>Status</u>	<u>Remarks</u>
<u>Westover AFB (Stoney Brook AFB) MA</u>			
LF02		Non-NPL @ RI/PS	
RW04	Shallow Burial	Non-NPL RI/PS Compl NFAP	Concrete vault; electron tubes Search unable to locate
	AEC Site	Non-NPL	Underground tank
	AEC Site	Non-NPL	Underground tank
	AEC Site	Non-NPL	Dry Site (Uranium oxides)
Facility 11922	????		
<u>Whiteman AFB MO</u>			
RW09	Shallow Burial	Non-NPL Compl SI	Electron tubes; Ra-226 dials
RW10 (1275)	Shallow Burial	Non-NPL Compl SI	Electron tubes; Ra-226 dials; exploratory exhumation failed to locate
<u>Williams AFB AZ</u>			
RW11	Pipe Site	NPL @ RA	Electron tubes
<u>Wright-Patterson AFB OH</u>			
RW60	Shallow Burial	NPL NFAP	Exhumed; no radioactive materials found Site "created" by administrative error in coding packaging/holding area
RW61	Res Contamination	NPL @ RI/PS	Reactor containment dome, bulk shield and tankage - activation products, Cobalt-60 Reactor core and fuel disposed.

DERP MIS  
**RADIOACTIVE WASTE BURIAL  
 AND  
 POTENTIALLY CONTAMINATED SITES**

Site Name	Site Type	Status	Remarks
--------------	--------------	--------	---------

Youngstown NY

RW02	Res Contamination	Non-NPL AP property clean; parcel of larger site Non-IRP having residual contamination ⊙ RI/FS	
------	-------------------	--	--

Abbreviations:

Compl SI	= Completed Site Inspection Phase
⊙ RI/FS	= Remedial Investigation/Feasibility Study underway
PA/SI Compl	= Preliminary Assessment/Site Investigation completed
NA	= Not Available
RA	= Remedial Action
RD	= Remedial Design
NPAP	= No Further Action Planned
Not Listed	= Site not listed in DERP MIS
NPL	= Site included on National Priorities List
P-NPL	= Potential National Priorities List site