



DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DIVISION, OHIO RIVER  
CORPS OF ENGINEERS  
P. O. BOX 1159  
CINCINNATI, OHIO 45201-1159

REPLY TO  
ATTENTION OF

JAN - 7 1992

CEORD-DL-MS (200-1c)

MEMORANDUM FOR HQUSACE (CEMP-RF/Chu), 20 Mass. Ave., NW, Washington, DC  
20314-1000

SUBJECT: DERP-FUDS Inventory Project Report (INPR) for Site No. G03WV006500, West  
Virginia Maneuver Area (which includes the Dolly Sods Wilderness Area), Davis, West Virginia

I am forwarding a revised Findings and Determination of Eligibility (FDE) for the subject INPR  
(Encl 1) to replace the original 21 May 1990 FDE (Encl 2). The FDE was revised to address  
Blackbird Knob as requested by Encl 3.

Encl

  
ALBERT J. VENETTI, Jr.  
Brigadier General, U.S. Army  
Commanding

200.1e  
G03WV006504\_01.08\_0004



SITE SURVEY SUMMARY SHEET  
FOR  
DERP-FUDS SITE NO. G03WV006500  
WEST VIRGINIA MANEUVER AREA, WV  
25 June 1991

SITE NAME: West Virginia Maneuver Area

LOCATION: Davis, West Virginia - Tucker, Grant and Randolph Counties, see site map attached.

SITE HISTORY: The site was acquired by the Army in the early 1940's for military exercises. The site was returned to the Department of Agriculture in 1950. Currently, the site is a wilderness area operated by the U.S. Forest Service and portions are privately owned.

SITE VISIT: A site visit was conducted on 3 December 1984 by Robert Johannsen, CEORH-ED-D. The purpose of the visit was to determine the presence of unsafe debris, hazardous and toxic waste and unexploded ordnance.

CATEGORY OF HAZARD: OEW

PROJECT DESCRIPTION: OEW. There is unexploded ordnance on the site. The public discovers it on an annual basis and there have been personal injuries. A Remedial Investigation and Feasibility Study beyond the scope of this preliminary assessment may be required.

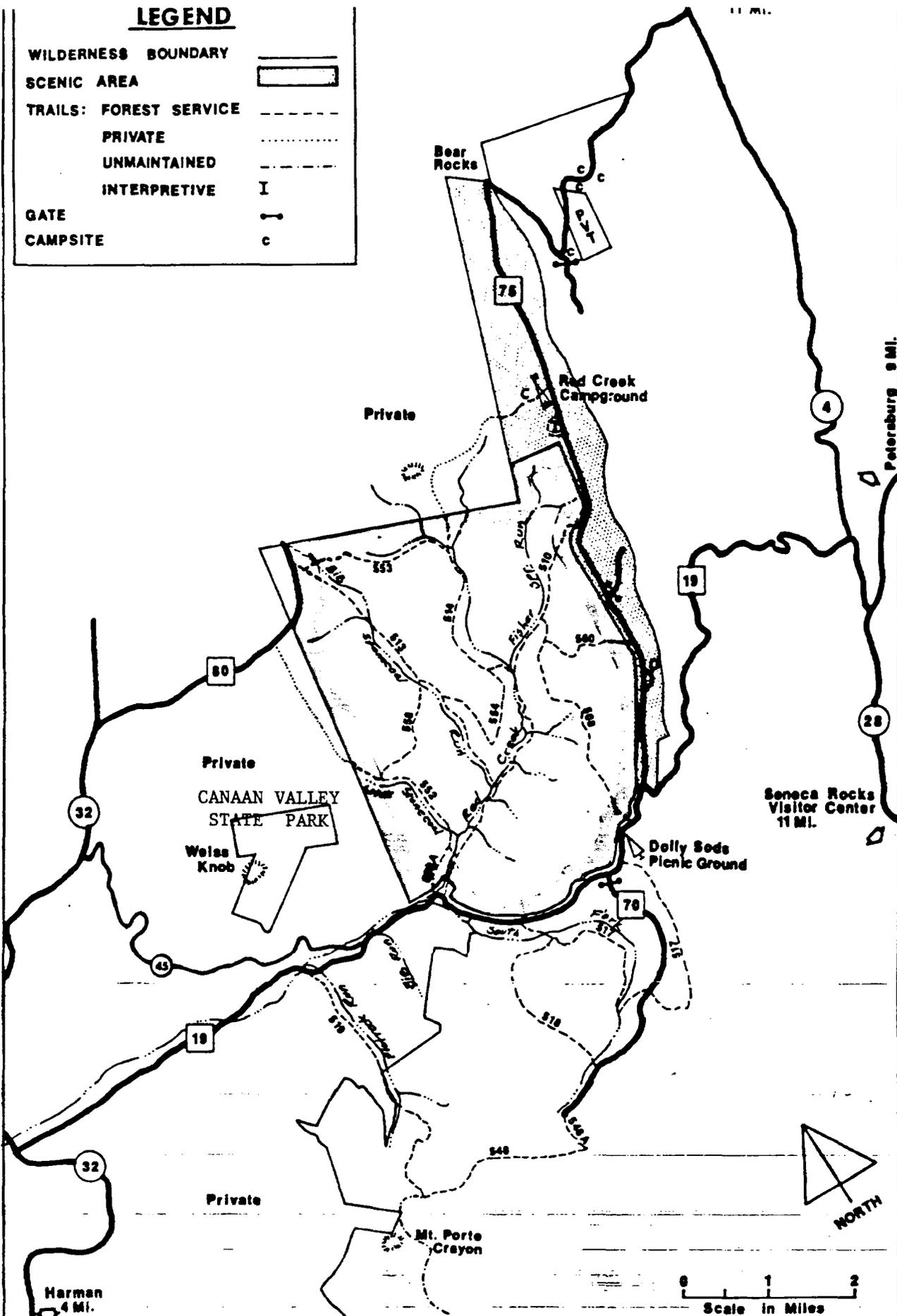
AVAILABLE STUDIES AND REPORTS: None identified.

PA POC: Frank Albert, (304) 529-5194 is the district POC.



**LEGEND**

WILDERNESS BOUNDARY	
SCENIC AREA	
TRAILS: FOREST SERVICE	
PRIVATE	
UNMAINTAINED	
INTERPRETIVE	
GATE	
CAMPSITE	



**DOLLY SODS WILDERNESS AND SCENIC AREA**

FILE  
DOLLYSODS

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

West Virginia Maneuver Area

North Central West Virginia

Site No. G03WV006500

FINDINGS OF FACT

1. The West Virginia Maneuver Area was an extremely large area in North Central West Virginia used by the Department of the Army for mountain training and maneuvering. The remaining records are skimpy, at best. It is not at all certain that good documentation ever existed for the land acquisitions that took place during the heat of the national emergency, World War II. There is work recommended for this project, and hazardous conditions are present. We shall endeavor to do the best we can with what we have, but it must be understood from the outset that little documentation for this project remains. The maneuver area consisted of a total of 2,180,367 acres of land. Of this 350,531 acres were public lands of which more will be said later; 48,067 acres were leased, and 1,781,769 acres were so-called lesser interests. According to warning order notice dated 26 March 1945, these lesser interests were covered by "trespass agreements." Apparently, the owners and Army agreed, given the contemporaneous emergency, that Army would shoot first and pay later. There are no records surviving that describe the trespass agreements or the area they covered. From the writer's extensive knowledge of World War II land acquisition procedures, it can be safely surmised that there is no information of record in any of the local courthouses as to this project.

Fortunately, better documentation remains for the public lands and leased lands. The public lands were all permitted to the Secretary of War by Department of Agriculture, all being a part (and virtually all of) the Monongahela National Forest. By letter dated 4 August 1943, 341,266 acres of Monongahela National Forest in Preston, Grant, Randolph, Tucker, and Pendleton counties, West Virginia is so permitted. By letter dated November 10, 1943, an additional 9,265 acres is said to be permitted, but from that should be subtracted 114.63 acres which was excepted by attached map (which did not survive the audit pruning of the files), leaving a true acreage of 9,150.37, or a total of 350,416.37 acres of land under permit from the Department of Agriculture. Additionally 65 tracts totalling 48,557 acres and one license from Western Maryland Railroad Company for a steam line were acquired by purchase and condemnation during World War II. Most of the lands where work is recommended are those covered by the permits from Department of Agriculture. The

remainder is an area called Blackbird Knob. Blackbird Knob is included in the leased lands then designated as Tracts Nos. A-76A: 17,515.54 acres; A-76B: 2107.74 acres; and A-76C: 3512 acres, all of which were leased 6 August 1943 from The West Virginia Central and Pittsburg [sic] Railroad Company and The Davis Coal & Coke Company. The Lease No. was W33-017, ENG 1403. Blackbird Knob, a target area, was included in these lands, and work is recommended for that area.

2. Just as the acquisition of these lands was rapid, and no actual legal description of the lands acquired survives (perhaps because there never was one due to unavailability of manpower or time), so was the disposal process unusual. Apparently, a warning order issued for the entire facility, dated 26 March 1945, stating that on 19 March 1945 the entire 2,180,367 acre facility was declared surplus (350,531 acres public lands, 1,781,769 acres "lesser interests," and 48,067 acres leased. However, a subsequent warning order dated 10 August 1945 withdrew the entire facility from surplus. As a Second Endorsement from the Louisville District Engineer to OCE through ORD dated 18 July 1950 notes, a 21 April 1945 letter from office for Emergency Management, Office of Scientific Research and Development, Washington DC (hereinafter OEM-SRD) requested OCE issue a permit for OEM-SRD or its agencies or contractors to test fire rockets and projectiles. The Louisville endorsement indicates no further information was available as to whether such a permit was issued. Thereupon, in the normal process, on 10 August 1950, OCE relinquished the land by letter back to Department of Agriculture. What OCE, and apparently Louisville District, were not aware of was that such a permit had been issued and a copy is hereto attached. Apparently the permit expired by its own terms either prior to or simultaneously with Army's relinquishment of the land back to Department of Agriculture. Also, of interest, and perhaps importance, attached is a copy of a 27 June 1945 letter from OCE to ORD advising that these lands must be decontaminated before disposal and that must done even if decontamination costs exceed costs of acquiring the land in fee. Most of the work to be done is located on the lands permitted to Secretary of War by the Department of Agriculture and remain under the ownership of the Department of Agriculture. The leases from the railroad, Tracts Nos. A-76A, A-76B, and A-76C were terminated on 28 February 1946. The Blackbird Knob area is now owned by The Nature Conservancy, which acquired it, less certain mineral interests not here pertinent, as a 3701.1 acre tract on 25 July 1991 for \$3,000,000. Western Pocahontas Properties Limited Partnership, successor to West Central and Pittsburg [sic] Railroad Company, still owns some of the surrounding lands, but The Nature Conservancy is in the process of acquiring those interests, for eventual consolidation into the Monongahela National Forest. An exact plat of The Nature Conservancy's current holdings is found on Plat Cabinet 1, Slide 189, Tucker County, West Virginia, Clerk of the County Commission's records.

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 established under 10 USC 2701 et seq.

7 January 1992  
Date

  
ALBERT J. GENETTI, Jr.  
Brigadier General, U.S. Army  
Commanding

PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS PROJECT NO. G03WV006504  
WEST VIRGINIA MANEUVER AREA  
SITE NO. G03WV006500  
25 June 1991

**PROJECT DESCRIPTION:** A Remedial Investigation and Feasibility Study (RI/FS) is proposed to determine the types and extent of ordnance contamination at the site and develop alternatives to safeguard the public. Unexploded ordnance has been found and personal injuries have occurred. Ordnance is located on public lands operated by the U.S. Forest Service and on private property.

**PROJECT ELIGIBILITY:** Records indicate that the area was used by the Army for military maneuvers and as an artillery range, and was returned to the Department of Agriculture for use as a wilderness area.

**POLICY CONSIDERATIONS:** There is no policy which prohibits the proposal of this project.

**PROPOSED ACTIVITIES:** The INPR should be referred to CEHND for determination of further action.

**RAC:** Attached.

**POC:** Frank Albert, (304) 529-5194.

APPENDIX A  
RISK ASSESSMENT PROCEDURES FOR  
EXPLOSIVE ORDNANCE (EXO)

Site Name WEST VA MANEUVER AREA Rater's Name FRANK ALBERT  
 Site Location DAVIS, WV Organization GEORH-07-IX  
 DERP Project # G03WV006504 RAC 2

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

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

A. Conventional Ordnance and Ammunition

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	—
Medium/Large Caliber (20 mm and larger)	10	0	—
Bombs, Explosive	10	0	<u>10</u>
Bombs, Practice (w/spotting charges)	6	0	—
Grenades, Hand and Rifle, Explosive	10	0	—
Grenades, Practice (w/spotting charges)	6	0	—

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Landmines, Explosive	10	0	—
Landmines, Practice (w/spotting charges)	6	0	—
Rockets, Guided Missiles, Explosive	10	0	—
Detonators, Blasting Caps	10	0	—
Demolition Charges	10	0	—
Conventional Ordnance and Ammunition Value (Maximum of 10).			<u>10</u>

B. Pyrotechnics

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	—
Any Munition Containing a Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6	0	—
Military Flares	4	0	—
Pyrotechnics Value (Maximum of 10).			<u>0</u>

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	—
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	—

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Military Dynamite	10	0	—
Less Sensitive Explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	—
High Explosives Value (Maximum value of 10).			—

D. Propellants

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Solid or Liquid Propellants	6	0	<u>6</u> <u>6</u>

E. Chemical Agents/Radiological Materials/Munitions

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Radiological	25	0	—
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	—
Incapacitating Agent (BZ)	10	0	—
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	—
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	—

Chemical Agents/Radiological Materials/Munitions Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total =  
A + B + C + D + E with a Maximum value of 61). 16

TABLE 1

## HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	$\geq 21$
CRITICAL	II	$\geq 13 < 21$
MARGINAL	III	$\geq 5 < 13$
NEGLIGIBLE	IV	$< 5$

\* Apply Hazard Severity to Table 3.

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

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	—
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	—
Subsurface, greater than 3 feet in depth.	3	0	—

Value for location of EXO (Maximum Value of 5).

5

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

<u>Distance to Nearest Target</u>	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
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5).

5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2
51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 1

D. Types of Buildings

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 3

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
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;	0

or  
Barrier

Assigned Value

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

Security guard, but no barrier

1

A barrier, (any kind of fence) but no separate means to control entry

2

Barriers do not completely surround the facility

3

No barrier or security system

5

Accessibility Value (Maximum Value of 5).

5

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

None Anticipated  
Expected

0

5

(Maximum Value of 5)

5

Total value for hazard probability.  
Sum of Values A through F.  
(Not to exceed 30). Apply this value  
to Hazard Probability Table 2 to determine  
Hazard Level.

24

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	<u>B</u>	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	<8

\* Apply Hazard Probability 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.

TABLES 1 AND 2

HAZARD SEVERITY - II  
(from Table 1)

HAZARD PROBABILITY - B  
(from Table 2)

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

Note: The risk assessment code for EXO is not equivalent to the risk assessment code prescribed in AR 385-10:

RISK ASSESSMENT CODE (RAC)

- RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., Fencing, physical barrier, guards, etc.).
- RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.
- RAC 3 Action required to evaluate potential threat to personnel. High priority Site Inspection is appropriate.
- RAC 4 Action required to evaluate potential threat to personnel. Site Inspection is appropriate.
- RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

DERP

INVENTORY REPORT AND HAZARDOUS RANKING SYSTEM EVALUATION

Preliminary General Information

1. DERP Code Number. (11) .G.O.3.W.V.O.O.65.O.O.
2. Site Name (current). (35) D.O.L.L.Y. .S.O.D.S. .W.I.L.D.B.E.R.N.E.S.S. .A.N.D. .S.C.E.N.I.C. .A.R.E.A
3. Site Name when used by DOD. (35) .W.V. .M.A.N.E.U.V.E.R. .A.R.E.A  
.....
4. Street/Route Number. (25) .....
5. City. (16) D.A.V.I.S. ....
6. County. (15) .....
7. State. (2) W.V.
8. Zip Code. (9) .....
9. Congressional District Code Number. (2) Harley O Staggers Jr. .O.2.
10. Latitude: degrees, minutes, seconds. (6) .....
11. Longitude: degrees, minutes, seconds. (7) .....
12. Is a large scale, greater than 1 inch equals 200 feet, topographic map of the site area available to attach to this inventory report? (1) .N.  
Y = YES N = NO
13. Are site maps or sketches on file with the inventory? (1) .N.  
Y = YES N = NO
14. Are there photographs on file with the inventory? (1) .Y.  
Y = YES N = NO
15. Current Owners Name(s). (45) .U.S. .D.E.P.T. .O.F. .A.G.R.I.C.U.L.T.U.R.E. - .P.O.T.A.M.O.T.A.C. .B.A.N.G.E.R. .D.I.S.T.R.I.C.T
16. Owner's Street Address. (25) .....
17. Owner's City. (16) .P.E.A.T.E.R.S.B.U.R.G. W.V.

- 18. Owner's State. (2) W.V.
- 19. Owner's Zip Code. (9) .....
- 20. Number of Years Owned. (2) ...
- 21. What is the current owner's use of the site? (50) WILDERNESS AND S.E.C.N.I.C. AREA.....

**REAL ESTATE SEARCH INFORMATION**

- 22. Give chronological list of owners or lessees since termination of DOD ownership or lease; include dates of ownership and brief description of use. (240)  
.....  
.....  
.....  
.....  
.....  
.....  
.....

- 23. Was property leased out to others by DOD? (Y or N), describe and match owner/lessee with use(s). (51)  
NO.....  
.....

- 24. Was property leased-out to others by subsequent owners? (Y or N) Describe. (51)  
NO.....  
.....

- 25. Type of problem(s) listed in claim documents, check as many as applicable: (3) D. . .  
 Hazardous and Toxic = H (if listed complete questions 100 to 399).  
 Ordnance and Explosive = O (if listed complete questions 400-499).  
 Debris/Structures = D (if listed complete questions 500 to 599).

- 26. Has Right of Entry Permit been obtained? (Y or N). (1) N.

27. Are copies of lease agreements or deeds or other instruments conveying title on file? (Y or N). (1) Y.

28. Does deed(s) or lease agreement(s) contain any disclaimers or restoration requirements? (Y or N). If yes, describe. (161)

.....  
.....  
.....  
.....  
.....

29. Date field inspection completed. (6) 12.03.84

30. Agency performing inspection. (25)  
U.S.A.E.O. HUNTINGTON W.V.

31. Inspection team leader's name. (20) FRANK ALBERT

32. Title. (25) CIVIL ENGINEER

33. Organization (office symbol). (10) CEORH ED-D

34. Telephone number(s): Commercial. (10) 304.579.5194

35. Telephone number(s): FTS. (7) 924.5794

36. Telephone number(s): AUTOVON. (7) .....

37. Site Status: A = Active I = Inactive (1) ..

38. Years of operation in current status. (2) ...

39. Type(s) of problems found by inspection team. (3) .0..

USE:  
H = H&T  
O = OEW  
D = Debris

40. Enter the number of buildings on the site. (3) .....

41. Describe. (80)  
.....  
.....  
.....

42. What is the major land use for a one mile radius around the site? (20)  
(e.g., agriculture, industry, residential).

.....

43. What is the estimated population within a one mile radius around the  
site? (use 3.8 persons/house). (6)

.....

44. Describe the security of the site. (120)

.....  
.....  
.....  
.....

45. Describe the best access to the site from the nearest public road.  
(120)

.....  
.....  
.....  
.....

LIST CURRENT AND/OR PAST POLLUTION ABATEMENT PERMITS

PERMIT INFORMATION

TYPE OF PERMIT ISSUED

PAST AND/OR PRESENT      PRESENT NO.      DATE ISSUED      EXPIRATION DATE      COMMENTS

46. NPDES. (72) (PERMIT #, DATE ISSUED, EXPIRATION DATE, COMMENTS)

.....  
.....  
.....

47. UIC. (72) (SAME AS 46)

.....  
.....  
.....

48. AIR. (72) (SAME AS 46)

.....  
.....  
.....

ORDNANCE AND EXPLOSIVE WASTE (OEW)

OEW RISK ASSESSMENT:

The OEW risk assessment is based on records searches, reports of Explosive Ordnance Detachment actions, and field observations and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel error, environmental conditions, or other pertinent factors.

Description	Category	Mishap Definition
CATASTROPHIC	1	Explosion, Death, Life-threatening or other injury causing total permanent disability, or Property damage in excess of \$500,000.
CRITICAL	2	Major fire, Severe injury which requires doctor or hospital care for 1 or more persons, or Property damage between \$100K and \$500K.
MARGINAL	3	Minor fire, Minor injury which would require any medical or Property damage between \$700 and \$100,000.
NEGLIGIBLE	4	No injuries or Property damage less than \$700.

400. The Hazard Category assigned for this site is. (1) .1.

401. This is based primarily upon the following: (160)  
WILDERNESS AND SCENIC AREA  
 .....  
 .....  
 .....  
 .....

Hazard probability. The probability that a hazard has been or will be created due to the presence of unexploded ordnance or explosive materials on a formerly used DOD site.

Description	Level	Probability Definition
FREQUENT	A	Has already occurred more than once or has the potential to occur at least every 1 or 2 years.
PROBABLE	B	Has already occurred once or has the potential to occur more than once in the next 10 to 20 years.
OCCASIONAL	C	Is likely to occur sometime in the next 10 to 20 years.
REMOTE	D	Unlikely but possible due to the nature of past DOD use of the site.
IMPROBABLE	E	So unlikely that it can be assumed that it will not occur.

402. The hazard probability level assigned for this site is. (1) A

403. This is based upon the following: (160)

REPORT FROM DISTRICT RANGER  
 .....  
 .....  
 .....  
 .....

Risk Assessment. The risk assessment value for this site is to be found by using the following table. Enter with the results of items 400 & 402.

Probability Level	A	B	C	D	E
Severity Category:					
I	20	20	18	14	10
II	20	18	14	10	6
III	18	14	10	6	2
IV	14	10	6	2	0

404. The risk assessment value for this site is. (3) 20.

405. Ordnance and Explosive Waste Characteristics. Is there any direct or other evidence that OEW is present or could be present based upon former DOD uses of the site? This evidence can be based upon direct observation of the site survey team, reports received from individuals, government agencies, or news media, review of drawings or archive documents relating to DOD operations at the site, or any other pertinent source.

- YES (Complete the rest of this question).
- NO (Continue starting with Question 422).

If the answer to this question is YES describe briefly the type of evidence and where that evidence is available for detailed review. (161)

SIGNS ALL OVER & REPORT FROM RANGER - FOREST SERVICE  
 .....  
 .....  
 .....

(For Questions 406 through 442 underline, check, circle or otherwise indicate each appropriate answer.)

406.	High Explosives. (4)	<i>TBD</i>		
		YES VALUE	NO VALUE	Y OR N
	Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	. . .
	Booster or Bursting Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	5	0	. . .
	Military Dynamite	5	0	. . .
	Less Sensitive Explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	. . .
407.	High Explosives Ordnance Ranking System (ORS) Value (Maximum value of 10). (2)			<i>TBD</i> . . . .
408.	Propellants. (5)	<i>TBD</i>		
		YES VALUE	NO VALUE	Y OR N
	Single Base Propellant (M10, M12, etc.)	3	0	. . .
	Double Base Propellant (M2, M5, M9, M13, etc.)	4	0	. . .
	Triple Base Propellant (M15, M17, etc.)	4	0	. . .
	Liquid Propellant	4	0	. . .
	Large Rocket Motors	5	0	. . .
409.	Other (describe). (15)	. . . . .		
410.	Propellants HRS Value from item 408. (1)			<i>TBD</i> . . .

411. Conventional Ordnance and Ammunition. (11) *TBD*

	YES VALUE	Y OR N
Small Arms (.22 cal - 20mm)	1	..
Medium/Large Caliber (over 20mm)	5	..
Ammunition, Inert	0	..
Ammunition, Blank or Practice	2	..
Bombs, Explosive	5	..
Bombs, Practice, Fuzed	2	..
Grenades, Mines	5	..
Grenades, Mines, Practice, Fuzed	2	..
Detonators, Blasing Caps	5	..
Rockets, Missiles	5	..
Demolition Charges	4	..
412. Other. (15)		..

.....

413. Conventional Ordnance and Ammunition ORS Value from item 411 (Maximum of 5). (1)

414. Pyrotechnics. (4) *TBD*

	YES VALUE	Y OR N
White Phosphorus	5	..
Pyrolusite	4	..
Flares	3	..
Smoke Rounds and Bombs	3	..

415. Other Pyrotechnic Devices. (15) *TBD* .....

416. Pyrotechnics ORS Value (Maximum of 5). (1) ..



- 423. Other (describe). (22) .....
- 424. Locations of Contamination ORS Value (Maximum of 5). (1) ..
- 425. Area Contaminated. (6) *TBD* .....

VALUE

None	0
Less than 1 acre	1
1 to 5 acres	2
5 to 50 acres	3
50 to 250 acres	4
Over 250 acres	5

- 426. Area Contaminated ORS Value (Maximum of 5). (1) *TBD* ..
- 427. Extent of Contamination ORS Value Sum of items (424 + 426) - (Maximum of 10). (2) ...
- 428. Weight of OEW materials on site. (7) .....
- 429. Number of rounds (from 428). (7) *TBD* .....

Weight of Bulk Explosives in Rounds	No. of Rounds, Containers, etc.	Value
0	0	0
Less than 10	1 to 9	2
10 to 100	10 to 100	4
101 to 500	101 to 500	6
501 to 1000	501 to 1000	8
Over 1000	Over 1000	10

- 430. Quantity of OEW ORS Value (Maximum of 10). (2) .....  
 Two valves may be figured (e.g., 8 lbs TNT gives value of 2 & 200 rounds a value of 6. Then the ORS value would be 8).



434. Distance to nearest utility system (power, water, or gas) or public highway likely to be at risk from OEW site. (6) .....

Distance to Nearest Target *TBD* VALUE

Less than 1250 feet 5

1251 feet to 1 mile 3

11 mile to 2 miles 1

Over 2 miles 0

435. Distances to Public Utilities/Highways ORS Value (Maximum of 5). (1) *TBD* ..

436. Distances ORS Value (433 + 435) - (Maximum of 10). (2) ...

437. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary. (6) .....

Numbers of Buildings *TBD* VALUE

0 0

1 to 10 1

11 to 50 2

51 to 100 3

101 to 250 4

251 or Over 5

438. Numbers of Buildings ORS Value (Maximum of 5). (1) ..

439. Types of Buildings. (30) *TBD*

.....  
VALUE

Educational, Child Care, etc. 5

Residential, Hospitals, Hotels, etc. 5

Commercial, Shopping Centers, etc. 5

Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

440. Types of Buildings ORS Value (Maximum of 5). (1) . . .

441. Numbers and Types of Buildings ORS Value (438 + 440) - Maximum of 10). (2) *TBD* . . .

442. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Assign a value using the following guidance: Describe. (40)

.....  
 .....

Barrier	Assigned Value
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;	0
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
Security guard, but no barrier	1
A barrier, but no separate means to control entry	2
Barriers do not completely surround the facility	3
No barrier or security system	5

SITE SURVEY SUMMARY SHEET  
FOR  
DERP-FUDS SITE NO. G03WV006500  
WEST VIRGINIA MANEUVER AREA, WV  
25 June 1991

SITE NAME: West Virginia Maneuver Area

LOCATION: Davis, West Virginia - Tucker, Grant and Randolph Counties, see site map attached.

SITE HISTORY: The site was acquired by the Army in the early 1940's for military exercises. The site was returned to the Department of Agriculture in 1950. Currently, the site is a wilderness area operated by the U.S. Forest Service and portions are privately owned.

SITE VISIT: A site visit was conducted on 3 December 1984 by Robert Johannsen, CEORH-ED-D. The purpose of the visit was to determine the presence of unsafe debris, hazardous and toxic waste and unexploded ordnance.

CATEGORY OF HAZARD: OEW

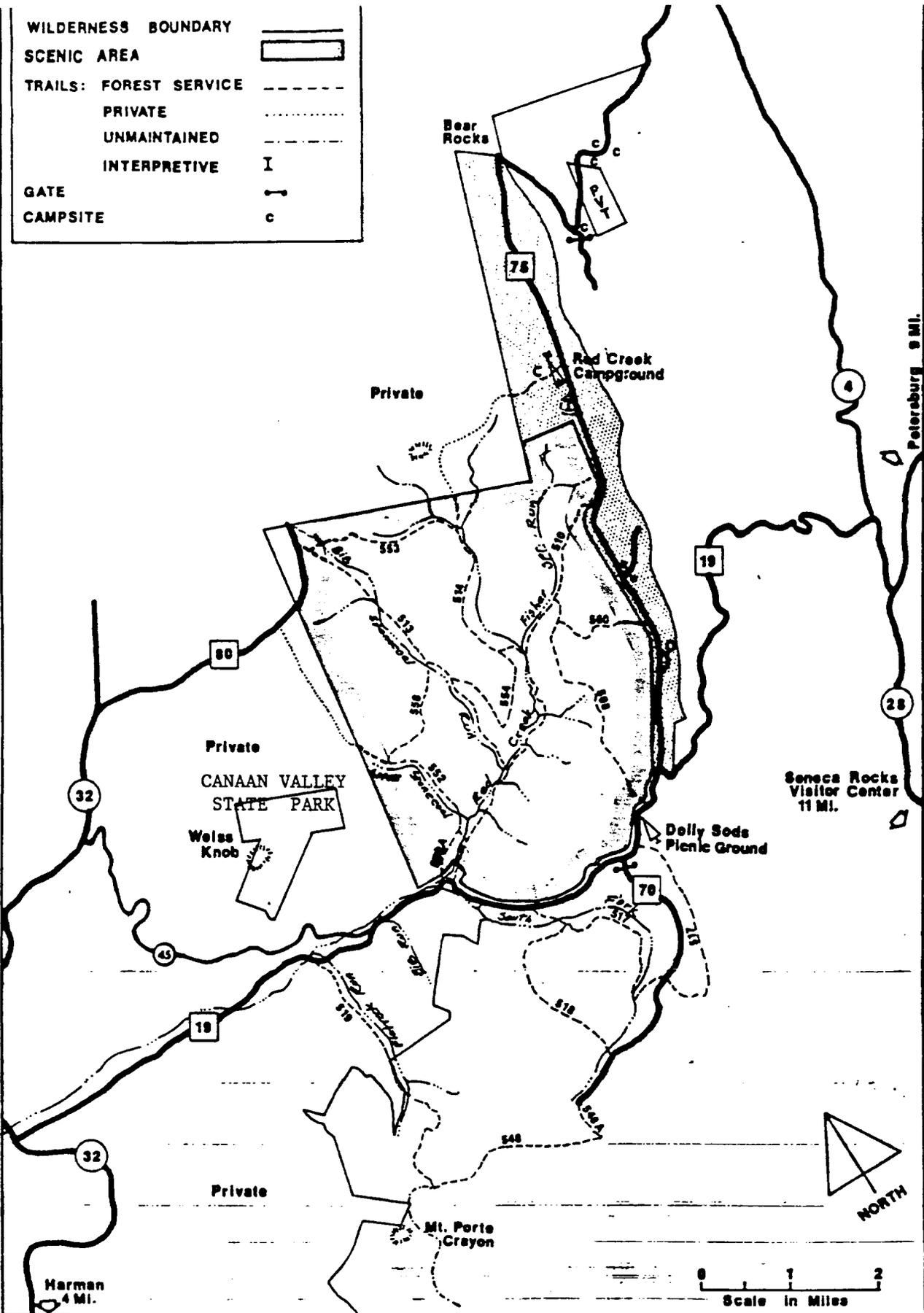
PROJECT DESCRIPTION: OEW. There is unexploded ordnance on the site. The public discovers it on an annual basis and there have been personal injuries. A Remedial Investigation and Feasibility Study beyond the scope of this preliminary assessment may be required.

AVAILABLE STUDIES AND REPORTS: None identified.

PA POC: Frank Albert, (304) 529-5194 is the district POC.

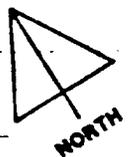
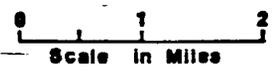


WILDERNESS BOUNDARY	
SCENIC AREA	
TRAILS: FOREST SERVICE	
PRIVATE	
UNMAINTAINED	
INTERPRETIVE	
GATE	
CAMPSITE	



# DOLLY SODS WILDERNESS AND SCENIC AREA

MONONGAHELA *National Forest* WEST VIRGINIA



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

West Virginia Maneuver Area

North Central West Virginia

Site No. G03WV006500

FINDINGS OF FACT

1. The West Virginia Maneuver Area was an extremely large area in North Central West Virginia used by the Department of the Army for mountain training and maneuvering. The remaining records are skimpy, at best. It is not at all certain that good documentation ever existed for the land acquisitions that took place during the heat of the national emergency, World War II. There is work recommended for this project, and hazardous conditions are present. We shall endeavor to do the best we can with what we have, but it must be understood from the outset that little documentation for this project remains. The maneuver area consisted of a total of 2,180,367 acres of land. Of this 350,531 acres were public lands of which more will be said later; 48,067 acres were leased, and 1,781,769 acres were so-called lesser interests. According to warning order notice dated 26 March 1945, these lesser interests were covered by "trespass agreements." Apparently, the owners and Army agreed, given the contemporaneous emergency, that Army would shoot first and pay later. There are no records surviving that describe the trespass agreements or the area they covered. From the writer's extensive knowledge of World War II land acquisition procedures, it can be safely surmised that there is no information of record in any of the local courthouses as to this project.

Fortunately, better documentation remains for the public lands and leased lands. The public lands were all permitted to the Secretary of War by Department of Agriculture, all being a part (and virtually all of) the Monongahela National Forest. By letter dated 4 August 1943, 341,266 acres of Monongahela National Forest in Preston, Grant, Randolph, Tucker, and Pendleton counties, West Virginia is so permitted. By letter dated November 10, 1943, an additional 9,265 acres is said to be permitted, but from that should be subtracted 114.63 acres which was excepted by attached map (which did not survive the audit pruning of the files), leaving a true acreage of 9,150.37, or a total of 350,416.37 acres of land under permit from the Department of Agriculture. Additionally 65 tracts totalling 48,557 acres and one license from Western Maryland Railroad Company for a steam line were acquired by purchase and condemnation during World War II. Most of the lands where work is recommended are those covered by the permits from Department of Agriculture. The

remainder is an area called Blackbird Knob. Blackbird Knob is included in the leased lands then designated as Tracts Nos. A-76A: 17,515.54 acres; A-76B: 2107.74 acres; and A-76C: 3512 acres, all of which were leased 6 August 1943 from The West Virginia Central and Pittsburg [sic] Railroad Company and The Davis Coal & Coke Company. The Lease No. was W33-017, ENG 1403. Blackbird Knob, a target area, was included in these lands, and work is recommended for that area.

2. Just as the acquisition of these lands was rapid, and no actual legal description of the lands acquired survives (perhaps because there never was one due to unavailability of manpower or time), so was the disposal process unusual. Apparently, a warning order issued for the entire facility, dated 26 March 1945, stating that on 19 March 1945 the entire 2,180,367 acre facility was declared surplus (350,531 acres public lands, 1,781,769 acres "lesser interests," and 48,067 acres leased. However, a subsequent warning order dated 10 August 1945 withdrew the entire facility from surplus. As a Second Endorsement from the Louisville District Engineer to OCE through ORD dated 18 July 1950 notes, a 21 April 1945 letter from office for Emergency Management, Office of Scientific Research and Development, Washington DC (hereinafter OEM-SRD) requested OCE issue a permit for OEM-SRD or its agencies or contractors to test fire rockets and projectiles. The Louisville endorsement indicates no further information was available as to whether such a permit was issued. Thereupon, in the normal process, on 10 August 1950, OCE relinquished the land by letter back to Department of Agriculture. What OCE, and apparently Louisville District, were not aware of was that such a permit had been issued and a copy is hereto attached. Apparently the permit expired by its own terms either prior to or simultaneously with Army's relinquishment of the land back to Department of Agriculture. Also, of interest, and perhaps importance, attached is a copy of a 27 June 1945 letter from OCE to ORD advising that these lands must be decontaminated before disposal and that must done even if decontamination costs exceed costs of acquiring the land in fee. Most of the work to be done is located on the lands permitted to Secretary of War by the Department of Agriculture and remain under the ownership of the Department of Agriculture. The leases from the railroad, Tracts Nos. A-76A, A-76B, and A-76C were terminated on 28 February 1946. The Blackbird Knob area is now owned by The Nature Conservancy, which acquired it, less certain mineral interests not here pertinent, as a 3701.1 acre tract on 25 July 1991 for \$3,000,000. Western Pocahontas Properties Limited Partnership, successor to West Central and Pittsburg [sic] Railroad Company, still owns some of the surrounding lands, but The Nature Conservancy is in the process of acquiring those interests, for eventual consolidation into the Monongahela National Forest. An exact plat of The Nature Conservancy's current holdings is found on Plat Cabinet 1, Slide 189, Tucker County, West Virginia, Clerk of the County Commission's records.

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 established under 10 USC 2701 et seq.

7 January 1992  
Date

  
ALBERT J. GENETTI, Jr.  
Brigadier General, U.S. Army  
Commanding

PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS PROJECT NO. G03WV006504  
WEST VIRGINIA MANEUVER AREA  
SITE NO. G03WV006500  
25 June 1991

**PROJECT DESCRIPTION:** A Remedial Investigation and Feasibility Study (RI/FS) is proposed to determine the types and extent of ordnance contamination at the site and develop alternatives to safeguard the public. Unexploded ordnance has been found and personal injuries have occurred. Ordnance is located on public lands operated by the U.S. Forest Service and on private property.

**PROJECT ELIGIBILITY:** Records indicate that the area was used by the Army for military maneuvers and as an artillery range, and was returned to the Department of Agriculture for use as a wilderness area.

**POLICY CONSIDERATIONS:** There is no policy which prohibits the proposal of this project.

**PROPOSED ACTIVITIES:** The INPR should be referred to CEHND for determination of further action.

**RAC:** Attached.

**POC:** Frank Albert, (304) 529-5194.

APPENDIX A  
RISK ASSESSMENT PROCEDURES FOR  
EXPLOSIVE ORDNANCE (EXO)

Site Name WEST VA MANEUVER AREA Rater's Name FRANK ALBERT  
 Site Location DAVIS, WV Organization CEORH-07-IX  
 DERP Project # GO3WV006S04 RAC 2

**EXO RISK ASSESSMENT:**

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

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

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	—
Medium/Large Caliber (20 mm and larger)	10	0	—
Bombs, Explosive	10	0	<u>10</u>
Bombs, Practice (w/spotting charges)	6	0	—
Grenades, Hand and Rifle, Explosive	10	0	—
Grenades, Practice (w/spotting charges)	6	0	—

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Landmines, Explosive	10	0	—
Landmines, Practice (w/spotting charges)	6	0	—
Rockets, Guided Missiles, Explosive	10	0	—
Detonators, Blasting Caps	10	0	—
Demolition Charges	10	0	—
Conventional Ordnance and Ammunition Value (Maximum of 10).			<u>10</u>

B. Pyrotechnics

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	—
Any Munition Containing a Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6	0	—
Military Flares	4	0	—
Pyrotechnics Value (Maximum of 10).			<u>0</u>

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	—
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	—

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Military Dynamite	10	0	—
Less Sensitive Explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	—
High Explosives Value (Maximum value of 10).			—

D. Propellants

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Solid or Liquid Propellants	6	0	<u>6</u> <u>6</u>

E. Chemical Agents/Radiological Materials/Munitions

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Radiological	25	0	—
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	—
Incapacitating Agent (BZ)	10	0	—
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	—
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	—

Chemical Agents/Radiological Materials/Munitions Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total =  
A + B + C + D + E with a Maximum value of 61). 16

TABLE 1  
HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	$\geq 21$
CRITICAL	II	$\geq 13 < 21$
MARGINAL	III	$\geq 5 < 13$
NEGLIGIBLE	IV	$< 5$

\* Apply Hazard Severity to Table 3.

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

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	—
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	—
Subsurface, greater than 3 feet in depth.	3	0	—

Value for location of EXO (Maximum Value of 5).

5

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

<u>Distance to Nearest Target</u>	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
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5).

5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2
51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 1

D. Types of Buildings

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 3

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
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;	0

or Barrier	Assigned Value
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
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2
Barriers do not completely surround the facility	3
No barrier or security system	5

Accessibility Value (Maximum Value of 5).

5

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
None Anticipated	0
Expected	5

(Maximum Value of 5)

5

Total value for hazard probability.  
Sum of Values A through F.  
(Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level.

24

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	<u>B</u>	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	<8

\* Apply Hazard Probability 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.

TABLES 1 AND 2

HAZARD SEVERITY - II  
(from Table 1)

HAZARD PROBABILITY - B  
(from Table 2)

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

Note: The risk assessment code for EXO is not equivalent to the risk assessment code prescribed in AR 385-10:

RISK ASSESSMENT CODE (RAC)

- RAC 1     Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., Fencing, physical barrier, guards, etc.).
- RAC 2     Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.
- RAC 3     Action required to evaluate potential threat to personnel. High priority Site Inspection is appropriate.
- RAC 4     Action required to evaluate potential threat to personnel. Site Inspection is appropriate.
- RAC 5     No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.