DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER
CORPS OF ENGINEERS
550 MAIN ST.
CINCINNATI, OH 45202

CELRD-PDM (200-1c) 2 December 2010

MEMORANDUM FOR Commander, Louisville District

SUBJECT: Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) Inventory Project Report (INPR) for Property No. G03WV0013, WV Maneuver Area/Dolly Sods, Davis, West Virginia

1. Reference CELRL-ED-E memorandum, 1 December 2010, SAB (Encl).

2. Military Munitions Response Program (MMRP) project G03WV001304 is approved "after-the-fact". Even though this is an on-going project, a Project Summary Sheet and Munitions Response Site Prioritization Protocol (MRSPP) need to be prepared for inclusion with this INPR.

3. The following new recommended MMRP projects are approved:

a. G03WV001305 – Dailey Infiltration Camp.

b. G03WV001306 – WVMA Ammunition Depot.

c. G03WV001307 – Maneuver Area.

d. G03WV001308 – Fore Knobs-Bear Rocks Firing Ranges.

e. G03WV001309 – Bearden Knob Firing Range.

f. G03WV001310 – Brown/Cabin Mountain Firing Ranges.

g. G03WV001311 – Buena Small Arms Firing Range.

4. Since the properties have been determined to be duplicates, this office also concurs with use of the Findings and Determination of Eligibility (FDE) for Property No. G03WV0065, signed 7 January 1992, to determine FUDS eligibility for Property No. G03WV0013.

G03WV001305_01-08_05

CELRD-PDM (200-1c) 2 December 2010
SUBJECT: Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) Inventory Project Report (INPR) for Property No. G03WV0013, WV Maneuver Area/Dolly Sods, Davis, West Virginia

5. Please ensure that a copy of this INPR is posted to the Project Information Retrieval System (PIRS) and the FUDS Records Management Database (FRMD), the FUDS Management and Information System (FUDSMIS) is updated to reflect these approvals and annotated to explain the "after-the-fact" approval and FDE irregularity, and that landowner notification is done in accordance with ER 200-3-1. A copy of this INPR should also be provided to the West Virginia Department of Environmental Protection.

MICHAEL B. WHITE, P.E.
Director of Programs

Encl
as

CF:
CELRL-ED-E

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE, KY 40201-0059

http://www.lrl.usace.army.mil/

CELRL-ED-E

DEC 1 2010

MEMORANDUM FOR Commander, Great Lakes and Ohio River Division, ATTN: CELRD-PDM/Patty Bertsch, 550 Main Street, Rm. 10032, Cincinnati, Ohio 45202-3222

SUBJECT: Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) Inventory Project Report (INPR) for Property No. G03WV0013, WV Maneuver Area/Dolly Sods, Davis, West Virginia

1. Reference ER 200-3-1, Environmental Quality, Formerly Used Defense Sites (FUDS) Program Policy, Department of the Army, U.S. Army Corps of Engineers, Washington, D.C., 20314, 10 May 2004.

2. This memorandum transmits the INPR for the subject DERP-FUDS property. This INPR requests after-the-fact approval for one existing Military Munitions Response Program (MMRP) project and proposes seven new MMRP projects.

3. Office of Counsel, Real Estate, and the Environmental and Munitions Center of Expertise (EM CX) have reviewed this INPR and concur that the property was formerly used by the Department of Defense (DoD) and that the projects described in paragraph 5 below are appropriate.

4. A Property Survey Summary Sheet including property maps and photographs is included at Enclosure 1. The revised FDE, dated 7 January 1992, is included at Enclosure 2. The property had an original FDE, dated 21 May 1990, but was subsequently revised to clarify the eligibility of Blackbird Knob. The revised FDE indicates a Property Number of G03WV0065 which is a duplicate of G03WV0013. The INPR checklist is included at Enclosure 3. The Executive Summary of the WV Maneuver Area/Dolly Sods Preliminary Assessment is included at Enclosure 4.

5. The following is a summary of the existing and proposed projects at the subject property:

a. **G03WV001304 (MMRP)** – *Dolly Sods Removal.* This existing MMRP project was approved on 25 May 1990 to address munitions-related contamination at an area of the property known as the Dolly Sods Region. While it was approved as MMRP project G03WV006500, all funding has been recorded under MMRP project G03WV001304. Consequently, this INPR seeks after-the-fact approval of this on-going MMRP project. The Dolly Sods Region consists of approximately 18,000 acres located in the northwest portion of the WV Maneuver Area/Dolly Sods property. Project 04 has transitioned to the Long-Term Management (LTM) phase. An Archives Search Report (ASR), Engineering Evaluation and Cost Analysis (EE/CA), Remedial Investigation/Feasibility Study (RI/FS), and a Munitions and Explosives of Concern (MEC)

removal action have been performed. Funding for the RI/FS was erroneously shown under the EE/CA in FUDSMIS. Although a MEC removal action has been conducted, there is the potential that visitors could come in contact with MEC that still exists in the area because full ordnance clearance was not possible. The LTM phase includes a Public Awareness Program to inform the public of the ordnance hazards in the area. Periodic property inspections and Five-Year Ordnance and Explosives Recurring Reviews are also required to assure that the previous MEC removal action remains protective of the public.

b. **G03WV001305 (MMRP)** – *Dailey Infiltration Camp.* Project 05 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Dailey Infiltration Camp being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 5.

c. **G03WV001306 (MMRP)** – *WVMA Ammunition Depot.* Project 06 is proposed to address the possible munitions-related contamination that may have occurred as a result of the WMVA Ammunition Depot being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 6.

d. **G03WV001307 (MMRP)** – *Maneuver Area.* Project 07 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Maneuver Area being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 7.

e. **G03WV001308 (MMRP)** – *Fore Knobs-Bear Rocks Firing Ranges.* Project 08 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Fore Knobs-Bear Rocks Firing Ranges being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 8.

f. **G03WV001309 (MMRP)** – *Bearden Knob Firing Range.* Project 09 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Bearden Knob Firing Range being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 9.

g. **G03WV001310 (MMRP)** – *Brown/Cabin Mountain Firing Ranges.* Project 10 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Brown/Cabin Mountain Firing Ranges being located on the property. This MMRP

project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 10.

h. **G03WV001311 (MMRP)** – *Buena Small Arms Firing Range.* Project 11 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Buena Small Arms Range being located on the property This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 11.

6. The West Virginia Department for Environmental Protection (WVDEP) has reviewed this INPR and concurs with the proposed MMRP projects.

7. I request that you review and approve this INPR under the DERP-FUDS Program. If you have any questions, please contact Dr. Kari Meier at 502-315-6316.

11 Enclosures

KEITH A. LANDRY
Colonel, Corps of Engineers
District Commander

PROPERTY SURVEY SUMMARY SHEET
for
DERP-FUDS PROPERTY NO. G03WV0013
FEDERAL FACILITY ID NO. WV9799F3460

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROPERTY NAME: WV Maneuver Area/Dolly Sods (WVMA/DS); Dolly Sods Wilderness Area; West Virginia Maneuver Area; Dolly Sods Region

Property No. G03WV0013 was originally named, "Dolly Sods Wilderness Area" while Property No. G03WV0065 is named "WV Maneuver Area". Property No. G03WV0065, however, has been determined to be a duplicate of G03WV0013. Previous FDEs, INPRs, and documents related to investigations and ordnance removal actions contained references to Property No. G03WV0065, and in many instances, these documents also contained the combined name "Dolly Sods Wilderness Area (West Virginia Maneuver Area)." However, project funding for investigations and removal actions has historically been programmed under DERP-FUDS Property No. G03WV0013, "Dolly Sods Wilderness Area." The Dolly Sods Wilderness Area is contained within the former WVMA/DS property, and no work other than INPR preparation has been funded under Property No. G03WV0065. [Note: While FUDSMIS shows approximately $100 in historic funding in 1992 not related to INPR preparation, this funding is believed to be in error.] On 30 September 1992, USACE declared No Defense Action Indicated (NDAI) for Property No. G03WV0065 and revised the name of DERP-FUDS Property No. G03WV0013 from "Dolly Sods Wilderness Area" to "WV Maneuver Area/Dolly Sods." The name "Dolly Sods" was retained in the property name due to the name of ordnance removal project G03WV001304 and frequent references to the Dolly Sods Wilderness Area in past documents. All current and future projects have and will be programmed under DERP-FUDS Property No. G03WV0013.

LOCATION: The former WVMA/DS property consisted of approximately 2,180,367 acres in northeastern West Virginia, including part of the Monongahela National Forest. The WVMA/DS property covers portions of Preston, Pendleton, Tucker, Grant, and Randolph Counties, near Davis, West Virginia. The approximate center of the WVMA/DS property is located at 39° 07' 08" North, 79° 27' 09" West. The property is located in Congressional District 1 and EPA Region 3.

PROPERTY HISTORY: The Department of the Army (DA) acquired the property in 1943 and used it for low altitude mountain training, regimental troop maneuvers, and artillery/mortar target practice during World War II. The maneuver area consisted of 2,180,367 acres of land. Of this acreage, 350,416 acres were public lands (part of the Monongahela National Forest, acquired via two use permits dated 4 August 1943 and 10 November 1943), 48,557 acres were leased from the public or businesses, and 1,781,394 acres were so-called "lesser interests," which were covered by trespass agreements. The land owners had given use of these lands to the Army

verbally, but there are no records that describe the trespass agreements or the area that they were associated with.

Numerous Munitions and Explosives of Concern (MEC) and Munitions Debris (MD) have been found on the WVMA/DS property. Based on the discovered MEC and historical documentation, rounds fired during the 1943 to 1944 military training included: 40-mm, 57-mm armor-piercing (AP), 60-mm, 105-mm and 155-mm high explosive (HE) projectiles, 81-mm HE and smoke round (SR), and 4.2-inch inert (sand-loaded rounds), HE, and SR mortars. The SR mortars were reported to contain a solution of sulphur trioxide in chlorosulfonic acid as the filler and were intended for marking and smoke screen purposes. It is documented that 75-mm artillery fire occurred in the region, although no physical evidence of such activity has been found. On 1 May 1945 the Office of Scientific Research and Development in the Office of Emergency Management (more specifically the Allegany Ballistics Laboratory (ABL) under a contract with the Department of the Navy) obtained a special use permit from the Secretary of War to use a portion of the WVMA/DS Impact Area. It is stated in this special use permit that the site will be used as a range for test firing of rockets and other projectiles. The land subject to the special use permit appears to be generally located in the Dolly Sods Region and in the area of MMRP Project G03WV001304. According to project documentation, the rocket mortars contained no explosive components. According to real estate documentation of the WVMA/DS, the properties reverted back to the Army and the leases were canceled in February and June of 1946. No obvious signs of ABL's use of the property are evident; nor has information concerning the actual amount of ordnance used for regional training purposes been discovered.

According to the WV Maneuver Area/Dolly Sods Preliminary Assessment (PA), dated February of 2009, the targets of artillery fire at least included the southern face of Blackbird Knob and the eastern face of Cabin Mountain. Historical documents, including newspaper articles, postings by the West Virginia Maneuver Area Headquarters to note hazard avoidance areas, and training journals, stated that the following areas were utilized as either firing points or targets/impact areas: Stoney River, Fore Knobs (firing point), Yellow Creek (firing point), Brown Mountain (impact area), Bear Rocks (impact area), Cabin Mountain (impact area), Glade Run, and locations within the Dolly Sods Region. Historical maps of the artillery/mortar impact area, created during the Army clearance efforts in the 1940's and 1950's indicated firing ranges positioned at several locations outside of the Dolly Sods Region.

In May of 1946, the DA (i.e., Engineer Bomb and Shell Disposal Team No. 6) conducted ordnance clearance at the property. The team completed a reconnaissance of the maneuver area. Records indicate that the team found and destroyed one hundred and eighty-nine 4.2-inch SR mortars, one 155-mm HE projectile, three 105-mm HE projectiles, two 40-mm projectiles, and twelve or fourteen inert (sand-loaded) rounds in the Dolly Sods Region. Information concerning the locations of these items is not available. All suspected impact areas, with the exception of certain regions to the north and northeast of Dolly Sods North (DSN) and Dolly Sods Scenic Area (DSSA) which were considered too rough or overgrown, were thoroughly searched during the 1946 clearance effort. Upon completion of the 1946 clearance effort, all lands except for the regions not searched were declared safe for grazing, lumbering, or hunting. During May of 1953, the 549 Ordnance Explosive Ordnance Disposal (EOD) Unit from Baltimore, Maryland,

conducted a follow-up reconnaissance and disposal mission of suspected impact areas in the Dolly Sods Region. Six live rounds were located and destroyed during this mission.

The use permits for the 350,416 acres of the Monongahela National Forest were relinquished to the Department of Agriculture on 10 August 1950. The leases for the 48,557 acres acquired from private entities were terminated between 1944 and 1946. The 1,781,394 acres covered by trespass agreements have no records of acquisition or disposal.

In 1970, 10,200 acres of the Dolly Sods Region were designated as a National Forest Scenic Area. The Dolly Sods Wilderness (DSW) was created by an act of Congress in 1975 to preserve and protect the area and provide special opportunities for solitude, primitive recreation, and other scientific, educational, scenic, and historical values. Management efforts within the DSW focus on allowing the forces of nature to reclaim the land, returning it to a natural state. During 1992 and 1993, 6,168.5 acres located north of the DSW were purchased by the U.S. Forest Service from The Nature Conservancy; this area is known as the DSN. Lands to the west, north, and northeast of DSN are still privately owned. Currently, 2,268 acres along Forest Service Road (FR) 75, east of the DSW, have the designation of National Scenic Area. The region currently known and referred to as Dolly Sods is comprised of the DSW, DSN, and DSSA.

In 1991, USACE conducted field work to estimate the extent of ordnance contamination in the Dolly Sods Region. Sixteen areas totaling 281 acres in the DSW were searched using hand-held magnetometers. These representative areas were selected because they were suspected to contain ordnance, based on topography and information obtained during records searches and previous site investigations. The areas consisted of hilltops (e.g., Breathed Mountain and Cabin Mountain), suspected of being former targets, as well as locations which had potential to contain "undershots" from firing at Blackbird Knob (located in DSN and just north of DSW). A surface sweep (0 to 6" below ground surface) of the areas was conducted and seven pieces of MEC were found. A subsurface sweep (6" to 24" below ground surface) was also conducted, and six pieces of MEC were found. The thirteen total MEC items included 57-mm AP projectile, 60-mm HE, 81-mm HE and SR, and 4.2-inch inert, HE, and SR mortars. Nine fragments were found in addition to these items. All of the MEC items discovered were removed or destroyed by detonation.

A MEC removal action was conducted for the DSW from June 1997 to October 1997. Twenty-six miles of designated and maintained trails were cleared to 20 feet each side (126.7 total acres), to a depth of one foot. Inventoried campsites (112 campsites; 8.83 total acres) were cleared to a depth of four feet. A total of 14 live mortars, including 60-mm HE and 81-mm HE, were found and destroyed by detonation, and 108 pounds of MD were disposed of. DSN and DSSA MEC removal activities occurred from October of 1997 to August of 1998. Thirty miles of designated and maintained trails were cleared to 20 feet each side (143.76 total acres), to a depth of one foot. Inventoried campsites and cabins (66 campsites and 6 cabins; 2.18 total acres) were cleared to a depth of four feet. A total of eight live mortars, including 60-mm HE and 4.2-inch SR and HE were found and destroyed by detonation. Nineteen 4.2-inch inert mortar rounds were also located during the clearance and disposed of. A total of 1,043.5 pounds of MD was recovered.

PROPERTY VISIT: Several property visits have been conducted on the former WVMA/DS property by USACE personnel. USACE has had a presence on the property since it was determined to be eligible for the FUDS program. Numerous MEC removal actions have been conducted and a Preliminary Assessment (PA) of the property was completed in February of 2009.

CATEGORY OF HAZARDS: MMRP. Based upon information presented in the 2009 PA, there are no potential HTRW, PRP/MMRP, PRP/HTRW, CON/HTRW, or BD/DR hazards associated with past DoD use of the property.

PROJECT DESCRIPTIONS: The following is a summary of the existing and proposed projects for this property:

a. **G03WV001304 (MMRP)** – *Dolly Sods Removal.* This existing MMRP project was approved on 25 May 1990 to address munitions-related contamination at an area of the property known as the Dolly Sods Region. While it was approved as MMRP project G03WV006500, all funding has been recorded under MMRP project G03WV001304. Consequently, this INPR seeks after-the-fact approval of this on-going MMRP project. The Dolly Sods Region consists of approximately 18,000 acres located in the northwest portion of the WV Maneuver Area/Dolly Sods property. Project 04 has transitioned to the Long-Term Management (LTM) phase. An Archives Search Report (ASR), Engineering Evaluation and Cost Analysis (EE/CA), Remedial Investigation/Feasibility Study (RI/FS), and a Munitions and Explosives of Concern (MEC) removal action have been performed. Although a MEC removal action has been conducted, there is the potential that visitors could come in contact with MEC that still exists in the area because full ordnance clearance was not possible. The LTM phase includes a Public Awareness Program to inform the public of the ordnance hazards in the area. Periodic property inspections and Five-Year Ordnance and Explosives Recurring Reviews are also required to assure that the previous MEC removal action remains protective of the public.

G03WV001305 (MMRP) – *Dailey Infiltration Camp.* Project 05 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Dailey Infiltration Camp being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the Munitions Response Site Prioritization Protocol (MRSPP) results (Table 29) is included at Enclosure 5.

G03WV001306 (MMRP) – *WVMA Ammunition Depot.* Project 06 is proposed to address the possible munitions-related contamination that may have occurred as a result of the WMVA Ammunition Depot being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 6.

G03WV001307 (MMRP) – *Maneuver Area.* Project 07 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Maneuver Area being located on the property. This MMRP project will include all necessary CERCLA response

actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 7.

G03WV001308 (MMRP) – *Fore Knobs-Bear Rocks Firing Ranges.* Project 08 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Fore Knobs-Bear Rocks Firing Ranges being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 8.

G03WV001309 (MMRP) – *Bearden Knob Firing Range.* Project 09 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Bearden Knob Firing Range being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 9.

G03WV001310 (MMRP) – *Brown/Cabin Mountain Firing Ranges.* Project 10 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Brown/Cabin Mountain Firing Ranges being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 10.

G03WV001311 (MMRP) – *Buena Small Arms Firing Range.* Project 11 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Buena Small Arms Range being located on the property This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 11.

AVAILABLE STUDIES AND REPORTS:

The Administrative Record for the WV Maneuver Area/Dolly Sods property is located at the following address: http://www.lrh.usace.army.mil/projects/current/derp-fuds/wvma/documents/. Some documents pertaining to the previous ASR, EE/CA, RI/FS, MEC removal actions, and public awareness activities include the following:

Final Removal Report: Ordnance and Explosives Removal Action Dolly Sods Wilderness, Monongahela National Forest. Human Factors Applications, Inc. (HFA), 1998.

Final Removal Report: Ordnance and Explosives Removal Action Dolly Sods North, Monongahela National Forest. HFA, 1999.

Final UXO Avoidance Report for the Bear Rocks Property, Monongahela National Forest. HFA, 1999.

Feasibility Study Dolly Sods Wilderness: Final Work Plan for Surface and Subsurface Investigation and On-Site Disposal of Ordnance. Metcalf & Eddy, Inc., 1991.

Feasibility Study Dolly Sods Wilderness: Engineering Report for Extent of OEW Contamination and Evaluation of Remedial Action Alternatives. Metcalf & Eddy, Inc. 1992.

Dolly Sods Wilderness Ordnance Removal Project Environmental Assessment. New Bold Enterprises (NBE), 1995.

Dolly Sods North Ordnance Removal Project Environmental Assessment. NBE, 1997.

Public Awareness and Organizational Plan of Unexploded Ordnance at Dolly Sods. S&C Advertising and Public Relations (SCPR), 2004.

Public Involvement Plan: Dolly Sods Region, Former West Virginia Maneuver Area. SCPR, 2005.

Archives Search Report: Findings for the Former Dolly Sods North. USACE, Rock Island District, 1995.

Database containing information regarding OE-related scrap and UXO found in the Dolly Sods region. USACE, Huntington District, 2004.

CEMVS-ED-P Memorandum dated 26 April 2004, Subject: Potential DERP FUDS Projects – West Virginia Maneuver Area.

Final Preliminary Assessment of the former WV Maneuver Area/Dolly Sods. USACE, Huntington District, February 2009.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.

Source: *www.bing.com*

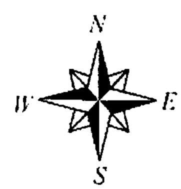
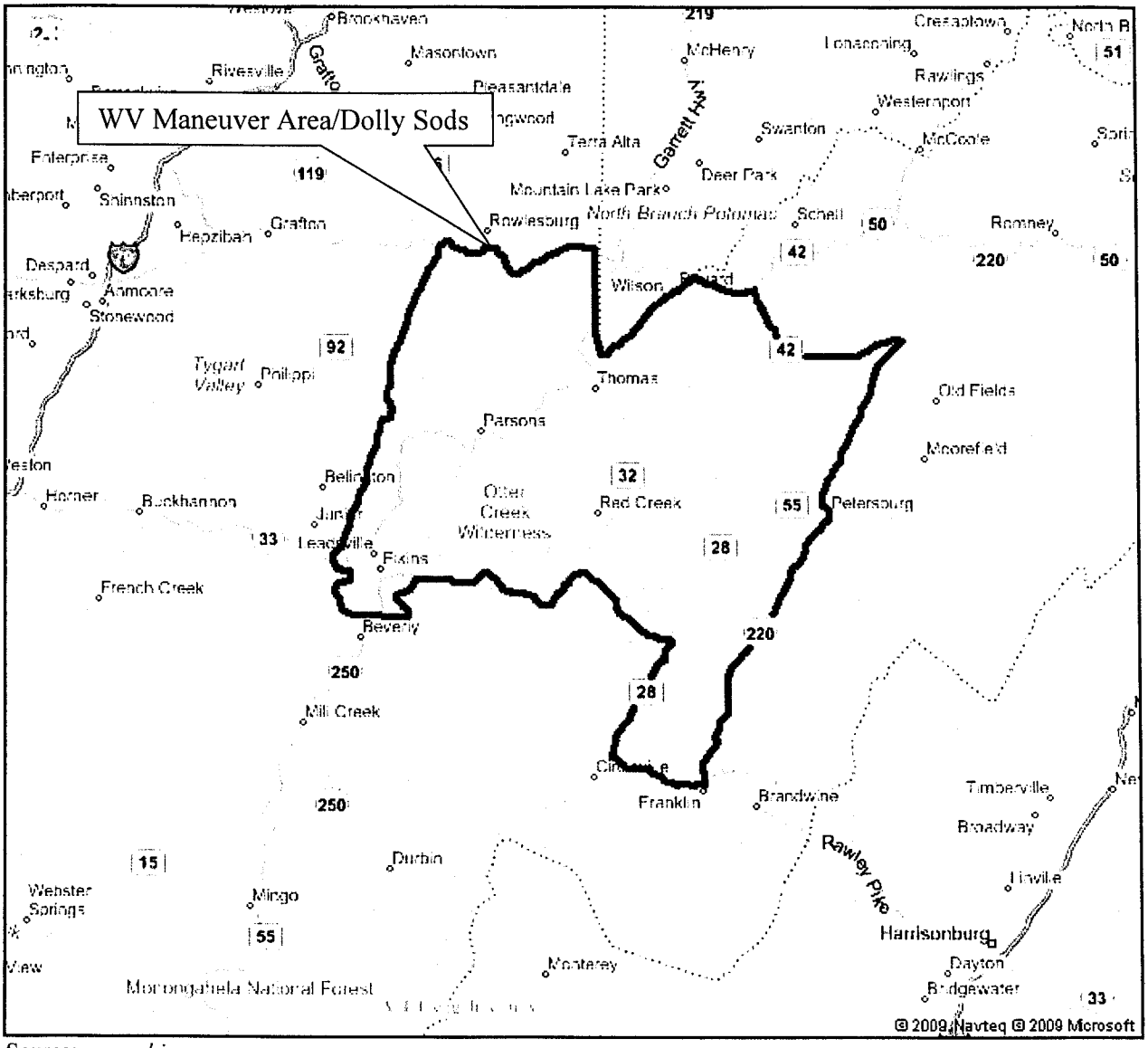


FIGURE 1
VICINITY MAP
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07’ 08” NORTH, 79° 27’ 09” WEST



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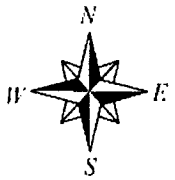


FIGURE 2
SITE MAP
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

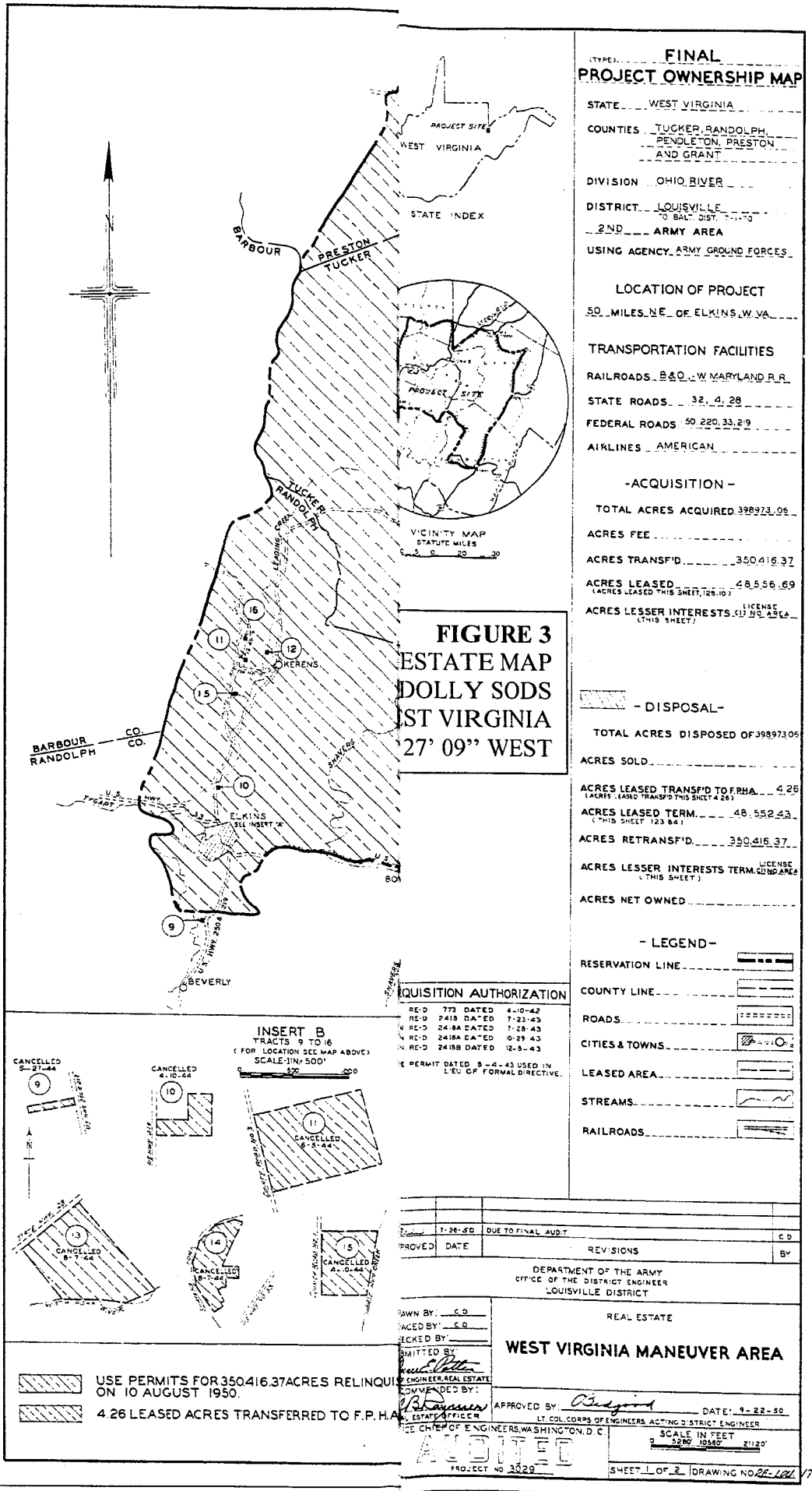
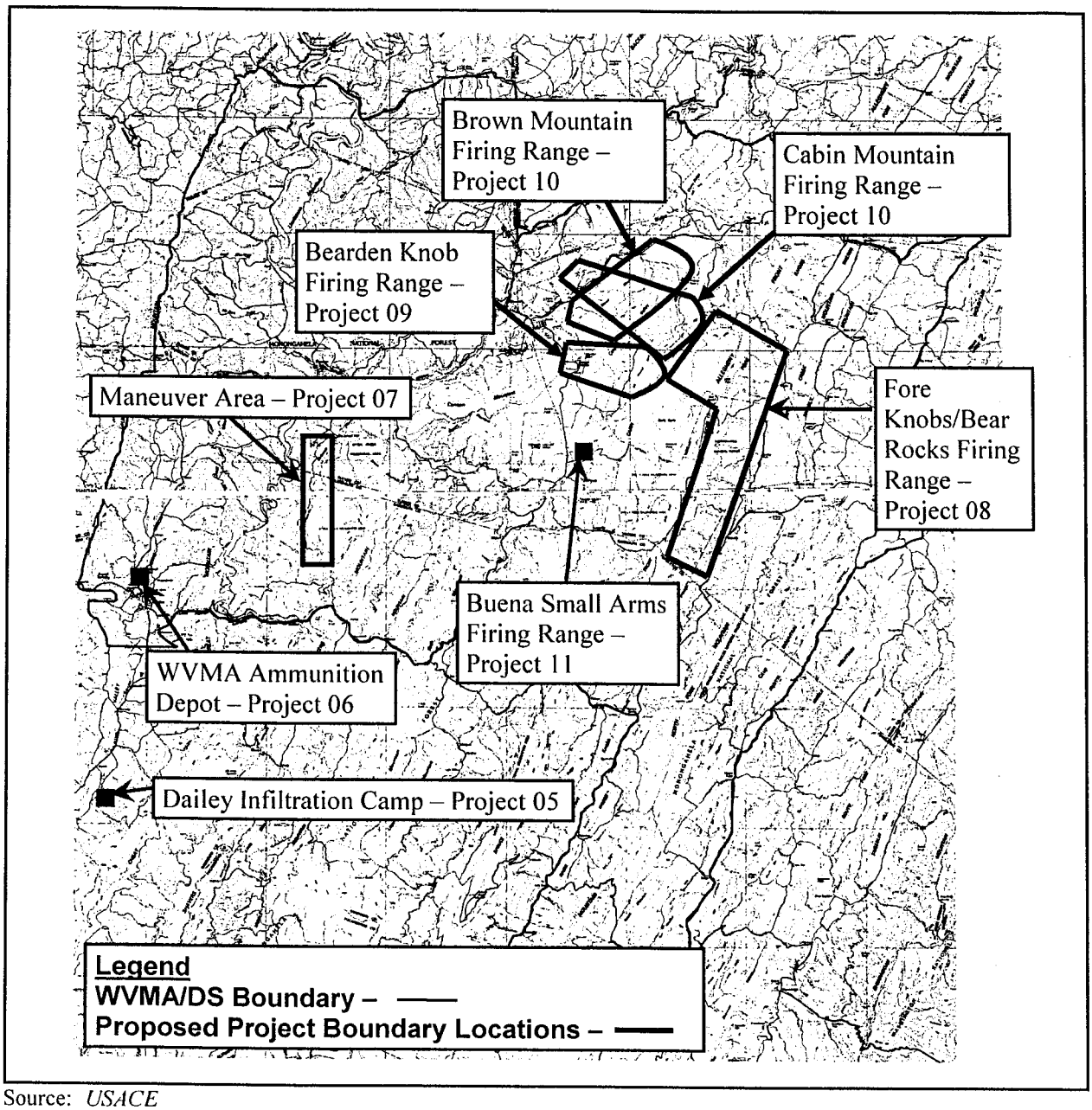


FIGURE 3
ESTATE MAP
DOLLY SODS
ST VIRGINIA
27' 09" WEST



Source: *USACE*

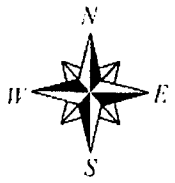
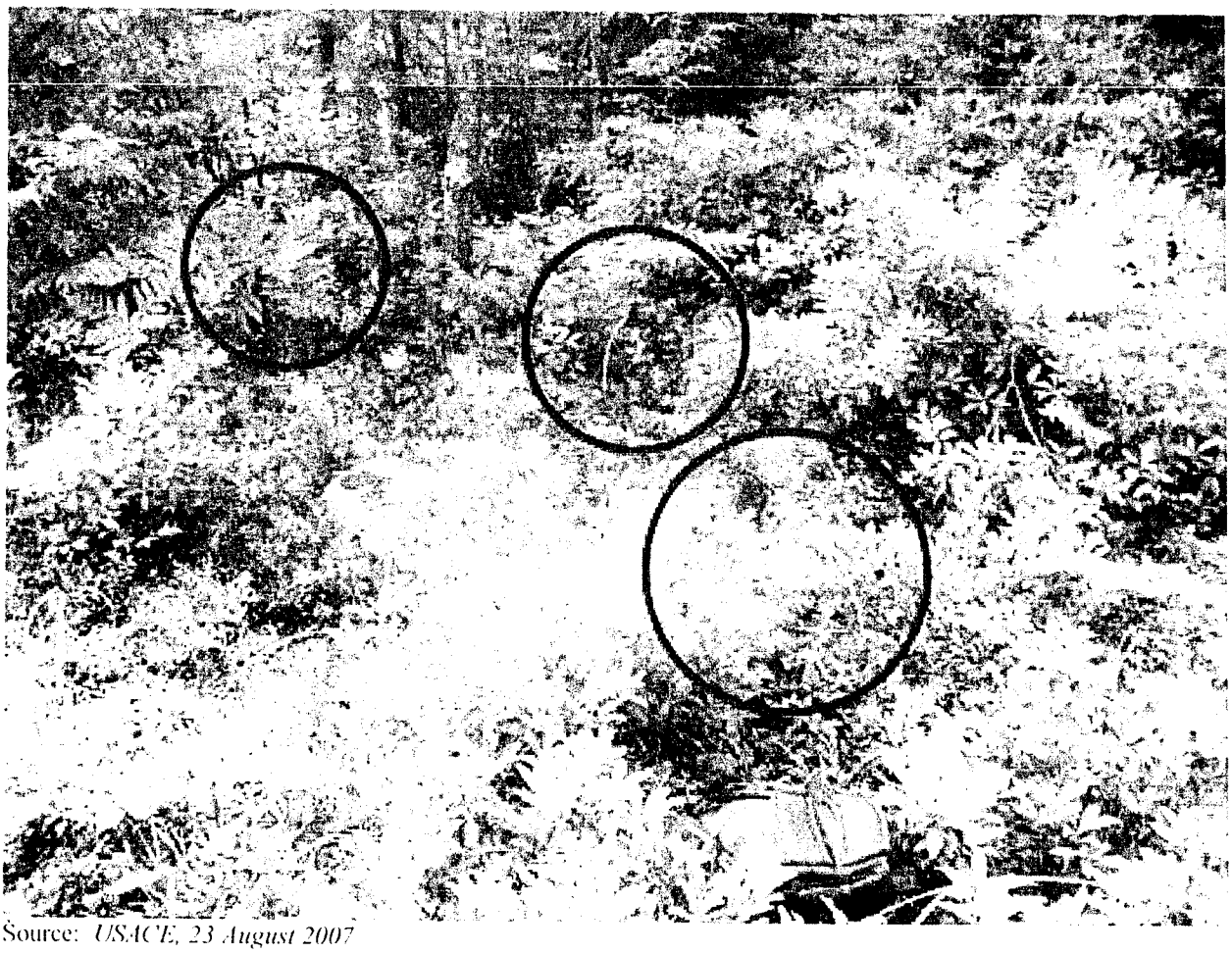


FIGURE 4
PROJECT LOCATION MAP
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Source: *USACE*

PHOTOGRAPH 1
TYPICAL LANDSCAPE OF THE DOLLY SODS WILDERNESS
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST



Source: *USACE, 23 August 2007*

PHOTOGRAPH 2
VIEW OF MAGNETIC ANOMOLIES DISCOVERED IN THE DOLLY SODS REGION
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Source: *USACE, 23 August 2007*

PHOTOGRAPH 3
VIEW OF A METALLIC OBJECT SUSPECTED OF BEING A ROCKET
DISCOVERED IN THE DOLLY SODS REGION
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Source: *USACE, 23 August 2007*

PHOTOGRAPH 4
VIEW OF A LARGE METALLIC OBJECT SUSPECTED OF BEING A ROCKET
DISCOVERED IN THE DOLLY SODS REGION
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
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CELRL-PM-ME

NOV 15 2010

MEMORANDUM FOR RECORD

SUBJECT: Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) Clarification of Findings and Determination of Eligibility (FDE) for West Virginia Maneuver Area/Dolly Sods, Tucker, Grant, Preston, and Randolph Counties, West Virginia, Property Nos. G03WV0013 and G03WV0065

1. Reference ER-200-3-1, Environmental Quality, Formerly Used Defense Sites (FUDS) Program Policy, Department of the Army, U.S. Army Corps of Engineers, Washington, D.C., 20314, 10 May 2004.

2. This memorandum transmits clarification for the FDE and FUDSMIS property numbers at the subject DERP-FUDS property.

3. The FDE for the West Virginia Maneuver Area was completed for property number G03WV0065 in January 1992. Property G03WV0013, titled WV Maneuver Area/Dolly Sods and encompasses the same property, had already been entered into FUDSMIS. No FDE currently exists for Property No. G03WV0013; however, subsequent project funding for investigations and removal actions have historically been programmed under DERP-FUDS Property No. G03WV0013, Dolly Sods Wilderness Area Project 04. A Remedial Investigation and Feasibility Study were proposed for G03WV0065; however, according to FUDSMIS, only $100.00 was spent under the RI/FS phase in 1992 under Property No. G03WV0065, Project 00. The same project was subsequently recorded No Defense Action Indicated (NDAI) on 30 September 1992. According to FUDSMIS, on 7 April 2005, regulatory concurrence was obtained to NDAI the Property G03WV0065 and focus future work at the Dolly Sods Wilderness Area to Property number G03WV0013.

4. All current and future projects for WV Maneuver Area/Dolly Sods have and will be programmed under DERP-FUDS Property No. G03WV0013. Since the existing FDE for the property was written for G03WV0065, it is hereby attached to this Memorandum for Record and is to serve henceforth to document the eligibility for the WV Maneuver Area/Dolly Sods area G03WV0013. Property G03WV0065 reflects NDAI in FUDSMIS.

5. If you have any questions, please contact Dr. Kari Meier at 502-315-6316.

1 Enclosures

Russell Boyd
Chief, Military Project Management Branch
Planning, Programs and Project Management Division

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 items 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.

Date

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

Worksheet B-3. Inventory Project Report (INPR) Checklist
(Use space at bottom of this worksheet for continuation)

Checklist Preparer:		Date: 13 January 2009
Name: Nickolas McHenry		Title: Civil Engineer
District: Huntington	Phone Number: 304-399-5909	
Email address: nickolas.l.mchenry@usace.army.mil		
Property information:		
Property Name: WV Maneuver Area/Dolly Sods (WVMA/DS)		Property #: G03WV0013
Previous Names, if any: WV Maneuver Area, Dolly Sods Wilderness Area, West Virginia Maneuver Area, Dolly Sods Region		
Former Service: U.S. Army		
Property Location: Congressional District 1, EPA Region 3		
Street:		
City: Davis	County: Tucker, Grant, Preston, Pendleton, and Randolph	State: WV
Latitude (D/M/S): 39° 07' 08" North	Longitude (D/M/S): 79° 27' 09" West	
Current Use (residential, commercial, etc.): Primarily Government (U.S. Forest Service), some commercial and residential		
Primary Property Owner Information (address multiple owners in Comments):		
Name: Kate Goodrich, Public & Legislative Affairs		
Address (if other than above): U.S. Forest Service		
Street: 200 Sycamore St.		
City: Elkins		
Phone Number: 304-636-1800 ext. 220	County: Randolph	State: WV

Indicate the status of the following checklist items in determining the completeness of the INPR. Provide a narrative in the comments section below to explain, and keyed to, the shaded boxes checked:

		Yes	No	NA
Property Document Search:				
X	Were the following records available and used in the preparation of the INPR?			
1	Archive records	X		
2	Site maps, including facility as-built drawings	X		
3	Aerial or ground photographs	X		
4	Prior studies, documents, reports, property contamination records, or public/private sampling data	X		
5	Compliance orders issued to current or past owners/operators		X	
6	Real estate records, deeds, or property transfer records	X		
7	Local historical societies and public libraries	X		
8	EPA/State environmental records or reports	X		
9	EOD incident reports	X		
10	Other documentation	X		

Property Visit:				
X	Indicate whether the following have been contacted and interviewed to obtain information.			
11	Current landowner(s)	X		
12	Neighbors	X		
13	Previous landowner(s)	X		
14	Prior employee(s)	X		
15	Federal agencies, including regulatory agencies	X		
16	State agencies, including regulatory agencies	X		
17	Local agencies, including regulatory and law enforcement agencies	X		
18	Other available sources	X		
19	Was access to the property possible (right of entry provided by landowner)?	X		
20	Was the property physically visited?	X		
21	Was access sufficient to allow for a thorough property inspection?	X		
22	Was access sufficient to identify potential hazards?	X		
23	Did regulatory agencies accompany USACE on the property visit?	X		
24	Did the landowner accompany USACE on the property visit?	X		
25	Was there evidence of a release of hazardous material or use/disposal of military munitions during DoD control?	X		
26	Was there evidence of a release of potential DoD hazardous material into a public or private drinking water supply? [1]		X	
27	Is there evidence of a release into a public or private drinking water supply due to deterioration of the system through ordinary use? [1]		X	
28	Is there evidence of a release from products that are part of the structure of, and result in exposure within, residential buildings or businesses or community structures? [2]		X	
29	Is some other program actively involved with the property (i.e., another Federal, state, or tribal program)?	X		
30	Is there evidence that activities by non-DoD parties at the property may be the source of potential contamination?		X	
31	Was information on hazards found at similar types of FUDS properties considered in identifying potential hazards at this property?	X		
32	Were site maps compared to actual conditions during the site visit?	X		
33	Were photographs taken?	X		
34	Were property owners advised to contact USACE if evidence of potential hazards is found later?	X		
35	Was a.trip report of the property visit prepared?	X		

[1] This can be determined by reviewing public water supply sampling data. Provide discussion of how it was determined to be release due to DoD activities rather than by current or past owners/operators.
[2] This question is from the EPA Pre-CERCLIS Screening Assessment Checklist/Decision Form, EPA-540-F-98-039 *"Improving Site Assessment: Pre-CERCLIS Screening Assessments."*

Property Eligibility Determination (refer to Chapter 3):				
36	Is the property Categorically Excluded?		X	
37	Are there release, hold harmless, "as-is", or indemnification clauses in deeds or property transfer documents that limit DoD liability?		X	
38	Is there evidence of this property being a Third Party Site?		X	
39	Is the property eligible under FUDS?	X		
40	If necessary, has a ***"Categorical Exclusion or Ineligible Property"*** worksheet been prepared			X
FUDS Property Screening:				
41	Was a CERCLA Preliminary Assessment completed?	X		
42	Was a RAC Worksheet prepared for the property?		X	
Project Eligibility Determination (refer to Chapter 3):				
43	Have all typical hazards been investigated for possible occurrence at this type of property?	X		
44	Were hazards identified?	X		
45	Are identified hazards of DoD Origin?	X		
46	If identified hazards were of non-DoD origin, has the lead regulatory agency been informed? (Provide name, phone number, date)			X
47	Is the current owner under a RCRA or CERCLA clean-up order?		X	
48	Has the "right of first refusal" been exercised by an adjacent DoD installation?			X
49	Is there evidence of beneficial use?		X	
50	Are there other policy considerations against recommending a project?		X	
51	Are eligible FUDS projects recommended? (If yes, identify projects below)	X		
INPR Preparation and Review:				
52	Is the INPR prepared consistent with INPR Content Matrix (Table B-1)?	X		
53	Is the INPR Property Survey Summary Sheet consistent with Table B-2?	X		
54	Is the Project Summary Sheet(s) consistent with Table B-3?	X		
55	If appropriate, has a ***"BD/DR Project Summary Sheet Checklist"*** been prepared? (See Worksheet B-2)			X
56	If the INPR recommends a PRP/HTRW project, has the PRP District reviewed the INPR? (See Figure B-1)			X
57	If the INPR recommends a PRP/HTRW project has the HTRW Center of Expertise reviewed the INPR? (See Figure B-1)			X
58	If the INPR recommends a MMRP or PRP/MMRP project, has the MM Center of Expertise reviewed the INPR? (See Figure B-1)	X		
59	Was the draft INPR coordinated with Office of Counsel and Real Estate?	X		
60	Was the draft INPR shared with the Lead Regulatory Agency after internal USACE review?	X		

Narrative comments to explain above notations: (Key your comments to the checklist item number)

10 and 18. The list of studies and reports reviewed in the preparation of this INPR are listed on pages 5 and 6 of Enclosure 1 in this document.

25. The DA used the property for low altitude mountain training, regimental troop maneuvers, and artillery/mortar target practice during WWII. Numerous MEC and MD have been found on the property. Based on the discovered MEC and historical documentation, rounds fired during the 1943-1944 training included: 40-mm, 57-mm armor-piercing, 60-mm, 105-mm and 155-mm high explosive projectiles, 81-mm high explosive and smoke rounds, and 4.2-inch inert, high explosive, and smoke rounds.

29. A large portion of the property is owned by the U.S. Forest Service and is part of the Monongahela National Forest and the Canaan Valley National Wildlife Refuge.

42. The Military Munitions Site Prioritization Protocol (MRSPP) has replaced the RAC Worksheet. The results (Table 29) of the MRSPP for each MRS are included in this INPR with the associated Project Summary Sheets.

44, 45, 51. The following is a summary of the existing and proposed projects for this property:

G03WV001304 (MMRP) – *Dolly Sods Removal.* This existing MMRP project was approved on 25 May 1990 to address munitions-related contamination at an area of the property known as the Dolly Sods Region. While it was approved as MMRP project G03WV006500, all funding has been recorded under MMRP project G03WV001304. Consequently, this INPR seeks after-the-fact approval of this on-going MMRP project. The Dolly Sods Region consists of approximately 18,000 acres located in the northwest portion of the WV Maneuver Area/Dolly Sods property. Project 04 has transitioned to the Long-Term Management (LTM) phase. An Archives Search Report (ASR), Engineering Evaluation and Cost Analysis (EE/CA), Remedial Investigation/Feasibility Study (RI/FS), and a Munitions and Explosives of Concern (MEC) removal action have been performed. Although a MEC removal action has been conducted, there is the potential that visitors could come in contact with MEC that still exists in the area because full ordnance clearance was not possible. The LTM phase includes a Public Awareness Program to inform the public of the ordnance hazards in the area. Periodic property inspections and Five-Year Ordnance and Explosives Recurring Reviews are also required to assure that the previous MEC removal action remains protective of the public.

G03WV001305 (MMRP) – *Dailey Infiltration Camp.* Project 05 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Dailey Infiltration Camp being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 5.

G03WV001306 (MMRP) – *WVMA Ammunition Depot.* Project 06 is proposed to address the possible munitions-related contamination that may have occurred as a result of the WMVA Ammunition Depot being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 6.

Narrative comments to explain above notations: (Key your comments to the checklist item number)

G03WV001307 (MMRP) – *Maneuver Area.* Project 07 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Maneuver Area being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 7.

G03WV001308 (MMRP) – *Fore Knobs-Bear Rocks Firing Ranges.* Project 08 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Fore Knobs-Bear Rocks Firing Ranges being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 8.

G03WV001309 (MMRP) – *Bearden Knob Firing Range.* Project 09 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Bearden Knob Firing Range being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 9.

G03WV001310 (MMRP) – *Brown/Cabin Mountain Firing Ranges.* Project 10 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Brown/Cabin Mountain Firing Ranges being located on the property. This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 10.

G03WV001311 (MMRP) – *Buena Small Arms Firing Range.* Project 11 is proposed to address the possible munitions-related contamination that may have occurred as a result of the Buena Small Arms Range being located on the property This MMRP project will include all necessary CERCLA response actions required to obtain project close-out. A Project Summary Sheet including a project location map and the MRSPP results (Table 29) is included at Enclosure 11.

EXECUTIVE SUMMARY

The Environmental and Remediation Section of the U.S. Army Corps of Engineers, Huntington District (CELRH EC-CE) conducted a Preliminary Assessment (PA) at the former West Virginia Maneuver Area (WVMA) in Tucker, Grant, Pendleton, Preston, and Randolph Counties, WV, under the Defense Environmental Restoration Program – Formerly Used Defense Site (DERP-FUDS) program. The FUDS Management Information System (FUDSMIS) property number is G03WV0013. This PA was conducted under the authority of Executive Order 12580 and the Comprehensive Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). This PA was also conducted in accordance with the United States Environmental Protection Agency (USEPA) *Guidance for Performing Preliminary Assessments Under CERCLA* (USEPA, 1991) and the U.S. Army Corps of Engineers (USACE) *FUDS Program: Guidance to Performing Preliminary Assessments Under FUDS* (USACE, 2005).

The former WVMA consisted of approximately 2,180,367 acres of land covering portions of Grant, Pendleton, Preston, Randolph and Tucker counties in northeastern West Virginia generally near the Town of Davis. Maneuver rights, secured by the Rents and Claims Board, Fifth Service Command, secured 350,416 acres of public lands (all part of the Monongahela National Forest), 48,557 acres of leased property for inclusion in the Impact Area, and 1,781,394 acres so-called "lesser interests". According to a warning order notice dated 26 March 1945, these "lesser interests" were covered by "trespass agreements." The land owners had granted use of these lands to the Army verbally; there are no records that describe the "trespass agreements" or the areas that they covered (USACE, 1991). A letter dated 15 July 1943 from the Secretary of War to the Secretary of Agriculture requested that there is a military necessity for the use of portions of the Monongahela National Forest for Army Maneuver purposes. In a response letter dated 4 August 1943 from the Secretary of Agriculture to the Secretary of War, the Department of Agriculture grants permission for the Army to use all Monongahela National Forest land in Preston, Grant, Randolph, Tucker and Pendleton Counties in West Virginia, covering 341,266 acres.

The former WVMA was the scene of special low-altitude mountain training activities during World War II. Regiments and battalions of larger Infantry Divisions came to the area from maneuvers and installations in other parts of the country to introduce the troops to various aspects of mountain warfare. Based on preliminary reconnaissance of the area within the WVMA, it was found to be similar to that of the Apennines and lower ranges of the Alps in Italy. This allowed the troops to simulate conditions that would possibly be encountered during the invasion of Italy and other mountainous regions in the war-time theater.

Regiment exercises conducted at the WVMA emphasized physical conditioning, topography, map interpretation, bivouac establishment, stream crossing and military problems unique to mountainous areas. Training schedules for infantry division combat teams at the WVMA typically included the following:

- Marches over mountainous terrain including use of Yukon type pack-boards (transporting instruments, radios, light weapons, and other loads), visual signaling, mountain surveying and other regiment exercises.
- Specialized programs including training for engineers (improvised river crossing) and medics (including evacuation medicine, first aid and evacuation).
- Occupation of difficult positions by firing batteries.
- 3-day tactical problem for artillery, winding up with a "Shoot" involving live rounds.
- 2-day battalion combat team problems.
- Cliff-scaling training for limited officials and enlisted men.
- An Impact Area that served as a training facility for field artillery testing.
- Local security in rugged terrain including scouting and patrolling, use of trip wires, sign and countersign, and dropping of all rank in addressing officers.

Based on the findings of this report, the following MMRP projects are proposed:

MRA #1/MRS #1 – Dailey Infiltration Camp

Findings: Based on historical documentation, aerial photography interpretation and a site visit conducted on the property, it is determined that the Dailey Infiltration Camp was once used as a small arms range (and potential grenade range) and obstacle course training facility during the operational period of the WVMA. **Current Use:** The area encompassed in this proposed project is currently a portion of the Monongahela National Forest and is currently not developed. **Estimated Proposed Project Acreage:** 200 acres

Conclusions: A site inspection (SI) should be conducted to determine the presence of small arms and other possible MEC located on this property. Site sampling should be conducted to determine the presence of potential munitions constituents (MC) contamination located on this property.

MRA #2/MRS #2 – WVMA Ammunition Depot

Findings: Based on historical mapping, historical documentation, and a site visit it is determined that the WVMA Ammunition Depot served as the main ammunition storage area during the operational period of the WVMA. **Current Use:** The area encompassed in this proposed project is currently a vacant field previously used for growing crops. **Estimated Proposed Project Acreage:** 4 acres

Conclusions: A SI should be conducted to determine the presence of Discarded Military Munitions (DMM) located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

MRA #3/MRS #3 – Jenningston Training Area

Findings: Based on the canister find in the Otter Creek Wilderness, historical documentation, and aerial photography interpretation, it is determined that the area around the community of Jenningston, WV was once used as infantry division troop maneuver area used during the

operational period of the WVMA. This site is generally bounded by the Otter Creek Wilderness Area to the west, Mozark Mountain to the north, Chimney Rock/community of Dryfork to the east and the community of Sully to the south. **Current Use:** The area encompassed in this proposed project is currently a combination of Monongahela National forest land and farmland with residences. **Estimated Proposed Project Acreage:** 40,000 acres

Conclusions: A SI should be conducted to determine the presence of possible MEC located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

MRA #4/MRS #4 – Fore Knobs/Bear Rocks Firing Ranges

Findings: Based on UXO found in proximity to this site, historical mapping and documentation, interviews and aerial photography interpretation, it is determined that the Fore Knobs/Bear Rocks Firing Ranges was once used as firing points and target locations for 105-mm and 155-mm howitzer rounds used during the operational period of the WVMA. **Current Use:** The area encompassed in this proposed project is currently a combination of Monongahela National forest land, The Nature Conservancy's Bear Rocks Preserve, forested land and farmland with residences. **Estimated Proposed Project Acreage:** 42,000 acres

Conclusions: A SI should be conducted to determine the presence of MEC located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

MRA #5/MRS #5 – Bearden Knob Firing Range

Findings: It was determined that the area near Bearden Knob was once used as a 105-mm and 155-mm howitzer round firing point and possible anti-tank firing range used during the operational period of the WVMA. These determinations have been made based on rocket finds near Yellow Creek, a UXO find on Cabin Mountain (105-mm howitzer round), historical mapping, historical documentation, aerial photography, and interviews. **Current Use:** The area encompassed in this proposed project is currently a combination of private property (residences, agricultural land) and Canaan Valley national Wildlife Refuge property. **Estimated Proposed Project Acreage:** 8,000 acres

Conclusions: A SI should be conducted to determine the presence of MEC located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

MRA #6/MRS #6 – Brown/Cabin Mountain Firing Ranges

Findings: It was determined that the areas around Beaver and Yellow Creeks were once used as a firing point for a 155-mm howitzer rounds, firing points for 60-mm and 81-mm mortars, and possible rocket or firing range used during the operational period of the WVMA. Brown Mountain was used as target area for the 60-mm and 81-mm mortar rounds fired from Yellow Creek during the operational period of the WVMA. The Cabin Mountain Firing Range was used

as a target location for 105-mm and 155-mm howitzer rounds used during the operational period of the WVMA. These determinations have been made based on historical mapping, historical documentation, aerial photography interpretation, and interviews with personnel familiar with the WVMA. A 105-mm howitzer round was found in 2006 on Cabin Mountain within the Canaan Valley National Wildlife Refuge. **Current Use:** The area encompassed in this proposed project is currently a combination of a preserve owned by Canaan Valley Institute, U.S. Fish and Wildlife's Canaan Valley National Wildlife Refuge. **Estimated Proposed Project Acreage:** 16,000 acres

Conclusions: A SI should be conducted to determine the presence of MEC located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

MRA #7/MRS #7 – Buena Small Arms Firing Range

Findings: Based on historical documentation, aerial photography interpretation and a site visit conducted on the property, it is determined that the Buena Small Arms Firing Range was once used as a small arms range (and possible grenade range) used during the operational period of the WVMA. **Current Use:** The area encompassed in this proposed project is currently a portion of the Canaan Valley National Wildlife Refuge. **Estimated Proposed Project Acreage:** 50 acres

Conclusions: A SI should be conducted to determine the presence of small arms and other possible MEC located on this property. Site sampling should be conducted to determine the presence of potential MC contamination located on this property.

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001305
FEDERAL FACILITY ID NO. WV9799F3460
DAILEY INFILTRATION CAMP

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. The WVMA/DS property included an area known as the Dailey Infiltration Camp. This camp, located near Dailey, West Virginia, had an obstacle course, a small arms firing range, and potential grenade range. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Dailey Infiltration Camp being located on the property.

PROJECT ELIGIBILITY: The Dailey Infiltration Camp was built by the 150th Engineering Combat Battalion. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD) or Munitions Constituents (MC) could be the result of the Army's former use of the site for maneuvers and target practice.

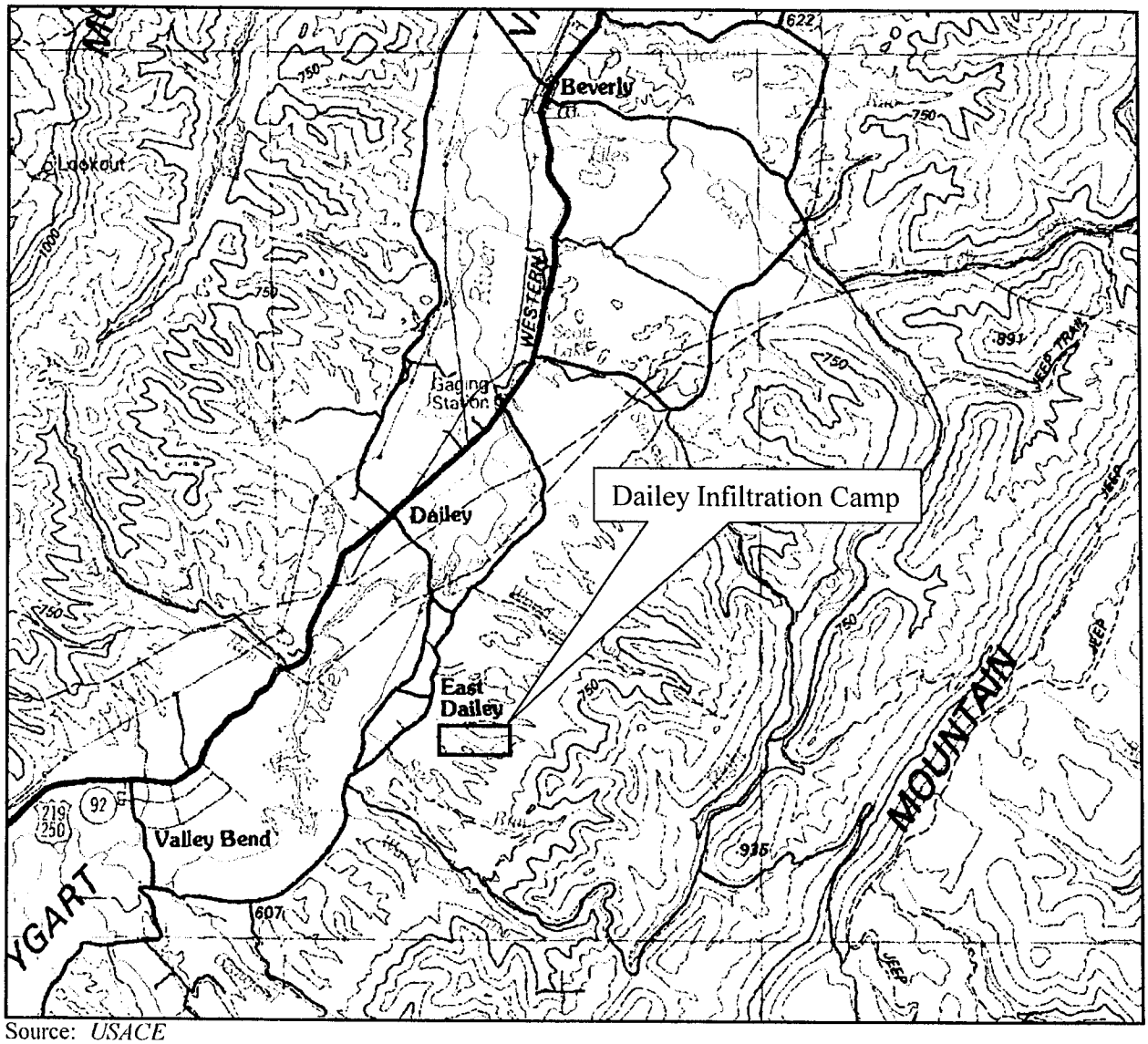
It should be noted that the Dailey Infiltration Camp is not located within the contiguous boundaries of the WVMA/DS property shown on the 1950 Real Estate map (Figure 3, Enclosure 1). However, the site is part of the FUDS-eligible property described in the 7 January 1992 Findings and Determination of Eligibility (FDE). The property is located in the Monongahela National Forest, near the community of Dailey, Randolph County, West Virginia. A letter, dated 15 July 1943, from the Secretary of War to the Secretary of Agriculture requested use of portions of the Monongahela National Forest for Army Maneuver purposes. Army use of 341,266 acres of Monongahela National Forest land in Preston, Grant, Randolph, Tucker, and Pendleton Counties in West Virginia was permitted by letter dated 4 August 1943. The site at which the former Dailey Infiltration Camp was located falls within the boundaries of this property.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

FIGURE 5
DAILEY INFILTRATION CAMP LOCATION MAP
PROJECT NO. G03WV001305
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				**5**	

MRSPP RESULTS
DAILEY INFILTRATION CAMP
PROJECT NO. G03WV001305
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001306
FEDERAL FACILITY ID NO. WV9799F3460
WVMA AMMUNITION DEPOT

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. According to a 1950 Real Estate map (Figure 3, Enclosure 1), the WVMA/DS property included an ammunition depot. The Real Estate map shows the Ammunition Depot located on the east side of Highway 219, just north of Elkins, West Virginia. The WVMA Ammunition Depot served as the main storage area for ammunition during the operational period of the WVMA/DS. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Ammunition Depot being located on the property.

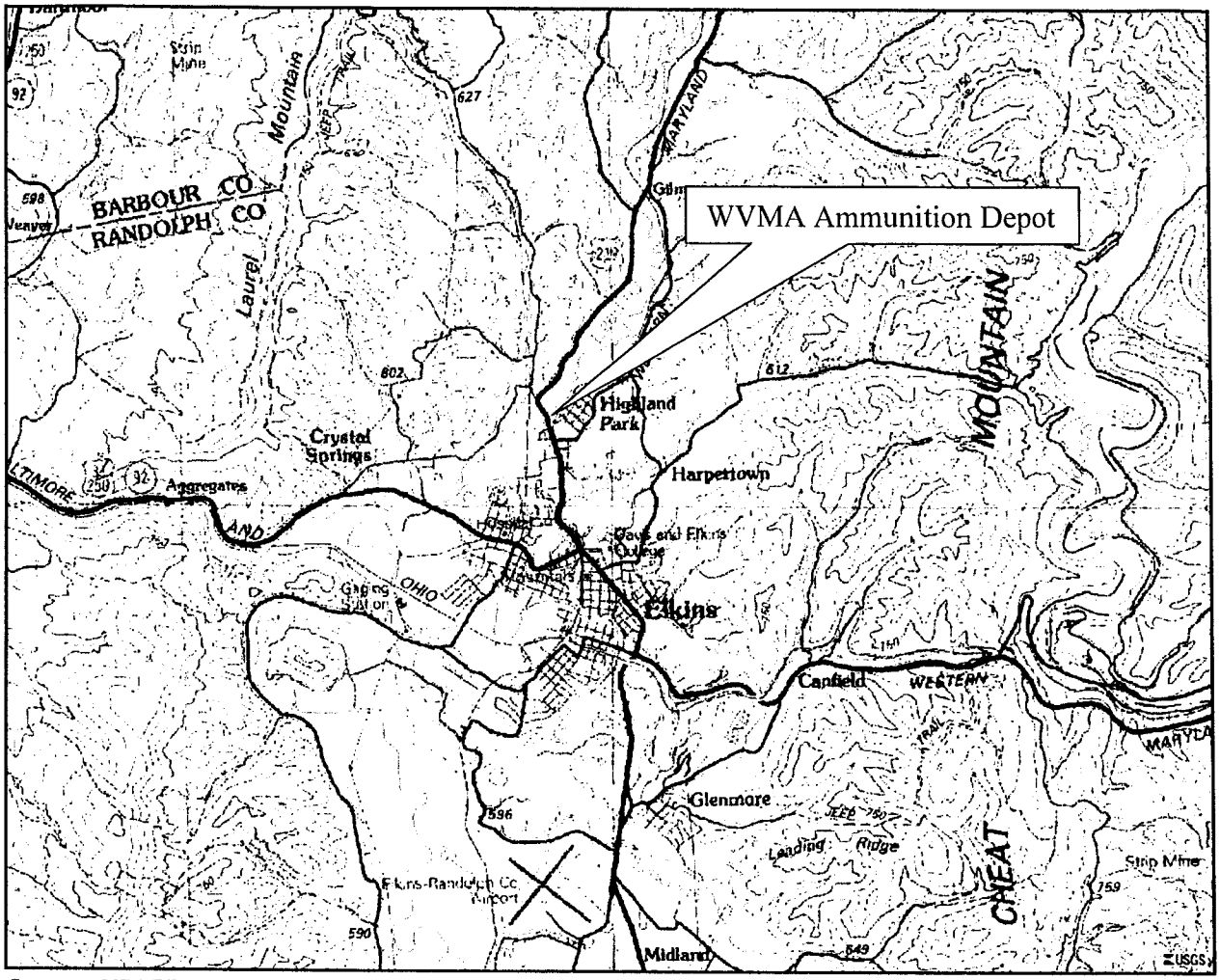
PROJECT ELIGIBILITY: The Army utilized the WVMA Ammunition Depot to store ammunition for the WVMA/DS during World War II. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD), or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

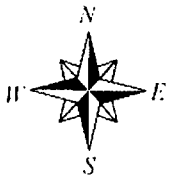


FIGURE 6
WVMA AMMUNITION DEPOT LOCATION MAP
PROJECT NO. G03WV001306
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				**7**	

MRSPP RESULTS
WVMA AMMUNITON DEPOT
PROJECT NO. G03WV001306
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001307
FEDERAL FACILITY ID NO. WV9799F3460
MANEUVER AREA

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. One of the training areas developed for use in the WVMA/DS was the Maneuver Area, also known as the Jenningston Training Area, generally located between the communities of Gladwyn, Sully, Jenningston, Red Creek, and Dry Fork, West Virginia. The Jenningston Training Area included areas for rock climbing exercises, troop maneuver problems, and potential mortar firing. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Maneuver Area being located on the property.

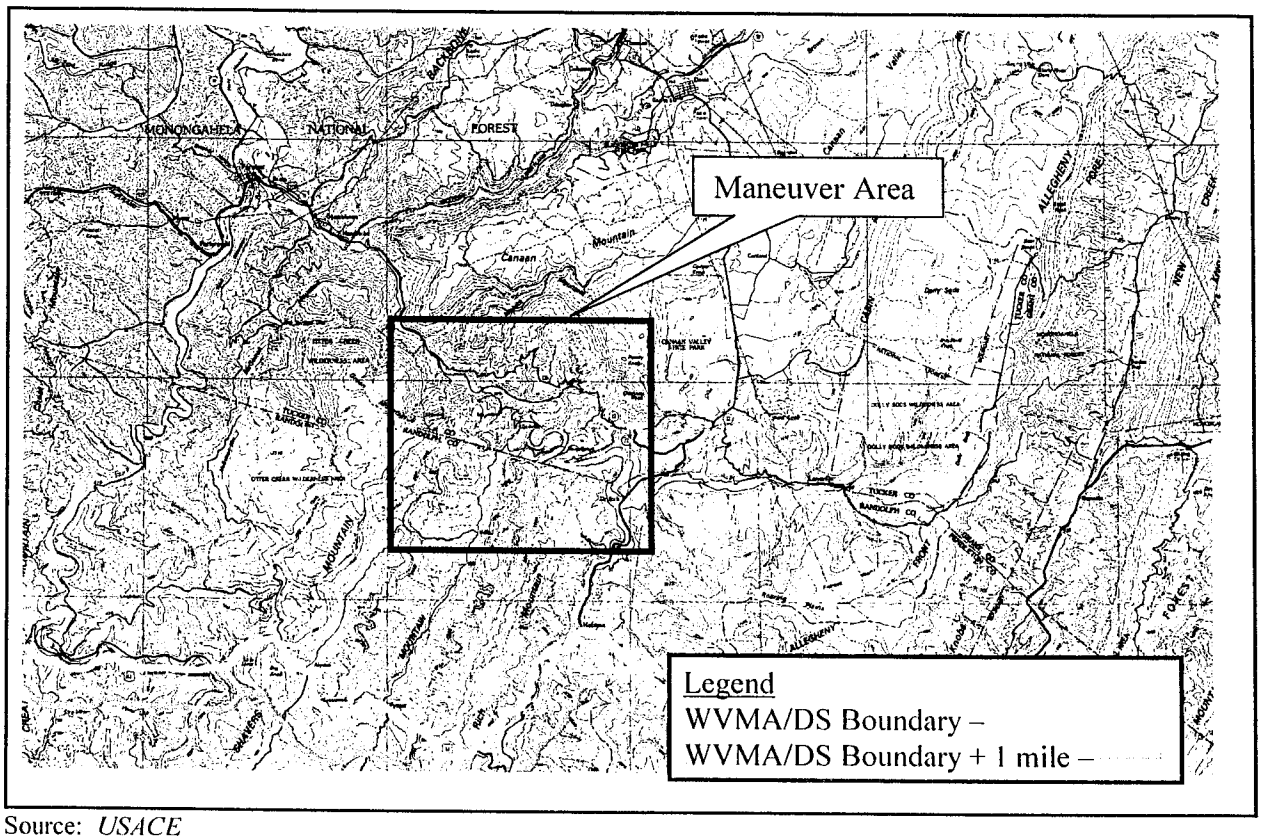
PROJECT ELIGIBILITY: The Army utilized the Maneuver Area of the WVMA/DS property for training during World War II. In 2006, Monongahela National Forest personnel discovered 60-mm and 81-mm shipping canisters in a cave at the site. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD), or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

FIGURE 7
MANEUVER AREA LOCATION MAP
PROJECT NO. G03WV001307
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
		MRS or ALTERNATIVE PRIORITY		**7**	

MRSPP RESULTS
MANEUVER AREA
PROJECT NO. G03WV001307
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001308
FEDERAL FACILITY ID NO. WV9799F3460
FORE KNOBS-BEAR ROCKS FIRING RANGES

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. The former Fore Knobs-Bear Rocks Firing Ranges were part of an impact area which consisted of 48,428.59 acres between the communities of Davis and Petersburg, West Virginia.

During the operational period of the WVMA/DS, the Headquarters in Elkins, West Virginia, published articles to warn the public as to where Army firing would be conducted in the coming week(s). The following areas within the Fore Knobs-Bear Rocks Firing Ranges were noted in the articles: Fore Knobs, Rohrbaugh School, Stoney River, Bear/Stack Rocks (specifically noted as 105-mm impact location), Jordan Run, State Route 28, and the Allegheny Front. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Fore Knobs-Bear Rocks Firing Ranges being located on the property.

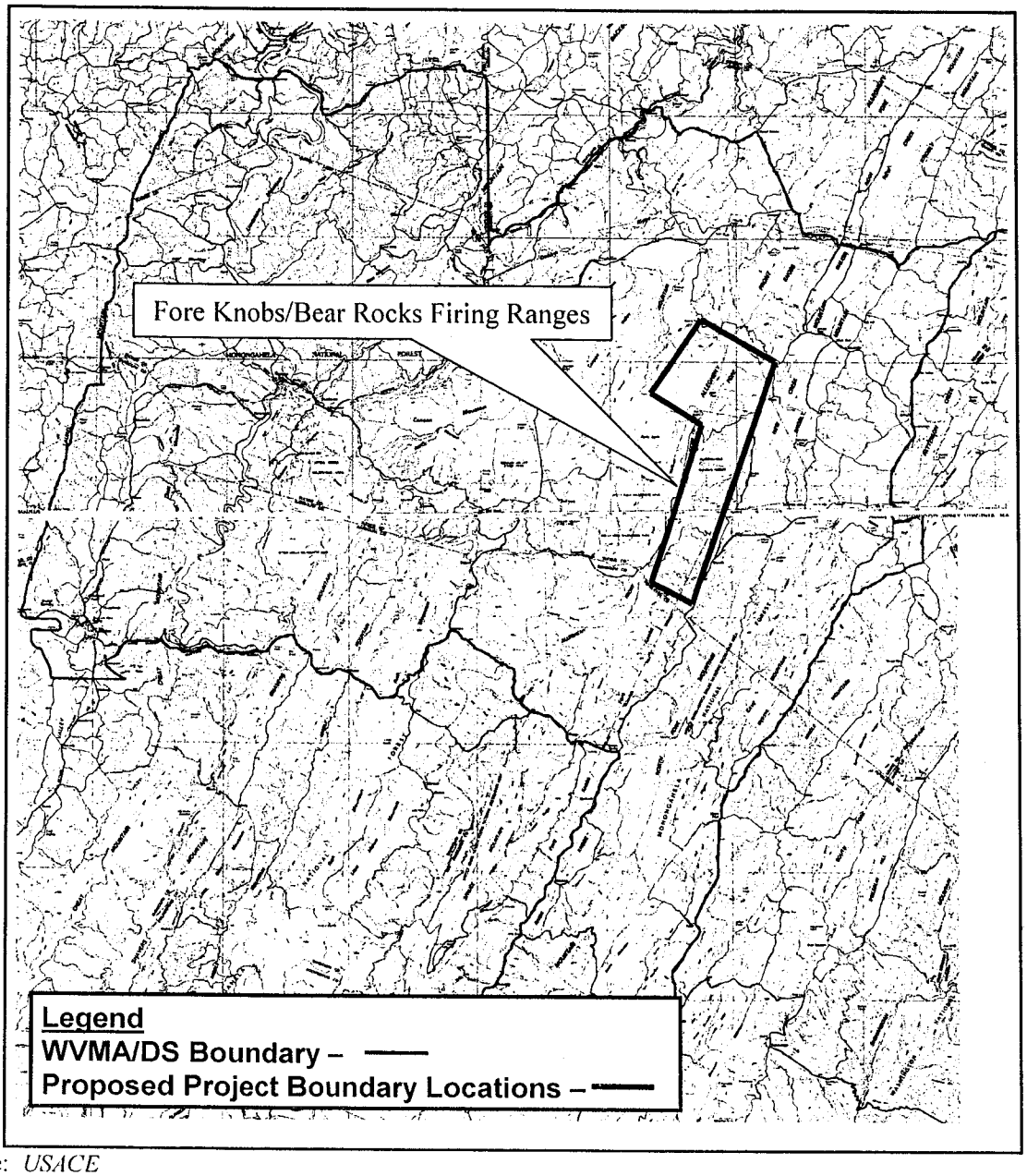
PROJECT ELIGIBILITY: The Army utilized the Fore Knobs-Bear Rocks Firing Ranges as 105-mm and 155-mm howitzer practice firing ranges during World War II. Real Estate documentation indicates that 48,428.59 acres of property owned by various individuals were leased by the Department of Defense for use as an impact area. Historical maps show firing locations along the Fore Knobs area of the Allegheny Front and impact areas at Bear and Stack Rocks. In 1999, a 105-mm howitzer round was discovered by a contractor of The Nature Conservancy, property owner of the Bear Rocks Area. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD) or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

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FIGURE 8
FORE KNOBS-BEAR ROCKS FIRING RANGES LOCATION MAP
PROJECT NO. G03WV001308
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				**3**	

MRSPP RESULTS
FORE KNOBS-BEAR ROCKS FIRING RANGES
PROJECT NO. G03WV001308
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001309
FEDERAL FACILITY ID NO. WV9799F3460
BEARDEN KNOB FIRING RANGE

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. The former Bearden Knob Firing Range was part of an impact area which consisted of 48,428.59 acres between the communities of Davis and Petersburg, West Virginia.

During the operational period of the WVMA/DS, the Headquarters in Elkins, West Virginia, published articles to warn the public as to where Army firing would be conducted in the coming week(s). One such article indicated that firing would occur in the vicinity of Bearden Knob firing toward Cabin Mountain. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Bearden Knob Firing Range being located on the property.

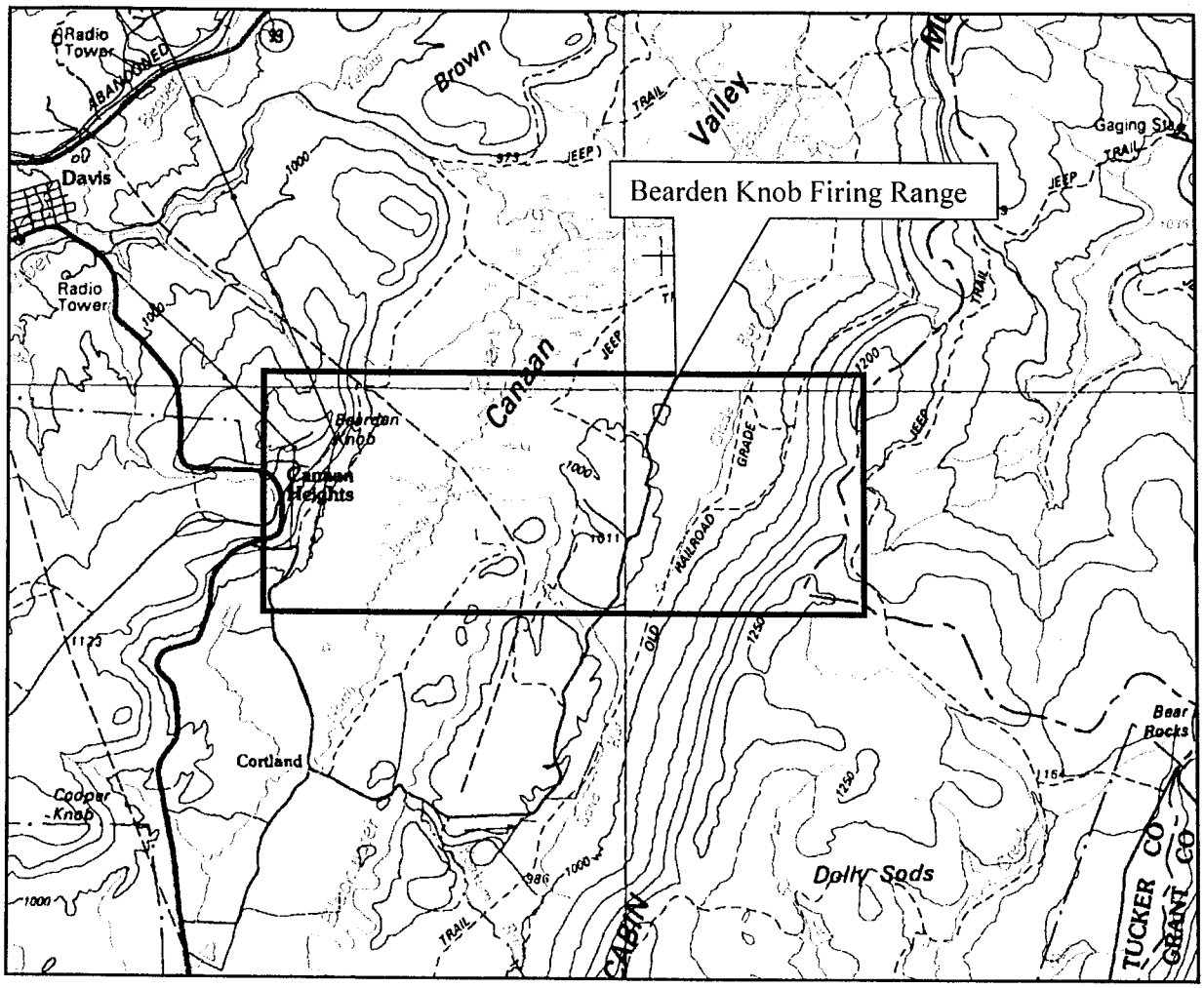
PROJECT ELIGIBILITY: The Army utilized the Bearden Knob Firing Range as a 105-mm firing range during World War II. Real Estate documentation indicates that 48,428.59 acres of property owned by various individuals were leased by the Department of Defense for use as an impact area. Historical maps show Bearden Knob marked as a firing point with an impact area located to the east, on Cabin Mountain. Documentation on the 628th Anti-Tank Battalion describes an anti-tank target range in the area of Bearden Knob, although the exact location of this range has not yet been determined. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD) or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

FIGURE 9
BEARDEN KNOB FIRING RANGE LOCATION MAP
PROJECT NO. G03WV001309
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				**3**	

MRSPP RESULTS
BEARDEN KNOB FIRING RANGE
PROJECT NO. G03WV001309
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NO. WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. The former Brown/Cabin Mountain Firing Ranges were part of an impact area which consisted of 48,428.59 acres between the communities of Davis and Petersburg, West Virginia.

During the operational period of the WVMA/DS, the Headquarters in Elkins, West Virginia, published articles to warn the public as to where Army firing would be conducted in the coming week(s). One such article indicated that firing would occur in the vicinity of Brown Mountain/Cabin Mountain at the following locations: Cabin Mountain to Brown Mountain (machine gun, mortar, and howitzer firing), Yellow Creek (.30 caliber machine gun fire), and Northern Canaan Valley (machine gun and mortar firing). This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Brown/Cabin Mountain Firing Ranges being located on the property.

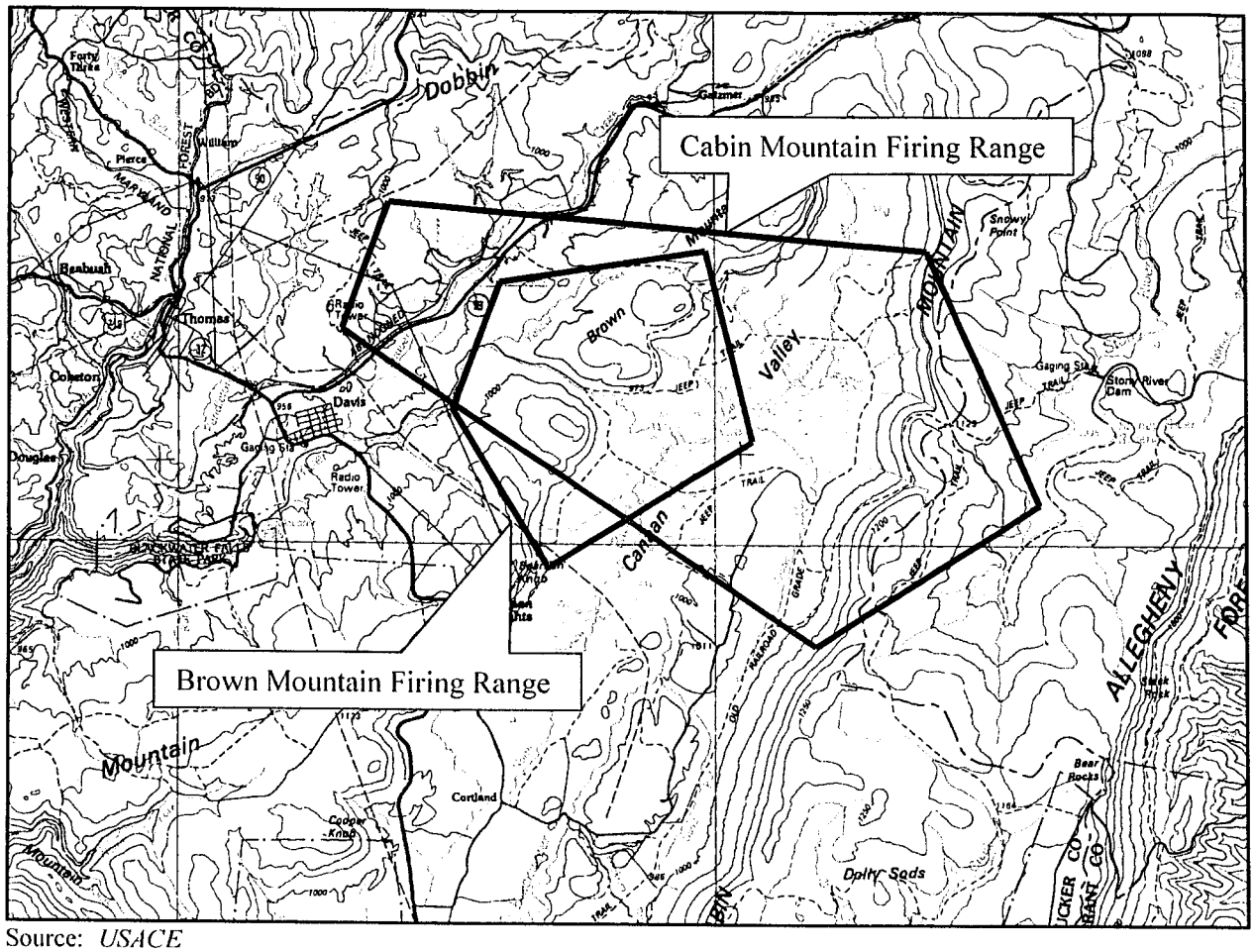
PROJECT ELIGIBILITY: The Army utilized the Brown Mountain Firing Range as 60-mm and 81-mm firing range and the Cabin Mountain Firing Range as a 155-mm howitzer firing range during World War II. Real Estate documentation indicates that 48,428.59 acres of property owned by various individuals were leased by the Department of Defense for use as an impact area. Historical maps show a firing point for 60-mm and 81-mm mortars at Yellow Creek, with an impact area located on Brown Mountain, to the east. The maps also show a firing point and along Beaver Creek, with an impact area on Cabin Mountain to the east. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD) or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

FIGURE 10
BROWN/CABIN MOUNTAIN FIRING RANGE LOCATION MAP
PROJECT NO. G03WV001310
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
		MRS or ALTERNATIVE PRIORITY		**3**	

MRSPP RESULTS
BROWN/CABIN MOUNTAIN FIRING RANGES
PROJECT NO. G03WV001310
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

PROJECT SUMMARY SHEET
for
DERP-FUDS MMRP PROJECT NO. G03WV001311
FEDERAL FACILITY ID NO. WV9799F3460
BUENA SMALL ARMS FIRING RANGE

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
23 December 2009

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former WV Maneuver Area/Dolly Sods (WVMA/DS) from 1943-1944 for low altitude mountain training, regimental troop maneuvers, and target practice during World War II. The WVMA/DS property included a small arms firing range near the community of Buena, West Virginia. This MMRP project is proposed to address the possible munitions-related contamination that may have occurred as a result of the Buena Small Arms Firing Range being located on the property.

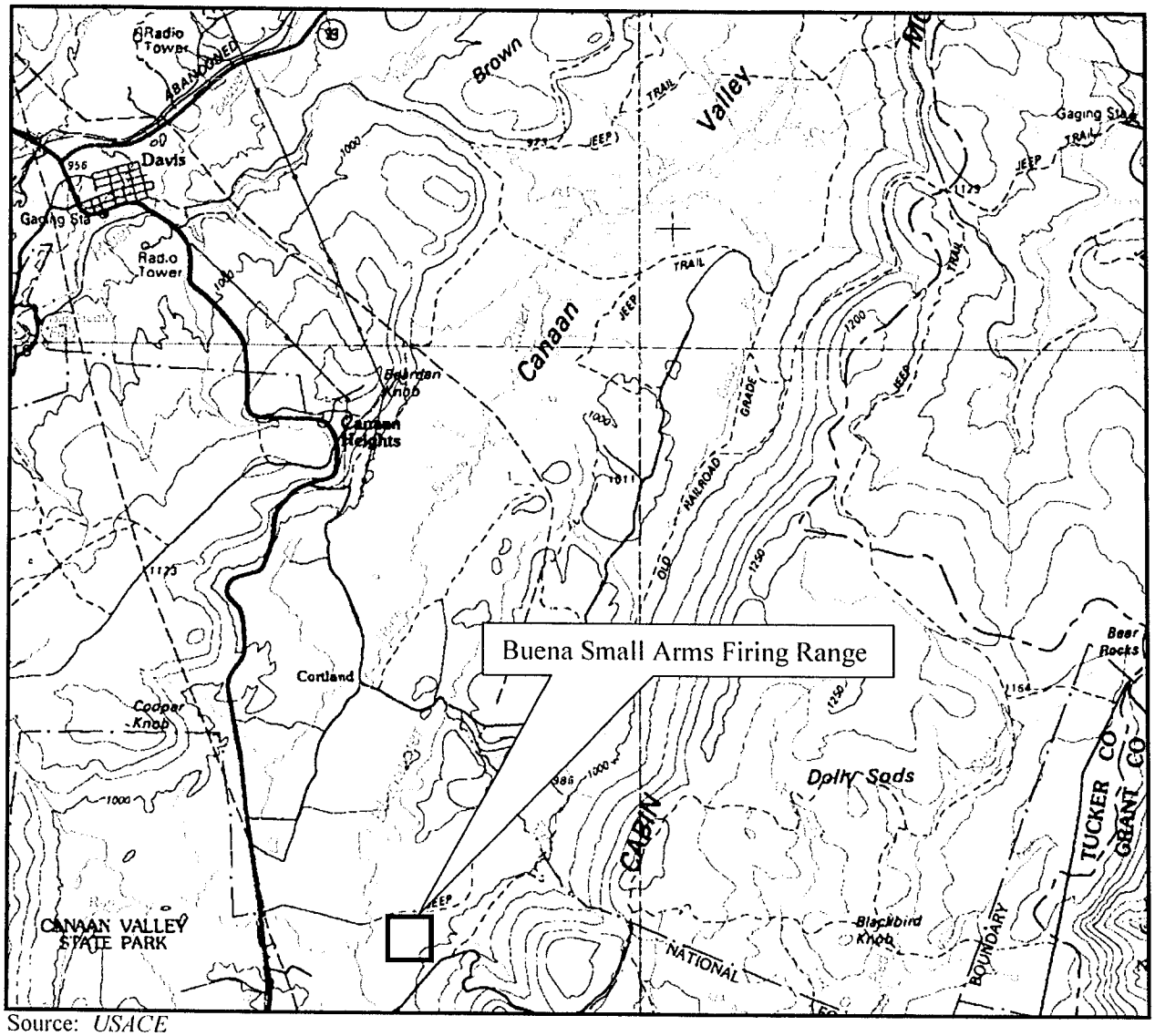
PROJECT ELIGIBILITY: The Army utilized the Buena Small Arms Firing Range a small arms firing range and potential grenade range during World War II. Remnants of the small arms range are still visible along Timberline Road in Canaan Valley, West Virginia. There is a potential for munitions-related contamination based on the nature of the past Army operations at the site. The presence of Munitions and Explosives of Concern (MEC), Munitions Debris (MD) or Munitions Constituents (MC) could be the result of the Army's former use of the site.

POLICY CONSIDERATIONS: There is no policy that prohibits this project.

PROPOSED ACTIVITIES: This MMRP project will include all necessary CERCLA response actions required to obtain project close-out.

POINTS OF CONTACT: Mr. Richard L. Meadows, CELRH-PM-PP-P, 304-399-5388; Mr. Nickolas L. McHenry, CELRH-EC-CE, 304-399-5909; Mr. William D. Veith, CEHNC-CX-MM, 256-895-1592; Dr. Kari Meier, CELRL-ED-E, 502-315-6316.

LEAD REGULATOR: Mr. Donald Martin, West Virginia Department of Environmental Protection, 304-924-6211.



Source: *USACE*

FIGURE 11
BUENA SMALL ARMS FIRING RANGE LOCATION MAP
PROJECT NO. G03WV001311
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST

Table 29
MRS Priority

DIRECTIONS: **In the chart below, circle the letter** rating **for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical** priority **for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the** MRS or Alternative Priority **box at the bottom of the table.**

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	(7)	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		(Evaluation Pending)	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		(No Known or Suspected CWM Hazard)		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				**7**	

MRSPP RESULTS
BUENA SMALL ARMS FIRING RANGE
PROJECT NO. G03WV001311
WV MANEUVER AREA/DOLLY SODS
DAVIS, WEST VIRGINIA
39° 07' 08" NORTH, 79° 27' 09" WEST