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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008
(Revised from 7 January 1992)

PROPERTY NAME: WV Maneuver Area/Dolly Sods; Dolly Sods Wilderness Area; West Virginia Maneuver Area; Dolly Sods Region

LOCATION: The former WV Maneuver Area/Dolly Sods (WVMA/DS) consisted of approximately 2,180,367 acres in the Monongahela National Forest, covering portions of Preston, Pendleton, Tucker, Grant, and Randolph Counties, near Davis, West Virginia. The property is geographically located at N 39^0 07' 08", W 79^0 27' 09" and is located in Congressional District 1 and EPA Region 3. Refer to the attached Vicinity and Property Maps at Enclosure 2, Figures 1 and 2.

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 were public lands (all part of the Monongahela National Forest), 48,557 were leased from the public or businesses, and 1,781,394 were so-called "lesser interests", which were covered by "trespass agreements." (It should be noted that the FDE states that 1,781,769 acres were lesser interest, but that number has been revised to the amount show above, 1,781,394.) Apparently, 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 covered. Within the former WVMA/DS, artillery/mortar practice activities were reported to have been confined to an area of approximately 50,000 acres, in the eastern side of the former WVMA/DS about 12 to 15 miles west of Petersburg, WV. The approved Findings and Determination of Eligibility is included at Enclosure 4. (It should be noted that in 2005, the Huntington District revised the DERP-FUDS property name for Property No. G03WV0013 from Dolly Sods Wilderness Area to WV Maneuver Area/Dolly Sods. A duplicate DERP-FUDS property, Property No. G03WV0065, West Virginia Maneuver Area, existed in the inventory of DERP-FUDS properties. The previous INPRs, FDEs, investigations and ordnance removal actions contained references to G03WV0065 in the documents, and in many instances, these documents also contained the combined name "Dolly Sods Wilderness Area (West Virginia Maneuver Area)", which was actually not the accurate DERP-FUDS property name. However, project funding for these investigations and removal actions had actually been programmed under DERP-FUDS Property No. G03WV0013, Dolly Sods Wilderness Area. Since the Dolly Sods Wilderness Area is contained within the

G03WV001304_01.08_0021_a

former WVMA DERP-FUDS property, and no work other than INPR preparation had been funded under Property No. G03WV0065, the USACE declared No Defense Action Indicated (NDAI) for DERP-FUDS Property No. G03WV0065 on 7 April 2005 and revised the name of DERP-FUDS Property No. G03WV0013 to WV Maneuver Area/Dolly Sods. The name Dolly Sods was retained in the property name due to the name of the ordnance removal project G03WV001304 and the vast references to the Dolly Sods Wilderness in past documents. All current and future projects have and will be programmed under DERP-FUDS Property G03WV0013.)

It is documented [based upon found Munitions of Explosive Concern (MEC) and MEC-related scrap] that rounds fired during the 1943 to 1944 military training included 40 mm, 57 mm armor-piercing (AP) and 105 mm and 155 mm high explosive (HE) projectiles, and 60 mm HE, 81 mm HE and smoke round (SR), and 4.2 inch inert (sand-loaded rounds), HE, and SR mortars. The SR that were used, were reported to contain a solution of sulphur trioxide in chlorosulfonic acid (FS) 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. It is also documented that the Allegany Ballistics Laboratory of George Washington University, under a contract with the Department of the Navy, fired experimental rocket mortars; the rocket mortars contained no explosive components, the laboratory completed its firing in November 1945. Information concerning the actual amount of ordnance used for regional training purposes is not available; records regarding military operations in the area are scarce because the majority of pertinent documents are believed to have been lost or destroyed over time.

Records regarding training operations are difficult to find, but substantial historical information was obtained for inclusion in the WVMA Preliminary Assessment conducted in 2007-08. In this report and previous historical documents, it is reported that targets of artillery fire at least included the southern face of Blackbird Knob and the eastern face of Cabin Mountain. Historical newspaper articles, posted to note hazard avoidance areas by the WVMA Headquarters, and training journals discovered at the National Archives stated that the following areas were utilized as either firing points or targets within the impact area: Stoney River, Fore Knobs (firing location), Yellow Creek (small arms and firing point), Brown Mountain (impact area), Bear Rocks (impact area), Cabin Mountain (impact area), Glade Run, and locations within the Dolly Sods Region. Maps contained in a 2003 USACE memorandum from the St. Louis District USACE indicate firing ranges positioned in several locations outside of the Dolly Sods Region, which had a removal action conducted under DERP-FUDS Project Number G03WV001304.

Following the 1943 to 1944 military maneuvers in the Dolly Sods region, and prior to returning the land to the U.S. Forest Service (USFS) in 1950, the DA (i.e., the Engineer Bomb and Shell Disposal Team No. 6) conducted an ordnance clearance during May 1946. The team completed a "thorough reconnaissance of the entire maneuver area." Records indicate that the team found and destroyed 189 4.2 inch SR mortars, one 155 mm HE projectile, three 105 mm HE projectiles, two 40 mm projectiles, and "12 or 14" inert (sand-loaded) rounds in the Dolly Sods region;

information concerning the locations of all of these found items is not available. All suspected impact areas, with the exception of certain regions to the north and northeast of the Dolly Sods North (DSN) and Dolly Sods Scenic Area (DSSA) (which were too rough or overgrown to be searched) were thoroughly searched during the 1946 clearance effort; all lands except for the regions not searched were "recommended as safe for grazing, lumbering, or hunting" subsequent to the clearance. 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, and from the field work it was determined that "previous clearance operations were good." Additional information concerning these clearance operations is not available; records regarding military operations in the area are scarce because the majority of pertinent documents have been lost or destroyed over time.

Property that had been acquired by the DA was returned to the U.S. Department of Agriculture in 1950. In 1970, 10,200 acres of the current Dolly Sods region were designated a National Forest Scenic Area to protect their unique scenic qualities. The Dolly Sods Wilderness (DSW) was created by an act of Congress in 1975 to preserve and protect the area with 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 appearing state. During 1992 and 1993, 6,168.5 acres located north of the DSW were purchased by the USFS from The Nature Conservancy; this area is known as the DSN. Lands to the west, north, and northeast of DSN are still privately owned. To the immediate east and southeast of DSN (and to the immediate east of DSW), 2,268 acres along Forest Service Road (FR) 75 have the designation of National Scenic Area. The three tracts: DSW, DSN, and Dolly Sods Scenic Area (DSSA) comprise the region currently known and referred to as Dolly Sods.

The exact amount of ordnance remaining in the Dolly Sods region and WVMA/DS Impact Area is undetermined. However, ordnance-related risk is illustrated by a sporadic but continuous discovery of MEC, between the initial DA clearance and the present, by recreational visitors and government officials. Information concerning the amount and types of MEC-related scrap and MEC that have been found and removed/disposed of since 1983 has been well documented by the USFS and records are maintained by the USACE Huntington District.

A remedial investigation/feasibility study (RI/FS) was authorized in 1990 to address MEC-related concerns in the public use areas of the Dolly Sods region. During 1991, the 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 areas were selected to provide a distribution of investigation, and because they were suspected to likely contain ordnance (based on topography and information obtained during a records search and site investigation). The areas consisted of hilltops (e.g., Breathed Mountain and Cabin Mountain); as they were considered to be likely targets, as well as locations which were considered to likely contain "undershots" from firing at Blackbird Knob (which is located

in DSN and just north of DSW). A "surface sweep" (within six inches of the surface) was conducted and seven pieces of unexploded ordnance (UXO) were found. A "subsurface sweep" (between six and 24 inches depth) was also conducted, and six pieces of MEC were found. The 13 total MEC included a 57 mm armor-piercing (AP) projectile, and 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. Some of the found ordnance was exploded in place while some was moved a short distance and then exploded.

Based on information obtained during the 1991 feasibility study, an Environmental Assessment (EA) was initiated by USACE in 1995 to address remediation alternatives for the Dolly Sods project. An EA and Finding of No Significant Impact (FONSI) were completed for both DSW and DSN in 1995 and 1997 respectively. An MEC removal action, focused on significant reduction of public risk in DSW, DSN and DSSA, which considered factors such as cost and environmental impact, was then conducted by USACE during 1997 and 1998.

A MEC removal action was conducted for the DSW from June 1997-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 depth. 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 MEC-related scrap was disposed. DSN and DSSA MEC removal activities occurred from October 1997-August 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. Inert (19, 4.2 inch mortars) rounds were also located during the clearance and properly disposed of. A total of 1043.5 pounds of MEC-related scrap was recovered.

PROPERTY VISIT: Due to the size of the WVMA, several site visits were conducted by Huntington District personnel in preparation for the WVMA Preliminary Assessment. Due to limited project funding, site visits involving examination of Impact Area sites were conducted while a Huntsville District UXO Safety Specialist was in the area assisting in a USACE/West Virginia University (WVU) sampling project. On August 22, 2007 Mr. Nickolas McHenry, CELRH-EC-CE. visited Cabin Mountain where a 105-mm howitzer round was found earlier in 2007. (See Enclosure 3, Photos H25-26) On historical maps this location is shown as a impact area for 155-mm howitzers fired from near Beaver Creek. Mr. McHenry was accompanied by Huntsville District UXO Safety Specialist (Walt Zange) and WVU graduate students and professors who were in the area to conduct environmental sampling at locations where UXO had been found. Following that site visit, on August 23, the same group conducted a site visit to property owned by the Canaan Valley Institute, where several 3.25" rockets have been found over the past three years. No military munitions (MM) were seen or detected by Mr. Zange's metal detector during the Cabin Mountain site visit, but while clearing the sampling area at the Canaan Valley Institute property Mr. Zange detected several large metallic objects, believed to be

additional rockets. (See Enclosure 3, Photos H27-30) Due to the nature of Mr. Zange's safety escort he was not allowed to verify what the objects located on the site were. According to historical mapping, the Canaan Valley Institute property is where firing of 60-mm and 81-mm mortars took place with a target of Brown Mountain. In the historical aerial photographic analysis significant activity in the area is noted based on vehicle tracks.

On September 12-13, 2007, Mr. Nickolas McHenry and Ms. Jo Huff, Huntington District conducted site visits in areas known to have been utilized during the WVMA. On September 12, 2007, the group, along with two local historians, visited the area where Quartermaster (QM) encampments were in Elkins, WV, the area where the WVMA QM supply depot once stood, fields that once housed engineering and infantry division encampments in Kerens, WV, and an area that was thought to be the location of the ammunition depot at the Mountain State Memorial Gardens just north of Elkins. Also on that day the group met with Paul Swecker, land owner in East Dailey, WV. Mr. Swecker had knowledge of the Dailey Infiltration Camp in East Dailey and led the ground to the location of the infiltration camp. Though the infiltration course is not on Mr. Swecker's property it turned out that it was located on MNF property. Portions of the course are still visible including berms and foxholes. A stream was noted that ran through the length of the course.

On September, 13, 2007, the group, including Major Juan Ramon Mejia, Huntington District, conducted additional site visits to additional sites that were known to have been used at the time of the WVMA. Sites included with these site visits included the MNF's Yokum Street Depot which was utilized as a repair shop/veterinarian hospital in Elkins, encampment areas in western Elkins, the Stuart Recreation Area of the MNF which was used as a field hospital during the WVMA, and the West Virginia State Fish Hatchery which was previously a laundry unit headquarters during the WVMA. Following the fish hatchery, the group went back to Elkins and drove through the area where the troop maneuver problems actually took place in the communities of Gladwyn, Jenningston, Sully, and Dry Fork. Following that the group conducted a site visit at the Buena Small Arms Firing Range in Canaan Valley, WV. The firing range is located on U.S. Fish and Wildlife property and is part of the Canaan Valley National Wildlife Refuge. The berms that made up the firing range are still currently visible at the site. Following the site visit at the small arms firing range the group conducted an interview with a local resident who grew up in the Fore Knobs region and whose family owned a farm that the military used at the time of the WVMA.

On November 29, 2007 Mr. Nickolas McHenry conducted a site visit to the location of the former Ordnance Base Shop which is now the Elkins Equipment Company, a small motor repair shop and pet store. Following the site visit to the Ordnance Base Shop Mr. McHenry visited a site once owned by Mr. Victor Del Sordo, previous owner of a tract that housed the WVMA Ammunition Depot. It was unclear which portion of the tract that Mr. Del Sordo owned was utilized as the Ammunition Depot, since he owned more than 400 acres at the time of the WVMA.

CATEGORY OF HAZARDS: MMRP. There are potential FUDS MMRP hazards evident from former Army use of this property. The MMRP project addresses possible contamination that may have occurred as a result of two small arms/machine gun firing range and mortar/artillery firing ranges. Based upon information obtained from site inspections and research for the PA, there are no potential PRP/HTRW, CON/HTRW, or BD/DR hazards associated with former Army activities or ownership of this property.

PROJECT DESCRIPTIONS: One MMRP project currently exists and eight new projects are proposed for this property.

The following is a summary of the existing project for this property:

G03WV001304 – Dolly Sods Removal MMRP. This existing MMRP project has transitioned to the Long-Term Management (LTM) phase. An Archives Search Report (ASR), Engineering Evaluation and Cost Analysis (EE/CA), RI/FS, and 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 site 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.

Some private wells do exist within the former WVMA Impact Area. The Canaan Valley State Park groundwater treatment plant is one that is served by wells within a 4-mile radius of the former Impact Area. Additionally, there are two hand-pump wells within the Dolly Sods Wilderness that are owned by the USFS and used by visitors to the area. As part of the long-term management phase of DERP-FUDS Project Number G03WV001304, it is recommended that Grant and Tucker county well registration records be reviewed and that a survey be made to identify unregistered wells within the 4-mile radius of the Impact Area. From this information, a sampling program should be developed and funding programmed to conduct analysis of wells identified in the target area, to determine if there has been any impact to groundwater from the former maneuvers.

The following is a summary of the recommended projects for this property:

G03WV001305 – Dailey Infiltration Camp MRA-1/MRS-1 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the infiltration camp being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001306 – Ammunition Depot MRA-2/MRS-2 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the

ammunition depot being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001307 – Maneuver Area MRA-3/MRS-3 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the maneuver area being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001308 – Fore Knobs/Bear Rocks Firing Range MRA-4/MRS-4 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the Fore Knobs/Bear Rocks Firing Range being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001309 – Bearden Knob Firing Range MRA-5/MRS-5 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the Bearden Knob Firing Range being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001310 – Brown/Cabin Mountain Firing Ranges MRA-6/MRS-6 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the Brown Mountain Firing Range and Cabin Mountain Firing Range being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

G03WV001311 – Buena Small Arms Firing Range MRA-7/MRS-7 (MMRP). This project addresses the possible MEC and MEC-related contamination that may have occurred as a result of the Buena Small Arms Firing Range being located on the property. A Site Inspection (SI) is recommended, which would involve a MEC Site Characterization and Removal Assessment, based upon the findings of MEC outside of areas that are covered under MMRP Project No. G03WV001304.

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 action, and public awareness activities include the following:

Human Factors Applications, Inc. (HFA), 1998, Final Removal Report: Ordnance and Explosives Removal Action Dolly Sods Wilderness, Monongahela National Forest. Prepared for U. S. Army Engineering and Support Center (USAESC), Huntsville, AL

HFA, 1999, Final Removal Report: Ordnance and Explosives Removal Action Dolly Sods North, Monongahela National Forest. Prepared for USAESC, Huntsville, AL.

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

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

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

New Bold Enterprises (NBE), 1995, Dolly Sods Wilderness Ordnance Removal Project Environmental Assessment. Prepared for USACE, Huntington District, Huntington, WV.

NBE, 1997, Dolly Sods North Ordnance Removal Project Environmental Assessment. Prepared for USACE, Huntington District, Huntington, WV.

S&C Advertising and Public Relations (SCPR), 2004, Public Awareness and Organizational Plan of Unexploded Ordnance at Dolly Sods. Prepared for USACE, Huntington District, Huntington, WV

SCPR, 2005, Public Involvement Plan: Dolly Sods Region, Former West Virginia Maneuver Area. Prepared for USACE, Huntington District, Huntington, West Virginia

U.S. Army Corps of Engineers (USACE), 1995, Archives Search Report: Findings for the Former Dolly Sods North. Prepared by USACE, Rock Island District, Rock Island, IL. Prepared for USACE, Huntsville District, Huntsville, AL.

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

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

USACE, 2008, Draft West Virginia Maneuver Area Preliminary Assessment, dated January 2008. Prepared by USACE, Huntington District, Huntington, WV.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

Figure 1 – Vicinity Map
West Virginia Maneuver Area-Dolly Sods
DERP-FUDS Property G03WV0013

Grant, Tucker, Preston, Pendleton
and Randolph Counties, WV
N 39 07' 08", W 79 27' 09"

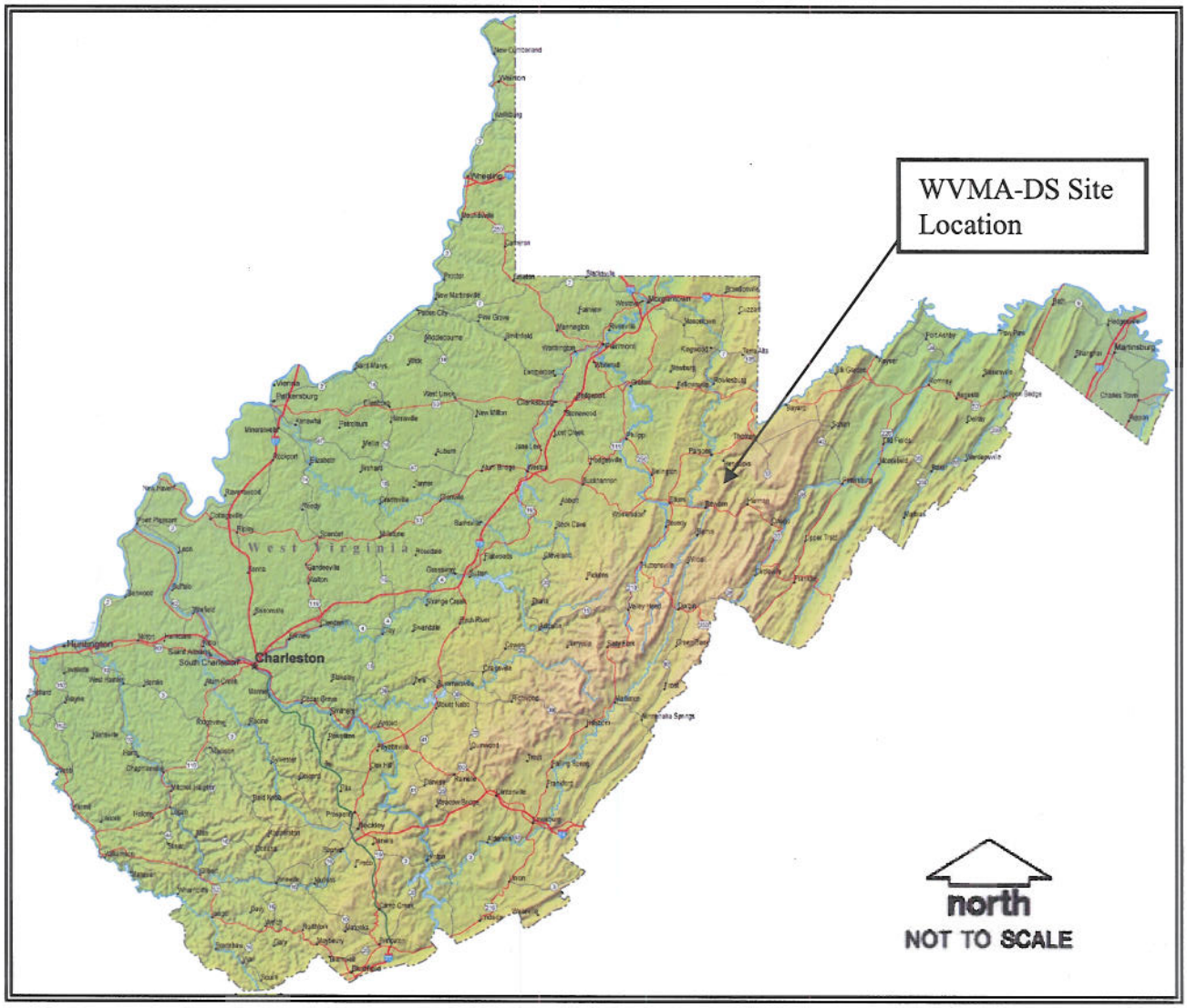
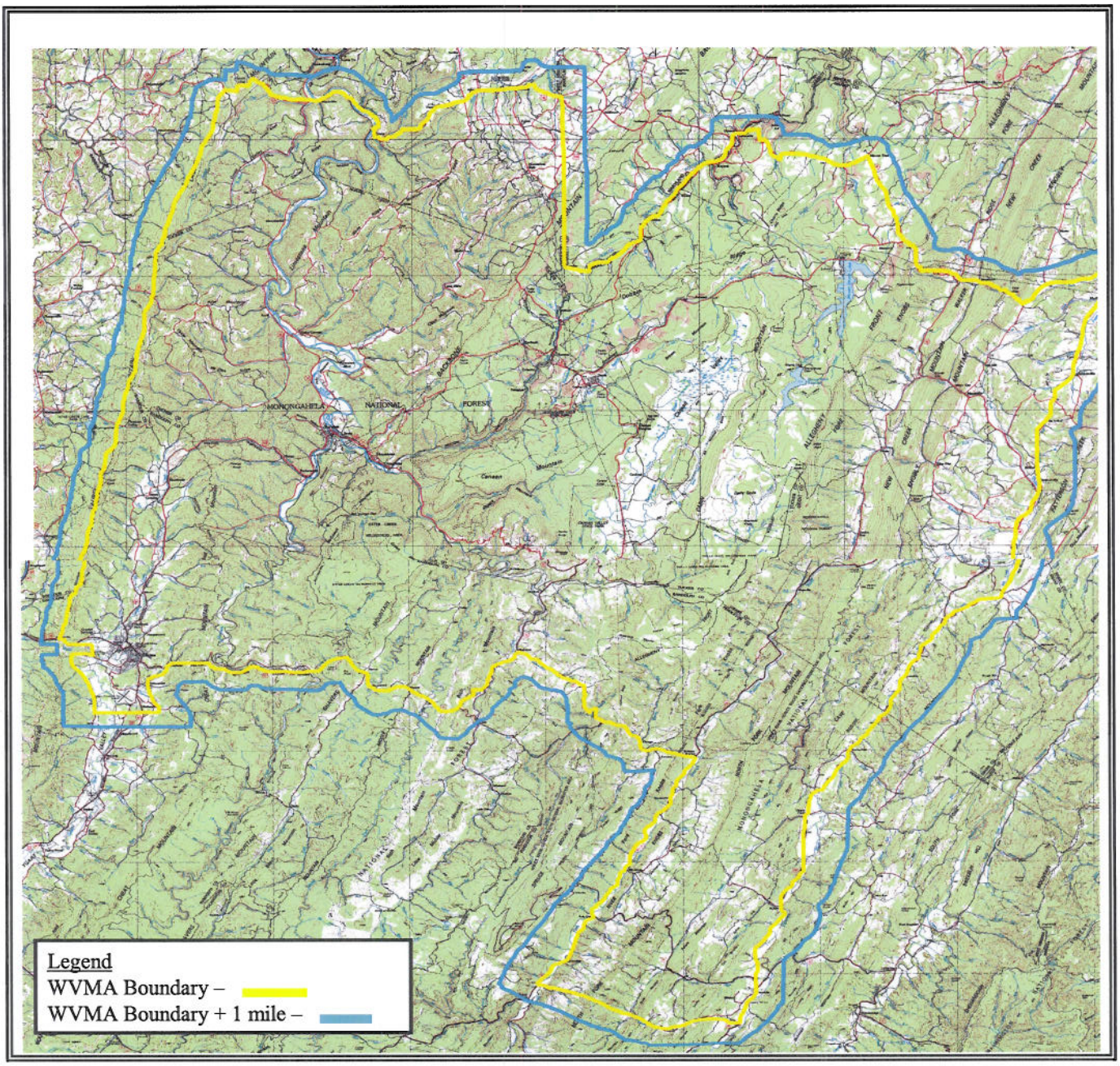


Figure 2 – Property Map
West Virginia Maneuver Area-Dolly Sods
DERP-FUDS Property G03WV0013

Grant, Tucker, Preston, Pendleton
and Randolph Counties, WV
N 39 07' 08", W 79 27' 09"



PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H1

Direction:
East

Comments:
View of a berm located at the Dailey Infiltration Camp.

Date:
September 12, 2007

Photographer:
Nick McHenry

Photo Number:
H2

Direction:
Southeast

Comments:
View of a berm that is located within the Dailey Infiltration Camp.

Date:
September 12, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H3

Direction:

Comments:
View of mounded "foxhole" located at the Dailey Infiltration Camp.

Date:
September 12, 2007

Photographer:
Nick McHenry

Photo Number:
H4

Direction:

Comments:
View of mounded "foxhole" located at the Dailey Infiltration Camp.

Date:
September 12, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H5

Direction:
South

Comments:
View of area where the 150th Engineering Combat Force had an encampment in Kerens, WV.

Date:
September 12, 2007

Photographer:
Nick McHenry

Photo Number:
H6

Direction:
East

Comments:
View of area where the 150th Engineering Combat Force had an encampment in Kerens, WV.

Date:
September 12, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer: Nick McHenry Photo Number: H7 Direction: Southeast Comments: View of cemetery that was used as an ammunition depot during the WVMA. Date: September 12, 2007	
Photographer: Nick McHenry Photo Number: H8 Direction: South Comments: View of cemetery that was used as an ammunition depot during the WVMA. Date: September 12, 2007	

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H9

Direction:
South

Comments:
View of cemetery that was used as an ammunition depot during the WVMA.

Date:
September 12, 2007

Photographer:
Nick McHenry

Photo Number:
H10

Direction:
South

Comments:
View of the Yokum Road Depot that was utilized by the Army during the WVMA for vehicle maintenance.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H11

Direction:
South

Comments:
View of the Stuart Park Area of the MNF that was used as a encampment for the medical evacuation hospitals within the WVMA.

Date:
September 13, 2007

Photographer:
Nick McHenry

Photo Number:
H12

Direction:
South

Comments:
View of the Stuart Park Area of the MNF that was used as a encampment for the medical evacuation hospitals within the WVMA.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H13

Direction:
South

Comments:
View of Bowden Fish Hatchery that was the site of a Laundry Unit Company encampment.

Date:
September 13, 2007

Photographer:
Nick McHenry

Photo Number:
H14

Direction:
West

Comments:
View of Bowden Fish Hatchery that was the site of a Laundry Unit Company encampment.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H15

Direction:
Northwest

Comments:
View of area that was utilized by the Army as the maneuver area hospital.

Date:
September 13, 2007

Photographer:
Nick McHenry

Photo Number:
H16

Direction:
Northeast

Comments:
View of area that was utilized by the Army as the maneuver area hospital.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H17

Direction:
West

Comments:
View of Sully, WV which was utilized by visiting Infantry Units for troop maneuver problem solving.

Date:
September 13, 2007

Photographer:
Nick McHenry

Photo Number:
H18

Direction:

Comments:
View of property in Sully, WV that was utilized by visiting Infantry Units for troop maneuver problem solving.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer: Nick McHenry Photo Number: H19 Direction: Northeast Comments: Photo of Raven's Rock which was utilized by Infantry Units for troop climbing and repelling . Date: September 13, 2007	
Photographer: Nick McHenry Photo Number: H20 Direction: West Comments: Area near Gladwin, WV that was utilized as a Mule School for the WVMA. Date: September 13, 2007	

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H21

Direction:
East

Comments:
Courtland Firing range located near Timberline Ski Lodge in Canaan Valley, WV.

Date:
September 13, 2007

Photographer:
Nick McHenry

Photo Number:
H22

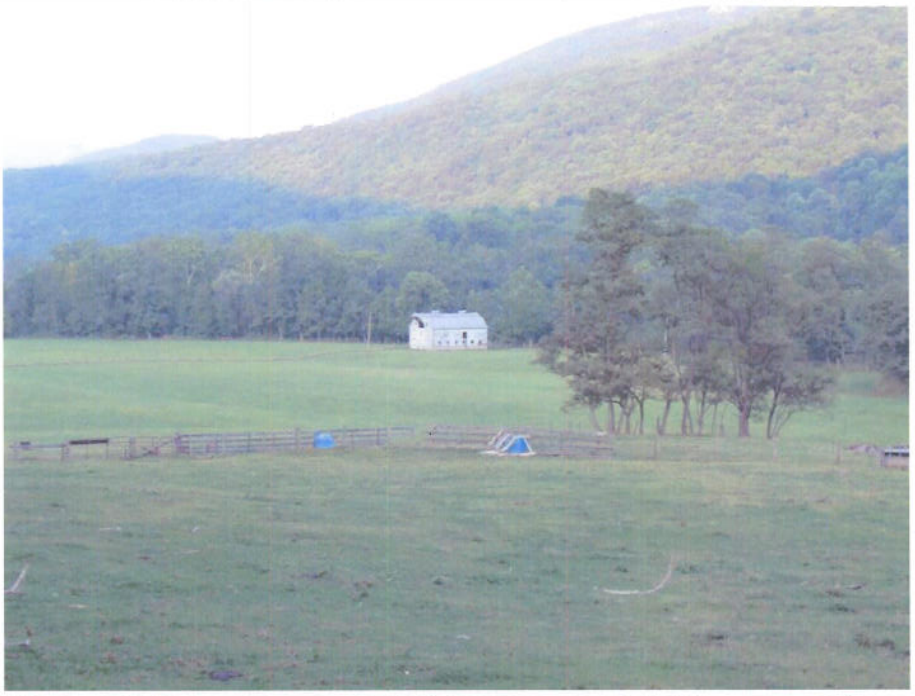
Direction:
South

Comments:
Courtland Firing Range located near Timberline Ski Lodge in Canaan Valley, WV.

Date:
September 13, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer: Nick McHenry Photo Number: H23 Direction: Northeast Comments: View of area near Seneca Rocks, WV that was utilized as the Seneca Rocks Climbing School encampment. Date: September 13, 2007	
Photographer: Nick McHenry Photo Number: H24 Direction: North Comments: View of area near Seneca Rocks, WV that was utilized as the Seneca Rocks Climbing School encampment. Date: September 13, 2007	

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H25

Direction:
South

Comments:
View of A Frame road located near 105-mm target location near the base of Cabin Mountain.

Date: August 22, 2007

Photographer:
Nick McHenry

Photo Number:
H26

Direction:
East

Comments:
General view of the location where 105-mm howitzer round was recently found on Cabin Mountain near Davis, WV.

Date: August 22, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H27

Direction:
Southwest

Comments:
General view of Canaan Valley Institute property where several rockets have been found since 2004.

Date: August 23, 2007

Photographer:
Nick McHenry

Photo Number:
H28

Direction:
North

Comments:
View of several magnetic anomalies encountered while conducting sampling at the Canaan Valley Institute property.

Date: August 23, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H29

Direction:
Unknown

Comments:
View of metallic object suspected of being a rocket (barely visible to the left of the knife) on the Canaan Valley Institute property.

Date: August 23, 2007

Photographer:
Nick McHenry

Photo Number:
H30

Direction:

Comments:
View of an area on Canaan Valley Institute property that contained a large metallic object thought to be a rocket.

Date: August 23, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Walt Zange

Photo Number:
H31

Direction:
Unknown

Comments:
Although unclear, this is a view of a 60-mm mortar found during a site visit between two rocks near Fisher Spring Run Trail in the Dolly Sods Wilderness Area of the Monongahela National Forest.

Date: June 2007

Photographer:
Nick McHenry

Photo Number:
H32

Direction:
West

Comments:
The current view of the WVMA Ordnance Base Shop. The Elkins Equipment Company serves as a small motor repair shop and pet store.

Date: November 29, 2007

PROPERTY VISIT PHOTOGRAPHS

Former West Virginia Maneuver Area Preliminary Assessment (G03WV001304)
US Army Corps of Engineers, Huntington District, Environmental and Remediation Section

Photographer:
Nick McHenry

Photo Number:
H33

Direction:
West

Comments:
The current view of an area that was once owned by Victor Del Sordo, potentially the location of the ammunition depot.

Date: November 29, 2007

Photographer:
Nick McHenry

Photo Number:
H34

Direction:
West

Comments:
The current view of an area that was once owned by Victor Del Sordo, potentially the location of the ammunition depot. Business located in the photo is Central Supply Company.

Date: November 29, 2007

ALE
DOLLY SODS

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.

7 January 1992
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: 01-Feb-08
Name: Nickolas McHenry		Title: Environmental 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		Property #: G03WV0013
Previous Names, if any: WV Manuever Area; Dolly Sods Wilderness Area		
Former Service: US Army		
Property Location (Section, Township, Range):		
Congressional District 1; EPA Region 3		
Street:		
City: Davis	County: Tucker, Grant, Randolph	State: WV
Latitude (D/M/S): 39-07'-08"	Longitude (D/M/S): 79-27'-09"	
Current Use (residential, commercial, etc.): Government - US Dept. of Agriculture/US Forest Service		
Primary Property Owner Information (address multiple owners in Comments):		
Name: Kate Goodrich, Public & Legislative Affairs		
Address (if other than above): US Forest Service		
Street: 200 Sycamore St.		
City Elkins		
Phone Number: (304) 636 -- 1800 ex220	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	✓		
2	Site maps, including facility as-built drawings	✓		
3	Aerial or ground photographs	✓		
4	Prior studies, documents, reports, property contamination records, or public/private sampling data	✓		
5	Compliance orders issued to current or past owners/operators		✓	
6	Real estate records, deeds, or property transfer records	✓		
7	Local historical societies and public libraries	✓		
8	EPA/State environmental records or reports	✓		
9	EOD incident reports	✓		
10	Other documentation	✓		
Property Visit:				

ER 200-3-1 FUDS Program Policy May 2004.pdf from H1ECXKLW on 03/29/06 at 14:43:59 from

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
	Indicate whether the following have been contacted and interviewed to obtain information.			
11	Current landowner(s)	✓		
12	Neighbors	✓		
13	Previous landowner(s)	✓		
14	Prior employee(s)	✓		
15	Federal agencies, including regulatory agencies	✓		
16	State agencies, including regulatory agencies	✓		
17	Local agencies, including regulatory and law enforcement agencies	✓		
18	Other available sources	✓		
19	Was access to the property possible (right of entry provided by landowner)?	✓		
20	Was the property physically visited?	✓		
21	Was access sufficient to allow for a thorough property inspection?	✓		
22	Was access sufficient to identify potential hazards?	✓		
23	Did regulatory agencies accompany USACE on the property visit?	✓		
24	Did the landowner accompany USACE on the property visit?	✓		
25	Was there evidence of a release of hazardous material or use/disposal of military munitions during DoD control?		✓	
26	Was there evidence of a release of potential DoD hazardous material into a public or private drinking water supply? [2]		✓	
27	Is there evidence of a release into a public or private drinking water supply due to deterioration of the system through ordinary use? [2]		✓	
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? [3]		✓	
28	Is some other program actively involved with the property (i.e., another Federal, state, or tribal program)?	✓		
30	Is there evidence that activities by non-DoD parties at the property may be the source of potential contamination?		✓	
31	Was information on hazards found at similar types of FUDS properties considered in identifying potential hazards at this property?	✓		
32	Were site maps compared to actual conditions during the site visit?	✓		
33	Were photographs taken?	✓		
34	Were property owners advised to contact USACE if evidence of potential hazards is found later?	✓		
35	Was a trip report of the property visit prepared?	✓		

[2] 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.
[3] 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."*

ER 200-3-1 FUDS Program Policy May 2004.pdf from H1ECXKLW on 03/29/06 at 14:48:48 from

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 Eligibility Determination (refer to Chapter 3):				
36	Is the property Categorically Excluded?		✓	
37	Are there release, hold harmless, "as-is", or indemnification clauses in deeds or property transfer documents that limit DoD liability?		✓	
38	Is there evidence of this property being a Third Party Site?		✓	
39	Is the property eligible under FUDS?	✓		
40	If necessary, has a ***"Categorical Exclusion or Ineligible Property"*** worksheet been prepared (Worksheet B-1)			✓
FUDS Property Screening:				
41	Was a CERCLA Preliminary Assessment completed?	✓		
42	Was a RAC Worksheet prepared for the property?	✓		
Project Eligibility Determination (refer to Chapter 3):				
43	Have all typical hazards been investigated for possible occurrence at this type of property?	✓		
44	Were hazards identified?	✓		
45	Are identified hazards of DoD Origin?	✓		
46	If identified hazards were of non-DoD origin, has the lead regulatory agency been informed? (Provide name, phone number, date)			✓
47	Is the current owner under a RCRA or CERCLA clean-up order?		✓	
48	Has the "right of first refusal" been exercised by an adjacent DoD installation?			✓
49	Is there evidence of beneficial use?		✓	
50	Are there other policy considerations against recommending a project?		✓	
51	Are eligible FUDS projects recommended? (If yes, identify projects below)	✓		
INPR Preparation and Review:				
51	Is the INPR prepared consistent with INPR Content Matrix (Table B-2)?	✓		
52	Is the INPR Property Survey Summary Sheet consistent with Table B-3?	✓		
53	Is the Project Summary Sheet(s) consistent with Table B-4?	✓		
54	If appropriate, has a ***"BD/DR Project Summary Sheet Checklist"*** been prepared? (See Worksheet B-2)			✓
55	If the INPR recommends a PRP/HTRW project, has the PRP District reviewed the INPR? (See Figure B-1)			✓
56	If the INPR recommends a PRP/HTRW project, has the HTRW Center of Expertise reviewed the INPR? (See Figure B-1)			✓
57	If the INPR recommends a MMRP or PRP/MMRP project, has the MM Center of Expertise reviewed the INPR? (See Figure B-1)	✓		
58	Was the draft INPR coordinated with Office of Counsel and Real Estate?	✓		

ER 200-3-1 FUDS Program Policy May 2004.pdf from HHECXKLW on 03/29/06 at 14:49:07 from

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
59	Was the draft INPR shared with the Lead Regulatory Agency after internal USACE review?	✓		

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

29 - Federal Government Owned Property - Monongahela National Forest, Canaan Valley National Wildlife Refuge.

42 - The MRSPP tables have been prepared instead, since they replaced the RAC scoring system.

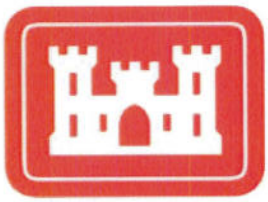
44, 45, 51 - G03WV001305 - Dailey Infiltration Camp (MMRP)
G03WV001306 - WVMA Ammunition Depot (MMRP)
G03WV001307 - Maneuver Area (MMRP)
G03WV001308 - Fore Knob/Bear Rocks Firing Ranges (MMRP)
G03WV001309 - Bearden Knob Firing Range (MMRP)
G03WV001310 - Brown/Cabin Mountain Firing Ranges (MMRP)
G03WV001311 - Buena Small Arms Firing Range (MMRP)

ER 200-3-1 FUDS Program Policy May 2004.pdf from HIECXKLW on 03/29/06 at 14:49:15 from

FORMER WV MANEUVER AREA/DOLLY SODS
GRANT, PRESTON, PENDLETON, TUCKER AND RANDOLPH
COUNTIES, WEST VIRGINIA
FUDS Property Number G03WV0013

PRELIMINARY ASSESSMENT

Draft Version



Prepared by
U.S. Army Corps of Engineers
Huntington, WV District
502 8th Street
Huntington, WV 25701

January 2008

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/Dolly Sods (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).

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." Apparently, 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).

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:

- Use of Yukon type pack-boards for transporting instruments, radios, light weapons, and other light loads.
- Visual signaling with emphasis on forming of definite visual signaling teams equipped with field glasses for use in receiving over medium and long distances.
- Local security in rugged terrain including scouting and patrolling, use of trip wires, sign and countersign, and dropping of all rank in addressing officers.

- Occupation of difficult positions by firing batteries.
- Mountain surveying.
- Marches over mountainous terrain.
- Blackout condition driving.
- 3-day tactical problem for artillery, winding up with a "Shoot" involving live rounds.
- In the second week of training there were 2-day battalion combat team problems.
- Cliff-scaling training for limited officials and enlisted men.
- Specialized programs including training for engineers (improvised river crossing) and medics (including evacuation medicine, first aid and evacuation).
- An Impact Area that served as a training facility for field artillery testing

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 photos and a site visit conducted on the property, it is determined that the Dailey Infiltration Camp was once used as a small arms range used during the WVMA.

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 WVMA.

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 – Maneuver Area

Findings: Based on the canister find in the Otter Creek Wilderness, historical documentation, and aerial photography, it is determined that the Gladwin Maneuver Area was once used as infantry division troop maneuver area used during the WVMA. This site is generally bounded by the communities of Elk, Gladwin, Jenningston, Sully, and Alpena, WV.

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, it is determined that the Fore Knobs/Bear Rocks Firing Ranges was once used as significant firing points and target locations for 105-mm and 155-mm howitzer rounds used during the WVMA.

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 WVMA. These determinations have been made based on rocket finds near Yellow Creek, UXO finds on Cabin Mountain (105-mm howitzer round) historical mapping, historical documentation, aerial photography, and interviews.

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 WVMA. Brown Mountain was used as target area for the 60-mm and 81-mm mortar rounds fired from Yellow Creek during the WVMA. The Cabin Mountain Firing Range was used as significant target for 105-mm and 155-mm howitzer rounds used during the WVMA. These determinations have been made based on historical mapping, historical documentation, aerial photography, and interviews with personnel familiar with the WVMA. Also, a 105-mm howitzer round was found in 2006 on Cabin Mountain within the Canaan Valley National Wildlife Refuge.

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 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 used during the WVMA.

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.

Private Groundwater Well Use

For the most part, public water is provided to residences and businesses near the former Impact Area; however, as previously noted, some private wells do exist and the CVSP groundwater treatment plant is served by wells within a 4-mile radius of the former Impact Area. Additionally, there are two hand-pump wells within the Dolly Sods Wilderness that are owned by the USFS and used by visitors to the area. As part of the long-term management phase of DERP-FUDS Project Number G03WV001304, it is recommended that Grant and Tucker county well registration records be reviewed and that a survey be made to identify unregistered wells within the 4-mile radius of the Impact Area. From this information, a sampling program should be developed and funding programmed to conduct analysis of wells identified in the target area, to determine if there has been any impact to groundwater from the former maneuvers.

PROJECT SUMMARY SHEET
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001304
FEDERAL FACILITY ID NUMBER WV9799F3460

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008
(Revised from 28 May 1991)

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA)/Dolly Sods from 1943 to 1944 for low altitude mountain training, regimental troop maneuvers and artillery/mortar practice during World War II. The Army extensively searched and cleared the area of ordnance prior to and after the return of the property to the U.S. Department of Agriculture (USDA); however, complete ordnance decontamination was not possible. The former maneuver area's artillery range consisted of 48,067 acres which were leased for use as an impact area. The Dolly Sods Region of the former WVMA encompasses approximately 18,653 acres of the formerly leased/used impact area. For management purposes, the project area has been divided into the following Munitions Response Sites (MRSs):

- MRS 1 - Dolly Sods Wilderness Area (DSWA), 10,215 acres
- MRS 2 - Dolly Sods North (DSN), 6,169.5 acres
- MRS 3 - Dolly Sods Scenic Area (DSSA), 2,268 acres

The Dolly Sods Region in located within the Monongahela National Forest and the area is highly utilized by the public for hiking, fishing, backpacking, camping, hunting, bird watching, and berry picking. The U.S. Forest Service maintains the property for the USDA and has established hiking trails and campsites within the region. Recurring ordnance findings led to the recommendation, approval, and performance of an Engineering Evaluation/Cost Analysis (EE/CA), Remedial Investigation/Feasibility Study (RI/FS), and an ordnance and explosives (OE) removal action. The project is currently under the long-term management (LTM) phase.

The OE Removal Action involved the following activities at the MRS areas:

- **MRS 1 -** June 1997 – October 1997
  - 26.14 miles of trails cleared; 20 feet each side, to a depth of one foot
  - 112 campsites; cleared to a depth of four feet
  - 14 live mortars were found and destroyed by detonation

- **MRS 2 and MRS 3 -** October 1997 – August 1998
  - 29.65 miles of trails, 66 campsites and 6 cabins cleared

- 8 live mortars found and destroyed by detonation
- 19 inert rounds located

The OE removal action greatly reduced the risk to the public; however, visitation is not restricted to these trails and campsites, and ordnance remains outside the cleared areas. It is estimated that between 45,000-76,000 visitors annually use the area.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II mountain training and maneuvers and target practice. The Dolly Sods Region lies within a leased area that was utilized for maneuvers and artillery/mortar practice. There is evidence of former DA use due to the presence of mortars and other munitions and explosives of concern (MEC) found within the Dolly Sods Region. The presence of MEC is the direct result of the Army's former use of the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Following the performance of EE/CA, RI/FS, and OE removal action phases under the existing project, the project transitioned to the Long-term Management (LTM) phase. Continuation of the LTM of the Dolly Sods Region MRA is recommended to assure that the previous OE removal action remains protective of the public. Although an OE removal project has been conducted, there is the potential that visitors could come in contact with unexploded ordnance (UXO) that still exists in the MRS areas because complete ordnance decontamination was not possible (or attainable). A public awareness and education program was developed in 2003-2004 as part of the LTM phase in accordance with recommendations that were contained in the first Ordnance and Explosives Recurring Review Report (USACE, 2004). The public awareness program implemented new strategies to inform the public about past DoD activities and potential ordnance hazards.

Some of the new public awareness programs that were recently initiated include the following:

- UXO warning signs were posted in high visitor traffic areas. The signs contain an OE warning, photos of UXO, and a phone number to call if UXO is encountered.
- Brochures containing a map of Dolly Sods Region trails that were cleared of UXO have been created and will be distributed and made available on the Huntington District's (CELRH) WVMA/Dolly Sods website.
- Project and UXO notification information has been listed on CELRH's website.
- CELRH publishes an annual newsletter to keep interested parties up to date on the latest news and actions taking place in their community.
- Animations and videos were developed and will be distributed to teachers to help educate local school children regarding UXO safety and notification.

In addition, USACE partnered with regulators (West Virginia Department of Environmental Protection) and stakeholders (U.S. Forest Service and West Virginia Division of Forestry) to

develop a Public Awareness and Organizational Plan (February 2004) and a Public Involvement Plan (March 2005). These documents include lines of communication, ordnance notification procedures, fire suppression/safety plan, public awareness training requirements, community involvement and survey information, and key points-of-contact and interested party information.

The Public Awareness Program should continue under the LTM phase to inform the public of the ordnance hazards in the area and should be reviewed and updated annually to keep information current. Five-Year Ordnance and Explosives Recurring Reviews are required to assure that the previous ordnance removal action remains protective of the public.

Some private wells do exist within the former WVMA Impact Area. The Canaan Valley State Park groundwater treatment plant is one that is served by wells within a 4-mile radius of the former Impact Area. Additionally, there are two hand-pump wells within the Dolly Sods Wilderness that are owned by the USFS and used by visitors to the area. As part of the long-term management phase of DERP-FUDS Project Number G03WV001304, it is recommended that Grant and Tucker county well registration records be reviewed and that a survey be made to identify unregistered wells within the 4-mile radius of the Impact Area. From this information, a sampling program should be developed and funding programmed to conduct analysis of wells identified in the target area, to determine if there has been any impact to groundwater from the former maneuvers.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. One of the training courses constructed for use in the WVMA was an infiltration course built near a Civilian Conservation Corps Camp in Dailey, WV. This course is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment, which included historical photos, common operations reports developed by USACE, aerial photos, a regimental history of the 150th Engineer Combat Battalion, and other historical information obtained concerning the site. Based upon this information it was determined that the infiltration course consisted of an obstacle course, small arms firing range, and potential grenade range. This proposed project covers the contamination generated by the Army's use of the Dailey Infiltration Camp. Location Map and Aerial Photograph are at Enclosure 9, photographs are at Enclosure 10 and the MRSPP Tables are at Enclosure 11.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and target practice. The infiltration course was built by the 150th Engineering Combat Battalion during preparation for the WVMA. Although outside of the traditional WVMA boundaries, this property is situated on Monongahela National Forest property and appears to have been so at the time of the WVMA. The presence of Munitions and Explosives of Concern (MEC) would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former Dailey Infiltration Camp. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC

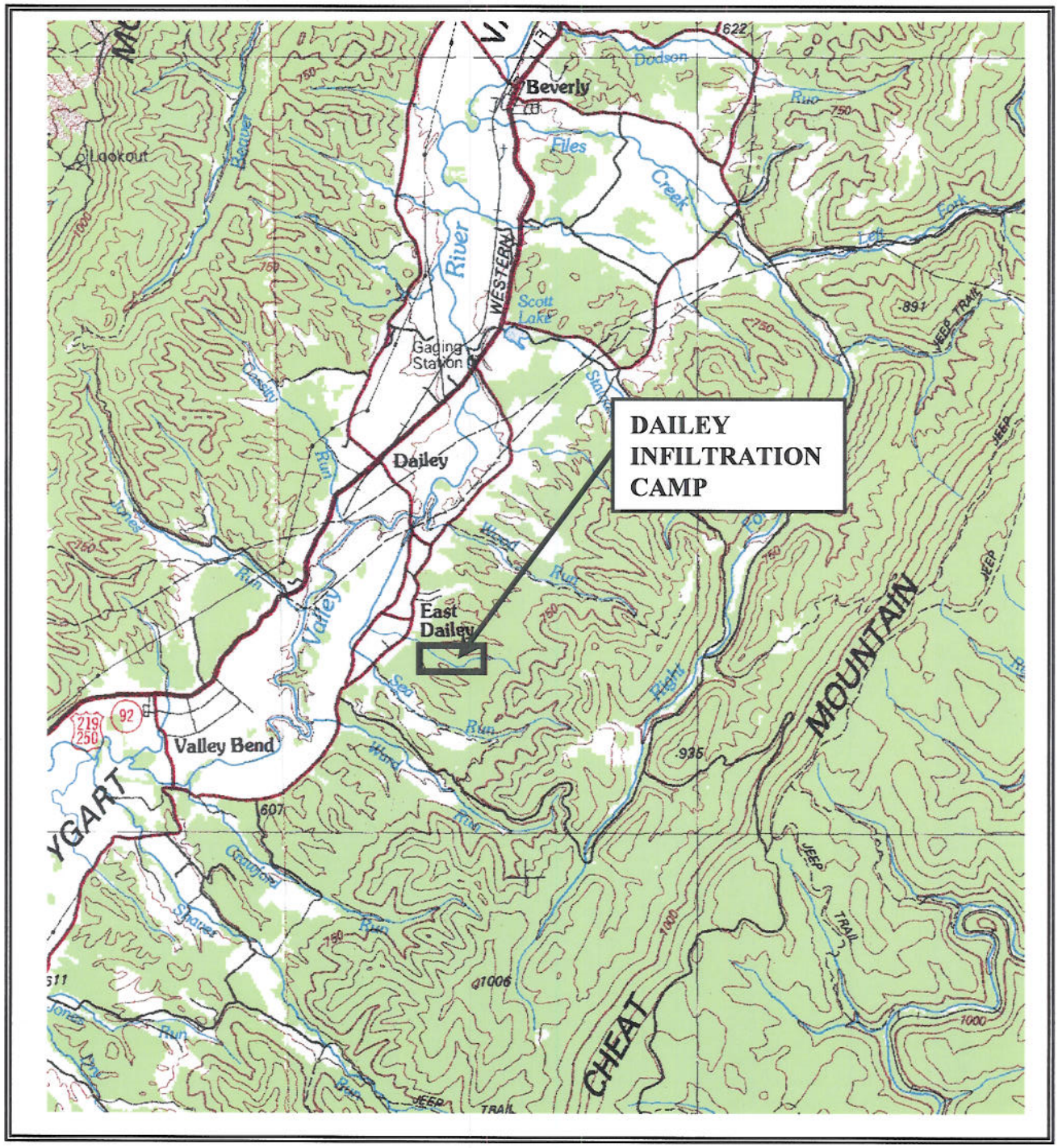
contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

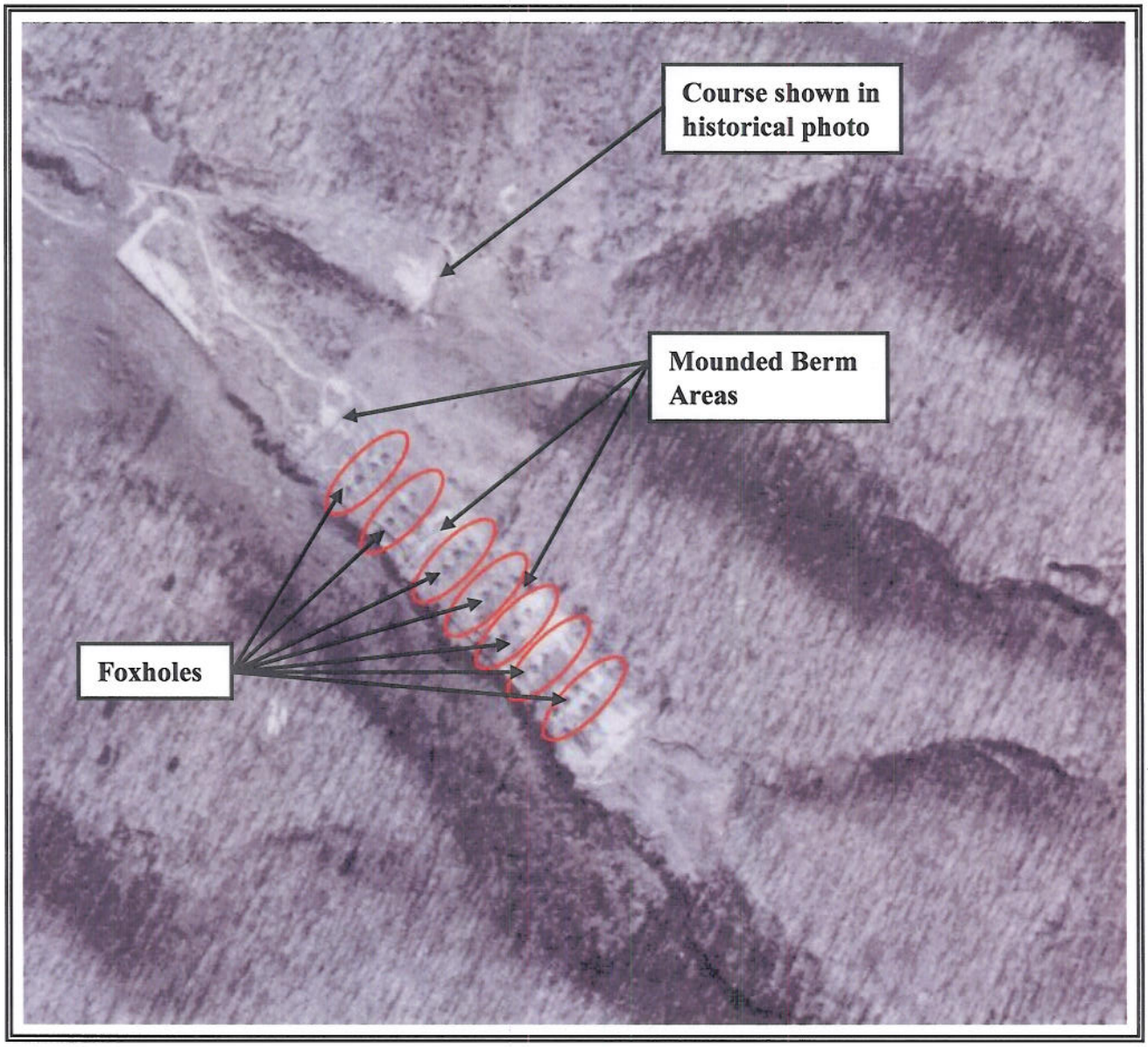
PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

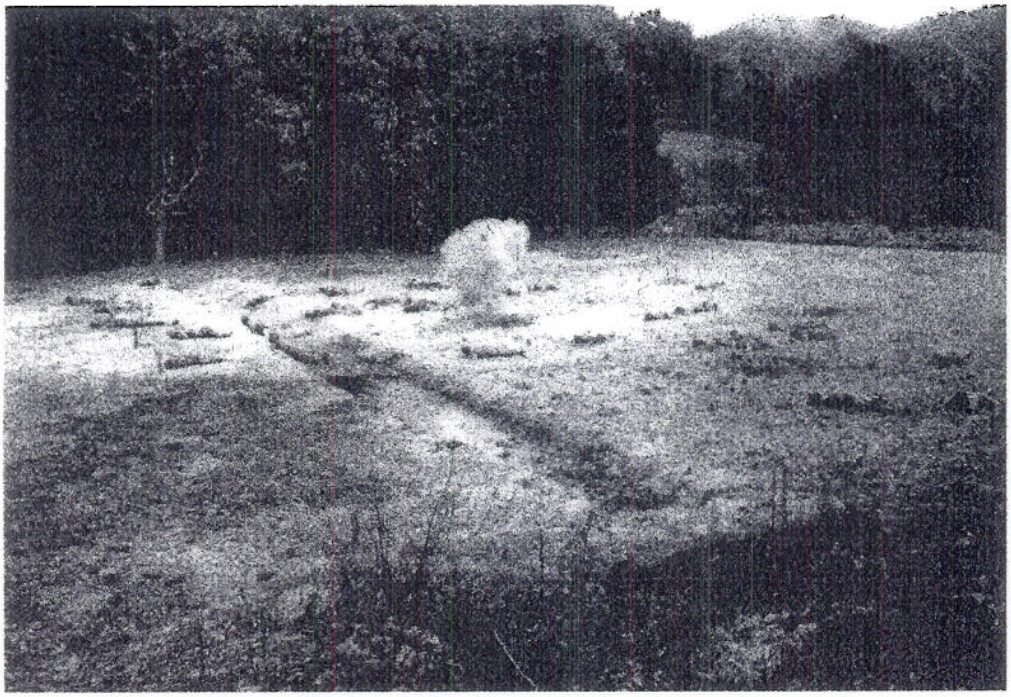
PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001305
FEDERAL FACILITY ID NUMBER WV9799F3460
DAILEY INFLTRATION CAMP



AERIAL PHOTOGRAPH
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001305
FEDERAL FACILITY ID NUMBER WV9799F3460
DAILEY INFILTRATION CAMP



PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001305
FEDERAL FACILITY ID NUMBER WV9799F3460
DAILEY INFILTRATION CAMP

Comments: View of troops maneuvering through the Dailey Infiltration Camp, date unknown	
Comments: Current view of foxholes at Dailey Infiltration Camp, date unknown	

PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001305
FEDERAL FACILITY ID NUMBER WV9799F3460
DAILEY INFILTRATION CAMP

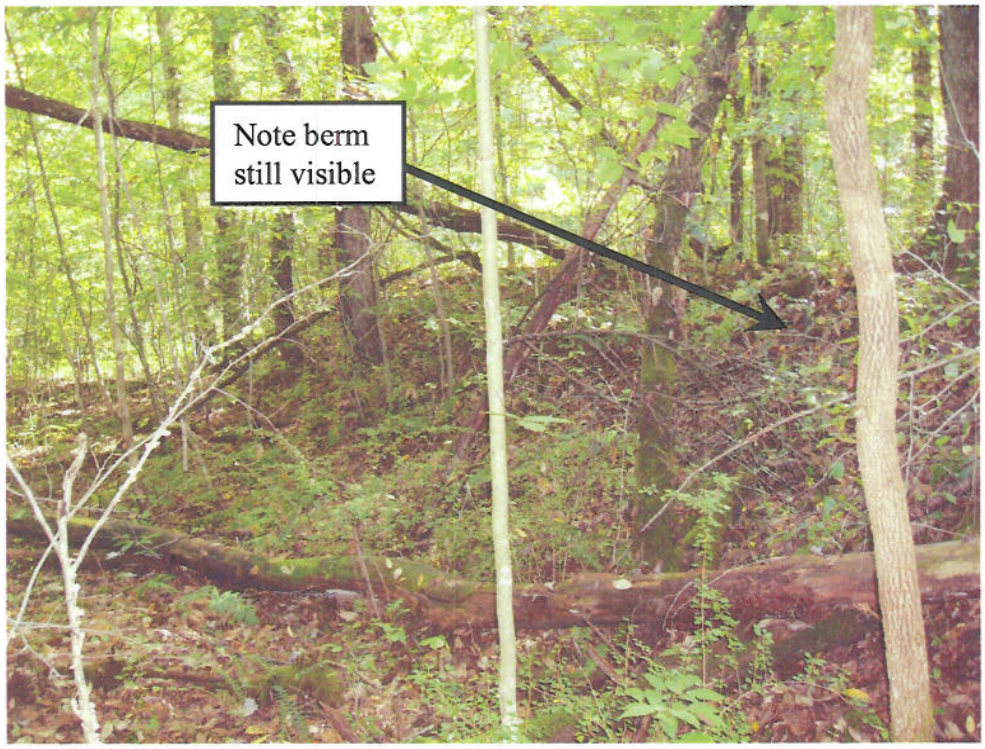
Comments: Current view of Small Arms Firing Range currently located on US Fish and Wildlife property, date unknown	

Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. Based on a Real Estate Property Lease Map of the WVMA obtained from the Baltimore District of the U.S. Army Corps of Engineers, there was an ammunition depot located a few miles north of the WVMA headquarters in Elkins, WV. This ammunition depot is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment, which included historical photos, common operations reports developed by USACE, the WVMA Administrative and Supply Plan, site interviews with individuals familiar with the site, and other historical information obtained concerning the site. Based upon this information it was determined that once a unit arrived in the WVMA their ammunition supply was turned over to this ammunition depot. The ammunition was allocated from either that point or temporary ammunition supply points located in the vicinity of troop maneuvers near the Impact Area in Canaan Valley, WV. This proposed project covers the potential contamination generated by the Army's use of the WVMA Ammunition Depot. Location Map and Aerial Photograph are at Enclosure 13, photographs are at Enclosure 14 and the MRSPP Tables are at Enclosure 15.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and target practice. The ammunition depot was utilized during DA activities at the WVMA. Real Estate documentation of the WVMA indicates that 4 acres of property owned by Mr. Victor del Sordo was leased by the Department of Defense for an ammunition depot (based on a Real Estate map provided by the Baltimore District of the USACE). The presence of Munitions and Explosives of Concern (MEC) would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former

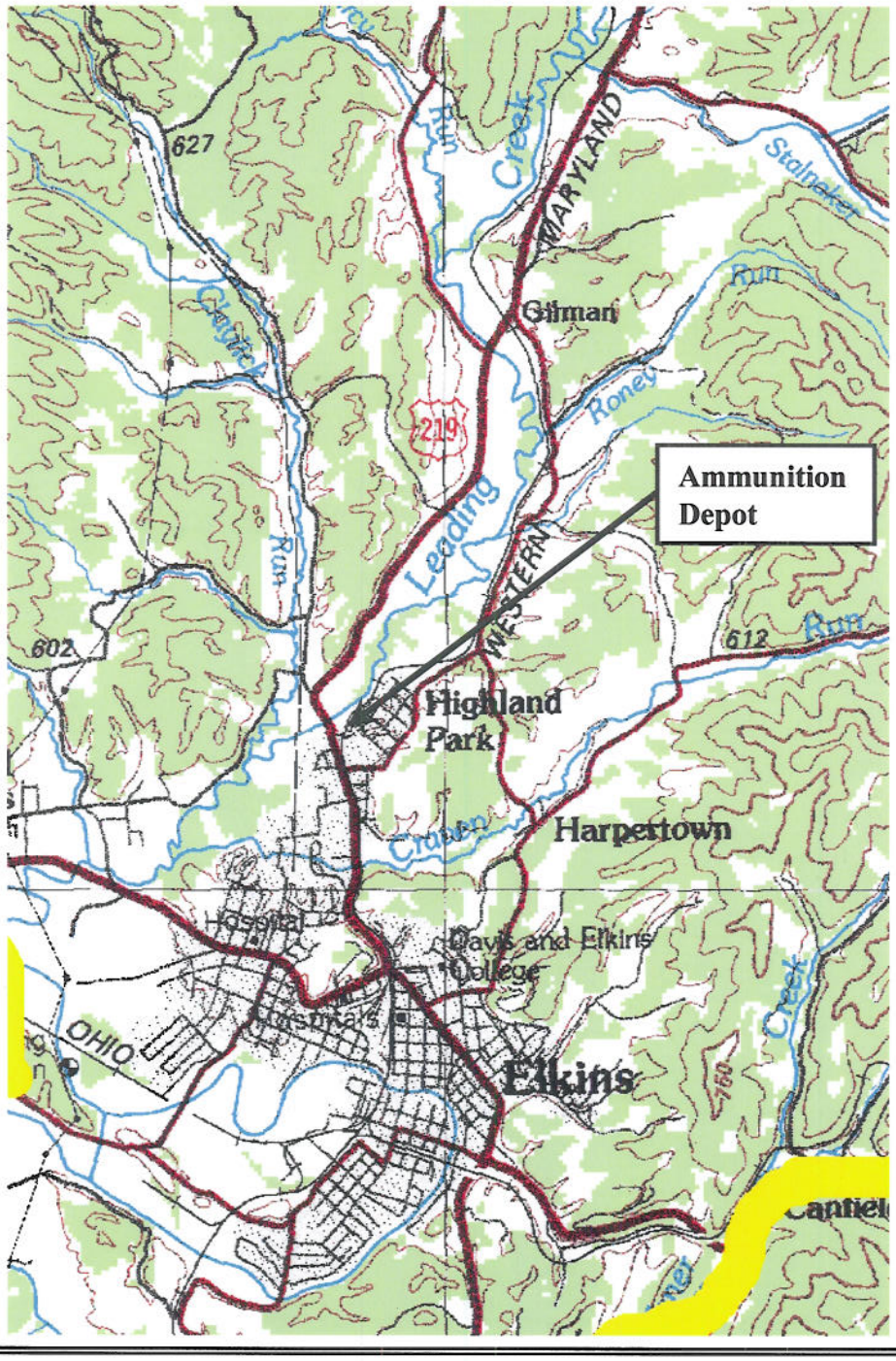
WVMA Ammunition Depot. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

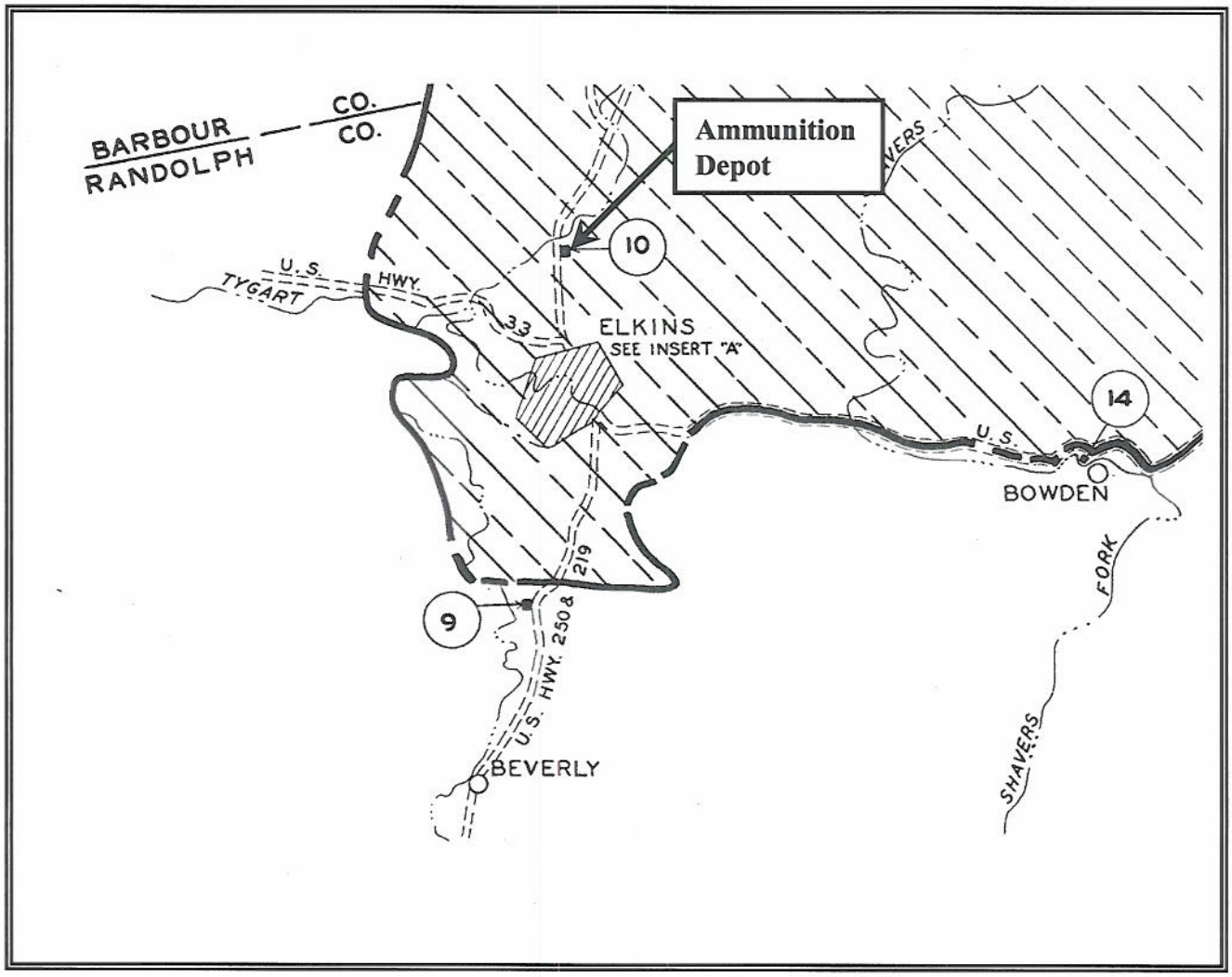
PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

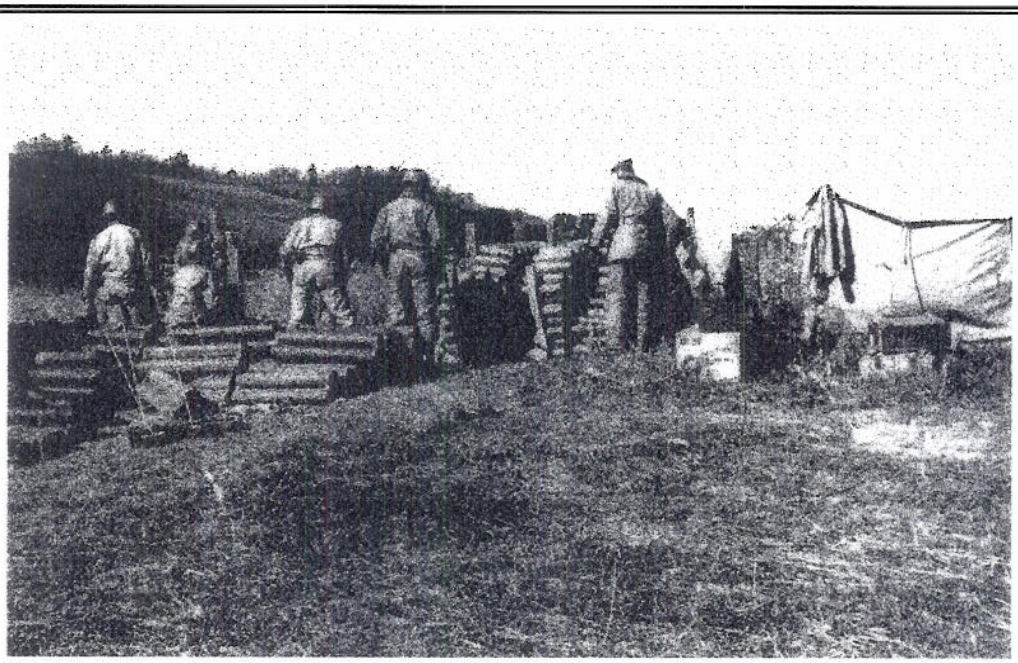
PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001306
FEDERAL FACILITY ID NUMBER WV9799F3460
AMMUNITION DEPOT



ORIGINAL REAL ESTATE MAP OF WVMA
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001306
FEDERAL FACILITY ID NUMBER WV9799F3460
AMMUNITION DEPOT



PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001306
FEDERAL FACILITY ID NUMBER WV9799F3460
AMMUNITION DEPOT

Comments: View of WVMA Ammunition Depot, date unknown	
Comments: Current view of WVMA presumed ammunition depot, date unknown	

PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001306
FEDERAL FACILITY ID NUMBER WV9799F3460
AMMUNITION DEPOT

Comments: Current view of WVMA presumed ammunition depot, date unknown	

Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 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 was a maneuver area with the general borders of the communities of Gladwyn, Sully, Jenningston, Red Creek, and Dry Fork, WV. This maneuver area is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment, which included historical photos, common operations reports developed by USACE, historical documentation obtained at the National Archives, interviews with individuals knowledgeable about the site and other information obtained concerning the site. Based upon this information it was determined that the maneuver area consisted of rock climbing exercises, troop maneuver problems, and potential mortar firing. In 2006, a cave containing 60-mm and 81-mm shipping canisters was located by Monongahela National Forest (MNF) personnel conducting a Karst Survey project. The cave was located in the Otter Creek Wilderness of the Monongahela National Forest. This proposed project covers the contamination generated by the Army's use of the Maneuver Area. (Project Location Map is at Enclosure 17, photographs are at Enclosure 18 and the MRSPP Tables are at Enclosure 19.)

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and target practice. The maneuver area of the WVMA was heavily used for regimental troop exercises during DA activities at the WVMA. Much of the property utilized as the maneuver area was situated within the 350,416.37 acres leased by the Department of Defense from the MNF, U.S. Department of Agriculture. The presence of Munitions and Explosives of Concern (MEC) would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former

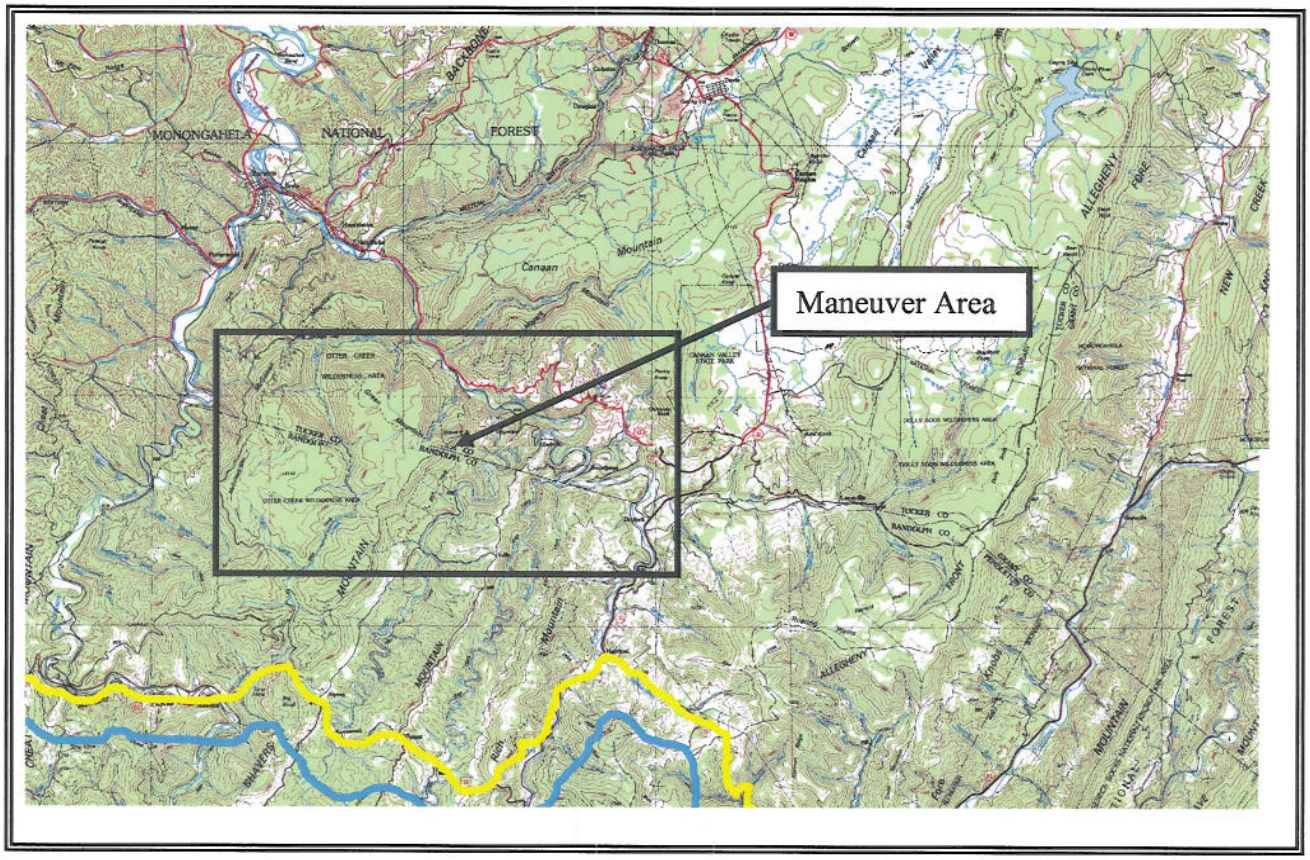
Maneuver Area. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001307
FEDERAL FACILITY ID NUMBER WV9799F3460
MANEUVER AREA



PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV00130
FEDERAL FACILITY ID NUMBER WV9799F3460
MANEUVER AREA

Comments: View of 60-mm and 81-mm mortar shipping cannisters, date unknown	
Comments: View of Gladwyn Rocks within the Maneuver Area, date unknown	

PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV00130
FEDERAL FACILITY ID NUMBER WV9799F3460
MANEUVER AREA

Comments: Current view of area around Sully, WV.	
Comments: Current view of farm located near Sully, WV.	

Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. The former maneuver area consisted of 48,428.59 acres between the communities of Davis and Petersburg, WV which were leased for use as an artillery/mortar impact area. The Fore Knobs-Bear Rocks Firing Range is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment and previous investigations conducted under the WVMA/Dolly Sods FUDS Project. Information obtained during these investigations included historical photos, common operations reports developed by USACE, aerial photos, interviews conducted with individuals familiar with the training, historical newspaper articles, and other historical information obtained concerning the site. In 2004, the St. Louis District of the USACE found Department of Army decomtamination reports and mapping in the Southwest Region National Archives in Fort Worth, TX. This mapping shows firing locations and impact areas. Additional documentation found with the mapping indicates that the Army extensively searched and cleared the impact area of ordnance prior to and after the return of the property to the U.S. Department of Agriculture (USDA); however, complete ordnance decontamination was not possible. The mapping found in the Fort Worth National Archives definitively shows that the areas around Stack and Bear Rocks were clearly marked as large impact areas. These areas are to the north and east of the Dolly Sods Region which are covered under Project No. G03WV001304 - Dolly Sods Removal. The Long-Term Management phase of that project is currently underway.

Historical newspaper articles were researched for inclusion in the WVMA Preliminary Assessment. These articles were published by the WVMA Headquarters in Elkins and warned the public as to where Army firing would be conducted in the coming week(s). Based on these warnings, the following areas within the Fore Knobs/Bear Rocks Firing Range were noted: Fore Knobs, Rohrbaugh School, Stoney River, Bear/Stack Rocks (specifically noted as 105-mm firing), Jordan Run, State Route 28, and the Allegheny Front. Interviews conducted with residents of the area confirmed that large cannon firing aimed west toward Bear Rocks occurred in farms and fields located along the Fore Knobs area west of State Route 28 (Jordan Run Road). In 1999, a 105-mm howitzer round was discovered by a contractor of The Nature Conservancy, who own the Bear Rocks Area, during construction. An interview conducted with a resident who owns a hunting cabin in the area stated that he had found an artillery round west-southwest of Stack Rocks. He stated that he didn't report the incident (~20 years ago), but had noted that a

yellow substance was coming from the round. This proposed project covers the Munitions and Explosives of Concern (MEC) contamination generated by the Army's use of the Fore Knobs-Bear Rocks Firing Range. Location Map and Site Map are at Enclosure 21 and the MRSPP Tables are at Enclosure 22.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and artillery/mortar target practice. The Fore Knobs/Bear Rocks Firing Range was utilized during the WVMA as a 105-mm and 155-mm howitzer practice firing range. Real Estate documentation of the WVMA indicates that 48428.59 acres of property owned by various individuals were leased by the Department of Defense for the use as an impact area (based on a Real Estate map and real estate documents provided by the Baltimore District of the USACE). The presence of MEC would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

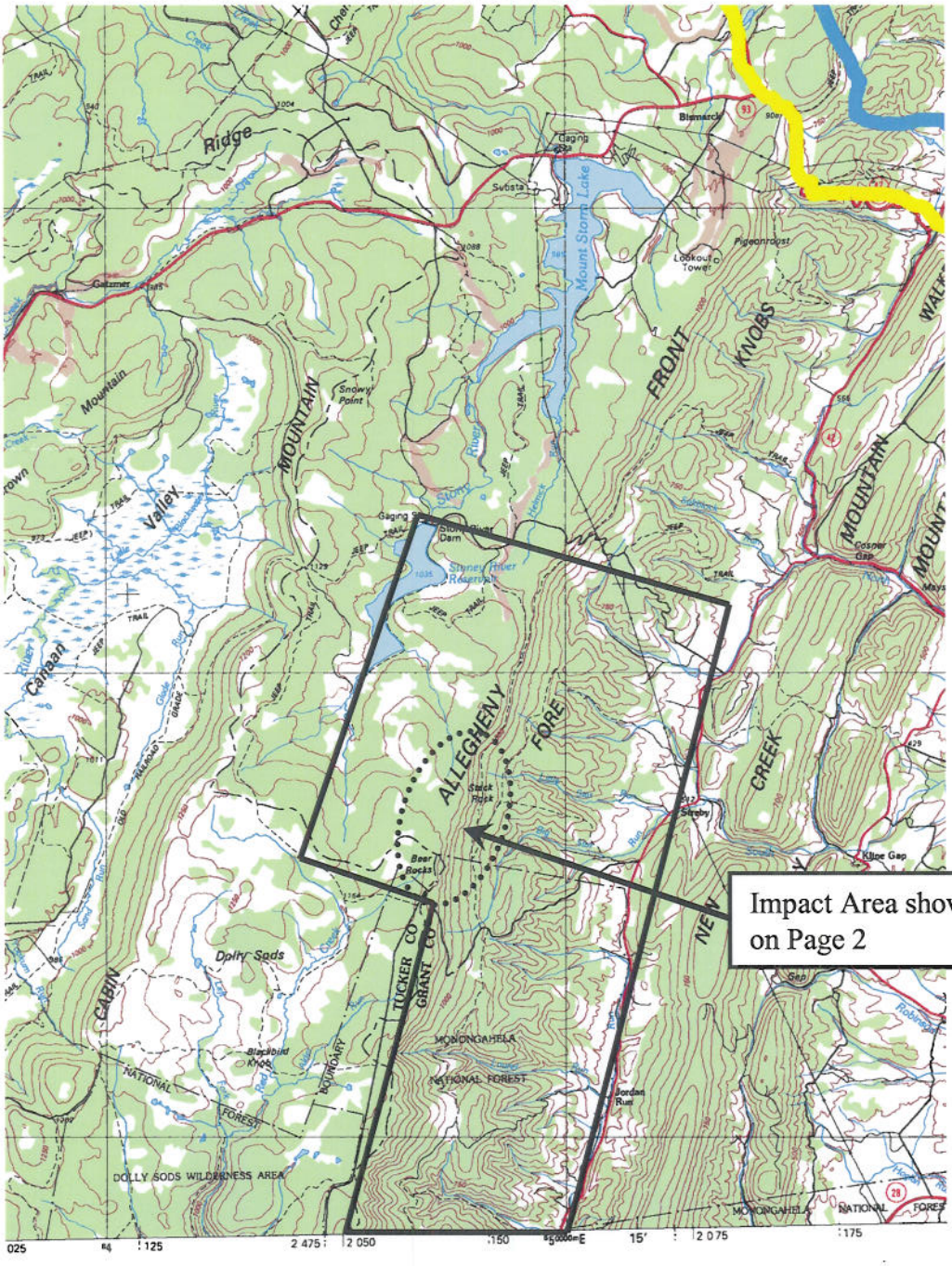
PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former Fore-Knobs-Bear Rocks Impact Ranges. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001308
FEDERAL FACILITY ID NUMBER WV9799F3460
FORE KNOBS/BEAR ROCKS FIRING RANGE



PROJECT SITE MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001308
FEDERAL FACILITY ID NUMBER WV9799F3460
FORE KNOBS/BEAR ROCKS FIRING RANGE

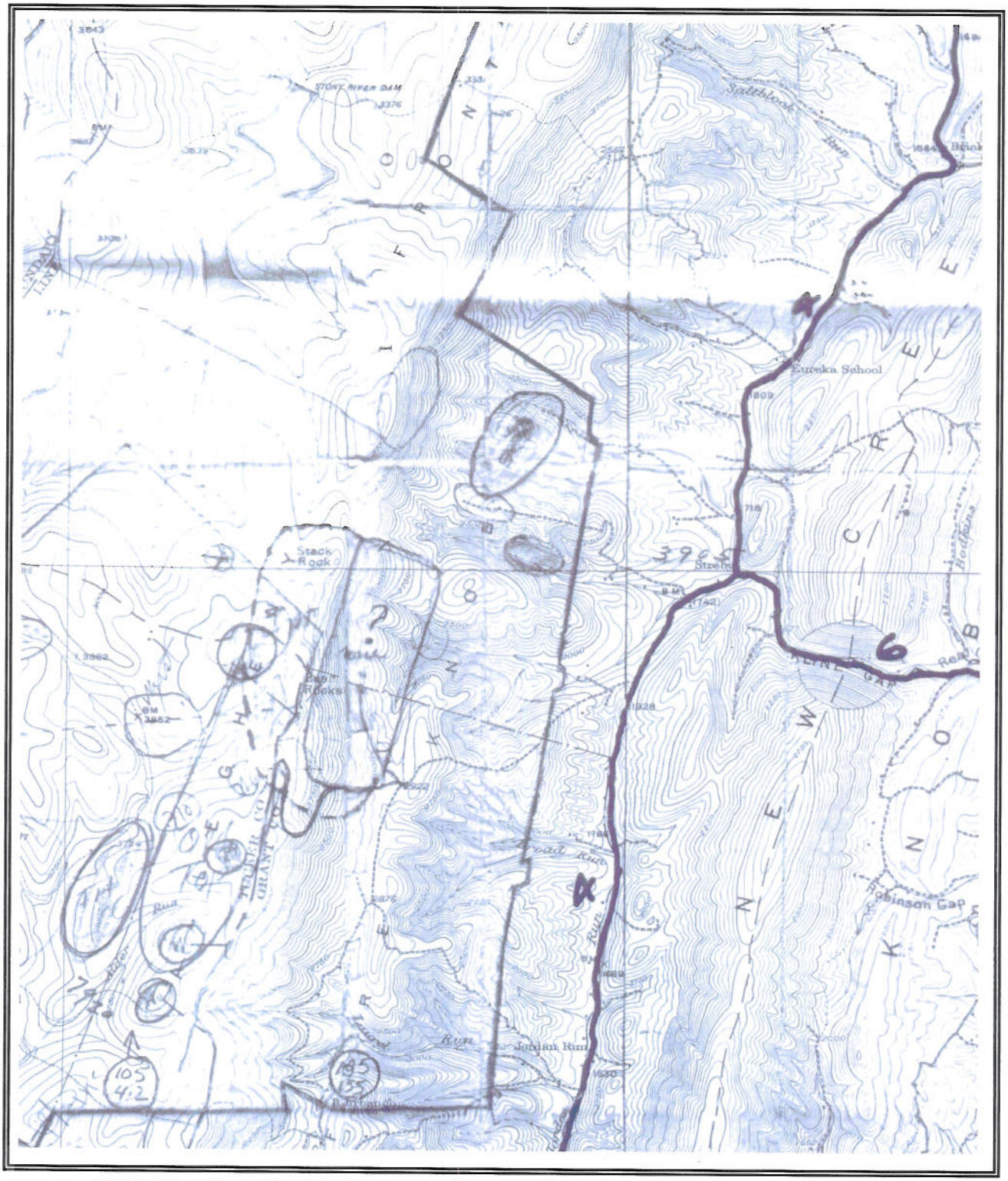


Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. The former maneuver area consisted of 48,428.59 acres between the communities of Davis and Petersburg, WV which were leased for use as an artillery/mortar impact area. The Bearden Knob Firing Range is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment and previous investigations conducted under the WVMA/Dolly Sods FUDS Project. Information obtained during these investigations included historical photos, common operations reports developed by USACE, aerial photos, interviews conducted with individuals familiar with the training, historical newspaper articles, and other historical information obtained concerning the site. In 2004, the St. Louis District of the USACE found Department of Army decomtamination reports and mapping in the Southwest Region National Archives in Fort Worth, TX. This mapping shows firing locations and impact areas. Additional documentation found with the mapping indicates that the Army extensively searched and cleared the impact area of ordnance prior to and after the return of the property to the U.S. Department of Agriculture (USDA); however, complete ordnance decontamination was not possible. The mapping found in the Fort Worth National Archives definitively shows that Bearden Knob was clearly marked as a firing point with a impact area located on Cabin Mountain to the east. These areas are to the west of the Dolly Sods Region which are covered under Project No. G03WV001304 - Dolly Sods Removal. The Long-Term Management phase of that project is currently underway.

Historical newspaper warning articles were researched for inclusion in the WVMA Preliminary Assessment. These warning articles were published by the WVMA Headquarters in Elkins and warned the public as to where Army firing would be conducted in the coming week. Based on these warnings, it was noted that firing would occur in the vicinity of Bearden Knob firing toward Cabin Mountain (target). Documentation concerning the 628th Anti-tank Battalion also describe an anti-tank target range in the area of Bearden Knob, although the exact location of this range has not yet been determined. This proposed project covers the Munitions and Explosives of Concern (MEC) contamination generated by the Army's use of the Bearden Knob Firing Range. Site Maps and Aerial Photographs are at Enclosure 24 and the MRSPP Tables are at Enclosure 25.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and artillery/mortar target practice. The Bearden Knob Firing Range was utilized during the WVMA as a 105-mm firing range. Real Estate documentation of the WVMA indicates that 48428.59 acres of property owned by various individuals were leased by the Department of Defense for the use as an impact area (based on a Real Estate map and real estate documents provided by the Baltimore District of the USCAE). The presence of MEC would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

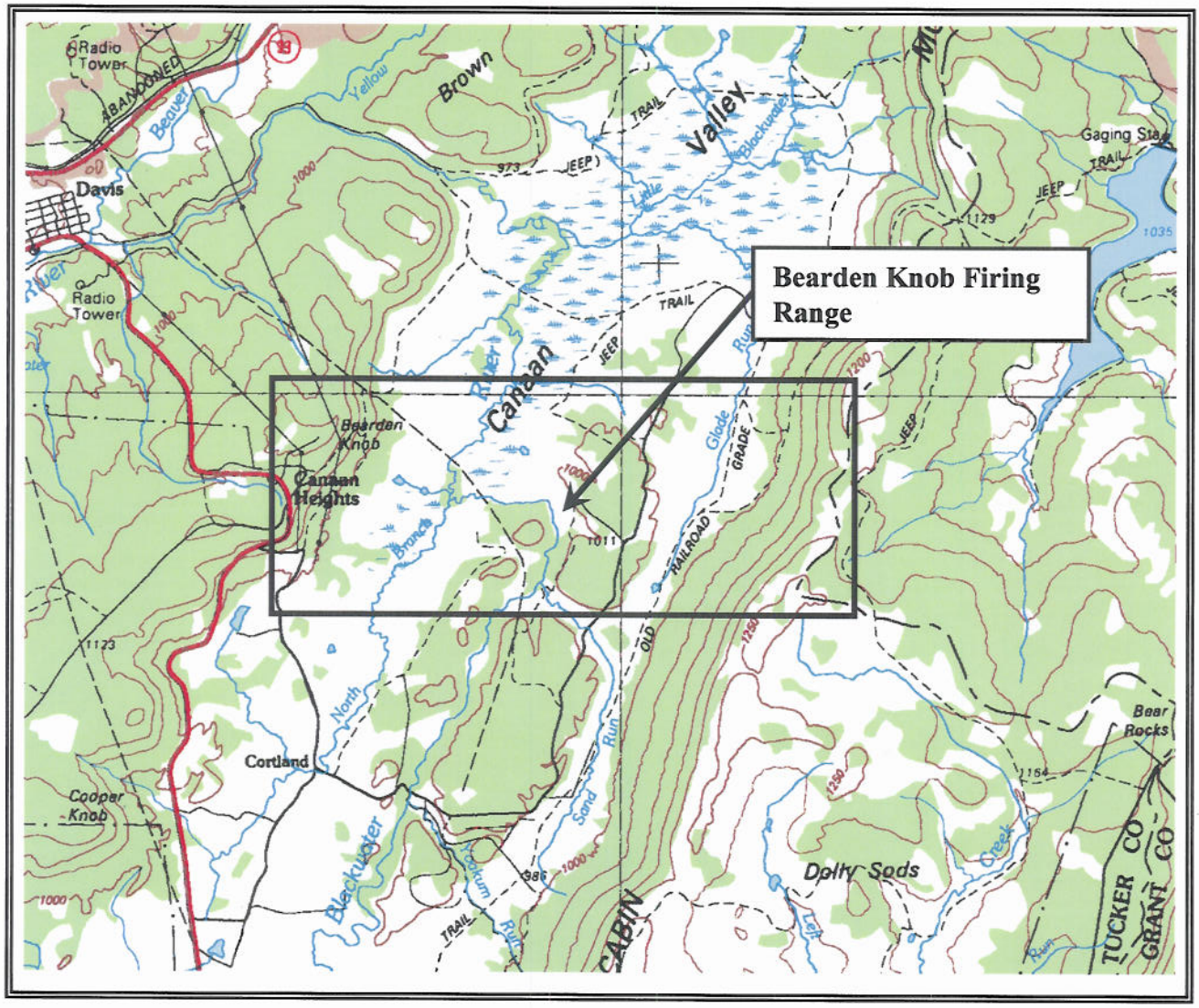
PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former Bearden Knob Firing Range. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

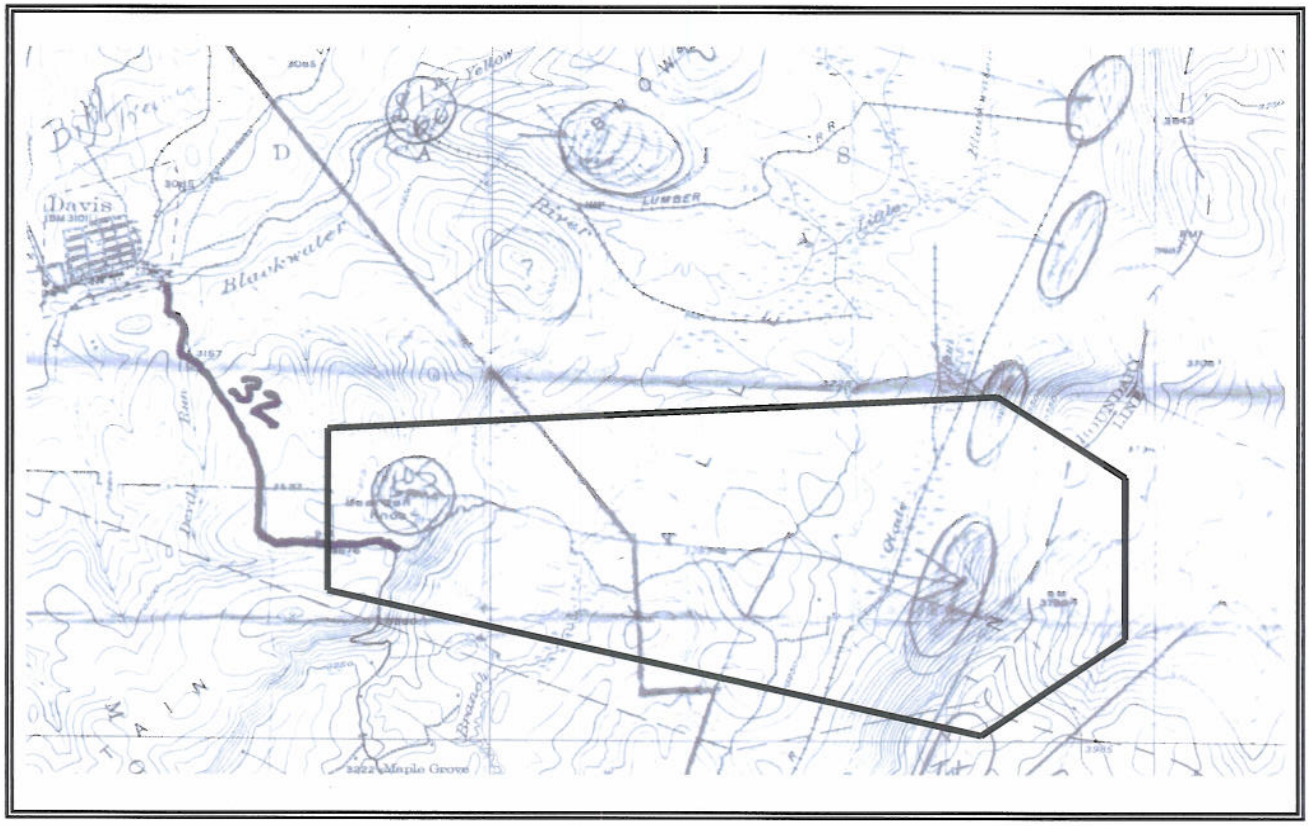
PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001309
FEDERAL FACILITY ID NUMBER WV9799F3460
BEARDEN KNOB FIRING RANGE



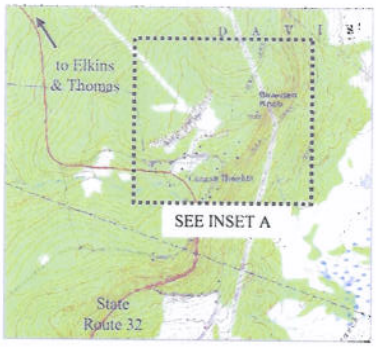
PROJECT HISTORIC SITE MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001309
FEDERAL FACILITY ID NUMBER WV9799F3460
BEARDEN KNOB FIRING RANGE



PROJECT AERIAL PHOTOGRAPHY
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001309
FEDERAL FACILITY ID NUMBER WV9799F3460
BEARDEN KNOB FIRING RANGE

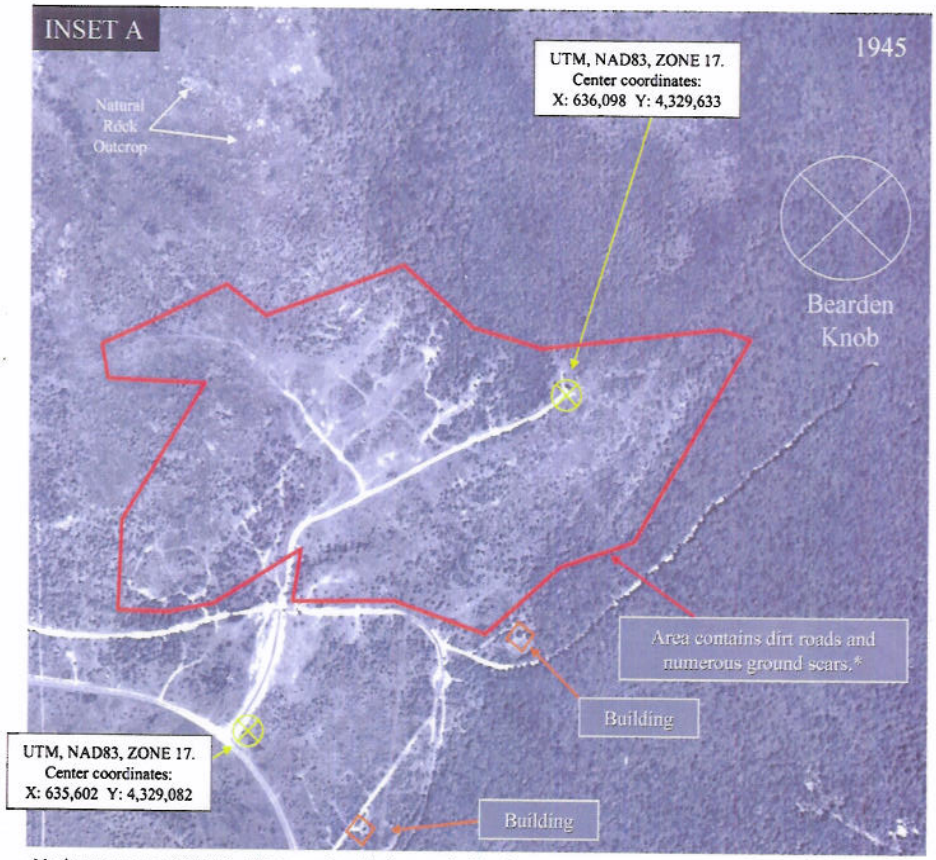
Main Impact Area
FINAL REPORT

Bearden Knob Area



North

LOCATION DIAGRAM



•Moving target range (628th Tank Destroyer Battalion) reported at Bearden Knob; History of the XIII Corps, West Virginia Maneuver Area, Page 7.

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Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. The former maneuver area consisted of 48,428.59 acres between the communities of Davis and Petersburg, WV which were leased for use as an artillery/mortar impact area. The Brown Mountain Firing Range and Cabin Mountain Firing are confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment Information obtained during these investigations included historical photos, mortar range and artillery range common operations reports developed by USACE, aerial photos, interviews conducted with individuals familiar with the training, historical newspaper articles, and other historical information obtained concerning the site. In 2004, the St. Louis District of the USACE found Department of Army decomtamination reports and mapping in the Southwest Region National Archives in Fort Worth, TX. This mapping shows firing locations and impact areas. Additional documentation found with the mapping indicates that the Army extensively searched and cleared the impact area of ordnance prior to and after the return of the property to the U.S. Department of Agriculture (USDA); however, complete ordnance decontamination was not possible. The mapping found in the Fort Worth National Archives definitively shows that Yellow Creek was clearly marked as a firing point with a impact area located on Brown Mountain to the east. This was shown as a 60-mm and 81-mm mortar firing range. The mapping also showed a longer firing range with a firing point located along Beaver Creek and an impact area on Cabin Mountain to the east. This range is shown as a 155-mm howitzer firing range. These areas are to the west of the Dolly Sods Region which are covered under Project No. G03WV001304 - Dolly Sods Removal. The Long-Term Management phase of that project is currently underway.

Historical newspaper warning articles were researched for inclusion in the WVMA Preliminary Assessment. These warning articles were published by the WVMA Headquarters in Elkins and warned the public as to where Army firing would be conducted in the coming week. Based on these warnings, it was noted 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 proposed project covers the Munitions and Explosives of Concern (MEC) contamination generated by the Army's use of the Brown Mountain and Cabin

Mountain Firing Ranges. Location Maps and Aerial Photographs are at Enclosure 27 and the MRSPP Tables are at Enclosure 28.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and artillery/mortar target practice. The Brown Mountain Firing Range was utilized during the WVMA as a mortar (60-mm and 81-mm) firing range. The Cabin Mountain Firing Range, which encompassed the Brown Mountain Firing Range, was utilized during the WVMA as a 155-mm howitzer firing range. Real Estate documentation of the WVMA indicates that 48428.59 acres of property owned by various individuals were leased by the Department of Defense for the use as an impact area (based on a Real Estate map and real estate documents provided by the Baltimore District of the USACE). The presence of MEC would be the direct result of the Army's former use of the property for maneuvers and target practice. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

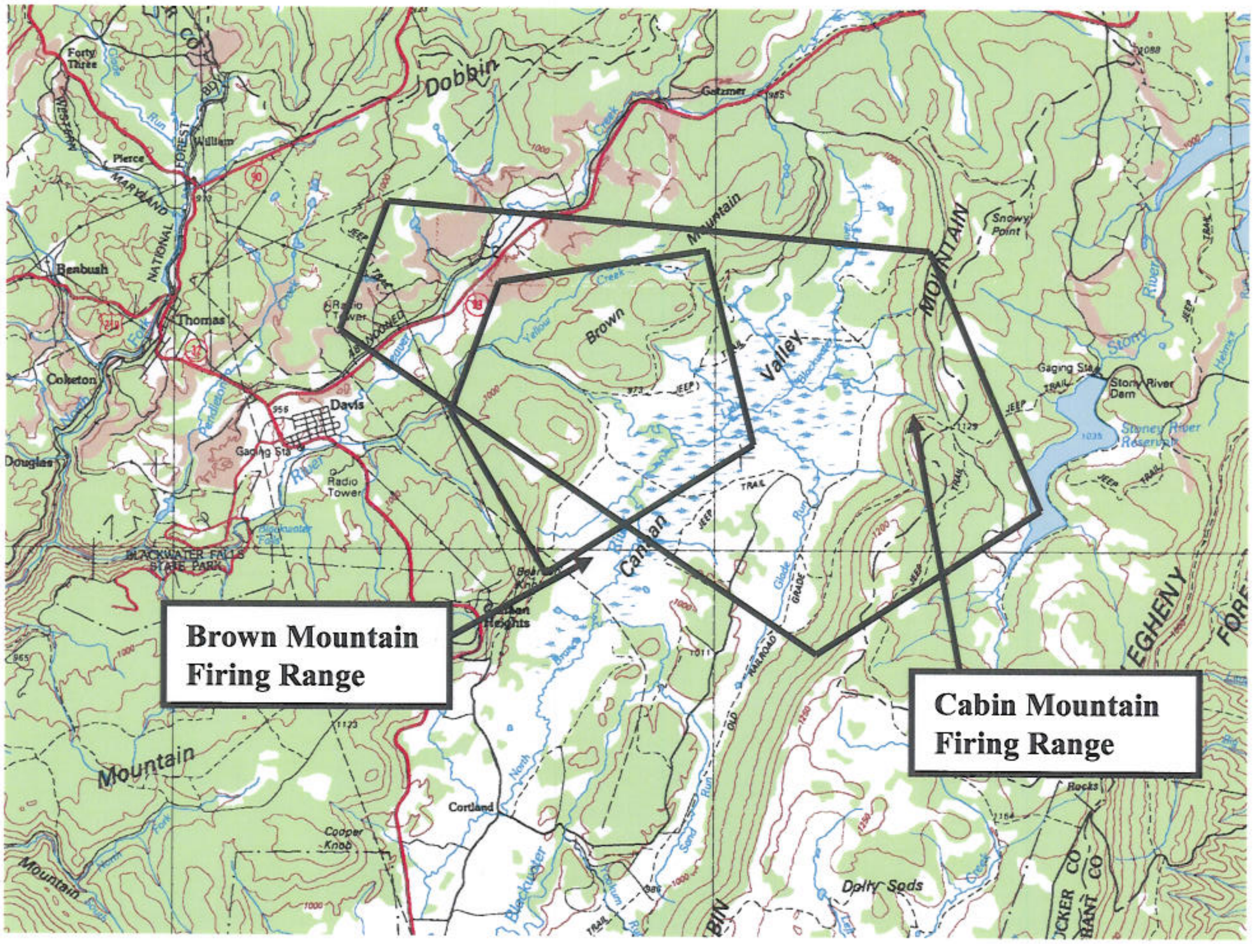
PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former WVMA Brown Mountain/Cabin Mountain Firing Ranges. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard. Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

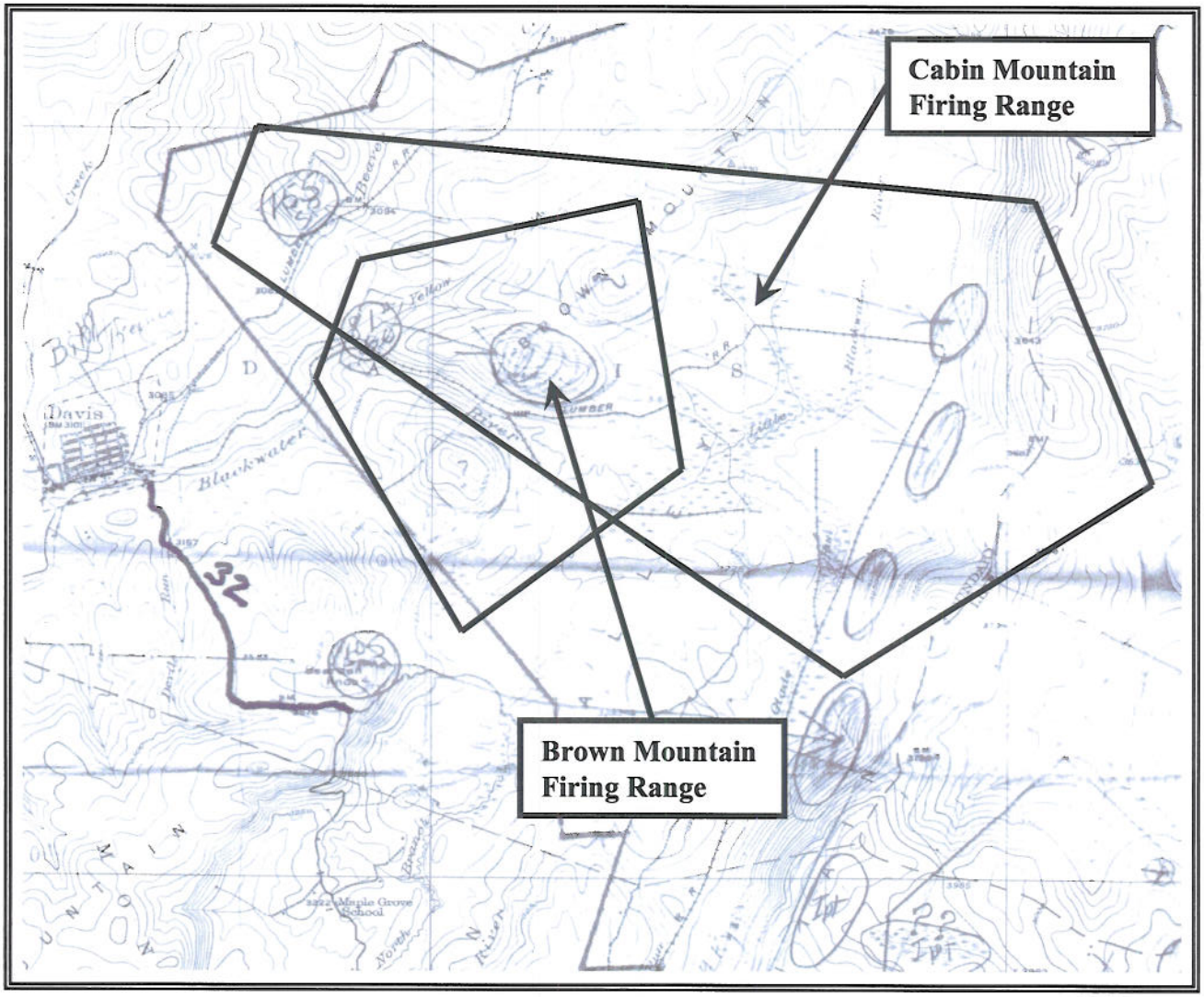
PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

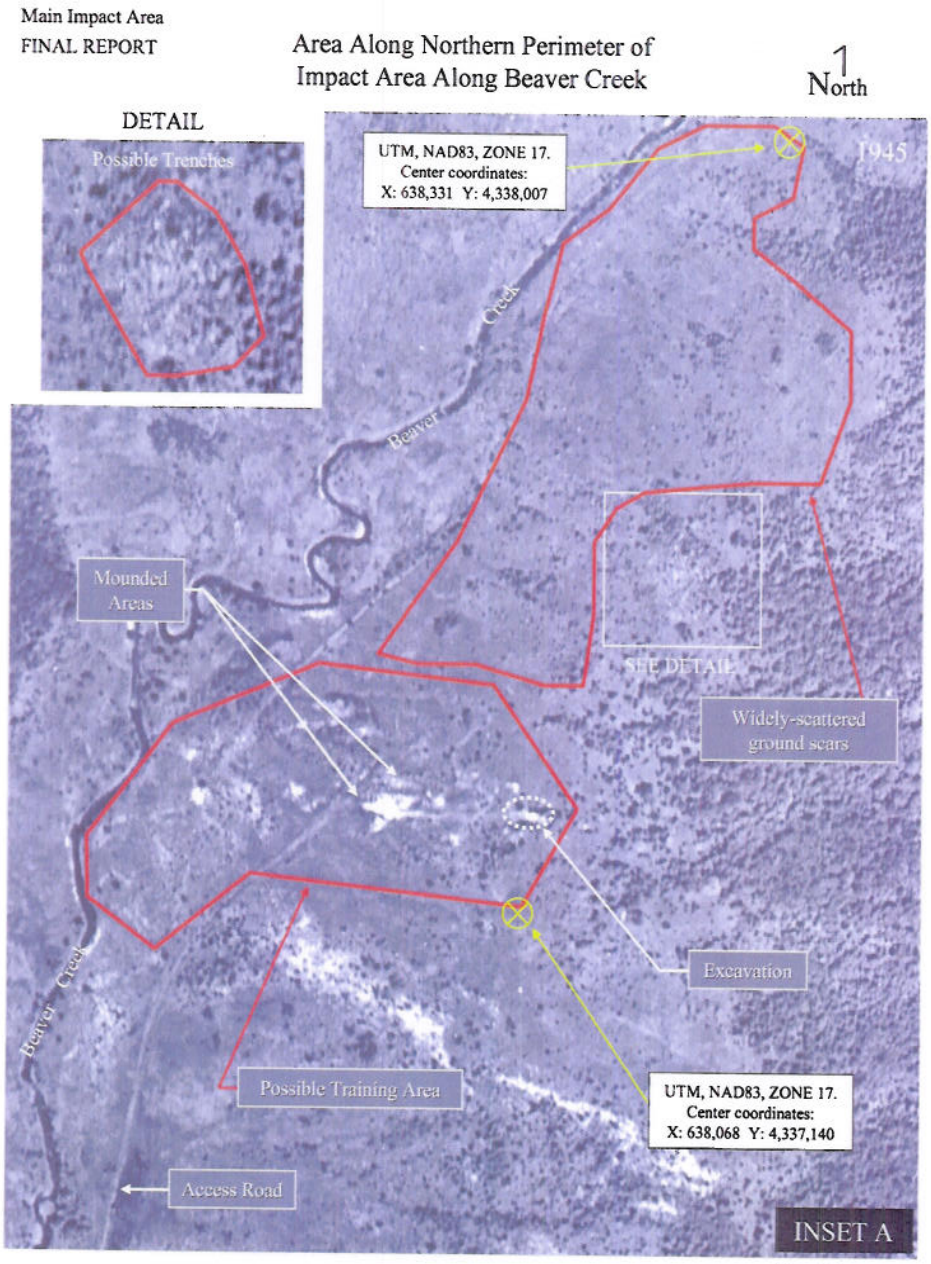
PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NUMBER WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES



PROJECT HISTORICAL SITE MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NUMBER WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES



PROJECT AERIAL PHOTOGRAPH 1
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NUMBER WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES



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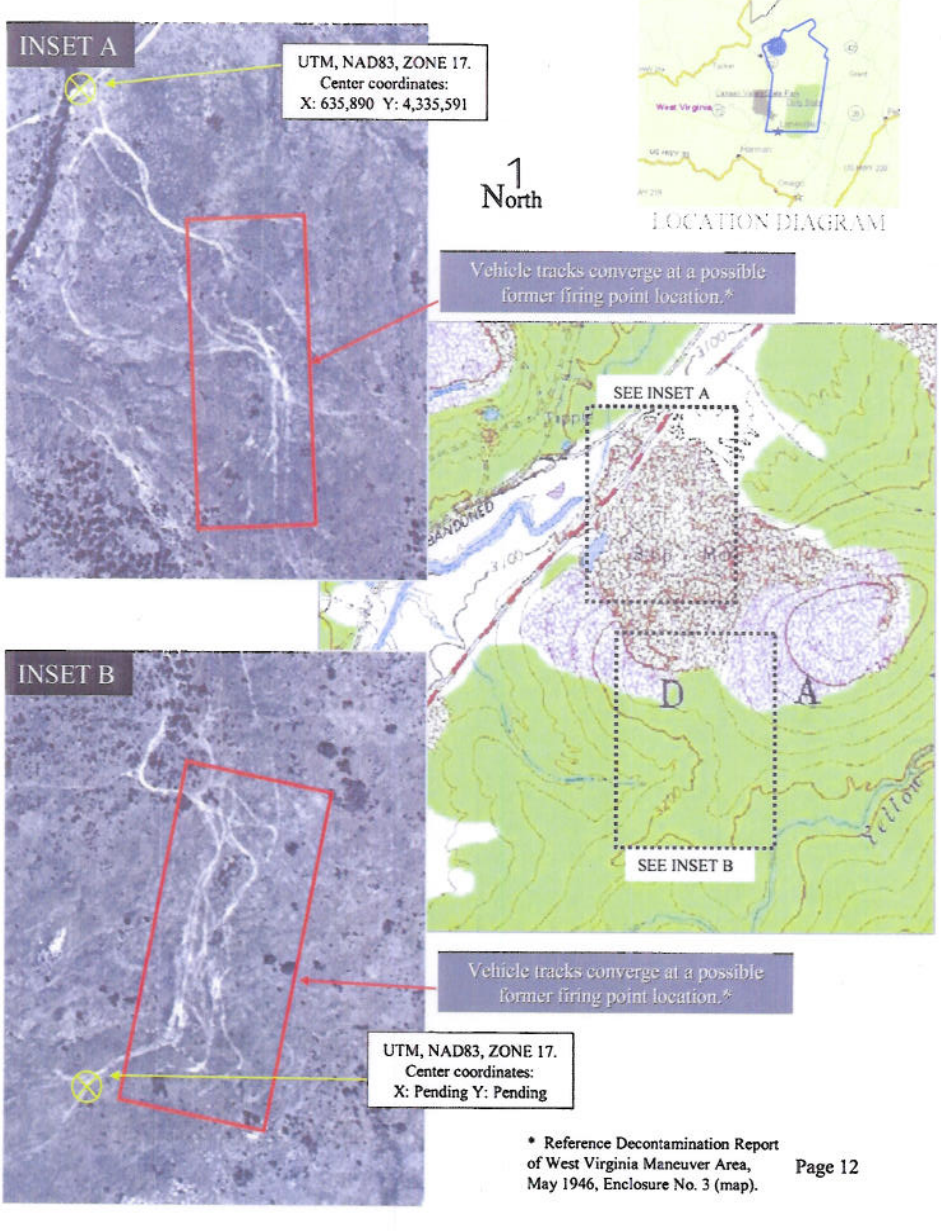
PROJECT AERIAL PHOTOGRAPH 2
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NUMBER WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES

Main Impact Area
FINAL REPORT

Area Northeast of Davis (Part 1 of 2)



* Reference Decontamination Report of West Virginia Maneuver Area, May 1946, Enclosure No. 3 (map).

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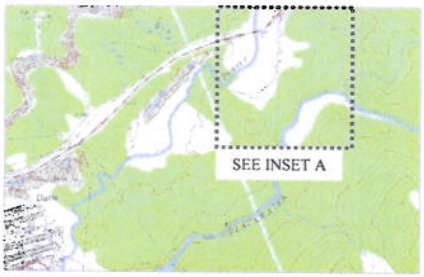
PROJECT AERIAL PHOTOGRAPH 3
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001310
FEDERAL FACILITY ID NUMBER WV9799F3460
BROWN/CABIN MOUNTAIN FIRING RANGES

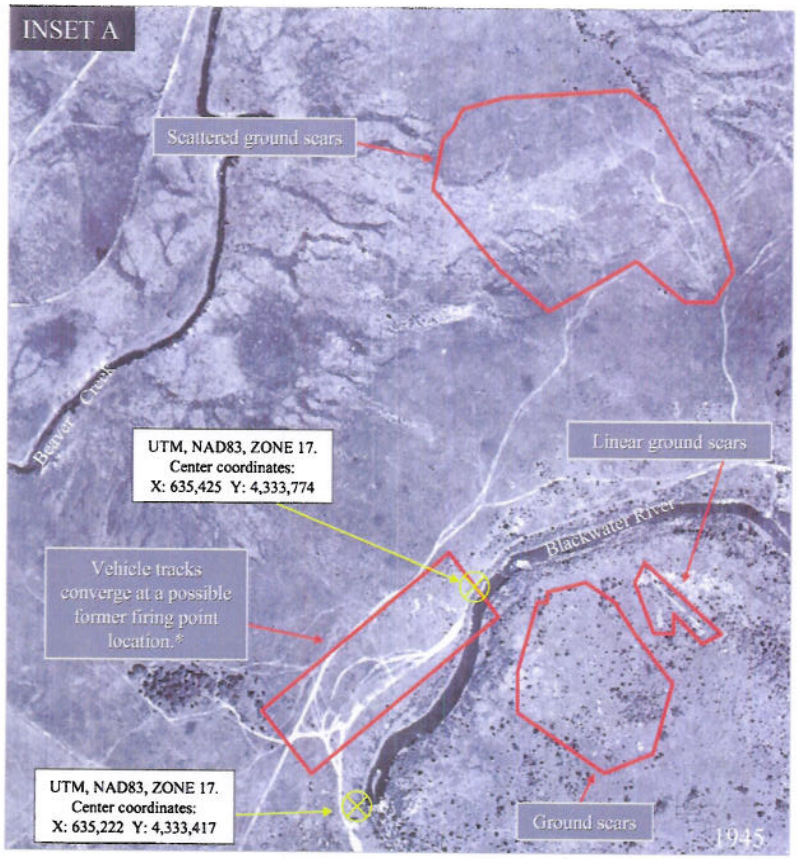
Main Impact Area
FINAL REPORT

Area Northeast of Davis (Part 2 of 2)



LOCATION DIAGRAM

North



* Reference Decontamination Report of West Virginia Maneuver Area, May 1946, Enclosure No. 3 (map).

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Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	

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

WV Maneuver Area/Dolly Sods
Tucker, Grant, Preston, Pendleton, and Randolph Counties, West Virginia
3 February 2008

PROJECT DESCRIPTION: The Department of the Army (DA) utilized the former West Virginia Maneuver Area (WVMA) from 1943-44 for low altitude mountain training, regimental troop maneuvers and target practice during World War II. One of the training courses constructed for use in the WVMA was an a small arms firing range built near the community of Buena, WV. This firing range is confirmed to have existed based upon research conducted for inclusion in the WVMA Preliminary Assessment and aerial photograph interpretation reports conducted for WV Department of Environmental Protection and USACE Huntington District. Documents indicating this site included historical photos, small arms firing range common operations reports developed by USACE, aerial photos, a regimental history of the 150th Engineer Combat Battalion, and other historical information obtained concerning the site. Based upon this information it was determined that the Buena Small Arms Firing Range consisted of a small arms firing range and a potential grenade range. This proposed project covers the Munitions and Explosives of Concern (MEC) contamination generated by the Army's use of the Buena Small Arms Firing Range. A Location Map and Aerial Photograph are at Enclosure 30, photographs are at Enclosure 31 and the MRSPP Tables are at Enclosure 32.

PROJECT ELIGIBILITY: Records indicate that the DA utilized the former WVMA from 1943-44 for World War II low altitude mountain training, regimental troop maneuvers and target practice. Real Estate documentation of the WVMA indicates that 48428.59 acres of property owned by various individuals were leased by the Department of Defense for the use as an impact area (based on a Real Estate map and real estate documents provided by the Baltimore District of the USACE). The presence of MEC would be the direct result of the Army's former use of the property for small arms firing. Any MEC contamination encountered as a result of this project would be a result of Army activity on the property.

POLICY CONSIDERATIONS: There is no DoD policy that prohibits this project's proposal.

PROPOSED PROJECT: Military Munitions Response Program (MMRP)

PROPOSED ACTIVITIES: A MMRP project is recommended to conduct a Site Inspection (SI), which would involve a MEC Site Characterization and Removal Assessment of the former Buena Small Arms Firing Range. The SI will help determine whether contamination exists on the area where the items listed above were situated and if it poses any type of explosive hazard.

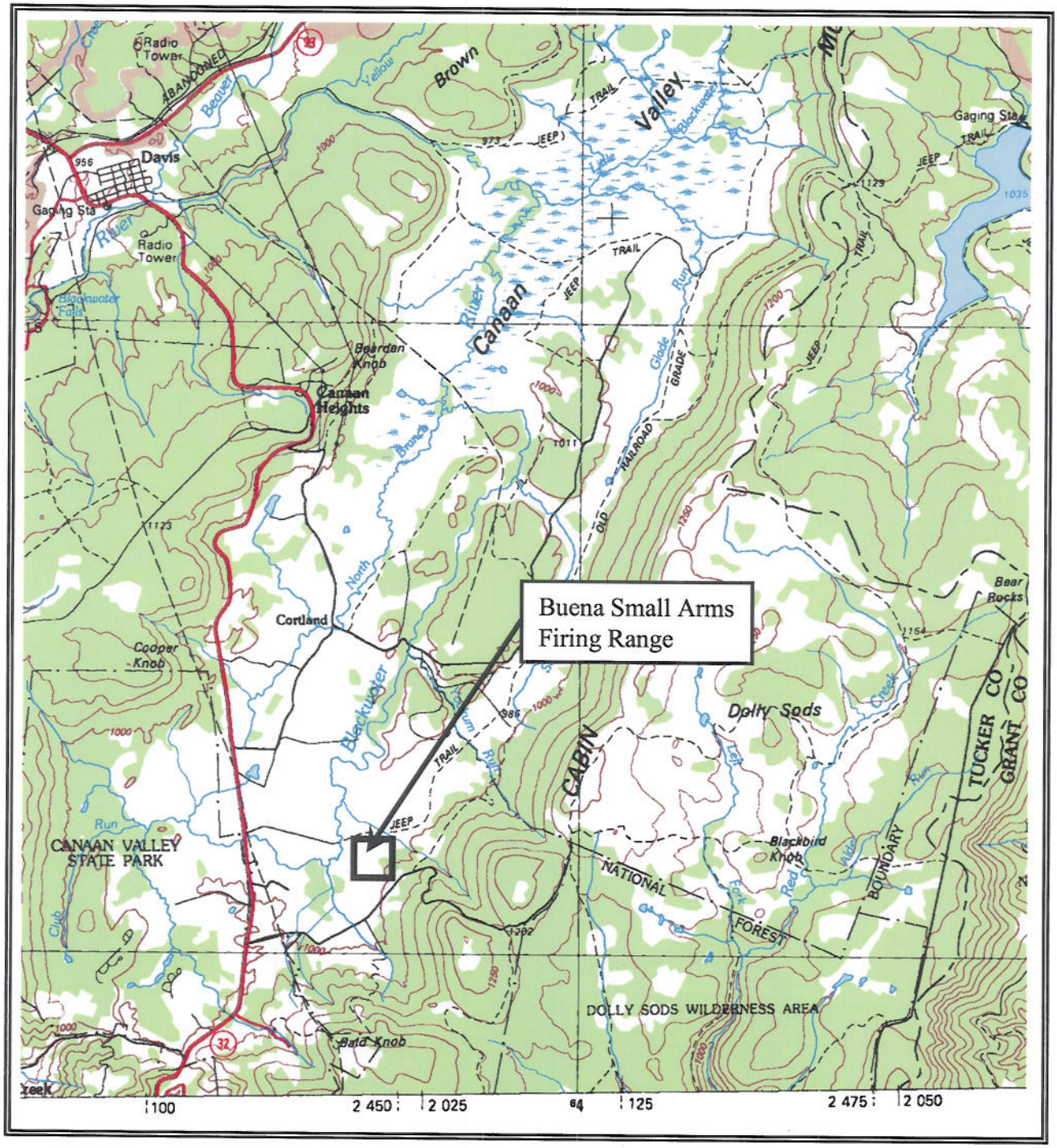
Based on the SI, a Remedial Investigation/Feasibility Study (RI/FS) may be required to address MEC contamination if it is found. After the RI/FS is performed, a MEC Removal Action (RA) may be required. Long-term Management (LTM) may be required such as that which is currently being conducted at the Dolly Sods region of the WVMA Impact Area (DERP-FUDS Project Number G03WV001304). A Project Closeout (PCO) phase will be needed following completion of all other phases.

POINTS-OF-CONTACT: Louisville District, Michael J. Saffran, CELRL-PM-M-E, (502) 315-6825, Huntington District, Mr. Richard L. Meadows, CELRH-PM-PP-P, (304) 399-5388 and Mr. Nickolas L. McHenry, CELRH-EC-CE, (304) 399-5909; and U.S. Army Engineering and Support Center, Huntsville, Mr. William D. Veith, CEHNC-CX-MM, (256) 895-1592.

PROPERTY POINTS-OF-CONTACT/STAKEHOLDERS: U.S. Forest Service, Ms. Nancy Feakes, District Manager, Monongahela National Forest, (304) 257-4488, Ms. Carol Whetsell (304) 478-3251, and Ms. Kate Goodrich, Public and Legislative Affairs (304) 636-1800; West Virginia Division of Forestry, Mr. Steve Upton, (304) 558-2788.

LEAD REGULATOR: West Virginia Department of Environmental Protection, Mr. Donald Martin, (304) 924-6211 and Mr. Jim Maurin, (304) 368-3950.

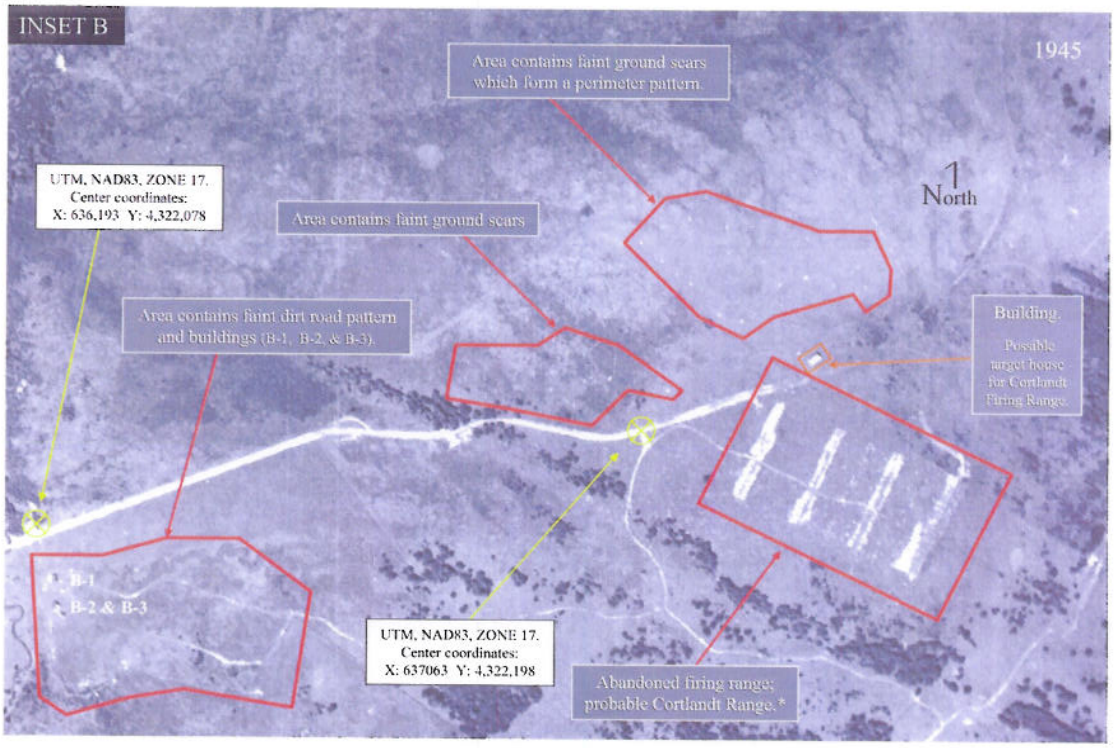
PROJECT LOCATION MAP
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001311
FEDERAL FACILITY ID NUMBER WV9799F3460
BUENA SMALL ARMS FIRING RANGE



PROJECT AERIAL PHOTOGRAPHY
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001311
FEDERAL FACILITY ID NUMBER WV9799F3460
BUENA SMALL ARMS FIRING RANGE

Main Impact Area
FINAL REPORT

Area South of Cortland, WV



* 1 October 1943 field message, WVMA, Elkins, West Virginia

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PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001311
FEDERAL FACILITY ID NUMBER WV9799F3460
BUENA SMALL ARMS FIRING RANGE

Comments: View of Small Arms Firing Range, date unknown	
Comments: View of WVMA personnel and Small Arms Firing Range, date unknown	

PROJECT PHOTOGRAPHS
FOR
DERP-FUDS MMRP PROJECT NO. G03WV001311
FEDERAL FACILITY ID NUMBER WV9799F3460
BUENA SMALL ARMS FIRING RANGE

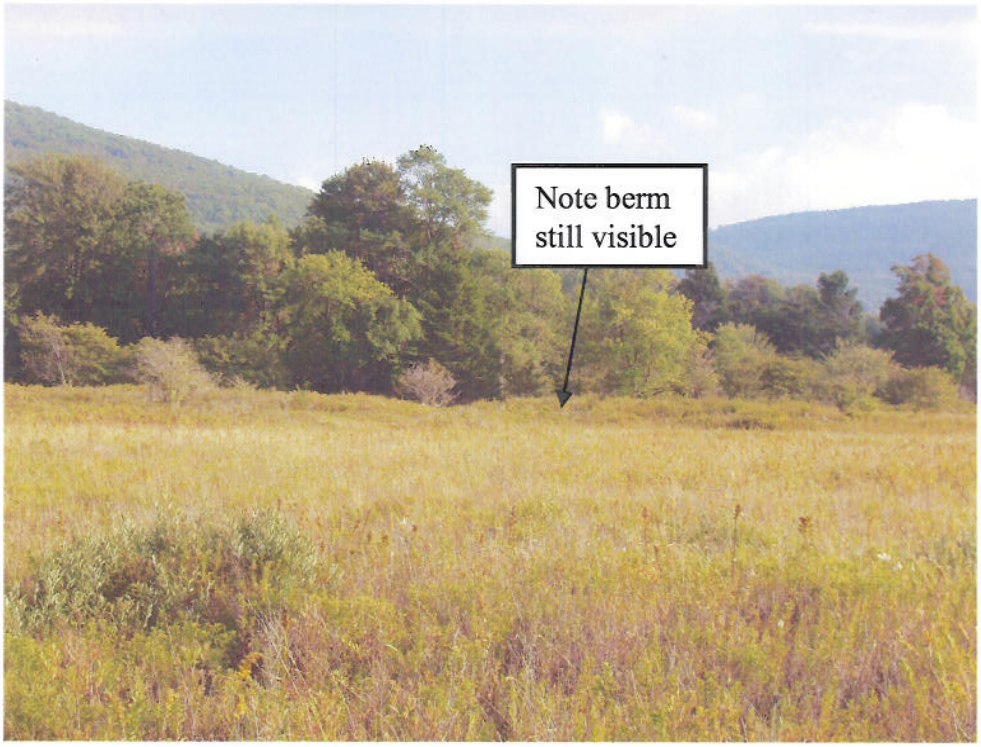
Comments: Current view of Small Arms Firing Range currently located on US Fish and Wildlife property, date unknown	

Table 24 HHE Module Rating				
Contaminant Hazard Factor	Receptor Factor	Migration Pathway		
		Evident	Potential	Confined
Significant	Identified	A	B	C
	Potential	B	C	D
	Limited	C	D	E
Moderate	Identified	B	C	D
	Potential	C	D	E
	Limited	D	E	F
Minimal	Identified	C	D	E
	Potential	D	E	F
	Limited	E	F	G

Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating					
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
Hazard Evaluation A (Highest)	2	Hazard Evaluation A (Highest)	1	Hazard Evaluation A (Highest)	2
Hazard Evaluation B	3	Hazard Evaluation B	2	Hazard Evaluation B	3
Hazard Evaluation C	4	Hazard Evaluation C	3	Hazard Evaluation C	4
Hazard Evaluation D	5	Hazard Evaluation D	4	Hazard Evaluation D	5
Hazard Evaluation E	6	Hazard Evaluation E	5	Hazard Evaluation E	6
Hazard Evaluation F	7	Hazard Evaluation F	6	Hazard Evaluation F	7
Hazard Evaluation G (Lowest)	8	Hazard Evaluation G (Lowest)	7	Hazard Evaluation G (Lowest) Low	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	