

Volk Field (Camp Douglas)

Volk Field CRTC
Camp Douglas, WI 54618

Major Ken Delano and Lt. Doug Sveum (new mgr. 8/28/2000)
Environmental Manager
Wisconsin Air National Guard (608) 427-1441
CRTC Volk Field
100 Independence Drive
Camp Douglas, WI 54618

dog doug.sveum@wlcrtc.ang.af.mil

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Environmental Restoration Branch (CEVR)
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Andrews AFB, MD 20762-5157

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Madison, WI 53714-0587 (608) 242-3355

Consultants:

Michael Collentine, P.G. (608) 231-4747 Ext. 228 (new MW mgr. Oct. 2003)
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Madison, WI 53711

Mr. Douglas Barber, Project manager
Montgomery Watson
One Science Court
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Madison, WI 53705-0385

Mr. Rick Karls and Margy Blanchard (new proj. mgr. As of 3/1/2000)
Montgomery Watson
One Science Court
P.O. Box 5385
Madison, WI 53705-0385
Phone: (608) 231-4755 Ext. 230

MSA Services (bldg. 15)

Hardwood Range:

USTs (UID #559)

560 gal. diesel fuel UST tank removed 7/28/93

1000 gal. unleaded gas UST tank removed 7/28/93

Site assessment rpt. concluded released occurred from fuel dispenser island All affected soil was removed. No gw affected.

A-4 Crash site (Area of Concern)

(occurred June 1983)

Assumption made by military that crash fire consumed all the fuel. Located some miles east of Volk

A-10 Crash site

(occurred July 1991) CLOSED 7/16/97

Impacted area was 20 by 50 by 3 ft. deep. Crash site was covered with water (marsh). At the time of crash, fire occurred. Sampling indicated benzene levels were 29 to 32 ug/l (above the ES NR140 standard of 5 ug/l). Site closed as spill case on 7/16/97.

Munitions Burial Site (Site 10) Site #2 02-29-250590

200 by 90 ft. located on west side of Hardwood ATG Range

Used from 1976 to 1988 for burning and burial of munitions.

Before early '80s, waste fuels, thinners, and solvents were used to burn the munitions.

Since then, ~ 500 gals. of JP-4 fuel have been used.

There were two munitions burial sites. Burial site 1 contained BDU33 (whatever the hell that is), 20MM shells, and M4 flares. This was excavated and transferred to Burial site 2 (according to Major Ken DeLano 04-15-2003).

Site 2 also contained BDU33, 2.75 rockets. MK106, and 20MM shells.

Burial Site 3 MK-82 and demolition debris. This site is located at:

Long. 90° 06' 12.6"

Lat. 44° 13' 40.89"

Hardwood Range:

USTs (UID #559)

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1000 gal. unleaded gas UST tank removed 7/28/93

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Eslien, Jack J

From: Delano, Kenneth
Sent: Tuesday, April 15, 2003 8:21 AM
To: Eslien, Jack J
Subject: FW: COORDS

Jack, looks like there is a correction. Please use these coordinates instead.

Ken

> -----Original Message-----

> From: Spolum, Kurt, CIV, CRTC, CE
> Sent: Tuesday, April 15, 2003 8:07 AM
> To: Villacrez, Joseph, MAJ, CRTC, DOTR
> Cc: Delano, Kenneth, MAJ, CRTC, EM
> Subject: FW: COORDS.

> Please disregard the first e-mail, this one is correct. Sorry!

> A4
> WI STATE PLANE (south zone) x:1945282.904353 y:815216.768721 ← A-4 Crash Site
> LAT LONG x:90 05 18.885192 y:44 14 11.685996

> A10
> WI STATE PLANE (south zone) x:1916806.519601 y:802596.688509 ← A-10 Crash Site
> LAT LONG x:90 11 49.595569 y:44 12 06.584731

> BURIAL SITE #1 BDU33, MK106, 20MM, M4 FLARES
> WI STATE PLANE (south zone) x:1941292.52345 y:815390.954595 Burial Site #1 excavated
> LAT LONG x:90 06 13.695722 y:44 14 13.360564 and placed in Burial Site 2

> BURIAL SITE #2 BDU33, 2.75 ROCKETS, MK106, 20MM
> WI STATE PLANE (south zone) x:1941369.390229 y:813051.046402 ← Wis. Air National Guard
> LAT LONG x:90 06 12.600064 y:44 13 50.255737 Hardwood Range Burial Site
02-29-250590

> BURIAL SITE #3 MK-82 & RELATED DEBRIS ONLY
> WI STATE PLANE (south zone) x:1942170.522064 y:812101.155077
> LAT LONG x:90 06 01.581964 y:44 13 40.885550

> Kurt Spolum
> Volk Field - CRTC
> 100 Independence Dr.
> Camp Douglas, WI 54618-5001
> DSN: 871-1712 / COMM: 608-427-1712
> kurt.spolum@WICRTC.ANG.AF.MIL

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> WI STATE PLANE (south zone) x:1945282.904353 y:815216.768721
> LAT LONG x:90 05 18.885192 y:44 14 11.685996

← A-4 Crash Site

> A10

> WI STATE PLANE (south zone) x:1916806.519601 y:802596.688509
> LAT LONG x:90 11 49.595569 y:44 12 06.584731

> BURIAL SITE #1 BDU33, MK106, 20MM, M4 FLARES

> WI STATE PLANE (south zone) x:1941292.52345 y:815390.954595
> LAT LONG x:90 06 13.695722 y:44 14 13.360564

This waste was dug up & move to

> BURIAL SITE #2 BDU33, 2.75 ROCKETS, MK106, 20MM

> WI STATE PLANE (south zone) x:1941369.390229 y:813051.046402
> LAT LONG x:90 06 12.600064 y:44 13 50.255737

← This is the munitions burial site at Hardwood Range

> BURIAL SITE #3 MK-82 & RELATED DEBRIS ONLY

> WI STATE PLANE (south zone) x:1942170.522064 y:812101.155077
> LAT LONG x:90 06 01.581964 y:44 13 40.885550

← Concrete, etc.

> Kurt Spolum
> Volk Field - CRTC
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> DSN: 871-1712 / COMM: 608-427-1712
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10' ACCESS ROAD

VF10 MW-1

APPROXIMATE LIMITS OF BURIED MUNITIONS AREA

GRASS FIELD

VF10 MW-2

GRAVEL ROAD

VF10 MW-3

VEHICLE STORAGE AREA

GRAVEL ROAD

VF10 MW-5R (REPLACEMENT WELL)

VF10 MW-4

VEHICLE STORAGE AREA

LOCKED STORAGE AREA

EDGE OF SAND ROAD

VF10 MW-6

GRASS FIELD

VF10 MW-7

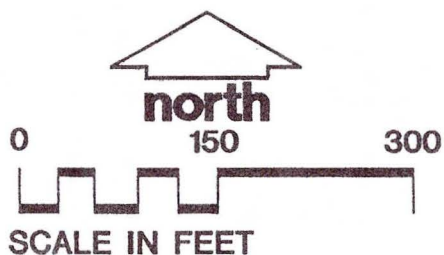
GRAVEL ROAD

LEGEND

- x-x- FENCE
- VF10 MW-1 SELECTED LONG TERM MONITORING WELL LOCATION AND NUMBER (GROUNDWATER SAMPLING)
- VF10 MW-2 SELECTED LONG TERM MONITORING WELL LOCATION AND NUMBER (WATER LEVELS ONLY)
- GROUNDWATER FLOW DIRECTION - MAY 1997

NOTES

1. BASE MAP DEVELOPED FROM A TOPOGRAPHIC SURVEY DRAWING OF HARDWOOD RANGE SITE 10, JUNEAU COUNTY, WISCONSIN, BY KL ENGINEERING, INC., DATED JUNE, 1997.
2. MONITORING WELLS MW-1, MW-2, MW-3, AND MW-4 INSTALLED IN 1988.
3. MONITORING WELLS MW-6 AND MW-7 INSTALLED IN 1989.
4. MONITORING WELL VF10 MW-5R IS A REPLACEMENT WELL INSTALLED BY ENVIRONMENTAL AND FOUNDATION DRILLING, UNDER THE SUPERVISION OF MONTGOMERY WATSON ON MAY 7, 1997.



LONG TERM MONITORING PLAN
 HARDWOOD RANGE
 WISCONSIN AIR NATIONAL GUARD
 JUNEAU COUNTY, WISCONSIN

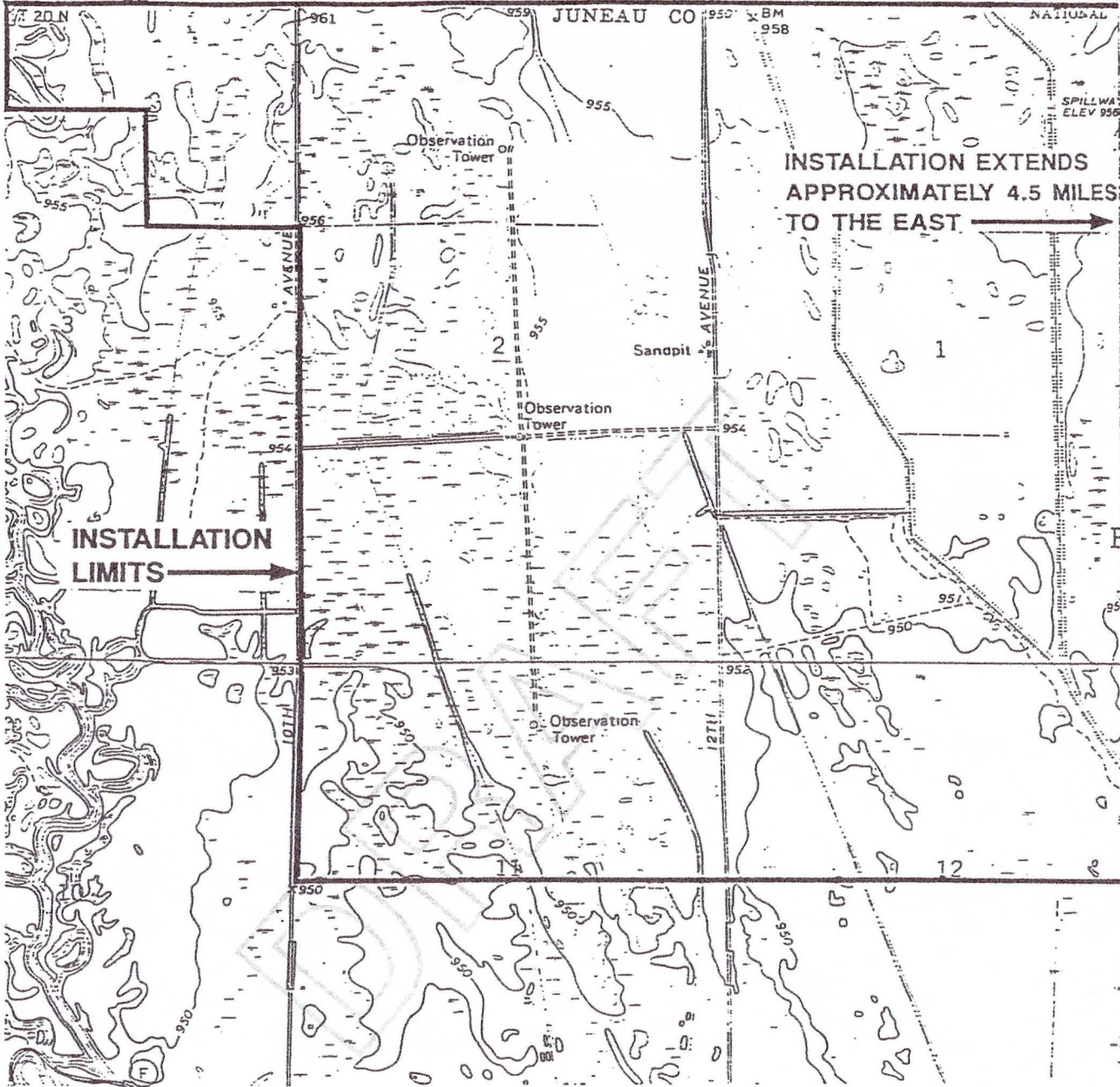
**SITE 10 - MUNITIONS BURIAL SITE
 SELECTED LTM MONITORING WELLS**

FIGURE 12



R3E

SECTION 7 35 N R E M H N G T O N WOOD CO 157-36 9614 STREET



T20N

INSTALLATION LIMITS

INSTALLATION EXTENDS APPROXIMATELY 4.5 MILES TO THE EAST

0 2000 4000



SCALE IN FEET



QUADRANGLE LOCATION

NOTE

BASE MAP DEVELOPED FROM THE NEW MINER, WISCONSIN, 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1969.

TECHNICAL MEMORANDUM
HARDWOOD RANGE
WISCONSIN AIR NATIONAL GUARD
JUNEAU COUNTY, WISCONSIN

HARDWOOD RANGE LOCATION MAP

FIGURE 2



MONTGOMERY WATSON

4 km NE of Finley, Wisconsin, United States

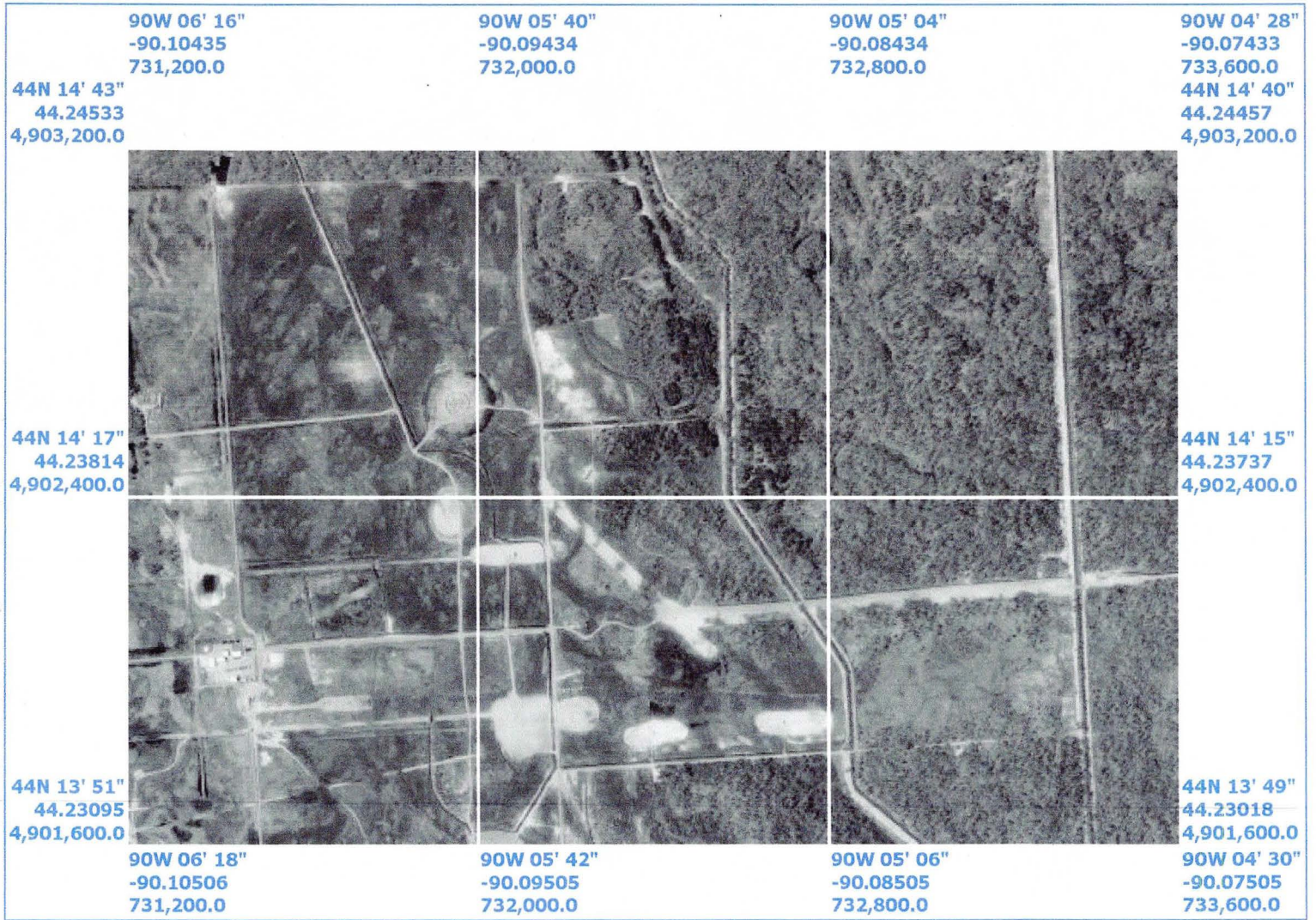


Image courtesy of the U.S. Geological Survey

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USGS 4 km NE of Finley, Wisconsin, United States 27 Apr 1998



0 ——— .5Km

0 ——— .25Mi

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 **USGS 4 km NE of Finley, Wisconsin, United States 27 Apr 1998**



0 ————— 0.5Km

0 ————— 0.25Mi

Image courtesy of the U.S. Geological Survey
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5 km NE of Finley, Wisconsin, United States

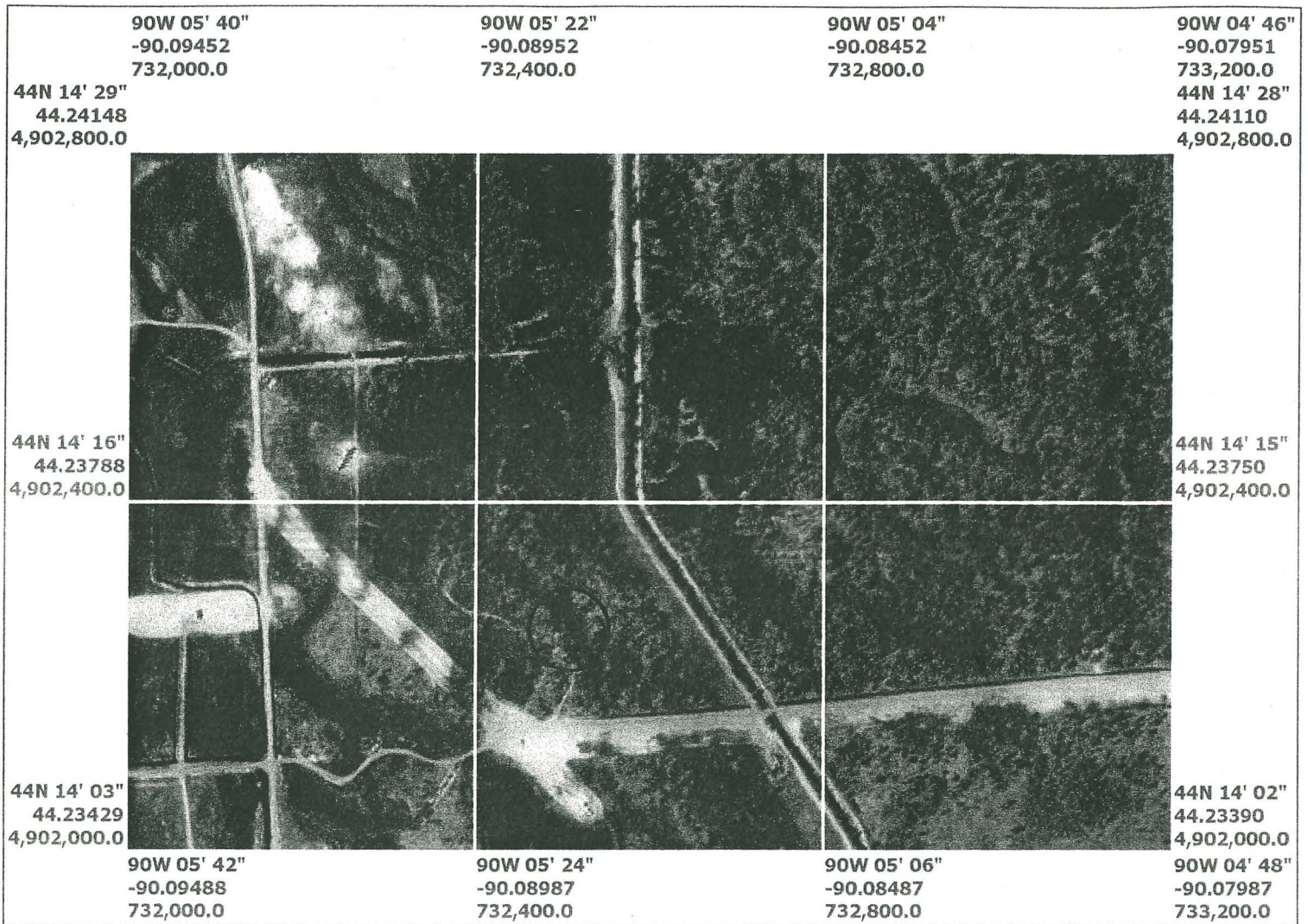


Image courtesy of the U.S. Geological Survey

A-4 Crash Site

3 km NE of Finley, Wisconsin, United States

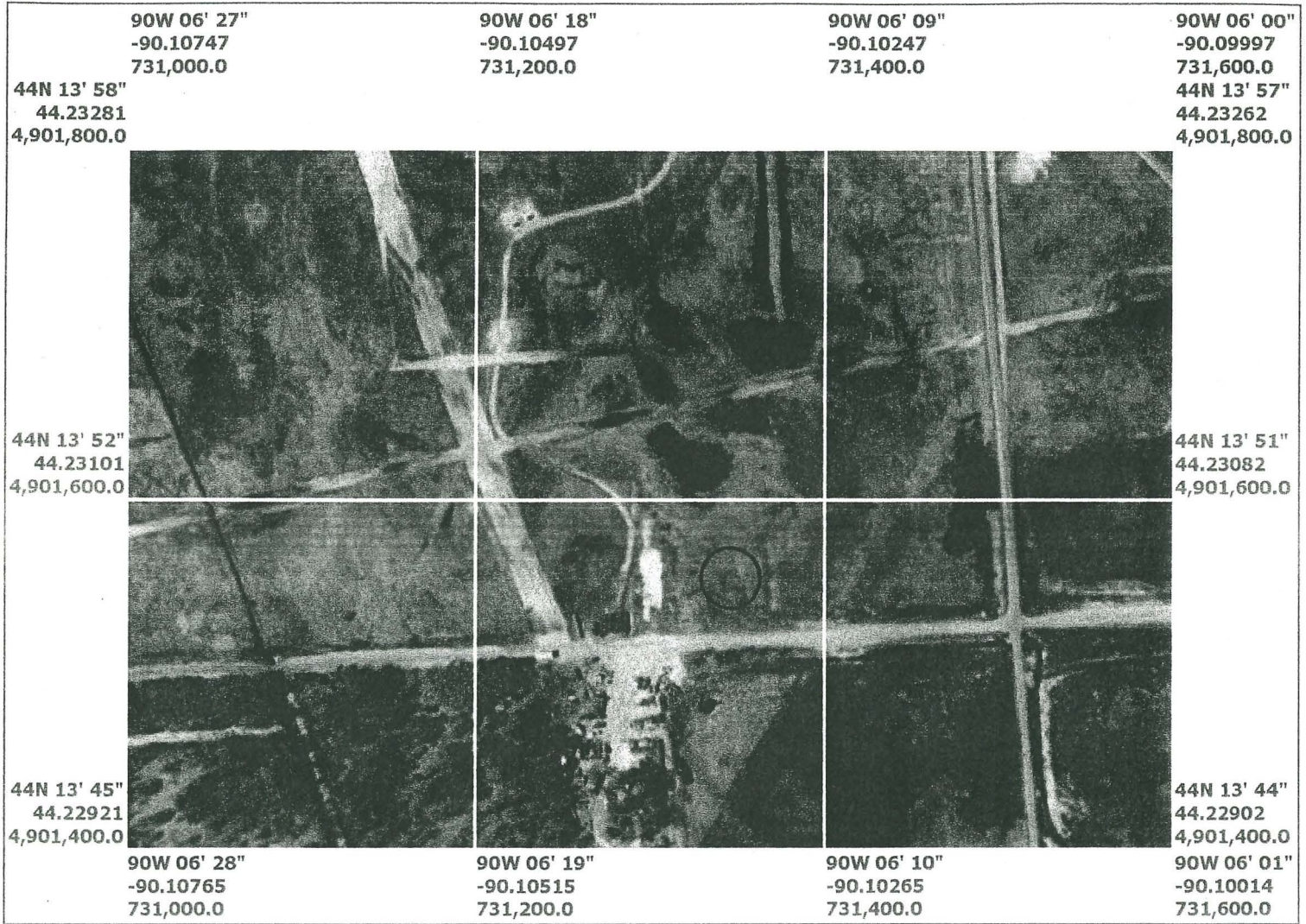


Image courtesy of the U.S. Geological Survey

WI AIR NATIONAL GUARD
HARDWOOD RANGE BURIAL SITE

5 km W of Finley, Wisconsin, United States

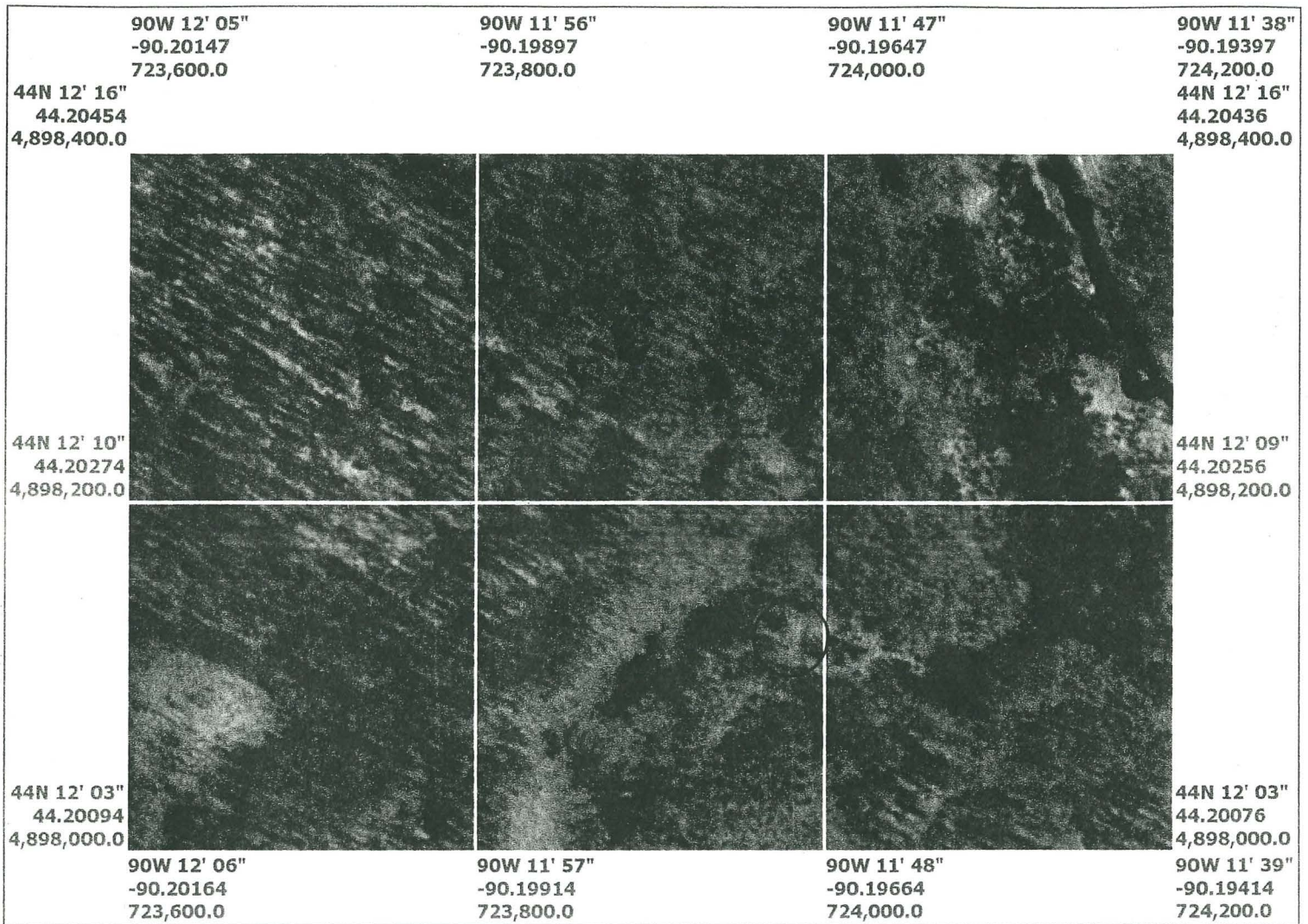


Image courtesy of the U.S. Geological Survey

A-10 Crash Site

5 km NE of Finley, Wisconsin, United States



Image courtesy of the U.S. Geological Survey

A-4 Crash Site

Underground Tanks at Volk Field, Camp Williams and Hardwood Range

Bldg./Site No.	UID#	Location and Contaminant	Closure Status (as of 04/11/02)
Bldg. 12, site 1	03-29-000014	Camp Williams (2) 8000 gal. gasoline tanks	closed 02/21/97
Bldg. 12, site 2	03-29-152494	Camp Williams (1) 5000 gal. gasoline tanks	closed 03/12/98
Bldg. 15, site 1	03-29-001031	Camp Williams	closed 07/20/94
Bldg. 15, site 2	03-29-152484	Camp Williams Bldg. 15, SI 09/12/97; Rem. Design 05/01/00; closure request rec'd 10/23/03; this site had (1) 5000 gal. diesel; (1) 2000 gal. heating oil; and (1) 2000 gal. unleaded tanks removed	closed June 28, 2004
Bldg. 17	03-29-000349	Camp Williams, removed 6000 gal. fuel tank, confine investigation to tank area	closed c/PAL exemp. 07/23/97
Bldg. 18	03-29-513838	Camp Williams, 2000 gal. heating oil	closed 05/22/96
Bldg. 19	03-29-513831	Camp Williams, 5000 heating oil	closed 09/11/96
Bldg. 23	03-29-001304	Camp Williams heating oil, diesel #2, 1500 gal. (add to BRRTS)	closed 09/29/97
Bldg. 28	03-29-099636	Camp Williams, 100 gal. leaded gasoline tank	closed 05/30/96
Bldg. 100		500 gal. tank, no detects	removed in 1991, NFRAPed
Bldg. 102		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 113		500 gal. #2 tank, no detects	removed in 1991, NFRAPed
Bldg. 115		2000 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 117		500 gal. #2 diesel tank, detects of TPH diesel at 267 ug/g	removed in 1991, NFRAPed
Bldg. 121		500 gal. tank, no detects	removed in 1991, NFRAPed
Bldg. 122		2000 gal. tank, no detects	removed in 1991, NFRAPed
Bldg. 125		500 gal. #2 diesel tank, detects of TPH diesel at 40,500 ug/g	removed in 1991, NFRAPed
Bldg. 126		300 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 127 and 128		560 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 129 and 130		560 gal. #2 diesel tank, detects of toluene 3.6 ng/g	removed in 1991, NFRAPed
Bldg. 131 and 132		560 gal. #2 diesel tank, detects of TPH diesel at 1,370 ug/g	removed in 1991, NFRAPed
Bldg. 134		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 135		500 gal. #2 diesel tank, no detects but some soil staining	removed in 1991, NFRAPed
Bldg. 136		500 gal. #2 diesel tank, no detects but some soil staining	removed in 1991, NFRAPed
Bldg. 138		560 gal. #2 diesel tank, some contamination	removed in 1991, NFRAPed
Bldg. 302		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 309		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 313		500 gal. tank, no detects	removed in 1991, NFRAPed
Bldg. 316	03-29-113841	560 gal. #2 diesel tank, no detects	closed 10/09/91
Bldg. 324	03-29-099638	Volk Field, 10,000 gal. #2 diesel tank (waste oil)	closed 06/30/96
Bldg. 329	03-29-112003	Volk Field, 6000 gal. #2 diesel tank	closed 11/15/96

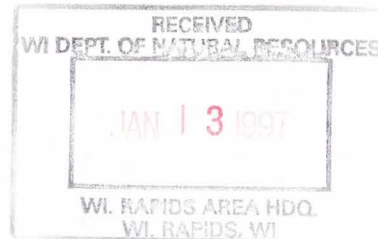
Bldg. 398	03-29-099646	Volk Filed, removed 10,036 gal. leaded gasoline tank	closed 05/30/96
Bldg. 398	03-29-099642	Volk Field, 500 gal. leaded gasoline	closed 05/30/96
Bldg. 398	03-29-099650	Volk Field, 10,000 gal. diesel fuel tank	closed 05/30/96
Bldg. 400	03-29-113840	1000 gal. #2 diesel tank, detects of TPA diesel at 2,400 ug/g	removed in 1991, NFRAPed
Bldg. 401		500 gal. #2 diesel tank, some stained soil	removed in 1991, NFRAPed
Bldg. 403	03-29-113839	Volk Field, 500 gal. #2 diesel tank	closed 02/21/97
Bldg. 414		500 gal. #2 diesel tank, some fuel oil stained soil	removed in 1991, NFRAPed
Bldg. 415		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 428		500 gal. #2 diesel tank	removed in 1991, NFRAPed
Bldg. 433		500 gal. #2 diesel tank, detects of TPH diesel at 8,920 ug/g	removed in 1991, NFRAPed
Bldg. 449	03-29-099648	Volk Filed, 6000 #2 diesel tank	closed 05/30/96
Bldg. 508		1000 gal. #2 diesel tank, detects of TPH diesel at 53.5 ug/g	removed in 1991, NFRAPed
Bldg. 509	03-29-099652	Volk Field, 1000 leaded gas tank	closed 05/30/96
Bldg. 510	03-29-099654	Volk Field, 4000 gal. leaded gasoline	closed 05-30-96
Bldg. 510	03-29-099656	Volk Field, 500 gal. #1 diesel fuel tank	closed 05-30-96
Bldg. 520		1000 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 522 & 523		1000 gal. #2 diesel tank, detects of TPH diesel at 288 ug/g	removed in 1991, NFRAPed
Bldg. 525		500 gal. #2 diesel tank, no detects	removed in 1991, NFRAPed
Bldg. 526		500 gal. #1 diesel tank, detects of TPH diesel at 240 ug/g and #2 500 gal. diesel tank	removed in 1991, NFRAPed
Bldg. 528	03-29-099658	Volk Filed, 500 gal. #1 diesel fuel tank	closed 05-30-96
Bldg. 530	03-29-099660	Volk Field, 500 gal. #1 diesel tank	closed 05/30/96
Bldg. 531	03-29-113842	Volk Field, 560 gal. #2 diesel tank	closed 10/30/91
Bldg. 601	03-29-111986	Volk Field 500 gal. #1 diesel tank	closed 10/15/96
Bldg. 613	03-29-001106	Volk Field, removed 300 gal. #2 diesel tank	closed c/gw use restr.07/23/97
Bldg. 616	03-29-152331	Volk Field, removed 300 gal. #2 diesel tank	closed c/gw use restr.06/23/94
Bldg. 907		450 gal. #2 diesel tank	removed in 1991, NFRAPed
Bldg. 908		500 gal. #1 diesel tank, some detects and 560 gal. #2 diesel tank	removed in 1991, NFRAPed
Bldg. 916		500 gal. #2 diesel tank, detects of TPH diesel at 139 ug/g, stained fuel oil soil	removed in 1991, NFRAPed
Bldg. 932	03-29-099662	Volk Field, removed 6000 gal. fuel oil tank	closed 05/30/96
Bldg. 950	03-29-099664	Volk Field, 500 gal. #1 diesel tank and 6000 gal. #2 diesel tank	closed 05/30/96
Bldg. 2000	03-29-099666	Volk Field, 300 gal. #2 diesel tank (550 gal. #1 diesel)	closed 05/30/96
A-4 Crash site	02-29-250442	A-4 Crash site	closed 02/11/94
Site 1	02-29-249438	Volk Field, Fire Training Area, estimated 266,500 gals. Fuel dumped, continue monitoring	in phytoremediation as of 05/2004
Site 2	02-29-250433	Volk Field, Former Landfil C, (municipal waste, hydrocarbons, fuels, demolition debris)	continue monitoring closed 7-20-01
Site 3	02-29-250434	Volk Field, noted as Sites 3/6, Chronic AST fuel spill area, continue monitoring	closed c/gw & soil restrict.12/09/04
Site 6	02-29-257894	Volk Field, JP-4 fuel spill (75 to 100 gals.) combined with Site 3 (continue monitoring)	closed c/gw & soil restrict.12/09/04

Site 4	02-29-250435	Volk Field, Transformer Fluid Disposal site (10 transformers emptied on ground 1967 or '68)	closed 05/08/97
Site 5	02-29-250436	Volk Field, KC97 crash site in 1978, 2000 to 5000 gal. of JP-4 released and burned ~50%	closed 05/08/97
Site 7	02-29-000038	Volk Field, Former Landfil A, continue monitoring	potential NFRAP <i>closed 2-22-06 NFA</i>
Site 8	02-29-250589	Volk Field, F-84 crash site in 1964 at end of east runway at Volk Field	closed 05/08/97
Site 9	02-29-250437	Volk Field, Former Landfill B	NFRAPed by close com. 04/12/98
Site 11	02-29-250438	Electron Tube Disposal site	closed 01/22/98
Site 12	02-29-250439	Oiled Roads and Parking Lot sites	closed 01/22/98
Site 13	02-29-181505	Ethylene Glycol Discharge area, conduct gw monitoring	NFRAPed by close com. 03/12/2001
Site 15	02-29-250440	Sanitary Wastewater System Ponds	closed 01-01-98
Site 16	02-29-181504	Bromochloromethane spill	NFRAPed by close com. 03/12/2001
Site 17	02-29-250441	Transformer Fluid spill, monitor gw	closed 05/08/97
Site 18	03-29-000559	WANG Hardwood Range, 560 gal. diesel & 1000 gal. unlead gas moved to Site 10 on 07/28/93	NFRAPed by close com. 11/15/96
Site 14	02-29-181499	WANG Hardwood Range, Small Solid Waste dump for household waste	NFRAPed by close com. 03/12/2001
Site 10	02-29-250590	WANG Hardwood Range, Munitions Burial site	open - planning to excavate munitions <i>NFA 4-12-01</i>
A-10 Crash site	02-29-000245	WANG A-10 Crash site in Neceedah wetlands in 1991 (02-29-001053)	closed 07/16/97
A-10 Crash site	02-29-001053	A-10 crash site at Hardwood Range	closed ????
Alert Hanger Area	04-29-047788	50-100 gals/JP-4 leak from transport truck on 10--29-92	
Motor Pool		1,500 gal. #1 diesel tank, unknown	
Motor Pool		2,000 gal. waste oil tank, unknown	
Motor Pool		10,036 gal. tank, MOGAS regular, good	
Motor Pool		5,264 gal. tank, MOGAS regular, good	
AGE Fueling Station		1,200 gal. tank MOGAS regular, good	
Hardwood Gun Range		550 gal. tank MOGAS regular, good	
Hardwood Gun Range		550 gal. #1 diesel tank, unknown	
POL Area		25,000 gal. tank AVGAS, good	
POL Area		2,000 gal. waste fuel tank, unknown	
POL Area		17,062 gal. #2 diesel, good	
POL Area		9,994 gal. #2 diesel, good	
POL Area		11,750 gal. #2 diesel, good	
Bldg. 17		6,000 gal. #2 diesel, unknown	
Bldg. 116		500 gal. #2 diesel, unknown	
Bldg. 133		300 gal. #2 diesel tank, unknown	
Bldg. 137		560 gal. #2 diesel, unknown	
Bldg. 300		500 gal. #2 diesel, unknown	
Bldg. 325		1,000 #2 diesel, unknown	

Bldg. 331		550 gal. #2 diesel, unknown
Bldg. 503		4,000 gal. #2 diesel, unknown
Bldg. 504		6,000 gal. #2 diesel, unknown
Bldg. 517		550 gal. #2 diesel, unknown
Bldg. 601		500 gal. #1 diesel tank, unkown
Bldg. 933		500 gal. #1 diesel tank, unkown
Bldg. 2013		300 gal. #1 diesel tank, unknown
Bldg. 2016		300 gal. #1 diesel tank, unknown
Bldg. 2020		550 gal. #2 diesel, unknown
Camp William's		
Not on 1884 list		
On 1884 list		
Unsure of BRRT's #		
Unknown additions		



MONTGOMERY WATSON



January 8, 1997

Ms. Ruth Lindsley Lodder
Deputy Branch Chief
ANGRC/CEVR
3500 Fetchet Ave
Andrews AFB, Maryland 20762-5157

Re: Final Kickoff/Scoping Meeting Minutes

Dear Ms. Lodder:

Enclosed for your files are two copies of the Final Kickoff Meeting Minutes for the FS/RD project for Volk Field in Camp Douglas, Wisconsin.

Should you have any questions, please feel free to contact me at (810) 449-3401.

Sincerely,

MONTGOMERY WATSON

Douglas J. Barber
Project Manager

cc: Capt. Dave Beck, Volk Field ANGB EM
Steve Buss, Volk Field ANGB
Don Grasser, Wisconsin Department of Natural Resources
Rick Karls, MW-Madison
Cathy Katz, MW-Detroit

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**FINAL
FEASIBILITY STUDY AND REMEDIAL DESIGN
KICKOFF/SCOPING MEETING MINUTES
NOVEMBER 18 AND 19, 1996**



**COMBAT READINESS TRAINING CENTER
VOLK FIELD AIR NATIONAL GUARD BASE
CAMP DOUGLAS, WISCONSIN**

**Contract No. DAHA90-94-D-0013
Delivery Order No. 0022
Montgomery Watson File No. 4162.0420**

Prepared For:

**Ruth Lindsley Lodder
ANGRC/CEVR
Andrews AFB, Maryland**

Prepared By:

**Montgomery Watson
Novi, Michigan**

January 1997

KICKOFF/SCOPING MEETING MINUTES

November 18 and 19, 1996
Combat Readiness Training Center
Volk Field Air National Guard Base
Camp Douglas, Wisconsin

Monday, 18 November 1996

Meeting Attendees:

Capt. Dave Beck	Volk Field/CRTC
Steve Buss	Volk Field/CRTC
Ruth Lindsley Lodder	ANGRC/CEVR
Doug Barber	Montgomery Watson (Novi, Michigan)
Carol Becker	Montgomery Watson (Novi, Michigan)
Rick Karls	Montgomery Watson (Madison, Wisconsin)

Introduction:

A meeting was held at the Volk Field Combat Readiness Training Center (CRTC) in Camp Douglas, Wisconsin to discuss the tasks associated with the feasibility study (FS), remedial design (RD), and associated tasks for five sites at Volk Field and the Hardwood Range. The intent of the meeting was to provide Montgomery Watson personnel with the background information needed to initiate and execute a field work plan prior to beginning the FS/RD and to inform the Wisconsin Department of Natural Resources (WDNR) of the scope and schedule of the project. Additionally, the meeting served to acquaint members of the project team and define a schedule (attached) for the remainder of the project. The items discussed are outlined below.

Meeting Highlights and Topics:

R. Lodder gave descriptions and backgrounds of each of the sites, as outlined in her handout and schedule. She discussed the general scope of work and opened the discussion. Montgomery Watson is to rework their schedule, incorporating Ruth's schedule into it.

The schedule for the field work was discussed. The field work should be conducted in early May, when the Hardwood Range is not being utilized for training.

R. Lodder and D. Beck confirmed that the wells that contained free product during previous investigations were not sampled at that time and no active removal of free product has occurred since the investigation took place. In the event that free product is present during sampling activities, a sample of the groundwater does not need to be collected. The depth of free product should, however, be measured.

Sites 3 and 6 are to be separated for the purpose of the FS and RD.

Groundwater monitoring at Site 9 may be recommended. If no cadmium is detected in groundwater, prepare a Decision Document for Site 9.

A Marine A-4 aircraft crashed at the Hardwood Range in June 1983. The aircraft blew up in the air after hitting the tops of several trees. It is unlikely there are impacts to soil and groundwater, but citizens are beginning to ask questions about this incident in light of the proposed expansion. The contract may need to be modified to include sampling of this area.

D. Beck and R. Lodder explained that currently Volk Field and the Hardwood Range have a Defense and State Memorandum of Agreement (DSMOA), but they are not receiving money. Therefore no fees, permits, or Wisconsin administrative rules would need to be submitted or followed. The scope of the project includes following only the applicable technical requirements of the WDNR regulations. Regulator input should be actively pursued, but state approval is not necessary for project activities to proceed.

D. Beck reported that, as of this date, the state has not signed the Decision Documents for Sites 2, 5, 7, and 8, where wells are to be abandoned by Montgomery Watson.

D. Barber and R. Lodder distributed schedules and C. Becker is to examine and merge the schedules.

D. Barber explained that he will be the project manager for Montgomery Watson on this project, and that R. Karls will be the lead project professional in Madison and C. Becker will be the lead engineer in Detroit.

D. Beck reported that Volk Field is owned by the state of Wisconsin and is leased by the Wisconsin Air National Guard (WIANG). D. Beck explained that Volk Field will likely remain open for a long time. R. Lodder explained that if Volk Field is closed, any Installation Restoration Program (IRP) site which has been closed by a Decision Document would be re-examined prior to returning the land to the state.

D. Barber inquired about preferred methods of remediation. R. Lodder stated off-site thermal destruction is acceptable, but not off-site disposal in a landfill. On-site treatment is preferred to off-site. Ex-situ soil treatment is a possibility, similar to Site 4 at the Alpena CRTC in Michigan. There is currently ample on-site space to accommodate on-site treatment. Natural attenuation with monitoring and/or limited source removal may be another viable remediation alternative.

R. Lodder stated that the field work needs to measure if and how far the plumes have migrated since the last field efforts. Montgomery Watson may want to write the work plan to include some additional wells if they are deemed necessary in the field. According to D. Beck, utility clearance takes approximately three to five days through Base Civil Engineering (CE).

D. Beck explained that the Occupational Health and Safety Administration (OSHA) can fine Volk Field if a contractor receives a notice of violation.

The schedule of the field work was discussed. Hardwood Range is closed the first two weeks in May. Since Site 10 is located at the strafe run for the Range, the field work must be done when the Range is closed. Therefore, May will be ideal as the Range is closed and the weather should be conducive to field work. D. Beck distributed the Range schedule.

R. Lodder will check with HAZWRAP on electronic CADD files of Volk Field. D. Beck reported that Volk is currently using AutoCAD 13 and AutoCAD 12 is available. D. Beck reported that CE may have topographic surveys of the IRP sites.

Montgomery Watson is to check into closure requirements for landfills. Sites 2 and 7 are old landfills, and although they are closed IRP sites, they are not closed landfills. If a cap is needed for these landfills, it needs to be budgeted soon.

When preparing the field work plan, Montgomery Watson needs to consider the alternatives which will be examined. If geotechnical or other groundwater characteristic data needs to be collected, write these activities into the work plan.

All meeting attendees visited each site at Volk Field and photographs were taken.

Tuesday, 19 November 1996

Meeting Attendees:

Capt. Dave Beck	Environmental Manager, Volk Field/CRTC
Don Grasser	Wisconsin Department of Natural Resources
Ruth Lindsley Lodder	ANGRC/CEVR
Doug Barber	Montgomery Watson
Rick Karls	Montgomery Watson
Carol Becker	Montgomery Watson

Introduction

A meeting was held between Montgomery Watson, Volk personnel, NGB, and the WDNR to discuss the upcoming FS/RD investigations at Volk and the status of other Volk projects.

Meeting Topics and Highlights

R. Lodder gave background on the sites and the scope of work. The general schedule for the project was discussed.

D. Beck and D. Grasser discussed the Decision Documents. R. Lodder explained that the Decision Documents are for current land use and that, if land use changes, these IRP sites will be re-examined.

D. Grasser reported that the soils standards are constantly changing and developing. If regulatory standards are not available, develop site-specific standards.

Preventive Action Limits (PALs) for groundwater are very conservative. The risk presented by groundwater contamination and potential receptors should be examined. Considering natural attenuation if no threat is present may be a viable alternative. Each of the district close-out committees uses different judgment and “standards”.

D. Grasser explained that technologies that have been proven in the state of Wisconsin are approved easier and faster. Unproven technologies may take longer to approve, but the committees like to see new technologies also.

R. Karls discussed ex-situ treatment of soils on-base. D. Grasser would coordinate with the solid waste, air, and hazardous waste people at the WDNR. Wisconsin is starting to approve landspreading for petroleum-impacted soils.

R. Karls explained that there are currently no receptors and therefore natural attenuation may be the best option for some situations. R. Lodder stated that Sites 3 and 6 are fenced and are an active petroleum, oils and lubricants (POL) site. Therefore, attenuation with monitoring may be the best alternative.

D. Grasser explained that if a site with groundwater exceedences is closed, a legal instrument is usually needed (i.e. deed restriction) to preclude certain activities (i.e. installation of a water supply well).

D. Grasser reported that some areas of the base may be considered industrial and others may be residential. Examine this when choosing soil criteria.

D. Grasser explained that if Montgomery Watson is aware of other sites where a technology has been allowed by the WDNR and has been successful, bring it up to avoid a duplication of effort.

D. Barber explained that all five of the open IRP sites are to be examined in one FS, but sites will be separated depending on their remedy and location. Sites 3 and 6 and Sites 1 and 9 may be addressed together in the Decision Document and Remedial Design.

D. Grasser and R. Karls discussed data needed when considering natural attenuation (i.e. nutrient levels, dissolved oxygen, redox potential, etc.) D. Grasser said that this data, along with modeling, supports the natural attenuation option. The inclusion of these samples would be detailed in the Work Plan.

D. Grasser explained that the chosen laboratory must meet appropriate detection limits.

D. Grasser stated that he needs only two copies of each document for review and files and D. Beck wants only a few copies also.

The A-4 crash site at Hardwood Range, hereafter referred to as Area of Concern (AOC) A, was discussed. D. Beck gave D. Grasser the background and asked for input. D. Grasser said that he will check the spill records, but D. Beck thought there were no records-they have already been checked. D. Grasser asked if the Marines may have any reports regarding the crash and cleanup. D. Beck and R. Lodder thought that they do not. D. Grasser recommended collecting several soil samples. NGB may modify Montgomery Watson's contract to include this as part of the field work after the Work Plan has been completed.

D. Beck inquired about the status of the five Decision Documents that were submitted to the state. D. Beck, R. Lodder, and D. Grasser reviewed the background of the five sites. R. Lodder requested D. Grasser send comments to D. Beck if they want caveats regarding compliance issues.

The KC-97 crash sites has high levels of xylene. D. Grasser may want additional sampling to evaluate the current conditions.

D. Grasser was concerned about the former transformer disposal area. D. Grasser questioned if sufficient and representative sampling was completed. Boring logs were located and examined and D. Beck gave more site background and reported that most of the transformers were pole-mounted and therefore do not likely contain PCBs. D. Grasser agreed that there is likely no issue.

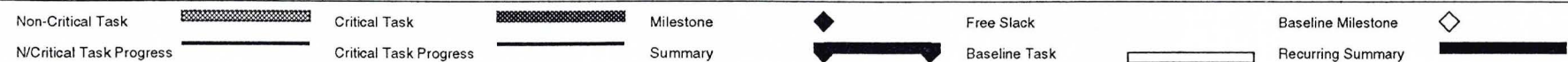
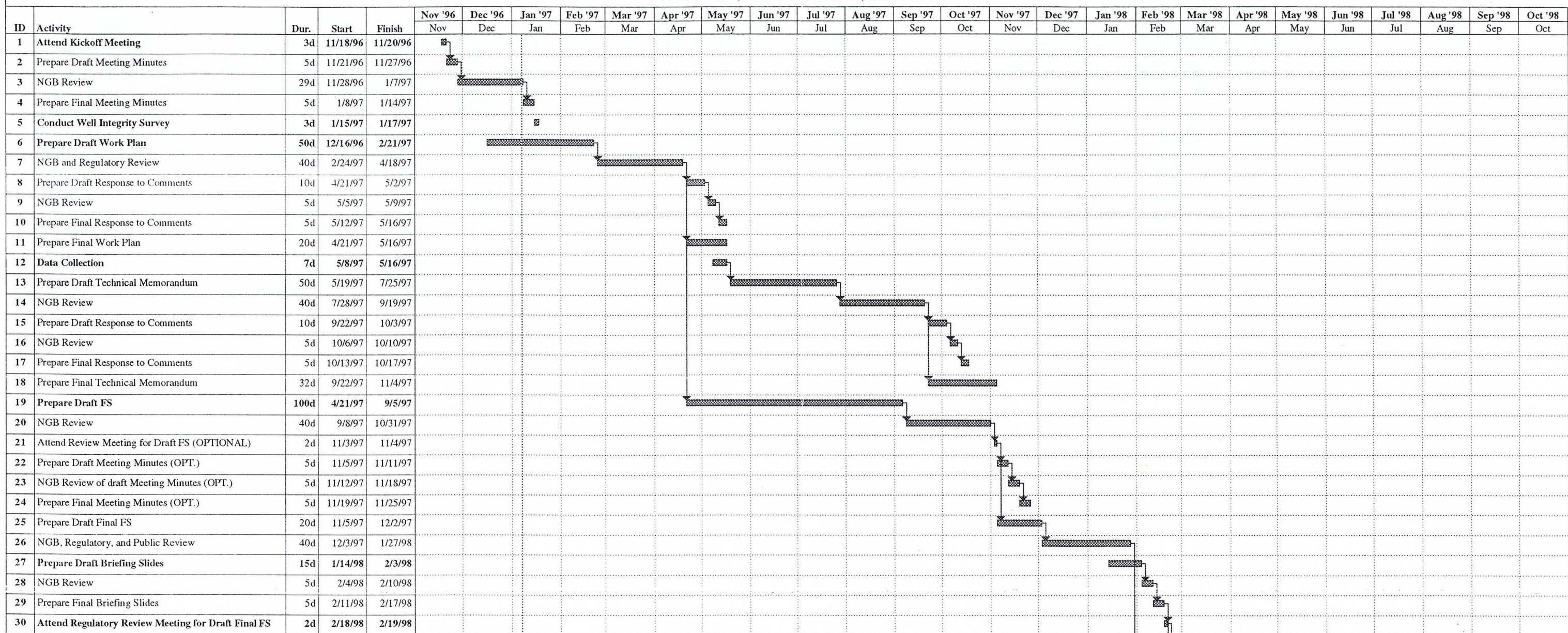
D. Grasser reported that he needs to review his files on the A-10 crash site and the USTs at Hardwood Range before he can issue his official comments. D. Beck updated D. Grasser on the status of the UST sites. D. Grasser agreed that several of the sites can be closed and that the Building 531 site needs additional work.

A well integrity survey will be necessary before the Work Plan can be written. R. Karls estimated that two to three days would be necessary to visually inspect each well's condition, measure the water level, free product thickness (if applicable), and the total depth of each well. No investigation derived wastes will be generated during this effort.

R. Lodder mentioned that possibly all drinking water wells should be sampled and analyzed.







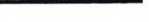



Following the meeting, a visit to the Hardwood Range was conducted. Photographs of Sites 10 and AOC A were taken and photos of all sites are on file at Montgomery Watson.

**PROJECT SCHEDULE
VOLK FIELD FS/RD
VOLK FIELD, CAMP DOUGLAS, WISCONSIN**



**PROJECT SCHEDULE
VOLK FIELD FS/RD
VOLK FIELD, CAMP DOUGLAS, WISCONSIN**

ID	Activity	Dur.	Start	Finish	Nov '96	Dec '96	Jan '97	Feb '97	Mar '97	Apr '97	May '97	Jun '97	Jul '97	Aug '97	Sep '97	Oct '97	Nov '97	Dec '97	Jan '98	Feb '98	Mar '98	Apr '98	May '98	Jun '98	Jul '98	Aug '98	Sep '98	Oct '98	
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
31	Prepare Draft Meeting Minutes	10d	2/20/98	3/5/98																									
32	NGB Review of Draft Meeting Minutes	5d	3/6/98	3/12/98																									
33	Prepare Final Meeting Minutes	5d	3/13/98	3/19/98																									
34	Attend Public Meeting for Draft Final FS	2d	2/18/98	2/19/98																									
35	Prepare Meeting Transcript	10d	2/20/98	3/5/98																									
36	Prepare Final FS	30d	3/13/98	4/23/98																									
37	Prepare Draft Responsiveness Summary	15d	2/20/98	3/12/98																									
38	NGB Review	10d	3/13/98	3/26/98																									
39	Prepare Draft Response to Comments	15d	1/28/98	2/17/98																									
40	NGB Review	10d	2/18/98	3/3/98																									
41	Prepare Final Response to Comments	5d	3/4/98	3/10/98																									
42	Prepare Draft Decision Documents	112d	9/15/97	2/17/98																									
43	NGB Review	40d	2/18/98	4/14/98																									
44	Prepare Draft Final Decision Documents	20d	4/15/98	5/12/98																									
45	Regulatory Review	40d	5/13/98	7/17/98																									
46	Prepare Draft Response to Comments	15d	7/8/98	7/28/98																									
47	NGB Review	10d	7/29/98	8/11/98																									
48	Prepare Final Response to Comments	5d	8/12/98	8/18/98																									
49	Prepare Final Decision Documents	5d	8/19/98	8/25/98																									
50	Prepare 35% Submittal	70d	9/15/97	12/19/97																									
51	NGB Review	60d	12/22/97	3/13/98																									
52	Prepare 95% Submittal	30d	3/16/98	4/24/98																									
53	NGB Review	60d	4/27/98	7/17/98																									
54	Advance Final 100% Submittal	30d	7/20/98	8/28/98																									
55	NGB Review	10d	8/31/98	9/11/98																									
56	100% Submittal	10d	9/14/98	9/25/98																									
57	Monthly Progress Reports	479d	12/2/96	10/1/98																									

Non-Critical Task  Critical Task  Milestone  Free Slack  Baseline Milestone 
 N/Critical Task Progress  Critical Task Progress  Summary  Baseline Task  Recurring Summary 

From: WIRAP::MILLEM "Mike Miller, Solid Waste, Wis. Rapids, (715) 421-7821" 13-NOV-1996
To: GRASSD
CC: MILLEM
Subj: Hardwood Range A-4 Crash

Recieved a call from Doug Green (Mead & Hunt) who was formerly the Base Civil Engineer and then Base Commander at Volk Field. Apparantly he is working on the Hardwood Range expansion project for WANG. Doug mentioned that the concerned citizens group was inquiring about a crash of an A-4 jet back in August +/- 1984. This crash occurred on Hardwood range property. From what he recalled a fireball occurred immediately upon impact with the ground. This crash was not mentioned in the IRP for Hardwood Range since, he assumed, all of the jet fuel went up in the fire. He asked me whether or not they should do any investigatiuon on this. I told him that I was not on the project anymore and that he should talk to you. I did however suggest that the area be located and a some field work performed. Even though there was an immediate fireball, there could be some jet fuel that made it into the soil without igniting. In this situation its better to be absolutely sure since this activity is so closely scrutinized. I also said that they may not find much since bioremediation may have occurred without much assistance since the soilis so sandy. Additionally the contamination may have been diluted and/or attenuated over this period of time.

I do not recall any crash reported us. I checked with Wally to see if he had spill reports covering that time period. He didn't have any in his office but there may be some in the garage. The warden covering that area during that time no longer works for us. I'll let you follow up on that.

Doug said that he would relay our conversation to Dave Beck for followup.