

FY2015

BADGER ARMY AMMUNITION PLANT

Installation Action Plan

Table of Contents

Statement Of Purpose.....	1
Acronyms.....	2
Installation Information.....	4
Cleanup Program Summary.....	5
5-Year / Periodic Review Summary.....	6
Parcel Summary.....	7
Installation Restoration Program.....	30
IRP Summary.....	31
IRP Contamination Assessment.....	33
IRP Previous Studies.....	34
Installation Restoration Program Site Descriptions.....	54
BAAP-012 GW Monitoring ON and OFF Post.....	55
BAAP-33 PROP BRNG GRD - CONTAMINATED WASTE PITS.....	57
BAAP-35 CAP & COVER MAINTENANCE.....	59
BAAP-40 GRUBER'S GROVE BAY	60
BAAP-43 Site-Wide RI.....	61
IRP Site Closeout (No Further Action) Summary.....	62
Installation Restoration Program Schedule.....	64
Installation Restoration Program Milestones.....	64
Installation Restoration Program Schedule Chart.....	67
Compliance Restoration.....	68
CR Summary.....	69
CR Contamination Assessment.....	70
CR Previous Studies.....	71
Compliance Restoration Site Descriptions.....	72
CC-BAAP-44 Abandoned Industrial Sewer Network.....	73
CR Site Closeout (No Further Action) Summary.....	74

Table of Contents

Compliance Restoration Schedule.....	75
Compliance Restoration Milestones.....	75
Compliance Restoration Schedule Chart.....	76
Community Involvement.....	77

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach. It also documents costs and schedules associated with conducting investigations, taking the necessary remedial actions (RA), operating required systems until no longer needed, and conducting long term maintenance where required.

All site-specific information about future activity has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

ACSIM	Assistant Chief of Staff for Installation Management
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
BAAP	Badger Army Ammunition Plant
BEBA	Badger Environmental Board of Advisors
bgs	below ground surface
BIA	Bureau of Indian Affairs
BRAC	Base Realignment and Closure
CC	Compliance-related Cleanup
CD	Compact Disc
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
CMS	Corrective Measures Study
CR	Compliance Restoration
CS	Confirmatory Sampling
cy	cubic yard
DBG	Deterrent Burning Ground
DBP	Dibutyl-Phthalate
DD	Decision Document
DERP	Defense Environmental Restoration Program
DES	Design
DNT	Dinitrotoluene
DPA	Diphenylamine
ER,A	Environmental Restoration, Army
ESS	Explosive Safety Submission
FRA	Final Remedial Action
FS	Feasibility Study
FY	Fiscal Year
GGB	Gruber's Grove Bay
GSA	General Services Administration
GW	Groundwater
HCN	Ho-Chunk Nation
IFCR	In-Field Condition Report
IR	Installation Restoration
IRA	Interim Remedial Action
IRM	Interim Remedial Measure
IRP	Installation Restoration Program
kg	kilogram
LTM	Long-Term Management
MIRM	Modified Interim Remedial Measure
MMRP	Military Munitions Response Program
MR	Munitions Response
N/A	Not Applicable

Acronyms

NFA	No Further Action
NG	Nitroglycerine
NPL	National Priorities List
ODUSD (I&E)	Office of the Deputy Under Secretary of Defense for Installations and Environment
OM,A	Operations and Maintenance, Army
PA	Preliminary Assessment
PBC	Public Benefit Conveyance
PBG	Propellant Burning Ground
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricants
RA	Remedial Action
RA(C)	Remedial Action - Construction
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SAC	Sulfuric Acid Concentrator
SI	Site Inspection
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
TAPP	Technical Assistance for Public Participation
TRC	Technical Review Committee
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAEC	US Army Environmental Command
USATHAMA	US Army Toxic and Hazardous Materials Agency
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources

Installation Information

Installation Locale

Installation Size (Acreage): 7,275.24

City: Baraboo

County: Sauk

State: Wisconsin

Other Locale Information

Badger Army Ammunition Plant (BAAP) site is located on 7,275.24 acres of land in Sauk County, Wisconsin. It is bordered on the north by Devil's Lake State Park, on the east by farmland, State Highway 78, and the Wisconsin River, on the south by farmland, and on the west by US Highway 12. It is approximately 9 miles south of Baraboo (pop. 10,771), and 7 miles north of Sauk City and Prairie du Sac (population 3,109 and 3,231 respectively). Bluffview, a residential area with approximately 1,000 residents, is located directly west across Highway 12 from Badger's main gate. On Badger's east side, between Highway 78 and the Wisconsin River, there are several unincorporated residential developments with a projected population of 1,000 people when fully developed.

Installation Mission

The mission of the BAAP is to prepare the property for transfer from Army control to various federal land managers or their sponsored agents.

Lead Organization

Base Realignment and Closure Division

Lead Executing Agencies for Installation

USAEC, Cleanup and Munitions Division, West Branch

Regulator Participation

Federal US Environmental Protection Agency (USEPA), Region 5

State Wisconsin Department of Natural Resources (WDNR)

National Priorities List (NPL) Status

BADGER ARMY AMMUNITION PLANT is not on the NPL

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

RAB established 1993

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Metals, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Volatiles (VOC)

Affected Media of Concern: Groundwater, Sediment, Soil

CR

Primary Contaminants of Concern: Explosives, Metals, Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Soil

Cleanup Program Summary

Installation Historic Activity

BAAP was constructed in 1942 in Sauk County, Wisconsin, near the city of Baraboo. The plant was operated intermittently over a 33-year period to produce single-base and double-base propellant for cannon, rocket, and small arms ammunition. Plant operation was terminated in March 1975 and all production facilities and many support functions were placed on standby status. Maintenance of standby facilities continued until 1998, when the Army declared BAAP excess to its needs.

Disposal of propellant waste in open burn pits and tanks and discharge of production wastewaters to open ditches and ponds appear to have been the major sources of groundwater problems on and off the installation. Monitoring of groundwater indicates natural attenuation is occurring. Incidental soil contamination around painted production buildings has been investigated and remediated after the buildings were demolished. All soil contamination above state standards has been removed.

Installation Program Cleanup Progress

IRP

- Prior Year Progress:** BAAP-001: WDNR sent a no further action (NFA) letter.
BAAP-012: Reduced residential monitoring and reduced monitored natural attenuation (MNA).
BAAP-33: WDNR approved removal of interim remedial measure (IRM) and shut down of half of modified interim remedial measure (MIRM) pumping wells. Army continues to monitor groundwater conditions for impacts.
BAAP-35: Maintained caps and covers.
BAAP-40: Researched remedies.
BAAP-43: Completed most closure documents and received WDNR NFA letters.
- Future Plan of Action:** BAAP-012: Obtain approval process of municipal water system and start construction. Refine MNA.
BAAP-33: Get approval to idle the remaining MIRM wells while monitoring groundwater conditions continues.
BAAP-35: Maintain caps and covers.
BAAP-40: Complete sediment sampling in entire bay and determine if RA is needed. If needed, design sediment remedy and implement.
BAAP-43: Complete paperwork and get last four parcel closures from WDNR.

CR

- Prior Year Progress:** CC-BAAP-44: Get regulatory concurrence for completed remedial investigation (RI)/RA activities for sewers via closure letters for parcels.
- Future Plan of Action:** CC-BAAP-44: Complete regulatory concurrence.

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Begin Date	End Date	End FY
Complete	200804	200906	2009
Complete	201304	201409	2014
Planned	201804	201909	2019

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Closure Landfill 5 (Existing Landfill)	BAAP-004
Closure Landfill 5 (Existing Landfill)	BAAP-004
InField Conditions Report 1987 & mods	BAAP-001, BAAP-35, BAAP-39, BAAP-42, BAAP-43, CC-BAAP-44
InField Conditions Report 1987 & mods	BAAP-001, BAAP-35, BAAP-39, BAAP-42, BAAP-43, CC-BAAP-44
PC&EDM FOR EAST & WEST ROCKET DITCHES	BAAP-36
PC&EDM FOR EAST & WEST ROCKET DITCHES	BAAP-36
PC&EPM FOR DETERRENT BURNING GROUND	BAAP-006
PC&EPM FOR DETERRENT BURNING GROUND	BAAP-006
PC&EPM FOR NG POND AND ROCKET PASTE AREA	BAAP-005, BAAP-008
PC&EPM FOR NG POND AND ROCKET PASTE AREA	BAAP-005, BAAP-008
PC&EPM FOR PBG 1949 PIT & LANDFILL 1	BAAP-35
PC&EPM FOR PBG 1949 PIT & LANDFILL 1	BAAP-35
PC&EPM FOR PBG CONTAMINATED WASTE PITS	BAAP-33
PC&EPM FOR PBG CONTAMINATED WASTE PITS	BAAP-33
PC&EPM FOR PBG RACETRACK AREA	BAAP-34
PC&EPM FOR PBG RACETRACK AREA	BAAP-34
PC&EPM FOR SOUTHERN OFF-POST AREA	BAAP-012
PC&EPM FOR SOUTHERN OFF-POST AREA	BAAP-012
Sediment Removal from Gruber's Grove Bay	BAAP-40
Sediment Removal from Gruber's Grove Bay	BAAP-40

Results Caps at DBG and PBG are functioning as designed. Groundwater monitoring should be optimized.

Actions WDNR received DBG and PBG reports submitted by Army as required and had no comments. WDNR approved Army's plan to optimize the groundwater monitoring program in May 2014.

Plans Conduct another review in 2018. Continue maintenance of caps and groundwater monitoring program as required by the WDNR.

Recommendations and Implementation Plans:

Continue groundwater monitoring to determine if MNA is occurring in all AOCs. Continue maintenance at closed sites where needed. Complete sediment sampling in Gruber's Grove Bay (GGB) to determine if more remediation is needed, and remediate if necessary.

Summary of Parcel Prioritization and Transfer Strategy

Parcel Name: Parcel A

Parcel Size: 89.00

Associated Sites: BAAP-012

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel B

Parcel Size: 55.36

Associated Sites:

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel C

Parcel Size: 114.22

Associated Sites: BAAP-33, BAAP-012

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel D

Parcel Size: 1,670.51

Associated Sites: BAAP-33, BAAP-012

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel DOT

Parcel Size: 60.21

Associated Sites: BAAP-33, BAAP-012

Transfer Date: 201109

Current Land Use: Other (US Highway 78 right of way)

Future Land Use: Other (Hwy 78)

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: State of Wisconsin Department of Transportation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel E

Parcel Size: 11.98

Associated Sites:

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel F

Parcel Size: 20.19

Associated Sites: BAAP-33, BAAP-012

Transfer Date: 200409

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel G

Parcel Size: 45.10

Associated Sites:

Transfer Date: 200507

Current Land Use: Agricultural

Future Land Use: Agricultural

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel H

Parcel Size: 44.60

Associated Sites: BAAP-35, BAAP-33, BAAP-012

Transfer Date: 201512

Current Land Use: Other (capped landfills/disposal sites need LTM)

Future Land Use: Agricultural

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel H1

Parcel Size: 29.06

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: Other (remediated area)

Future Land Use: Agricultural

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel I

Parcel Size: 16.85

Associated Sites:

Transfer Date: 200509

Current Land Use: Other (Closed landfill)

Future Land Use: Other (closed landfill/wildlife area)

Encumbrances: none

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel J

Parcel Size: 9.91

Associated Sites: BAAP-012

Transfer Date: 201103

Current Land Use: Other (disposal of inert materials)

Future Land Use: Other (wildlife area)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Dairy Forage Research Center

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel K

Parcel Size: 1,168.42

Associated Sites: BAAP-012

Transfer Date: 201006

Current Land Use: Other (wildlife, agriculture, clay & sand borrow)

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel K1

Parcel Size: 12.30

Associated Sites: BAAP-35, BAAP-012

Transfer Date: 201006

Current Land Use: Other (closed landfill/wildlife)

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel K2

Parcel Size: 17.29

Associated Sites: BAAP-012, BAAP-35

Transfer Date: 201005

Current Land Use: Other (closed remediation site with long term maintenance)

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel K3

Parcel Size: 1.14

Associated Sites:

Transfer Date: 201006

Current Land Use: Other (wildlife area)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel K4

Parcel Size: 54.95

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel L

Parcel Size: 199.38

Associated Sites: BAAP-012

Transfer Date: 201006

Current Land Use: Other (agriculture, wildlife area)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel M

Parcel Size: 385.31

Associated Sites: BAAP-012

Transfer Date: 201006

Current Land Use: Other (wildlife area)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel M1

Parcel Size: 160.60

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: Other (wildlife area)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel M2

Parcel Size: 17.97

Associated Sites: BAAP-012

Transfer Date: 201006

Current Land Use: Other (monofill for dredging sediments)

Future Land Use: Other (closed monofill/ park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel M3

Parcel Size: 1.00

Associated Sites:

Transfer Date: 201409

Current Land Use: Other (inactive cemetery maintained by Army)

Future Land Use: Other (active cemetery operated by cemetery association)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Sale

Recipient Organization: Town of Sumpter

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel N

Parcel Size: 4.56

Associated Sites:

Transfer Date: 201006

Current Land Use: Other (inactive water pumping station)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel O

Parcel Size: 332.17

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Other (wild life area)

Future Land Use: Other (buffalo grazing, cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel O1

Parcel Size: 3.89

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo grazing, cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel O2

Parcel Size: .03

Associated Sites:

Transfer Date: 201512

Current Land Use: Other (inactive cemetery maintained by Army)

Future Land Use: Other (cemetery operated by cemetery association)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Sale

Recipient Organization: Town of Sumpter

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel O3

Parcel Size: 12.85

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (rocket motor static firing)

Future Land Use: Other (buffalo grazing & cultural activities)

Encumbrances: Currently used by Orbitec, a government contractor

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel O4

Parcel Size: 10.35

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo grazing and cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel O5

Parcel Size: 14.41

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo grazing and cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel O6

Parcel Size: 2.56

Associated Sites:

Transfer Date: 201512

Current Land Use: Other (inactive cemetery maintained by Army)

Future Land Use: Other (active cemetery operated by cemetery association)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Sale

Recipient Organization: Town of Sumpter

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel O7

Parcel Size: 33.00

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo grazing and cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel P1

Parcel Size: 68.14

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo grazing and cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel P2

Parcel Size: 161.64

Associated Sites: BAAP-012

Transfer Date: 201104

Current Land Use: Other (wildlife)

Future Land Use: Other (buffalo raising and cultural activities)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel P3

Parcel Size: 30.25

Associated Sites: BAAP-012

Transfer Date: 201401

Current Land Use: Other (wildlife)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel P4

Parcel Size: 47.13

Associated Sites: BAAP-012

Transfer Date: 201401

Current Land Use: Other (wildlife)

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel P5

Parcel Size: 78.32

Associated Sites: BAAP-012

Transfer Date: 201104

Current Land Use: Other (wildlife)

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel P6

Parcel Size: 43.25

Associated Sites:

Transfer Date: 201104

Current Land Use: Other (wildlife)

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel Q1

Parcel Size: 43.52

Associated Sites:

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel Q2

Parcel Size: 145.56

Associated Sites:

Transfer Date: 201506

Current Land Use: N/A

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel Q3

Parcel Size: 239.22

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: N/A

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel R

Parcel Size: 93.68

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel R1

Parcel Size: 14.11

Associated Sites: BAAP-43, BAAP-012

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel R2

Parcel Size: 1.01

Associated Sites:

Transfer Date: 201202

Current Land Use: Other (Drinking water well)

Future Land Use: Other (Drinking water well)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: US HHS passthrough to Bluffview Sanitary District

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel R3

Parcel Size: 35.75

Associated Sites:

Transfer Date: 201512

Current Land Use: Commercial

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: If not BIA for HCN then NPS for WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel R4

Parcel Size: 29.01

Associated Sites:

Transfer Date: 201401

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel R5

Parcel Size: 1.08

Associated Sites:

Transfer Date: 201412

Current Land Use: N/A

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: Wisconsin Department of Natural Resources

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel S1

Parcel Size: 35.40

Associated Sites:

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel S2

Parcel Size: 87.48

Associated Sites: BAAP-012

Transfer Date: 201104

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel S3

Parcel Size: 39.67

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel S4

Parcel Size: 9.83

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel S5

Parcel Size: 15.71

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Other (wildlife)

Future Land Use: Other (agricultural or recreational)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel T

Parcel Size: 15.44

Associated Sites: BAAP-33

Transfer Date: 201202

Current Land Use: Industrial

Future Land Use: Industrial

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: US HHS passthrough to Bluffview Sanitary District

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel T1

Parcel Size: 147.41

Associated Sites: BAAP-012, BAAP-33

Transfer Date: 201412

Current Land Use: Industrial

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: US HHS passthrough to Bluffview Sanitary District

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel U2

Parcel Size: 100.43

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel U3

Parcel Size: 130.72

Associated Sites: BAAP-012

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel V

Parcel Size: 209.05

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel V1

Parcel Size: 136.95

Associated Sites: BAAP-012, BAAP-35

Transfer Date: 201412

Current Land Use: Other (active permitted demolition landfill)

Future Land Use: Other (inactive, capped landfill)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel V2

Parcel Size: 22.15

Associated Sites:

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel V3

Parcel Size: 272.46

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel V4

Parcel Size: 82.10

Associated Sites:

Transfer Date: 201412

Current Land Use: N/A

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel V5

Parcel Size: 28.69

Associated Sites: BAAP-012

Transfer Date: 201412

Current Land Use: N/A

Future Land Use: N/A

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel W

Parcel Size: 47.39

Associated Sites: BAAP-012

Transfer Date: 201006

Current Land Use: Other (restored prairie)

Future Land Use: Other (restored prairie)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to WDNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel X1

Parcel Size: 58.33

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel X2

Parcel Size: 42.37

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel X3

Parcel Size: 36.95

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel Y

Parcel Size: 68.15

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Other (park land)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

Parcel Summary

Parcel Name: Parcel Y1

Parcel Size: 32.87

Associated Sites:

Transfer Date: 201412

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Public Benefit Conveyance (PBC)

Recipient Organization: National Park Service passthrough to Wisconsin DNR

Other Issues Affecting Transfer:N/A

Parcel Name: Parcel Y2

Parcel Size: 24.32

Associated Sites:

Transfer Date: 201506

Current Land Use: Recreational

Future Land Use: Recreational

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: Dept of Interior in trust for Ho-Chunk Nation

Other Issues Affecting Transfer:N/A

BADGER ARMY AMMUNITION PLANT

Non-BRAC Excess Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 37/32

Installation Site Types with Future and/or Underway Phases

- 1 Burn Area
(BAAP-33)
- 2 Contaminated Ground Water
(BAAP-012, BAAP-43)
- 1 Contaminated Sediments
(BAAP-40)
- 1 Landfill
(BAAP-35)

Most Widespread Contaminants of Concern

Explosives, Metals, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Volatiles (VOC)

Media of Concern

Groundwater, Sediment, Soil

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
BAAP-010	NEW ACID AREA	IRA	CAPPING	1987	TBD
BAAP-004	EXISTING LANDFILL (LANDFILL #5)	IRA	CAPPING	1990	TBD
BAAP-34	PROP BRNG GRD - THERM TRTMT UNT/RACETRCK	FRA	WASTE REMOVAL - SOILS	1995	TBD
BAAP-005	NITROGLYCERINE Pond	FRA	DRAINAGE CONTROLS	1996	\$143.3 K
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	FRA	GROUND WATER TREATMENT	1997	TBD
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	IRA	GROUND WATER TREATMENT	1997	TBD
BAAP-38	TRANSFORMER YARD - PCB IN SOIL	FRA	WASTE REMOVAL - SOILS	1997	TBD
BAAP-34	PROP BRNG GRD - THERM TRTMT UNT/RACETRCK	FRA	WASTE REMOVAL - SOILS	1998	\$6.0 K
BAAP-34	PROP BRNG GRD - THERM TRTMT UNT/RACETRCK	FRA	NATURAL ATTENUATION	1998	TBD
BAAP-35	CAP & COVER MAINTENANCE	FRA	CAPPING	1998	\$469.5 K
BAAP-35	CAP & COVER MAINTENANCE	FRA	CAPPING	1998	\$962.9 K
BAAP-37	POWERHOUSE # 1 SOIL OLD FUEL SPILLS	FRA	FREE PRODUCT RECOVERY	1998	TBD
BAAP-35	CAP & COVER MAINTENANCE	FRA	CAPPING	1999	TBD
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	FRA	WASTE REMOVAL - SOILS	2000	TBD
BAAP-37	POWERHOUSE # 1 SOIL OLD FUEL SPILLS	FRA	BIOVENTING	2000	TBD
BAAP-005	NITROGLYCERINE Pond	FRA	WASTE REMOVAL - SOILS	2001	TBD
BAAP-006	DETERRENT BURNING GROUND	IRA	WASTE REMOVAL - SOILS	2001	TBD
BAAP-006	DETERRENT BURNING GROUND	FRA	CAPPING	2003	\$1,475.0 K

IRP Summary

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
BAAP-008	ROCKET PASTE AREA	FRA	WASTE REMOVAL - SOILS	2003	\$55.0 K
BAAP-36	EAST & WEST ROCKET AREA DITCHES	FRA	WASTE REMOVAL - SOILS	2003	\$40.0 K
BAAP-006	DETERRENT BURNING GROUND	FRA	BIOREMEDITATION - IN SITU	2004	\$525.0 K
BAAP-009	OLD ACID AREA	IRA	FUGITIVE DUST COVER/CONTROL	2005	TBD
BAAP-37	POWERHOUSE # 1 SOIL OLD FUEL SPILLS	FRA	REMOVAL	2006	TBD
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	FRA	BIOREMEDITATION - IN SITU	2007	TBD
BAAP-40	GRUBER'S GROVE BAY	IRA	REMOVAL	2007	TBD
BAAP-42	Box Wash Accounts 1890-1&2	FRA	WASTE REMOVAL - SOILS	2007	\$191.0 K
BAAP-001	SETTLING PONDS/SPOILS DISPOSAL AREA	IRA	WASTE REMOVAL - SOILS	2008	TBD
BAAP-009	OLD ACID AREA	FRA	WASTE REMOVAL - SOILS	2008	TBD
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	FRA	OTHER	2008	TBD
BAAP-001	SETTLING PONDS/SPOILS DISPOSAL AREA	IRA	WASTE REMOVAL - SOILS	2009	TBD
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	FRA	CAPPING	2009	TBD
BAAP-012	GW Monitoring ON and OFF Post	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	2012	TBD
BAAP-001	SETTLING PONDS/SPOILS DISPOSAL AREA	FRA	WASTE REMOVAL - SOILS	2014	TBD
BAAP-43	Site-Wide RI	FRA	WASTE REMOVAL - SOILS	2014	TBD
BAAP-43	Site-Wide RI	FRA	NATURAL ATTENUATION	2015	TBD

Duration of IRP

Year of IRP Inception: 197701

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201809/204509

Date of IRP completion including Long Term Management (LTM): 204903

IRP Contamination Assessment

Contamination Assessment Overview

In the 1940s, the US government acquired more than 10,000 acres to construct BAAP. In 1942, the construction of the propellant plant began on farmland composed of topsoil (up to 10 feet (ft) of clay silt loess) over very permeable sand and gravel deposits. The installation was the largest propellant manufacturing plant constructed in World War II. It also made propellants for the Korean and Vietnam conflicts. Active propellant manufacturing ceased in 1976.

Studies conducted during the late-1970s and early-1980s discovered materials such as propellant grains, dinitrotoluene (DNT), nitroglycerine (NG), organic solvents, lead compounds and acids, used during production were potential soil and groundwater contaminants. In 1987, a preliminary assessment (PA) and site inspection (SI) were conducted and documented in the Master Environmental Plan. Some volatile organic compounds (VOC), such as the solvent carbon tetrachloride, had migrated through the soil to the groundwater located 90 to 110 ft below ground surface. The contaminants then moved with the groundwater, which generally flows to the south.

Contaminants have been found in soil at varying depths as well as in groundwater. Contamination from production discharge water also has been identified in the bottom sediments of now-dry, man-made settling ponds. This discharge also emptied into the waters of Lake Wisconsin at GGB.

In September 1987, based on information developed during the PA, the WDNR issued an in-field condition report (IFCR) for BAAP. The IFCR contained requirements to conduct a remedial investigation/feasibility study (RI/FS) for specified sites on the installation. Over the years the IFCR has been modified by the state as necessary, under their Resource Conservation and Recovery Act (RCRA) authority from USEPA, to keep it current and address the latest findings and decisions regarding the installation cleanup program.

In 1988, the installation also received a hazardous waste operations and storage license in accordance with the RCRA Part B permit process. Issued jointly by the USEPA Region V and the WDNR, it included specific requirements for an investigation at each of the potentially contaminated sites previously identified. It also provided for a phased study program based on a prioritized ranking. This license was renewed in 1998 for storage only and was no longer needed in 2003 when the storage facility was closed.

BAAP was nominated for the NPL, but was not listed. The remediation program is proceeding under the RCRA authority delegated by USEPA to the state in 1994, but the terminology used follows the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The WDNR regulates the Army's remedial efforts. The USEPA involvement continues only in an advisory/assistance role.

Over the years the IFCR identified sites have been investigated and remediated. Additional problems found during the demolition and investigation of the production areas have been addressed. There are two capped disposal areas [(DPG and propellant burning ground (PBG)) where residuals chemicals remain and groundwater contamination has moved away from these sites as distinct plumes. A third plume has been identified, but no specific site was identified. All the plumes appear to be stable or decreasing through natural attenuation. The maintenance of the source caps and the monitoring of groundwater conditions will continue for many years.

Three home wells found to be significantly impacted by the PBG plume were replaced in the 1990s. Two other homes found to be significantly impacted by the third plume were replaced in the 2000s. A public water system is proposed by the Army as part of the final remedy for the problem, to provide reliable clean water to all residences in the potential area of impact from the three plumes.

Cleanup Exit Strategy

Building demolition, asbestos and explosive safety certifications, followed by soil sampling has been completed. Shut down of the groundwater pump-and-treat systems started in December 2012 and will proceed if no negative impacts are found. The on-site demolition waste landfill was closed and capped in 2013. Transfers of the remaining parcels out of Army control, achieving NFA status in GGB, installing a municipal water system to prevent human exposure to impacted groundwater, MNA, and capped sites to meet long-term state requirements will be done in the coming years.

IRP Previous Studies

Year	Title	Author	Date
1973	Air Pollution Engineering General Survey NO. 21-001-74	US Army Environmental Hygiene Agency	OCT-1973
1977	Installation Assessment of BAAP	Installation	MAY-1977
1978	Water Quality Special Study No. 24-0039-78	Installation	MAR-1978
1980	Closure Plan, Deterrent Burning Grounds, BAAP	Installation	MAY-1980
	Preliminary Environmental Survey, BAAP	Installation	MAY-1980
1981	BAAAP Contamination Survey, Final Report	Installation	MAR-1981
1983	Environmental Assessment for Total Plant Operation BAAP	Installation	MAY-1983
1984	Near-Surface Soils Investigations at BAAP	Installation	OCT-1984
1985	Investigation Report for Soil Sampling, Analysis and Evaluation of Settling Ponds Spoils Site at BAAP	Installation	SEP-1985
1987	CLOSURE DOCUMENTATION APPROVAL, NEUTRALIZATION/STABILIZATION POND, NEW ACID COMPLEX (CD)	Wisconsin Department of Natural Resources	JUL-1987
1988	Geophysical Investigation At An Existing Landfill, BAAP	Installation	MAY-1988
1989	WDNR LETTER, CLOSURE DOCUMENTATION APPROVAL, BADGER ARMY AMMUNITION PLANT LANDFILL (#2813), SAUK CO. (CD)	Wisconsin Department of Natural Resources	SEP-1989
1990	High Capacity Well Survey Report (Recommends Locations For 5 Off-Plant Monitoring Wells)	Installation	JUN-1990
	An Investigation of Cancer Mortality for Communities near the BAAP	Installation	JUL-1990
	Environmental Assessment for Removal of Barricades	Installation	SEP-1990
	Health Assessment BAAP	Installation	SEP-1990
	Graf Well Results with Suspect Metatrace	Installation	OCT-1990
	Graf Well Results without Metatrace Data	Installation	OCT-1990
	Environmental Assessment for Layaway of Contaminated Waste Processor	Installation	OCT-1990
1991	Geophysical Investigation at an Existing Landfill, BAAP	Installation	APR-1991
	Receiving Water Biological Study No. 32-24-0025-91, Effluent Toxicity Testing, BAAP	Installation	MAY-1991

IRP Previous Studies

Year	Title	Author	Date
1991	Environmental Assessment and Finding of No Significant Impact for Agricultural Leasing: Fertilization Policy Change	Installation	JUN-1991
	Finding Of No Significant Impact For Prove-out - Nitric Acid/Sulfuric Acid Concentrator (NAC/SAC) Facilities At BAAP	Installation	JUN-1991
	Dinitrotoluene in Deer Tissues Final Report	Installation	SEP-1991
1992	2,4 And 2,6 Dinitrotoluene Health Advisory	Installation	APR-1992
1993	Gruber's Grove Bay Investigation Summary	Installation	FEB-1993
	Groundwater Narrative Historical Summary Report - Badger AAP Volumes I, II and III	Installation	MAR-1993
	Leachability of Selected Chemical Elements from Concrete	Installation	MAR-1993
	Final Remedial Investigation Report, Volumes I and II, Appendices A Through R	Installation	APR-1993
	BAAP Monitoring Well Results - Volumes I, II, and III	Installation	JUN-1993
	BAAP Groundwater Tests - Private Wells	Installation	SEP-1993
	WDNR LETTER, CLOSURE OF 18,000-GALLON FUEL OIL TANK (CD)	Wisconsin Department of Natural Resources	SEP-1993
1994	Groundwater Narrative Historical Summary Report - Volumes I, II, and III	Installation	MAY-1994
	Badger Army Ammunition Plant Groundwater Hydrology	Installation	MAY-1994
	BAAP Groundwater Private Well Test Results	Installation	SEP-1994
1995	BAAP Groundwater Hydrology	Installation	MAY-1995
	Natural Attenuation Study for Racetrack Area Soil	Installation	OCT-1995
1996	Delineation of Subsurface Soil Impacts at Refuse Pits Located At The South End Of The PBG	Installation	JAN-1996
	Health Risk Assessment - Heavy Metal Uptake in Terrestrial Insects - Specifications, Design Analysis	Installation	FEB-1996
	Racetrack Area Waste Pile Delineation/Characterization - Final Remedial Investigation Report	Installation	JUL-1996
	CLOSURE DOCUMENTATION OF THE HAZARDOUS WASTE THERMAL TREATMENT UNIT IN THE PROPELLANT BURNING GROUND AT BADGER (CD)	Wisconsin Department of Natural Resources	SEP-1996
	Small Mammal Survey	Installation	NOV-1996
	Infrastructure Remedial Environmental Study	Installation	DEC-1996
1997	MIRM Vapor Phase Carbon Adsorption Report	Installation	FEB-1997
	Bench Scale Soil Washing Treatability Study	Installation	MAY-1997
	Northeast Boundary Area Groundwater Study	Installation	MAY-1997
	Evaluation of Groundwater Conditions - Deterrent	Installation	MAY-1997

IRP Previous Studies

	Title	Author	Date
1997	Burning Grounds		
	Deterrent Burning Ground Subsurface Investigation	Installation	DEC-1997
	FINAL RI REPORT, RACETRACK AREA WASTE PILE DELINEATION/CHARACTERIZATION & DATA REPORT-DELINEATION OF SUBSURFACE SOIL (CD)	Wisconsin Department of Natural Resources	DEC-1997
1998	Alternative Feasibility Study Soil, Sediment, and Surface Water Nitroglycerine, Rocket Paste, and Overflow Ponds	Installation	APR-1998
	BAAP Groundwater Hydrology Report	Installation	JUN-1998
	Alternative Feasibility Study (FS) for the DBG and PBG Waste Pits Subsurface Soil at BAAP	Installation	JUL-1998
1999	REPORT ON GAS & DIESEL TANK REMOVAL DONE IN 1998 & WDNR LETTER, NO FURTHER ACTION ON GAS & DIESEL TANKS PER NR 708, WIS. ADM. CODE (CD)	Ramaker & Associates, Inc. & Wisconsin Department of Natural Resources	JAN-1999
	Corrective Measures Implementation Report Nitroglycerine, Overflow, And Rocket Paste Ponds	Installation	JAN-1999
	Plexus Scientific Environmental Baseline Survey	Installation	JAN-1999
	Corrective Measures Implementation Report Rocket Ditches Area BAAP	Installation	JAN-1999
	REPORT ON GAS & DIESEL TANK REMOVAL DONE IN 1998 & WDNR LETTER, NO FURTHER ACTION ON GAS & DIESEL TANKS PER NR 708, WIS. ADM. CODE (CD)	Ramaker & Associates, Inc. & Wisconsin Department of Natural Resources	MAR-1999
	1949 PIT CLOSURE (CD)	Wisconsin Department of Natural Resources	MAR-1999
	Badger Army Ammunition Plant Independent Technical Review Final Recommendations Report	Installation	MAY-1999
	BAAP Monitoring Well Results	Installation	MAY-1999
	Technical Report Natural Attenuation Screening Study Propellant Burning Ground	Installation	AUG-1999
	2000	BAAP Groundwater Program Private Well Results	Installation
2000 Groundwater Narrative Summary Report		Installation	MAY-2000
WDNR LETTER, CLOSURE OF THE NG POND, THE ROCKET PASTE POND & ROCKET DITCHES (CD)		Wisconsin Department of Natural Resources	JUL-2000
2001	Gruber's Grove Bay Dredging Project Lake Wisconsin, Sauk County	Installation	JAN-2001
	Badger AAP Monitoring Well Results	Installation	MAR-2001
2002	USDA Evaluation of Suspect Soil At Fence Lines And Railroad Track, Badger Army Ammunition Plant	Installation	FEB-2002
	WDNR LETTER, BALLISTICS POND (CD)	Wisconsin Department of Natural Resources	APR-2002
	WDNR LETTER, OLEUM PLANT LANDFILL, BADGER ARMY AMMUNITION PLANT, SAUK COUNTY (CD)	Wisconsin Department of Natural Resources	APR-2002
	FINAL DETERMINATION OF REMEDY FOR THE	Wisconsin Department of	OCT-2002

IRP Previous Studies

Year	Title	Author	Date
2002	DETERRENT BURNING GROUND (CD)	Natural Resources	
2003	USDA Summary of Soil Sampling Activities - USDA/Badger Army Ammunition Plant	Installation	JAN-2003
	2003 Groundwater Narrative Summary Report	Installation	MAR-2003
	FUDS SITES (CD)	Wisconsin Department of Natural Resources	NOV-2003
2004	2004 Groundwater Narrative Summary	Installation	JAN-2004
	Badger Army Ammunition Plant Environmental Site Assessment	Installation	DEC-2004
2005	WDNR LETTER, NO ACTION REQUIRED, BALLISTICS DITCHES (CD)	Wisconsin Department of Natural Resources	JAN-2005
	Groundwater Narrative Summary Report	SpecPro	JAN-2005
	WDNR LETTER, OLEUM POND (CD)	Wisconsin Department of Natural Resources	MAR-2005
	Final Report on Residual Dinitrotoluenes in Settling Ponds and Spoils Disposal Area Soils at BAAP: Microcosm and Soil Column Studies	Georgia Institute of Technology	JUN-2005
2006	March 2006 Groundwater Cert. & Exceedance Reports, All Hits Report, Sampled Wells List, & Sampled Wells By Frequency Map (CD)	Department of the Army/Specpro, Inc.	MAR-2006
	Bench Scale Study Report, Verification of Field Test Methods for NC & NG - Spiked Samples of Soil & Building Materials (Rev. 1)	Shaw Environmental, Inc.	APR-2006
	Draft Report, Ecological Risk Assessment Re- Evaluation, Settling Ponds & Spoils Disposal Areas Site, Badger AAP	Menzie-Cura & Associates, Inc./Specpro, Inc	APR-2006
	Site Assessment Report, Parcels K4, O, P3, And P5, Underground Storage Tank Investigation (CD)	Department of the Army/Specpro, Inc	APR-2006
	Dept. of the Army Letter Dated April 10, 2006, Subject: High Priority Review Request (CD)	Department of the Army/Specpro, Inc	APR-2006
	WDNR Letter, Landfill Closure Approvals	Wisconsin Department of Natural Resources	MAY-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Rocket Paste Dep Storage Area	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Solvent Recovery Area	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Maintenance Shop, UST	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Tram Repair Shop UST	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Solvent Recovery Area USTs	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Compressor House UST	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army Ammunition Plant Ball Powder Pilot Plant	Wisconsin Department of Natural Resources	JUN-2006
	WDNR Letter, No Action Required For The Badger Army	Wisconsin Department of	JUN-2006

IRP Previous Studies

2006

Title	Author	Date
Ammunition Plant Dep Unloading Station UST	Natural Resources	
2006 Groundwater Narrative Summary Report (CD)	Department of the Army/Specpro, Inc.	JUN-2006
June 2006 Groundwater Certifications And Exceedance Reports, All Hits Report, And Sampled Wells List (CD)	Department of the Army/Specpro, Inc.	JUN-2006
Site Assessment Report, Historic Shops Solvent Investigation - Phase 2, Follow-Up Remedial Investigation, Badger AAP (CD)	Department of the Army/Specpro, Inc.	JUN-2006
Site Assessment Report, Battery Charging Station, Underground Storage Tank Investigation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUN-2006
Landfill 4 Closure Construction Documentation Report, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUN-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Oleum Ditch	Wisconsin Department of Natural Resources	JUN-2006
Explosive Safety Submission (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	JUL-2006
Site Assessment Report, Parcel K UST Investigation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUL-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Battery Charging Station USTs	Wisconsin Department of Natural Resources	JUL-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Parcel K (Oleum Area) UST	Wisconsin Department of Natural Resources	JUL-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Railroad Track Scale	Wisconsin Department of Natural Resources	JUL-2006
Site Assessment Report, Parcel O5 UST Investigation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUL-2006
Site Assessment Report, Parcel O1 UST Investigation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUL-2006
Phase 2 Site Assessment & Remediation Report, Parcel V UST Investigation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JUL-2006
Draft Corrective Measures Implementation Rpt, Asbestos Abatement, Demo, & Disposal, East/West Paste & Ball Powder Areas (CD)	Shaw Environmental, Inc.	AUG-2006
WDNR Landfill Closure Approval Letter, Landfill 4 Soil Cover Project Report	Wisconsin Department of Natural Resources	AUG-2006
Aug UST 2006 Groundwater Certification And Exceedance Report, All Hits Report, And Sampled Wells List, & Sampled Wells Maps (CD)	Department of the Army/Specpro, Inc.	AUG-2006
Remediation Summary Report, Powerhouse #1 Fuel Oil Remediation, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	AUG-2006
Site Assessment Report, Parcels D And T Former Underground Storage Tanks Investigation (CD)	Department of the Army/Specpro, Inc.	SEP-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Parcel O5 (Cannon Range) USTs	Wisconsin Department of Natural Resources	SEP-2006
Final Amendment 5 Explosive Safety Submission (ESS) For Building Demolition, Badger Army Ammunition Plant (CD),	Shaw Environmental, Inc./US Army Corps of Engineers	SEP-2006
September 2006 Groundwater Certifications And Exceedance Reports, All Hits Report, And Sampled Wells List (CD)	Department of the Army/Specpro, Inc.	SEP-2006

IRP Previous Studies

2006

Title	Author	Date
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Historic Shops Solvent Investigation	Wisconsin Department of Natural Resources	SEP-2006
Final Amendment 6 Explosive Safety Submission (ESS) For Building Demolition, Badger Army Ammunition Plant (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	SEP-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Powerhouse #2 Fuel Oil USTs	Wisconsin Department of Natural Resources	SEP-2006
Health Consultation, Dinitrotoluene In Private Wells, Badger Army Ammunition Plant, Baraboo, Sauk County, Wisconsin (CD)	US Department of Health and Human Services	SEP-2006
Site Assessment Report, Gasoline Storage Area, Follow-Up Remedial Investigation Phase 2, Badger AAP (CD)	Department of the Army/Specpro, Inc	OCT-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Magazine Office USTs	Wisconsin Department of Natural Resources	OCT-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Raw Material Store USTs	Wisconsin Department of Natural Resources	OCT-2006
October 2006 Groundwater Certifications And Exceedance Reports, All Hits Report, Sampled Wells List, & Sampled Wells Map (CD)	Department of the Army/Specpro, Inc.	OCT-2006
Site Assessment Report, Old Acid Area Solvent Investigation, Follow-Up Remedial Investigation, Badger AAP (CD)	Department of the Army/Specpro, Inc	OCT-2006
RAB Minutes: February 6, 2006; June 5, 2006; August 14, 2006; And October 16, 2006 (CD)	Department of the Army/Specpro, Inc.	NOV-2006
Final Addendum, Field Sampling Plan, Gruber's Grove Bay Dredging Project (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	NOV-2006
Construction Documentation Report, Phase 2 Liner Construction, Expansion Of Landfill 03646 (CD)	Department of the Army/Specpro, Inc.	NOV-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Contaminated Waste Processing Building UST (On CD)	Wisconsin Department of Natural Resources	NOV-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Old Acid Air Compressor House UST (On CD)	Wisconsin Department of Natural Resources	NOV-2006
WDNR Letter, Site Closure Approval For The Badger Army Ammunition Plant Filtration Plant USTs (On CD)	Wisconsin Department of Natural Resources	NOV-2006
WDNR Letter, No Action Required For The Badger Army Ammunition Plant Emergency Generator House UST (On CD)	Wisconsin Department of Natural Resources	NOV-2006
Monitoring Results From Gruber's Grove Bay Cleanup (CD)	US Army Corps of Engineers	DEC-2006
Baseline Ecological Risk Assessment Work Plan, Settling Ponds & Spoils Disposal Areas Site, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc./Menzie-Cura & Associates, Inc.	DEC-2006

2007

Final Amendment 7 Explosive Safety Submission (ESS) For Building Demolition, Badger Army Ammunition Plant (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	JAN-2007
Old Acid Area Remedial Action Plan, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	JAN-2007

IRP Previous Studies

2007

Title	Author	Date
Applied Innovative Technologies For Characterization Of Nc- And Ng-Contaminated Buildings, Badger Army Ammunition Plant (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	JAN-2007
Restoration Advisory Board Meeting Minutes For January 10, 2007 (CD)	Department of the Army	JAN-2007
Inspiration Drive Area Groundwater Sampling Files	Specpro, Inc.	FEB-2007
March 2007 Groundwater Certifications, Exceedance Reports, All Hits Report, Sampled Wells List, Sampled Wells Map, Landfill Wells Sampled	Department of the Army/Specpro, Inc.	MAR-2007
P6 Nitroglycerin Area Investigation	Department of the Army/Specpro, Inc.,	MAR-2007
Best System Database (CD)	Shaw Environmental & Infrastructure, Inc	MAR-2007
Restoration Advisory Board Meeting Minutes for March 19, 2007	Department of the Army	MAR-2007
Residential Groundwater Test Results - March 2007, March 2007 and Master Summary Spreadsheets	Department of the Army	MAR-2007
Documentation Of Annual Maintenance Activities 2006, Closed Covered And Capped Sites, Badger Army Ammunition Plant (CD)	Department of the Army	MAR-2007
Gasoline Storage Area Shallow Soil Remediation Report, Badger Army Ammunition Plant (CD)	Department of the Army/Specpro, Inc.	MAR-2007
Old Acid Area Solvent Investigation Site Closeout Request; Brrts Number 02-57-001002 (CD)	Department of the Army/Specpro, Inc.	MAR-2007
December 2006 Groundwater Certifications, Exceedance Reports, All Hits Reports, Sampled Wells List, Map, Residential Master List (CD)	Department of the Army/Specpro, Inc.	MAR-2007
Tractor Garage Underground Storage Tanks (USTs) Remediation Site Closeout Request; Brrts Number 02-57-001002 (CD)	Department of the Army/Specpro, Inc.	MAR-2007
SURFACE WATER (WEIGAND'S BAY) SAMPLING WEST OF HWY 78 (CD)	SpecPro, Inc.	APR-2007
Department of the Army Letter Dated April 18, 2007, Subject: Old Acid Area Remedial Action Plan Modification	Department of the Army	APR-2007
Department of the Army Letter, Powerhouse # 1 Final Closure Fuel Oil Discharge Site, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	MAY-2007
Department of the Army Letter, No Further Action Request Regarding Cemeteries At Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	MAY-2007
WDNR Letter, No Action Required for Three Cemeteries on Badger Army Ammunition Plant Property	Wisconsin Department of Natural Resources	MAY-2007
Dept. of the Army & Wisconsin Department of Natural Resources Letters (2) Regarding Dinitrotoluene Health Standards	Department of the Army/Wisconsin Department of Natural Resources	MAY-2007
WDNR Letter, Site Closure Approval for the Badger Army Ammunition Plant Gasoline Storage Area ASTs	Wisconsin Department of Natural Resources	MAY-2007
WDNR Letter, No Action Required Determination for the Badger Army Ammunition Plant Old Acid Area Solvent Investigation	Wisconsin Department of Natural Resources	MAY-2007
WDNR Letter, Site Closure Approval for the Badger Army Ammunition Plant Tractor Garage USTs	Wisconsin Department of Natural Resources	MAY-2007

IRP Previous Studies

2007

Title	Author	Date
WDNR Letter, No Action Required Determination for the Badger Army Ammunition Plant P6 Nitroglycerin Area Investigation	Wisconsin Department of Natural Resources	MAY-2007
WDNR Letter, Site Closure Approval for the Badger Army Ammunition Plant Tractor Garage USTs	Wisconsin Department of Natural Resources	MAY-2007
WDNR Letter, Site Closure Approval for the BAAP - Powerhouse #1 Fuel Oil Discharge Site; Sauk County; BRRTS Number 02-57-549430	Wisconsin Department of Natural Resources	JUN-2007
Residential Groundwater Test Results - June 2007, June 2007 and Master Summary Spreadsheets	Department of the Army	JUN-2007
June 2007 Groundwater Data Certifications, Exceedance Reports, All Hits Reports, Sampled Wells List, Sampled Wells Map	Department of the Army/Specpro, Inc.	JUN-2007
Restoration Advisory Board Meeting Minutes for June 18, 2007	Department of the Army	JUN-2007
2007 Groundwater Narrative Summary Report (CD)	Department of the Army/Specpro, Inc.	JUL-2007
Department of the Army Letter Dated July 16, 2007, Subject: No Further Action, Coal Yard, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	JUL-2007
Remediation Summary Report, P4 Rocket Paste Ditch, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	JUL-2007
Site Assessment Reports, Oil & Solvent Store, Follow-Up Remedial Investigations, Olin Corp. Phase 2 & Specpro, Inc. Phase 3	Department of the Army/Specpro, Inc.	AUG-2007
Construction Documentation Report, Phase 3 Liner Construction, Expansion of Landfill 03646	Department of the Army/Specpro, Inc.	AUG-2007
DNR Letter Dated August 20, 2007, Subject: No Further Action Request Former Coal Yard Storage Area	Wisconsin Department of Natural Resources	AUG-2007
Gruber's Grove Bay Draft Remedial Action Completion Report	Shawe Environmental, Inc.	AUG-2007
August 2007, Residential Sampling, GW Certification Form, Exceedance Report, All Hits Report, Sampled Wells Map & List, GW Test Results Table	Department of the Army/Specpro, Inc.	AUG-2007
Soil Remediation Summary Report, Box Wash Repair Site, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	SEP-2007
Propellant Burning Ground September 2007 Explosives Groundwater Data	Department of the Army/Specpro, Inc.	SEP-2007
September 2007 Groundwater Data Certifications, Exceedance Reports, All Hits Reports, Sampled Wells List, Sampled Wells Map	Department of the Army/Specpro, Inc.	SEP-2007
Restoration Advisory Board Meeting Minutes for September 24, 2007	Department of the Army	SEP-2007
WDNR Letter Dated October 1, 2007, Subject: No Action Required for the Badger Army Ammunition Plant Oil & Solvent Store	Wisconsin Department of Natural Resources	OCT-2007
WDNR Letter Dated October 9, 2007, Subject: Phase 3 Liner Construction Documentation Approval for Landfill Site No. 03646	Wisconsin Department of Natural Resources	OCT-2007
WDNR Letter Dated October 24, 2007, Subject: Site Closure Approval for the BAAP - Box Wash Repair Site	Wisconsin Department of Natural Resources	OCT-2007
Final Amendment 8 Explosive Safety Submission (ESS) for Building Demolition, Badger Army Ammunition Plant	Shaw Environmental, Inc./US Army Corps of Engineers	NOV-2007

IRP Previous Studies

2007	Title	Author	Date
	DECEMBER 2007 GROUNDWATER DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	DEC-2007
	WDNR Letter Dated December 12, 2007, Subject: Site Closure Approval for the BAAP - P4 Rocket Paste Ditch Case	Wisconsin Department of Natural Resources	DEC-2007
	Old Acid Area Remedial Action Report, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	DEC-2007
2008	WDNR LETTER DATED JANUARY 30, 2008, SUBJECT: FINAL CASE CLOSURE FOR THE BAAP - OLD ACID AREA CASE (CD)	Wisconsin Department of Natural Resources	JAN-2008
	RESTORATION ADVISORY BOARD MEETING MINUTES FOR JANUARY 9, 2008 (CD)	Department of the Army	JAN-2008
	Draft Finding of Suitability To Transfer (FOST), Parcels K, K1, K2, K3, L, M, N, and W, Badger Army Ammunition Plant, Baraboo, WI	Department of the Army	JAN-2008
	Draft Finding of Suitability To Transfer (FOST), Parcels O2, O6 and M3, Badger Army Ammunition Plant, Baraboo, WI	Department of the Army	JAN-2008
	Documentation of Annual Maintenance Activities 2007, Closed, Covered, and Capped Sites, Badger Army Ammunition Plant	Department of the Army/Specpro, Inc.	JAN-2008
	Gruber's Grove Bay Geotube Laydown Area Wetland Sampling, Badger Army Ammunition Plant	Department of the Army	JAN-2008
	FINAL REMEDIAL ACTION COMPLETION REPORT, GRUBER'S GROVE BAY DREDGING PROJECT, BADGER ARMY AMMUNITION PLANT (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	JAN-2008
	OLD ACID AREA FUEL OIL SITE REPORT, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army/SpecPro, Inc.	FEB-2008
	PARCEL O SITE INVESTIGATION, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army/SpecPro, Inc.	MAR-2008
	FINAL DETERMINATION OF REMEDY FOR PROPELLANT BURNING GROUND WASTE PITS SUBSURFACE SOIL (CD)	Wisconsin Department of Natural Resources	MAR-2008
	FINAL DETERMINATION OF REMEDY FOR PROPELLANT BURNING GROUND WASTE PITS SUBSURFACE SOIL (CD)	Wisconsin Department of Natural Resources	MAR-2008
	GROUNDWATER DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	MAR-2008
	FINAL ALTERNATIVE FEASIBILITY STUDY, PROPELLANT BURNING GROUND WASTE PITS SUBSURFACE SOIL, BADGER ARMY AMMUNITION PLANT (CD)	Shaw Environmental, Inc./US Army Corps of Engineers	MAR-2008
	WDNR LETTER, FINAL CASE CLOSURE FOR THE BAAP - OLD ACID AREA FUEL OIL CASE; SAUK COUNTY (CD)	Wisconsin Department of Natural Resources	APR-2008
	WDNR LETTER, NO ACTION REQUIRED FOR THE BADGER ARMY AMMUNITION PLANT PARCEL O SITE INVESTIGATION (CD)	Wisconsin Department of Natural Resources	APR-2008
	CONSTRUCTION DOCUMENTATION REPORT, FINAL COVER CONSTRUCTION, LANDFILL 3118, BADGER	Department of the Army/SpecPro, Inc.	APR-2008

IRP Previous Studies

2008

Title	Author	Date
ARMY AMMUNITION PLANT (CD)		
DNT DEGRADATION SPECIAL EVENT, APRIL 2008, GW DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	APR-2008
DRAFT BASELINE ECOLOGICAL RISK ASSESSMENT, SETTLING PONDS AND SPOILS DISPOSAL AREAS SITE (CD)	Department of the Army/SpecPro, Inc./Exponent, Inc.	APR-2008
GROUNDWATER DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, AND SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	APR-2008
PARCEL P5 FUEL OIL INVESTIGATION (CD)	Department of the Army/SpecPro, Inc.	MAY-2008
NO FURTHER ACTION REQUIRED FOR THE BADGER ARMY AMMUNITION PLANT PARCEL P5 FUEL OIL RELEASE SITE (CD)	Wisconsin Department of Natural Resources	MAY-2008
LEAD BURNING HOUSE REMEDIAL INVESTIGATION - PARCELS P6 AND R (CD)	SpecPro, Inc.	MAY-2008
GROUNDWATER NARRATIVE SUMMARY REPORT (CD)	Department of the Army/SpecPro, Inc.	JUN-2008
GROUNDWATER NARRATIVE SUMMARY REPORT (CD)	Department of the Army/SpecPro, Inc.	JUN-2008
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	JUN-2008
PARCEL O4 REMEDIAL INVESTIGATION REPORT (CD)	Department of the Army/SpecPro, Inc.	JUL-2008
PARCEL Q3 REMEDIAL INVESTIGATION REPORT (CD)	Department of the Army/SpecPro, Inc.	JUL-2008
DETERRENT BURNING GROUND CAP AND COVER SYSTEM FIVE-YEAR OPERATION AND MAINTENANCE SUMMARY (CD)	Department of the Army	JUL-2008
BADGER ARMY - FINAL CLOSURE OF THE LANDFILL LIC: 3118 (CD)	Wisconsin Department of Natural Resources	JUL-2008
GROUNDWATER DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, AND SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	JUL-2008
SETTLING POND 4 INTERIM REMEDIAL ACTION (CD)	Department of the Army	AUG-2008
GROUNDWATER DATA CERTIFICATION, ALL HITS REPORT, SAMPLED WELLS LIST, AND SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	AUG-2008
NOTIFICATION FOR HAZARDOUS SUBSTANCE DISCHARGE FORMS FOR POST DEMOLITION SAMPLING CONTAMINANTS IDENTIFIED IN PARCELS H1, O7, P2, AND V AND POST DEMO REPORTS (CD)	Department of the Army/SpecPro, Inc.	SEP-2008
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	SEP-2008

IRP Previous Studies

2008

Title	Author	Date
PARCELS P2, P3, AND P4 REMEDIAL INVESTIGATION REPORT (CD)	Department of the Army/SpecPro, Inc.	OCT-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCELS O, O1, O5, Q2, U2, and X1 (CD)	Department of the Army	OCT-2008
SETTLING POND 4 INTERIM REMEDIAL ACTION REPORT (CD)	Department of the Army/SpecPro, Inc.	NOV-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL M2 (CD)	Department of the Army	NOV-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL S2 (CD)	Department of the Army	NOV-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), BLUFFVIEW SANITARY DISTRICT, PARCEL R2 (CD)	Department of the Army	NOV-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL K4 (CD)	Department of the Army	NOV-2008
FINAL CASE CLOSURE FOR THE BAAP - WDOT PROJECTS AREA WITHIN SETTLING POND 4; SAUK COUNTY (CD)	Wisconsin Department of Natural Resources	DEC-2008
PARCEL R - DIESEL FUEL REMEDIAL ACTION REPORT (CD)	Department of the Army/SpecPro, Inc.	DEC-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL P5 (CD)	Department of the Army	DEC-2008
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), BLUFFVIEW SANITARY DISTRICT, PARCEL T (CD)	Department of the Army	DEC-2008
LEACHATE RELEASE REMEDIAL INVESTIGATION REPORT (CD)	Department of the Army/SpecPro, Inc.	DEC-2008
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	DEC-2008

2009

DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), WISCONSIN DEPARTMENT OF TRANSPORTATION, PARCEL DOT (CD)	Department of the Army	JAN-2009
DOCUMENTATION OF ANNUAL MAINTENANCE ACTIVITIES 2008, CLOSED, COVERED, AND CAPPED SITES, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army/SpecPro, Inc.	JAN-2009
FIVE-YEAR REVIEW REPORT, DETERRENT BURNING GROUND (CD)	U.S. Army Corps of Engineers/Base Realignment & Closure Division	JAN-2009
STATE OF WISCONSIN - DEPARTMENT OF NATURAL RESOURCES, SUBSTANCE RELEASE NOTIFICATION REPORTS (SERTS) OF 01/26/2009 (CD)	Wisconsin Department of Natural Resources	JAN-2009

IRP Previous Studies

2009

Title	Author	Date
CONSTRUCTION DOCUMENTATION REPORT, PROPELLANT BURNING GROUND PHASE 2, CAP CONSTRUCTION (CD)	Department of the Army/SpecPro, Inc.	FEB-2009
GRUBER'S GROVE BAY QUALITY ASSURANCE PROJECT PLAN AND FIELD SAMPLING PLAN (CD)	Department of the Army/SpecPro, Inc.	FEB-2009
PARCEL O4 SOLVENT ABOVEGROUND STORAGE TANK REMEDIATION REPORT (CD)	Department of the Army/SpecPro, Inc.	FEB-2009
SUPPLEMENTAL INFORMATION FOR PARCELS O7, P2, H1, AND V POST-DEMOLITION SAMPLING (CD)	Department of the Army/SpecPro, Inc.	FEB-2009
SOLID WASTE FACILITY CLOSURE AND LONG-TERM CARE LICENSE FOR LANDFILL LICENSE NUMBER 3118 (CD)	Wisconsin Department of Natural Resources	FEB-2009
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	MAR-2009
REVIEW OF PROPELLANT BURNING GROUND PHASE 2 CAP CONSTRUCTION DOCUMENTATION REPORT (CD)	Wisconsin Department of Natural Resources	MAR-2009
FINAL CASE CLOSURE FOR THE BAAP - PARCEL O4 SOLVENT ASTs (LEAD) CASE; SAUK COUNTY; BRRTS NUMBER 02-57-553336 (CD)	Wisconsin Department of Natural Resources	MAR-2009
GROUNDWATER NARRATIVE SUMMARY REPORT (CD)	Department of the Army/SpecPro, Inc.	JUN-2009
FINAL AMENDMENT 9 EXPLOSIVE SAFETY SUBMISSION (ESS) FOR PROCESS AND SANITARY SEWER REMOVAL, BADGER ARMY AMMUNITION PLANT (CD)	Shaw Environmental, Inc./U.S. Army Corps of Engineers	JUN-2009
HIGHWAY 78 NORTH DITCH REMEDIAL INVESTIGATION REPORT (CD)	Department of the Army	JUN-2009
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	JUN-2009
OFF-SITE GROUNDWATER MONITORING DATA CERTIFICATION, EXCEEDANCE REPORT, ALL HITS REPORT, SAMPLED WELLS LIST, SAMPLED WELLS MAPS (CD)	Department of the Army/SpecPro, Inc.	JUL-2009
HIGHWAY 78 NORTH DITCH GROUNDWATER INVESTIGATION REPORT (CD)	Department of the Army	SEP-2009
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	SEP-2009
CONDITIONAL CLOSURE OF THE STH 78 NORTH DITCH CONTAMINATED SOIL CASE (CD)	Wisconsin Department of Natural Resources	OCT-2009
BASELINE ECOLOGICAL RISK ASSESSMENT WORK PLAN, SETTLING PONDS & SPOILS DISPOSAL AREAS SITE, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army/SpecPro, Inc.	OCT-2009
CONSTRUCTION DOCUMENTATION REPORT, PHASE 4 LINER CONSTRUCTION, EXPANSION OF LANDFILL 03646 (CD)	Department of the Army/SpecPro, Inc.	NOV-2009
GRUBER'S GROVE BAY SEDIMENT SAMPLING	Department of the	NOV-2009

IRP Previous Studies

2009

Title	Author	Date
REPORT (CD)	Army/SpecPro, Inc.	
DRAFT REVISED REMEDIATION GOALS PROPOSAL FOR THE ALT FS FINAL CREEK, SETTLING PONDS, AND SPOILS DISPOSAL AREAS (CD)	DEPT. OF THE ARMY LETTER	NOV-2009
SEWER REMOVAL/REMEDIAL INVESTIGATION - PARCEL O7 (CD)	Department of the Army	NOV-2009
RECORD OF ENVIRONMENTAL CONSIDERATION, UPDATE TO THE BADGER ARMY AMMUNITION PLANT RECORD OF DECISION AND ENVIRONMENTAL IMPACT STATEMENT (CD)	Department of the Army/SpecPro, Inc.	DEC-2009
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), HO-CHUNK NATION, PARCELS O3 AND P1 (CD)	Department of the Army	DEC-2009
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	DEC-2009

2010

STATE HIGHWAY 78 NORTH DITCH FINAL CLOSURE REQUEST AND PROPERTY CERTIFICATION DOCUMENT (CD)	Department of the Army	JAN-2010
SEWER REMOVAL/REMEDIAL ACTION IN PARCEL K4 - WDNR CLOSURE REQUEST (CD)	Department of the Army	JAN-2010
REMEDIAL ACTION IN PARCEL P5 - WDNR CLOSURE REQUEST (CD)	Department of the Army	JAN-2010
NORTHEAST BOUNDARY GROUNDWATER INVESTIGATION REPORT, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army	JAN-2010
WDNR LETTER: FINAL CASE CLOSURE FOR THE BAAP - PARCEL O7 POST-DEMOLITION AND SEWER REMOVAL CASE (CD)	Wisconsin Department of Natural Resources	JAN-2010
PARCEL O4 - REMEDIAL INVESTIGATION/REMEDIAL ACTION (CD)	Department of the Army	JAN-2010
DOCUMENTATION OF ANNUAL MAINTENANCE ACTIVITIES 2009, CLOSED, COVERED, AND CAPPED SITES, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army/SpecPro, Inc.	JAN-2010
DRAFT ENVIRONMENTAL CONDITION OF PROPERTY (ECP) UPDATES, AND PARCEL T, ECP CATEGORY CHANGE RATIONALE (CD)	Department of the Army/SpecPro, Inc.	JAN-2010
WDNR LETTER: FINAL CASE CLOSURE FOR THE BAAP - STH 78 NORTH DITCH CONTAMINATED SOIL CASE, BRRTS NUMBER 02-57-554197 (CD)	Wisconsin Department of Natural Resource	JAN-2010
ENVIRONMENTAL CONDITION OF PROPERTY (ECP), PARCELS O, O3, O5, AND X1, ECP CATEGORY CHANGE RATIONALE (CD)	Department of the Army/SpecPro, Inc.	FEB-2010
PARCEL P2 REMEDIAL ACTION - WDNR CLOSURE REQUEST (CD)	Department of the Army	FEB-2010
PARCEL P5 ADDITIONAL SAMPLING - WDNR CLOSURE REQUEST (CD)	Department of the Army	FEB-2010
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL P6 (CD)	Department of the Army	MAR-2010

IRP Previous Studies

2010

Title	Author	Date
WDNR LETTER: FINAL CASE CLOSURE FOR THE BAAP - PARCEL O4 POST-DEMOLITION & SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-554923 (CD)	Wisconsin Department of Natural Resources	MAR-2010
WDNR LETTER: FINAL CASE CLOSURE FOR THE BAAP - PARCEL P5 POST-DEMOLITION SITE; SAUK COUNTY; BRRTS NUMBER 02-57-554817 (CD)	Wisconsin Department of Natural Resources	MAR-2010
PARCEL P4 REMEDIAL ACTION/SEWER REMOVAL REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	MAR-2010
WDNR LETTER: FINAL CASE CLOSURE FOR THE BAAP - PARCEL P2 POST-DEMOLITION SITE; SAUK COUNTY; BRRTS NUMBER 02-57-553348 (CD)	Wisconsin Department of Natural Resources	MAR-2010
PARCEL S4 SEPTIC REMOVAL AND REMEDIAL ACTION - WDNR CLOSURE REQUEST (CD)	Department of the Army	MAR-2010
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	MAR-2010
DEPARTMENT OF THE ARMY REQUEST LETTER AND WDNR APPROVAL LETTER FOR MIRM VAPOR PHASE PROCESS CHANGE (CD)	Department of the Army/Wisconsin Department of Natural Resources	MAR-2010
PARCEL Q1 REMEDIAL ACTION/REMEDIAL INVESTIGATION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	APR-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL P4 POST-DEMOLITION AND SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-553280 (CD)	Wisconsin Department of Natural Resources	MAY-2010
WDNR RESPONSE TO THE REVISED "GRUBER'S GROVE BAY SEDIMENT SAMPLING REPORT", DATED NOVEMBER 2009 (CD)	Wisconsin Department of Natural Resources	MAY-2010
2010 GROUNDWATER NARRATIVE SUMMARY REPORT (CD)	Department of the Army/SpecPro, Inc.	JUN-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL Q1 POST-DEMOLITION AND SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-555261 (CD)	Wisconsin Department of Natural Resources	JUN-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL S4 POST-DEMOLITION AND SEPTIC SYSTEM REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-555262 (CD)	Wisconsin Department of Natural Resources	JUN-2010
PARCEL R LEAD BURNING HOUSE REMEDIATION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc.	JUN-2010
WDNR & DEPARTMENT OF THE ARMY LETTERS, COMMENTS & RESPONSE TO COMMENTS ON BERA REPORT FOR BAAP SETTLING PONDS & SPOILS DISPOSAL AREAS SITE (CD)	Wisconsin Department of Natural Resources/Department of the Army	JUN-2010
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL S4 (CD)	Department of the Army	JUN-2010
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	JUN-2010
FINDING OF SUITABILITY TO TRANSFER (FOST),	Department of the Army	JUL-2010

IRP Previous Studies

2010

Title	Author	Date
BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL O4 (CD)		
FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL O7 (CD)	Department of the Army	JUL-2010
FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL P2 (CD)	Department of the Army	JUL-2010
FINAL CASE CLOSURE FOR THE BAAP-LEAD BURNING HOUSE CASE (IN PARCEL R): SAUK COUNTY; BRRTS NUMBER 02-57-555505 (CD)	Wisconsin Department of Natural Resources	JUL-2010
PARCEL O3 REMEDIAL INVESTIGATION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	JUL-2010
PARCEL R4 REMEDIAL INVESTIGATION REPORT - WDNR 'NO FURTHER ACTION' REQUEST (CD)	Department of the Army	JUL-2010
NO ACTION REQUIRED DETERMINATION FOR THE BAAP -PARCEL O3 POST-DEMOLITION SITE; SAUK COUNTY; BRRTS NUMBER 02-57-555782 (CD)	Wisconsin Department of Natural Resources	AUG-2010
PARCEL U2 REMEDIAL INVESTIGATION/REMEDIAL ACTION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	AUG-2010
PARCEL K4 CLOSURE REQUEST (CD)	Department of the Army	AUG-2010
NO ACTION REQUIRED DETERMINATION(CORRECTED)FOR THE BAAP - PARCEL R4 UST SOIL INV.; SAUK COUNTY; BRRTS NUMBER 02-57-555784 (CD)	Wisconsin Department of Natural Resources	AUG-2010
PARCEL Q2 REMEDIAL INVESTIGATION/REMEDIAL ACTION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	AUG-2010
NORTHEAST BOUNDARY WELLS GROUNDWATER MONITORING DATA CERTIFICATION & ALL HITS REPORT, SAMPLED WELLS LIST & SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	AUG-2010
RESIDENTIAL WELLS GROUNDWATER MONITORING DATA CERTIFICATION AND EXCEEDANCE REPORT AND ALL HITS REPORT, SAMPLED WELLS LIST, AND SAMPLED WELLS MAPS (CD)	Department of the Army/SpecPro, Inc.	AUG-2010
RESTORATION ADVISORY BOARD MEETING MINUTES FOR SEPTEMBER 29, 2010 (CD)	Department of the Army	SEP-2010
BADGER ARMY AMMUNITION PLANT, LOCATIONS OF OFF-SITE WELLS AND PRIVATE WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	SEP-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL U2 POST-DEMOLITION & SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-555903 (CD)	Wisconsin Department of Natural Resources	SEP-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL K4 POST-DEMOLITION & SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-554924 (CD)	Wisconsin Department of Natural Resources	SEP-2010
FINAL CASE CLOSURE FOR THE BAAP - PARCEL Q2 POST-DEMOLITION & SEWER REMOVAL SITE; SAUK COUNTY; BRRTS NUMBER 02-57-555902 (CD)	Wisconsin Department of Natural Resources	SEP-2010
GRUBER'S GROVE BAY SEDIMENT SAMPLING REPORT & DEPARTMENT OF THE ARMY LETTER RESPONSE TO WDNR COMMENTS ON 2009 GGB REPORT (CD)	Department of the Army/SpecPro, Inc.	SEP-2010

IRP Previous Studies

2010

Title	Author	Date
NORTHEAST BOUNDARY MONITORING WELL INSTALLATION REPORT (CD)	Department of the Army/SpecPro, Inc.	SEP-2010
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	SEP-2010
DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL R4 (CD)	Department of the Army	OCT-2010
PARCEL R1 - SEWER REMOVAL/REMEDIAL INVESTIGATION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	OCT-2010
WDNR CONCURRENCE FOR PARCEL R4 ENVIRONMENTAL CONDITION OF PROPERTY CATEGORY (CD)	Department of the Army	OCT-2010
FEASIBILITY REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	OCT-2010
GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	OCT-2010
CONSTRUCTION DOCUMENTATION REPORT, PHASE 5 LINER CONSTRUCTION, LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	NOV-2010
NO ACTION REQUIRED DETERMINATION FOR THE BAAP -PARCEL R1 SEWER REMOVAL/INVESTIGATION SITE; SAUK COUNTY; BRRTS NUMBER 02-57-556305 (CD)	Wisconsin Department of Natural Resources	NOV-2010
PARCEL U3 - REMEDIAL INVESTIGATION/REMEDIAL ACTION SUMMARY REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	NOV-2010
GROUNDWATER STANDARDS EXEMPTION REQUEST, FEASIBILITY REPORT - ADDENDUM NUMBER 1, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	NOV-2010
FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL P4 (CD)	Department of the Army	DEC-2010
FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL Q1 (CD)	Department of the Army	DEC-2010
FINDING OF SUITABILITY TO TRANSFER (FOST), BUREAU OF INDIAN AFFAIRS, HO-CHUNK NATION, PARCEL R1 (CD)	Department of the Army	DEC-2010
FEASIBILITY REPORT - ADDENDUM NUMBER 2, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	DEC-2010
WDNR COMPLETENESS DETERMINATION OF THE FEASIBILITY REPORT FOR THE CONTIGUOUS ADDITION TO LANDFILL 3646, EA & DECISION ON THE NEED FOR AN EIS (CD)	Wisconsin Department of Natural Resources	DEC-2010
WDNR LINER CONSTRUCTION DOCUMENTATION APPROVALS - BADGER CONSTRUCTION &	Wisconsin Department of Natural Resources	DEC-2010

IRP Previous Studies

2010	Title	Author	Date
	DEMOLITION LANDFILL, SITE NO. 03646 (PHASE 4 & PHASE 5) (CD)		
	GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	DEC-2010
2011	RESTORATION ADVISORY BOARD MEETING MINUTES FOR JANUARY 11, 2011 (CD)	Department of the Army	JAN-2011
	PARCEL P3 - REMEDIAL INVESTIGATION/REMEDIAL ACTION REPORT - WDNR CLOSURE REQUEST (CD)	Department of the Army	JAN-2011
	LIABILITY CLARIFICATION AND CURRENT CONDITIONS AT BADGER ARMY AMMUNITION PLANT PARCEL R4, SAUK COUNTY; BRRTS #07-57-556497 (CD)	Wisconsin Department of Natural Resources	JAN-2011
	DOCUMENTATION OF ANNUAL MAINTENANCE ACTIVITIES 2010, CLOSED, COVERED AND CAPPED SITES, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army	JAN-2011
	PLAN OF OPERATION REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	FEB-2011
	WDNR RESPONSE TO THE REVISED "GRUBER'S GROVE BAY SEDIMENT SAMPLING REPORT", DATED AUGUST 2010 (CD)	Wisconsin Department of Natural Resources	FEB-2011
	WDNR LETTER, FINAL CASE CLOSURE AND NO-ACTION-REQUIRED DETERMINATION FOR BAAAP PARCEL P3 RI/RA/PROCESS SEWER REOVAL PROJECTS (CD)	Wisconsin Department of Natural Resources	MAR-2011
	ADDENDUM NUMBER 1, PLAN OF OPERATION REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc	MAR-2011
	ADDENDUM NUMBER 2, PLAN OF OPERATION REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	MAR-2011
	DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL U3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army	MAR-2011
	MARCH 2011 GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LISTS, SAMPLED WELLS MAPS (CD)	Department of the Army/SpecPro, Inc.	MAR-2011
	FINAL CASE CLOSURE AND NO-ACTION-REQUIRED DETERMINATION FOR BAAAP PARCEL P3 RI/RA/PROCESS SEWER REMOVAL PROJECTS (CD)	Wisconsin Department of Natural Resources	MAR-2011
	BADGER ARMY AMMUNITION PLANT TECHNICAL ASSISTANCE PUBLIC PARTICIPATION (TAPP) GRANT APPEAL (CD)	Department of the Army	APR-2011
	SUPPLEMENTAL INFORMATION, ADDENDUM NUMBER 2, PLAN OF OPERATION REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc	APR-2011
	AFTER ACTION REPORT, EXPLOSIVE SAFETY SUBMISSION, AMENDMENT 1 (CD)	Shaw Environmental, Inc./U.S. Army Corps of Engineers	APR-2011
	APRIL 2011 INSPIRATION DRIVE AREA GROUNDWATER MONITORING DATA	Department of the Army/SpecPro, Inc.	APR-2011

IRP Previous Studies

2011

Title	Author	Date
CERTIFICATION AND ALL HITS REPORT, SAMPLED WELLS LIST AND MAPS (CD)		
RESTORATION ADVISORY BOARD MEETING MINUTES FOR APRIL 11, 2011 (CD)	Department of the Army	APR-2011
ADDITIONAL SUPPLEMENTAL INFORMATION, ADDENDUM NUMBER 2, PLAN OF OPERATION REPORT, CONTIGUOUS ADDITION TO LANDFILL 3646 (CD)	Department of the Army/SpecPro, Inc.	MAY-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL Y1 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc.	MAY-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL R3 TRUCK GARAGE (ACCOUNT #0518-00) WDNR CLOSURE REQUEST (CD)	Department of the Army/Badger Technical Services, LLC	JUN-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL X2 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc.	JUN-2011
2011 GROUNDWATER NARRATIVE SUMMARY REPORT (CD)	Department of the Army/SpecPro, Inc	JUN-2011
JUNE 2011 GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	JUN-2011
RESTORATION ADVISORY BOARD MEETING MINUTES FOR JUNE 20, 2011 (CD)	Department of the Army	JUN-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL Y LEACHATE RELEASE INTERIM ACTION REPORT (CD)	Department of the Army/Badger Technical Services, LLC	JUL-2011
FINDING OF SUITABILITY TO TRANSFER (FOST), NATIONAL PARK SERVICE, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, PARCEL P3 (CD)	Department of the Army	JUL-2011
AUGUST 2011 WEIGANDS BAY AREA GROUNDWATER MONITORING DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LIST, SAMPLED WELLS MAP (CD)	Department of the Army/SpecPro, Inc.	AUG-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCELS V, V2, AND V3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	, Department of the Army/SpecPro, Inc.	AUG-2011
WDNR LETTER, NO FURTHER ACTION DETERMINATION FOR PARCEL R3 TRUCK GARAGE REMEDIAL INVESTIGATION/REMEDIAL ACTION PROJECT, BRRTS 03-57-557583 (CD)	Wisconsin Department of Natural Resources	SEP-2011
WDNR LETTER, NO FURTHER ACTION DETERMINATION FOR PARCEL Y1 LEACHATE RELEASE INTERIM REMEDIAL ACTION, BRRTS NUMBER 02-57-557590 (CD)	Wisconsin Department of Natural Resources	SEP-2011
DRAFT RESTORATION ADVISORY BOARD MEETING MINUTES FOR SEPTEMBER 12, 2011 (CD)	, Department of the Army	SEP-2011
WDNR LETTERS (2) REGARDING SOIL TESTING FOR DINITROTOLUENE ISOMERS (CD)	Wisconsin Department of Natural Resources	SEP-2011
SEPTEMBER 2011 GROUNDWATER MONITORING	Department of the	SEP-2011

IRP Previous Studies

2011

Title	Author	Date
DATA CERTIFICATIONS, EXCEEDANCE REPORTS, ALL HITS REPORTS, SAMPLED WELLS LISTS, SAMPLED WELLS MAPS (CD)	Army/SpecPro, Inc.	
WDNR LETTERS (2) REGARDING SOIL TESTING FOR DINITROTOLUENE ISOMERS (CD)	Wisconsin Department of Natural Resources	NOV-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: DETERRENT BURNING GROUND & FINAL REMEDY ENHANCED BIODEGRADATION SYSTEM NOTIFICATION OF DISCONTINUANCE (CD)	Department of the Army	NOV-2011
DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCELS K AND V1 & LEACHATE RELEASE REMEDIAL ACTION REPORT (CD)	Department of the Army/Badger Technical Services, LLC	DEC-2011
CONSTRUCTION DOCUMENTATION REPORT, PHASE 6 LINER CONSTRUCTION, LANDFILL 3646 (CD)	, Department of the Army/Badger Technical Services, LLC	DEC-2011
REVISED ALTERNATIVE FEASIBILITY STUDY, GROUNDWATER REMEDIAL STRATEGY (SEPTEMBER 2011 SCS BT SQUARED COMMENTS & FEBRUARY 2012 CORRECTIONS) (CD)	Department of the Army/Badger Technical Services, LLC	DEC-2011
REVISED ALTERNATIVE FEASIBILITY STUDY, GROUNDWATER REMEDIAL STRATEGY (SEPTEMBER 2011 SCS BT SQUARED COMMENTS & FEBRUARY 2012 CORRECTIONS) (CD)	Department of the Army/Badger Technical Services, LLC	DEC-2011

2012

DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL Q3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc	JAN-2012
PARCEL R LOCOMOTIVE SHOP WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REPORT (CD)	Department of the Army/Badger Technical Services, LLC	JAN-2012
WDNR LETTER, SUBJECT: NO FURTHER ACTION DETERMINATION FOR PARCEL R LOCOMOTIVE SHOP CLEANUP, BRRTS NUMBER 02-57-558278 (CD)	Wisconsin Department of Natural Resources	JAN-2012
DOCUMENTATION OF ANNUAL MAINTENANCE ACTIVITIES, 2011, CLOSED, COVERED AND CAPPED SITES, BADGER ARMY AMMUNITION PLANT (CD)	Department of the Army	JAN-2012
CONSTRUCTION DOCUMENTATION REPORT, PHASES 1 & 2 FINAL COVER, LANDFILL 3646 (CD)	Department of the Army/Badger Technical Services, LLC	JAN-2012
WDNR LETTER, SUBJECT: PHASE 6 LINER CONSTRUCTION DOCUMENTATION APPROVAL, FOR THE CONSTRUCTION AND DEMOLITION LANDFILL (SITE NO. 03646) (CD)	Wisconsin Department of Natural Resources	JAN-2012
REVISED ALTERNATIVE FEASIBILITY STUDY, GROUNDWATER REMEDIAL STRATEGY (SEPTEMBER 2011 SCS BT SQUARED COMMENTS & FEBRUARY 2012 CORRECTIONS) (CD)	Department of the Army/Badger Technical Services, LLC	FEB-2012
WDNR PRELIMINARY DETERMINATION OF FEASIBILITY FOR AN ALTERNATIVE GROUNDWATER REMEDIAL STRATEGY AT AND NEAR THE BADGER ARMY AMMUNITION PLANT (CD)	Wisconsin Department of Natural Resources	FEB-2012

IRP Previous Studies

Year	Title	Author	Date
2012	Final Case Closure Parcel Y	WDNR	DEC-2012
2013	2012 Documentation of Annual Maintenance Activities	Dept of the Army/Badger Technical Services	JAN-2013
	Final Case Closure Parcel S3	WDNR	FEB-2013
	Final Case Closure Parcel S1	WDNR	FEB-2013
	Preliminary Determination of Feasibility for Remedy for Soils of Settling Ponds	WDNR	FEB-2013
	Final Case Closure Parcel Y2	WDNR	MAR-2013
	2013 Groundwater Narrative Summary Report	Dept of the Army/ Badger Technical Services	APR-2013
	WDNR Concurrence for Parcel X1 ECP Category	WDNR	JUN-2013
	Final Case Closure Parcel S5	WDNR	JUN-2013
	Final Case Closure Parcels V4 and V5	WDNR	JUN-2013
	Five Year Review Report, Propellant Burning Ground	US Army Corps of Engineers	JUL-2013
	Five Year Review Report Deterrent Burning Ground	US Army Corps of Engineers	JUL-2013
	Parcel V1 Leachate Release Remedial Action Report	Dept of the Army/Badger Technical Services	SEP-2013
	WDNR approval GW Monitoring Plan changes	WDNR	SEP-2013
	Surface Water Impacts Investigation Report	Dept of the Army/Badger Technical Services	NOV-2013
	Construction Documentation Report West End Landfill 3646	Dept of the Army/Badger Technical Services	DEC-2013
2014	MIRM Shutdown Plan	Dept fo the Army/ Badger Technical Services	JAN-2014
	Dcumentation of Annual Maintenance Activities 2013	Dept of the Army/Badger Technical Services	JAN-2014
	2014 Monitoring Well Optimization Report	Dept of the Army/ Badger Technical Services	FEB-2014
	BNA Testing Elimination Proposal	Dept of the Army/Badger Technical Services	FEB-2014
	Request to Dismantle the IRM	Dept of the Army/ Badger Technical Services	JUN-2014
	Final Case Closure Parcel H1	WDNR	JUN-2014
	Final Case Closure Parcels M1 & T1	WDNR	JUN-2014
	2014 MonitoringWell Abandonment Plan	Dept of the Army/Badger Technical Services	JUL-2014

BADGER ARMY AMMUNITION PLANT

Non-BRAC Excess

Installation Restoration Program

Site Descriptions

Site ID: BAAP-012

Site Name: GW Monitoring ON and OFF Post

STATUS

Parcel: Parcel U2 (100.43 acres), Parcel S5 (15.71 acres), Parcel R (93.68 acres), Parcel C (114.22 acres), Parcel M (385.31 acres), Parcel O (332.17 acres), Parcel DOT (60.21 acres), Parcel T1 (147.41 acres), Parcel V1 (136.95 acres), Parcel P2 (161.64 acres), Parcel M2 (17.97 acres), Parcel M1 (160.6 acres), Parcel L (199.38 acres), Parcel K2 (17.29 acres), Parcel K1 (12.3 acres), Parcel K (1168.42 acres), Parcel H1 (29.06 acres), Parcel U3 (130.72 acres), Parcel Q3 (239.22 acres), Parcel V (209.05 acres), Parcel P4 (47.13 acres), Parcel P1 (68.14 acres), Parcel J (9.91 acres), Parcel H (44.6 acres), Parcel F (20.19 acres), Parcel D (1670.51 acres), Parcel A (89 acres), Parcel V3 (272.46 acres), Parcel S3 (39.67 acres), Parcel R1 (14.11 acres), Parcel S2 (87.48 acres), Parcel P3 (30.25 acres), Parcel W (47.39 acres), Parcel P5 (78.32 acres), Parcel V5 (28.69 acres), Parcel O1 (3.89 acres)

<u>Phases</u>	<u>Start</u>	<u>End</u>
RFA.....	197703.....	197703
CS.....	197703.....	197703
RFI/CMS.....	199107.....	199512
DES.....	201012.....	201809
IRA.....	199105.....	201202
CMI(C).....	201203.....	201809
CMI(O).....	201510.....	204509
LTM.....	204509.....	204509

RIP Date: 201809

RC Date: 204509

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Explosives, Volatiles (VOC)

Media of Concern: Groundwater

SITE DESCRIPTION

Monitoring wells have been used since the 1980s to check groundwater conditions in and around BAAP. There are three AOCs identified. One originates at the PBG (BAAP-033) in the southwest part of BAAP; the main concern is solvents. DNT is also present in the plume. Two groundwater extraction systems captured groundwater from the PBG source area to the installation southern boundary. The area from the boundary to the Wisconsin River, just below the Wisconsin Power and Light Dam is not treated. See BAAP-033 for more details on the treatment systems.

The second major AOC is located in the northeast portion of Badger near source areas Landfill No. 5 (BAAP-004) and the Landfill 3/deterrant burning ground (DBG) area (BAAP-006). Capping of the DBG area in 2003 stopped infiltration of precipitation, but isomers of DNT have been detected in the untreated shallow groundwater here and past the installation's eastern boundary moving toward Weigand's Bay on the Wisconsin River. There is no treatment in this area.

The third AOC is the southeast quarter of the installation, where 2,6-DNT was detected at the enforcement standard on and off the installation: levels appear to be decreasing. No specific source has been found and there is no treatment in this area. The suspected source was discharge of production wash waters to unlined ditches in the rocket propellant production area that ended in 1976.

Five relatively shallow private residential water supply wells in the southern off-post area were affected by exceedances of state standards over the years: three from solvent contamination from the PBG that were replaced with new wells drilled into bedrock in the 1990s. The lab's ability to detect DNT isomers at lower levels led to more findings and increasingly stringent state standards. In

Site ID: BAAP-012

Site Name: GW Monitoring ON and OFF Post

the 2000s Army provided new wells into the lower uncontaminated portion of the upper aquifer for two residences with 2,6-DNT exceedances. In November 2010, the state added additional regulated groundwater contaminants, including a cumulative of the six DNT isomers.

The Army's proposal for final remedies for all groundwater issues at Badger received WDNR approval June 28, 2012. The remedies include a district water supply (awaiting local municipal approval) to eliminate residential well monitoring requirements and reduce other monitoring, MNA with reduced residential and monitoring well sampling, and shutdown of the treatment systems tracked at BAAP-033. A final off-post contingency plan (supply bottled water to affected homes once exceedances of state drinking water standards are confirmed in their wells) has been prepared for use as long as residential wells can be impacted by BAAP contaminants.

In September 2013, WDNR approved a reduction in the residential well monitoring program. In February 2014 the WDNR approved elimination of BNA testing. In May 2014 and January 2015 the WDNR approved reduced sampling requirements under MNA, and reduced pumping of groundwater for treatment.

MNA will continue for many years.

USACE real estate office manages the off-site monitoring well leases. The schedule for the future planned public water system installation, prove out and operations are also tracked at this site. The town of Merrimac is still considering the water system issue. The WDNR reviews the monitoring results and is the primary contact for groundwater questions.

The installation staff will execute the groundwater monitoring program until the current contract ends in 2015.

CLEANUP/EXIT STRATEGY

Installation-wide and off-site groundwater monitoring is conducted and funded under this site. Leases for off-site monitoring wells are negotiated and fees paid annually to the landowners through the USACE real estate office. In February 2012 the WDNR gave preliminary approval to Army's proposed remedies. Get approval to install a district drinking water system to eliminate residential well monitoring and potential human exposure. Continue phased shut down of the pump-and-treat systems (IRM shutdown in 2012 was started) under WDNR oversight. Reduce residential and monitoring wells to best support long-term MNA that will continue through 2034 or longer.

Site Name: PROP BRNG GRD - CONTAMINATED WASTE PITS

STATUS

Parcel: Parcel C (114.22 acres), Parcel DOT (60.21 acres), Parcel T1 (147.41 acres), Parcel H (44.6 acres), Parcel F (20.19 acres), Parcel D (1670.51 acres), Parcel T (15.44 acres)

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Explosives, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	197701.....	197705
CS.....	197701.....	197705
RFI/CMS.....	198808.....	200612
DES.....	198809.....	200806
IRA.....	198908.....	199612
CMI(C).....	199510.....	200811
CMI(O).....	200105.....	201712

RIP Date: 200811

RC Date: 201712

SITE DESCRIPTION

The PBG waste pits are located in the southwestern portion of BAAP. The contaminated waste pits area is approximately three acres and contained three disposal pits and a large open area. From the 1950s through the 1970s the pits were used to burn propellant-contaminated materials and organic solvents. The liquid waste materials migrated down through the sandy soil to the groundwater. A groundwater plume containing solvents and DNT has moved south past the installation boundary (see BAAP-012).

Soil remedies originally selected in 1994 included soil vapor extraction (SVE) followed by soil removal, washing, and composting. In 1997 the soil washing was shown to be ineffective in removing DNT. In February 1998 an SVE system to remove solvents was installed, operated successfully and was removed in September 1999. Shallow soils contaminated with the non-volatile DNT and metals were removed from the waste pits in the fall of 1999 and a pilot biotreatment system was installed in Waste Pit 1 to treat DNT in the subsurface soil. The pilot system proved to successfully increase the rate of naturally occurring biological decomposition of the chemicals in the soil. A full-scale biotreatment system was installed and operated through 2005.

A revised alternative FS was prepared to finalize the change in the soils remedy. The FS proposed the SVE system, partial excavation and off-site incineration of soils, a biotreatment system, and installation of a cap as the final remedy. In February 2008 the WDNR approved this remedy. In the summer of 2008 the pits area cap installation completed the soil remediation actions.

Investigations in 2002 and 2003 for other potential sources of solvents in the area were completed; the results were negative.

The groundwater remediation started in 1990 with the construction of a pump-and-treat system called the interim remedial measure (IRM) to capture contamination from the source (pits area). In 1996, groundwater capture along the BAAP southern boundary began with the construction of the modified IRM (MIRM). In 2005 and 2006, additional capture wells were installed within the plume and distal boundary wells abandoned. Biofouling of these wells required additional process measures in 2006 and 2007. Efforts to optimize groundwater capture continued.

The Army's alternate FS proposed shutdown of the groundwater treatment systems (along with a district water system and MNA for the final groundwater remedy tracked at BAAP-012). The AFS received WDNR approval June 28, 2012. The approved phased shutdown of the pump-and-treat systems started with the IRM shutdown/layaway in December 2012 and complete removal of the IRM in December 2014. Shutdown continued with the idling of the northern three MIRM extraction wells in September 2014. Monitoring to check specifically for problems from rebound of contaminant levels is underway. Shutdown of the remaining two pumping MIRM wells in 2015 and complete system removal in 2017 is anticipated.

In November 2010, the state set new groundwater standards including all six DNT isomers separately and as a cumulative value.

Site ID: BAAP-33

Site Name: PROP BRNG GRD - CONTAMINATED WASTE PITS

CLEANUP/EXIT STRATEGY

The RCRA cap installed in 2008 was designed as Phase II of the 1949 pit cap. It is maintained under BAAP-35 site-wide cap and cover maintenance.

The pump-and-treat systems (IRM/MIRM) will be phased to shut down completely by 2016. If WDNR agrees that no groundwater conditions require system restart, it will be removed.

Groundwater monitoring is done as a part of an installation-wide program tracked at BAAP-012.

Site ID: BAAP-35

Site Name: CAP & COVER MAINTENANCE

STATUS

Parcel: Parcel V1 (136.95 acres), Parcel K2 (17.29 acres), Parcel K1 (12.3 acres), Parcel H (44.6 acres)

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	197701.....	197705
CS.....	197701.....	197705
RFI/CMS.....	198808.....	199512
DES.....	199509.....	199807
CMI(C).....	199707.....	199812
LTM.....	201002.....	204903

RIP Date: N/A

RC Date: 199812

SITE DESCRIPTION

This site is now used to track all long-term care requirements on the former installation lands, to insure all requirements are met.

The PBG racetrack area includes the area used to burn off-spec propellants over the years. This disposal operation was eventually permitted as the hazardous waste thermal treatment unit. It was closed after soil removal, with a soil cover placed over the area in 1994. Landfill 1, which received solid waste and ash from about 1944 to 1955, was capped in 1997. The 1949 pit area, used for open burning of wastes after 1944 through 1950s, was backfilled in 1962. It was formally closed with an engineered cap in 1998. In 2008 the cap was extended as originally planned to cover the PBG waste pits. Landfill 3118 was closed in 2009.

No maintenance is required at closed construction debris landfills 2, 4, and 7 (Oleum).

The closed sites that do require long-term maintenance are addressed here: the PBG area caps and covers (Racetrack Area soil cover, Landfill No. 1 cap, and the combined PBG pits/1949 pit cap), caps at Landfills No. 5 and 3118, and the DBG area/Landfill No. 3 cap.

The WDNR requires long-term operation and maintenance (O&M) of these caps and covers for at least 40 years beyond the closure date of the sites.

A five-year review of the DBG and PBG caps was done in FY08 and FY13 per WDNR requirements.

The state regulation requires at least 40 years of maintenance (and it will probably require it far longer); however, AEDB-R only allows for input of 30 years of O&M into the cost estimate detail sheet. Therefore, while only 30 yrs of O&M is shown as the duration in the cost estimate detail sheet, estimated LTM costs reflect current estimated maintenance periods that will exceed 30 years.

CLEANUP/EXIT STRATEGY

All cap and cover maintenance costs for any site on the installation are tracked here. An installation-wide review is underway. WDNR requires maintenance of caps for at least 40 years from installation date. Contracting for maintenance will switch from installation to USAEC or USACE in out-years.

Site ID: BAAP-40
Site Name: GRUBER'S GROVE BAY

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Sediment

<u>Phases</u>	<u>Start</u>	<u>End</u>
PA.....	199805.....	199903
SI.....	199904.....	200009
RI/FS.....	199909.....	201612
IRA.....	200103.....	200709

RIP Date: N/A

RC Date: 201612

SITE DESCRIPTION

The GGB site received Badger discharge waters during production. State sampling of sediment in November 1998 showed elevated lead, mercury, zinc and ammonia. The results were confirmed in a 1999 sampling. The RI was completed in 2000. The selected remedy was dredging of sediments with disposal on the installation. The dredged materials were pumped into fabric tubes for dewatering. The water was treated and sprayed on agricultural land on the installation. The dry, filled tubes were buried-in-place, in an area north of the settling ponds (Parcel M2). Dredging began in June 2001, and was completed in November 2001, with 88,000 cubic yards (cy) removed. The geotubes were covered over in September 2002 (Phase I). Bay restoration activities (fish cribs, aquatic plants) were completed in September 2002. Final grading and seeding was completed in July 2003.

In early 2003, the WDNR sampled the bay sediments and found some elevated levels of metals. In 2004 and 2005 the Army investigated residual concentrations and toxicity of metals in bay sediments. On May 5, 2005, the WDNR sent a letter to the Army recommending sediment removal or an additional ecological risk assessment.

In 2006, the bay was dredged again, following procedures similar to those used in 2001. Attention was given to shoreline areas within the dredge boundary. In addition, confirmation sampling was used to verify completion. Removal of 52,532 cy of sediment was completed in 2006. The laydown area was covered in 2007. The final report was submitted to the WDNR in February 2008. Subsequent sampling by Army and the WDNR revealed mercury above the cleanup level remains in the bay.

In 2009, WDNR started review of all available information to determine if additional remediation is required. The WDNR sent a letter in May 2010 requesting that BAAP evaluate alternatives that address restoring GGB sediments to levels protective of benthic organisms. On Feb. 3, 2011 WDNR requested Army action. Alternatives were evaluated. Technical review meetings with the WDNR were conducted in 2014 to make sure the remedy recommended (sediment treatment) would be technically suitable for the site or if another remedy will be needed. In August 2013 USAEC indicated future remediation work will be done by the USACE. On April 1, 2014, WDNR and USEPA requested sediment samples from the entire bay before the WDNR and USEPA will close the site and remove GGB from the USEPA Section 303(d) list of endangered waters.

The WDNR sent a letter on Aug. 27, 2014 stating that sampling sediment from GGB would be required. An investigation of the bay is anticipated to occur during 2016.

CLEANUP/EXIT STRATEGY

Based on the post-dredging sample results, mercury-impacted sediment remains. WDNR and the Army have a preliminary agreement on the closure criteria so a remedy design can begin. The remedy involves the design and placement of a sediment cap. If the cap is successful, NFA will be required.

Site ID: BAAP-43
Site Name: Site-Wide RI

STATUS

Parcel: Parcel R1 (14.11 acres)

Regulatory Driver: RCRA

RRSE: HIGH

Phases	Start	End
RFA.....	200305.....	200503
RFI/CMS.....	200505.....	201402
DES.....	200606.....	201403
CMI(C).....	200606.....	201506

RIP Date: N/A

RC Date: 201506

SITE DESCRIPTION

Previous RIs did not address the production and support areas at this site. Full RIs were required, with cleanup as needed.

From 2005 to 2010 demolition was funded by Operations and Maintenance, Army (OM,A). Post-demolition RI work followed, covering production areas from start to finish. RI/RA was completed in FY13. The last of the parcel closure documents are expected from the state regulators no later than June 2015.

CLEANUP/EXIT STRATEGY

The last of the parcel closure documents are expected from the state regulators no later than June 2015.

IRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
BAAP-001	SETTLING PONDS/SPOILS DISPOSAL AREA	201310	WDNR letter dated June 2014 stating NFA
BAAP-002	BALLISTICS POND and Ditches	200204	WDNR letter dated April 2002 stating NFA
BAAP-003	OLEUM PLANT AND POND	199812	WDNR letter dated March 2005 stating NFA
BAAP-004	EXISTING LANDFILL (LANDFILL #5)	200112	WDNR letter dated Sept 1989 stating NFA
BAAP-005	NITROGLYCERINE Pond	200012	WDNR letter dated July 2000 stating NFA
BAAP-006	DETERRENT BURNING GROUND	201210	WDNR letter October 14, 2002 modifies IFCR to include approved remedy
BAAP-008	ROCKET PASTE AREA	200304	WDNR letter dated July 2000 stating NFA
BAAP-009	OLD ACID AREA	200805	Letter from WDNR dated 30-Jan-08 confirming the completion of lead cleanup and NFA required.
BAAP-010	NEW ACID AREA	200112	WDNR letter dated March 2005 stating NFA
BAAP-011	OLD FUEL OIL TANKS	200112	WDNR letter dated Jan 2006 stating NFA
BAAP-013	UNDERGROUND STORAGE TANKS (10)	199008	WDNR letter dated Mar 1999 stating NFA
BAAP-014	LANDFILL #6 (NEW 1989)	199908	USACHPPM review 8/99 - not DERA eligible
BAAP-015	SANITARY LANDFILL #3 (CLOSED)	199008	Capped as part of BAAP-006. NFA
BAAP-016	Landfill#4/POWERHOUSE #2	199008	Bldg demolished in 2005. WDNR letter 12/05 NFA
BAAP-020	BALL POWDER PILOT PLANT	199008	WDNR letter dated July 2000 stating NFA
BAAP-021	BALLISTICS AND TESTING AREA	199008	WDNR letter dated Jan 2005 stating NFA
BAAP-022	BALL PROPELLANT PRODUCTION AREA	199008	WDNR letter dated July 2000 stating NFA
BAAP-023	INGREDIENT WAREHOUSE	199008	WDNR letter dated July 2000 stating NFA
BAAP-024	SMOKELESS POWDER PRODUCTION	199008	WDNR letter dated July 2000 stating NFA
BAAP-025	SALVAGE YARD	199008	USACHPPM review 7/99 - not DERA eligible
BAAP-026	HAZARDOUS WASTE STORAGE AREA	199108	WDNR letter dated Oct 2004 stating NFA
BAAP-027	WASTE PROCESSOR	199008	WDNR letter dated July 2000 stating NFA
BAAP-029	SOLVENT RECOVERY STILL AREA	199008	WDNR letter dated July 2000 stating NFA
BAAP-030	LABORATORIES-BLDG# 201,2556,4034,6682	199008	USACHPPM review 7/99 - not DERA eligible
BAAP-031	COAL YARD	199008	WDNR letter dated July 2000 stating NFA
BAAP-032	ABOVE GROUND STORAGE TANKS	199008	WDNR letter dated July 2000 stating NFA
BAAP-34	PROP BRNG GRD - THERM TRTMT UNT/RACETRCK	200112	WDNR letter dated Sept 1996 stating NFA

IRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
BAAP-36	EAST & WEST ROCKET AREA DITCHES	200305	WDNR letter dated Sept 1989 stating NFA
BAAP-37	POWERHOUSE # 1 SOIL OLD FUEL SPILLS	200606	WDNR letter dated July 2006 stating NFA
BAAP-38	TRANSFORMER YARD - PCB IN SOIL	199612	WDNR letter dated Jan 1997 stating NFA
BAAP-39	OLEUM LANDFILL	199808	WDNR letter dated Apr 2002 stating NFA
BAAP-42	Box Wash Accounts 1890-1&2	200707	WDNR letter dated June 2007 stating NFA

IRP Schedule

Date of IRP Inception: 197701

Past Phase Completion Milestones

1977

SI (BAAP-011 - OLD FUEL OIL TANKS)

CS (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA, BAAP-002 - BALLISTICS POND and Ditches, BAAP-003 - OLEUM PLANT AND POND, BAAP-004 - EXISTING LANDFILL (LANDFILL #5), BAAP-005 - NITROGLYCERINE Pond , BAAP-006 - DETERRENT BURNING GROUND, BAAP-008 - ROCKET PASTE AREA , BAAP-009 - OLD ACID AREA, BAAP-010 - NEW ACID AREA, BAAP-012 - GW Monitoring ON and OFF Post, BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS, BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK, BAAP-35 - CAP & COVER MAINTENANCE, BAAP-36 - EAST & WEST ROCKET AREA DITCHES)

RFA (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA, BAAP-002 - BALLISTICS POND and Ditches, BAAP-003 - OLEUM PLANT AND POND, BAAP-004 - EXISTING LANDFILL (LANDFILL #5), BAAP-005 - NITROGLYCERINE Pond , BAAP-006 - DETERRENT BURNING GROUND, BAAP-008 - ROCKET PASTE AREA , BAAP-009 - OLD ACID AREA, BAAP-010 - NEW ACID AREA, BAAP-012 - GW Monitoring ON and OFF Post, BAAP-014 - LANDFILL #6 (NEW 1989), BAAP-015 - SANITARY LANDFILL #3 (CLOSED), BAAP-020 - BALL POWDER PILOT PLANT, BAAP-021 - BALLISTICS AND TESTING AREA, BAAP-022 - BALL PROPELLANT PRODUCTION AREA, BAAP-023 - INGREDIENT WAREHOUSE, BAAP-024 - SMOKELESS POWDER PRODUCTION, BAAP-025 - SALVAGE YARD, BAAP-027 - WASTE PROCESSOR, BAAP-029 - SOLVENT RECOVERY STILL AREA, BAAP-030 - LABORATORIES-BLDG# 201,2556,4034,6682, BAAP-031 - COAL YARD, BAAP-032 - ABOVE GROUND STORAGE TANKS, BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS, BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK, BAAP-35 - CAP & COVER MAINTENANCE, BAAP-36 - EAST & WEST ROCKET AREA DITCHES)

PA (BAAP-011 - OLD FUEL OIL TANKS, BAAP-013 - UNDERGROUND STORAGE TANKS (10), BAAP-016 - Landfill#4/POWERHOUSE #2)

1987

IRA (BAAP-010 - NEW ACID AREA)

1990

IRA (BAAP-004 - EXISTING LANDFILL (LANDFILL #5))

1991

RFA (BAAP-026 - HAZARDOUS WASTE STORAGE AREA, BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS)

1992

RFA (BAAP-42 - Box Wash Accounts 1890-1&2)

1993

RFA (BAAP-38 - TRANSFORMER YARD - PCB IN SOIL)

1994

CS (BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS, BAAP-42 - Box Wash Accounts 1890-1&2)

1995

RFI/CMS (BAAP-005 - NITROGLYCERINE Pond)

1996

DES (BAAP-005 - NITROGLYCERINE Pond)

RFI/CMS (BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS, BAAP-38 - TRANSFORMER YARD - PCB IN SOIL, BAAP-003 - OLEUM PLANT AND POND, BAAP-004 - EXISTING LANDFILL (LANDFILL #5), BAAP-006 - DETERRENT BURNING GROUND, BAAP-010 - NEW ACID AREA, BAAP-012 - GW Monitoring ON and OFF Post, BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK, BAAP-35 - CAP & COVER MAINTENANCE)

RI/FS (BAAP-011 - OLD FUEL OIL TANKS)

1997

IRA (BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS)
 CMI(C) (BAAP-38 - TRANSFORMER YARD - PCB IN SOIL)

1998

CMI(C) (BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK)
 DES (BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS, BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK, BAAP-35 - CAP & COVER MAINTENANCE)
 CS (BAAP-39 - OLEUM LANDFILL)
 RFA (BAAP-39 - OLEUM LANDFILL)

1999

LTM (BAAP-003 - OLEUM PLANT AND POND, BAAP-014 - LANDFILL #6 (NEW 1989))
 CMI(C) (BAAP-35 - CAP & COVER MAINTENANCE)
 PA (BAAP-40 - GRUBER'S GROVE BAY)

2000

SI (BAAP-40 - GRUBER'S GROVE BAY)

2001

IRA (BAAP-006 - DETERRENT BURNING GROUND)
 CMI(C) (BAAP-005 - NITROGLYCERINE Pond)

2002

LTM (BAAP-004 - EXISTING LANDFILL (LANDFILL #5), BAAP-010 - NEW ACID AREA, BAAP-011 - OLD FUEL OIL TANKS, BAAP-34 - PROP BRNG GRD - THERM TRTMT UNT/RACETRCK)
 RFI/CMS (BAAP-002 - BALLISTICS POND and Ditches)

2003

RFI/CMS (BAAP-008 - ROCKET PASTE AREA , BAAP-36 - EAST & WEST ROCKET AREA DITCHES)
 CMI(C) (BAAP-008 - ROCKET PASTE AREA , BAAP-36 - EAST & WEST ROCKET AREA DITCHES)
 DES (BAAP-006 - DETERRENT BURNING GROUND, BAAP-008 - ROCKET PASTE AREA , BAAP-36 - EAST & WEST ROCKET AREA DITCHES)

2004

CMI(C) (BAAP-006 - DETERRENT BURNING GROUND)

2005

RFI/CMS (BAAP-42 - Box Wash Accounts 1890-1&2, BAAP-009 - OLD ACID AREA)
 IRA (BAAP-009 - OLD ACID AREA)
 RFA (BAAP-43 - Site-Wide RI)

2006

CMI(O) (BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS)
 CMI(C) (BAAP-37 - POWERHOUSE # 1 SOIL OLD FUEL SPILLS)

2007

IRA (BAAP-40 - GRUBER'S GROVE BAY)
 RFI/CMS (BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS)

2007

DES (BAAP-42 - Box Wash Accounts 1890-1&2, BAAP-009 - OLD ACID AREA)
 CMI(C) (BAAP-42 - Box Wash Accounts 1890-1&2)

2008

CMI(C) (BAAP-009 - OLD ACID AREA)
 DES (BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS)

2009

IRA (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA)
 CMI(C) (BAAP-33 - PROP BRNG GRD - CONTAMINATED WASTE PITS)

2010

RFI/CMS (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA)

2011

DES (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA)

2012

IRA (BAAP-012 - GW Monitoring ON and OFF Post)

2013

CMI(O) (BAAP-006 - DETERRENT BURNING GROUND)

2014

RFI/CMS (BAAP-43 - Site-Wide RI)
 DES (BAAP-43 - Site-Wide RI)
 CMI(C) (BAAP-001 - SETTLING PONDS/SPOILS DISPOSAL AREA)

Additional Past Phase Completion Milestones

2013 CMI(C) BAAP-001 Settling Pond

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date
BAAP-012	GW Monitoring ON and OFF Post	Water Supply System, Badger AAP	20151130

Final RA(C) Completion Date: 201809

Schedule for Next Five-Year Review: 2019

Estimated Completion Date of IRP at Installation (including LTM phase): 204903

BADGER ARMY AMMUNITION PLANT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
BAAP-012	GW Monitoring ON and OFF Post	DES						
		CMI(C)						
		CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
BAAP-33	PROP BRNG GRD - CONTAMINATED WASTE PITS	CMI(O)						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
BAAP-35	CAP & COVER MAINTENANCE	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
BAAP-40	GRUBER'S GROVE BAY	RI/FS						

BADGER ARMY AMMUNITION PLANT

Non-BRAC Excess Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 1/0

Installation Site Types with Future and/or Underway Phases

1 Industrial Discharge
(CC-BAAP-44)

Most Widespread Contaminants of Concern

Explosives, Metals, Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Soil

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
CC-BAAP-44	Abandoned Industrial Sewer Network	IRA	WASTE REMOVAL - SOLIDS (NON-SOILS)	2012	TBD
CC-BAAP-44	Abandoned Industrial Sewer Network	IRA	WASTE REMOVAL - SOILS	2012	TBD

Duration of CR

Year of CR Inception: 200010

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201503/201503

Date of CR completion including Long Term Management (LTM): 205403

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP). On Dec. 29, 2008, the ODUSD(I&E), issued an interim policy for Defense Environmental Restoration Program (DERP) eligibility that rescinded the 1986 eligibility date for the IRP and the 2002 eligibility date for the MMRP. This made many sites previously addressed in the Army's Compliance-related Cleanup (CC) program eligible for the DERP. Sites which are now eligible for the MMRP have been migrated from Army Environmental Database - Compliance-related Cleanup (AEDB-CC) and given the naming convention of other Munitions Response (MR) sites. The newly eligible non-MR type sites are considered to be Installation Restoration (IR) sites; however, the newly eligible sites are being coded as Compliance Restoration (CR) in AEDB-R to distinguish them from the original IR sites and IR metrics.

The total estimated documented abandoned production area sewers was 58.18 miles (plus additional undocumented drains) at depths from 4 to 30 ft below ground surface (bgs). Sewer pipe (3-ft tile sections), was in poor condition with collapses and heavy damage. Previous spot investigations found DNTs, lead, mercury, propellants, dibutyl-phthalate (DBP) diphenylamine (DPA), polychlorinated biphenyls (PCB) above required cleanup levels in pipes and surrounding soils. RI work included location surveys, safety oversight, removing overlying soil and structures, rerouting active utility lines interfering with excavation, collecting pipe and soil samples, laboratory analysis, disposal of investigation derived waste, and reports. An active Bluffview sanitary sewer line serving 1,000 people rested atop sections of an abandoned production sewer, and required relocation.

Investigation and cleanup was completed in 2012.

Cleanup Exit Strategy

As structures are demolished, inspection, removal and closure of remaining sewers will be completed. Closure will be complete when all parcels have received closure letters from state.

CR Previous Studies

	Title	Author	Date
2011	WDNR LETTER, FINAL CASE CLOSURE AND NO-ACTION-REQUIRED DETERMINATION FOR BAAAP PARCEL P3 RI/RA/PROCESS SEWER REOVAL PROJECTS (CD)	Wisconsin Department of Natural Reso	MAR-2011
	DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL U3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army	MAR-2011
	DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL X2 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc	JUN-2011
	DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCELS V, V2, AND V3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc.	AUG-2011
2012	DEPARTMENT OF THE ARMY LETTER, SUBJECT: PARCEL Q3 WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLOSURE REQUEST (CD)	Department of the Army/SpecPro, Inc.	JAN-2012

BADGER ARMY AMMUNITION PLANT

Non-BRAC Excess

Compliance Restoration

Site Descriptions

Site ID: CC-BAAP-44

Site Name: Abandoned Industrial Sewer Network

STATUS

Parcel: NONE

Regulatory Driver: RCRA

Phases	Start	End
RFA.....	200010.....	200812
RFI/CMS.....	200905.....	201503
IRA.....	200906.....	201207
LTM.....	201503.....	205403

RIP Date: N/A

RC Date: 201503

SITE DESCRIPTION

The estimated length of the abandoned production area sewers was documented to be 68.18 miles at depths from 4 to 30 ft bgs. Sewer pipe (in 3-ft tile sections) was found in poor condition with collapses and damage. In addition to the original estimate, undocumented shallow drains were found. Previous spot investigations found DNT, lead, mercury, propellants, DBP, DPA, PCBs above required cleanup levels in pipes and surrounding soils. RI work included location surveys, safety oversight, removing overlying soil and structures, rerouting active utility lines interfering with excavation, collecting pipe and soil samples, laboratory analysis, disposal of investigation derived waste, and reports. An active Bluffview sanitary sewer line serving 1,000 people rested atop sections of abandoned production sewer, requiring relocation.

In 2009, relocation of active sewer lines and inspection/removal/closure of approximately 55 percent of sewers was completed. In 2012 the last of the sewer lines were investigated, remediated where necessary, and closed. Site closure documentation by parcel completed in FY15.

The sitewide remediation debris was placed in this site and this last capped area, Landfill 3646 (CC-BAAP-044) received final approval on March 7, 2014 with no end date specified.

WDNR requires sentry groundwater monitoring, long-term O&M of the landfill and remediation of site caps and covers for at least 40 years beyond the closure date.

CLEANUP/EXIT STRATEGY

LTM will be conducted until FY54 to comply with the WDNR requirement of 40 years post-closure monitoring.

CR Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
There are no NFA sites			

CR Schedule

Date of CR Inception: 200010

Past Phase Completion Milestones

2009

RFA (CC-BAAP-44 - Abandoned Industrial Sewer Network)

2012

IRA (CC-BAAP-44 - Abandoned Industrial Sewer Network)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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Final RA(C) Completion Date:

Schedule for Next Five-Year Review: 2019

Estimated Completion Date of CR at Installation (including LTM phase): 205403

BADGER ARMY AMMUNITION PLANT CR Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CC-BAAP-44	Abandoned Industrial Sewer Network	LTM						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201301

Restoration Advisory Board (RAB): RAB established 1993

RAB Adjournment Date:

RAB Adjournment Reason:

Additional Community Involvement Information

At each phase of the environmental restoration process, public information meetings have been held at BAAP to keep the community informed of the progress of the cleanup program. In January 1993, the installation began publishing an environmental newsletter to keep the employees, local citizens, and politicians updated on the environmental work that was underway.

In 1993, the Badger Environmental Board of Advisors (BEBA) was formed to provide a venue for citizens to participate in the cleanup program at the installation. The first BEBA meeting was held in September 1993 and the group has continued since that time.

The BEBA was formed before the guidelines for Army RABs were finalized. The BEBA had functioned as the Badger RAB until November 2000, when the BEBA refused the Army's request for the BEBA to comply with current RAB guidance.

The BEBA members were able to transition to an expanded regulatory-compliant RAB, which began meeting in January 2001 and continues to meet and advise the Army on restoration issues.

In 2002, the Badger Intergovernmental Group was formed by General Services Administration (GSA) to work toward the disposal of BAAP real estate. The group held public meetings about every two months. This provided another opportunity for the community to give input on the actions being taken to prepare the installation for new ownership. This group led to the formation of the county-led Badger Oversight and Management Commission that focuses on uses of the installation after the parcels transfer out of Army control.

A community involvement survey of residents impacted by BAAP groundwater issues was conducted in December 2011. The results indicate some changes in RAB representation and increased communication efforts would help the community. Combined RAB/public meetings are held as needed.

Administrative Record is located at

Badger AAP
S7560 US Highway 12, North Freedom, WI 53951
608.434.5374

Information Repository is located at

Sauk City Public Library
515 Water Street, Sauk City, WI 53583
608.643.8346

Ruth Culver Community Library
540 Water Street, Prairie du Sac, WI 53578
608.643.8318

Current Technical Assistance for Public Participation (TAPP): 200309

TAPP Title: 2003 TAPP Grant

Community Involvement

Current Technical Assistance for Public Participation (TAPP): 200805

TAPP Title: explain Settling Ponds FS

Potential TAPP:

