IOWA ARMY AMMUNITION PLANT

Army Cleanup Program

Installation Action Plan Final

June 2024

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STATEMENT OF PURPOSE

The Installation Action Plan (IAP) provides evidence that the Army is firmly committed to expeditious identification and cleanup of environmental contamination, and that the installation has a credible, organized program to carry out that commitment. The IAP provides an outline of the total multi-year environmental cleanup program for each site with ongoing or future planned restoration activity and includes the (1) environmental restoration requirements, (2) the rationale for the selected technical approach, and (3) foundation to develop corresponding financial needs for each cleanup site.

INSTALLATION OVERVIEW

Installation Name: IOWA ARMY AMMUNITION PLANT

Installation City: MIDDLETOWN

Installation County: DES MOINES

Installation State: IA

Regulatory Participation - Federal: US Environmental Protection Agency (USEPA), Region VII Federal Facilities and Special Emphasis Branch, Superfund Division; US Fish and Wildlife Service

Regulatory Participation - State: Iowa Department of Natural Resources

ACRONYMS

Acronym	Definition
ABCDP	Ammunition Box Chipper Disposal Pit
ACM	Asbestos-Containing Material
AET	Advanced Environmental Technology
AWQR	Annual Water Quality Report
BEHP	Basic Environmental Health Program
BERA	Baseline Ecological Risk Assessment
BHHRA	Baseline Human Health Risk Assessment
CAMU	Corrective Action Management Unit
CC	Compliance-Related Cleanup
CCL	Contaminated Clothing Laundry
CCR	Coal Combustion Residue
CDM	Clean Development Mechanism
CEA	Classification Exception Area
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMS	Corrective Measures Study
COC	Contaminant of Concern
COPC	Contaminant of Potential Ecological Concern
CRL	Cleanup Restoration & Liabilities
CSM	Conceptual Site Model
CTA	Central Test Area
CTL	Central Testing Laboratory
CWP	Contaminated Waste Processor
CWWP	Comprehensive Watersheds Evaluation and Supplemental Data Collection Work Plan
cy	cubic yard
DA	Demolition Area
DCP	Dicalcium Phosphate
DERP	Defense Environmental Restoration Program
DF	Deactivation Furnace
DNT	Dinitrotoluene
DPT	Direct Push Technology
DU	Depleted Uranium
EBP	East Burn Pads
ED	Enhanced Degradation
ENV	Environmental
ER,A	Environmental Restoration, Army
ESD	Explanation of Significant Differences
EWI	Environmental Work Instruction
EPC	Exposure Point Concentration
FADA	Fly Ash Disposal Area

Acronym	Definition
FALF	Fly Ash Landfill
FFA	Federal Facility Agreement
FRA	Final Remedial Action
FS	Feasibility Study
FS-12	Firing Site-12
ft	feet
ft bgs	feet below ground surface
FTP	Fire Training Pit
FUSRAP	Formerly Utilized Sites Remedial Action Program
FYR	Five-Year Review
GAC	Granular Activated Carbon
HHRA	Human Health Risk Assessment
HMX	cyclotetramethylene-tetranitramine
HRR	Historical Records Review
IAAAP	Iowa Army Ammunition Plant
IAP	Installation Action Plan
ID	Identification
IDA	Inert Disposal Area
InDA	Incendiary Disposal Area
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
lbs	pounds
LTM	Long-Term Management
LTTD	Low Temperature Thermal Desorption
LUC	Land Use Control
MACS	Modular Artillery Charge System
MC	Munitions Constituents
MEC	Munitions and Explosives of Concern
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitoring Natural Attenuation
MR	Munitions Response
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
NBPA	North Burn Pad Area
NBPLF	North Burn Pad Landfill
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
O&M	Operations and Maintenance

Acronym	Definition
OB	Open Burn
ORAP	Operational Range Assessment Program
OU	Operable Unit
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PCP	Pentachlorophenol
PFAS	Per- and Polyfluoroalkyl Substances
PP	Proposed Plan
ppb	parts per billion
ppm	parts per million
PR	Periodic Review
PSD	Possible Demolition Site
QAPP	Quality Assurance Project Plan
RA	Remedial Actions
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
RFI	RCRA Facility Investigation
RG	Remediation Goals
RI	Remedial Investigation
RIP	Remedy-In-Place
ROC	Radionuclides of Concern
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SC	Site Closeout
SI	Site Inspection
SRI	Supplemental Remedial Investigation
STP	Sewage Treatment Plant
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCLP	Toxicity Characteristic Leaching Procedure
TNT	Trinitrotoluene
UFP-QAPP	Uniform Federal Policy for Quality Assurance Project Plans
ug/L	micrograms per liter

Acronym	Definition
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USATHAMA	US Army Toxic and Hazardous Materials Agency
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UU/UE	Unlimited Use/Unrestricted Exposure
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WAM	Wide Area Mine
WBPLF	West Brun Pad Landfill

PHASE TRANSLATION TABLE

CERCLA Phase	RCRA Phase	RCRA UST Phase
Preliminary Assessment (PA)	RCRA Facility Assessment (RFA)	Initial Site Characterization (ISC)
Site Inspection (SI)	Confirmation Sampling (CS)	Investigation (INV)
Remedial Investigation/ Feasibility Study (RI/FS)	RCRA Facility Investigation/Corrective Measures Study (RFI/CMS)	Corrective Action Plan (CAP)
Remedial Design (RD)	Design (DES)	Design (DES)
Interim Remedial Action (IRA)	Interim Measure (IM)	Interim Remedial Action (IRA)
Remedial Action (Construction) (RA(C))	Corrective Measures Implementation (Construction) (CMI(C))	Implementation (Construction) (IMP(C))
Remedial Action (Operations) (RA(O))	Corrective Measures Implementation (Operations) (CMI(O))	Implementation (Operations) (IMP(O))
Long-Term Management (LTM)	Long-Term Management (LTM)	Long-Term Management (LTM)

PROGRAM SUMMARY

Number of Open Sites with Response Complete/Total Open IR Sites: 20/73

Number of Open Sites with Response Complete/Total Open MR Sites: 4/4

Number of Open Sites with Response Complete/Total Open CC Sites: 0/1

SITE-LEVEL INFORMATION

19105.1001_IAAP-001_LINE 1 AMMO LAP(MISSILE/FORMER

Env Site ID: IAAP-001

Cleanup Site: LINE 1 AMMO LAP(MISSILE/FORMER

Alias: R01

Regulatory Driver: CERCLA

RIP Date: 9/30/2003

RC Date: 9/30/2003

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	9/30/2003
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: Line 1 Ammo Lap is an ammunition production line that has been in operation since the inception of Iowa Army Ammunition Plant (IAAAP) in 1941. In 2000, the Line was split thereby creating an active area called Line 1A. This area contains approximately 15.9 acres and 151 buildings. Activities in this area include Metrology and Chemical Labs Tool & Die Shop Electronic Shop Ammunition Surveillance Depleted Uranium (DU) Demil Powerhouse Research and Development and production for Modular Artillery Charge System (MACS) and Wide Area Mine (WAM). All other areas of Line 1 are now inactive. The active area has been fenced off from the inactive area. The entire site Lines 1 and 1A combined occupies approximately 188 acres. Most of the contamination occurred as a result of building wash downs and sump failures. The Atomic Energy Commission operated a portion of Line 1 between 1947 and 1975. The Installation Restoration Program (IRP) Preliminary Assessment/Site Inspection (PA/SI) was completed in 1991 and an initial Remedial Investigation (RI) was completed in May 1996. The Interim Record of Decision (ROD) required the removal of 7410 cubic yard (cy) (220cy metals 4850 cy explosives 1480 cy explosives and metals 590 cy Volatile Organic Compounds (VOC) and 270 cy radiation) contaminated soil. Per the ROD this soil was taken to the Inert Disposal Area (IAAP-020) and sorted by contaminant level and type. Formerly Utilized Sites Remedial Action Program (FUSRAP) performed a PA (published December 2001) of this site and determined it to be a former Atomic Energy Commission area. In July 2002, the Corps designated this area to be under the FUSRAP program. The wastewater is now treated by carbon adsorption in adjacent filter houses and released pursuant to National Pollutant Discharge Elimination System (NPDES) permit. Soil Remedial Cleanup action at this site is being handled currently by the FUSRAP program for Line 1 structures only, and the Army maintains responsibility for enforcing the Land Use Controls (LUC) at this site associated with remedial goals for soils with Operable Unit 1 (OU-1). The 2018 OU-1 Explanation of Significant Differences (ESD) documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the Environmental Work Instruction (EWI). This site was originally closed due to the transfer from IRP to FUSRAP. However, it has been reopened as it is being addressed as a soil site for OU-1 LUCs under IRP. Suspected mercury contamination has been recently found at Line 1.

FUSRAP and the Army are currently discussing the path forward. It is unknown at this time if additional cost for the Army will be needed with this site. CLEANUP/EXIT STRATEGY - Long-Term Management (LTM) which includes cyclotrimethylenetrinitramine (RDX) contaminated soil removal (Lines 1, 5A and 6), Iron Bio-reactor Operations and Maintenance (O&M), optimization of the identified mercury site, internal installation-specific restrictions, and five-year reviews (FYR) will be required for an indefinite period because contamination above unlimited use/unrestricted exposure (UU/UE) remains.

19105.1002_IAAP-002_LINE 2 AMMO LAP(ARTILLERY/SHAPE

Env Site ID: IAAP-002

Cleanup Site: LINE 2 AMMO LAP(ARTILLERY/SHAPE

Alias: R02

Regulatory Driver: CERCLA

RIP Date: 9/30/2007

RC Date: 9/30/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	5/31/1996
RD:	6/30/2004	11/30/2006
IRA:	- -	- -
RA(C):	6/30/2004	9/30/2007
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 2 which is part of OU-1. The PA/SI was completed in 1991 and an RI was completed in May 1996. The interim soil ROD required the removal of an estimated 1950 cubic yards (cy) of soil contaminated with metals and explosives. The soil was taken to the Inert Disposal Area (IDA) (IAAP-020) and sorted. Soils were disposed of at site IAAP-020 in accordance with the 1998 final ROD and subsequent 2018 Explanation of Significant Differences (ESD). Not all contaminated soils were removed due to inaccessibility or the threat to structural integrity of production buildings. Information on contamination left in place may be found in the Remedial Action Completion Report (RACR). The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYR will be required for an indefinite period because contamination above UU/UE remains.

19105.1003_IAAP-002G_LINE 2 AMMO LAP - GROUNDWATER

Env Site ID: IAAP-002G

Cleanup Site: LINE 2 AMMO LAP - GROUNDWATER

Alias: IAAP-2G

Regulatory Driver: CERCLA

RIP Date: 9/16/2029

RC Date: 9/30/2058

RC Reason: Not assigned

SC Date: 9/30/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. The past contamination resulted from the practice of washing spilled explosives from floors and equipment from spillages resulting from sump failures and operational effluent. Trinitrotoluene (TNT) and RDX in concentrations greater than 2500 part per billion (ppb) have been found in the groundwater in shallow localized plumes within 30 feet (ft) of the ground surface. The PA/SI was completed in 1991 and an initial RI was completed in May 1996. In 2003 a Supplemental Remedial Investigation (SRI) was completed to fill groundwater data gaps found in the May 1996 RI. From 2004-2006 the comprehensive watersheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. The OU-6 Feasibility Study (FS) was withdrawn December 8, 2010, due to data gaps. This site was separated from IAAP-002 to better manage groundwater cleanup and allow clearer reporting for phase completions and funding allocation. The OU-6 RI was completed August 2023. CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (RDX, 2-amino-4,6- Dinitrotoluene (DNT), 4-amino-2,6-DNT, cyclotetramethylene-tetranitramine (HMX), nitrobenzene, and arsenic.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation with Monitoring Natural Attenuation (MNA) and LUCs.

19105.1004_IAAP-003_LINE 3 AMMO LAP (ARTILLERY)

Env Site ID: IAAP-003

Cleanup Site: LINE 3 AMMO LAP (ARTILLERY)

Alias: IAAP-3

Regulatory Driver: CERCLA

RIP Date: 9/30/2007

RC Date: 9/30/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	5/31/1991
RI/FS:	12/31/1990	5/31/1996
RD:	8/31/2004	11/30/2006
IRA:	- -	- -
RA(C):	6/30/2004	9/30/2007
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 3 which is part of OU-1. The practice during the early years of production was to dispose of wastewater at the Line 800 Pinkwater Lagoon. This line was upgraded to include self-contained Pinkwater reroute systems in July 1995 and September 1998. The PA/SI was completed in 1991 and an RI was completed in May 1996. The interim ROD required the removal of an estimated 3493cy contaminated with metals explosives and Semi-Volatile Organic Compounds (SVOC). The soil was taken to the IDA (IAAP-020) and sorted. Soils were disposed of at site IAAP-020 in accordance with the 1998 final ROD and subsequent 2018 ESD. Not all contaminated soil was removed due to inaccessibility or the threat to structural integrity of production buildings. Information on contamination left in place may be found in the RACR. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1005_IAAP-003G_LINE 3 AMMO LAP - GROUNDWATER

Env Site ID: IAAP-003G

Cleanup Site: LINE 3 AMMO LAP - GROUNDWATER

Alias: IAAP-3G

Regulatory Driver: CERCLA

RIP Date: 9/16/2029

RC Date: 9/30/2058

RC Reason: Not assigned

SC Date: 9/30/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. RDX in low concentrations has been found in the groundwater in a shallow localized plume within 30 ft of the ground surface. Recent data shows a downward trend in groundwater concentrations. In 1991 the PA/SI was completed and in May 1996 an initial RI was completed. In 2003 an SRI was completed to fill groundwater data gaps found in the May 1996 RI. In 2004 to 2006 the comprehensive watersheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. The OU-6 FS was withdrawn December 8, 2010, due to data gaps. This site was separated from IAAP-003 to better manage groundwater cleanup and allow clearer reporting for phase completions and funding allocation. The OU-6 RI was completed August 2023.CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (2,4-DNT, 2,6-DNT, 2-amino-4,6-DNT, 4-amino-2,6-DNT, and RDX.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA, and LUCs.

19105.1006_IAAP-004_LINE 3A AMMO LAP (ARTILLERY)

Env Site ID: IAAP-004

Cleanup Site: LINE 3A AMMO LAP (ARTILLERY)

Alias: IAAP-4

Regulatory Driver: CERCLA

RIP Date: 9/30/2007

RC Date: 9/30/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	5/31/1996
RD:	8/31/2004	11/30/2006
IRA:	- -	- -
RA(C):	6/30/2004	9/30/2007
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 3A which is part of OU-1. This line was upgraded to include a self-contained Pinkwater Reroute System in December 1996. The PA/SI was completed in 1991 and an RI was completed in May 1996. The interim ROD required the removal of 2036 cy soil contaminated with explosives and metals. This soil was taken to the IDA (IAAP-020) and sorted. Soils were disposed of at site IAAP-020 in accordance with the 1998 final ROD and subsequent 2018 ESD. Not all contaminated soil were removed due to inaccessibility or the threat to structural integrity of production buildings. Information on contamination left in place may be found in the RACR. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1007_IAAP-004G_LINE 3A AMMO LAP - GROUNDWATER

Env Site ID: IAAP-004G

Cleanup Site: LINE 3A AMMO LAP - GROUNDWATER

Alias: IAAP-4G

Regulatory Driver: CERCLA

RIP Date: 9/16/2029

RC Date: 9/30/2058

RC Reason: Not assigned

SC Date: 9/30/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	5/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. In December 1996 this line was upgraded to include a self-contained Pinkwater reroute system. Two isolated shallow plumes (RDX low level) have been identified. The PA/SI was completed in 1991 and in May 1996 an RI was completed. In 2004 to 2006 the comprehensive watersheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. The OU-6 FS was withdrawn December 8, 2010, due to data gaps. This site was separated from IAAP-004 to better manage groundwater cleanup and allow clearer reporting for phase completions and funding allocation. The OU-6 RI was completed August 2023. CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (2,4-DNT, 2,6-DNT, 2-amino-4,6-DNT, 4-amino-2,6-DNT, and RDX.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA, and LUCs.

19105.1008_IAAP-005_LINE 4A AND 4B AMMO ASSEMBLY

Env Site ID: IAAP-005

Cleanup Site: LINE 4A AND 4B AMMO ASSEMBLY

Alias: IAAP-5

Regulatory Driver: CERCLA

RIP Date: 8/31/2005

RC Date: 8/31/2005

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	1/31/2001
RD:	9/30/2002	5/31/2003
IRA:	- -	- -
RA(C):	5/31/2003	8/31/2005
RA(O):	- -	- -
LTM:	8/31/2005	9/30/2054

Site Narrative: This IRP site consists of the soil contamination from past munitions production at Line 4A and 4B which is part of OU-1. The PA/SI was completed in 1991 and an RI was completed in May 1996. The 1998 interim soil ROD required the removal of 153 cy of lead contaminated soil. However, sampling during Remedial Design (RD) could not recreate RI data. Therefore, the Final Remedial Action (FRA) report for Phase V soils indicates that additional soil removal was not necessary. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains. LTM optimization needed with future land use change.

19105.1009_IAAP-006_LINE 5A AND 5B AMMO ASSEMBLY

Env Site ID: IAAP-006

Cleanup Site: LINE 5A AND 5B AMMO ASSEMBLY

Alias: IAAP-6

Regulatory Driver: CERCLA

RIP Date: 11/30/1999

RC Date: 11/30/1999

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	8/31/1998
RD:	4/30/1998	8/31/1998
IRA:	- -	- -
RA(C):	8/31/1998	11/30/1999
RA(O):	- -	- -
LTM:	11/30/1999	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 5A and 5B which is part of OU-1. The PA/SI was completed in 1991 and an RI was completed in May 1996. The interim soil ROD required the removal of an estimated 731 cy of soil contaminated with metals and explosives. The soil was taken to the IDA (IAAP-020) and sorted. Soils were disposed of at site IAAP-020 in accordance with the 1998 final ROD. Not all contaminated soils were removed due to inaccessibility or the threat to structural integrity of production buildings. Information on contamination left in place may be found in the RACR. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1010_IAAP-007_LINE 6 AMMO PRODUCTION(DETONATO

Env Site ID: IAAP-007

Cleanup Site: LINE 6 AMMO PRODUCTION(DETONATO

Alias: R07

Regulatory Driver: CERCLA

RIP Date: 9/30/2007

RC Date: 9/30/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	8/31/1991
RI/FS:	12/31/1990	1/31/2000
RD:	6/30/2002	11/30/2006
IRA:	- -	- -
RA(C):	6/30/2004	9/30/2007
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 6 which is part of OU-1. The primary waste stream was related to the production of detonators and included lead azide lead styphnate tetracene RDX barium nitrate and mercury fulminate. Treatment of black powder was performed in Building 6-68 as a Resource Conservation and Recovery Act (RCRA) permitted unit. This unit underwent RCRA closure in 1995 and will no longer be maintained or used by the Army (modified caretaker status). As part of the RCRA closure 800 cy of contaminated soil were removed in 1994. The PA/SI was completed in 1991 and an RI was completed in May 1996. The interim ROD required the removal of 445 cy of soil contaminated with metals that was not addressed under the RCRA closure. This soil was excavated and taken to the IDA (IAAP-020) and sorted by contaminant level and type. The principal concern at this site is the potential for surface runoff to migrate to nearby streams which in turn recharge groundwater off-post. During the historical records review in 2007 it was determined there was a potential unexploded ordnance (UXO) concern at this site that is addressed under OU-5 Military Munitions Response Program (MMRP) site IAAP-002-R-01. Line 6 buildings except for one bunker have been demolished. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1012_IAAP-009_LINE 8 AMMO LAP(FUZE/ROCKET)

Env Site ID: IAAP-009

Cleanup Site: LINE 8 AMMO LAP(FUZE/ROCKET)

Alias: IAAP-9

Regulatory Driver: CERCLA

RIP Date: 8/31/2005

RC Date: 8/31/2005

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	1/31/2000
RD:	9/30/2002	9/30/2003
IRA:	- -	- -
RA(C):	5/31/2003	8/31/2005
RA(O):	- -	- -
LTM:	8/31/2005	9/30/2054

Site Narrative: The IRP site consists of the soil contamination from past munitions production at Line 8 which is part of OU-1. The PA/SI was completed in 1991 and an RI was completed in May 1996. The 1998 interim ROD required the removal of 476 cy of lead-contaminated soil. This site did not require additional cleanup to industrial remedial action objectives as no contamination was found above action levels as documented in the Phase IV Soil Remedial Action Report dated August 2005. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1013_IAAP-010_LINE 9 AMMO LAP (MINE)

Env Site ID: IAAP-010

Cleanup Site: LINE 9 AMMO LAP (MINE)

Alias: IAAP-10

Regulatory Driver: CERCLA

RIP Date: 8/31/2005

RC Date: 8/31/2005

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	5/31/1996
RD:	9/30/2002	9/30/2003
IRA:	- -	- -
RA(C):	5/31/2003	8/31/2005
RA(O):	- -	- -
LTM:	8/31/2005	9/30/2054

Site Narrative: This IRP site consists of the soil contamination from past munitions production at Line 9 which is part of OU-1. The PA/SI was completed in 1991 and an RI was completed in May 1996. The 1998 interim ROD required the removal of 469 cy of lead-contaminated soil. Soil contaminated with explosives and metals was removed and disposed of in the IDA (IAAP-020) as documented in the OU-1 Phase IV Soil Remedial Action Report dated August 2005. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1014_IAAP-010G_LINE 9 AMMO LAP - GROUNDWATER

Env Site ID: IAAP-010G

Cleanup Site: LINE 9 AMMO LAP - GROUNDWATER

Alias: IAAP-10G

Regulatory Driver: CERCLA

RIP Date: 9/16/2029

RC Date: 9/30/2058

RC Reason: Not assigned

SC Date: 9/30/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. Line 9 comprises about nine acres and was built in 1942 for use as a production facility that produced mines and mine fuses during the Vietnam War. The line is in modified caretaker status. In 1991 the PA/SI was completed and in May 1996 an initial RI was completed. During the supplemental RI which was completed in 2003 Freon-113 was found in the groundwater in concentrations of up to 220 parts per million (ppm). The plume most likely extends over approximately five acres and has been found to produce concentrations that displace oxygen at levels that represent a risk to human health. This information has been provided to American Ordnance safety. Freon-113 in groundwater is adequately delineated. The OU-6 RI was completed August 2023. CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (Freon 113, 1,1- DCE, and pentachlorophenol (PCP)). in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA, and LUCs.

19105.1015_IAAP-011_LINE 800 AMMO RENOV

Env Site ID: IAAP-011

Cleanup Site: LINE 800 AMMO RENOV

Alias: R11

Regulatory Driver: CERCLA

RIP Date: 9/1/2024

RC Date: 9/1/2024

RC Reason: Not assigned

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	9/30/2000
RD:	- -	- -
IRA:	1/31/2000	9/30/2000
RA(C):	2/1/2023	9/1/2024
RA(O):	- -	- -
LTM:	9/2/2024	9/30/2054

Site Narrative: LINE 800 - PRIMARY FUNCTION OF THE LINE WAS AMMUNITION RENOVATION. WASTES WERE GENERATED BY METAL CLEANING OPERATIONS. This site had been merged with IAAP-044, Line 800 Pinkwater Lagoon for better management and cost collection. This site was inadvertently closed in 2000 and reopened in 2023. This IRP site consists of the soil contamination which is part of OU-1. In 1943, leaching fields associated with the lagoon to include evaporation furrows were constructed. The lagoon also received metal cleaning sludge. In the 1970s this lagoon ceased to be used. Studies conducted in 1991 through 1998 indicated that primary waste disposed at the site included explosives-contaminated wash water and heavy metals from operations at Line 800 and other production lines. Carbon and fly ash disposal may also have occurred at the site. As a result of the RI sampling 63,236 cy of explosives-contaminated soils were excavated from this area during 1997. The excavated soil contained greater than 80,000 lbs. of explosives. This soil was taken to the IDA (IAAP-020) and sorted by contaminant level and type. Two additional areas of explosives soil contamination were found in 1998. One area in the southwest portion of the lagoon was found to require no action. The other area in settling basin No. 1 requires additional characterization and excavation. The lagoon currently is used as a phytoremediation wetlands treatment cell. The Army has determined that the facilities at this Line are excess and will pursue non-ER A funding for building demolition and debris removal. Additional evaluation of soil beneath the slabs will be required after the demolition. This site is considered RC for soils media under the IRP. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. Contaminated soil removal and monitoring well capping is ongoing in 2024. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1016_IAAP-012_EDA/EAST BURN PADS

Env Site ID: IAAP-012

Cleanup Site: EDA/EAST BURN PADS

Alias: IAAP-12

Regulatory Driver: CERCLA

RIP Date: 10/31/1998

RC Date: 10/31/1998

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	6/30/1997
RD:	4/30/1997	11/30/1997
IRA:	- -	- -
RA(C):	7/31/1998	10/31/1998
RA(O):	- -	- -
LTM:	10/31/1998	9/30/2054

Site Narrative: This IRP site consists of the soil contamination from past munitions production at the East Burn Pads (EBP) which is part of OU-1. The explosive disposal area consisted of eight raised earthen burning pads enclosed in a fenced area of approximately 12 acres. Activities included Open Burn (OB) of explosives-contaminated metals propellant explosives and pyrotechnic contaminated materials. Each pad was bermed on three sides to restrict horizontal movement of metal projectiles. The pads were in operation from 1941 until 1982. The PA/SI was completed in 1991 and an RI was completed in May 1996. The 1998 interim ROD required the removal of 21411 cy of contaminated soil. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1017_IAAP-012G_EDA/EAST BURN PADS - GROUNDWAT

Env Site ID: IAAP-012G

Cleanup Site: EDA/EAST BURN PADS - GROUNDWAT

Alias: IAAP-12G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site is part of OU-10 Explosive Disposal Area Groundwater consist of eight raised earthen burning pads enclosed in a fenced area of approximately 12 acres. Activities included OB of explosives-contaminated metals propellant explosives and pyrotechnic contaminated materials. Each pad was bermed on three sides to restrict horizontal movement of metal projectiles. The pads were in operation from 1941 until 1982 when the explosive waste incinerator was built. The PA/SI was completed in 1991 and an RI was completed in May 1996. In 2003 an SRI was completed to fill groundwater data gaps found in the May 1996 RI. Low levels of explosives and VOCs have been found in shallow groundwater and upper bedrock 30 feet below ground surface (ft bgs). In 2004 to 2006 the comprehensive watersheds evaluation and supplemental data collection was completed. CLEANUP/EXIT STRATEGY - The OU-10 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1,1-Dichloroethane, Methylene chloride, Benzene, 1,1-Dichloroethene, Naphthalene, Xylene, 0-, 1,2-Dichloroethane, Tetrachloroethene, cis-1,2- Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene, Ethylbenzene, 1,1,2-Trichloroethane, Vinyl chloride, 1,2,4-Trimethylbenzene, Benzene, 2-Amino-4,6-DNT, Naphthalene, 4-Amino-2,6-DNT, Methyl ethyl ketone, Royal Demolition Explosive, Methyl isobutyl ketone, Acetone, Toluene, Arsenic, and Xylene, m,p.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA with LUCs.

19105.1018_IAAP-013_INCENDIARY DISPOSAL AREA (EAST

Env Site ID: IAAP-013

Cleanup Site: INCENDIARY DISPOSAL AREA (EAST

Alias: IAAP-13

Regulatory Driver: CERCLA

RIP Date: 10/31/2007

RC Date: 10/31/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/2000	10/31/2007
RD:	8/31/2004	10/31/2007
IRA:	- -	- -
RA(C):	8/31/2004	10/31/2007
RA(O):	- -	- -
LTM:	10/31/2007	9/30/2054

Site Narrative: This IRP site consists of soil contamination from past munitions production at the Incendiary Disposal Area (InDA) which is part of OU-1. The site was used for disposal of waste military munitions in the 1940s. The exact size location and wastes disposed of at this site cannot be determined because there are no records of this activity ever being performed at the IAAAP. As stated in the 2010 OU-1 RACR 48 cy of lead-contaminated soil was excavated and transported to the IDA (IAAP-020) for treatment and disposal. This site is Response Complete (RC) for soils media under OU-1. This site is also being addressed for Munitions and Explosives of Concern (MEC) under OU-5 (MMRP) site number IAAP-006-R-01. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1020_IAAP-015_OLD FLY ASH WASTE PILE

Env Site ID: IAAP-015

Cleanup Site: OLD FLY ASH WASTE PILE

Alias: IAAP-15

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/30/2055

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	12/31/1990	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	- -	- -
IRA:	4/15/2016	9/15/2017
RA(C):	9/15/2026	9/15/2026
RA(O):	- -	- -
LTM:	9/16/2026	9/30/2055

Site Narrative: This site addresses soil surface water and sediment as part of OU-7. Ash was placed directly on the ground surface. Sludge from the sewage disposal plant was placed on this site once or twice a year since the early-1940s. It is unclear when this practice stopped. There is no record of the amounts of ash or sludge placed here. Most of the surface of the Fly Ash Waste Pile is vegetated. Surface runoff flows into Brush Creek. The PA/SI was completed in 1991 and the limited RI was completed in May 1996. Ash has fallen into Brush Creek. Uncontrolled dumping of vegetation and solid waste including tires bricks and five-gallon cans was found at this site in May 1999. This material was removed shortly after discovery. Soil samples collected beneath the fly ash in fall 2004 were analyzed for total metals Polycyclic Aromatic Hydrocarbons (PAH) and Toxicity Characteristic Leaching Procedure (TCLP) metals. No PAHs were detected in subsurface soil beneath the fly ash and total metals were detected at concentrations below screening levels. In 2018 a conservation project was completed to control erosion stabilize the slope and eliminate sloughing of fly ash and other materials from the old fly ash waste pile into Brush Creek. Based on the 2020 installation-wide RI conclusions and results of human health risk assessments and ecological risk assessments the 2021 OU-7 RI Report recommends that this site be included in the OU-7 FS to evaluate remedial alternatives to mitigate potentially unacceptable risks to future receptors from site-related contaminant of concern (COC) (arsenic and silver) in fly ash. It is anticipated that cleanup will include monitoring, FYRs, and LUCs. CLEANUP/EXIT STRATEGY - The FS will evaluate remedial alternatives to mitigate potentially unacceptable risks to future receptors from site-related COCs. It is anticipated that cleanup will include monitoring, FYRs, and LUCs.

19105.1021_IAAP-016_LINE 1 FORMER WASTEWATER IMPOUN

Env Site ID: IAAP-016

Cleanup Site: LINE 1 FORMER WASTEWATER IMPOUN

Alias: IAAP-16

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This site consists of Line 1 Impoundment soil sediment and surface water contamination being addressed as OU7. Groundwater associated with this site is also addressed under site IAAP-016G which is part of OU7. This site consists of the Line 1 Former Wastewater Impoundment and upgradient settling basins. From 1948 to 1957 this impoundment received large volumes of discharge. The wastes included TNT coal pile runoff and condensate from the coal-fired power plant. Fly ash usually was added to the impoundment liquid to absorb the explosives and reduce the color. In 1991 RI work for the Impoundment area was completed. In 1996 the action memo was approved. A contaminated soils IRA was completed during 1997 when 8270 cy of explosives-contaminated soils were excavated from this area. The excavated soils contained greater than 3900 pounds of explosives. This soil was taken to the IDA (IAAP-020) where it was separated by level of contamination. Approximately 1000 cy of higher contaminated soil was placed in Trench 7 and was treated as required by the ROD. The remainder was capped at the IDA without treatment. This site has been converted into wetlands. Native plants containing the nitro reductase enzyme are being used to phytoremediate the surface water. Low levels of residual explosives remain in surface water within the impoundment; those greater than 2 ppb are being treated with granular activated carbon prior to discharge. The FUSRAP PA identified this area as requiring additional investigation. In August 2004 the FUSRAP conducted a screening survey of this site to determine if radiological contaminants from the Atomic Energy Commission activities are present in the soil. PAs of all screening results indicate no radiological contamination present at this area; however, groundwater contamination was discovered in 2004. Between 2009 and 2013 contaminated soil was removed from multiple excavations at Line 1. Soil has been excavated during various remedial actions to meet either OU1 leaching-based Remediation Goals (RG) except where the presence of buildings precluded further excavation or in drainages that were sampled during Phase 2 SRI activities. Additional soil remedial actions are being conducted under OU1; however, groundwater concentration trends will be evaluated as part of the RI to assess whether soil may be acting as an ongoing source to groundwater. RDX in sediment is adequately characterized. Surface water is adequately delineated to complete the RI

and no further investigation is warranted. Additional groundwater investigation is warranted at the former impoundment to delineate the horizontal extent of RDX in overburden groundwater. O&M activities at this site include the Granular Activated Carbon (GAC) treatment system used to treat discharge; hydraulic control of surface water elevations via treated or direct release from Line 1 Impoundment; access road maintenance including snow removal; mowing and other clearing of vegetation; inspection and repair of erosion controls; and repair of erosion or animal-related damage to land features. The 2023 OU-6 RI recommends this site move to OU-7 FS. An FS will be completed for this site to evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1996 CDM (HMX, RDX, TNT, 1,3,5-TNB, 1,3-dinitrobenzene, nitrobenzene, DNT mix, nitrotoluene, and tetryl). An interim remedial action is currently in place for the former Line 1 Impoundment. This interim action is supported by ongoing O&M activities and is effectively addressing soil, sediment, and surface water media. However, the interim action does not currently fall under an OU. It is recommended that the interim action be presented as the final remedy for these sites and memorialized in a decision document. Because this action will address multiple media and require ongoing O&M, it is recommended that this site be placed under OU-7. Although the interim actions do not specifically address groundwater at the former Line 1 Impoundment, it is suggested that groundwater media also be included under OU-7 so that a more comprehensive remedial approach can be developed.
CLEANUP/EXIT STRATEGY - The FS will be performed to evaluate remedial alternatives to address the unacceptable risks or hazards. It is anticipated that cleanup will include GAC treatment of the surface water, MNA, LUCs, and FYRs to continue indefinitely.

19105.1022_IAAP-017_PESTICIDE PIT

Env Site ID: IAAP-017

Cleanup Site: PESTICIDE PIT

Alias: R13

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	5/31/1991
RI/FS:	9/30/2007	9/15/2026
RD:	- -	- -
IRA:	3/31/1995	6/30/1996
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site consists of the soil contamination which is part of OU-7. The Pesticide Pit was in operation between 1968 and 1974 for the disposal of small quantities of insecticides and herbicides. The Pesticide Pit is an inactive site located in the central portion of the IAAAP south of Line 3 and west of the Old Winnebago School House which is currently vacant and was fenced for safety reasons. The Pesticide Pit was a small plywood structure lined with limestone and polyester resin geomembrane; however, the integrity of the structure that contained these wastes was questionable. The pit was capped with clay of unknown thickness during the late-1970s to early-1980s. The PA/SI was completed in 1991 and the RI in May 1996. In 1995 based on preliminary RI results 144 cy of soils were excavated and the site was backfilled with pea gravel and clean soil. The removal action at the Pesticide Pit Site was conducted in accordance with the Action Memorandum for the Pesticide Pit Removal (Clean Development Mechanism (CDM) 1995) and not under OU1-related removal actions. The Action Memorandum contained pesticide RGs specific to the Pesticide Pit. Follow-on groundwater sampling and analyses indicated all contaminants were below federal action levels. Interim Remedial Actions (IRA) were completed in 1996. The soils were transported to an off-site incinerator for disposal. This action has not been finalized in a ROD. Based on the installation-wide RI conclusions and results of human health risk assessments and ecological risk assessments the 2023 OU-7 RI Report recommends SRI for soil and groundwater under OU-7. CLEANUP/EXIT STRATEGY - A supplemental RI is recommended, to include collecting additional data to identify the source of metals in soil and groundwater and develop an appropriate exposure point concentration (EPC) for hexavalent chromium. Following the SRI field effort, human health and ecological risk assessments will be completed for the Pesticide Pit to evaluate potentially unacceptable risk and hazard to human health and the environment and to recommend a path forward. This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1023_IAAP-018_POSSIBLE DEMOLITION SITE

Env Site ID: IAAP-018

Cleanup Site: POSSIBLE DEMOLITION SITE

Alias: IAAP-18

Regulatory Driver: CERCLA

RIP Date: 10/31/2007

RC Date: 10/31/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	7/31/2001	10/31/2007
RD:	8/31/2004	10/31/2007
IRA:	- -	- -
RA(C):	8/31/2004	10/31/2007
RA(O):	- -	- -
LTM:	12/15/2007	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part OU-1. This site was apparently used during the 1940s and possibly into the early 1950s as a demolition area for ammunition items. This demolition area was allegedly located south of Plant Road K near Yard G and across the road from the pistol range. There are no records to substantiate demolition activities, or the kind of ammunition items treated at the site. The exact size of the site is also unknown but is thought to be as big as 15 acres. Specific waste on the site is unknown. The SI sampling was completed in 1991 and no significant contamination was found. This site appears to be larger than previously thought and previous samples may not be representative of the site conditions. Contaminants listed in the PA for this site included white and red phosphorus as well as explosives and metals. Additional soil samples were collected in 2004 and documented in the Draft Final Report for the Soil Data Collection. Elevated levels of TNT and lead were found in multi-incremental shallow soil above background levels as determined in the OU-1 Record of Decision. A draft SRI was submitted to the US Environmental Protection Agency (USEPA) for review in April 2006. Soil has been excavated and transported to the IDA (IAAP-020) for treatment and disposal. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1024_IAAP-019_CONTAMINATED CLOTHING LAUNDRY

Env Site ID: IAAP-019

Cleanup Site: CONTAMINATED CLOTHING LAUNDRY

Alias: IAAP-19

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	6/30/1990	6/30/1991
SI:	6/30/1990	6/30/1991
RI/FS:	5/31/1995	9/15/2026
RD:	- -	- -
IRA:	8/15/2007	10/30/2007
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The laundry has been in operation from the 1940s through the present. It is currently used to launder coveralls underwear and towels used by production and maintenance personnel. The open sump was constructed in the 1940s of reinforced concrete which was upgraded with a covered sump in 2007. In 1991 the PA/SI was conducted by the US Army Toxic and Hazardous Materials Agency (USATHAMA); the analyses did not discover explosives-contaminated soils. The revised draft final RI IAAAP 11 Volumes was completed in 1996 reflecting SI results. In 1997 the explosive RDX was found in the surface soils surrounding the sump indicating a potential release of water from this sump. (Report of Action IAAAP Laundry Effluent Pre-treatment System Sampling and Analysis 1997). In 2001 the site was determined to be ineligible for IRP action because it is an active site. In accordance with the 2004 Federal Facility Agreement (FFA) dispute resolution with the USEPA the site was transferred to the Compliance-Related Cleanup (CC) Program for further investigation and action under RCRA. In 2006 soil sampling showed no contamination above SRI screening levels. In 2007 as part of the sump upgrade soils were sampled again and actionable levels of explosives were discovered. Contaminated soil was removed and disposed of at the IDA under the CC Program. This is considered a completed IRA. In 2008 sampling results indicated that the groundwater below the sump is contaminated with RDX. The highest result was 20.5 ppb RDX. In 2009 the site became Defense Environmental Restoration Program (DERP) eligible and was transferred back to IRP as part of a policy change. In 2012 the Army proposed that the site be managed as part of OU-6 on-site groundwater, but the USEPA declined that proposal. Groundwater proceeded to be addressed under RCRA. The draft final RCRA Facility Investigation (RFI) for the Contaminated Clothing Laundry (CCL) was submitted in April 2014. A new laundry facility is planned for FY26 therefore this site is to be included with OU-6. Per the 2018 RCRA Permit all Solid Waste Management Units (SWMU) listed in the 1990 FFA are to be transferred to IRP and addressed under Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). USEPA has agreed to transfer back to IRP so this site can be addressed under CERCLA with the current installation-wide RI. The CC-01 site was closed April 30, 2020, and this site was reopened. Site was determined to be

DERP eligible again and managed with OU-6 for all media. Monitoring wells at this site were installed with the RI phase. A Human Health Risk Assessment (HHRA) an Ecological Risk Assessment (ERA) were conducted to quantify potential risks to human health and the environment from exposure to contaminates. The OU-12 Phase 2 HHRA concluded that there were no unacceptable risks or hazards for hypothetical residents from exposure to soil or groundwater. The ERA concluded that no potentially unacceptable adverse ecological effects exist at this site. Based on the results of the RI and risk assessments, no further action (NFA) is warranted for soil and groundwater at this site under CERCLA. Contaminated soil the settling basin and sump have been removed from the site. NFA will be presented as the preferred remedy in the OU-12 Proposed Plan. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-12 ROD.

19105.1025_IAAP-020_INERT DISPOSAL AREA

Env Site ID: IAAP-020

Cleanup Site: INERT DISPOSAL AREA

Alias: OU-4

Regulatory Driver: CERCLA

RIP Date: 9/30/2011

RC Date: 9/30/2011

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	5/31/1991
RI/FS:	12/31/1990	5/31/1995
RD:	5/31/1995	8/31/1995
IRA:	9/30/1988	1/31/2000
RA(C):	3/31/1996	9/30/2011
RA(O):	- -	- -
LTM:	9/30/2011	9/30/2054

Site Narrative: The IDA which is OU-4 encompasses approximately 20 acres and is located west of C Road north of Line 3A in the west central part of the installation. It once included an inert (sanitary) landfill a burning ground a metal salvage operation the former Blue Sludge Lagoon wastewater sludge drying bed CEA and an earthen holding area formerly used to store sludge from Line 3 and Line 800. Soils from other restoration sites were transported to the inert disposal area for segregation according to health risk. Soils classified as a high health risk were placed in the Corrective Action Management Unit (CAMU) (Trench 7) for treatment. The CAMU was designated by the USEPA via a letter dated March 8, 1996. Soils classified as a medium health risk were placed in a RCRA-type lined cell (Trench 6) and soils that were classified as a low health risk were placed underneath the overall cap at the IDA. The inert landfill was in operation from 1941 to September 1992. It employed the trench-and-fill operation technique. Trenches 1 through 5 were filled primarily with sanitary landfill materials such as unsalvageable or unrecoverable materials (cafeteria and residential refuse and garbage broken pallets plastic tin cans and scrap wood/lumber paper cardboard and asbestos insulation in double-lined plastic bags). Ash from OB and incineration was also placed in the landfill. In 1980 a Part A permit was received for the inert landfill and the Blue Sludge Lagoon. Interim status was granted that year. During 1997 a low permeability synthetic cap was placed over trenches 1 through 5 (approximately 17 acres). This area was seeded in 1998. In 1984 the lagoon holding area was closed following the transfer of the blue sludge to a concrete-lined sludge drying bed where it remained until January 1997. The excavated area was backfilled and capped with clay and a vegetative cover was established. In 1997 the blue sludge was excavated from this drying bed and deposited into Trench 6. In 1997 explosives- and metals-contaminated soils from a 1993/1994 multi-site sump removal project were placed in Trench 6. The north end of Trench 5 contains special waste such as ash from the Contaminated Waste Processor (CWP) (IAAP-024) explosive waste incinerator (IAAP-025) and OB of explosives and explosives-contaminated wastes. In April 1988 this area was capped and the RCRA closure plan was completed. In February 1997 the plan was amended to address sampling issues. In 1997 during routine sampling radionuclides were found in groundwater samples and were

determined to be within normal background levels for IAAAP and within safe limits. In 1996 IRAs (soil removal and capping) at the IDA Former Line 1 Impoundment Area (IAAP-016) and the Line 800 Lagoon (IAAP-044) were initiated and were completed in 1997. Soil and debris from the burning grounds was placed underneath the inert landfill cap or in Trench 6 whichever was appropriate based upon contamination levels. In 1997 the cap construction was completed over Trenches 1 through 5. Soils from the East Burn Pads North Burn Pads North Burn Pads Landfill and Fire Training Pit were placed into Trenches 6 or 7. VOC-contaminated soils from the Fire Training Pit were removed and treated via a Low Temperature Thermal Desorption (LTTD) unit at Trench 6. On March 8, 1996, Trench 7 was designated as a CAMU by the USEPA. In FY02 approximately 6000 cy of soil contaminated with explosives and metals and stored in the CAMU were treated and segregated per the Interim Soil ROD. An ESD signed in 2003 specified enhanced biological treatment as the primary remedy for explosive-contaminated soils. Soil is not included in the current RI as soil has been addressed at the IDA in previous records of decision (RODs) i.e., Action Memorandum for the Inert Landfill (CDM 1997) and Interim Action Record of Decision for Trench 6 Trench 7 and the Cap Extension Area of the Inert Disposal Area (IDA) in Soils Operable Unit 4 (OU-4 IROD) (Tetra Tech 2008a). The ILF trenches have been closed with a synthetic liner cover system and Trench 6 and the CEA have been closed with RCRA Subtitle C synthetic liner cover systems; LUCs and post-closure monitoring will continue at the IDA in accordance with CERCLA and RCRA requirements. CLEANUP/EXIT STRATEGY - It is anticipated that cleanup will continue monitoring, FYRs, and LUCs.

19105.1026_IAAP-020G_INERT DISPOSAL AREA - GROUNDWA

Env Site ID: IAAP-020G

Cleanup Site: INERT DISPOSAL AREA - GROUNDWA

Alias: IAAP-20G

Regulatory Driver: CERCLA

RIP Date: 3/15/2026

RC Date: 9/30/2055

RC Reason: Not assigned

SC Date: 9/30/2055

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	5/31/1991
RI/FS:	6/30/2004	3/15/2025
RD:	- -	- -
IRA:	- -	- -
RA(C):	3/15/2025	3/15/2026
RA(O):	3/15/2026	9/30/2055
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-4 consists of groundwater contamination. This area once included an inert (sanitary) landfill a burning ground a metal salvage operation the former Blue Sludge Lagoon a wastewater sludge drying bed Classification Exception Area (CEA) and an earthen holding area formerly used to store sludge. The inert landfill was in operation from 1941 to September 1992 and employed the trench and fill operation technique. Trenches 1 through 5 were filled primarily with sanitary landfill materials such as unsalvageable or unrecoverable materials (cafeteria and residential refuse and garbage broken pallets plastic tin cans and scrap wood/lumber paper cardboard and asbestos insulation in double-lined plastic bags). Ash from OB and incinerations was also placed in the landfill. In 1980 a Part A permit was received for the inert landfill and the Blue Sludge Lagoon. Interim status was granted that year. In 1984 the lagoon holding area was closed following the transfer of the blue sludge to a concrete-lined sludge drying bed where it remained until January 1997. The excavated area was backfilled and capped with clay and a vegetative cover was established. In 1997 the blue sludge was excavated from the drying bed and deposited into Trench 6. In 1997 explosives- and metals-contaminated soils from a 1993-1994 multi-site sump removal project were placed in Trench 6. Also, during 1997 a low permeability synthetic cap was placed over Trenches 1 through 5 (approximately 17 acres). This area was seeded in 1998. The north end of Trench 5 contains special waste such as ash from the CWP (IAAP-024) explosive waste incinerator (IAAP-025) and OB of explosives and explosives-contaminated wastes. In April 1988 this area was capped and the RCRA closure plan was completed. In February 1997 the plan was amended to address sampling issues. In 1997 during routine sampling radionuclides were found in groundwater samples and were determined to be within normal background levels for IAAAP and within safe limits. In 1994 groundwater monitoring began. Low levels of explosives VOCs and metals have been found in shallow groundwater (30 ft bgs). High levels of PCP have been found in one well. Based on the results of the HHRA from the 2021 OU-4 RI Report an evaluation of the soil and groundwater final COCs is warranted in a FS relative to further actions. NFA is recommended from an ecological risk perspective. RI installed the needed monitoring wells. It is anticipated that

cleanup will continue MNA and LUCs. CLEANUP/EXIT STRATEGY - Based on the results of the HHRA this site will continue to an FS relative to further actions. It is anticipated that cleanup will continue MNA indefinitely, monitoring FYRs and LUCs.

19105.1027_IAAP-021_DEMOLITION AREA/DEACTIVATION FU

Env Site ID: IAAP-021

Cleanup Site: DEMOLITION AREA/DEACTIVATION FU

Alias: IAAP-021

Regulatory Driver: CERCLA

RIP Date: 9/30/2007

RC Date: 9/30/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	9/30/2000
RD:	- -	- -
IRA:	5/31/1994	9/30/2000
RA(C):	6/30/2004	9/30/2007
RA(O):	- -	- -
LTM:	9/30/2007	9/30/2054

Site Narrative: The Demolition Area (DA) (IAAP-021) is approximately 23 acres located in the southwestern portion of the installation. It is an active site used for the emergency open burn and open detonation of rejected ammunition. The DA has been in use since the early 1940s for open detonation and since 1997 for open burn operations. Metals and residues that remain after detonation or burning are collected as part of site maintenance. If the metals and residues were suspected of containing explosives the metals and residues were thermally treated at the Deactivation Furnace (DF) (IAAP-023) to remove remaining explosive constituents. The PA/SI was completed in 1991 and an initial RI was completed in May 1996. The Interim OU-1 ROD required the removal of 753 cy of lead-contaminated soil from the DF subsite. The FUSRAP PA identified this area as requiring additional investigation. In August 2004 FUSRAP conducted a screening survey of this site to determine if radiological contaminants from USAEC activities are present in soil. Preliminary assessments of all screening results indicated no radiological contamination present at this area. The February 19, 2004, Resolution of Dispute between the US Army and the USEPA acknowledged that the DF was ineligible for Environmental Restoration Army (ERA) funds and required that the site be cleaned up under CERCLA subject to the OU-1 RGs. This dispute resolution required that Remedial Actions (RA) at the DF be completed by December 2007 and the subsequent report documenting the RAs submitted by August 2008. The DA and DF were assigned separate site numbers when the sites were included in the IRP. When the sites were moved to CC both sites were included in site number CC-06 due to site proximity. Per the 2018 OU-1 ESD this site has been reopened as IAAP-021 as it is being addressed as a soil site for OU-1 LUCs under IRP. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1029_IAAP-024_CONTAMINATED WASTE PROCESSOR

Env Site ID: IAAP-024

Cleanup Site: CONTAMINATED WASTE PROCESSOR

Alias: R16

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	6/30/1990	6/30/1991
SI:	6/30/1990	6/30/1991
RI/FS:	5/31/1995	9/15/2026
RD:	- -	- -
IRA:	3/31/2007	9/30/2009
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site housed within building BG-199-2 is located south of the North Burn Pads Landfill and north of the North Burn Pads. A fire in 2004 damaged the CWP and rendered it inoperable. Rehabilitation of the CWP in 2006 included the installation of new air pollution control equipment and the replacement of burners. During the construction of the new CWP petroleum contaminated soil was discovered while excavating a trench to install a fire hydrant. The COC at the CWP is lead-contaminated soil (i.e., lead concentrations exceeding the OU-1 remedial goals). The February 19, 2004, Resolution of Dispute between the Depart of the Army and the USEPA placed management of this site with the Army's CC Program. The risk assessment analysis determined that lead was found to be the COC for human health in soil at location CWP-005 (area east of the former sump location) which required further action under RCRA and the 1998 ROD for OU-1. The ROD specified the removal of lead-contaminated soils in excess of the RGs for OU-1. The extent of lead contaminated soil at the CWP was delineated in 2006 as part of the Phase I SRI The draft SRI Report was submitted in July 2009 to document the SRI performed at the CWP and other CC sites during the spring/summer of 2006. In 2005 a supplemental RI work plan was written and in 2006 surface and subsurface soil samples were collected. Results indicated 10 cys of metals-contaminated soil requiring excavation. In October 2007 soil excavation and sampling activities began. Because this site was not listed in the IRP OU#1 ROD the regulator requested that interim measures work plan be written (i.e., a RCRA document) to describe this soil excavation. In October of 2007 as a part of the corrective measure at the CWP approximately 0.6 cy of lead contaminated soil was excavated backfilled with clean soil to the original grade compacted and then reclaimed to original conditions. All excavated soil from the CWP was transported to Trench 6 at the IDA for later treatment. Confirmation sample results indicate NFA is required. Potential sources of release are no longer present at the site. The draft SRI for these sites was submitted to the USEPA in July of 2009. Numerous attempts to solicit comments from USEPA were made but none received. In May 2010 the USEPA was notified that the Army considered this document final and would proceed with drafting the Corrective Measures Study (CMS). The draft final CMS was submitted to USEPA May 2012. Like the draft to date no response

has been received from USEPA. The CMS concluded that NFA is warranted at all CC sites except the DA portion of CC-06. As such a RCRA permit modification will be sought to document that NFA at these sites is required. A draft final Statement of Basis was submitted to the EPA on 29 May 2012. To date no response has been received from USEPA. On June 18, 2012, a letter was sent to USEPA concerning the six CC sites. It included recent activities as well as planned activities. No response received to date. Per the 2018 RCRA Permit all SWMU listed in the 1990 FFA are to be transferred to IRP and addressed under CERCLA. USEPA has agreed to transfer back to IRP so this site can be addressed under CERCLA with the current installation-wide RI. CC-02 was closed April 30, 2020, and this site reopened. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-12 Phase II Report recommends an NFA in the OU-12 PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-12 ROD.

19105.1030_IAAP-025_EXPLOSIVE WASTE INCINERATOR

Env Site ID: IAAP-025

Cleanup Site: EXPLOSIVE WASTE INCINERATOR

Alias: R17

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	5/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 for soil contamination contained an adjoining air pollution control system. The site treated explosive wastes sump scrap and explosives-contaminated waste solvents. Explosives-contaminated carbon was originally treated in the EWI but is now recycled. Resultant ash was collected and managed as a hazardous waste. The EWI buildings and facilities underwent RCRA closure, and the incinerator was removed from the installation in 1999. The PA/SI was completed in 1991 and an initial RI was completed in May 1996. One area (drainage ditch) had a detection of RDX at levels above cleanup criteria that was not addressed by RCRA closure of the EWI. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - It is anticipated that this site is NFA with OU-11. This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1032_IAAP-027_FLY ASH LANDFILL (NEW BLDG 400-

Env Site ID: IAAP-027

Cleanup Site: FLY ASH LANDFILL (NEW BLDG 400-

Alias: R19

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	6/30/1990	6/30/1991
SI:	6/30/1990	6/30/1991
RI/FS:	5/31/1995	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This landfill was constructed in accordance with the Iowa regulations for sanitary landfills. The state approved the plans and on May 5, 1982, issued construction permit #29-SDP-3-82P. The approved construction plan used the compacted native clay soils as the landfill's base. The liner construction is appropriate for disposal of fly ash which has been characterized as nonhazardous. No hazardous wastes are disposed of in the landfill. The Fly Ash Landfill (FALF) was listed in the Sept. 21, 1990, IRP FFA Docket No. VII-F-90-0029. In 2001 the site was determined to be ineligible for ERA funding as the site is active. While this site was under the IRP ERA funded the PA/SI (SI of IAAAP USATHAMA June 1991) and the RI (Revised Draft Final RI Risk Assessment IAAAP 11 Volumes US Army Corps of Engineers (USACE) May 1996). The analyses did not include testing for explosives-contaminated soils and no significant contamination was found; however, in 2004 the USEPA reviewed the Fly Ash Landfill groundwater monitoring data and concluded that the landfill is releasing sulfate to the groundwater. In 2005 a supplemental RI and regulatory path forward document was finalized by the Army. This document referenced the landfill's 2005 Annual Water Quality Report (AWQR) which concluded the landfill was working properly. The site was removed from the IRP because it is an active facility. The February 2004 IRP FFA Dispute Resolution (DR) placed management of this site under the Army's CC Program. This DR states that the Army would be out of compliance with the RCRA hazardous waste permit if the site was not further investigated. The USEPA's concern with this site is that the landfill may not be functioning properly. This concern was brought about by sulfate levels exceeding Coal Combustion Residue (CCR) permit levels. In March 2006 the CC program completed a supplemental RI work plan. The USEPA accepted this plan with comments which requested additional investigation at the FALF. The Army responded to this comment by forwarding the 2005 AWQR to the USEPA. No response was received from USEPA. The draft SRI for these sites was submitted to the USEPA in July 2009. Numerous attempts to solicit comments from USEPA were made but none received. In May 2010 the USEPA was notified that the Army considered this document final and would proceed with drafting the CMS. The draft final CMS was submitted to USEPA in May 2012. Like the draft to date no response has

been received from USEPA. The CMS concluded that NFA is warranted at all sites except the Demolition Area (DA) portion of CC-06. The Deactivation Furnace (DF) is the other portion of CC-06 which has a NFA recommendation. As such a RCRA permit modification will be sought to document that NFA at these sites is required. A draft final Statement of Basis was submitted to the USEPA on May 29, 2012. To date no response has been received from USEPA. On June 18, 2012, a letter was sent to USEPA concerning the six CC sites. It included recent activities as well as planned activities. No response received to date. During the August 13, 2014, meeting with RCRA regulator it was agreed that this site needs to maintain compliance with its State of Iowa CCR permit and that the planned OU-12 ROD should document that the investigation of this site under the CC program per 2004 Dispute Resolution is complete. Site was closed in CC and reopened under IAAP-024 19105.1032 in the IR Program on April 30, 2020. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-12 RI Phase I Report recommended that an SRI and an FS be conducted for this site to mitigate potentially unacceptable risks to future receptors from site-related COCs in soil. The November 2021 TPP Phase II meeting determined this site ineligible due to this site is an active landfill state permitted through 2029. CLEANUP/EXIT STRATEGY - The state approved the plans and on May 5, 1982, issued construction permit #29-SDP-3-82P. With an active permit this site is DERP ineligible, therefore this site will close with the OU-12 ROD.

19105.1033_IAAP-028_CONSTRUCTION DEBRIS DISPOSAL AR

Env Site ID: IAAP-028

Cleanup Site: CONSTRUCTION DEBRIS DISPOSAL AR

Alias: IAAP-28

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site is addressed under OU-7 for soil surface water and sediment. Wastes were placed in a ravine with periodic soil cover. Waste included brick stone concrete wire and 55-gallon drums. It is believed that this site was in operation from 1941 to September 1992. The PA/SI was completed in 1991 and the initial RI was completed in May 1996; no significant contamination was found. It is believed that unauthorized dumping occurred at this site. Additional soil and sediment samples were collected in 2004 to help determine the full extent of the site. This information is documented in the draft final report for the soil data collection. No analytes above the background levels as determined in the OU-1 ROD were detected. Material that appeared to be fly ash was encountered at 18 ft bgs. Soil is adequately characterized and requires no additional investigation. Based on the installation-wide RI conclusions and results of 2023 OU-7 RI recommends NFA and to transfer to OU-11 for closure. CLEANUP/EXIT STRATEGY - It is anticipated that this site will move to OU-11 as NFA. This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1034_IAAP-029_LINE 3A SEWAGE TREATMENT PLANT/

Env Site ID: IAAP-029

Cleanup Site: LINE 3A SEWAGE TREATMENT PLANT/

Alias: R21

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	6/30/1991
SI:	6/30/1990	6/30/1991
RI/FS:	9/30/2007	9/15/2026
RD:	- -	- -
IRA:	3/31/1995	6/30/1996
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site is listed in the Sept. 21, 1990, IRP FFA Docket No. VII-F-90-0029. In 2001 the site was determined to be ineligible for ERA funding as the site is active. While this site was under the IRP ERA funded the PA/SI (SI of IAAAP USATHAMA June 1991) and the RI (Revised Draft Final RI Risk Assessment IAAAP 11 Volumes USACE May 1996). The analyses did not include testing for explosives-contaminated soils. Significant levels of explosives were found in the outfall and downstream surface water. Samples collected from the outfall in October 2000 showed slightly elevated levels of RDX, HMX, and TNT. Background documents include a PA (1994) and an RI (1996) completed under the IRP. This site was removed from the IRP because it is an active facility. The February 2004 IRP FFA DR placed management of this site under the Army CC Program. This DR states that the Army would be out of compliance with the RCRA hazardous waste permit if this site was not further investigated. In March 2006 the CC Program completed a supplemental RI work plan. Phase 1 supplemental RI sampling was conducted in April 2006 and phase 2 soil sampling was conducted in 2007. Results indicated NFA was required. The draft SRI for these sites was submitted to the USEPA in July of 2009. Numerous attempts to solicit comments from USEPA were made but none received. In May of 2010 the USEPA was notified that the Army considered this document final and would proceed with drafting the CMS. The draft final CMS was submitted to USEPA in May 2012. Like the draft to date no response has been received from USEPA. The CMS concluded that NFA is warranted at all sites except the DA portion of CC-06. The DF is the other portion of CC-06 which has a NFA recommendation. As such a RCRA permit modification will be sought to document that NFA at these sites is required. A draft final Statement of Basis was submitted to the USEPA on May 29, 2012. To date no response has been received from USEPA. On June 18, 2012, a letter was sent to USEPA concerning the six CC sites. It included recent activities as well as planned activities. No response received to date. Per the 2018 RCRA Permit all SWMU listed in the 1990 FFA are to be transferred to IRP and addressed under CERCLA. USEPA has agreed to transfer back to IRP so this site can be addressed under CERCLA with the current installation-wide RI. The CC-05 site was closed April 30, 2020, and this site was reopened. Site was determined to be DERP eligible again. Based on the

installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-12 RI Phase II Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1036_IAAP-031_YARD B AMMO BOX CHIPPER DISPOSA

Env Site ID: IAAP-031

Cleanup Site: YARD B AMMO BOX CHIPPER DISPOSA

Alias: R23

Regulatory Driver: CERCLA

RIP Date: 9/15/2028

RC Date: 9/15/2028

RC Reason: Not assigned

SC Date: 9/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	12/31/1990	8/31/1991
RI/FS:	12/31/1990	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The Yard B Ammunition Box Chipper Disposal Pit (ABCDP) has been estimated to measure 120 x 40 x 8 ft. The pit was reportedly used for a three-month period sometime between 1972 and 1975. Wastes consisted of shredded ammunition boxes treated with the wood preservative PCP. Investigations conducted during 1997 have not substantiated the former existence of this site. If this site is ever located, it will be investigated. Bis-2-ethylhexylphthalate has been found in groundwater. This site was further investigated during the comprehensive watershed evaluation and supplemental data collection effort in 2005-2006 where nine trenches were excavated at the ABCDP area to locate the pit. In all nine trenches no indication of the wooden boxes was found thus the location of the pit was not confirmed even in the location where the PA (JAYCOR 1991) indicated (Trench 5) or where aerial photo review indicated a disturbed area (Trenches 1 and 2). Two soil samples were collected from Trench 6 and Trench 7 and analyzed for explosives to characterize soil in a location with heavy use. All explosives analyzed were below detection limits. Based on these samples and those evaluated in the Comprehensive Watersheds Evaluation and Supplemental Data Collection Work Plan (CWWP) there is no indication of a disposal pit or contamination at the ABCDP. This site needs to be reopened based on the 2020 installation-wide RI conclusions and results of HHRA and ecological risk assessments. The 2021 OU-7 RI Report recommends that this site be included in the OU-7 FS to evaluate remedial alternatives to mitigate potentially unacceptable risks to future receptors from site-related COCs. The expected remedy is to characterize the site with dig and hauls. CLEANUP/EXIT STRATEGY - An FS should be completed to evaluate remedial alternatives to mitigate potentially unacceptable future risks from site-related COCs (Aluminum and manganese.) This phase will also evaluate the potential performance and cost to remove contaminated soil to UU/UE. The PP will include a preferred remedy and present the cleanup plan for public comment. Following the public comment period, a final ROD will be issued. The RD will detail the cleanup plans and specifications for site cleanup. The RA(C) will remove soil contamination to UU/UE under OU-11.

19105.1037_IAAP-032_BURN CAGES, BCLF; WEST BURN PAD

Env Site ID: IAAP-032

Cleanup Site: BURN CAGES, BCLF; WEST BURN PAD

Alias: #

Regulatory Driver: CERCLA

RIP Date: 12/31/2002

RC Date: 12/31/2002

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	4/30/1998
RD:	1/31/1999	9/30/1999
IRA:	- -	- -
RA(C):	6/30/2000	12/31/2002
RA(O):	- -	- -
LTM:	12/31/2002	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part of OU-1. Groundwater associated with this site is addressed under site IAAP-032G which is part of the new OU-10 (Explosive Disposal Area). Burn cages were used for incineration of materials. The 1998 interim soil ROD required the removal of an estimated 1451 cy of soil contaminated with metals and explosives. This site is considered RC for the soils media under the IRP as documented in the 2000 Phase 1 and 2002 Phase 3 soil RA Report (north side of road). This site does not include the West Burn Pads South of the Road that is being addressed by the FUSRAP program. The MEC and Munitions Constituents (MC) were addressed under OU-5 (MMRP) as captured in site IAAP-003-R-01 which is considered NFA. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1038_IAAP-032G_WEST BURN PAD AREA - GROUNDWAT

Env Site ID: IAAP-032G

Cleanup Site: WEST BURN PAD AREA - GROUNDWAT

Alias: IAAP-32G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This site is to be incorporated into one site; IAAP-032 (Burn Cages) IAAP-033 (Burn Cage Landfill) IAAP-034 (West Burn Pads) and IAAP-035 [West Burn Pads Landfill (WBPLF)] and are part of OU-10 operable unit for the Explosive Disposal Area groundwater. For administrative purposes the WBPLF South of the Road groundwater will be documented with this site. The site was used from 1949 to 1982, when the cages were removed. In 1991, during the SI metal parts munitions casings and staining on the ground surface were observed. Ash generated from the burn operations was disposed in the adjacent landfills. The landfills are heavily vegetated. Between 1949 and 1982, ash from the Burn Cages and West Burn Pads was disposed at the Burn Cage Landfill and then between 1950 and 1975, at the WBPLF. The WBPLF also received waste from the East Burn Pads as well as various solid wastes that included sanitary and industrial waste. This site consists of the contamination from past activities. In 1991 the PA/SI was completed and in May 1996 an RI was completed. In 2003 an SRI was completed to fill groundwater data gaps found in the May 1996 RI. In 2004 to 2006, the comprehensive watersheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. After the soil removal was completed in 2000 relatively high levels of explosives and Freon were found in the groundwater. In 2000, low levels of explosives were detected in the creek south of the WBPLF. In 2003 an SRI was completed and in 2004 a groundwater model was created. CLEANUP/EXIT STRATEGY - The OU-10 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1,1-Dichloroethane, Methylene chloride, Benzene, 1,1-Dichloroethene, Naphthalene, Xylene, 0-, 1,2-Dichloroethane, Tetrachloroethene, cis-1,2- Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene, Ethylbenzene, 1,1,2-Trichloroethane, Vinyl chloride, 1,2,4-Trimethylbenzene, Benzene, 2-Amino-4,6-DNT, Naphthalene, 4-Amino-2,6-DNT, Methyl ethyl ketone, Royal Demolition Explosive, Methyl isobutyl ketone, Acetone, Toluene, Arsenic, and Xylene, m,p.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA with LUCs.

19105.1039_IAAP-036_NORTH BURN PADS

Env Site ID: IAAP-036

Cleanup Site: NORTH BURN PADS

Alias: #

Regulatory Driver: CERCLA

RIP Date: 10/15/2000

RC Date: 10/15/2000

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	12/31/1990	8/31/1991
RI/FS:	12/31/1990	4/30/1998
RD:	- -	- -
IRA:	- -	- -
RA(C):	6/15/1998	10/15/2000
RA(O):	- -	- -
LTM:	10/15/2000	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part of OU-1. This site consists of Pads 1-N and 2-N. A 275-gallon diesel fuel station was located at the base of Pad 2-N. Soil excavations were completed in 1999 under soils Phase 1 RA. This site is considered RC for soils media under the IRP. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1040_IAAP-037_NORTH BURN PADS LANDFILL

Env Site ID: IAAP-037

Cleanup Site: NORTH BURN PADS LANDFILL

Alias: #

Regulatory Driver: CERCLA

RIP Date: 12/31/1998

RC Date: 12/31/1998

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	5/31/1996
RD:	5/31/1997	12/31/1998
IRA:	- -	- -
RA(C):	1/31/1998	12/31/1998
RA(O):	- -	- -
LTM:	12/31/1998	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part of OU-1. North Burn Pads Landfill (NBPLF) was used to receive the remnants from the North Burn Pads; reported to be flashed cans. Soils were disposed of at the IDA site IAAP-020 in accordance with the 1998 final ROD. Cleanup of this site is documented in the Phase 1 RA report dated October 2000. This site is considered RC for soils media under the IRP. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1041_IAAP-038_BUILDING 600-86 SEPTIC SYSTEM

Env Site ID: IAAP-038

Cleanup Site: BUILDING 600-86 SEPTIC SYSTEM

Alias: IAAP-38

Regulatory Driver: CERCLA

RIP Date: 9/15/2028

RC Date: 9/15/2028

RC Reason: Not assigned

SC Date: 9/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	12/31/1990	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site which is part of OU7 consists of soil contamination from past activities. This building has served in several roles since its construction in 1941. It was an analytical laboratory from 1941 to 1953. In 1985 two rooms in the building were used to store RCRA hazardous wastes. Room A was used to store spent solvents with a permitted capacity of 2640 gallons. Room B was used to store waste liquids containing cyanide salts. Both rooms had concrete curbing around the perimeter. Small amounts of solvents that may be contaminated with explosives were accumulated in Room C then filtered through a carbon filter column before being taken off-site. The function of the laboratory was to perform drinking water and wastewater analyses as well as analysis of primer mixes containing lead azide in quantities of 10 to 20 milligrams. The waste from the primer tests was deactivated with ceric ammonium nitrate and the resultant waste solution was disposed of in the Explosive Disposal Area (IAAP-012). The laboratory building was constructed with its own septic tank and drain. Sometime after 1983 sludge was removed from the septic tank and the tank was filled with sand. RCRA closure on the building occurred in 2000. The building was torn down under the Facilities Reduction Program in 2007. Groundwater associated with this site is addressed under site IAAP-038G which is part of OU-11. The results of the 1996 RI indicated that no significant contamination was present, and this site was not advanced to the FS stage. Based on the 2020 installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-7 RI Report recommends that this site be included in the OU-7 FS to evaluate remedial alternatives to mitigate potentially unacceptable risks to future receptors from site-related COCs. CLEANUP/EXIT STRATEGY - An FS will evaluate remedial alternatives to mitigate potentially unacceptable future risks from site-related COCs (Aluminum, mercury, and manganese.). The RA(C) will remove soil contamination to UU/UE.

19105.1042_IAAP-039_FIRE TRAINING PIT

Env Site ID: IAAP-039

Cleanup Site: FIRE TRAINING PIT

Alias: #

Regulatory Driver: CERCLA

RIP Date: 9/30/2004

RC Date: 9/30/2004

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	12/31/1990	8/31/1991
RI/FS:	12/31/1990	9/30/2004
RD:	- -	- -
IRA:	3/31/1996	9/30/2004
RA(C):	9/15/2004	9/30/2004
RA(O):	- -	- -
LTM:	9/30/2004	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part of OU-1. The Fire Training Pit (FTP) was an unlined pit and used from 1982 to 1987. In 1991 the PA/SI was completed, and the RI was completed in May 1996. Investigations found localized soil and groundwater contamination consisting of significant quantities of VOCs (including chlorinated solvents) SVOCs metals and low levels of dioxins and furans. In 1994 groundwater monitoring began. In 1998 a source removal action was completed at the FTP. Approximately 5,200 cys of contaminated soil was removed and approximately 2,600 cys of the removed soil was thermally treated using low-temperature thermal desorption (2000). In the pit area soil was removed to 22 ft bgs and prior to backfilling approximately two to four feet of sand was placed across the bottom of the excavation to allow for potential groundwater extraction if necessary. The remainder of the excavation was backfilled with clay (2000). In August 2003 additional soil removal actions were completed at the FTP. Approximately 116 cys of soil was removed from the northwest pit and approximately 850 cys was removed from the northeast pit; soil was disposed of at the IDA. Confirmation sample results indicated that that no further excavation was required, and the pits were backfilled (2003). The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1043_IAAP-039G_FIRE TRAINING PIT - GROUNDWATE

Env Site ID: IAAP-039G

Cleanup Site: FIRE TRAINING PIT - GROUNDWATE

Alias: IAAP-39G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site is part of the new OU-10 (Explosive Disposal Area) consists of groundwater contamination. The Fire Training Pit was an unlined pit and was used from 1982 to 1987. In 1991, the PA/SI was completed, and the RI was completed in May 1996. Investigations found localized soil and groundwater contamination consisting of significant quantities of VOCs (including chlorinated solvents) SVOCs metals and low levels of dioxins and furans. In 1994 groundwater monitoring began. High levels of VOCs in concentrations greater than 30 ppm have been found in shallow groundwater and the upper bedrock (30 ft bgs). Groundwater contamination has migrated to the Spring Creek tributary. In 2003 the SRI was completed and was documented in a remedial alternative analysis document. In 2004 to 2006 the comprehensive water sheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. CLEANUP/EXIT STRATEGY - The OU-10 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1,1-Dichloroethane, Methylene chloride, Benzene, 1,1-Dichloroethene, Naphthalene, Xylene, 0-, 1,2-Dichloroethane, Tetrachloroethene, cis-1,2- Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene, Ethylbenzene, 1,1,2-Trichloroethane, Vinyl chloride, 1,2,4-Trimethylbenzene, Benzene, 2-Amino-4,6-DNT, Naphthalene, 4-Amino-2,6-DNT, Methyl ethyl ketone, Royal Demolition Explosive, Methyl isobutyl ketone, Acetone, Toluene, Arsenic, and Xylene, m,p.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA with LUCs.

19105.1044_IAAP-040_ROUNDHOUSE TRANSFORMER STORAGE

Env Site ID: IAAP-040

Cleanup Site: ROUNDHOUSE TRANSFORMER STORAGE

Alias: #

Regulatory Driver: CERCLA

RIP Date: 8/31/2005

RC Date: 8/31/2005

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	12/31/1990	8/31/1991
RI/FS:	12/31/1990	7/31/1998
RD:	6/30/2002	8/31/2003
IRA:	7/31/1999	5/31/2000
RA(C):	5/31/2003	8/31/2005
RA(O):	- -	- -
LTM:	8/31/2005	9/30/2054

Site Narrative: This IRP site consists of soil contamination which is part of OU-1. The Roundhouse Transformer Storage area was used to store transformers pending use or disposal. The storage yard is a flat graded area with crushed stone on a hard base. According to the 1997 FS two areas with elevated Polychlorinated Biphenyls (PCB) soil removal was completed. The 1998 interim soil ROD required the removal of an estimated 599 cys of soil contaminated with PCBs. This site is considered RC for soils media under the IRP. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains.

19105.1045_IAAP-041_LINE 3A POND

Env Site ID: IAAP-041

Cleanup Site: LINE 3A POND

Alias: #

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The soils of this site are included in OU-7. The Line 3A Pond (leach field and disposal pit) was constructed in 1956 and reportedly closed and removed in either 1958 or 1959 (JAYCOR 1996). The leach field was constructed as a sand-filled structure on the ground surface approximately 40 feet by 60 feet in area and 4 feet high. According to a site drawing dated 1951 the leach field was associated with a floor drain in the western section of Building 3A-01 located to the north of the site. The raw chemical disposal pit approximately 10 feet by 20 feet in area and approximately 6 feet deep was apparently not connected to the leach field. According to the final SRI for OU 7 (2011) there are no available records indicating what material was used to line the raw chemical disposal pit. Line 3A pond is assumed to be an excavated unlined pit. The pond area is relatively flat and slopes gently. While some sources conflict on this fact it is generally believed that this site was excavated and backfilled circa 1959. The PA/SI was completed in 1991 and the RI was completed in May 1996. Soil samples collected in 2005 and 2014 detected only arsenic and chromium above the screening levels however arsenic does not exceed the OU1 remediation goal established in the ROD for OU1 to be protective of groundwater (leachability). Arsenic and chromium are naturally occurring in soil at the Line 3A Pond. Soil at this site was sampled during the 2020 Installation-Wide RI and data has discovered soil contamination. The 2023 OU-7 RI Report recommends that this site move to OU-11 for NFA. CLEANUP/EXIT STRATEGY - The RI recommends NFA for soil under OU-11.

19105.1047_IAAP-043_FLY ASH DISPOSAL AREA

Env Site ID: IAAP-043

Cleanup Site: FLY ASH DISPOSAL AREA

Alias: R30

Regulatory Driver: CERCLA

RIP Date: 9/15/2028

RC Date: 9/15/2028

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	8/31/1990	8/31/1991
SI:	8/31/1990	8/31/1991
RI/FS:	12/31/1990	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	- -	- -
LTM:	9/15/2028	9/30/2057

Site Narrative: This IRP site which is part of OU-7 was used for the disposal of fly ash residual coal clinkers and other residue from the coal-fired power plant in the 1940s to 1950s. Nearly five acres in size the site is abandoned and covered with natural vegetation but has no soil or clay cover. The PA/SI was completed in 1991 the RI was completed in May 1996; sampling found no significant contamination. This site was recommended as NFA in October 2000 but may need to be reopened for additional sampling to support the NFA determination. This site needs to be reopened based on the 2020 installation-wide RI conclusions and results of HHRA and ecological risk assessments. The 2023 OU-7 RI Report recommends that this site be included in an OU-7 SRI. Fly ash has not been sampled within the 2019 delineation area. Therefore, it is recommended that an SRI be conducted to assess the nature and extent of contamination and potential risks associated with fly ash. If potential unacceptable risk is identified from exposure to the fly ash, then it is recommended that the management of fly ash at this site be evaluated under the OU-7 FS. CLEANUP/EXIT STRATEGY - The FS will evaluate remedial alternatives to mitigate potentially unacceptable risks to future receptors from site-related COCs. It is anticipated that cleanup will include monitoring FYRs and LUCs.

19105.1048_IAAP-044_LINE 800 & PINKWATER LAGOON

Env Site ID: IAAP-044

Cleanup Site: LINE 800 & PINKWATER LAGOON

Alias: #

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	5/31/1991
RI/FS:	12/31/1990	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site consists of the groundwater contamination which is part of OU-7. In 1943 leaching fields associated with the lagoon to include evaporation furrows were constructed. The lagoon also received metal cleaning sludge. In the 1970s this lagoon ceased to be used. Studies conducted in 1991 through 1998 indicated that primary waste disposed at the site included explosives-contaminated wash water and heavy metals from operations at Line 800 and other production lines. Carbon and fly ash disposal may also have occurred at the site. As a result of the RI sampling 63236 cy of explosives-contaminated soils were excavated from this area during 1997. The excavated soil contained greater than 80000 lbs. of explosives. This soil was taken to the IDA (IAAP-020) and sorted by contaminant level and type. Two additional areas of explosives soil contamination were found in 1998. One area in the southwest portion of the lagoon was found to require no action. The other area in settling basin No. 1 requires additional characterization and excavation. The lagoon currently is used as a phytoremediation wetlands treatment cell. The 2023 OU-6 RI recommended this site move to OU-7 for an FS. The OU-7 FS will be completed to evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (HMX, RDX, TNT, 1,3,5-TNB, 1,3-dinitrobenzene, nitrobenzene, DNTs, nitrotoluene, and tetryl.) as COCs at Pinkwater Lagoon Soil and surface water. An interim remedial action is currently in place for the Pinkwater Lagoon. This interim action is supported by ongoing O&M activities and is effectively addressing soil, sediment, and surface water media. However, the interim action does not currently fall under an OU. It is recommended that the interim action be presented as the final remedy for this site and memorialized in a decision document. Because this action will address multiple media and require ongoing O&M, it is recommended that this site be placed under OU-7. Although the interim actions do not specifically address groundwater at the Pinkwater Lagoon, it is suggested that groundwater media also be included under OU-7 so that a more comprehensive remedial approach can be developed. CLEANUP/EXIT STRATEGY - It is anticipated that cleanup will include in bio in-situ injections, MNA, and LUCs.

19105.1049_IAAP-044G_LINE 800 & PINKWATER LAGOON- G

Env Site ID: IAAP-044G

Cleanup Site: LINE 800 & PINKWATER LAGOON- G

Alias: IAAP-44G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	3/31/1978	5/31/1991
SI:	3/31/1978	5/31/1991
RI/FS:	6/30/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. In 1943 leaching fields associated with the lagoon to include evaporation furrows were constructed. The lagoon also received metal cleaning sludge. In the 1970s this lagoon ceased to be used. This IRP site consists of the groundwater contamination from past activities. Studies conducted from 1991 through 1998 indicated that primary waste disposed at the site included explosives-contaminated wash water and heavy metals from operations at Line 800 and other production lines. Carbon and fly ash disposal also may have occurred at the site. During 1997, as a result of the RI sampling 63236 cy of explosives-contaminated soils were excavated from this area. In July 2001 the supplemental groundwater RI was completed. In 1991 the PA/SI was completed and in May 1996 an initial RI was completed. In 2004 to 2006 the comprehensive watersheds evaluation and supplemental data collection was completed. In 2005 treatability studies were completed. OU-6 FS is currently underway. High levels of explosives in concentrations of greater than 2500 ppb have been found in shallow groundwater (up to 30 ft bgs). The groundwater discharges into a tributary of Brush Creek. The 2023 OU-6 RI recommended this site move to OU-7 for an FS. The OU-7 FS will be completed to evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (Iron, manganese, 1,3-dinitrobenzene, TNT, 2,4-DNT, 2,6-DNT, 2-amino-4,6-DNT, 2-nitrotoluene, 3-nitrotoluene, 4-amino-2,6-DNT, nitrobenzene, RDX, Freon 113, and 1,2-DCE.) in multiple media. An interim remedial action is currently in place for the Pinkwater Lagoon. This interim action is supported by ongoing O&M activities and is effectively addressing soil, sediment, and surface water media. However, the interim action does not currently fall under an OU. It is recommended that the interim action be presented as the final remedy for this site and memorialized in a decision document. Because this action will address multiple media and require ongoing O&M, it is recommended that this site be placed under OU-7. Although the interim actions do not specifically address groundwater at the Pinkwater Lagoon, it is suggested that groundwater media also be included under OU-7 so that a more comprehensive remedial

approach can be developed. CLEANUP/EXIT STRATEGY - It is anticipated that cleanup will include in bio in-situ injections, MNA, and LUCs.

19105.1051_IAAP-046_OFF POST CONTAMINATION

Env Site ID: IAAP-046

Cleanup Site: OFF POST CONTAMINATION

Alias: OU-3

Regulatory Driver: CERCLA

RIP Date: 9/30/2024

RC Date: 9/30/2054

RC Reason: Not assigned

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	5/31/1985	10/31/1985
SI:	9/30/1992	5/31/1993
RI/FS:	6/30/1999	6/15/2020
RD:	6/30/2004	3/9/2021
IRA:	5/31/1993	10/31/2001
RA(C):	6/30/2004	9/30/2024
RA(O):	6/30/2004	9/30/2054
LTM:	- -	- -

Site Narrative: Historical discharges of explosive-contaminated wastewater have resulted in surface water and groundwater contamination Off-Site. In 1993 Off-Site contamination of private drinking water wells with explosives RDX and 2 6-DNT was confirmed. The IAAAP contracted to connect residents in the contaminated area to the public water supply. This action was designed to eliminate the pathway of future exposures to contaminated drinking water and was completed in the fall of 1994. IAAAP investigated the Off-Site groundwater contamination and found concentrations of up to 150 micrograms per liter of RDX within the Brush Creek watershed approximately two miles off-post. The Off-Site efforts were accelerated in 1998 due to increased stakeholder interest. In 2001 IAAAP provided connection to Rathbun Regional Water to 34 homeowners who declined in 1993. The total number of homes connected to the Rathbun Regional Water supply is 188. During annual groundwater sampling in 2003 groundwater was analyzed by FUSRAP for radionuclides; only naturally occurring isotopes were detected. The ROD for Off-Site groundwater was signed in 2005 employing the preferred remedy as Enhanced Degradation (ED)/MNA. An RD/Remedial Action Work Plan was final March 2009 which includes the details of the injection well installations monitoring well construction well development sodium acetate injections baseline and first quarterly sampling results data evaluations and OU3 LUCs. October 2007 began the baseline sampling and initial injections. The Army continues to negotiate LUCs with the State of Iowa and is implementing the remedy. An Optimized RD became final March 9, 2021, and is to optimize the existing RD to ED MNA and LUCs as the interim remedy. The Optimized RD is intended to supplement only the ED portion of the remedy selected in the OU3 ROD. The initial ED implementation and performance-monitoring data have been reassessed along with an in-depth review of the Conceptual Site Model (CSM). Based on the available information this optimized ED RD has been prepared to address the portion of the plume where residual RDX concentrations are expected to remain above approximately 50 ug/L. The purpose of the optimized ED RD is to describe the optimized ED RD which will include RA(C) to installation of up to 20 new injection wells to support injection of ED amendments into the aquifer. This work is intended to expedite remediation of the RDX plume hot spot

ultimately reducing the cleanup time. The ROD selected ED to target RDX concentrations greater than 50 ug/L with the interim goal of reducing RDX concentrations within the plume hot spot to below 50 ug/L within 5 years. The initial ED injections were completed between October 2007 and October 2015 and while the interim ED goal was initially achieved RDX concentrations have on occasion rebounded to above 50 ug/L in limited areas during subsequent annual sampling events. The 20 new injection wells were installed 2022 and sampling will continue quarterly until 2024. CLEANUP/EXIT STRATEGY - The implementation of the OU-3 ROD for off-site groundwater will continue. ED will continue until RDX in groundwater is below 50 ppb throughout the plume. The remedy will continue with MNA and institutional and engineering controls until acceptable human health risks are achieved. The ROD requires levels less than 2 ppb by 2047. It is anticipated that cleanup will include in situ injections, MNA, FYRs, and LUCs.

19105.1052_IAAP-047_Central Test Area

Env Site ID: IAAP-047

Cleanup Site: Central Test Area

Alias: #

Regulatory Driver: CERCLA

RIP Date: 10/31/2007

RC Date: 10/31/2007

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	6/30/2004	10/31/2007
RD:	6/30/2004	10/31/2007
IRA:	- -	- -
RA(C):	6/30/2004	10/31/2007
RA(O):	- -	- -
LTM:	10/31/2007	9/30/2054

Site Narrative: This IRP site consists of the soil contamination which is part of OU-1. Very little historical documentation is available on this site, but layout drawings are dated back as far as 1943. It is not known exactly when this area was in operation. During the historical site assessment, it was determined there was a potential MEC concern at this site. A geophysical density survey for MEC was performed at the central test area in the fall of 2004. The MEC density survey was performed using an electromagnetic metal detector to a depth of 4 ft bgs. MEC construction support was provided for the two identified soil removal areas. Soil was excavated and transported to the IDA for treatment. This site is RC for soils media under OU-1. This site is also being addressed for MEC under OU-5 (MMRP) site number IAAP-001-R-01. The 2018 OU-1 ESD documents the requirement for LUCs because soils were cleaned up to industrial land use levels. The LUCs are implemented by the operating contractor through the EWI. CLEANUP/EXIT STRATEGY - LTM which includes internal installation-specific restrictions and FYRs will be required for an indefinite period because contamination above UU/UE remains. As buildings are demolished the need for further action will be assessed.

19105.1062_CC-IAAP-001_Construction Debris Site #1

Env Site ID: CC-IAAP-001

Cleanup Site: Construction Debris Site #1

Alias: OU9#1

Regulatory Driver: CERCLA

RIP Date: 2/15/2025

RC Date: 2/15/2025

RC Reason: Not assigned

SC Date: 2/16/2025

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
PA:	1/31/1990	12/31/1991
SI:	1/31/1990	12/31/1991
RI/FS:	5/31/2012	2/15/2025
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site is part of OU-9 which addresses all media- soil groundwater surface water and sediment. This site was discovered in October 2007 at the intersection of roads H and A during work on a water line along Road H. The site covers approximately 1.34 acres and contains construction debris that includes asbestos lead and possible other contaminants that appear to have been used as fill. An RI and FS were finalized in 2014 which adequately characterized groundwater; therefore, no additional investigation is warranted. No surface water or wet sediment is present at this site. The PP was finalized in 2015. The draft final ROD was withdrawn June 1, 2015, due to media issues. Based on the OU-9 RI (November 2020) conclusions and results of the Residential Baseline Human Health Risk Assessment (BHHRA) no COCs or Radionuclides of Concern (ROC) requiring further evaluations in a FS and/or additional remedial actions were identified. All media at CC-IAAP-001 achieve UU/UE as well as NFA. CLEANUP/EXIT STRATEGY - The RI will address requirements across the various OUs through completion of the ROD. Site closeout is anticipated upon completion of the ROD.

19105.1063_CC-IAAP-002_Construction Debris Site #2

Env Site ID: CC-IAAP-002

Cleanup Site: Construction Debris Site #2

Alias: OU9 #2

Regulatory Driver: CERCLA

RIP Date: 2/15/2027

RC Date: 2/15/2027

RC Reason: Not assigned

SC Date: 2/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
PA:	1/31/1990	12/31/1991
SI:	1/31/1990	12/31/1991
RI/FS:	5/31/2012	2/15/2025
RD:	2/15/2025	2/15/2026
IRA:	- -	- -
RA(C):	2/15/2026	2/15/2027
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site is part of OU-9 which addresses all media- soil groundwater surface water and sediment. It was discovered by recreational users in March 2009. The site consists of construction debris containing asbestos and possible other contaminants. The RI and FS were finalized in 2014. The nature and extent of soil sediment and groundwater were adequately characterized; however, the hypothetical future resident scenario was not evaluated in the human health risk assessment (HHRA). The PP was finalized in 2015. The draft final ROD was withdrawn June 1, 2015, due to media issues. Based on the results of the BHHRA in the 2020 OU-9 RI Report no COCs or ROCs were identified in any of the evaluated media. Although no COCs or ROCs were identified, and no additional remedial actions are required to address the chemicals at the site the asbestos-containing material (ACM) removal action must occur before this site can be followed by an NFA determination. The expected remedy is to characterize the site with dig and hauls. CLEANUP/EXIT STRATEGY - The RI/FS completes supplemental data collection for soils an evaluation of the nature and extent of contamination and assess potential threats to human health and the environment. The RI is underway. This phase will also evaluate the potential performance and cost to remove contaminated soil to UU/UE. The PP will include a preferred remedy and present the cleanup plan for public comment. Following the public comment period, a final ROD will be issued. The RD will detail the cleanup plans and specifications for site cleanup. The RA(C) will remove soil contamination to UU/UE.

19105.1065_CC-001G_Line 1 Groundwater

Env Site ID: CC-001G
Cleanup Site: Line 1 Groundwater
Alias: CC-1G
Regulatory Driver: CERCLA
RIP Date: 9/16/2029
RC Date: 9/30/2058
RC Reason: Not assigned
SC Date: 9/30/2058
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: Yes
Hazardous Ranking Score: 29.7
RRSE: Not Evaluated
MRSPP: N/A

Phase	Start	End
PA:	1/31/1989	5/31/1991
SI:	1/31/1989	8/31/1991
RI/FS:	10/15/2010	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. The waste primarily comes from the historical practice of uncontrolled releases from sumps wash downs and operational effluent. The operational wastewater is now treated by carbon adsorption to NPDES standards. Responsibility for soil actions were transferred to FUSRAP in 2002. The OU-6 RI was completed August 2023. CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (2,4,6-TNT, 2-amino-4,6-DNT, 4-amino-2,6-DNT, 2,4-DNT, 2,6-DNT, 2-nitrotoluene, and RDX.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA, and LUCs.

19105.1066_IAAP-005G_LINE 4A/4B AMMO ASSEMBLY GROUN

Env Site ID: IAAP-005G

Cleanup Site: LINE 4A/4B AMMO ASSEMBLY GROUN

Alias: IAAP-5G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 (NFA for groundwater). Line 4A was constructed in 1941 to produce fuzes for ammunition produced at IAAAP. The site included a fuze assembly building mixing buildings a lead azide service magazine a solvent storage building and a high-explosives preparation building. However, based on interviews with former plant employees Line 4A was not used during World War II. Line 4B was constructed in 1941 as an assembly facility for components manufactured elsewhere at the IAAAP. Operations ceased in 1945 at the end of World War II. In 1962 production resumed and by the late 1960s the line was used for missile assembly. The most recent additions to the facility in 1984 are three buildings surrounded by berms for high explosives preparation. Line 4B is currently active and used for warhead production. Lines 4A and 4B were reevaluated as part of the CWWP in 2006 which concluded that soil groundwater surface water and sediment had been adequately characterized and no adverse impacts from the sumps to the environment were identified based on extensive historical sampling results. No further investigation or action was proposed at that time. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1067_IAAP-006G_LINE 5A/5B AMMO ASSEMBLY GROUN

Env Site ID: IAAP-006G

Cleanup Site: LINE 5A/5B AMMO ASSEMBLY GROUN

Alias: IAAP-6G

Regulatory Driver: CERCLA

RIP Date: 9/16/2029

RC Date: 9/30/2058

RC Reason: Not assigned

SC Date: 9/30/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2029
RA(O):	9/16/2029	9/30/2058
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-6 consists of groundwater contamination from past munitions production. Constructed in 1941 Lines 5A and 5B was formally known together as the Booster Line and was used for explosive components. This site encompasses approximately 33 acres and historically contained 18 buildings that were demolished in FY19. This site has two groundwater plumes that will require in situ injections MNA and LUCs. The OU-6 RI was completed August 2023. CLEANUP/EXIT STRATEGY - The OU-6 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (2-amino-4,6-DNT and 4-amino-2,6-DNT.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA, and LUCs.

19105.1068_IAAP-007G_LINE 6 AMMO PRODUCTION GROUNDW

Env Site ID: IAAP-007G

Cleanup Site: LINE 6 AMMO PRODUCTION GROUNDW

Alias: IAAP-7G

Regulatory Driver: CERCLA

RIP Date: 9/16/2027

RC Date: 9/17/2030

RC Reason: Not assigned

SC Date: 9/18/2030

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/16/2027
RA(O):	9/17/2027	9/17/2030
LTM:	- -	- -

Site Narrative: This IRP site is part of OU -11 (NFA for groundwater) which consists of the contamination from past munitions production. The primary waste stream was related to the production of detonators and included lead azide lead styphnate tetracene RDX barium nitrate and mercury fulminate. Treatment of black powder was performed in Building 6-68 as a RCRA permitted unit. This unit underwent RCRA closure in 1995 and will no longer be maintained or used by the Army (modified caretaker status). As part of the RCRA closure 800 cys of contaminated soil were removed in 1994. The PA/SI was completed in 1991 and an initial RI was completed in May 1996. The interim ROD required the removal of approximately 445 cys of contaminated (metals) soil that was not addressed under the RCRA closure. This soil was excavated and taken to the IDA (IAAP-020). There it was sorted by contaminant level and type. The principal concern at this site is the potential for surface runoff to migrate to nearby streams which in turn recharge groundwater off-post. Groundwater at the site shows no significant contamination. During the historical site assessment, it was determined there was a potential UXO concern at this site. A geophysical density survey for MEC was performed. The MEC density survey was performed using an electromagnetic metal detector to a depth of 4 ft bgs. MEC avoidance procedures should be used during any sampling and clearance is required prior to any large-scale soil removal. The Army has determined that the facilities at this line are excess and will pursue non-ERA funding for building demolition and debris removal. Additional evaluation of soil beneath the slabs will be required after the demolition. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. Additional RI data is being collected due to regulatory comment with the current RI. CLEANUP/EXIT STRATEGY - The OU-11 SRI will address requested additional regulatory required sampling for manganese. It is anticipated that this site will move to an OU-6 RD, RAO then site closeout.

19105.1069_IAAP-008G_LINE 7 AMMO LAP GROUNDWATER

Env Site ID: IAAP-008G

Cleanup Site: LINE 7 AMMO LAP GROUNDWATER

Alias: IAAP-8G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The IRP site which is part of OU-11 consists of the contamination from past production. Line 7 is centrally located and encompasses nine acres. It is approximately 800 feet south of Line 9. Line 7 was built in 1942 as a production line consisting of 10 buildings. Three additional buildings were added in the late 1960s. Line 7 structures were demolished in 2005 to 2006. The PA/SI was completed in 1991 and an initial RI was completed in May 1996. No contaminants above action levels were found. Line 7 is located within the boundary the active 40mm test range which became operational in 2013 and is currently being used by the Army to test military munitions. If required additional investigations and response actions at Line 7 will be addressed when the 40mm test range ceases to be operational. Based on the results of the groundwater sampling conducted as part of the 2006 CWWP no additional sampling or remediation is warranted for this site. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-7 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - 2023 OU-7 RI recommends NFA and to transfer to OU-11 for closure. CLEANUP/EXIT STRATEGY - It is anticipated that this site will move to OU-11 as NFA. This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1070_IAAP-009G_LINE 8 AMMO LAP GROUNDWATER

Env Site ID: IAAP-009G

Cleanup Site: LINE 8 AMMO LAP GROUNDWATER

Alias: IAAP-9G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: High

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The IRP site which is part of the new OU-11 (NFA for groundwater) consists of the contamination from past production. Line 8 was used for producing Amatol (an explosive composed of 246-TNT and ammonium nitrate) during World War II and for fertilizer manufacturing and fuze and rocket igniter LAP operations following the war. Operations ceased at Line 8 around 1950. When the site was operational it contained a gate house compressor house service house and a tank farm composed of 13 aboveground tanks that was used to store ammonium nitrate liquor. After operations ceased in 1950 the tank farm was removed, and two buildings were burned. Remaining buildings have been demolished. Based on the results of the groundwater sampling conducted as part of the 2006 CWWP no additional sampling or remediation is warranted for this site. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1071_IAAP-013G_INCENDIARY DISPOSAL AREA GROUN

Env Site ID: IAAP-013G

Cleanup Site: INCENDIARY DISPOSAL AREA GROUN

Alias: IAAP-13G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 (NFA for groundwater) consists of groundwater contamination. The InDA was reportedly used by a contractor from 1940 to 1946 as a high explosives demolition area and/or for burial of unknown materials (USATHAMA 1980). There are no records indicating the types of munitions detonated at the InDA or definitive mention of its period of use. Historical drawings indicate that the InDA was small (approximately 40 feet by 60 feet) encompassing three depressions reported to be burial pits for incendiary materials (1996) and surrounded by a barbed wire fence. This is supported by a subsequent document referencing two Army employees who describe an area that was fenced with signs east of Yard D with World War II material buried in it (1989). However, through various investigations the extent of MEC items was found to be larger. As a result, the InDA boundary was expanded to its current extent became part of OU-5 site IAAP-006-R-01. The facility-wide evaluation of historical data conducted between 2004 and 2005 concluded that previous investigations did not adequately characterize soil or groundwater at the InDA; however, surface water and sediment were adequately characterized and required no further investigation (2006). Therefore, additional activities were conducted in 2005 and 2006 to evaluate the location of additional areas of potential contamination. In 2007 179 cys of contaminated soil were removed from 10 excavations. In a letter dated May 25, 2012, USEPA indicated that groundwater was not adequately characterized at the site. A more robust evaluation of geology depth to groundwater hydraulic conductivity and lead associated with InDA operations was warranted. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1072_IAAP-014G_BOX CAR UNLOADING AREA GROUNDW

Env Site ID: IAAP-014G

Cleanup Site: BOX CAR UNLOADING AREA GROUNDW

Alias: IAAP-14G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of the new OU-11 (NFA for groundwater) addresses groundwater and surface water at two areas. Minute amounts of TNT and RDX may have come into contact with the soil in the area. This site was evaluated in the CWWP and based on the results of the investigation there is no indication that contamination is present at the site. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1073_IAAP-047G_CENTRAL TEST AREA GROUNDWATER

Env Site ID: IAAP-047G

Cleanup Site: CENTRAL TEST AREA GROUNDWATER

Alias: IAAP-47G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site is part of the new OU-11 (NFA for groundwater) The Central Test Area (CTA) is an approximately 6.4-acres and comprises the former Central Testing Laboratory (CTL) housed in Building 600-84 and two former test areas one in the walled-in area south of Building 600-84 used at the same time as the CTL and one approximately 815 feet northeast of Building 600-84 (firing pit) used between approximately 1941 and 1950 (JAYCOR 1996). The firing pit and surrounding fencing is in the former test-fire area. Building 600-84 is currently planned for demolition. This building was occupied/leased by Advanced Environmental Technology (AET) and was contracted by the US Army to provide disposal of military and commercial explosive wastes disposal of ammunition propellants fuses components explosives and other reactive waste items at IAAAP as defined in RCRA Permit #IAR000005876. There are few definitive records regarding the testing of munitions at the CTA and previous investigations and reports have provided limited information on its history. The Historical Records Review (HRR) reported that Building 600-84 and the walled-in area south of the building jointly known as the CTL were constructed in 1941 and operated until 1963. During the HRR it was determined there was a potential for UXO at this site. Because of the potential for UXO the CTA was also included in the RI for OU5 (IAAP-001-R-01). In 2005 and 2006 a groundwater investigation was conducted. The OU5 RI was conducted in 2008 and 2009 to identify and define the nature and extent of potential MEC and munitions debris and determine whether MCs had been released to the environment. Sixteen soil samples were collected and analyzed for MCs at eight locations where contamination was likely. No MCs were detected above human health screening levels or leaching criteria in soil. Due to the lack of soil contamination at potential areas of MC it was concluded that groundwater sampling was not warranted (2010). Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1074_IAAP-015G_OLD FLY ASH WASTE PILE GW

Env Site ID: IAAP-015G

Cleanup Site: OLD FLY ASH WASTE PILE GW

Alias: IAAP-15G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 groundwater attributed to historical deposition of Fly Ash. Fly Ash was placed directly on the ground surface. Sludge from the sewage disposal plant was placed on this site once or twice a year since the early-1940s. It is unclear when this practice stopped. There is no record of the amounts of ash or sludge placed here. The majority of the surface of the Fly Ash Waste Pile is vegetated. Surface runoff flows into Brush Creek. The PA/SI was completed in 1991 and the limited RI was completed in May 1996. In 2004 fly ash was evaluated for leaching potential to investigate groundwater at this site. Samples were analyzed for total PAHs and metals. TCLP metals concentrations for subsurface fly ash were below groundwater screening levels indicating that metals were not a risk for groundwater. In 2018 a conservation project was completed to control erosion stabilize the slope and eliminate sloughing of fly ash and other materials from the old fly ash waste pile into Brush Creek. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-7 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1075_IAAP-016G_LINE 1 FORMER IMPOUNDMENT GW

Env Site ID: IAAP-016G

Cleanup Site: LINE 1 FORMER IMPOUNDMENT GW

Alias: IAAP-16G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-7 consists of groundwater contamination from past munitions production. This site consists of the Line 1 Former Wastewater Impoundment and upgradient settling basins. From 1948 to 1957 this impoundment received large volumes of discharge. The wastes included TNT coal pile runoff and condensate from the coal-fired power plant. Fly ash was usually added to the impoundment liquid to absorb the explosives and reduce the color. Low levels of residual explosives remain in surface water within the impoundment; those greater than two ppb are being treated with granular activated carbon prior to discharge. The FUSRAP PA identified this area as requiring additional investigation. In August 2004 the FUSRAP conducted a screening survey of this site to determine if radiological contaminants from Atomic Energy Commission activities are present in the soil. PAs of all screening results indicate no radiological contamination present at this area; however, groundwater contamination was discovered in 2004. The 2023 OU-6 RI recommends this site move to OU-7 FS. An FS will be completed for this site to evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (RDX, 2-amino-4,6-DNT, and 4-amino-2,6-DNT and manganese). An interim remedial action is currently in place for the former Line 1 Impoundment. This interim action is supported by ongoing O&M activities and is effectively addressing soil, sediment, and surface water media. However, the interim action does not currently fall under an OU. It is recommended that the interim action be presented as the final remedy for these sites and memorialized in a decision document. Because this action will address multiple media and require ongoing O&M, it is recommended that this site be placed under OU-7. Although the interim actions do not specifically address groundwater at the former Line 1 Impoundment, it is suggested that groundwater media also be included under OU-7 so that a more comprehensive remedial approach can be developed. CLEANUP/EXIT STRATEGY - The FS will be performed to evaluate remedial alternatives to address the unacceptable risks or hazards. It is anticipated that cleanup will include in situ injections, MNA, LUCs, and FYRs will continue indefinitely.

19105.1076_IAAP-017G_PESTICIDE PIT GROUNDWATER

Env Site ID: IAAP-017G

Cleanup Site: PESTICIDE PIT GROUNDWATER

Alias: #

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	1/15/1989	5/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	5/15/1995	6/15/1996
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site consists of the groundwater contamination which is part of OU-7. Soil associated with this site is addressed under site IAAP-017 which is also part of OU-7. The Pesticide Pit was in operation between 1968 and 1974 for the disposal of small quantities of insecticides and herbicides. The Pesticide Pit is an inactive site located in the central portion of the IAAAP south of Line 3 and west of the Old Winnebago School House which is currently vacant and was fenced for safety reasons. The Pesticide Pit was a small plywood structure lined with limestone and polyester resin geomembrane; however, the integrity of the structure that contained these wastes was questionable. The pit was capped with clay of unknown thickness during the late-1970s to early-1980s. The PA/SI was completed in 1991 and the RI in May 1996. The periodic groundwater monitoring results were documented in the various annual groundwater reports published by various contractors between 1997 and 2008. Spring 2001 and June 2004 groundwater sampling indicated slightly elevated levels of chromium. The Army anticipates that this site will be included with the OU-7 ROD. CLEANUP/EXIT STRATEGY - A OU-7 supplemental RI is recommended, to include collecting additional data to identify the source of metals in soil and groundwater and develop an appropriate EPC for hexavalent chromium. Following the SRI field effort, human health and ecological risk assessments will be completed for the Pesticide Pit to evaluate potentially unacceptable risk and hazard to human health and the environment and to recommend a path forward. An FS will evaluate remedial alternatives to mitigate potentially unacceptable future risks from site related COCs (Pesticides and metals including hexavalent chromium). It is anticipated that cleanup will include MNA and LUCs.

19105.1077_IAAP-018G_POSSIBLE DEMOLITION SITE GW

Env Site ID: IAAP-018G

Cleanup Site: POSSIBLE DEMOLITION SITE GW

Alias: IAAP-18G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site is part of OU-11 NFA for groundwater contamination. This Possible Demolition Site (PDS)/ Munitions Response Site (MRS) was probably used during the 1940s and early-1950s as a demolition area. The SI sampling was completed in 1991 and no significant contamination was found. The site is currently addressed under OU-5 for MEC; OU-11 for groundwater. In 2009 groundwater sampling detected metals. Explosives and inorganics have been detected in groundwater; however explosive concentrations were below screening levels. Inorganics concentrations are much lower in dissolved (filtered) samples compared to total (unfiltered) samples. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1078_IAAP-022G_UNIDENTIFIED SUBSTANCE OIL GW

Env Site ID: IAAP-022G

Cleanup Site: UNIDENTIFIED SUBSTANCE OIL GW

Alias: IAAP-22G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site which is part of OU-11 consists of contamination from past activities. The unidentified substance thought to be road surfacing oil was discovered on July 16, 1985 (1990). The source of the oil spill is thought to have been a leaking railroad tank car (RI/FS T1990). According to the on-site personnel this area has been covered with approximately 10 ft of fill material which has created a small incline sloping up and away from the railroad track bed. The SI sampling was completed in 1991 and no significant contamination was found. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1079_IAAP-025G_EXPLOSIVE WASTE INCINERATOR GW

Env Site ID: IAAP-025G

Cleanup Site: EXPLOSIVE WASTE INCINERATOR GW

Alias: IAAP-25G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site which is part of OU-11 consists of soil surface water groundwater contamination from past activities. The EWI contained an adjoining air pollution control system. The site treated explosive wastes sump scrap and explosives contaminated waste solvents. Explosives-contaminated carbon was originally treated in the EWI but is now recycled. Resultant ash was collected and managed as a hazardous waste. The EWI buildings and facilities underwent RCRA closure, and the incinerator was removed from the installation in 1999. Per the CERCLA SI and 1996 RI and RCRA PA and closure report and as summarized in the CWWP no significant soil contamination was present from the EWI. A single isolated RDX exceedance occurred in 1992; however subsequent sampling in 1998 and 2004 could not replicate the sampling results. USEPA concurred with that closure was completed in accordance with the approved closure plan (1998). No additional investigation of soil is warranted. Per the Final CWWP there is no indication of groundwater contamination from practices at the EWI. Any chlorinated solvents present at low concentrations in groundwater along the eastern boundary of the EWI are associated with the plume emanating from the Fire Training Pit and not associated with the operation of the EWI. The two primary potential transport mechanisms at the EWI are overland flow and leaching of contamination into groundwater particularly when the sumps received wastewater. No pesticides herbicides or PCBs have been detected in soil and detections of VOCs SVOCs and PAHs in soil are minimal. Based on the installation-wide RI conclusions and results of human health risk assessments and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1080_IAAP-028G_CONSTRUCTION DEBRIS DISPOSAL G

Env Site ID: IAAP-028G

Cleanup Site: CONSTRUCTION DEBRIS DISPOSAL G

Alias: IAAP-28G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site addresses groundwater under OU-11. Wastes were placed in a ravine with periodic soil cover. Waste included brick stone concrete wire and 55-gallon drums. It is believed that this site was in operation from 1941 to September 1992. The PA/SI was completed in 1991 and the initial RI was completed in May 1996; no significant contamination was found. It is believed that unauthorized dumping occurred at this site. Although buried debris is still present at the site groundwater does not appear to be present in the fill material containing debris other than as perched water layers. Groundwater concentrations indicate that no significant impact has occurred. However, USEPA expressed concern in a May 25, 2012, letter that metals in groundwater required further characterization. Soil is adequately characterized; no further investigation is warranted. Surface water concentrations do not exceed screening levels; no further investigation is warranted. Additional samples are needed to adequately characterize PCBs and metals (total) in groundwater. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1081_IAAP-043G_FLY ASH DISPOSAL AREA GROUNDWA

Env Site ID: IAAP-043G

Cleanup Site: FLY ASH DISPOSAL AREA GROUNDWA

Alias: IAAP-43G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/1/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 consists of groundwater contamination. In operation from the 1940s to the 1950s this area was used for disposal of fly ash residual coal clinkers and other residue from the coal-fired power plant. The site is abandoned and covered with natural vegetation but has no soil or clay cover. The PA/SI was completed in 1991 and the RI was completed in May 1996. The sampling found no significant contamination. Numerous metals exceed USEPA Region 5 ecological soil screening criteria. However, in the 2004 Baseline Ecological Risk Assessment (BERA) only mercury was identified as a chemical of potential ecological concern due to one sample location where the concentration exceeded the lowest observed adverse effects level-based critical concentration. Per the Final CWWP and Draft OU6 SRI there is no indication of groundwater contamination from practices at the Fly Ash Disposal Area (FADA). No explosives SVOCs PAHs pesticides herbicides or PCBs have been detected in soil ash or sediment. The fly ash is nonhazardous no explosives have been disposed of at the site and only low concentrations of metals have been detected in soil ash or sediment. Two overburden groundwater wells will be installed as part of the RI. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-7 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1082_IAAP-030G_FIRING SITE AREA GROUNDWATER

Env Site ID: IAAP-030G

Cleanup Site: FIRING SITE AREA GROUNDWATER

Alias: IAAP-30G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-7 consists of groundwater contamination. In 1947 the IAAAP was selected as the first production facility for manufacturing of high explosives components for weapons under the Atomic Energy Commission. Portions of the Firing Site were under the control of the Atomic Energy Commission from 1948 to 1974. The Atomic Energy Commission operated Sub-Area Firing Site-12 (FS-12) from December 1965 to December 1973. FS-12 was used for destructive testing of ordnance containing depleted uranium and high explosives. Area FS-12 was surveyed for radioactivity by the Atomic Energy Commission in 1974 and some contaminated soil was shipped off-site to Sheffield IL in that same year. In May 2001 a survey conducted by FUSRAP detected numerous fragments of depleted uranium. An aerial radiological survey of the entire plant was conducted in October 2002 and detectable emissions from man-made radiological sources were found at FS-12. The IRP PA/SI was completed in 1991 and the RI in May 1996 found radionuclides and metals in soil and groundwater. An SRI was completed in 2002. FUSRAP performed a PA (published December 2001) of this site and determined it to be a former Atomic Energy Commission area. In July 2002 the USACE designated this area to be under FUSRAP. Both radiological and non-radiological contamination attributable to former US Army Environmental Command (USAEC) operations will be addressed by FUSRAP for soils. FUSRAP will complete an SRI for this site. FUSRAP will assume responsibility for cleanup of soils. This site was transferred to FUSRAP and is considered RC for the soils media by the IRP. The Firing Sites Area is an operational testing range currently being used by the Army to test military munitions. Therefore, consistent with Army-wide operational ranges sampling will be conducted at the Firing Sites Area range boundary to verify if off-site migration of potential contaminants is occurring. Due to the historical radiological and total uranium contamination within the range existing wells, eight wells were sampled in 2019 as part of the OU-7 RI. The FS groundwater ROCs are identified as actinium-228, cesium-137, lead-210, lead-212, potassium-40, radium-226, thorium-234, uranium-234, uranium-235 and uranium- 238. The 2023 OU-7 RI recommends an OU-7 FS for the firing site groundwater. CLEANUP/EXIT STRATEGY - The FS evaluation for this site will determine if the Operational Range Assessment Program (ORAP) will

implement the FS range boundary monitoring for off-site migration or an NFA as a recommend path forward.

19105.1083_IAAP-031G_AMMO BOX CHIPPER DISPOSAL GW

Env Site ID: IAAP-031G

Cleanup Site: AMMO BOX CHIPPER DISPOSAL GW

Alias: IAAP-31G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-7 consists of soil and groundwater contamination. The ABCDP reportedly measured 120 by 40 by 8 feet deep and is reportedly located approximately 2000 feet west of the Fire Training Pit and 500 feet west of Plant Road O. The pit was reportedly used for a three-month period sometime between 1972 and 1975. Wastes consisted of shredded ammunition boxes treated with the wood preservative PCP. Investigations conducted during 1997 have not substantiated the former existence of this site. If this site is ever located, it will be investigated. Bis-2-ethylhexylphthalate has been found in groundwater in area of suspected location. Various investigations have been unable to locate any presence of wooden boxes in the subsurface. As is consistent with the Draft OU6 SRI soil has been adequately characterized; therefore, no additional investigation is warranted. Groundwater contamination at the site is characterized by Basic Environmental Health Program (BEHP) and lead above their respective screening levels in the late 1990s and 2001 but was subsequently non-detect in 2001 and 2002. Two explosives RDX and nitrobenzene were eliminated as Contaminants of Potential Ecological Concern (COPC) because they were not detected in the subsequent four annual events from 1999 to 2002. Groundwater has not been sampled at the site since 2002. A current round of groundwater data is necessary to confirm the presence or absence of BEHP and lead. No surface water or wet sediment is present at the site. CLEANUP/EXIT STRATEGY - An FS will be completed to evaluate remedial alternatives to mitigate potentially unacceptable future risks from site-related COCs (Aluminum, cobalt, and iron.). It is anticipated that cleanup will include in situ injections followed by MNA and LUCs.

19105.1084_IAAP-036G_NORTH BURN PADS GROUNDWATER

Env Site ID: IAAP-036G

Cleanup Site: NORTH BURN PADS GROUNDWATER

Alias: IAAP-36G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is now part OU-10 (Explosive Disposal Area) consists of soil and groundwater contamination. The North Burn Pads consists of Pads 1-N and 2-N. Each pad was operational from 1968 to 1972. A 275-gallon diesel fuel station was located at the base of Pad 2-N. The station had an aboveground tank used to refuel equipment operating in the area. The PA/SI was completed in 1991 the RI was completed in May 1996 and found metals and small amounts of explosives. Groundwater monitoring began in 1994 and ended in 2001. The FUSRAP PA identified this area as requiring additional investigation. In August 2004 FUSRAP conducted a screening survey of this site to determine if radiological contaminants from USAEC activities are present in soil. PAs of all screening results indicate no radiological contamination present at this area. Soil was excavated to meet OU-1 leaching-based RGs across most of the area. RDX was left in place at depth at concentrations exceeding RGs at one sample location at the NBPLF and at one sample location at Pad 1-N. No additional soil remedial actions are planned for the North Burn Pad Area (NBPA) and additional soil investigation is not warranted under this OU6 Groundwater Quality Assurance Project Plan (QAPP); however, groundwater concentration trends will be evaluated as part of the RI to assess whether soil may be acting as an ongoing source to groundwater. Groundwater contamination is present beneath the former NBPLF in bedrock. Additional groundwater investigation is warranted to vertically and horizontally delineate the bedrock RDX plume at the former NBPLF and to provide overburden groundwater data at the excavation site of Pad 1-N. CLEANUP/EXIT STRATEGY - The OU-10 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1,1-Dichloroethane, Methylene chloride, Benzene, 1,1-Dichloroethene, Naphthalene, Xylene, 0-, 1,2-Dichloroethane, Tetrachloroethene, cis-1,2- Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene, Ethylbenzene, 1,1,2-Trichloroethane, Vinyl chloride, 1,2,4-Trimethylbenzene, Benzene, 2-Amino-4,6-DNT, Naphthalene, 4-Amino-2,6-DNT, Methyl ethyl ketone, Royal Demolition Explosive, Methyl isobutyl ketone, Acetone, Toluene, Arsenic, and Xylene, m,p-.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA with LUCs.

19105.1085_IAAP-042G_ABANDONED COAL STORAGE YARD GR

Env Site ID: IAAP-042G

Cleanup Site: ABANDONED COAL STORAGE YARD GR

Alias: IAAP-42G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	1/15/1989	5/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-7 consists of groundwater contamination. During the operation of the Steam Generating Plant coal was the primary fuel used. The Coal Pile is bounded on the north and east by railroad tracks and on the southeast by the head of Brush Creek. It has been discovered runoff may have spread to a greater area. The SI sampling was completed in 1991 and no significant contamination was found. Site IAAP-042 Abandoned Coal Storage Yard was eliminated from RI consideration because the installation completed a state of Iowa Department of Natural Resources Removal Activity. This excavation was summarized in a Finding of No Significant Impact dated Oct. 26, 1992. The RCRA Branch of Region VII USEPA has agreed to this removal action. The removal was completed in late-1993 and the area was covered with clean soil and re-vegetated with native grasses. The Final CWWP found soil has been adequately characterized for metals; however, characterization for PAHs has not been conducted. Additional soil samples will be collected from locations underneath the area of the former coal pile. Per the Final CWWP sediment and surface water have been adequately characterized and data do not indicate a surface water or sediment problem from the location of the former coal pile. No additional investigation is warranted. Per the Final CWWP based on the absence of significant soil contamination and the surficial nature of the coal which has since been removed no groundwater data gaps are considered to be present. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-7 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1086_IAAP-041G_LINE 3A POND GROUNDWATER

Env Site ID: IAAP-041G

Cleanup Site: LINE 3A POND GROUNDWATER

Alias: IAAP-41G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-7 consists of soil and groundwater contamination from past munitions production. The pond is assumed to be an excavated unlined pit. The pond area is relatively flat and slopes gently. While some sources conflict on this fact it is generally believed that this site was excavated and backfilled circa 1959. Approximately 15000 gallons of spent sulfuric and hydrochloric acid were disposed in the pond and neutralized with sodium hydroxide. The PA/SI was completed in 1991 and the RI was completed in May 1996; samples found no explosives or metals above action levels in the soil. Soil remedial actions were reportedly conducted at the Line 3A Pond. According to interviews during “closure” of the Line 3A Pond site features in the late 1950s the pit was excavated. The soil was disposed in the on-site landfill and the pit was backfilled using clean fill (1996). No documentation is available regarding these activities; however, the extent of the soil removal is presumed as the area where trees are cleared. In soil arsenic and chromium concentrations are below OU1 RGs and naturally occurring background levels; therefore, they are considered to be naturally occurring and no further investigation is warranted. In groundwater 246-TNT 12- dicalcium phosphate (DCP) and methylene chloride exceeded respective screening levels at one location each. Historical samples delineated these exceedances near the discharge location of the former leach field, but groundwater may not be adequately characterized across the presumed former excavation area. Therefore, four overburden wells are proposed to evaluate the nature and extent of these compounds in addition to speciated chromium based on site operational history. CLEANUP/EXIT STRATEGY - The OU-7 RI states potentially unacceptable noncarcinogenic hazards were identified from exposure to 1,2-dichloropropane, chloroform, and methylene chloride, and potentially unacceptable carcinogenic risks were identified for exposure to 1,2-dichloroethane, 1,2-dichloropropane, 2,6-DNT, bromodichloromethane, chloroform, methylene chloride, and nitrobenzene. The maximum detected groundwater concentrations for these chemicals were then compared to the federal MCLs, if available. Hexavalent chromium, 1,2-dichloroethane, 1,2-dichloropropane, 2,6-DNT, methylene chloride, and

nitrobenzene were identified as final groundwater COCs. It is anticipated that cleanup will include in situ injections followed by MNA and LUCs.

19105.1087_IAAP-037G_NORTH BURN PADS LANDFILL GW

Env Site ID: IAAP-037G

Cleanup Site: NORTH BURN PADS LANDFILL GW

Alias: IAAP-37G

Regulatory Driver: CERCLA

RIP Date: 9/16/2028

RC Date: 9/30/2057

RC Reason: Not assigned

SC Date: 9/30/2057

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Low

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	9/16/2026	9/15/2027
IRA:	- -	- -
RA(C):	9/16/2027	9/15/2028
RA(O):	9/16/2028	9/30/2057
LTM:	- -	- -

Site Narrative: This IRP site is part of the new OU-10 (Explosive Disposal Area) consists of groundwater contamination. Landfill activities occurred from 1968 to 1972. A cleanup operation was performed in 1980 during which some of the contents of the landfill were taken to the IDA. Results from the SI in 1991 did not indicate significant contamination; however, RI work was initiated to fill data gaps. The RI work completed in May 1996 found metals in soil and groundwater. Pre-design sampling in 1997 to 1998 found high levels of explosives in soil and leachate. Groundwater monitoring began in 1994. RDX in concentrations of less than 10 ppb have been found in the groundwater in upper bedrock (30-40 ft bgs). The FUSRAP PA identified this area as requiring additional investigation. In August 2004 FUSRAP conducted a screening survey of this site to determine if radiological contaminates from USAEC activities are present in soil. PAs of all screening results indicate no radiological contamination present at this area. CLEANUP/EXIT STRATEGY - The OU-10 FS will evaluate remedial alternatives to address the unacceptable risks or hazards from site-related COCs (1,1-Dichloroethane, Methylene chloride, Benzene, 1,1-Dichloroethene, Naphthalene, Xylene, 0-, 1,2-Dichloroethane, Tetrachloroethene, cis-1,2-Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene, Ethylbenzene, 1,1,2-Trichloroethane, Vinyl chloride, 1,2,4-Trimethylbenzene, Benzene, 2-Amino-4,6-DNT, Naphthalene, 4-Amino-2,6-DNT, Methyl ethyl ketone, Royal Demolition Explosive, Methyl isobutyl ketone, Acetone, Toluene, Arsenic, and Xylene, m,p-.) in groundwater. It is anticipated that cleanup will include Enhanced In-Situ Bioremediation, MNA with LUCs.

19105.1088_IAAP-038G_BUILDING 600-86 SEPTIC SYS GW

Env Site ID: IAAP-038G

Cleanup Site: BUILDING 600-86 SEPTIC SYS GW

Alias: IAAP-38G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 NFA for groundwater. This building has served in several roles since its construction in 1941. It was an analytical laboratory from 1941 to 1953. In 1985 two rooms in the building were used to store RCRA hazardous wastes. Room A was used to store spent solvents with a permitted capacity of 2640 gallons. Room B was used to store waste liquids containing cyanide salts. Both rooms had concrete curbing around the perimeter. Small amounts of solvents that may be contaminated with explosives were accumulated in Room C then filtered through a carbon filter column before being taken off-site. The function of the laboratory was to perform drinking water and wastewater analyses as well as analysis of primer mixes containing lead azide in quantities of 10 to 20 milligrams. The waste from the primer tests was deactivated with ceric ammonium nitrate and the resultant waste solution was disposed of in the Explosive Disposal Area (IAAP-012). The laboratory building was constructed with its own septic tank and drain. Sometime after 1983 sludge was removed from the septic tank and the tank was filled with sand. The building was torn down under the Facilities Reduction Program in 2007. Per the CWWP soil has been adequately characterized and no additional soil sampling is necessary; however, an additional sample will be collected to verify historical sample results of RCRA metals at the septic drain outfall and two additional samples will be collected near the septic tank to assess the presence or absence of VOCs RCRA metals and explosives based on historical building operations. Per the CWWP groundwater exhibited no significant metals contamination. During the March 2017 Technical Project Planning Meeting it was agreed that the two existing wells would be sampled for VOCs and RCRA metals to assess the presence or absence of based on historical building operations. A Direct-Push Technology (DPT) boring east of the former building location will also be sampled per a USEPA request. Groundwater has not been analyzed for VOCs at the site. No surface water or wet sediment is present at the site. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2023 OU-7 RI Report recommends that this site be transferred to OU-11 and NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY - This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1089_IAAP-040G_ROUNDHOUSE TRANSFORMER AREA GR

Env Site ID: IAAP-040G

Cleanup Site: ROUNDHOUSE TRANSFORMER AREA GR

Alias: IAAP-40G

Regulatory Driver: CERCLA

RIP Date: 9/15/2026

RC Date: 9/15/2026

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	1/15/1989	5/15/1991
SI:	12/15/1990	8/15/1991
RI/FS:	6/15/2004	9/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: This IRP site which is part of OU-11 consists of groundwater contamination. This site consists of contamination from past activities. The area was used since the 1940s to store transformers (which contain PCBs) pending use or disposal; this site is no longer used for PCB storage. Transformers found to contain greater than 50 ppm PCBs were moved to the old storage site. Those transformers having less than 50 ppm PCBs were moved to an outside storage concrete pad and a new storage. The PA/SI was completed in 1991 the RI was completed in May 1996; samples found PCBs and explosives. As concluded in the final CWWP groundwater investigation is not warranted (2006). This conclusion is supported by the fact that there have been only low-level detections of two PCBs in soil at the site and PCBs have very limited mobility due to their chemical properties. Based on the installation-wide RI conclusions and results of HHRA and ecological risk assessments the 2021 OU-11 RI Report recommends that NFA be presented as the preferred remedy for this site in a PP. CLEANUP/EXIT STRATEGY This site is to achieve site closeout with finalization of the OU-11 ROD.

19105.1090_IAAP-PFAS_PFAS

Env Site ID: IAAP-PFAS

Cleanup Site: PFAS

Alias: #

Regulatory Driver: CERCLA

RIP Date: 7/15/2026

RC Date: 7/15/2026

RC Reason: Not assigned

SC Date: 7/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Yes

Hazardous Ranking Score: 30

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	9/30/2017	9/29/2018
SI:	9/30/2018	12/30/2023
RI/FS:	12/7/2022	7/15/2026
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: The PA (2020) has determined three areas of concern - the IDA (IAAP-20/20G) the FTP (IAAP-039/039G) and the Former Fire Station 200-131-3. The Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP) SI (2020) presents the requirements and procedures for conducting field investigations under USACE. The PA (2021) was revised and final April 2021. The UFP-QAPP SI was final October 2020. The SI is underway data gathered will be used to evaluate whether there is per- and polyfluoroalkyl substances (PFAS) contamination at the IDA FTP and the Former Fire Station 200-131-3. CLEANUP/EXIT STRATEGY - The results of the site characterization will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be and or what the corrective action necessary for remediation will entail. With this uncertainty and the full extent of contamination unknown, it is not possible at this time to postulate what the exit strategy for this site with multiple subareas will be beyond the RI/FS phase.

19105.1055_IAAP-002-R-01_LINE 6 AMMO PRODUCTION

Env Site ID: IAAP-002-R-01

Cleanup Site: LINE 6 AMMO PRODUCTION

Alias: #

Regulatory Driver: CERCLA

RIP Date: 5/26/2017

RC Date: 5/26/2017

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	5/15/2003	10/22/2003
SI:	6/30/2006	10/31/2007
RI/FS:	3/31/2007	5/31/2012
RD:	10/31/2011	6/30/2012
IRA:	- -	- -
RA(C):	1/31/2015	5/26/2017
RA(O):	- -	- -
LTM:	9/30/2017	9/30/2054

Site Narrative: This site is part of OU5 MMRP. In fall 2004 the contractor performed a Geophysical Density Survey for MEC. The MEC density survey was performed using an electromagnetic metal detector to a depth of 4 ft bgs. MEC avoidance procedures should be used during any sampling and clearance is required prior to any large-scale soil removal. The US Army has determined that the facilities at this line are excess and will pursue non-ERA funding for building demolition and debris removal of some buildings. An active Test Range began operations immediately south of Line 6 and used some previously inactive buildings. In October 2007 the SI was completed. Per the agreements made in the December 2006 dispute resolution the US Army has agreed to complete RIs at all MMRP sites at IAAAP. The Munitions Response Site Prioritization Protocol (MRSPP) score for this site was updated during the RI in FY10. The remaining 87.21 acres which are the outside of the buildings' blast radii will be addressed in IAAP-002-R-02 with a recommendation of NFA. The RI report was finalized in August 2011 and the FS was completed in 2012. The final ROD was signed in 2014. The RA objectives included fence installation and LUCs at the site. Fence construction was completed in FY16 and the RACR became final in FY17. CLEANUP/EXIT STRATEGY - LTM currently includes O&M of fencing and signage, periodic future assessments regarding changes to land use, and FYRs to evaluate the continued effectiveness and permanence of the alternative. An updated CSM is needed prior to an evaluation of remedies. The acreage for this MRS is 8.00 acres. Constituents are M22s and M42s at a depth of 0-12 bgs. Due to change in future land use, an FS is needed to evaluate alternative remedies. The anticipated remedy is an engineer control (capping), LUCs, and FYR to continue indefinity.

19105.1056_IAAP-001-R-01_Central Test Area

Env Site ID: IAAP-001-R-01

Cleanup Site: Central Test Area

Alias: #

Regulatory Driver: CERCLA

RIP Date: 5/26/2017

RC Date: 5/26/2017

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	5/15/2003	10/22/2003
SI:	6/30/2006	10/31/2007
RI/FS:	3/31/2007	3/1/2013
RD:	5/31/2013	9/30/2014
IRA:	- -	- -
RA(C):	1/31/2015	5/26/2017
RA(O):	- -	- -
LTM:	11/15/2017	9/30/2054

Site Narrative: This site is part of OU5 MMRP. In fall 2004 the contractor performed a Geophysical Density Survey for MEC at the CTA. The MEC density survey was performed using an electromagnetic metal detector to a depth of 4 ft bgs. MEC construction support is recommended for the two identified concentrated areas prior to performing any intrusive activity. For all other areas at this site avoidance procedures should be used during any sampling and clearance is required prior to any large-scale soil removal. Per the agreements made in the December 2006 dispute resolution the US Army has agreed to complete RIs at all MMRP sites at IAAAP. The MRSPP score for this site was updated during the RI in FY10. The RI report was finalized in August of 2011 and the FS was completed in 2012. The final ROD was signed in 2014. The remedial action objectives included fence installation and LUCs at the site. Fence construction was completed in FY16 and the RACR became final in FY17. CLEANUP/EXIT STRATEGY - LTM currently includes O&M of fencing and signage periodic future assessments regarding changes to land use and FYRs to evaluate the continued effectiveness and permanence of the alternative. The acreage for this MRS is 22.90 acres stated in the ROD, the RI stated 31.00 acres. Constituents are point detonated (PD) fuzes, grenades, A1M1 mine, and 75mm projectiles at a depth of 2-24 bgs. Due to change in future land use, LUCs and FYR remain on this site until completion of the LTM optimization.

19105.1057_IAAP-004-R-01_POSSIBLE DEMOLITION SITE

Env Site ID: IAAP-004-R-01

Cleanup Site: POSSIBLE DEMOLITION SITE

Alias: #

Regulatory Driver: CERCLA

RIP Date: 5/26/2017

RC Date: 5/26/2017

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	5/31/2003	10/31/2003
SI:	6/30/2006	10/31/2007
RI/FS:	3/31/2007	3/1/2013
RD:	5/31/2013	9/30/2014
IRA:	- -	- -
RA(C):	1/31/2015	5/26/2017
RA(O):	- -	- -
LTM:	9/30/2017	9/30/2054

Site Narrative: This site is part of OU5 MMRP. There is no documentation to indicate that demolition activities occurred at this site or which types of ammunition items were treated. The size of the site was also unknown. In 1991 PA/SI sampling was completed and no significant contamination was found. In October 2007 the SI was completed. Per the agreements made in the December 2006 dispute resolution the US Army has agreed to complete RIs at all MMRP sites at IAAAP. The MRSPP score for this site was updated during the RI in FY10. The RI report was finalized in August of 2011 that included a geophysical survey and intrusive investigation. Fencing installation was completed in 2012 per the 2006 dispute resolution and will stand as the remedy as recommended in the FS amendment dated November 2012. The final ROD was signed in 2014. The remedial action objectives included fence installation and LUCs at the site. Fence construction was completed in FY16 and the RACR became final in FY17. CLEANUP/EXIT STRATEGY - LTM currently includes annual LUCs inspections reporting and FYRs. The acreage for this MRS is approx. 40.00 acres as stated in the ROD. Constituents are M1A1 mine, 81mm, 75mm, 105mm, PD or BD fuze, smoke grenade, 155mm, slap flare, 100-pound bomb, 5.56mm, burster, and M5A1 cartridges at a depth of 0-24 bgs. Due to change in future land use, an LTM optimization is underway. LUCs and FYRs remain on this site until completion of the LTM optimization.

19105.1059_IAAP-006-R-01_INCENDIARY DISPOSAL AREA

Env Site ID: IAAP-006-R-01

Cleanup Site: INCENDIARY DISPOSAL AREA

Alias: #

Regulatory Driver: CERCLA

RIP Date: 5/26/2017

RC Date: 5/26/2017

RC Reason: All Required Cleanup(s) Completed

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	5/31/2003	10/31/2003
SI:	6/30/2006	10/31/2007
RI/FS:	3/31/2007	1/31/2014
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/31/2015	5/26/2017
RA(O):	- -	- -
LTM:	9/30/2017	9/30/2054

Site Narrative: This site is part of OU5 MMRP. In the Final Range/Site Inventory Report (e2M 2003) the IDA MRS was not identified as an Active US Army MMRP site. Documentation was not located that specifically identified actual munitions burned at the site. Documents reviewed for the HRR indicate that soil contamination is present. Geophysical survey and intrusive investigation were completed as part of the RI that was completed in August 2011. Fencing installation was completed in 2012 per the 2006 dispute resolution and will stand as the remedy as recommended in the FS amendment dated November 2012. The final ROD was signed in 2014. The remedial action objectives included fence installation and LUCs at the site. Fence construction was completed in FY16 and the RACR became final in FY17. CLEANUP/EXIT STRATEGY - LTM currently includes O&M of fencing and signage periodic future assessments regarding changes to land use and FYRs to evaluate the continued effectiveness and permanence of the alternative. The acreage for this MRS is approx. 36.00 acres as stated in the SI and captured in HQAES and DENIX. The DD states 34.00 acres. Constituents are 75mm, PD fuze, 37mm, 81mm, indeterminate frag, pusher plate, 155mm, burster, M1A1 mine, 105mm, and flash tubes at a depth of 0-24 bgs. Due to change in future land use, an LTM optimization is underway. LUCs and FYRs remain on this site until completion of the LTM optimization.

19105.1096_CC-06_Demolition Area and Deactivation F

Env Site ID: CC-06

Cleanup Site: Demolition Area and Deactivation F

Alias: CC-06

Regulatory Driver: CERCLA

RIP Date: 9/16/2026

RC Date: 9/30/2055

RC Reason: Not assigned

SC Date: 9/30/2055

Program: Compliance-related Cleanup

Subprogram: CC

NPL Status: Yes

Hazardous Ranking Score: 29.7

RRSE: N/A

MRSPP:

Phase	Start	End
PA:	6/30/1990	6/30/1991
SI:	6/30/1990	6/30/1991
RI/FS:	5/31/1995	9/15/2026
RD:	- -	- -
IRA:	3/31/2007	12/31/2014
RA(C):	9/16/2026	9/16/2026
RA(O):	9/17/2026	9/30/2055
LTM:	- -	- -

Site Narrative: The DA and the DF were both originally in the DERP. Because the sites are in very close proximity they are used for similar activities and are still active therefore the sites were moved to the CC Program. When moved to the CC Program both sites were included in site CC-06. The DA is an approximately 23-acre site in the southwest portion of the installation an active site used for emergency open burn and open detonation of rejected ammunition. The open detonation area comprises an open field with six shallow detonation pits. The open burn area consists of an access road to an open field where a burn pan can be placed. In addition, earth-covered poured concrete waste storage structures are present at the site. The DA is located at the topographic high near the boundary of the Skunk River and Long Creek watersheds. The DA has been in use since the early 1940s for open detonation of ammunition and since 1997 for open burn operations. The documented open detonation practice consists of construction of detonation pits to a depth of approximately six feet placement and detonation of ordnance and site maintenance. Debris and UXO are periodically cleared from detonation pits. Detonation pits are backfilled when they are no longer usable or during breaks in scheduled demilitarization activities. Additional pits are constructed as needed. Open burning is performed in open-top metal containers (pans) with solid or liquid propellants. Metals and residues that remain after a detonation or burning episode are collected as part of site maintenance. If residual explosives are suspected waste is thermally treated on-site to remove any remaining explosive constituents. Metal scrap is then sold as salvage material. Since 1981 this area has been used on an emergency-only basis requiring approval by the State of Iowa to open burn propellants in pans that have faulty stabilizers or to open detonate ammunition rounds that become armed during the assembly process. MEC were investigated removed and destroyed at the DA previously; however residual MEC and MCs may be present at the site. The DA was included in the facility's application for an emergency basis RCRA permit for open demolition and subsequently permitted for open burning operations. In 2004 the US Army and the USEPA agreed to a Resolution of Dispute which allowed for remedial activities to be performed at five RCRA sites under the CC Program (2005). Since this agreement soil sediment surface water and

groundwater investigations have progressed. Impacts to soil sediment surface water and groundwater at the DA have been investigated since 1981. A draft final CMS submitted to the USEPA in 2012 concluded that NFA for the soil was warranted for the DF. Demolition of the DF was completed in 2017. The CMS and subsequent studies concluded that explosives and metals above screening levels are present in groundwater at the DA. Based on the results of the 2012 CMS additional work is needed to further delineate two RDX plumes. To further characterize groundwater a 2018 UFP-QAPP for RI/RFI was funded and includes the conceptual exposure model for human and ecological receptors. The IAAAP RCRA Permit was renewed September 2018 which includes the emergency basis open burn/open detonate. This site is regulated under RCRA and managed under the CERCLA program and is currently a stand-alone OU-12 CC-06 SRI. The 2023 CC-06 SRI recommends an FS/CMS. Based on the results of the CC-06 SRI and risk assessments, additional action is warranted to mitigate potential unacceptable risks to future receptors from site-related COCs at CC-06 (both the DA and DF). It is recommended that an FS/CMS be completed to evaluate remedial alternatives to address RDX, iron, or manganese in groundwater at the DA and DF. This FS/CMS will be conducted under the CC program. When developing remedial alternatives, the FS/CMS should consider ongoing site operations, the reasonably foreseeable future land use for this area, and the results of previous treatability studies. CLEANUP/EXIT STRATEGY - The FS will evaluate alternatives for a path forward. The anticipated path forward is MNA, FYR, and LUCs.

SITE SUMMARY

SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
19105.1011	IAAP-008_LINE 7 AMMO LAP(FUZE/BLANK)	5/31/1996
19105.1019	IAAP-014_BOXCAR UNLOADING AREA	5/31/1996
19105.1028	IAAP-022_UNIDENTIFIED SUBSTANCE(OIL) WAS	8/31/1991
19105.1031	IAAP-026_SEWAGE TREATMENT PLANT/DRYING B	5/5/2022
19105.1035	IAAP-030_FIRING SITE AREA	9/30/2003
19105.1046	IAAP-042_ABANDONED COAL STORAGE YARD	10/31/1993
19105.1050	IAAP-045_FORMER FUEL STATION UST'S	8/31/2002
19105.1053	PBC at Iowa_PBC at Iowa	9/30/2014
19105.1061	CC-01_Contaminated Clothing Laundry	6/10/2020
19105.1054	IAAP-003-R-01_WEST BURN PADS	9/30/2014
19105.1058	IAAP-005-R-01_WEST BURN PADS SOUTH OF TH	1/31/2014
19105.1060	IAAP-006-R-02_MANEUVER AREA	1/31/2014
19105.1064	IAAP-002-R-02_Line 6 - Outside Blast Rad	1/31/2014
19105.1092	CC-02_Contaminated Waste Processor	9/30/2009
19105.1093	CC-03_Fly Ash Landfill	4/30/2020
19105.1095	CC-05_3A Sewage Treatment Plant Drying B	4/30/2020

COMMUNITY INVOLVEMENT

Community Involvement Plan (Date Last Reviewed):	05/01/2017
Technical Review Committee Establishment Date:	04/30/1992
Restoration Advisory Board (RAB) Establishment Date:	08/31/1997
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Reasons for Not Establishing RAB:	N/A
RAB Date of Solicitation from Community:	N/A
RAB Results of Solicitation:	N/A
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A
Administrative Record Location:	www.IAAAPrestoration.com
Information Repository Location:	IAAAP DERP Library - Admin Bldg Room 62 17571 DMC Hwy 79, Middletown, IA 52638

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Completed	FYR	02/04/2020	03/10/2021	OU-1 Complete the Site Inspection that is currently underway to evaluate PFOS, PFBS, PFOA and potential exposure pathways at the Fire Training Pit. Remediation goals are being evaluated and revised. A post-ROD change document will be required.	OU-1 Protectiveness Deferred; OU-4 Protectiveness Deferred; OU-3 Conduct a Remedial Design and continue coordination with IDNR to facilitate execution of the groundwater protection zone.; OU-5 Base Master Plan Needed.	N/A
Planned	FYR	09/14/2024	03/10/2026	N/A	N/A	N/A