JFHQ PA ARNG

Army Cleanup Program

Installation Action Plan

2023

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ACRONYMS

Acronym	Definition
AEDB-R	Army Environmental Database - Restoration
CC	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
DD	Decision Document
ENV	Environmental
FS	Feasibility Study
HQAES	Headquarters Army Environmental System
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
PA	Preliminary Assessment
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RIP	Remedy-In-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SI	Site Inspection
UST	Underground Storage Tank
WBS	Work Breakdown Structure

PHASE TRANSLATION TABLE

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

SITE ALIAS LIST

HQAES ID	AEDB-R Reference	Site Alias
6912A.1015	CC_PAE40-001-R-01_NDNODS_RIDGEWAY TRAINING SITE	
6912A.1016	CC_PAHQ-002-R-01_NDNODS_CAMP BOAL	RRPA000002
6912A.1017	CC_PAHQ-005-R-01_NDNODS_Jenkins Small Arms Range	
6912A.1018	CC_ PAHQ-008-R-01_NDNODS_Mount Gretna Training Site	RRPA000008
6912A.1019	CC_ PAHQ-009-R-01 _NDNODS_Mt Gretna Training Camp Machine Gun Range	RRPA000009
6912A.1020	CC_PAHQ-010-R-01_NDNODS_Mt Gretna Training Camp Pistol Range	RRPA000010

JFHQ PA ARNG

COMPLIANCE CLEANUP SITES

CC_PAE40-001-R-01_NDNODS_RIDGEWAY TRAINING SITE

HQAES ID: 6912A.1015

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned
MRSPP: Not assigned
RIP Date: 10/15/2025

RC Date: 10/15/2025

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	9/15/2012
RI/FS	3/15/2016	12/31/2020
RD	3/15/2021	4/15/2021
IRA		
RA(C)	4/15/2021	10/15/2025
RA(O)		
LTM		

Site Narrative

The Ridgway Training Site is located on Grant Road, approximately 2 miles northwest of Ridgeway, Pennsylvania. The Ridgeway Training Site was identified through the ARNG Directorate as part of the NDNODS inventory and determined to be eligible for the MMRP. The site, established in 1965, is used primarily during inactive duty training weekends by several units of the Pennsylvania Army National Guard (PAARNG). Three types of training activities occur at Ridgeway TS: live-fire weapons training, vehicle maintenance training, and light maneuver exercises. The small arms range was constructed in 1987 on the western edge of the installation. Live-fire training has only occurred on the small arms weapons range. SI fieldwork was conducted at this site in 2011. Nitroglycerin was detected in the parent and field duplicate surface soil samples c ollected from the firing line above selected United States Environmental Protection Agency human health screening criterion. The maximum detected concentrations of antimony, copper, nitroglycerin and lead detected in the biased surface soil samples exceeded the MR S-specific SI maximum ambient concentrations as well as the selected PADEP evaluation criteria. Site is recommended to be further analyzed for metals and explosives. DERP funding was used to complete work through the SI at this site. NDNODS sites moving forward with the RI/FS phase are reprogrammed into Compliance-related Cleanup.

Restoration/Cleanup Strategy: A Remedial Investigation (RI) and Feasibility Study (FS) has been completed at this site and Remedial Action(Construction) is underway.

CC_PAHQ-002-R-01_NDNODS_CAMP BOAL

HQAES ID: 6912A.1016

Alias: RRPA000002

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned RIP Date: 2/15/2033

RC Date: 2/15/2033

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	9/15/2012
RI/FS	1/15/2026	1/15/2031
RD	1/15/2031	2/15/2031
IRA		
RA(C)	2/15/2031	2/15/2033
RA(O)		
LTM		

Site Narrative

The Camp Boal Machine Gun Range is a one mile site located just off Pennsylvania Military Museum property in Boalsburg, Pennsylvania, 30 yards west of Highway 45 (Warren Road) and south of Brandywine Drive. A cement wall about ten yards long and two yards high remains at the site of the former target location on the eastern side of a large hill. The number and location of the firing points is unknown, but based on the location and orientation of the range backstop, it is assumed the direction of fire was to the west.

Site Inspection (SI) field work was conducted in 2011. Lead was detected in one sample (and its field duplicate) at a concentration exceeding the selected Pennsylvania Department of Environmental Protection (PADEP) evaluation criterion. An impact to human health via exposure to lead in surface soil is possible; therefore, the site is recommended for a Remedial Investigation (RI) to further investigate the presence of metals.

Defense Environmental Restoration Program (DERP) funding was used to complete work through the SI at this site. Non Department of Defense Non-Operational Defense Sites (NDNODS) sites moving forward with the RI/Feasibility Study (FS) phase are reprogrammed into Compliance-related Cleanup.

Restoration Cleanup Strategy: An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

CC_PAHQ-005-R-01_NDNODS_Jenkins Small Arms Range

HQAES ID: 6912A.1017

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned RIP Date: 2/15/2036

RC Date: 2/15/2036

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	10/15/2012
RI/FS	1/15/2029	1/15/2034
RD	1/15/2034	2/15/2034
IRA		
RA(C)	2/15/2034	2/15/2036
RA(O)		
LTM		

Site Narrative

A small arms range of no more than 25 yards with ten .22 caliber (cal) rifle and pistol firing points and ten .45 cal pistol firing points located on private property in Washington County, Pennsylvania. The Pennsylvania Army National Guard (PAARNG) is known to have fired .22 cal and .45 cal munitions at the range in 1981 and 1982.

Site Inspection (SI) fieldwork was conducted in 2011. Antimony and lead were detected at concentrations exceeding the selected Pennsylvania Department of Environmental Protection (PADEP) evaluation criteria. Based on the results of the SI Report, the site is recommended for further investigation of metals.

Defense Environmental Restoration Program (DERP) funding was used to complete work through the SI at this site. Non Department of Defense Non-Operational Defense Sites (NDNODS) sites moving forward with the RI/Feasibility Study (FS) phase are reprogrammed into Compliance-related Cleanup.

Restoration Cleanup Strategy: An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

CC PAHQ-008-R-01 NDNODS Mount Gretna Training Site

HQAES ID: 6912A.1018

Alias: RRPA000008

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned

RIP Date: 2/15/2029 RC Date: 2/15/2029

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	9/15/2012
RI/FS	1/15/2021	1/15/2026
RD	1/15/2027	2/15/2027
IRA		
RA(C)	2/15/2027	2/15/2029
RA(O)		
LTM		
·	·	·

Site Narrative

Two former artillery ranges with overlapping footprints encompassing approximately 421 acres. One north-south range and one east-west range on which powder and ball cannons, 37 millimeter (mm) mortars, 37mm cannons, 75mm cannons, and 155mm Howitzers were fired. The eastern portion of the Mount Gretna Training Camp State Rifle Range, which contained the ranges backstops and an earthen berm, is included in the munitions response site (MRS). This portion of the site consists of 78.7 acres. This site consists of two former artillery ranges and the berm portion of a former rifle range. It has the potential for munitions debris and Unexploded Ordnance. It has been at least 50 years since the site was last used, but local residents have reportedly found artillery rounds from the estimated period of use. Defense Environmental Restoration Program (DERP) funding was used to complete work through the Site Inspection (SI) at this site. Non Department of Defense Non-Operational Defense Sites (NDNODS) sites moving forward with the Remedial Investigation (RI)/Feasibility Study (FS) phase are reprogrammed into Compliance-related Cleanup.

Restoration/Cleanup Strategy: The Remedial Design (RD)/ Remedial Action (Construction) (RA(C)) work was initiated but halted due to issues associated with Munitions and Explosives of Concern (MEC) removal action activities and the identification of 37mm munitions debris (MD) and MEC during the RA work which had not been previously identified. The RA was only partially completed, and the completed field activities included: surface and subsurface removal of MEC over 29 acres of the planned 78.7 acres, post-demolition soil sampling, and pre-excavation munitions constituents (MC) sampling for the 950-yard berm. The project was halted, and demobilization occurred before the planned soil removal on the berm could be conducted. The MC sampling results indicated that the MC-contaminated soil removal area should be expanded from the planned 0.08-acre area to a 0.12-acre area. An expanded RI will be required to further delineate nature and extent of MEC of the additional 119 acres, munitions potentially presenting an explosive hazard and non-munitions-related debris prior to reconvening RA activities. The expanded RI/FS phase was awarded in Fiscal Year (FY) 21. The estimate assumes RD/RAC phases. Due to an additional 119 acres needing to be investigated, the RI was re-opened and the RD/RAC phases will now be future.

CC_ PAHQ-009-R-01 _NDNODS_Mt Gretna Training Camp Machine Gun Range | Start |

HQAES ID: 6912A.1019

Alias: RRPA000009

Regulatory Driver: CERCLA

RRSE: Not assigned

MRSPP: Not assigned

RIP Date: 2/15/2036

RC Date: 2/15/2036

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	9/15/2012
RI/FS	1/15/2029	1/15/2034
RD	1/15/2034	2/15/2034
IRA		
RA(C)	2/15/2034	2/15/2036
RA(O)		
LTM		

Site Narrative

One acre former 1,000-inch machine gun range located west of Conewago Hill in Lebanon County, Pennsylvania. The range consisted of a man-made earthen berm and a slightly raised firing line. Site Inspection field work was conducted in 2011. Lead was detected (in two biased [and one field duplicate] samples) at concentrations exceeding the selected Pennsylvania Department of Environmental Protection (PADEP) evaluation criterion. Based on the results of the SI Report, an impact to human health via exposure to lead in the surface soil is possible. The site is recommended for further investigation of metals.

Defense Environmental Restoration Program (DERP) funding was used to complete work through the SI at this site. Non Department of Defense Non-Operational Defense Sites (NDNODS) sites moving forward with the Remedial Investigation (RI)I/Feasibility Study (FS) phase are reprogrammed into Compliance-related Cleanup.

Restoration Cleanup Strategy: An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

CC_PAHQ-010-R-01_NDNODS_Mt Gretna Training Camp Pistol Range

HQAES ID: 6912A.1020

Alias: RRPA000010

Regulatory Driver: CERCLA

RRSE: Not assigned

MRSPP: Not assigned

RIP Date: 2/15/2037

RC Date: 2/15/2037

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	4/15/2007	9/15/2009
SI	7/15/2010	9/15/2012
RI/FS	1/15/2030	1/15/2035
RD	1/15/2035	2/15/2035
IRA		
RA(C)	2/15/2035	2/15/2037
RA(O)		
LTM		

Site Narrative

Two acre former Pistol Range located east of Route 117 (Mount Gretna Road) across from what is currently Timberbridge Lane in Lebanon County, Pennsylvania. The range consisted of a man-made earthen berm and firing points no more than 25 yards apart. The direction of fire was to the east. Site Inspection (SI) field work was conducted in 2011. Lead was detected in one sample at a concentration that exceeded the selected Pennsylvania Department of Environmental Protection (PADEP) evaluation criterion. Based on the results of the SI Report, an impact to human health via exposure to lead in the surface soil is possible. The site is recommended for further investigation of metals.

Defense Environmental Restoration Program (DERP) funding was used to complete work through the SI at this site. Non Department of Defense Non-Operational Defense Sites (NDNODS) sites moving forward with the Remedial Investigation (RI)I/Feasibility Study (FS) phase are reprogrammed into Compliance-related Cleanup.

Restoration Cleanup Strategy: An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

SITE CLOSEOUT SUMMARY

HQAES ID	Site Name	Site Closeout Date
6912A.1001	PAHQ-001-R-01_NDNODS Bear Creek Local Training Area (LTA)	9/30/2012
6912A.1002	PAHQ-004-R-01_NDNODS Forest Route 143 LTA	9/30/2012
6912A.1003	PAHQ-005-R-01_NDNODS Jenkins Small Arms Range	9/15/2012
6912A.1004	PAHQ-007-R-01_NDNODS Mead Run LTA	9/30/2012
6912A.1005	PAHQ-012-R-01_NDNODS Squaw Valley Park	10/30/2012
6912A.1006	PAHQ-002-R-01_NDNODS Camp Boal	9/30/2012
6912A.1007	PAHQ-008-R-01_NDNODS Mount Gretna Training Site	9/30/2012
6912A.1008	PAHQ-009-R-01_NDNODS Mt Gretna Tng C. Machine Gun Range	9/30/2012
6912A.1009	PAHQ-010-R-01_NDNODS Mt Gretna Tng Camp	9/30/2012
6912A.1010	PAHQ-011-R-01_NDNODS Mt Gretna Tng Camp	9/30/2012
6912A.1011	PAC90-001-R-01_NDNODS Lewistown Armory	9/30/2012
6912A.1012	PAE40-001-R-02_NDNODS_RIDGWAY TRAINING SITE	9/15/2012
6912A.1013	PAA75-001-R-01_NDNODS Carlisle Munitions	9/30/2012
6912A.1014	CC_PAA75-001-R-01_NDNODS_CARLISLE MUNITIONS	11/22/2017
6912A.1021	PAHQ-005-R-02_NDNODS_JENKINS SMALL ARMS RANGE	9/15/2012
6912A.1022	PAHQ-008-R-02_NDNODS MT GRETNA TRAINING	9/15/2012
6912A.1023	CC_PAHQ-008-R-03_NDNODS MOUNT GRETA TRAINING SITE	6/15/2017
6912A.1024	PAE40-001-R-01_NDNODS Ridgway Training Site	9/15/2012

COMMUNITY INVOLVEMENT

Technical Review Committee (TRC) Establishment Date:	N/A
Community Involvement Plan (Date Published):	08/15/2017
Restoration Advisory Board (RAB) Establishment Date:	N/A
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Additional Community Involvement:	N/A
Administrative Record is located at:	PA Army National Guard Ft. Indiantown Gap Environmental Bldg. 0-11 Annville PA 17003
Information Repository is located at:	PA Army National Guard Ft. Indiantown Gap Environmental Bldg. 0-11 Annville PA 17003
Current Technical Assistance for	N/A
Public Participation (TAPP):	
TAPP Title:	N/A
Potential TAPP:	N/A

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Review Summary Table

None

ROD/DDs associated with the last Five-Year/Periodic Review

None

Results, Actions & Plans

None

LAND USE CONTROLS (LUC) SUMMARY

None

FORT INDIANTOWN GAP TRAINING SITE

Army Cleanup Program

Installation Action Plan

2023

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ACRONYMS

Acronym	Definition
AEDB-R	Army Environmental Database - Restoration
AOI	Area of interest
ARNG	Army National Guard
СС	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
DD	Decision Document
DERP	Defense Environmental Restoration Program
ENV	Environmental
FS	Feasibility Study
FTIG	Fort Indiantown Gap Training Site
FY	Fiscal Year
HQAES	Headquarters Army Environmental System
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
Ng/L	Nanograms per liter
PA	Preliminary Assessment
PFAS	Per-and polyfluoroalkyl substances
PFHxS	Perfluorohexanesulfonic acid
PFNA	Perfluorononanoic acid
PFOS	Perfluorooctane sulfonate acid
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act

Acronym	Definition
RD	Remedial Design
RI	Remedial Investigation
RIP	Remedy-In-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SI	Site Inspection
SL	Screening level
Ug/kg	Microgram per kilogram
UST	Underground Storage Tank
WBS	Work Breakdown Structure

PHASE TRANSLATION TABLE

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

SITE ALIAS LIST

HQAES ID	AEDB-R Reference	Site Alias
42307.1008	FTIG-003-R-01_RICOCHET AREA	
42307.1010	CC-FTIG-002-01_SANITARY LANDFILL	
42307.1023	CCPA2019-01-P_FT INDIANTOWN GAP PFAS CONTAMINATION	
42307.1024	PA2019-01-P_FT INDIANTOWN GAP PFAS CONTAMINATION	

FORT INDIANTOWN GAP TRAINING SITE

INSTALLATION RESTORATION PROGRAM SITES

CC-FTIG-002-01_SANITARY LANDFILL

HQAES ID: 42307.1010

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned

RIP Date: 7/1/2017 RC Date: 7/1/2017

RC Reason: All Required Cleanup(s) Completed

Program: ENV Restoration, Army

Subprogram: IR

Phases	Start	End	
PA	1/15/2002	12/15/2002	
SI	1/15/2002	12/15/2002	
RI/FS	3/15/2012	9/15/2014	
RD	3/15/2014	10/15/2014	
IRA			
RA(C)	3/15/2014	7/1/2017	
RA(O)			
LTM	7/1/2017	9/15/2054	

Site Narrative

The on-site sanitary landfill, located on Ft. Indiantown Gap, was operated by the U.S. Army from approximately 1942 to 1982. The landfill is located in the northeastern corner of the installation on approximately 100 acres. The wastes disposed into this landfill include, but are not limited to: municipal waste, sewage sludge, rinsed chemical containers, coal ash and used oil. The waste was placed into trenches, burned, and buried. Under the 1995 Base Realignment and Closure (BRAC) process, U.S. Army Ft. Indiantown Gap was selected for closure and the lease was transferred from the U.S. Army to the National Guard Bureau in 1998. The landfill had previously been identified by the U.S. Army as a source of contamination and was entered into the Installation Restoration Program (IRP) under Defense Environmental Restoration Program (DERP) and given the following IRP Site Number: CC-FTIG-002-01.

One hundred acres was designated to receive solid wastes from post operations. However, it is approximated that only 40 acres was actually used as the waste disposal areas. The exact acreage and boundaries of the waste disposal areas were confirmed during the Remedial Investigation (RI) in 2015 and Remedial Action (RA) in 2016 and found to be 45 acres.

Contamination of site groundwater has been documented since monitoring wells were installed in 1979. Cadmium 0.001 milligram/Liter (mg/L), chromium 0.118 mg/L, lead 0.15 mg/L, silver 0.474 mg/L, and manganese 26.3 mg/L were identified in that study as impacting site groundwater. These levels are well above current Pennsylvania Department of Environmental Protection (PADEP) standards for metals in groundwater. PADEP began requiring monitoring of site groundwater in 2003 for metals and volatile organic compounds (VOCs). Currently the concentrations of metals in site groundwater are below the PADEP standards. The concentration of cis-1,2-dichloroethene of 6.0 microgram/liter (ug/L) and trichloroethene of 4.1 ug/L are below the PADEP standards of 70 ug/L and 5ug/L respectively, however, PADEP requires the site to continue monitoring IAW Title 25 PA Code 273 (Pennsylvania Municipal Waste Regulations). Sporadically, VOC's such as vinyl chloride or trichloroethene have popped up as exceedances over the years.

In a letter dated 31 January 2011, PADEP required the submission of a re-grading plan to include the delineation of the waste disposal areas, the current landfill topography and proposed grading and capping of the landfill. Per the PADEP letter, the final cover should consist of at least 18 inches of earthen material covered by an erosion layer of at least 6 inches of earthen material. Pennsylvania Army National Guard (PAARNG) must maintain the landfill cap and groundwater monitoring system IAW Title 25 Pa Code Chapter 273 Municipal Waste Regulations. This includes restrictions on future site usage to ensure that the integrity of the cap is maintained.

The Remedial Action at this site was completed in Fiscal Year (FY) 17. Five-year reviews will begin in FY23. PADEP has not been willing to allow us to cease Long Term Management (LTM) of groundwater monitoring since the quality of groundwater does not meet statewide health standards. PADEP requires PAARNG to follow 25 Pa Code 271.342 of Pennsylvania's Municipal Waste regulations to achieve landfill final closure certification. A method to achieve this closure certification is via the PADEP's Land Recycling and Environmental Remediation Standards Act (Act 2), which is anticipated for FY22 funding.

Restoration/Cleanup Strategy:

Long Term Management (LTM) will continue, including five-year reviews.

PA2019-01-P_FT INDIANTOWN GAP PFAS CONTAMINATION

HQAES ID: 42307.1024

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned

RIP Date: 9/15/2029

RC Date: 9/15/2029

RC Reason: Not assigned

Program: ENV Restoration, Army

Subprogram: IR

Phases	Start	End
PA	8/11/2017	9/27/2018
SI	9/7/2018	4/30/2021
RI/FS	6/15/2021	9/15/2029
RD		
IRA		
RA(C)		
RA(O)		
LTM		

Site Narrative

A Preliminary Assessment was done for per- and polyfluoroalkyl substances (PFAS) at Fort Indiantown Gap Training Site (FTIG) in Annville, Pennsylvania, to assess potential PFAS release areas and exposure pathways to receptors. The FTIG facility was under the jurisdiction of the Federal Government from 1941 to 1998, when it was converted to a training site for Army National Guard (ARNG), transferring management to the Pennsylvania Department of Military and Veteran Affairs. Currently, separate leases exist for the Army (1990 to 2049) and the Air Force (1989 to 2049). A Site Inspection (SI) was completed at the facility. Based on the Office of the Secretary of Defense Memorandum, 6 July 2022, perfluorooctane sulfonate acid (PFOS) at AOI 2 exceeded surface soil screening levels (SL) with a maximum concentration of 120 microgram per kilogram (ug/kg). Perfluorohexanesulfonic acid (PFHxS), PFOS, perfluorooctanoic acid (PFOA), and perfluorononanoic acid (PFNA) at AOI 2 exceeded groundwater SLs with maximum concentrations of 150 nanograms per liter (ng/L), 280 ng/L, 44 ng/L, and 9.5 ng/L, respectively. PFOA at AOI 1 exceeded groundwater SLs with a maximum concentration of 14 ng/L. Based on the SI findings, it is recommended the facility proceed to a Remedial Investigation (RI). Further evaluation is warranted for AOI 1: Combined Arms Collective Training Facility and AOI 2: West Ramp Fire Pit Training Area, East Ramp Fire Pit Training Area, Building 019-101 Ramp, and Current Fire Station. The RI was awarded in late Fiscal Year 2021 (FY21).

The RI funding will be tracked under Compliance-related Cleanup (CC) program site 42307.1023. This site was determined to be eligible for the Defense Environmental Restoration Program (DERP) and future Feasibility Study (FS) funding will be tracked under this site.

Restoration/Cleanup Strategy: actions will be evaluated.	An RI/FS is underway at this site. Once the RI/FS is completed, future	

FORT INDIANTOWN GAP TRAINING SITE

MILITARY MUNITIONS RESPONSE PROGRAM SITES

FTIG-003-R-01_RICOCHET AREA

HQAES ID: 42307.1008

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned
MRSPP: Not assigned
RIP Date: 10/15/2015

RC Date: 10/15/2015

RC Reason: All Required Cleanup(s) Completed

Program: ENV Restoration, Army

Subprogram: MR

Phases	Start	End	
PA	9/24/2002	10/24/2003	
SI	6/30/2006	9/30/2008	
RI/FS	3/31/2009	9/30/2012	
RD	10/31/2012	9/30/2014	
IRA			
RA(C)	6/15/2013	10/15/2015	
RA(O)			
LTM	10/15/2015	9/15/2054	

Site Narrative

The approximately 8,002 acre Ricochet Area Munitions Response Site, located in Pennsylvania State Game Lands 211, is adjacent to the northern property boundary of the installation and lies between Second Mountain and Stony Mountain. The current and future use of the ricochet area is recreational, including hunting, fishing, and hiking and non-recreational forest and trail maintenance. The east and west boundaries of the munitions response site (MRS) correspond to the Restricted Airspace area R5802A, also known as Restricted Area F5802A as documented in the United States (U.S.) Army Garrison Safety Range Regulation for FTIG (Army Regulation 385-1) dated October 1986. This regulation describes the area as "a fall area for spent ordnance which ricochets north of Second Mountain" (U.S. Army Garrison, 1995). The ridgeline of Stony Mountain bounds the MRS to the north based on the fact that there is no historical evidence of ricochets north of Stony Mountain. The 756th Ordnance Company (Explosive Ordnance Disposal (EOD) reported that every hunting season they typically responded to numerous calls involving artillery rounds. The MRS was subdivided into two MRS's in the 2012 Feasibility Study Report: The Ricochet Area MRS corresponds to an approximate 3,262 acre safety buffer/ricochet area of the Ft Indiantown Gap (FIG) ranges where unexploded ordnance and munitions debris were recovered during the Remedial Investigation and includes the former Cold Spring range fan MRS. The 4,740 acre Sharp Mountain MRS extends from the northern Ricochet Area MRS boundary to the ridgeline of Sharp Mountain where there was no evidence of military munitions-related activities or material identified in this MRS during the Remedial Investigation.

The ricochet area is considered a transferred range under the 2003 closed, transferring and transferred (CTT) Range Site Inventory conducted at FIG in 2003 inventory because the Army does not own or control the property. The estimated active years are from 1933 to 1998. The Army also used an 80 acre parcel in the Cold Spring portion of the Munition Response Site for bivouacs and as an artillery firing

position from 1945 to 1958 which was combined into the single Ricochet Area MRS. The 1982 Installation Assessment done through the US Army Toxic and Hazardous Materials Agency states that FIG "holds a waiver of Safety from the Pennsylvania Game Commission for weapons range safety fans which extend beyond the installation boundaries onto State Game Lands No. 211 in Dauphin and Lebanon Counties." It states that FIG "holds a special license from the Pennsylvania Game Commission for approximately 107 hectares (264 acres) north of the Impact Area that licensed the Army to conduct indirect artillery firing over portions of SGL211 during the months of June through August each year the license was in effect. Historical records indicate that safety danger zones (SDZs) did extend into the MRS from FIG and that Safety waivers for ranges firing north from FIG were obtained from the Pennsylvania Game Commission between 1955 and 1982. No ordnance was intentionally fired into the ricochet area

The 2012 Feasibility Study evaluated the most appropriate remedial action that would mitigate, reduce or eliminate unacceptable risks to human health and the environment from munitions and explosives of concern (MEC), based on the future use of the property in the newly defined Ricochet Area MRS (3,262 acres). The selected remedial alternative was for focused surface (1,334 acres) and subsurface removal (10 acres) of munitions explosive constituents with containment and controls. The proposed remedy was accepted by the regulator and Pennsylvania Game Commission and documented in a Proposed Plan (PP). The PP was presented to the public in 2012 with an opportunity for public comments that were considered prior to selecting the final remedy described above. The Remedial Design (RD) and Remedial Action (RA) contract was awarded in 2013. A Record of Decision (ROD) was finalized in May 2013. Alternative 4 was selected as the plan going forward, which includes Five Year Reviews and Containment and Controls. The ROD estimates 30 years of Long Term Management (LTM) activities.

RA was conducted at the Ricochet Area Munitions Response Site in 2014 pursuant to the ROD and was necessary to reduce the risk associated with MEC to human health and the environment based on the current and intended future land use. Surface removal of MEC was conducted in a focused area limited to the portions of the MRS with MEC/munitions debris (MD) with densities greater than 0.5 surface items per acres. This area was approximately 1,334 acres of the Ricochet Area MRS. Subsurface removal was done within two separate areas of the MRS designated as the Cold Spring herbaceous opening (7 acres) and the Yellow Springs herbaceous opening (4 acres) totaling approximately 11 acres. There were 67 recovered MEC items and 9,434 pounds of Materials Documented as Safe (MDAS). The following types of unexploded ordnance and discarded military munitions were found in the area along with a variety of munitions debris and components:

75mm high explosive (HE) projectiles

155mm HE projectile 75mm armor piercing HE projectile

105 mm HE projectiles 106mm HEAT projectile

4.2 inch HE projectile

MK-2A4 primers

105mm white phosphorous (WP) smoke projectile

8 inch HE projectile 81mm HE mortars

81mm Illum mortar 76mm HE projectile

37mm HE projectiles

Land use controls were initiated in Fiscal Year (FY) 14. Signs were placed at the entrances to the SG211 Ricochet Area MRS, an awareness video was created for contractors that will perform work for the

Pennsylvania Game Commission (PGC) and for recreational users and brochures were created for distribution by the PGC.

The SGL 211 footprint lies along the northern perimeter of Fort Indiantown Gap (FTIG) and is part of the largest road less acreage tract in Pennsylvania. The property line is functionally represented by a firebreak trail. Tree blazes provide another identifier of the property line. Regardless of these boundaries, any planned or unplanned burning of the forest material in these areas would be responded to primarily by FTIG, since FTIG forest fire fighting resources are closest and physical access is available only from FTIG controlled acreage. Similar restrictions would apply to any planned timbering of the area, access would need to be facilitated by FTIG.

Both the PGC and FTIG would cooperate with controlled burns and timbering activities and FTIG forestry staff would be intimately involved with operations on the ground. Due to the high degree of shared training, FTIG forestry would also be aware of potential items of concern identified during these activities and would be aware of the proper and appropriate response procedures. Based on these scenarios, no outside funding for unexploded ordnance (UXO) support is necessary. Resources dedicated to the Forestry group within FTIG will be utilized and Forestry will involve other FTIG resources as needed, especially Range Control and Environmental, for issues found on either side of the poorly marked boundary between FTIG and SGL 211.

Restoration/Cleanup Strategy:

Long Term Management (LTM) will continue to include five-year reviews.

FORT INDIANTOWN GAP TRAINING SITE

COMPLIANCE CLEANUP SITES

CCPA2019-01-P_FT INDIANTOWN GAP PFAS CONTAMINATION

HQAES ID: 42307.1023

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned

RIP Date: 9/30/2029 RC Date: 9/30/2029

RC Reason: Not assigned

Program: Compliance Cleanup

Subprogram: CC

Phases	Start	End
PA	8/11/2017	9/27/2018
SI	9/7/2018	4/30/2021
RI/FS	6/15/2021	9/30/2029
RD		
IRA		
RA(C)		
RA(O)		
LTM		

Site Narrative

A Preliminary Assessment was done for per- and polyfluoroalkyl substances (PFAS) at Fort Indiantown Gap Training Site (FTIG) in Annville, Pennsylvania, to assess potential PFAS release areas and exposure pathways to receptors. The FTIG facility was under the jurisdiction of the Federal Government from 1941 to 1998, when it was converted to a training site for Army National Guard (ARNG), transferring management to the Pennsylvania Department of Military and Veteran Affairs. Currently, separate leases exist for the Army (1990 to 2049) and the Air Force (1989 to 2049). A Site Inspection (SI) was completed at the facility. Based on the Office of the Secretary of Defense Memorandum. 6 July 2022. perfluorooctane sulfonate acid (PFOS) at AOI 2 exceeded surface soil screening levels (SL) with a maximum concentration of 120 microgram per kilogram (ug/kg). Perfluorohexanesulfonic acid (PFHxS), PFOS, perfluorooctanoic acid (PFOA), and perfluorononanoic acid (PFNA) at AOI 2 exceeded groundwater SLs with maximum concentrations of 150 nanograms per liter (ng/L), 280 ng/L, 44 ng/L, and 9.5 ng/L, respectively. PFOA at AOI 1 exceeded groundwater SLs with a maximum concentration of 14 ng/L. Based on the SI findings, it is recommended the facility proceed to a Remedial Investigation (RI). Further evaluation is warranted for AOI 1: Combined Arms Collective Training Facility and AOI 2: West Ramp Fire Pit Training Area, East Ramp Fire Pit Training Area, Building 019-101 Ramp, and Current Fire Station. The RI was awarded in late Fiscal Year 2021 (FY21).

This site (42307.1023) will be used to track the RI funding under the Compliance-related Cleanup (CC) program. Site 42307.1024 will be used to track future Defense Environmental Restoration Program (DERP) funds as the site received DERP eligibility for future Feasibility Study (FS) funding.

Restoration/Cleanup Strategy: actions will be evaluated.	An RI/FS is underway at this site. Once the RI/FS is completed, fu	ıture

SITE CLOSEOUT SUMMARY

HQAES ID	Site Name	Site Closeout Date	Program Code
42307.1001	FIG-01_FORMER INCINERATOR	8/31/2006	ENV Restoration, Army
42307.1002	FIG-02_FORMER STAGING AREA	9/30/2006	ENV Restoration, Army
42307.1003	FIG-03_AASF OUTFALL	4/30/1999	ENV Restoration, Army
42307.1004	FTIG-008-R-01_MT. GRETNA RIFLE RANGE	10/24/2003	ENV Restoration, Army
42307.1005	FTIG-005-R-01_MT. GRETNA ARTILLERY RANGE	10/24/2003	ENV Restoration, Army
42307.1006	FTIG-007-R-01_MT. GRETNA PISTOL RANGE	10/24/2003	ENV Restoration, Army
42307.1007	FTIG-006-R-01_MT. GRETNA MACHINE GUN RAN	3/31/2005	ENV Restoration, Army
42307.1009	FTIG-004-R-01_COLD SPRING RANGE FAN	9/30/2008	ENV Restoration, Army
42307.1011	FTIG-009-R-01_RANGE ROAD SMALL ARMS RANG	9/15/2016	ENV Restoration, Army
42307.1012	CCPAA20041_FTIG AREA 4 FORMER FUEL POINT	6/30/2006	Compliance Cleanup
42307.1013	CCPAA20042_FTIG AREA 17 HEATING OIL RELE	5/31/2012	Compliance Cleanup
42307.1014	CCPAA20043_FTIG AREA 19/11 HEATING OIL	3/31/2007	Compliance Cleanup
42307.1015	CCPAA20011_FTIG AREA 9 SHOPPETTE RELEASE	8/15/2012	Compliance Cleanup
42307.1016	CCPAA20012_FTIG AASF#1 FUEL FARM RELEASE	9/30/2006	Compliance Cleanup
42307.1017	CCPAA20013_FTIG AREA 11 FUEL POINT	12/31/2005	Compliance Cleanup
42307.1018	CCPAA20051_FTIG Building 11-89 heating o	6/15/2012	Compliance Cleanup
42307.1019	CCPAA20071_FTIG CSMS EAST	9/15/2013	Compliance Cleanup
42307.1020	CCPAA20091_AASF fuel spill	11/15/2012	Compliance Cleanup
42307.1021	FTIG-006_ABANDONED TANK REMOVALS	5/15/2017	ENV Restoration, Army
42307.1022	FTIG-011_HEATING OIL AT BLDG 11-92	6/30/2018	ENV Restoration, Army

COMMUNITY INVOLVEMENT

Technical Review Committee (TRC) Establishment Date:	N/A
Community Involvement Plan (Date Published):	2/15/2013
Restoration Advisory Board (RAB) Establishment Date:	N/A
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Additional Community Involvement:	Community Involvement solicited on 12/15/2015
Administrative Record is located at:	BUREAU OF ENV MANAGEMENT BLDG 0-11, FORT INDIANTOWN GAP NATIONAL GUARD TRAI
Information Repository is located at:	ANNVILLE FREE LIBRARY 216 EAST MAIN ST. ANNVILLE, PA 17003
Current Technical Assistance for	N/A
Public Participation (TAPP):	
TAPP Title:	N/A
Potential TAPP:	N/A

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Review Summary Table

Status	Start Date	End Date	End FY
PLANNED	10/1/2021	10/1/2022	2023

ROD/DDs associated with the last Five-Year/Periodic Review

None

Results, Actions & Plans

None

LAND USE CONTROLS (LUC) SUMMARY

ROD/DD	LUC Title	HQAES ID
ROD	FTIG-003-R-01 ROD	42307.1008
ROD	Final ROD Former Landfill Remediation Project	42307.1010

AASF#2 JOHNSTOWN

Army Cleanup Program

Installation Action Plan

2023

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ACRONYMS

Acronym	Definition
AASF	Army Aviation Support Facility
AEDB-R	Army Environmental Database - Restoration
AOI	Area of interest
СС	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
DD	Decision Document
DERP	Defense Environmental Restoration Program
ENV	Environmental
FS	Feasibility Study
HQAES	Headquarters Army Environmental System
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
Ng/L	Nanograms/liter
PA	Preliminary Assessment
PFAS	Per-and poly-fluoroalkyl substances
PFNA	Perfluorononanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation

Acronym	Definition
RIP	Remedy-In-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SI	Site Inspection
SL	Screening level
Ug/kg	Micrograms/kilograms
UST	Underground Storage Tank
WBS	Work Breakdown Structure

PHASE TRANSLATION TABLE

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

SITE ALIAS LIST

HQAES ID	AEDB-R Reference	Site Alias
4673A.1002	PA2020-01-P_JOHNSTOWN AASF2 RC PFAS CONTAMINATION	

AASF#2 JOHNSTOWN

INSTALLATION RESTORATION PROGRAM SITES

PA2020-01-P_JOHNSTOWN AASF2 RC PFAS CONTAMINATION

HQAES ID: 4673A.1002

Alias: None

Regulatory Driver: CERCLA

RRSE: Not assigned MRSPP: Not assigned

RIP Date: 9/15/2038 RC Date: 9/15/2038

RC Reason: Not assigned

Program: ENV Restoration, Army

Subprogram: IR

Phases	Start	End
PA	8/11/2017	7/31/2020
SI	12/6/2019	9/30/2023
RI/FS	9/15/2031	9/15/2038
RD		
IRA		
RA(C)		
RA(O)		
LTM		

Site Narrative

A Preliminary Assessment (PA) was completed at Johnstown Army Aviation Support Facility (AASF) #2 to assess potential per- and poly-fluoroalkyl substances (PFAS) release areas and exposure pathways to receptors. Three Areas of Interest (AOI) related to potential PFAS releases were identified at the Johnstown AASF#2 during the PA. Based on the preliminary Conceptual Site Model developed for the AOIs, there is potential for receptors to be exposed to PFAS contamination in soil, groundwater, surface water, and sediment. A Draft Final Site Inspection (SI) was completed at the facility. Based on the results of the SI, at AOI1, for groundwater, perfluorooctanoic acid (PFOA) exceeded the screening level (SL) with a maximum concentration of 9.46 nanograms/liter (ng/L) and perfluorooctane sulfonate (PFOS) exceeded the SL with a maximum concentration of 68.4 ng/L. At AOI2, in surface soil, PFOA exceeded with a concentration of 36.2 micrograms/kilograms (ug/kg), PFOS exceeded the SL with a maximum concentration of 439 ug/kg and perfluorononanoic acid (PFNA) exceeded the SL with a concentration of 34.9 ug/kg. Further evaluation is warranted at AOI1 and AOI2.

The subject site was tracked as 4673A.1001 under the Compliance-related Cleanup (CC) program. In FY23 this site was determined to be eligible for the Defense Environmental Restoration Program (DERP).

Restoration/Cleanup Strategy: A Remedial Investigation (RI)/Feasibility Study (FS) will be completed at this site. Once the RI/FS is completed, future actions will be evaluated.

SITE CLOSEOUT SUMMARY

HQAES ID	Site Name	Site Closeout Date	Program Code
4673A.1001	CCPA2020-01-P_JOHNSTOWN AASF2 RC PFAS CONTAMINATION	4/23/2023	Compliance Cleanup

COMMUNITY INVOLVEMENT

Technical Review Committee (TRC) Establishment Date:	N/A
Community Involvement Plan (Date Published):	TBD
Restoration Advisory Board (RAB) Establishment Date:	N/A
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Additional Community Involvement:	Community involvement Plan, Administrative Record and Information Repository will be developed once the project progresses.
Administrative Record is located at:	TBD
Information Repository is located at:	TBD
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Review Summary Table

None

ROD/DDs associated with the last Five-Year/Periodic Review

None

Results, Actions & Plans

None

LAND USE CONTROLS (LUC) SUMMARY

None