SUNFLOWER 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: SUNFLOWER ARMY AMMUNITION PLANT

Installation City: DESOTO

Installation County: JOHNSON

Installation State: KS

Regulatory Participation - Federal: US ENVIRONMENTAL PROTECTION AGENCY (USEPA) REGION VII

Regulatory Participation - State: KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT (KDHE), BUREAU OF ENVIRONMENTAL REMEDIATION

ACRONYMS

Acronym	Definition
AAP	Army Ammunition Plant
ACM	Asbestos Containing Material
AOC	Area of Concern
ARAR	Applicable or Relevant and Appropriate Requirement
AST	Aboveground Storage Tank
CC	Compliance-Related Cleanup
CCC	Calcium Carbonate Cake
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
CWP	Contaminated Waste Processor
cy	cubic yard
DD	Decision Document
DES	Design
DNT	Dinitrotoluene
DRO	Diesel Range Organics
EBS	Environmental Baseline Survey
ENV	Environmental
ER,A	Environmental Restoration, Army
FS	Feasibility Study
FTW	Fluorescent Tube Well
FY	Fiscal Year
FYR	Five-Year Review
GN	Guanidine Nitrate
GRO	Gasoline Range Organics
IAP	Installation Action Plan
ICM	Interim Corrective Measures
ICMR	Interim Corrective Measures Report
ID	Identification
IM	Interim Measure
IR	Installation Restoration
IRA	Interim Remedial Action
KDHE	Kansas Department of Health and Environment

Acronym	Definition
kg	kilogram
KSWQS	Kansas Surface Water Quality Standards
LTM	Long-Term Management
LUC	Land Use Control
LWTP	Liquid Waste Treatment Plant
MEC	Munitions and Explosives of Concern
mg	Milligram
MNA	Monitored Natural Attenuation
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
NC	Nitrocellulose
NFA	No Further Action
NFCAP	No Further Corrective Action is Planned
NG	Nitroglycerine
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NQ	Nitroguanidine
NSE	Nitroguanidine Support Equipment
O&M	Operations & Maintenance
PA	Preliminary Assessment
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene
POL	Petroleum, Oil, and Lubricant
ppm	parts per million
PR	Periodic Review
PRG	Preliminary Remediation Goal
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-In-Place
RRSE	Relative Risk Site Evaluation

Acronym	Definition
RWTP	River Water Treatment Plant
SAC	Sulfuric Acid Concentrator
SC	Site Closeout
SI	Site Inspection
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
TEC	Threshold Effect Concentration
TMCL	Target Media Cleanup Level
TPH	Total Petroleum Hydrocarbon
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage and Disposal Facility
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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: 3/43

Number of Open Sites with Response Complete/Total Open MR Sites: 0/0

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

SITE-LEVEL INFORMATION

20655.1004_SAAP-004_POND A AND SLUDGE DISPOSAL AREA

Env Site ID: SAAP-004

Cleanup Site: POND A AND SLUDGE DISPOSAL AREA

Alias: SWMU 4

Regulatory Driver: RCRA-C

RIP Date: 8/15/2028

RC Date: 8/15/2028

RC Reason: Not assigned

SC Date: 8/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/15/1994	5/15/1998
RFI/CMS:	10/15/1996	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	10/15/2024	8/15/2028
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises three acres in the north central portion of the installation. This area was used for the sedimentation of solids and equalization of wastewater from the nitrocellulose (NC) production area prior to lime treatment and subsequent discharge to Pond B (SAAP-006). Pond A was constructed in 1942, with a surface area of 86,200 square feet and received wastewater from NC production during 1943-1946, 1951-1960, and 1965-1971. In addition, Pond A received wastes from many other areas of Sunflower AAP, including the NQ Pilot Plant from 1980-1984. The pond now functions as part of the natural drainage system receiving storm sewer outfall from various parts of Sunflower AAP, including drainage from the industrial wastewater treatment facility area. Pond A receives storm water runoff from SAAP-025 (NC Ditches) and shares a geographical boundary with SAAP-005 (Acid Sewage Disposal Plant). All underground piping that is associated with the Acid Sewage Disposal Plant will be handled under SAAP-005. The March 2000 RFI results indicated elevated levels of NC. An RFI work plan was prepared in July 2010, which was approved by KDHE. The RFI/CMS was completed in 2023. The CMS is currently being finalized and a Decision Document will follow. Cleanup/Exit Strategy- Complete the RFI/CMS and CMI(C) phases. Remediation will consist of excavation with off-site disposal, and it is anticipated that site closure will be achieved at the completion of the CMI(C) phase. Groundwater is being addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1005_SAAP-005_ACID SEWAGE DISPOSAL PLANT

Env Site ID: SAAP-005

Cleanup Site: ACID SEWAGE DISPOSAL PLANT

Alias: SWMU 5

Regulatory Driver: RCRA-C

RIP Date: 8/15/2028

RC Date: 8/15/2028

RC Reason: Not assigned

SC Date: 8/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/15/1994	5/15/1998
RFI/CMS:	10/15/1996	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	10/15/2024	8/15/2028
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the north central portion of the installation. This area was used to treat the acidic wastewater flowing into Pond A from the NC Production Area and had three periods of operation- 1943-1946, 1951-1960, and 1965- 1971. The water from Pond A was diverted into the neutralization unit and pH was adjusted by adding burned lime slurry. The neutralized water and unsettled flocculent were then discharged from the unit into an underground drainage pipe which emptied into a tributary ditch to Pond B (SAAP-006). The underground piping and the initial portion of the connecting ditch to Pond B will be remediated under this site. The March 2000 RFI results indicated elevated levels of NC. An RFI work plan was prepared in July 2010, which was approved by KDHE. The RFI/CMS was completed in 2023. The CMS is currently being finalized and a Decision Document will follow.). Cleanup/Exit Strategy- Complete the RFI/CMS and CMI(C) phases. Remediation will consist of excavation with off-site disposal, and it is anticipated that site closure will be achieved at the completion of the CMI(C) phase. Groundwater is being addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1006_SAAP-006_POND B AND SLUDGE DISPOSAL AREA

Env Site ID: SAAP-006

Cleanup Site: POND B AND SLUDGE DISPOSAL AREA

Alias: SWMU 6

Regulatory Driver: RCRA-C

RIP Date: 8/15/2028

RC Date: 8/15/2028

RC Reason: Not assigned

SC Date: 8/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	5/15/1994	5/15/1998
RFI/CMS:	11/15/1996	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	10/15/2024	8/15/2028
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 38 acres in the east central portion of the installation. This area was used for sedimentation of solids from the neutralized wastewater discharged from the Acid Sewage Disposal Plant (SAAP-005). Unknown quantities of sludge were occasionally dredged from Pond B and was used as landfill west of the pond. Pond B discharges into Kill Creek. Pond B was a farm pond constructed prior to purchase of farmland for building the installation. Pond B is an unlined impoundment situated upon limestone bedrock with a surface area of nine acres and a capacity of 16.5 million gallons. The May 1999 RFI results indicated elevated levels of manganese in groundwater. An RFI work plan was prepared in July 2010, which was approved by KDHE. The RFI/CMS was completed in 2023. The CMS is currently being finalized and a Decision Document will follow. Cleanup/Exit Strategy-Complete the RFI/CMS and CMI(C) phases. Remediation will consist of excavation with off-site disposal, and it is anticipated that site closure will be achieved at the completion of the CMI(C) phase. Groundwater is being addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1007_SAAP-007_NORTH ACID AREA-CHROMATE AREA

Env Site ID: SAAP-007

Cleanup Site: NORTH ACID AREA-CHROMATE AREA

Alias: SWMU 7

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	1/31/1992
CS:	10/15/1996	5/15/1998
RFI/CMS:	7/15/1998	9/15/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	7/30/2021	9/15/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the north central portion of the installation. This area was used for production and recycling of nitric acid and sulfuric acid as well as the production of ammonia and ammonium nitrate. The Chromate Area is the location of the former cooling water treatment unit including a cooling tower in which chromium-contaminated wastewater was reportedly generated through the use of corrosion inhibitors on the tower. Chromate liquid may have been disposed in pipes subsequently left buried in the area and the potential is present for heavy metal contamination. When the site was dismantled in 1958, the two wastewater collection basins were left in place. In 1982 and 1983, chromium-contaminated water was removed from the basins. Water continues to accumulate in the basins. The North Acid Area operated during WWII (1943-1946) producing nitric acid and recycling sulfuric acid. After propellant production ceased in 1946, an ammonium nitrate facility was constructed, and 324 million pounds of ammonium nitrate liquor were produced during the period of 1946-1948. In 1952, Food Machinery and Chemical Corporation built a Nitrogen Fixation Plant at the north end of the North Acid Area and operated it from 1953-1954. This is the location where chromate contamination was found. As a result of the 1998 environmental baseline survey (EBS), the single boundary for SAAP-007, 008, and 009 was expanded to include all of the North Acid Area. To better define the geographic areas of contamination/production processes the three sites were defined as three different areas within the North Acid Area. The entire Chromate Area will be covered in SAAP-007. The soil around explosive buildings in the North Acid Area will be covered in SAAP-008. The nonexplosive buildings ditches and areas away from the explosive buildings in the North Acid Area excluding the Chromate Area will be included in SAAP-009. The data from the 2001 RFI were determined by the regulators to be unreliable; therefore, another RFI was initiated in 2008. There were 38 soil samples that exceeded industrial TMCL at 22 sample locations; however, the full nature and extent of contamination was not determined. Cleanup/Exit Strategy- An RFI/CMS was completed. Excavation with off-site disposal was also completed. A No Further Corrective Action is Planned (NFCAP) is being completed. Groundwater will be addressed under a Groundwater Operable Unit.

20655.1008_SAAP-008_N. ACID AREA-CHROMATE CONC. PON

Env Site ID: SAAP-008

Cleanup Site: N. ACID AREA-CHROMATE CONC. PON

Alias: SWMU 8

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/15/1996	5/15/1998
RFI/CMS:	1/15/2000	9/15/2024
DES:	- -	- -
IRA:	2/15/2015	12/5/2022
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the north central portion of the installation. This area was used for production and recycling of nitric acid and sulfuric acid as well as the production of ammonia and ammonium nitrate. The Chromate Area is the location of the former cooling water treatment unit including a cooling tower in which chromium-contaminated wastewater was reportedly generated through the use of corrosion inhibitors on the tower. Chromate liquid may have been disposed in pipes subsequently left buried in the area and the potential is present for heavy metal contamination. When the site was dismantled in 1958, the two wastewater collection basins were left in place. In 1982 and 1983, chromium-contaminated water was removed from the basins. Water continues to accumulate in the basins. The North Acid Area operated during WW II (1943-1946), producing nitric acid and recycling sulfuric acid. After propellant production ceased in 1946, an ammonium nitrate facility was constructed, and 324 million pounds of ammonium nitrate liquor were produced during the period of 1946-1948. In 1952, Food Machinery and Chemical Corporation built a nitrogen fixation plant at the north end of the North Acid Area and operated it from 1953-1954. This is the location where chromate contamination was found. As a result of the 1998 EBS, the boundary for SAAP-007, 008, and 009 was expanded to include all of the North Acid Area. The entire Chromate Area will be covered in SAAP-007. The soil around explosive buildings in the North Acid Area will be covered in SAAP-008. The nonexplosive buildings ditches and areas away from the explosive buildings in the North Acid Area excluding the Chromate Area will be included in SAAP-009. A rind soils investigation at SAAP-008 was completed in 2016. ICMs were completed that include explosive contaminants being addressed under site SAAP-130 in the Excess Program and other environmental contaminants under this site within the Environmental Restoration, Army (ER,A) Program. Cleanup/Exit Strategy- An RFI/CMS was completed. Excavation with off-site disposal was also completed. A no further corrective action is planned (NFCAP) is being completed. Groundwater contamination will beaddressed under a Groundwater Operable Unit.

20655.1009_SAAP-009_N. ACID AREA-WW TREATMENT LAGOO

Env Site ID: SAAP-009

Cleanup Site: N. ACID AREA-WW TREATMENT LAGOO

Alias: SWMU 9

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	10/15/1996	5/15/1998
RFI/CMS:	1/15/2000	9/15/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	7/30/2021	9/15/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the north central portion of the installation. This area was used for production and recycling of nitric acid and sulfuric acid and production of ammonia and ammonium nitrate. The Chromate Area is the location of the former cooling water treatment unit including a cooling tower in which chromium-contaminated wastewater was reportedly generated through the use of corrosion inhibitors on the tower. Chromate liquid may have been disposed in pipes subsequently left buried in the area and the potential is present for heavy metal contamination. When the site was dismantled in 1958, the two wastewater collection basins were left in place. In 1982 and 1983, chromium-contaminated water was removed from the basins. Water continues to accumulate in the basins. The North Acid Area operated during WW II (1943-1946) producing nitric acid and recycling sulfuric acid. After propellant production ceased in 1946, an ammonium nitrate facility was constructed, and 324 million pounds of ammonium nitrate liquor were produced during the period of 1946-1948. In 1952, Food Machinery and Chemical Corporation built a nitrogen fixation plant at the north end of the North Acid Area and operated it from 1953-1954. This is the location where chromate contamination was found. As a result of the 1998 EBS, the single boundary for SAAP-007, 008, and 009 was expanded to include all of the North Acid Area. To better define the geographic areas of contamination/production processes the three sites were defined as three different areas within the North Acid Area. The entire Chromate Area will be covered in SAAP-007. The soil around explosive buildings in the North Acid Area will be covered in SAAP-008. The nonexplosive buildings ditches and areas away from the explosive buildings in the North Acid Area excluding the Chromate Area will be included in SAAP-009. The data from the 2001 RFI were determined by the regulators to be unreliable; therefore, another RFI was initiated in 2008. There were 36 soil samples that exceeded the industrial TMCL at 34 sample locations during Phase II; however, the full nature and extent of contamination was not determined. Cleanup/Exit Strategy- An RFI/CMS was completed. Excavation with off-site disposal was also completed. A no further corrective action is planned (NFCAP) is being completed. Groundwater contamination will be addressed under a Groundwater Operable Unit.

20655.1012_SAAP-012_PYOTTS POND & SLUDGE DISPOSAL A

Env Site ID: SAAP-012

Cleanup Site: PYOTTS POND & SLUDGE DISPOSAL A

Alias: SWMU 12

Regulatory Driver: RCRA-C

RIP Date: 8/15/2028

RC Date: 8/15/2028

RC Reason: Not assigned

SC Date: 8/16/2028

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	6/15/1996	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	10/15/2024	8/15/2028
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 12 acres in the east central portion of the installation. This area was used as an acidic water retention basin to regulate the pH prior to discharge off-post. Pyott's Pond is an unlined earthen impoundment with a surface area of 1.7 acres and a capacity of 5.2 million gallons. The pond was constructed in 1968 to aide in pollution control. The pond received drainage from the South Acid Area the Paste Mix Area the NC Area the Solvent Area and the NG Area. Neutralization of water entering the pond resulted in an accumulation of calcium sulfate sludge which was periodically dredged and landfilled adjacent to the pond to the north. Effluent from the pond drains northeast to Kill Creek and was monitored by National Pollutant Discharge Elimination System (NPDES) Outfall 004. The May 1999 RFI results indicated elevated levels of mercury and NQ in the surface water. Groundwater contained NQ and sediments contained elevated levels of polycyclic aromatic hydrocarbons (PAH) polychlorinated biphenyls (PCB) and NC. An RFI work plan was prepared in June 2010, which was approved by KDHE. The RFI/CMS was completed in 2023. The CMS is currently being finalized and a Decision Document will follow. Cleanup/Exit Strategy- An RFI will be completed that includes both soils and groundwater. It is anticipated that excavation with off-site disposal will be performed, and site closure will be achieved within the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1014_SAAP-014_ROCKET STATIC TEST AREA

Env Site ID: SAAP-014

Cleanup Site: ROCKET STATIC TEST AREA

Alias: SWMU 14

Regulatory Driver: RCRA-C

RIP Date: 5/15/2024

RC Date: 5/15/2024

RC Reason: Not assigned

SC Date: 5/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	10/15/1998	5/15/2024
DES:	- -	- -
IRA:	3/15/2008	7/15/2022
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: Site SAAP-014 or Rocket Static Test Area comprises seven acres in the east central portion of the installation that was used to ballistically test 2.75-inch rocket grains. The site includes four firing platforms. The contaminants of concern are explosives and metals in the soil sediment and groundwater. ICM was conducted in 2008, in which 1847 tons of contaminated soil were excavated and disposed. An ICM for contaminated rind soil removal around the explosively-contaminated foundations and removal of contaminated soil underneath the explosively-contaminated foundation slabs was completed. Cleanup/Exit Strategy- ICM was completed and an NFCAP is awaiting final approval. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1017_SAAP-017_G-LINE AREA DITCHES

Env Site ID: SAAP-017

Cleanup Site: G-LINE AREA DITCHES

Alias: SWMU 17

Regulatory Driver: RCRA-C

RIP Date: 8/15/2027

RC Date: 8/15/2027

RC Reason: Not assigned

SC Date: 8/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	1/15/2000	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2022
CMI(C):	1/15/2026	8/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 284 acres in the south central portion of the installation. This area was used for production of multi-base solvent propellant. G-Line operated from 1943-1948 and 1953-1960. It was reported that during the 1940s, the G-line NC wringers (Building 5026-1) overflowed, and NC fines had been observed along drainage ditches from the area leading to Kill Creek. It is likely that G-Line Area ditches received the same types of materials and followed the same historical wastewater treatment practices as the F-Line Area. The G-Line area is situated close to the basin divide between flow westward to Captain Creek and flow eastward to Spoon and Kill Creeks. Consequently, it is possible for contamination to migrate in either direction depending on the location of the source of contamination in the G-Line area. It is possible that small amounts of propellant solids may have settled in these ditches. As a result of the 1998 EBS, SAAP-017 was expanded to include all of G-Line. The nonexplosive buildings ditches and areas away from the explosive buildings are included in the RFI and corrective measures for SAAP-017. The data from the October 2000 RFI were determined by the regulators to be unreliable. An RFI work plan was prepared in June 2009, which was approved by KDHE but never fully implemented. Cleanup/Exit Strategy- An RFI/CMS will be completed for soils. It is anticipated excavation and off-site disposal along with site closure will be performed in the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 3 (SAAP-127 20655.1100).

20655.1018_SAAP-018_OLD/NEW SANITARY LANDFILL

Env Site ID: SAAP-018

Cleanup Site: OLD/NEW SANITARY LANDFILL

Alias: SWMU 18

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	10/15/1998	7/15/2022
DES:	- -	- -
IRA:	10/15/2000	10/15/2002
CMI(C):	9/15/2021	9/15/2024
CMI(O):	- -	- -
LTM:	9/15/2024	9/30/2054

Site Narrative: This site comprises 50 acres in the west central portion of the installation. This area was used for disposal of solid waste. The landfills employed a trench-type operation. Several types of landfills are included in the landfill area- the sanitary landfill (31 acres); the asbestos landfill (one acre); and the ash landfill (19 acres SAAP-019). This landfill area began operation in 1943. Prior to the designation of the New Sanitary Landfill in 1967, refuse of all types was buried at a site just south of the new landfill. No records from the Old Landfill were available. Sunflower AAP no longer uses the New Sanitary Landfill; currently waste is disposed off-site. There is no record of hazardous waste being placed in either landfill. The 1997 RFI report states that the primary concerns at SAAP-018 and -019 are the constituents detected in groundwater (sulfide; cis-1 3-dichloropropene; and ammonia nitrogen) and dioxins/furans in the shallow soil. Institutional controls have been implemented (fencing) to control site access. An ICM for eroded areas was completed in September 2003. Shallow groundwater flowing through a sand lens within the site complicates the final corrective measures. A May 2006 RFI delineated the exact boundaries of the disposal cells and a hydrogeological investigation was conducted. A large track hoe was used to delineate the boundaries of SAAP-018 019 and 049. No waste was found in SAAP-049. Delineated areas of SAAP-018 and -019 were surveyed and show that SAAP-018 is 19.8 acres and SAAP-019 is 1.2 acres for a total of 21 acres. The SAAP-018 landfill was no longer used after June 1988. The new part of the SAAP-018 landfill was properly closed. Per a KDHE letter dated Nov. 22, 2000, the old area of the SAAP-018 landfill has insufficient cover and was not properly closed. Therefore, a typical landfill cap has to be installed over the SAAP-018 landfill. There currently is no groundwater monitoring. Monitoring and maintenance of the landfill cover is ongoing. The RFI/CMS for soils and groundwater has been completed. Cleanup/Exit Strategy- The CMI(C) includes a landfill cap to be completed. It is anticipated that the long-term management (LTM) phase will include annual Operations & Maintenance (O&M) of the landfill cap, including annual groundwater and surface water monitoring, annual inspections, annual maintenance, Land Use Controls (LUC), and periodic reviews.

20655.1019_SAAP-019_ASH LANDFILLS

Env Site ID: SAAP-019
Cleanup Site: ASH LANDFILLS
Alias: SWMU 19
Regulatory Driver: RCRA-C
RIP Date: 9/15/2024
RC Date: 9/15/2024
RC Reason: Not assigned
SC Date: 9/30/2053
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: Low
MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1996
RFI/CMS:	6/15/1996	9/15/2022
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2021	9/15/2024
CMI(O):	- -	- -
LTM:	9/15/2024	9/30/2053

Site Narrative: This site comprises two areas 19 acres in the west central portion of the installation and one acre in the central portion of the installation. This area was used for the disposal of fly ash and coal fines. There are two unlined ash landfills. SAAP-019 West is located north of SAAP-018 and will be addressed under SAAP-018. SAAP-019-1 East is located southeast of Power House No. 1. It has been reported that SAAP-019-2 West was used prior to 1966. The ash landfills contain unknown quantities of fly ash from the ash-sluice system and coal fines from the coal pile. Fly ash may contain heavy metals. A May 2006 RFI delineated the exact boundaries of the disposal cells. A large track hoe was used to delineate the boundaries of SAAP-019 West which was surveyed as 1.2 acres. This landfill is closed. Currently there is no groundwater monitoring. Monitoring and maintenance of the landfill cover is ongoing. RFI/CMS report was completed for SAAP-019 in FY20. Cleanup/Exit Strategy-The CMI(C) consists of work at SWMU 19-1 and 19-2. Excavation and disposal at SWMU 19-1 was completed in FY22. GW for SWMU 19-1 is addressed under GW OU #2 (SAAP-126 20655.1099). On-going work at SWMU 19-2 consists of installation of a low permeability cap. It is anticipated that the LTM phase will include annual landfill inspections of cap; annual maintenance of the landfill perimeter and landfill cap; annual surface water and groundwater monitoring and reporting; and periodic reviews.

20655.1021_SAAP-021_CONTAMINATED MATERIALS BURN GRO

Env Site ID: SAAP-021

Cleanup Site: CONTAMINATED MATERIALS BURN GRO

Alias: SWMU 21

Regulatory Driver: RCRA-C

RIP Date: 12/15/2024

RC Date: 12/15/2024

RC Reason: Not assigned

SC Date: 12/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	1/31/1996	11/30/2004
DES:	5/31/2005	1/31/2006
IRA:	- -	- -
CMI(C):	5/15/2005	12/15/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 10 acres in the west central portion of the installation. This area was used for open burning combustible material contaminated with explosive residues and flashing non-combustible material contaminated with explosive residues. Used oil was also open burned in this area. The site was built in 1942. Prior to 1970, burning of contaminated materials occurred in two open trenches; however, in about 1970 the two trenches were filled and two unlined 30 feet by 300 feet pads were installed where the trenches were located. The pads were separated by an earthen berm. Contaminated material accumulated at the site until the pad was full which generally took one to two months. Burning was initiated using diesel fuel, waste oils, and scrap wood (including telephone poles). The Army randomly sampled the remaining residue for toxicity characteristic leaching procedure (TCLP) metals (leachable) and upon negative results disposed the ash in the sanitary landfill (SAAP-018). After one pad was burned the other pad began receiving materials for the next burn. During a site visit in 1990, burn areas were observed away from the main burn pads. Also located on the site was an open top tank eight feet in diameter which was used to burn waste solvent and used oil. Adjacent to the tank was an elevated platform which appeared to have been used as an unloading dock for containers of liquids to be emptied into the tank. At the time of a 2001, site visit the tank contained water. Groundwater and surface water runoff from the burn area flows northwest to Captain Creek or the adjacent oxbow. The May 1997 and April 2002 RFI results indicated the presence of dioxins metals solvents and petroleum hydrocarbons in soil. Petroleum hydrocarbons and volatile organic compounds (VOC) were detected in groundwater and surface water. Additional delineation sampling was completed in Spring 2003. Due to the detected ongoing release of petroleum oil and lubricant (POL) from POL-contaminated soil to Captain Creek, an ex-situ bioremediation pilot test for total petroleum hydrocarbons (TPH) and sampling for VOCs and PAHs in the soil was conducted in 2004. Approximately 5000 cubic yards (cy) of POL-contaminated soil was excavated and bioremediated in 2004 (from Area D). A CMS for soil was completed in November 2004. Corrective measures were implemented in November 2007. A total of 66381 tons of contaminated soil was excavated and disposed of. It was also necessary to

pump and haul to the local publicly owned treatment works 320,000 gallons of groundwater from the deep excavations in Areas D, E, and F to complete the deep soil excavations. A corrective measures completion report was submitted to KDHE, and comments have been received. A CMS for groundwater at SAAP-021 was approved by KDHE. Three new groundwater monitoring wells were installed. Monitoring of contaminated groundwater will continue. Soil remediation at this site is complete. The corrective measures completion report was finalized in FY22. Clean up/Exit Strategy- CMI(C) and site closure to be completed. NFCAP is planned. Groundwater contamination will be addressed under Groundwater Operable Unit No. 3 (SAAP-127 20655.1100).

20655.1022_SAAP-022_OLD EXPLOSIVE WASTE BURNING GRO

Env Site ID: SAAP-022

Cleanup Site: OLD EXPLOSIVE WASTE BURNING GRO

Alias: SWMU 22

Regulatory Driver: RCRA-C

RIP Date: 1/22/2024

RC Date: 1/22/2024

RC Reason: Not assigned

SC Date: 1/23/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	3/31/1994	5/31/1998
RFI/CMS:	1/31/1996	10/31/1999
DES:	- -	- -
IRA:	- -	- -
CMI(C):	6/22/2004	1/22/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 30 acres in the west central portion of the installation. This area was used to open burn waste explosives on designated pads. The waste explosive included NG slums (i.e. NG mixed with sawdust and soda ash for stabilization) and various propellant formulations from the production area sumps filters settling ponds and drains. The site was in operation from 1943 to 1980. SAAP-022 includes seven acres containing five burning pads and a NG slums burning area. During a groundwater contamination survey in 1987, it was reported that the site was a grass-covered field showing no signs of vegetative stress. The March 1997 RFI detected lead and NG in surface soil above action levels. A CMS was completed in February 1999. Corrective measures were implemented in 2004-2005. A total of 46,997 tons of contaminated soil was excavated and disposed. All remaining soil in SAAP-022 was below unrestricted levels as reported in the corrective measures completion report in January 2006. One round of groundwater sampling was conducted. A request for NFA was submitted by the Army to KDHE in March 2008. In a letter dated April 20, 2009, KDHE denied the NFA request based on data gaps KDHE found in the corrective measures completion report for SAAP-022. Additional sampling and cleanup is required to fill these data gaps. The areas requiring sampling are very well defined because of the characterization sampling during the CMI and therefore an additional RFI is not necessary. Confirmation soil samples were collected and sent to an off-site laboratory for analysis. Clean Up/Exit Strategy- Contaminated soils have been excavated and removed off-site for disposal. NFCAP was submitted to the KDHE and Response Complete and Site Closure has been achieved. Groundwater contamination will be addressed under Groundwater Operable Unit No. 3 (SAAP-127 20655.1100).

20655.1024_SAAP-024_NITROGLYCERINE AND PASTE MIX AR

Env Site ID: SAAP-024

Cleanup Site: NITROGLYCERINE AND PASTE MIX AR

Alias: SWMU 24

Regulatory Driver: RCRA-C

RIP Date: 8/15/2027

RC Date: 8/15/2027

RC Reason: Not assigned

SC Date: 8/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	6/15/1998	8/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2022
CMI(C):	9/15/2024	8/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 149 acres in the central portion of the installation. This area was used to produce NG mix pastes for double-base solventless propellant and multi-base solvent propellant. The NG area includes four NG Nitrator Neutralization and Storehouse complexes with sumps and drainage ditches that extend from the production buildings to Pyott's Pond (SAAP-012) and had three periods of operation- 1943-1946, 1951-1960, and 1965-1971. The F-Line and N-Line Paste Mix Area is located northeast of the NG Area and produced double-base solventless propellant paste for the 2.75 rocket grains. The G-Line Paste Mix area is located southwest of the NG Area and produced multi-base solvent propellant paste for cannon propellant grains. As a result of the 1998 EBS, the boundary of this site was expanded from just the NG Production Area to include the F-Line, G-Line, and N-Line Paste Mix Areas. During the March 1998 RFI, the downgradient ditch areas of SAAP-024 were investigated. The RFI was deemed incomplete by US Environmental Protection Agency (USEPA) and KDHE. Sampling was not conducted in NG Nitrator areas due to the potential explosive hazards associated with NG in soils at concentrations that may exceed 10%. The data from the initial RFI identified 18 metals nitrates sulfates PAHs, semi-volatile organic compounds (SVOCs), and NC above background concentrations at SAAP-024. Metals, PAHs, and SVOCs were detected in all media (surface water, groundwater, sediment, and surface soil) nitrates and sulfate were detected in surface water and groundwater and NC was detected in surface soil and sediment. Due to the potential presence of reactive levels of NG in the NG Production Area of SAAP-024, an explosive safety assessment was conducted in 2004 to determine if there was an explosive hazard requiring an explosive safety submission before RFI or corrective measures work could be performed. A remotely operated Geoprobe was used to take soil borings from zero to four feet in all of the NG sumps the ditches downgradient of the sumps and two recorded spill areas. The highest concentration detected was 485 milligrams (mg) /kilogram (kg) which is well below the explosive level. Therefore, remote investigation and cleanup is not required (i.e. the standard investigation and cleanup methods are safe from explosive hazards). An RFI work plan was prepared in December 2008, which was approved by KDHE; however, it was never fully implemented. Cleanup/Exit Strategy- An Interim

Corrective Measures Report (ICMR) for MEC was completed. An RFI/CMS will be completed. It is anticipated that contaminated soils will be excavated, removed off-site for disposal and site closure achieved in the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1025_SAAP-025_NITROCELLULOSE AREA DITCHES

Env Site ID: SAAP-025

Cleanup Site: NITROCELLULOSE AREA DITCHES

Alias: SWMU 25

Regulatory Driver: RCRA-C

RIP Date: 9/15/2025

RC Date: 9/15/2025

RC Reason: Not assigned

SC Date: 9/16/2025

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	1/15/2000	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 244 acres in the north central portion of the installation. This area was used to convey acidic wastewater and other wastewater from the NC Production Area (SAAP-116) to Pond A (SAAP-004). SAAP-025 consists of 41,000 linear feet of ditch leading from the edge of the NC Production Area to Pond A. NC production involved the use of significant amounts of NC fibers acids and wash/rinse water. There were two types of wastewater. Acid wastewater was directly discharged through baffled settling tanks; NC wastewater resulted from boiling screening and blending after which the water passed through a NC fines settling pit. Wastewaters were reported as milky in color containing suspended NC fibers. All wastewater was conveyed via an underground sewer system that discharged to an open drainage ditch leading to Pond A for sedimentation of solids and equalization of wastewater. NC production ceased in 1971. NC has little vertical migration potential but may exist in sediment layers below the surface. NC has no toxic properties but a TMCL of 1,000 mg/kg was established by the regulators for the site (1% of the explosive concentration). The data from the November 2000 RFI were determined by the regulators to be unreliable. The June 2006 RFI baseline screening risk assessment determined that metals pose an unacceptable risk to human health. Cleanup/Exit Strategy- An RFI/CMS was completed and resulted in an NFA determination. An NFA DD will be completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1026_SAAP-026_SINGLE BASE PROPELLANT AREA SUM

Env Site ID: SAAP-026

Cleanup Site: SINGLE BASE PROPELLANT AREA SUM

Alias: SWMU 26

Regulatory Driver: RCRA-C

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: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	10/31/1996	8/31/1998
RFI/CMS:	1/15/2000	9/15/2026
DES:	- -	- -
IRA:	6/15/2007	9/15/2022
CMI(C):	9/15/2023	9/15/2028
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 501 acres in the north central portion of the installation. This area was used to produce single-, double-, and triple-base solvent propellant grains. Site SAAP-026 consists of three single base propellant lines (B-Line, C- Line, and D-Line). The base explosive NC in single base propellant was mixed with dinitrotoluene (DNT) stabilizers and burn modifiers using an ether-alcohol mix as the mixing solvent. The propellant paste was extruded by presses and then the grains were cut to length. The propellant grain manufacturing process was completed in the Finishing Area located within SAAP-026 to the west of the mixing lines. SAAP-026 also includes a multi-base propellant line (E-Line) where double base (NC and NG) and triple base (NC NG NQ) propellants were produced. The mixing solvent for multi-base propellant was an acetone-alcohol mix. The finishing area for E-Line is not included in SAAP-026 but was instead made a separate site SAAP-111. Production was documented during the period of 1943-1948, for B-Line and C-Line. Production was documented during the periods of 1943-1948 and 1951-1960, for D-Line and E-Line. As a result of the 1998 EBS, the boundary of this site was expanded from just the Single Base Solvent Propellant Finishing Area to include the B-, C-, D-, and E-Line paste mix and grain production areas. A hazardous waste study of SAAP-026 was completed in 1985. A remedial investigation (RI) report was completed in September 1989. An RFI was completed in May 2001. A relative risk site evaluation (RRSE) of the paste mixing pressing and cutting area of B-Line, C-Line, D-Line, and E-Line was completed in 2003. The results from these reports indicate that SAAP-026 contains contaminants above risk levels and includes ammonia arsenic chromium 24-DNT lead and mercury. The data from the May 2001 RFI were determined by the regulators to be unreliable; therefore, another RFI was prepared in 2009 which was approved by KDHE. The ICM was completed. Cleanup/Exit Strategy- An RFI/CMS will be completed. The anticipated remedy is excavation and off-site disposal of contaminated soils and a no further action/site closure within the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1 (SAAP-125 20655.1098).

20655.1031_SAAP-031_CONTAMINATED WASTE PROCESSOR

Env Site ID: SAAP-031

Cleanup Site: CONTAMINATED WASTE PROCESSOR

Alias: SWMU 31

Regulatory Driver: RCRA-C

RIP Date: 9/15/2027

RC Date: 9/15/2027

RC Reason: Not assigned

SC Date: 9/16/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	1/15/2000	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/28/2021
CMI(C):	9/15/2023	9/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises seven acres in the west central portion of the installation. This area was used to decontaminate material containing explosive residues. The Contaminated Waste Processor (CWP) operated between 1982 and 1996. The CWP is an incinerator measuring 14.5 feet by 25 feet. The CWP was designed to incinerate materials contaminated or suspected of being contaminated with explosives and to decontaminate (flash) explosive-contaminated metal prior to salvage. Because the CWP could only handle materials with residual amounts of explosives the waste materials to be incinerated were checked to ensure they did not contain pockets of explosives. Lab analysis was conducted after the burn to verify the ash debris could be disposed in the onsite landfill. If the ash debris exceeded any TCLPs it was disposed off-site as hazardous waste. The April 1999 RFI results indicated the presence of phthalates in the soil samples. KDHE and USEPA identified several significant data gaps in the 1999 RFI that had to be addressed. Because of insufficient data KDHE and USEPA requested that the Army conduct a more extensive investigation to fully characterize the extent of contamination. An RFI work plan was prepared in March 2009 and was approved by KDHE but was never fully implemented. Clean Up/Exit Strategy- The RFI/CMS phase will be completed. The anticipated remedy for the CMI(C) phase is soil excavation, off-site disposal, and a no further action/site closure. Groundwater contamination will be addressed under Groundwater Operable Unit No. 3 (SAAP-127 20655.1100).

20655.1033_SAAP-033_PASTE AREA HALF TANKS & DITCHES

Env Site ID: SAAP-033

Cleanup Site: PASTE AREA HALF TANKS & DITCHES

Alias: SWMU 33

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	7/31/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	10/15/1998	9/15/2024
DES:	- -	- -
IRA:	10/31/2000	9/30/2003
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the central portion of the installation. This area was used to settle out propellant solids from the wastewater discharged from the F-Line and N-Line paste mix area. The half tanks in this area received wastewater from wash-down of propellant processing equipment and buildings in the paste mix area. They were used from 1965 to 1971. The half tanks discharged into two unlined settling ponds then to Pyott's Pond. There were two steel half tanks located upgradient from each of the settling ponds and are designated half tank 33/34 and 33/35. The 33/34 tank was located southeast of the paste mix area between the Five Corners Settling Ponds and the Paste Sumps and the 33/35 tank was located northwest of the paste mix area near the F- Line Paste Mix Settling Ponds. Reportedly, overflowing of the metal flumes and half tanks occurred. There was no secondary containment around the half tanks. The April 2002 RFI results indicated the presence of lead NG, NC, and SVOCs in the soil. ICM occurred in 2002 and consisted of removal and decontamination of the half tanks removal of 60 cubic yards (cy) of impacted soils from around the half tanks and 700 cy of contaminated soil from drainage ditches extending from the half tanks to their stream discharge point. Confirmation samples were collected to verify that remaining soils met KDHE residential requirements. The ditches extending from the half tanks upgradient to the source area will be remediated as part of the SAAP-024 cleanup. Groundwater monitoring at SAAP-033 detected metals and SVOCs above industrial risk levels. Clean Up/ Exit Strategy- An NFA decision document (DD) for soils and Groundwater will be completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1034_SAAP-034_FIVE CORNERS SETTLING PONDS

Env Site ID: SAAP-034

Cleanup Site: FIVE CORNERS SETTLING PONDS

Alias: SWMU 34

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	10/15/1998	9/15/2024
DES:	- -	- -
IRA:	10/31/2000	9/30/2003
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the central portion of the installation. This area was used to settle out propellant solids from the wastewater discharged from the F-Line and N-Line Paste Mix Area. There were two earthen unlined ponds (5A 5B) each 40 feet in diameter. The ponds were used periodically from 1953 to 1971. There were no secondary containment berms surrounding these ponds. The Settling Ponds received paste mix wastewater resulting from the wash down of equipment and buildings and from sprinkler trips. The April 2002 RFI results indicated the presence of lead NG, NC, and SVOCs in soil. ICM occurred in 2002 and consisted of removal of 900 cy of contaminated soil. Post-excavation confirmation sampling found no contaminants above unrestricted levels. Groundwater monitoring at SAAP-034 detected metals SVOCs and sulfate above industrial risk levels. Therefore, groundwater monitoring will continue at SAAP-034. A request for NFA was sent by the Army and to KDHE in December 2007. In a letter dated March 23, 2009, KDHE denied the NFA request based on data gaps KDHE found in the ICM completion report for SAAP-034. Additional investigation and cleanup is not required to fill these data gaps. Cleanup/Exit Strategy- An NFA DD for soils and Groundwater will be completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1035_SAAP-035_NITROGLYCERINE AREA SETTLING PO

Env Site ID: SAAP-035

Cleanup Site: NITROGLYCERINE AREA SETTLING PO

Alias: SWMU 35

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	10/15/1998	9/15/2024
DES:	- -	- -
IRA:	10/31/2000	9/30/2003
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the central portion of the installation. This area was used to settle out propellant solids from the wastewater discharged from the F-Line and N-Line paste mix area. The NG Production Area did not discharge to these settling ponds. There were two earthen unlined ponds (6A 6B) each 40 feet in diameter. The ponds were used periodically from 1953 to 1971. There were no secondary containment berms surrounding these ponds. The Settling Ponds received paste mix wastewater resulting from the wash-down of equipment and buildings and from sprinkler trips. During site visits in both 1985 and 1987, Pond 6A was reported to contain approximately 16 inches of standing water while Pond 6B was dry. Both ponds contained 12-18 inches of sediment which appeared to be soil. The April 2002 RFI results indicated the presence of lead NG, NC, and SVOCs in the soil. ICM occurred in 2002 and consisted of removal of 1300 cy of contaminated soil. Post-excavation confirmation sampling found no contaminants above unrestricted levels. Groundwater monitoring at SAAP-035 detected metals and SVOCs above industrial risk levels. Cleanup/Exit Strategy- An NFA DD for soils and Groundwater will be completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1036_SAAP-036_N-LINE AREA

Env Site ID: SAAP-036
Cleanup Site: N-LINE AREA
Alias: SWMU 36
Regulatory Driver: RCRA-C
RIP Date: 1/15/2025
RC Date: 1/15/2025
RC Reason: Not assigned
SC Date: 1/16/2025
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: Medium
MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	10/15/1998	1/22/2024
DES:	- -	- -
IRA:	7/15/2007	10/15/2018
CMI(C):	9/15/2021	1/15/2025
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 301 acres in the south-central portion of the installation. This area was used to produce 2.75-inch rocket grains. The N-Line Press and Roll House Area operated from 1943 to 1946. The N-Line Finishing Area operated from 1943 to 1971 and was where the Army completed final machining and inspection of extruded and cut propellant grains. Off-spec materials and trimmings were sent to a grinding mill and then back to the north end of N-Line Area for re-blending. Wastewater originated primarily from floor and equipment washing and from deluge events (water used for fire suppression) and flowed through floor drains into underground sewer which discharged to unlined ditches that lead to Spoon Creek. There were 20 eastwardly trending ditches and six concrete settling sumps. Propellant solids containing NC and NG settled in these sumps and trace amounts settled in the ditches. The propellant formulations processed in this area were double base and were generally reactive. The April 1999 RFI identified propellant and lead in soil. Lead, NG, and TPH-gasoline range organics (GRO) were found in groundwater. In 2001, subsequent to the initial RFI and due to a site-wide EBS in 1998, this site was increased by 248 acres. Another RFI was required to investigate the additional 248 acres in the production area and the area around monitoring well 008, in an attempt to identify the source of NG in that well. Visible propellant was observed in the production area. The Army also needs to determine the extent of contamination in the two tunnel dryers used for calcium carbonate cake storage and the Jeep Shop leaking underground storage tank (UST) site (incorporated into SAAP-036 in 2002). A total of 52,833 tons of contaminated soil under the SAAP-123/124 explosive foundations and sewers in N-line were excavated and disposed. An ICM completion report will be prepared. An RFI work plan was prepared in October 2012, which was approved by KDHE. An RFI/CMS was performed. Cleanup/Exit Strategy- Excavation and off-site disposal of contaminated soil was completed. Completion of an NFCAP for site closure. Groundwater contamination will be addressed under a Groundwater Operable Unit.

20655.1039_SAAP-039_SOUTH ACID AREA DITCHES

Env Site ID: SAAP-039

Cleanup Site: SOUTH ACID AREA DITCHES

Alias: SWMU 39

Regulatory Driver: RCRA-C

RIP Date: 9/15/2027

RC Date: 9/15/2027

RC Reason: Not assigned

SC Date: 9/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	9/30/1995	5/31/1998
RFI/CMS:	2/15/1996	9/15/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	7/15/2023	9/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the east-central portion of the installation. This area was used to convey contaminated wastewater from the South Acid Area. The primary central drainage ditch originates near the Calcium Cyanamide Disposal Area (SAAP-040). A second ditch originates from the northeast corner of the South Acid Area. A third influent ditch from the NG and paste mix areas joins the central ditch. All three ditches discharge into Pyott's Pond. During a site visit in 1990, the surface water observed in the central ditch was tinted orange; a white precipitate was observed along both the east and central ditches. Reportedly, the orange color was caused by the neutralization of acidic ferrous sulfate and sulfuric acid with hydrated lime. The sediment was reported to contain ferrous sulfate and calcium sulfate. Wastes handled at this site include sulfuric and nitric acids NC and NG. The data from the April 2000 RFI were determined by the regulators to be unreliable. The September 2005 RFI found contamination in the drainage soil sediment surface water and groundwater. Removal of contaminated drainage soil and sediment in the drainage ditches was recommended in the RFI report. Cleanup/Exit Strategy- A CMS for soils was completed in FY23. Excavation and off-site disposal of contaminated soil is anticipated along with site closure in the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1043_SAAP-043_TUNNEL DRYERS (CCC STORAGE)

Env Site ID: SAAP-043

Cleanup Site: TUNNEL DRYERS (CCC STORAGE)

Alias: SWMU 43

Regulatory Driver: RCRA-C

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: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	9/30/1995	5/31/1998
RFI/CMS:	4/15/1996	8/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2021
CMI(C):	9/15/2023	9/15/2026
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises eight acres in the west-central and southeast portion of the installation. This area was used to temporarily store calcium carbonate cake (CCC). There are six former tunnel dryers used for CCC storage. Four of the dryers are located in the west-central portion of Sunflower AAP. The two remaining dryers are located in the southeast portion of Sunflower AAP and were handled under SAAP-123 at SAAP-036. The dryers began operation in 1986. Each dryer measures 125 feet by 18 feet with six-foot-high walls and each has a leachate collection system. CCC was a byproduct of the GN step of the NQ production process. The CCC was loaded into dump trucks via conveyor in the NQ area and transported to the tunnel dryers. The CCC was dumped into the dryer and arranged using a front-end loader. The product was ultimately off loaded from the tunnel dryers by vendors for use by local farmers. The tunnel dryers were not enclosed. During a site visit in 1990, it was observed that CCC had been tracked beyond the walls of the tunnel dryers by the trucks loading and unloading at the site. The data from the May 2000 RFI were determined by the regulators to be unreliable. An RFI work plan was prepared in June 2010 and comments have been received from KDHE, but it was never fully implemented. Cleanup/Exit Strategy- The RFI/CMS phase will be completed. It is anticipated that excavation and off-site disposal and site closure will be performed in the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 3 (SAAP-127 20655.1100).

20655.1045_SAAP-045_BLDG 9040 & CA. CYANAMIDE CONVE

Env Site ID: SAAP-045

Cleanup Site: BLDG 9040 & CA. CYANAMIDE CONVE

Alias: SWMU 45

Regulatory Driver: RCRA-C

RIP Date: 9/30/2026

RC Date: 9/30/2026

RC Reason: Not assigned

SC Date: 9/30/2026

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	10/31/1996	5/31/1998
RFI/CMS:	1/15/2000	9/30/2026
DES:	- -	- -
IRA:	- -	- -
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises two acres in the northwest portion of the installation. This area was used for moving and storing calcium cyanamide and production of GN. The NQ Area had limited production in 1981 (proveout) and full production from 1984 to 1992. Calcium cyanamide was produced in Building 9004 and transferred via belt conveyor to Building 9040 for use in the GN production process. The belt conveyor which led to storage bins located on the east side of Building 9040 was enclosed in an elevated sheet-metal galley way. There were four 175-ton storage bins. Calcium cyanamide was released at the bins because of problems with the screw conveyors used to transport material from Building 9004. A concrete pad was constructed in a small portion of the area under the storage bins; however, the pad was too small to effectively contain the spillage especially in windy conditions. Bare spots were observed in areas near the storage bins. A drainage divide is located in the NQ Area running north of Building 9040. It separates the Captain Creek drainage area from the area drained by unnamed creeks flowing northward toward the Kansas River. The data from the November 2000 RFI were determined by the regulators to be unreliable. The August 2005 RFI indicates that the nitrate groundwater plume is not leaving Sunflower AAP. A baseline screening risk assessment was performed to evaluate the risk from soil contamination. The results indicate that the soil under and around the conveyors and bins does not contain any contaminants above unrestricted levels. Ammonia contaminated soil was found around at Building 9040 and will be remediated under AOC-17. Cleanup/Exit Strategy- SWMU 45 will be included within the AOC 17 NFCAP. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1 (SAAP-125 20655.1098).

20655.1046_SAAP-046_DECONTAMINATION OVEN

Env Site ID: SAAP-046

Cleanup Site: DECONTAMINATION OVEN

Alias: SWMU 46

Regulatory Driver: RCRA-C

RIP Date: 1/22/2024

RC Date: 1/22/2024

RC Reason: Not assigned

SC Date: 1/22/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	1/31/1992
CS:	9/30/1995	5/31/1998
RFI/CMS:	1/15/2000	5/15/2022
DES:	- -	- -
IRA:	2/15/2015	12/6/2022
CMI(C):	9/25/2018	1/22/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises two acres in the northeast portion of the installation. This area was used to decontaminate oversized equipment/materials contaminated with trace explosives. The oven was constructed in 1970 and was used until 2001. There were no secondary containment features at this site. Only trace explosives were treated in this area. It may have been possible for VOCs to be released via the exhaust fan during heating. Lead may have been released from the equipment and vehicles decontaminated at this site. The data from the April 2000 RFI were determined by the regulators to be unreliable. An RFI work plan was prepared in February 2008 and was approved by KDHE. Fieldwork is complete. Dioxin and lead were found in surface soil above industrial levels. An RFI/CMS was finalized in 2018. Contaminated soil underneath explosive foundations have been removed. CMI(C) excavation and off-site disposal of lead- or dioxin-impacted soil and asphalt was completed in FY23. Cleanup/Exit Strategy- An NFCAP was completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1047_SAAP-047_NITROGUANIDINE AREA (25) SUMPS

Env Site ID: SAAP-047

Cleanup Site: NITROGUANIDINE AREA (25) SUMPS

Alias: SWMU 47

Regulatory Driver: RCRA-C

RIP Date: 9/15/2027

RC Date: 9/15/2027

RC Reason: Not assigned

SC Date: 9/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	10/15/1998	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2023	9/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the northwest portion of the installation. This area was used to collect wastewater from each of the NQ Production Area buildings/tanks. SAAP-047 consists of 25 sumps. Construction of the NQ Production facilities began in the late-1970s with limited production during 1981 (proveout). In August 1984, the plant began bulk production of NQ producing approximately 63 million pounds through August 1992. Each of the production buildings had dedicated sumps outside the buildings which received wastewater generated by operations in the NQ Area. The wastewater resulted from equipment wash downs and spills. The wastewater may have been acidic and may potentially have contained contaminants such as NQ and GN as well as raw process materials or intermediates of the NQ production process. The May 1999 RFI results indicate elevated levels of nitrates in groundwater and the soil around the sumps in the NQ Production Area. Another RFI is required to confirm vertical and horizontal extent of contamination. RFI work plan was prepared in May 2010 and comments have been received from KDHE. KDHE comments will be incorporated into upcoming RFI/CMS. Cleanup/Exit Strategy- An RFI/CMS will be completed. Excavation with off-site disposal is anticipated along with site closure within the CMI(C) phase. SWMU 47 will be included within the AOC 17 NFCAP. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1 (SAAP-125 20655.1098).

20655.1048_SAAP-048_NITROGUANIDINE SUPPORT AREA

Env Site ID: SAAP-048

Cleanup Site: NITROGUANIDINE SUPPORT AREA

Alias: SWMU 48

Regulatory Driver: RCRA-C

RIP Date: 9/15/2027

RC Date: 9/15/2027

RC Reason: Not assigned

SC Date: 9/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	9/15/1996	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2022
CMI(C):	9/15/2023	9/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises six acres in the north central portion of the installation. This area was used to proveout the NQ production process. SAAP-048 consists of the NQ Support Equipment (NSE) Area located in the in Buildings 2000 and 2012. The equipment included dryer bays aboveground storage tanks (AST) and half tanks. The NSE was a NQ pilot-scale production plant that was constructed during 1977-1980 and operated periodically as a partial proveout of the NQ production process from May 1979 to June 1984. In August 1984, the main NQ plant began production. The majority of the pilot plant was demolished sometime following shut down. This site was formerly the location of the 2000 series NC production facility used from 1943 to 1946. The NC production equipment was removed and the NSE was built in the empty buildings. The May 1999, RFI was approved by KDHE, and the results indicated the presence of elevated levels of nitrates, NQ, GN, and sulfates in the soil and groundwater. However, full nature and extent of contamination has not been determined. Cleanup/Exit Strategy- An RFI/CMS will be completed. Excavation with off-site disposal along with site closure is anticipated within the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1051_SAAP-051_NEW RECLAMATION YARD

Env Site ID: SAAP-051

Cleanup Site: NEW RECLAMATION YARD

Alias: SWMU 51

Regulatory Driver: RCRA-C

RIP Date: 9/16/2024

RC Date: 9/16/2024

RC Reason: Not assigned

SC Date: 9/17/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1979	9/30/1990
CS:	8/31/1994	5/31/1998
RFI/CMS:	1/15/2000	9/15/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2023	9/16/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises eight acres in the north-central portion of the installation. This area was used to stage scrap materials and excess equipment. SAAP-051 consists of the New Reclamation Yard commonly referred to as the Salvage Yard. This site also includes the battery handling area. Scrap was flash (explosive) decontaminated at the Contaminated Materials Burning Ground (SAAP-021) and then temporarily stored in the Salvage Yard prior to disposition. In the battery handling area battery parts were observed on the ground. Typical wastes associated with batteries include acids and metals (mercury, lead, and cadmium). Historically, SAAP-051 was just the battery handling area but was expanded to include all of the Salvage Yard due to the 1998 site-wide EBS, which identified the remainder of the Salvage Yard as an area of concern (AOC). The data from the June 1997 RFI were determined by the regulators to be unreliable. An RFI work plan was prepared in October 2009 and was approved by KDHE. An RFI/CMS was performed in FY21. Cleanup/Exit Strategy- RFI/CMS report has been completed. DD is under review. Excavation of contaminated soil was completed by the developer and site closure will be completed in the CMI(C) phase. Groundwater contamination will be addressed under a Groundwater Operable Unit.

20655.1058_SAAP-057_CHEMICAL PREPARATION HOUSE

Env Site ID: SAAP-057

Cleanup Site: CHEMICAL PREPARATION HOUSE

Alias: SWMU 57

Regulatory Driver: RCRA-C

RIP Date: 9/30/2024

RC Date: 9/30/2024

RC Reason: Not assigned

SC Date: 9/30/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	8/31/1998	3/31/2003
CS:	3/31/2003	9/30/2003
RFI/CMS:	4/15/2009	9/30/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/25/2018	9/30/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises one acre in the north-central portion of the installation. This area was used for storing and preparing non-explosive chemicals for mixing with explosives to make propellant paste. SAAP-057 consists of the Chemical Preparation House (Facility 507-2). Chemicals may have been spilled on the ground outside of this building. This site is located in Parcel 1-27(7)HR(P) as shown in the 1998 site-wide EBS. The March 2003 RRSE results showed that there were no exceedances of background levels. The RRSE report recommended NFA at this site. However, the KDHE wrote a letter recommending the Army conduct additional soil and groundwater sampling. An RFI work plan was prepared in April 2009 and was approved by KDHE. Field sampling is complete. Sampling results showed one soil exceedance of the industrial TMCL for lead and two exceedances of groundwater samples at one monitoring well of the industrial TMCL for dieldrin (an insecticide). CMI(C) excavation and disposal of surface soil contamination was completed in FY21. Cleanup/Exit Strategy- A supplemental RFI has been completed and a DD was prepared to close the RFI/CMS phase. A completion report has been signed and an NFCAP was sent to the KDHE for site closure. Further groundwater delineation will be addressed under a Groundwater Operable Unit.

20655.1059_SAAP-058_COMBINED SHOPS AREA

Env Site ID: SAAP-058

Cleanup Site: COMBINED SHOPS AREA

Alias: SWMU 58

Regulatory Driver: RCRA-C

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: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2025
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2024	9/15/2026
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 14 acres in the north-central portion of the installation. This area was used for maintenance activities and repairs. There are a total of 30 facilities in the area. The facilities include: three offices, the fuel unloading station, storage and distribution center, 12 storehouses, and nine shops. There was a Tram Repair Shop that was converted into a Heating Plant. Shops in this area include: Paint and Sign Paint, Tool Control/Millwright, Forge and Weld, Lead Burning Heavy Equipment, Repair Area, Oil House Locomotive Repair, and Tram Repair Shops. Building 500 contained the following shops: carpenter, electrical, instrument, refrigeration, air conditioner, pipe, and machine shops. This site is located in Parcel 1-28(7)HR(P) shown in the 1998 site-wide EBS. The results from the March 2003 RRSE report indicate that perchloroethylene (PCE) in the groundwater exceeded the USEPA Region IX preliminary remediation goals (PRG). PCE, PAHs, lead, arsenic, and manganese results from soil exceeded the USEPA Region IX PRGs. An RFI work plan was prepared in April 2010 and was approved by KDHE. Cleanup/Exit Strategy- The RFI/CMS phase will be completed. It is anticipated excavation and off-site disposal along with site closure will be performed within the CMI(C) phase. Partial remediation will be performed by the Developer. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1063_SAAP-064_PAPER BURNING GROUND

Env Site ID: SAAP-064

Cleanup Site: PAPER BURNING GROUND

Alias: SWMU 64

Regulatory Driver: RCRA-C

RIP Date: 1/23/2024

RC Date: 1/23/2024

RC Reason: Not assigned

SC Date: 1/24/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	10/15/2018
DES:	3/15/2019	5/15/2019
IRA:	- -	- -
CMI(C):	5/16/2019	1/23/2024
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises three acres in the east central portion of the installation. This area was used to burn paper. A trench was observed on aerial photographs encompassing approximately 200 feet by 30 feet. Contaminants may have extended to a depth of five feet below ground surface (depth to bedrock). This site is located in Parcel 1-38(7)HR(P) shown in the 1998 site-wide EBS. In the March 2003 RRSE arsenic results in the soil exceeded the USEPA Region IX PRGs. The soil results were used to estimate the potential levels of compounds in groundwater. Arsenic, chromium, and lead were estimated for groundwater as exceeding the USEPA Region IX PRGs. An RFI work plan was prepared in February 2009 and was approved by KDHE. Fieldwork is complete. There were 24 soil exceedances of TMCLs at 10 sample locations. There were no exceedances of residential TCMLs for sediment surface water and groundwater at SAAP-064. An RFI/CMS was completed in 2017; corrective measures consisting of excavation and disposal of contaminated soil was completed in FY2021. Cleanup/Exit Strategy- CMI(C) completion report and NFCAP were completed. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1064_SAAP-065_TANK FARM

Env Site ID: SAAP-065
Cleanup Site: TANK FARM
Alias: SWMU 65
Regulatory Driver: RCRA-C
RIP Date: 8/15/2027
RC Date: 8/15/2027
RC Reason: Not assigned
SC Date: 8/16/2027
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: Low
MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2023
CMI(C):	9/15/2024	8/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 22 acres in the north central portion of the installation. This area was used for storing and recycling ether and alcohol. The Tank Farm consists of three contiguous areas: South Tank Farm (which includes the 600-2 600-3 and 600-4 Tanks and Still Houses 3502 and 4502); the North Tank Farm (which includes the 600-1 Tanks) and the Loading Stations; and the area containing the compressor buildings and tanks (Building 1991). The Tank Farm received and processed recycled solvents which included alcohol and ether. Numerous releases have been documented from within the Tank Farm. Although the tanks were removed the foundations and saddles remain. This site has not been used for solvent storage and recycling since 1960. The 600-1 Tanks were used for storing diesel fuel starting in the mid-1970s. The east 600-3 Tank was used for storing gasoline starting in the mid-1970s. This site is located in Parcel 8-2(7)HR(P) shown in the 1998 site-wide EBS. In the March 2003 RRSE, arsenic and benzo(a)pyrene results in the soil and arsenic and lead results in groundwater exceeded the USEPA Region IX PRGs. An RFI work plan was prepared and comments have been received from KDHE. Cleanup/Exit Strategy- RFI/CMS will be completed. It is anticipated that excavation with off-site disposal along with site closure will occur in the CMI(C) phase. Groundwater contamination will be addressed under a Groundwater Operable Unit.

20655.1065_SAAP-066_INSTALLATION-WIDE STREAM STUDY

Env Site ID: SAAP-066

Cleanup Site: INSTALLATION-WIDE STREAM STUDY

Alias: SWMU 66

Regulatory Driver: RCRA-C

RIP Date: 9/15/2029

RC Date: 9/15/2029

RC Reason: Not assigned

SC Date: 9/16/2029

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: High

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2027
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2026	9/15/2029
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 8.6 miles of streams across the installation. This area was used for disposal of wastewater. In February 2000, the USEPA ordered Sunflower AAP to conduct stream monitoring. This site is designated for sampling the installation-wide surface waters of Captain Creek (10,861 linear feet), Hanson Creek (6,900 linear feet), Kill Creek (9,097 linear feet), and Spoon Creek (18,506 linear feet). An RRSE was conducted in July 2005. In August 2003, an RFI was initiated. Phase I included sediment and surface sampling. Sediment sampling results were compared to the threshold effect concentrations (TEC) provided in the document Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000). There were 21 sediment samples that exceeded the TECs at 16 sample locations. Surface water sample results were compared to the Acute Aquatic Life Screening Values in the Kansas Surface Water Quality Standards (KSWQS 2004). There were five surface water samples that exceeded the KSWQS at three sample locations. In July 2005, the RFI was completed. Phase II and Phase III results indicated that arsenic, chromium, cobalt, iron, lead, and NG in sediment samples were above the TECs. Surface water sample contaminants above the KSWQS were dieldrin (a pesticide) and 44-dicholoro-diphenyl-trichloroethane. KDHE's comment letter on the RFI report stated- There is significant potential that contaminated in-drainage sediment will be transported by fluvial action into the in-stream areas. The sediment sampling will take place after the upgradient remediation is completed. Cleanup/Exit Strategy- An RFI/CMS will be completed. Excavation, off-site disposal of contaminated sediment and site closure/NFA is anticipated within the CMI(C) phase. There is no groundwater associated with SAAP-066.

20655.1066_SAAP-067_SOUTH ACID AREA

Env Site ID: SAAP-067

Cleanup Site: SOUTH ACID AREA

Alias: SWMU 67

Regulatory Driver: RCRA-C

RIP Date: 9/15/2025

RC Date: 9/15/2025

RC Reason: Not assigned

SC Date: 9/16/2025

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2025
DES:	- -	- -
IRA:	9/15/2016	2/15/2023
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 26 acres in the east-central portion of the installation. This area was used for production and recycling of nitric acid and sulfuric acid. The South Acid Area was operated from 1943 to 1998. This area contains numerous buildings and tanks (Building 700 and 900 series). The conditions of these buildings range from being intact to total disrepair requiring demolition. Drainage ditches in the area were used for managing spills and wastewater discharges. Areas of discolored soil were noted during inspections in 2001. This area also includes SAAP-107 (Building 719-2; Former Truck Maintenance Shop), SAAP-108 (Former Fuel Oil Storage Tank), and SAAP-109 (Building 554-6; Oil and Paint House). This site is shown as an area needing investigation in the 1998 site-wide EBS. In the March 2003 RRSE, benzo(a)pyrene, lead, and arsenic in surface soils exceeded the USEPA Region IX PRGs. An RFI work plan was prepared in November 2008, and was approved by KDHE. An RFI/CMS was completed March 2020. Excavation and disposal of contaminated soil was completed in 2021. Cleanup/Exit Strategy- MEC removal and CMIC report was completed and NFCAP is being prepared. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1075_SAAP-102_MAIN ELECTRICAL SWITCH YARD

Env Site ID: SAAP-102

Cleanup Site: MAIN ELECTRICAL SWITCH YARD

Alias: AOC 2

Regulatory Driver: RCRA-C

RIP Date: 9/15/2025

RC Date: 9/15/2025

RC Reason: Not assigned

SC Date: 9/16/2025

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	8/31/1998	3/31/2003
CS:	8/31/1998	3/31/2003
RFI/CMS:	10/15/2014	9/15/2022
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2022	9/15/2025
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises two acres in the central portion of the installation. This area was used to transform electricity coming on plant at 115,000 volts to 12,000 volts and lower voltage. SAAP-102 measures 360 feet by 185 feet for an area of 66,600 square feet. Based on interviews with a former employee a transformer fire resulting from a lightning strike occurred around 1945. The majority of the transformers, which were assumed to contain PCBs based on that time period, were said to have been destroyed by the fire. This site was active until 2003, at which time the transformers were removed. This site is located in Parcel 1- 29(7)HR(P) shown in the 1998 site-wide EBS. A CERCLA remediation using TSCA as an ARAR was conducted in 2004. The investigation and cleanup was done under TSCA regulations using non-ER,A funds. Therefore, this ICM work is not shown in the phase schedule. A total of 5,060 tons of PCB-contaminated soil were excavated and disposed of. All remaining soil in SAAP-102 was below unrestricted levels for PCBs (1 mg/kg) as reported in the Polychlorinated Biphenyl Sites Cleanup Report (September 2007). In a letter dated Jan. 29, 2008, KDHE approved with conditions the referenced Polychlorinated Biphenyl Sites Cleanup report. Additional investigation and cleanup is required to close the data gaps identified by KDHE. Cleanup/Exit Strategy- An RFI/CMS was completed. Excavation and off-site disposal along with site closure will be completed in the RA(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1078_SAAP-112_PASTE AIR DRY FACILITIES

Env Site ID: SAAP-112

Cleanup Site: PASTE AIR DRY FACILITIES

Alias: AOC 12

Regulatory Driver: RCRA-C

RIP Date: 9/15/2024

RC Date: 9/15/2024

RC Reason: Not assigned

SC Date: 9/16/2024

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2024
DES:	- -	- -
IRA:	2/15/2015	9/15/2023
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 36 acres in the central portion of the installation. SAAP-112 consists of 16 buildings that were part of the F-Line and N-Line operations. All of the buildings have been intentionally burned down with only foundations remaining. It is in Parcel 5-13(7)HR(P) shown in the 1998 site-wide EBS. In the March 2003 RRSE, arsenic and lead exceeded the USEPA Region IX PRG. An RFI work plan was prepared in March 2011, and was approved by KDHE in February 2015. An RFI/CMS was completed in FY22. Cleanup/Exit Strategy- NFA DD and NFCAP awaiting approval. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1081_SAAP-116_NITROCELLULOSE PRODUCTION LINES

Env Site ID: SAAP-116

Cleanup Site: NITROCELLULOSE PRODUCTION LINES

Alias: AOC 16

Regulatory Driver: RCRA-C

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: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1998	3/15/2003
CS:	8/15/1998	3/15/2003
RFI/CMS:	3/15/2003	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2023
CMI(C):	9/15/2023	9/15/2026
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 107 acres in the north central portion of the installation. This area was used to produce NC. Each of the four production lines is approximately 22 acres in size and contains 10 or more buildings. The majority of the buildings have been intentionally burned down and all that remains are the explosive concrete foundations and underground explosive sewers. The NC Production Lines produced NC during 1943-1946, 1951-1960, and 1965-1971. Cotton fibers and wood pulp were nitrated using a mixture of nitric acid and sulfuric acid. Nitric acid and sulfuric acid was produced and recycled in the North and South Acid Areas. NC and other hazardous constituents were released to the soil and potentially the groundwater in the proximity of the production facilities. This site is in Segment 8 shown in the 1998 site-wide EBS. In the March 2003 RRSE, arsenic and lead were above their respective TMCLs and SVOCs were detected in the soil above the USEPA Region IX PRG. An RFI work plan was prepared in November 2008, and was approved by KDHE. The ICM work plan for MEC removal was prepared in September 2009, and was approved by KDHE. Cleanup/Exit Strategy- An RFI/CMS will be completed. Building demolition and excavation of contaminated soils with off-site disposal along with site closure is anticipated within the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1082_SAAP-117_NITROGUANIDINE PRODUCTION BUILD

Env Site ID: SAAP-117

Cleanup Site: NITROGUANIDINE PRODUCTION BUILD

Alias: AOC 17

Regulatory Driver: RCRA-C

RIP Date: 9/15/2027

RC Date: 9/15/2027

RC Reason: Not assigned

SC Date: 9/16/2027

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Low

MRSPP: N/A

Phase	Start	End
RFA:	8/31/1998	3/31/2003
CS:	8/31/1998	3/31/2003
RFI/CMS:	5/15/2010	9/15/2025
DES:	- -	- -
IRA:	2/15/2015	9/15/2021
CMI(C):	9/15/2022	9/15/2027
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 139 acres in the northwest portion of the installation. This area was used for producing NQ. SAAP-117 includes all buildings which have been identified as being potentially contaminated with explosives located in the NQ Production Area. NQ is a major constituent of multi-base propellants. The NQ production process starts with the conversion of calcium carbide to calcium cyanamide. Purchased calcium carbide is ground and mixed in a ball mill with calcium fluoride. This material is aspirated into a rotary kiln where under a blanket of nitrogen gas the conversion to calcium cyanamide takes place. The calcium cyanamide is converted into GN by the reaction of calcium cyanamide with ammonium nitrate nitric acid and anhydrous ammonia. GN is converted to NQ by reaction of GN with oleum and nitric acid. Crystallization of NQ followed by drying and packaging complete the process. This site is in Parcel 9-5(6)HR shown in the 1998 site-wide EBS. Based on a review of the documents visual inspections and interviews there is evidence that NQ and GN contamination was observed leaching out of walls and floors during the 1998 EBS visual inspection. In the March 2003 RRSE, the site was sampled for NQ and nitrates/nitrites with no detections above USEPA Region IX PRG values. The RRSE report recommended NFA at this site; however, KDHE wrote a letter requesting the Army conduct additional soil sampling. An RFI work plan was prepared in May 2010, comments have been received from KDHE. An IRA consisting of MEC removal was completed in 2021. Cleanup/Exit Strategy- An RFI/CMS will be completed. Excavation with off-site disposal along with site closure is anticipated within the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1 (SAAP-125 20655.1098).

20655.1096_CCSAAP-113_GENERAL WAREHOUSES (8037 SERI

Env Site ID: CCSAAP-113

Cleanup Site: GENERAL WAREHOUSES (8037 SERI

Alias: AOC 13

Regulatory Driver: RCRA-C

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: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
RFA:	1/15/1997	10/15/1998
CS:	1/15/1999	9/15/1999
RFI/CMS:	8/15/2004	9/15/2026
DES:	- -	- -
IRA:	6/15/2003	6/15/2004
CMI(C):	- -	- -
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 15 acres in the east-central portion of the installation. This area was used for storing plant parts an assortment of supplies process equipment taken out of commission for reuse or disposal unused packing drums for NQ and unused packing containers for 2.75-inch rocket grains. Two 10,400-square-foot buildings were constructed in 1945 and six more were constructed in 1952. Each warehouse has 12 overhead doors and four wooden unloading/loading ramps. All eight buildings are still standing. The warehouses are currently empty except for an estimated 700,000 of the 2.75-inch rocket grain packing containers. Located within this area is Building 309 the Cannon Unloading Station. The 1,720 square feet unloading station was built in 1943. In the 1998 EBS, the warehouse area was listed as an area where there were possible releases or disposal of hazardous substances. An RFI was conducted in 2004. Soil samples had exceedances for lead and indeno(123-cd)pyrene. The sample locations with exceedances were excavated in 2005. This ICM work was funded by non-ER, A funds and therefore, is not shown in the phase schedule. A request for NFA was submitted to KDHE in 2008. KDHE denied the NFA request with comments that identified data gaps requiring more soil samples. Historic exceedance of cobalt and a hydraulic oil spill require further characterization and cleanup. In meetings with KDHE, they stated that after the 700,000 rocket grain packing containers are removed from these warehouses and properly disposed, they will consider site closure. The landfill will not accept unless the tubes are compacted or shredded. Cleanup/Exit Strategy- Awaiting Office of Council decision concerning further investigation due to responsibility determination. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655-1099).

20655.1097_CCSAAP-126_POWER HOUSES

Env Site ID: CCSAAP-126
Cleanup Site: POWER HOUSES
Alias: AOC 26
Regulatory Driver: RCRA-C
RIP Date: 9/15/2025
RC Date: 9/15/2025
RC Reason: Not assigned
SC Date: 9/16/2025
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: Medium
MRSPP: N/A

Phase	Start	End
RFA:	10/15/2012	11/15/2012
CS:	11/15/2012	12/15/2012
RFI/CMS:	10/15/2014	9/15/2024
DES:	- -	- -
IRA:	- -	- -
CMI(C):	9/15/2021	9/15/2025
CMI(O):	- -	- -
LTM:	- -	- -

Site Narrative: This site comprises 66 acres in the central portion of the installation. This area was used for steam production by burning coal. There were three Power Houses (Buildings 154-1 thru 3) with various subaccounts: Thaw Sheds, Shakeout Houses, Pump Houses, Control Houses, Electrostatic Precipitators, Coal Unloading Shelters, Boiler Shelter Houses, Fuel Oil Storage Tanks. These structures were built in 1943. In the 1998 EBS, this area was listed as a Category 2 area which is any area where only release or disposal of petroleum products has occurred. Fuel oil spills were reported. ACM and lead-based paint may be present in soil. Power House 154-1 is still standing. Power Houses 154-2 and 154-3 have been demolished. RFI activities included collecting surface soil and subsurface soil samples at locations of potential contamination. Subsurface soil samples were collected at areas where fuel oil was stored or spilled. Soil samples were analyzed for RCRA metals, SVOCs, VOCs, TPH-diesel range organics (DRO), and TPH-GRO. Groundwater samples were collected. A CMS will be included in the RFI report. Cleanup/Exit Strategy- Excavation and off-site disposal of contaminated soil was completed. Site closure expected to occur during the CMI(C) phase. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2 (SAAP-126 20655.1099).

20655.1098_SAAP-125_GW OU1

Env Site ID: SAAP-125

Cleanup Site: GW OU1

Alias: GW OU1

Regulatory Driver: RCRA-C

RIP Date: 9/15/2029

RC Date: 9/15/2058

RC Reason: Not assigned

SC Date: 9/16/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Not assigned

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	8/15/1994	5/15/1998
CS:	- -	- -
RFI/CMS:	3/1/2020	3/15/2028
DES:	- -	- -
IRA:	- -	- -
CMI(C):	3/15/2024	9/15/2029
CMI(O):	9/15/2029	9/15/2058
LTM:	- -	- -

Site Narrative: This site will address groundwater for sites listed in the RCRA permit as part of Operable Unit 1 (OU1). Cleanup/Exit Strategy- RFI/CMS will be completed to delineate Operable Unit-wide contamination above TMCLs. CMI(C) is anticipated to consist of monitored natural attenuation (MNA) followed by 30 years of monitoring and PRs under CMI(O). LTM/CMI(O) activities may continue indefinitely.

20655.1099_SAAP-126_GW OU2

Env Site ID: SAAP-126
Cleanup Site: GW OU2
Alias: GW OU2
Regulatory Driver: RCRA-C
RIP Date: 3/15/2029
RC Date: 9/15/2058
RC Reason: Not assigned
SC Date: 9/16/2058
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
RFA:	9/15/1994	5/15/1998
CS:	- -	- -
RFI/CMS:	3/1/2020	3/15/2028
DES:	- -	- -
IRA:	- -	- -
CMI(C):	3/15/2026	3/15/2029
CMI(O):	3/15/2029	9/15/2058
LTM:	- -	- -

Site Narrative: This site will address groundwater for sites listed in the RCRA permit as part of Operable Unit 2 (OU2). Contaminants of concern: Metals and semi-volatile compounds (SVOCs); Media of concern: Groundwater. Cleanup/Exit Strategy- RFI/CMS will be completed to delineate OU-wide contamination above TMCLs. CMI(C) is anticipated to consist of MNA followed by 30 years of monitoring and PRs under CMI(O). LTM/CMI(O) activities may continue indefinitely.

20655.1100_SAAP-127_GW OU3

Env Site ID: SAAP-127

Cleanup Site: GW OU3

Alias: GW OU3

Regulatory Driver: RCRA-C

RIP Date: 9/15/2029

RC Date: 9/15/2058

RC Reason: Not assigned

SC Date: 9/16/2058

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1994	5/15/1998
CS:	- -	- -
RFI/CMS:	3/1/2020	9/15/2028
DES:	- -	- -
IRA:	- -	- -
CMI(C):	3/15/2026	9/15/2029
CMI(O):	3/15/2029	9/15/2058
LTM:	- -	- -

Site Narrative: Site addresses groundwater for sites listed in Operable Unit 3 in the RCRA Permit. Contaminants of concern: Metals and Semi-Volatile Organic Compounds (SVOCs). Cleanup/Exit Strategy-RFI/CMS will be completed to delineate Operable Unit-wide contamination above TMCLs. CMI(C) is anticipated to consist of MNA followed by 30 years of monitoring under CMI(O). LTM/CMI(O) activities may continue indefinitely which include PRs.

SITE SUMMARY

SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
20655.1001	SAAP-001_CLASSIFICATION YARD	1/19/2023
20655.1002	SAAP-002_RIVER WATER TREATMENT PLANT LAG	9/16/2023
20655.1003	SAAP-003_SEWAGE TREATMENT PLANT DRYING B	12/15/2021
20655.1010	SAAP-010_F-LINE AREA DITCHES	3/15/2022
20655.1011	SAAP-011_F-LINE AREA SETTLING PONDS	9/29/2020
20655.1013	SAAP-013_SOUTH ACID AREA LWTP EVAP. LAGO	9/16/2023
20655.1015	SAAP-015_WASTE STORAGE MAGAZINES	9/16/2023
20655.1016	SAAP-016_TEMPORARY WASTE STORAGE MAGAZIN	9/16/2023
20655.1020	SAAP-020_ASH LAGOONS	9/22/2022
20655.1023	SAAP-023_NEW EXPLOSIVE WASTE BURNING GRO	9/30/1999
20655.1027	SAAP-027_NQ AREA SAC & LWTP EVAP. LAGOON	9/16/2023
20655.1028	SAAP-028_WASTE CALCIUM CARBIDE TREATMENT	4/30/1980
20655.1029	SAAP-029_INDUSTRIAL WASTEWATER LAGOONS	4/30/1980
20655.1030	SAAP-030_PESTICIDE HANDLING AREA	12/15/2021
20655.1032	SAAP-032_LEAD DECON. AND RECOVERY UNIT	12/15/2021
20655.1037	SAAP-037_SANDBLAST AREAS	9/16/2023
20655.1038	SAAP-038_OIL WATER SEPARATOR	9/16/2023
20655.1040	SAAP-040_CALCIUM CYANIMIDE DISPOSAL AREA	12/15/2021
20655.1041	SAAP-041_CALCIUM CARBONATE CAKE LANDFILL	8/15/2005
20655.1042	SAAP-042_TEMPORARY SANITARY LANDFILL	8/15/2005
20655.1044	SAAP-044_TANK T784	9/30/2023
20655.1049	SAAP-049_ROAD SOUTHEAST OF SANITARY LAND	9/16/2023
20655.1050	SAAP-050_DISPOSAL SITE EAST OF SWMU 1	9/16/2023
20655.1052	SAAP-052_PAINT BAY BUILDING 542	9/16/2023
20655.1053	SAAP-053_BURN & DEBRIS AREA NORTH OF STP	1/19/2023
20655.1054	SAAP-054_FLUORESCENT TUBE WELLS	1/19/2023
20655.1057	SAAP-056_WELL SOUTH OF FACILITY 211	8/15/2011
20655.1060	SAAP-059_LAUNDRY FACILITY	7/16/2023
20655.1061	SAAP-060_Old Photographic Laboratory	12/16/2022
20655.1062	SAAP-063_WATER TOWERS	12/15/2021
20655.1067	SAAP-101_MONITORING WELL WEST OF OLD ADM	1/19/2023
20655.1068	SAAP-104_Disposal Area Southeast of STP	9/29/2020
20655.1069	SAAP-105_CANON RANGE TUNNELS (FACILITY 3	9/16/2023
20655.1070	SAAP-106_Process Facilities with F-Line	3/31/2003
20655.1071	SAAP-107_Truck Maintenance Shop, South A	3/31/2003
20655.1072	SAAP-109_Oil & Paint House, South Acid	3/31/2003
20655.1073	SAAP-108_Fuel Oil Storage Tank, South Ac	3/31/2003
20655.1074	SAAP-062_TRANSFORMER STORAGE WAREHOUSE 5	9/16/2023
20655.1076	SAAP-110_STORAGE MAGAZINES NOT IN SAAP-1	9/16/2023
20655.1077	SAAP-111_FORCED AIR DRYERS	12/15/2021
20655.1079	SAAP-114_ROBERT'S LAKE	12/15/2021
20655.1080	SAAP-115_HAZARD ANALYSIS TESTING LAB	12/15/2021

CRL ID	Site Name	Site Closeout Date
20655.1083	SAAP-118_TRENCH DISPOSAL AREA A3	12/15/2021
20655.1084	SAAP-119_TRENCH DISPOSAL AREA A4	9/3/2021
20655.1085	SAAP-120_TRENCH DISPOSAL AREA A5	12/15/2021
20655.1086	SAAP-121_TRENCH DISPOSAL AREA A6	6/23/2022
20655.1087	SAAP-122_OLD RECLAMATION YARD	12/15/2021
20655.1088	SAAP-123_CLEANUP UNDER EXPLOSIVE FOUNDAT	12/16/2020
20655.1089	SAAP-124_CLEANUP UNDER EXPLOSIVE SEWERS	12/16/2020
20655.1090	PBC Sunflower_Site Wide GFPR	1/31/2008
20655.1091	CCSAAP-055_OLD ADMINISTRATION BLDGS	12/16/2022
20655.1092	CCSAAP-061_ENVIRONMENTAL LAB BLDG 232	9/16/2023
20655.1093	CCSAAP-069_DISPOSAL AREA NORTH OF OLD QU	12/15/2021
20655.1094	CCSAAP-070_DIESEL FUEL SPILL BLDG 129-2	9/16/2023
20655.1095	CCSAAP-103_NEW PHOTOGRAPHIC LAB 227-18	9/16/2023
20655.1055	SAAP-002-R-01_NEW EXPLOSIVE WASTE BURNIN	8/31/2003
20655.1056	SAAP-001-R-01_CANNON RANGE TUNNELS-MR	8/31/2003

COMMUNITY INVOLVEMENT

Community Involvement Plan (Date Last Reviewed):	6/15/2020
Technical Review Committee Establishment Date:	N/A
Restoration Advisory Board (RAB) Establishment Date:	5/31/1998
RAB Adjournment Date:	1/31/2007
RAB Adjournment Reason:	Installation Commander determined RAB should be adjourned.
Reasons for Not Establishing RAB:	Insufficient interest
RAB Date of Solicitation from Community:	2/1/2022
RAB Results of Solicitation:	Insufficient interest
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A
Administrative Record Location:	SUNFLOWER ARMY AMMUNITION PLANT 35425 WEST 103RD ST. DESOTO, KS, 66018-0640
Information Repository Location:	SUNFLOWER ARMY AMMUNITION PLANT 35425 WEST 103RD ST. DESOTO, KS, 66018-0640

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Planned	PR	2/15/2026	7/15/2026	TBD	TBD	TBD
Completed	PR	2/15/2021	7/15/2021	The purpose of the PR is to evaluate the implementation and performance of a selected remedy to determine if the remedy remains protective of human health and the environment.	This review evaluates soil-contaminated sites. AOC 18, AOC 20, AOC 22 and SWMU 63 are the SAAP soil-contaminated sites with final DD where actions have not yet been implemented.	Because AOC 18, AOC 20, AOC 22 and SWMU 63 have achieved conditions that allow for unrestricted use / unrestricted exposure, no further reviews are required.