

# **USARC KINGS MILLS (AMSA 59)**

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:** USARC KINGS MILLS (AMSA 59)

**Installation City:** MAINEVILLE

**Installation County:** WARREN

**Installation State:** OHIO

**Regulatory Participation - Federal:** N/A

**Regulatory Participation - State:** OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA)

## ACRONYMS

Acronym	Definition
AOC	Area of Concern
CC	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
COC	Contaminant of Concern
CRL	Cleanup Restoration & Liabilities
DD	Decision Document
DPHVE	Dual Phase High Vacuum Extraction
ENV	Environmental
FS	Feasibility Study
FYR	Five-Year Review
GW	Groundwater
IAP	Installation Action Plan
ID	Identification
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MR	Munitions Response
MRSP	Munitions Response Site Prioritization Protocol
NPL	National Priorities List
OEPA	Ohio Environmental Protection Agency
PA	Preliminary Assessment
PBA	Performance-Based Acquisition
PP	Proposed Plan
PR	Periodic Review
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
RI	Remedial Investigation
RIP	Remedy-In-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SC	Site Closeout
SI	Site Inspection
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethylene

Acronym	Definition
USARC	US Army Reserve Center
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UU/UE	Unlimited Use/Unrestricted Exposure
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: 0/1**

**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

## 1720A.1004\_SITE 12\_Kings Mills USARC

**Env Site ID:** SITE 12

**Cleanup Site:** Kings Mills USARC

**Alias:** KINGS MILL

**Regulatory Driver:** CERCLA

**RIP Date:** 8/15/2007

**RC Date:** 9/30/2054

**RC Reason:** Not assigned

**SC Date:** 9/30/2054

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	11/15/1994	4/15/2002
SI:	8/15/1995	9/15/2003
RI/FS:	9/15/2003	3/1/2007
RD:	5/15/2006	8/15/2007
IRA:	9/15/1998	9/15/1999
RA(C):	4/15/2004	8/15/2007
RA(O):	1/15/2005	9/30/2054
LTM:	--	--

**Site Narrative:** This site is located east of the village of Kings Mills in Deerfield Township, Warren County, Ohio. Historically, solvents used by the maintenance facility were disposed of directly to the soil surface outside the facility. A limited remedial investigation (RI) was conducted, and trichloroethylene (TCE) was found in the soil and groundwater above regulatory guidelines. Most TCE contamination was observed in the groundwater samples collected at the soil/bedrock interface at a depth between 15 and 20 feet below ground surface. The TCE plume in the upper aquifer extends over approximately 200 by 100 feet. Initially, an in-situ chemical oxidation process was employed to attempt to remediate the site. Monitoring was performed for two years to evaluate the treatment's effectiveness and substantiate residual contamination's natural attenuation (risk-based closure). Subsequent groundwater monitoring results detected rebound concentrations indicating limited success of the in-situ treatment. In May 2002, a non-sampling screening site inspection (SI) report was prepared for the site by the Ohio Environmental Protection Agency (OEPA). In July 2002, the US Environmental Protection Agency (USEPA) Region 5 prepared a letter requesting the US Army Reserve Center (USARC) address data gaps identified in the report. The primary data gaps include the need for surface soil data contamination, source identification, and analytical results for inorganic constituents in groundwater. A supplemental SI was conducted to address data gaps, and a dual-phase high vacuum extraction (DPHVE) pilot study was conducted to evaluate the effectiveness of this method as a corrective action. High-vacuum extraction of groundwater with associated on-site treatment was determined to be a viable corrective method. In 2006, a supplemental SI report, a focused feasibility study (FS), a proposed plan (PP), a groundwater well monitoring closure plan, and a remedial action (RA) work plan were completed. The decision document (DD) was finalized and signed in March 2007, recommending DPHVE. In April 2007, response complete (RC) for soil was reached, and in July 2007, the DPHVE system was started. Contaminants of concern (COC) in groundwater include volatile organic compounds (VOCs), and chemical agent breakdown products. In August 2007, remedy-in-place (RIP) for groundwater was reached. The DPHVE was shut down in December 2021 due to diminishing returns. Cleanup and Exit Strategy - The anticipated exit strategy includes conducting a monitored natural attenuation study, five-year reviews (FYR), and

performing a vapor intrusion study at Building K100, located near the east edge of the TCE groundwater plume. There is a low potential for off-site migration. Current and future land use is industrial. FYRs will be conducted as long as hazardous substances remain at the site at concentrations that do not allow Unlimited Use/Unrestricted Exposure (UU/UE).

## SITE SUMMARY

## SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
1720A.1001	SITE 1_POL BUILDING	8/15/1998
1720A.1002	SITE 10_VEHICLE WASH AREA	8/15/1998
1720A.1003	SITE 11_DIESEL FUEL UST	8/15/1998
1720A.1005	SITE 2_SEPTIC TANK/LEACHFIELD	5/15/1997
1720A.1006	SITE 3_FUEL OIL UST	4/30/1994
1720A.1007	SITE 4_TRANSFORMER	8/15/1998
1720A.1008	SITE 5_TRANSFORMER	8/15/1998
1720A.1009	SITE 6_DRUM STORAGE AREA	8/15/1998
1720A.1010	SITE 7_PARTS CLEANER	8/15/1998
1720A.1011	SITE 8_BRAKE CHANGING AREA	8/15/1998
1720A.1012	SITE 9_FLAMMABLE MATERIALS LOCKER	8/15/1998

## COMMUNITY INVOLVEMENT

<b>Community Involvement Plan (Date Last Reviewed):</b>	01/20/2006
<b>Technical Review Committee Establishment Date:</b>	N/A
<b>Restoration Advisory Board (RAB) Establishment Date:</b>	N/A
<b>RAB Adjournment Date:</b>	N/A
<b>RAB Adjournment Reason:</b>	N/A
<b>Reasons for Not Establishing RAB:</b>	Lack of community interest.
<b>RAB Date of Solicitation from Community:</b>	N/A
<b>RAB Results of Solicitation:</b>	N/A
<b>Current Technical Assistance for Public Participation (TAPP):</b>	N/A
<b>TAPP Title:</b>	N/A
<b>Potential TAPP:</b>	N/A
<b>Administrative Record Location:</b>	88TH RD HEADQUARTERS - 60 SOUTH O STREET, FORT MCCOY, WISCONSIN 54656
<b>Information Repository Location:</b>	Marion Public Library 445 EAST CHURCH STREET, MARION, OH, 43302

**FIVE-YEAR / PERIODIC REVIEW SUMMARY**

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Completed	FYR	May 2021	08/09/2022	Evaluate the effectiveness of the Dual Phase High Vacuum Extraction system to determine if the system has reached a point of diminishing returns.	Area of Concern (AOC) #1 remedy currently protects human health and the environment. Trichloroethene concentrations have decreased, the plume is shrinking and not migrating, and mandatory approval of all soil excavations by the 88th RD prevents exposure to groundwater (GW) contamination.	Remedy remains protective of human health and the environment.
Planned	FYR	Jun 2026	Aug 2027	N/A	N/A	N/A