

# **MILWAUKEE USARC/AMSA#49**

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:** MILWAUKEE USARC/AMSA#49

**Installation City:** MILWAUKEE

**Installation County:** MILWAUKEE

**Installation State:** WISCONSIN

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

**Regulatory Participation - State:** WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR)

## ACRONYMS

Acronym	Definition
AMSA	Area Maintenance Support Activity
CC	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CRL	Cleanup Restoration & Liabilities
DD	Decision Document
ENV	Environmental
FS	Feasibility Study
FYR	Five-Year Review
IAP	Installation Action Plan
ID	Identification
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LTMP	Long-Term Monitoring Plan
LUC	Land Use Control
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
NPL	National Priorities List
PA	Preliminary Assessment
PR	Periodic Review
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RAB	Restoration Advisory Board
RC	Response Complete
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
USAEC	US Army Environmental Command
USARC	US Army Reserve Center
UST	Underground Storage Tank
UU/UE	Unlimited Use/Unrestricted Exposure
VOC	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources
WSSC	West Silver Spring Complex

## 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: 2/2**

**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

## 1750A.1001\_SITE 1\_LANDFILL NO. 1

**Env Site ID:** SITE 1

**Cleanup Site:** LANDFILL NO. 1

**Alias:** SITE 1

**Regulatory Driver:** SW

**RIP Date:** 10/31/1994

**RC Date:** 10/31/1994

**RC Reason:** Other

**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:	3/31/1984	8/31/1984
SI:	9/30/1984	9/30/1985
RI/FS:	9/30/1985	2/29/1992
RD:	3/31/1992	4/30/1994
IRA:	--	--
RA(C):	5/31/1994	10/31/1994
RA(O):	--	--
LTM:	11/30/1998	9/30/2054

**Site Narrative:** There are two landfill cells located at the Milwaukee US Army Reserve Center (USARC)/ Area Maintenance Support Activity (AMSA) #49 (Facility ID - WI064) located in Milwaukee, Wisconsin (Site 1 Landfill 1 and Site 2 Landfill 2 in HQAES). The Army manages both landfills under Site 1 Landfill 1. These two cells comprise the licensed landfill (License Number 3753) managed by the Waste and Materials Management Division of the Wisconsin Department of Natural Resources (WDNR). The Milwaukee USARC/AMSA #49 complex consists of 28 buildings on a 126.8-acre triangle-shaped parcel in the northern part of Milwaukee, Wisconsin. The property has three distinct sections- a Beech and Maple Forest covering the northern 11 acres, two capped landfill cells, and the cantonment area occupying the southern portion. Lincoln Creek roughly bisects the property and flows from the northeast to the southwest. This facility is owned and operated by the 88th Readiness Division. The Milwaukee USARC complex was constructed on a former Milwaukee County House of Corrections site in 1945. During WWII, the complex was used as a disciplinary barracks and, following the war in the 1950s, as a Nike Missile site. Historical records indicate that between 1957 and 1966, the Milwaukee Sanitation Department disposed of approximately 500,000 cubic yards of solid waste in the on-site landfill cells. Hazardous waste was reportedly not accepted at the landfill, and refuse thickness reportedly varied from 6 to 14 feet, with the fill reportedly consisting of "furniture, appliances, street-sweepings, leaves, tin cans, bottles, ashes, cinders, sewer pipe, and other miscellaneous materials." The landfills were not constructed with a liner but were capped following closure. When the landfill cells were initially closed after waste filling stopped in 1966, the cover soil was not placed correctly on the landfills, and approximately 75% of the landfills lacked the two feet of compacted clay cover required by the WDNR. The Army closed the landfills under a 1993 closure plan, with the final closure documentation report submitted to the WDNR in 1995. The WDNR issued a conditional approval of the closure plan with the understanding that the Army would address groundwater monitoring requirements in a subsequent Long-Term Monitoring Plan (LTMP). In 2000, the Army completed an LTMP and submitted it to the WDNR. The WDNR stated in a letter dated Jan. 28, 2000, that the LTMP was approved with the understanding that the proposed one round of groundwater sampling was a "reconnaissance round" and

that additional sampling would be required. Using groundwater monitoring wells installed at the site for historical studies, the Army conducted at least three more rounds of groundwater sampling after the LTMP was submitted to the WDNR. Volatile Organic Compounds (VOCs) were detected in the groundwater at the landfill (dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride), and several studies indicated that at least some of the contamination was due to migration from off-site sources. The 88th Readiness Division met with state officials from the WDNR on Oct. 22, 2019, for a landfill inspection. In a Jan. 30, 2020, letter, the WDNR listed the actions required at the site 1) remove woody vegetation from both cells, 2) inventory existing monitoring wells, 3) abandon or repair monitoring wells as required and identify usable wells, 4) survey all existing usable wells and develop the wells, and 5) conduct a baseline sampling event at the site.

Cleanup and Exit Strategy - A Closure Plan Modification for the West Silver Spring Complex (WSSC) landfills was approved by the WDNR on October 30, 2023, and LTMP will be submitted to the WDNR. The Closure Plan Modification summarizes changes to the landfills' post-closure maintenance and long-term monitoring requirements. WDNR allows for reducing sampling frequencies and analytes if supported after several rounds of sampling events. Current and future land use is industrial.

## 1750A.1009\_SITE 2\_LANDFILL NO. 2

**Env Site ID:** SITE 2

**Cleanup Site:** LANDFILL NO. 2

**Alias:** SITE 2

**Regulatory Driver:** CERCLA

**RIP Date:** 10/31/1994

**RC Date:** 10/31/1994

**RC Reason:** Other

**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:	3/31/1984	8/31/1984
SI:	9/30/1984	9/30/1985
RI/FS:	9/30/1985	2/29/1992
RD:	2/29/1992	4/30/1994
IRA:	--	--
RA(C):	5/31/1994	10/31/1994
RA(O):	--	--
LTM:	10/31/1994	9/30/2054

**Site Narrative:** There are two landfill cells located at the Milwaukee USARC/AMSA #49 (Facility ID - WI064) located in Milwaukee, Wisconsin (Site 1 Landfill 1 and Site 2 Landfill 2 in HQAES). The Army manages both landfills under Site 1 Landfill 1. These two cells comprise the licensed landfill (License Number 3753) managed by the Waste and Materials Management Division of the WDNR. The Milwaukee USARC/AMSA #49 complex consists of 28 buildings on a 126.8-acre triangle-shaped parcel in the northern part of Milwaukee, Wisconsin. The property has three distinct sections- a Beech and Maple Forest covering the northern 11 acres, two capped landfill cells, and the cantonment area occupying the southern portion. Lincoln Creek roughly bisects the property and flows from the northeast to the southwest. This facility is owned and operated by the 88th Readiness Division. The Milwaukee USARC complex was constructed on a former Milwaukee County House of Corrections site in 1945. During WWII, the complex was used as a disciplinary barracks and, following the war in the 1950s, as a Nike Missile site. Historical records indicate that between 1957 and 1966, the Milwaukee Sanitation Department disposed of approximately 500,000 cubic yards of solid waste in the on-site landfill cells. Hazardous waste was reportedly not accepted at the landfill, and refuse thickness reportedly varied from 6 to 14 feet, with the fill reportedly consisting of "furniture, appliances, street-sweepings, leaves, tin cans, bottles, ashes, cinders, sewer pipe, and other miscellaneous materials." The landfills were not constructed with a liner but were capped following closure. When the landfill cells were initially closed after waste filling stopped in 1966, the cover soil was not placed correctly on the landfills, and approximately 75% of the landfills lacked the two feet of compacted clay cover required by the WDNR. The Army closed the landfills under a 1993 closure plan, with the final closure documentation report submitted to the WDNR in 1995. The WDNR issued a conditional approval of the closure plan with the understanding that the Army would address groundwater monitoring requirements in a subsequent LTMP. In 2000, the Army completed an LTMP and submitted it to the WDNR. The WDNR stated in a letter dated Jan. 28, 2000, that the LTMP was approved with the understanding that the proposed one round of groundwater sampling was a "reconnaissance round" and that additional sampling would be required.

The 88th Readiness Division met with state officials from the WDNR on Oct. 22, 2019, for a landfill inspection. In a Jan. 30, 2020, letter, the WDNR listed the actions required at the site: 1) remove woody vegetation from both cells, 2) inventory existing monitoring wells, 3) abandon or repair monitoring wells as required and identify usable wells, 4) survey all existing usable wells and develop the wells, and 5) conduct a baseline sampling event at the site. There were no monitoring wells by the East Landfill with elevated VOCs nor any chlorinated solvents during groundwater sampling events in 2022 and 2023. Furthermore, the groundwater sampling events in 2022 and 2023 detected no metal concentrations above the NR 140 ES by the East Landfill.

Cleanup and Exit Strategy - A Closure Plan Modification for the WSSC landfills was approved by the WDNR on October 30, 2023, and LTMP will be submitted to the WDNR. The Closure Plan Modification summarizes changes to the landfills' post-closure maintenance and long-term monitoring requirements. WDNR allows for reducing sampling frequencies and analytes if supported after several rounds of sampling events. Current and future land use is industrial.

## SITE SUMMARY

## SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
1750A.1002	SITE 10_POL SHED	2/28/1998
1750A.1003	SITE 11_INDOOR FIRING RANGE	2/28/1998
1750A.1004	SITE 12_FLAMMABLE MATERIALS SHED	2/28/1998
1750A.1005	SITE 13_PARTS CLEANER	2/28/1998
1750A.1006	SITE 14_FUEL OIL UST	4/30/1990
1750A.1007	SITE 15_BRAKE CHANGING AREA	2/28/1998
1750A.1008	SITE 16_TRANSFORMER	8/31/1998
1750A.1010	SITE 3_DRUM STORAGE AREA	2/28/1998
1750A.1011	SITE 4_VEHICLE WASH RACK	2/29/2000
1750A.1012	SITE 5_FLAMMABLES MATERIALS LOCKER	2/28/1998
1750A.1013	SITE 6_HOSPITAL LAB (303)	2/28/1998
1750A.1014	SITE 7_FORMERLY LEAKING DIESEL & GASOLIN	12/31/1988
1750A.1015	SITE 8_FUEL OIL UST	4/30/1990
1750A.1016	SITE 9_GASOLINE UST	8/31/1998

## COMMUNITY INVOLVEMENT

<b>Community Involvement Plan (Date Last Reviewed):</b>	N/A
<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>	No cleanup is required at this time.
<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>	N/A
<b>Information Repository Location:</b>	State of Wisconsin, Department of Natural Resources, Milwaukee Service Center, 2300 N. Dr. Martin Luther King Drive, Milwaukee, WI 53212. Reference Facility ID #241697280

## FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Planned	N/A	N/A	N/A	N/A	N/A	N/A
Completed	N/A	N/A	N/A	N/A	N/A	N/A