2025 Site Management Plan

Defense Depot Memphis, Tennessee
U.S. EPA I.D. Number TN4210020570

Final
March 2025



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Department of the Army

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Prepared by:

HDR
369 Inverness Parkway, Suite 325
Englewood, CO 80112

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Acronyms and Abbreviations

µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
AFFF	aqueous film-forming foam
AOC	area of concern
AOPI	area of potential interest
AR	Administrative Record
AS/SVE	air sparging with soil vapor extraction
bgs	below ground surface
BRA	Baseline Risk Assessment
BRAC	Base Realignment and Closure
cDCE	cis-1,2-dichloroethene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CF	chloroform
COC	chemical of concern
CT	carbon tetrachloride
CVOC	chlorinated volatile organic compound
CY	cubic yard
DCE	1,1-dichloroethene
DDMT	Defense Depot Memphis, Tennessee
DERP	Defense Environmental Restoration Program
DF	Dunn Field
DFW	Dunn Field West
DoD	Department of Defense
e^2M	engineering-environmental Management, Inc.
EBT	enhanced bioremediation treatment
ECP	Environmental Condition of Property
EISR	Early Implementation of Selected Remedy
ESD	Explanation of Significant Differences
ET&D	excavation, transportation and disposal
FDAQ	Fluvial Deposits Aquifer
FFA	Federal Facilities Agreement
FFS	Focused Feasibility Study
FOST	Finding of Suitability to Transfer

ft	feet
FU	functional unit
FYR	Five-Year Review
HFPO-DA	hexafluoropropylene oxide dimer acid
HHERA	Human Health and Ecological Risk Assessment
HHRA	human health risk assessment
HI	hazard index
HQDA	Headquarters, Department of the Army
HSWA	Hazardous and Solid Waste Amendment
IAQ	intermediate aquifer
IR	Information Repository
IRA	interim remedial action
IRACR	Interim Remedial Action Completion Report
ISTD	in situ thermal desorption
IW	injection well
lb/hr	pound per hour
LOQ	limit of quantitation
LTM	long-term monitoring
LUC	land use control
LUCIP	land use control implementation plan
MAQ	Memphis aquifer
MCL	maximum contaminant level
MI	Main Installation
MIP	membrane interface probe
MLGW	Memphis Light, Gas & Water
MNA	monitored natural attenuation
MW	monitoring well
NPL	National Priorities List
OPS	Operating Properly and Successfully
OSI	Offsite groundwater investigation
OU	Operable Unit
PA	Preliminary Assessment
PAHs	polyaromatic hydrocarbons
PCB	polychlorinated biphenyl
PCE	tetrachloroethene

PCP	pentachlorophenol
PFAS	per- and polyfluoroalkyl substances
PFBS	perfluorobutane sulfonate
PFHxS	perfluorohexane sulfonate
PFNA	perfluorononanoic acid
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
pg/g	picogram per gram
PRB	permeable reactive barrier
PV	passive vapor
RA	remedial action
RAO	remedial action objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REC	recognized environmental conditions
RFA	RCRA Facility Assessment
RG	remediation goal
RI	remedial investigation
ROD	Record of Decision
RSL	regional screening level
RW	recovery well
SAP	sampling and analysis plan
SCHD	Shelby County Health Department
SI	Site Investigation
SL	screening level
SLERA	screening level ecological risk assessment
SMP	Site Management Plan
SMT	Site Management Team
SRI	Supplemental Remedial Investigation
SRS	Sampling and Risk Screening
SVE	soil vapor extraction
SVOC	semi-volatile organic compound
SWMU	Solid Waste Management Unit
TC	target concentration

TCA	1,1,2-trichloroethane
TCE	trichloroethene
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TCL	Target Compound List
TDEC	Tennessee Department of Environment and Conservation
TeCA	1,1,2,2-tetrachloroethane
TEQ	toxicity equivalent
TTA	target treatment area
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UU/UE	unrestricted use and unlimited exposure
VC	vinyl chloride
VI	vapor intrusion
VISL	vapor intrusion screening level
VMP	vapor monitoring point
VOC	volatile organic compound
WNRC	Washington National Records Center
ZVI	zero valent iron

1 Introduction

This 2025 Site Management Plan (SMP) for the former Defense Depot Memphis, Tennessee (DDMT) was prepared under Contract W91278-20-D-0024, Task Order No. W9127822F0208 to the United States Army Corps of Engineers (USACE), Mobile District. The environmental restoration program at DDMT is directed by Headquarters Department of the Army (HQDA), Deputy Chief of Staff, G-9 (Installations), Environmental Division Base Realignment and Closure (BRAC) Branch.

This SMP has been prepared in accordance with *Department of Defense (DoD) Manual Number 4715.20, Defense Environmental Restoration Program [DERP] Guidance* (DoD, 2012) and fulfills a requirement of the *Federal Facilities Agreement at the Defense Distribution Depot Memphis* (FFA), which was signed by United States Defense Logistics Agency, United States Environmental Protection Agency (USEPA) and Tennessee Department of Environment and Conservation (TDEC) in 1995. DDMT's USEPA Identification Number is TN4210020570. The Site Management Team (SMT) for DDMT, which consists of the project managers for Army, TDEC and USEPA with support from agency staff and contractors, has monthly on-line conference calls to discuss project activities, documents and schedule and occasional project review meetings at DDMT.

In accordance with the DERP Guidance, the SMP describes a coordinated approach for environmental restoration activities and includes required activities by year until the expected completion of environmental restoration at DDMT. The SMP is updated annually, made available for public review in the information repository (IR) and included in the Administrative Record (AR). The 2025 SMP is updated with information available as of 25 March 2025.

An IR is a records storage area at or near a Superfund site that contains all correspondence, reports, and documents pertaining to the site, as well as general Superfund program information. At an IR, people can research the site and the law pertaining to the cleanup, learn how to participate in the cleanup process, and copy any information found at the repository.

Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), an AR is the complete collection of documents that forms the basis for selecting a response action (i.e., those documents considered or relied upon by the lead agency in selecting a remedy). Thus, the record should include final documents generated by the lead agency and support agency or agencies, as well as technical and site-specific information. Information or comments submitted by the public during a public comment period also should be included in the AR whether or not they support the selected decision.

The Army has developed a website for DDMT AR and IR documents to improve access. The public can search and download documents at https://www.sam.usace.army.mil/Library/DDMT/. The first two files on the website are the indexes for the AR and the IR. Documents can be found by using the indexes or a key word search. New documents will be added to the website semiannually.

The AR for DDMT is stored by the National Archives and Records Administration, Washington National Records Center (WNRC). The last transmittal of files to the WNRC was made in July 2023. Additional shipments will be made periodically as AR documents are created. Prior to shipment, the AR documents are stored in a locked room at the DDMT field office. The WNRC address is:

WNRC
4205 Suitland Road
Suitland, MD 20745-8001

Responses to agency comments on the 2025 SMP and correspondence with TDEC and USEPA are included in Appendix A.

2 Summary of Site Conditions

2.1 Site Location and Description

DDMT is located in southeastern Memphis, Shelby County, Tennessee, approximately 5 miles east of the Mississippi River and 0.5 miles northeast of Interstate 240 (Figure 1). DDMT originated as a military facility in the early 1940s to provide stock control, materiel storage, and maintenance services for DoD. In 1995, DDMT was placed on the list of DoD facilities to be closed under BRAC. Storage and distribution activities continued until DDMT closed in September 1997.

DDMT covers approximately 634 acres and consists of the Main Installation (MI) and Dunn Field (Figure 2). The MI contains approximately 567 acres with open storage areas, warehouses, former military family housing, and outdoor recreational areas. Dunn Field, which is located across Dunn Avenue from the north-northwest portion of the MI, contains approximately 67 acres and includes former mineral storage and waste disposal areas.

2.2 Regulatory Status

DDMT was a generator of Resource Conservation and Recovery Act (RCRA) hazardous wastes during its period of operation. The wastes included hazardous substances that reached shelf-life expiration dates and could no longer be used, vehicle maintenance wastes, and waste materials from the cleanup of small hazardous substance spills.

On 28 September 1990, USEPA Region 4 and TDEC issued DDMT a RCRA Part B permit for storage of hazardous waste. The Hazardous and Solid Waste Amendment (HSWA) portion of the permit issued by USEPA included requirements for the identification and, if necessary, corrective action at Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). A RCRA Facility Assessment (RFA), completed in 1990, identified 49 SWMUs and 8 AOCs (A.T. Kearney, 1990). Subsequent to issuing the RCRA permit, USEPA prepared a final Hazard Ranking System Scoring Package for the facility.

On 14 October 1992, USEPA added DDMT to the National Priorities List (NPL) (57 Federal Register 47180 No. 199). On 6 March 1995, USEPA, TDEC, and the Defense Logistics Agency entered into an FFA under CERCLA, Section 120, and RCRA, Sections 3008(h) and 3004(u) and (v). The FFA outlines the process for investigation and cleanup of environmental sites at DDMT under CERCLA. The parties agreed that investigation and cleanup of releases from the sites (including formerly identified SWMUs/AOCs) would satisfy any RCRA corrective action obligation.

The RCRA Part B permit for hazardous waste storage was terminated by TDEC in October 1998 upon request from DDMT, because the storage unit was not constructed. The HSWA portion of the permit for corrective action remained in effect. DDMT submitted a corrective action permit renewal application in March 2004. In January 2005, TDEC issued a Denial to Reissue the Hazardous Waste Corrective Action Permit, which terminated the requirement to

perform corrective action under RCRA and noted that all corrective action shall continue to be performed under CERCLA.

The NPL site status was revised to Construction Complete in May 2010 after construction of the selected remedies for DDMT was completed.

2.3 Site Designations

Site designations at DDMT were developed for overlapping environmental programs and for facility reuse. Four Operable Units (OUs) were established during preparation of the FFA: Dunn Field, OU-1; Southwest Quadrant MI, OU-2; Southeastern Watershed and Golf Course, OU-3; and North Central Area MI, OU-4.

The property was divided into 36 parcels based on planned reuse after DDMT was selected for closure under BRAC. Areas of environmental concern within each parcel were divided into sub-parcels representing buildings, spill locations, burial locations, former pistol ranges, open land areas, and other sites. This system allowed investigation results to be compared directly to BRAC parcels for reuse purposes and facilitated sampling/analysis and decisions regarding environmental condition of property for leasing and transfer.

During the MI remedial investigation, the parcels were combined in functional units (FUs) to evaluate risk to human health and the environment. Each FU represented an area where human health exposure was generally uniform based on operational history, expected use and location. The MI was divided into six FUs with groundwater under the MI being FU 7. During the Dunn Field remedial investigation, the site was divided into three areas for conducting baseline risk assessments based on similar historical use and proposed reuse: Northeast Open Area, Stockpile Area, and Disposal Area. The FUs/Areas are described on Table 1 and the boundaries are shown on Figure 3 for the MI and Figure 4 for Dunn Field.

Environmental restoration sites were first identified during the 1990 RFA, and additional sites were added over time. The 1990 RFA identified 57 SWMUs and AOCs. An appendix to the FFA increased the number of sites to 89 based on additional site investigations; additional information is provided in the *Environmental Baseline Survey Report* (Woodward-Clyde, 1996). Two of the 89 sites consisted of multiple disposal locations that were later separated, bringing the number of sites to 93. The environmental restoration sites within each OU are listed on Table 2 with the current site status; the site locations are shown by OU on Figures 5, 6, 7 and 8. The site designations on the figures (e.g., RI, Screening, and No Further Action) were established when the sites were identified and do not reflect the current status.

2.4 Geology and Hydrogeology

The geologic units of interest at DDMT are (from youngest to oldest): loess, including surface soil; fluvial deposits; Jackson Formation/upper Claiborne Group (Jackson/upper Claiborne); and Memphis Sand.

The loess consists of wind-blown and deposited, brown to reddish-brown, low plasticity clayey silt to silty clay. The loess deposits are about 20 to 30 feet (ft) thick and are continuous throughout the DDMT area.

The fluvial (terrace) deposits at DDMT consist of two general layers. The upper layer is silty, sandy clay to clayey sand and ranges from about 0 to 30 ft thick. The lower layer is composed of interlayered sand, sandy gravel, and gravelly sand, and ranges from 30 to 100 ft thick. The uppermost aquifer is the unconfined Fluvial Deposits Aquifer (FDAQ), which consists of saturated sands and gravelly sands in the lower portion of the fluvial deposits. The saturated thickness ranges from 0 ft (dry) to approximately 70 ft. The groundwater level and saturated thickness of the FDAQ are mainly controlled by the surface of the uppermost clay in the upper Claiborne and areas of downward leakage where the clay layer is thin or absent. The groundwater level does not reflect the nearly level ground surface at the MI. The groundwater in the FDAQ is not a drinking water source for area residents; however, the current Tennessee groundwater classification at DDMT is General Use (TDEC Chapter 1200-04-03).

The Jackson/upper Claiborne forms the Upper Confining Unit for the Memphis Aquifer (MAQ) on a regional basis and separates the FDAQ from the MAQ at DDMT. The upper Claiborne Group includes the Cockfield and Cook Formations; the individual layers of the Jackson/upper Claiborne consist of clays, silts, and sands deposited in lenses or individual beds. The Jackson Formation is reported to be absent in the area of DDMT. The Cockfield Formation consists of inter-fingering fine sand, silt, clay, and local lenses of lignite. The Cook Mountain Formation consists primarily of clay with varying amounts of fine sand and is reported to be the most persistent clay layer in the Upper Confining Unit. The Intermediate Aquifer (IAQ) is locally developed in sand layers within the upper Claiborne.

The Memphis Sand consists primarily of thick-bedded, white to brown or gray, very fine-grained to coarse, partly argillaceous and micaceous sand. The Memphis Sand ranges from 500 to 890 ft in thickness and begins at a depth of approximately 120 to 300 ft below ground surface (bgs). The MAQ is a regional deep, confined aquifer and is the primary source of water for the City of Memphis. Memphis Light, Gas & Water (MLGW) extracts groundwater from several well fields in the Memphis area, which have created a regional cone of depression in the potentiometric surface, with steeper local cones of depression at each well field. The Allen Well Field is the closest to DDMT; individual extraction wells in the well field are 1 to 2 miles west of DDMT.

At locations where clay layers in the upper Claiborne Group are thin or absent, a ‘window’ can develop with downward flow of groundwater transporting contaminants to the IAQ, and potentially the MAQ. Studies indicate that downward leakage from the water-table aquifers (alluvial and fluvial deposits) to the MAQ is widespread in the Memphis area (Parks, 1990). Within the northwestern MI, an erosional window between the FDAQ and IAQ has been identified in the area northwest of long-term monitoring (LTM) well MW-286 (Figure 9). The depressed FDAQ water levels near MW-39 and MW-259 in the central MI indicate a separate area of downward leakage of water (‘sink’) and provide additional evidence of the hydraulic connection between the FDAQ and the IAQ.

3 Environmental Program Status

Construction of the selected remedies for DDMT was completed in December 2009, and the *Preliminary Close Out Report* (USEPA, 2010a) was approved in May 2010. Interim remedial action completion reports (IRACRs) have been approved for all remedial actions (RAs). USEPA has concurred with operating properly and successfully (OPS) determinations for the remedies implemented on federal property.

3.1 Dunn Field (OU-1)

Dunn Field, which is located across Dunn Avenue from the MI, contains approximately 67 acres and includes former mineral storage and waste disposal areas. Approximately 41 acres have been transferred through a public benefit conveyance and a competitive public sale; approximately 26 acres along the western and northern sides of Dunn Field are still held by Army (see Section 3.4).

Site investigations from 1998 to 2001 are described in the *Memphis Depot Dunn Field Remedial Investigation Report* (Dunn Field RI; CH2M HILL, 2002). Site records indicated that chemical warfare material, chlorinated lime, super tropical bleach, and calcium hypochlorite, food stocks, paints/thinners, petroleum/oil/lubricants, acids, herbicides, mixed chemicals, and medical waste were destroyed or buried in pits and trenches at the Dunn Field disposal sites. Subsurface soils, including those from the disposal sites in the Disposal Area were considered to be principal threat wastes, which significantly degraded groundwater quality in the FDAQ. Chlorinated volatile organic compounds (CVOCs) were detected at elevated concentrations in subsurface soil samples collected in the Disposal Area.

Groundwater samples collected for the RI were analyzed for explosives, herbicides, metals (total), pesticides, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs); samples were also analyzed for chemical warfare materiel breakdown products. Only CVOCs were selected as chemicals of concern (COCs) for groundwater; the CVOCs with the highest groundwater concentrations were 1,1,2,2-tetrachloroethane (TeCA) and trichloroethene (TCE).

The RI identified three CVOC plumes in the FDAQ: a northern plume, a central plume, and a southern plume. The plume along the northern boundary of the site was determined to have on-site sources due to previous releases in the northwest section of the Disposal Area on Dunn Field and undetermined off-site sources based on CVOCs detected in off-site monitoring wells upgradient of Dunn Field. The central and southern plumes had on-site sources due to releases in the Disposal Area (Figure 4). The evaluation of remedial alternatives is described in the *Memphis Depot Dunn Field Feasibility Study Report* (CH2M HILL, 2003b).

3.1.1 Prior Remedial and Removal Actions

The following actions were taken on Dunn Field prior to the *Memphis Depot Dunn Field Record of Decision* (Dunn Field ROD; CH2M HILL, 2004a) in 2004. The locations are shown on Figure 4.

3.1.1.1 Interim Remedial Action

The *Record of Decision for Interim Remedial Action of the Groundwater at Dunn Field (OU-1)* (CH2M HILL, 1996) was signed in April 1996, with the objective of hydraulic containment to prevent further contaminant plume migration and to reduce contaminant mass in groundwater. The interim groundwater extraction system began operation in November 1998 with seven recovery wells (RWs); four additional RWs were brought on-line in 2001. Groundwater was discharged without treatment to the city sewer system under Industrial Discharge Agreement S-NN3-097.

Based on reduction of CVOC concentrations in groundwater following implementation of the Dunn Field ROD, all RWs were shut down by January 2009. Approximately 918 pounds of total VOCs were discharged by the interim remedial action (IRA) in just over 10 years of operation. The IRA system was removed and the RWs abandoned in July 2010. The final year of IRA groundwater monitoring and the closure activities were described in *2009 Operations and Closure Report, Dunn Field Groundwater Interim Remedial Action* (HDR, 2010).

3.1.1.2 Removal Actions

The following non-time critical removal actions were performed:

- Approximately 914 cubic yards (CY) of soil contaminated with mustard degradation by-products, 19 CY of mustard-contaminated soil and 29 bomb casings were removed by excavation, transport and off-site disposal (ET&D) at two separate locations on Dunn Field. The action was completed in March 2001 and documented in the *Final Chemical Warfare Materiel Investigation/Removal Action Report* (UXB International, Inc., 2001).
- Approximately 930 CY of lead-contaminated surface soil from the former pistol range were removed by ET&D. The action was completed in March 2003 and documented in *Removal Action at Former Pistol Range, Site* 60 (Jacobs Federal Programs, 2003).

3.1.2 Record of Decision and ROD Amendment

The Dunn Field ROD was approved in April 2004 and the *Dunn Field Record of Decision Amendment* (ROD Amendment) (e^2M, 2009a) was approved in March 2009. The remedial action objectives (RAOs) are:

<u>Surface Soil</u>

- Limit use of the surface soil in the Disposal Area to activities consistent with light industrial land use and prevent residential use through land controls.

<u>Disposal Sites</u>

- Prevent groundwater impacts from a release of buried containerized hazardous liquids and the leaching of contaminants from buried hazardous solids.
- Prevent unacceptable risk of direct contact with buried hazardous liquids and/or solids due to intrusive activities during future land use or site development.

Subsurface Soil Impacted with VOCs

- Prevent direct inhalation of indoor air vapors from subsurface soils in excess of industrial worker criteria.
- Reduce or eliminate further impacts to the shallow FDAQ from VOCs in the subsurface soil.

Groundwater

- Prevent human exposure to contaminated groundwater (i.e., exceeding protective target concentrations [TCs]).
- Prevent further off-site migration of VOCs in excess of protective target levels.
- Remediate FDAQ groundwater to drinking water quality to be protective of the deeper MAQ.

Remedial goal objectives for soil, soil vapor and groundwater included in the Dunn Field ROD are shown on Table 3. The soil screening levels for loess and fluvial deposits were used as remediation goals (RGs) to be met by the RAs.

Since multiple CVOCs were detected in groundwater on Dunn Field and downgradient, targeting to meet the maximum contaminant levels (MCLs) was not considered adequately protective of a potentially exposed receptor due to the possibility of cumulative toxicity exceeding the upper-bound limit of the acceptable risk or hazard index (HI). The individual concentration of each CVOC in plumes originating on Dunn Field are to be below MCLs and combined concentration levels are to be below a cumulative upper-bound target risk of 1 in 10,000 ($1x10^{-4}$) and a HI of 1.0 at each LTM well. Preliminary TCs for groundwater, which assume all primary CVOCs are present, are shown on Table 3.

The components of the selected remedy from the Dunn Field ROD are:

- ET&D of soil and material contained within disposal sites based upon results from a pre-design investigation.
- SVE to reduce VOC concentrations in subsurface soils to levels that are protective of the intended land use and groundwater.
- Injection of zero valent iron (ZVI) within Dunn Field to treat CVOCs in the most contaminated part of the groundwater plume, and installation of a permeable reactive barrier (PRB) to remediate CVOCs within the off-site areas of the groundwater plume.
- Monitored natural attenuation (MNA) and LTM of groundwater to document changes in plume concentrations, detect potential plume migration to off-site areas or into deeper aquifers, and track progress toward TCs.
- Implementation of land use controls (LUCs), which consist of deed and/or lease restrictions; Notice of Land Use Restrictions; City of Memphis/Shelby County zoning

restrictions and the Shelby County Health Department (SCHD) groundwater well restrictions.

The Dunn Field ROD identified the eastern portion of Dunn Field, including most of the Northeast Open Area and the Stockpile Area, as suitable for unrestricted use and unlimited exposure (Figure 4).

The fundamental change documented in the ROD Amendment was the use of air sparging with soil vapor extraction (AS/SVE) instead of a PRB for the Off Depot groundwater plume. The criteria used to determine the extent of the AS/SVE system, and the treatment objective were also included in the ROD Amendment. The AS/SVE system was selected to cross the core of the plume near the downgradient end and to reduce the individual CVOC concentrations in groundwater to 50 micrograms per liter (µg/L) or less. The RGs and TCs for the COCs shown on Table 3 were not changed in the ROD Amendment.

Three RAs were performed to implement the selected remedies for OU-1, Dunn Field: Disposal Sites RA (ET&D); Source Areas RA (SVE, ZVI injections and LUCs); and Off Depot Groundwater RA (AS/SVE and LTM). Locations of the Disposal Sites, Source Areas and Off Depot Groundwater RAs are shown on Figure 10.

The RAOs for surface soil, disposal sites and subsurface soil impacted with VOCs have generally been met through the RAs and LUCs. An area of soil contamination located outside the RA areas has been identified along the central, western boundary of Dunn Field; investigation and risk assessment have been performed and additional investigation is being conducted to determine the appropriate remedial action (see Section 3.1.7.2). The RAOs for groundwater have been partially met through the RAs and LUCs. Exposure to contaminated groundwater has been prevented because there are no current production wells on-site or within 0.5 miles of Dunn Field or the plume west of Dunn Field, and LUCs prevent installation of production wells within that area. Further off-site migration of VOCs has generally been prevented through the RAs.

Groundwater contaminants were reduced below MCLs and TCs by the RAs except in the Offsite plume along the northern boundary of Dunn Field. An investigation of the Offsite plume has provided multiple lines of evidence for an upgradient, offsite contaminant source for the plume (see Section 3.1.7.1). In addition, rebound in groundwater concentrations in two wells along the central, western boundary of Dunn Field led to the investigation noted above (see Section 3.1.7.2).

Groundwater has been remediated to groundwater quality (below MCLs and TCs) in most areas although several wells have concentrations above MCLs or TCs (Section 3.1.6). The active remediation goal of 50 µg/L for individual CVOCs has recently been achieved in the Off Depot wells, and AS/SVE system operation has ceased for two years of groundwater monitoring for rebound. Additional information on remedial actions, groundwater monitoring, and land use controls for Dunn Field is presented in following sections of this SMP.

3.1.3 Disposal Sites Remedial Action

Soil and debris including potential principal threat wastes (primarily drums and glass bottles) from five disposal sites were excavated and transported for off-site disposal in accordance with the *Memphis Depot Dunn Field Disposal Sites Final Remedial Design, Revision 1* (CH2M HILL, 2004b). The *Dunn Field Disposal Sites Remedial Action Completion Report, Revision 1* (MACTEC, 2006), was approved by USEPA in August 2006.

The Disposal Sites RA was performed during separate mobilizations in 2005 and 2006. Approximately 2,700 CY of non-hazardous materials were transported off-site and disposed at the BFI South Shelby County Landfill. Approximately 234 CY of hazardous materials from Disposal Site 3 was disposed at the Clean Harbors Lambton Secure Landfill in Canada. The confirmation samples met the RGs at each site.

3.1.4 Source Areas Remedial Action

The Source Areas RA included conventional SVE in the coarse-grained fluvial soils; ET&D for two shallow areas containing waste materials (TA-1F) and buried drums with residual petroleum hydrocarbons (TA-3); in situ thermal desorption (ISTD) in the fine-grained loess; and ZVI injection in the FDAQ. The RA was performed in accordance with the *Memphis Depot Dunn Field Source Areas Final Remedial Design* (Dunn Field RD) (CH2M HILL, 2007).

The *Source Areas Interim Remedial Action Completion Report, Dunn Field, Revision 1* (HDR|e^{2}M, 2009) was approved by USEPA and TDEC in November 2009. The *Dunn Field Operating Properly and Successfully Demonstration, Source Areas Remedial Action* (e^{2}M, 2009c) was approved by USEPA in October 2009.

The Fluvial SVE system was installed to remove CVOCs from the fluvial sands at Dunn Field with screened intervals for the SVE wells at approximately 30 to 70 ft bgs. The system was operated from July 2007 through July 2012 under SCHD Permit #01030-01P; permit conditions included an emission limit of 5.71 pounds per hour (lb/hr) for VOCs and annual reporting of emissions. The system was shut down in July 2012 based on confirmation soil sample results demonstrating that RAOs had been met; approximately 4,000 pounds of VOCs were removed during the five years of operation. The final year of operations and monitoring was described in *Dunn Field Source Areas Fluvial Soil Vapor Extraction System Annual Operations Report, Year Five, Revision 0* (HDR, 2012a), which was approved by USEPA and TDEC.

The Fluvial SVE system has been left in place since shutdown in 2012. No further operation of the existing SVE system is planned. Most SVE wells and vapor monitoring points (VMPs) were abandoned in May 2024; SVE-F, SVE-F-W and VP-07A/B were left in place for remedial action in Dunn Field West if needed (Figure 11). Well abandonment activities will be described in the 2024 LTM report.

The initial excavations at TA-1F and TA-3 were performed October 2007 to January 2008. Further excavation was delayed in order to proceed with construction and operation of the ISTD system. The excavations were completed February to June 2009. Soil confirmation samples

met RGs in both areas. Approximately 7,400 CY of waste material were disposed at a non-hazardous waste landfill approved for receipt of CERCLA waste.

ISTD treatment was performed in four areas with a total area of about 1.25 acres and a treatment interval of approximately 5 to 30 ft bgs. The thermal conduction wells operated from May to November 2008, and the vapor extraction system from May to December 2008. Approximately 12,500 pounds of VOCs were removed during treatment. Confirmation soil samples demonstrated that clean-up standards were met.

ZVI injections were not required because groundwater objectives for the Source Areas remedy were achieved through the subsurface soil remedies.

3.1.5 Off Depot Groundwater Remedial Action

3.1.5.1 Early Implementation

An Early Implementation of Selected Remedy (EISR) using ZVI was performed to reduce contaminant mass downgradient of the planned PRB in order that the portion of the plume slated for MNA in the ROD was not unduly extensive or high in concentration. ZVI injections were made November 2004 to January 2005. The *EISR Interim Remedial Action Completion Report, Revision 1* (MACTEC, 2005) noted that the injections did not achieve the goal of 90 percent or greater reduction of TCE and TeCA and the report included recommendations for decreased spacing between injection locations to achieve increased reduction in CVOCs. The report was approved by USEPA in September 2005.

3.1.5.2 AS/SVE

The Off Depot Groundwater RA included installation of an AS/SVE system across the core of the plume near the downgradient end; long-term groundwater monitoring to document remedy performance and/or changes in the lateral or vertical extent of the CVOC plume; and LUCs to prevent access to contaminated groundwater. The AS/SVE system was constructed in accordance with the *Memphis Depot Dunn Field Off Depot Groundwater Final Remedial Design, Revision* 1 (Off Depot RD) (CH2M HILL, 2008). Remedial action construction and initial operations are described in *Off Depot Groundwater Interim Remedial Action Completion Report, Revision 1* (Off Depot IRACR) (HDR, 2011), which was approved by USEPA in August 2011.

The AS/SVE system has 95 AS points, 12 SVE wells, 10 pairs of VMPs and control buildings for the AS compressor, SVE blowers and system controls. The AS/SVE system layout and nearby monitoring wells are shown on Figure 12. The latest annual report, *Off Depot Air Sparge/Soil Vapor Extraction System Annual Operations Report, Year 12 (August 2022 through July 2023), Defense Depot Memphis Tennessee, Revision 1* (Trinity, 2024), was submitted 31 May 2024 with approval from TDEC and USEPA.

The Dunn Field ROD Amendment (e2M, 2009a) states the AS/SVE system is expected to reduce individual CVOC concentrations below 50 µg/L and will continue to operate until the influent (upgradient) concentrations from the Dunn Field plume do not exceed 50 µg/L for individual CVOCs. The Off Depot RD (CH2M HILL, 2008) states system shutdown should be considered when groundwater samples collected upgradient and downgradient of the AS barrier

show individual COC concentrations at or below 50 µg/L for 12 months, and that isolated upgradient outliers may be excluded from consideration if surrounding wells show statistically significant decreasing trends. MW-159, which is located immediately upgradient of the AS/SVE system, has been the only Off Depot well to exceed 50 µg/L for an individual CVOC (TCE) since 2012.

The TCE concentration at MW-159 decreased below 50 µg/L in December 2021; the concentration decreased from 48.7 µg/L in December 2021 to 23.9 µg/L in April 2023; the AS/SVE system was shut down in July 2023. CVOC concentrations at MW-159 and other wells have remained below 50 µg/L with no apparent rebound. A decision on removal of the AS/SVE system will be considered after the April 2025 LTM event.

3.1.6 Long-Term Monitoring

From 1999 to 2010, groundwater monitoring on Dunn Field was conducted to evaluate IRA effectiveness in restricting plume migration. Since 2010, groundwater monitoring has been conducted to evaluate progress in preventing further off-site plume migration and restoring FDAQ groundwater to drinking water quality for protection of the deeper MAQ, in accordance with the LTM Plan in Appendix C of the Off Depot RD (CH2M HILL, 2008). LTM sample analyses include most USEPA Target Compound List (TCL) VOCs; analytical summary tables include the primary CVOCs and other VOCs detected above the laboratory limit of quantitation (LOQ) in one or more samples. The primary CVOCs for Dunn Field are the groundwater contaminants detected most frequently during the RI: carbon tetrachloride (CT), chloroform (CF), 1,2-dichloroethane, 1,1-dichloroethene (DCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene, TeCA, tetrachloroethene (PCE), 1,1,2-trichloroethane (TCA), TCE, and vinyl chloride (VC).

LTM wells are assigned to the FDAQ, IAQ or MAQ. In addition, the Dunn Field (DF) LTM wells are grouped in the following area/plumes: Offsite, DF West, Off Depot and Background.

In 2024, Dunn Field LTM comprised 90 wells. The LTM wells are listed on Table 4 and the well locations, color-coded by area, are shown on Figure 13. The number of wells and sample frequencies by aquifer are:

- 85 FDAQ – semiannual (16), annual (17) and biennial (52);
- 4 IAQ/UC – biennial (4); and
- 1 MAQ – biennial (1).

The April 2024 LTM event consisted of a water level sweep and biennial groundwater sampling at all Dunn Field LTM wells. The analytical results for the primary CVOCs from the April 2024 event were reviewed to evaluate extent of contamination and prepare CVOC concentration maps. The analytical results discussed herein will be presented in the 2024 LTM report.

The number of Dunn Field LTM wells with primary CVOCs exceeding an MCL or TC in the April 2024 samples, and the maximum concentration for those CVOCs, are summarized by aquifer and area on Table 5. A total of 17 Dunn Field LTM wells had concentrations above an MCL or

TC for one or more primary CVOCs; all 17 wells are screened in the FDAQ and 11 of the wells are located along the northern boundary of Dunn Field or off-site near that area. TCE was most often detected above MCLs and had a maximum concentration of 78.1 µg/L (MW-322). Concentrations and isopleths for total CVOCs and TCE from the April 2024 LTM event are shown on Figures 14 and 15.

3.1.7 Additional Investigations

3.1.7.1 Offsite Plume Investigation

The offsite groundwater investigation (OSI) was conducted to evaluate the potential for offsite source(s) of groundwater contamination upgradient of Dunn Field. Nine OSI wells (MW-319 to MW-327) were installed and sampled in June 2020; the OSI wells and 10 existing wells installed by TDEC were then sampled quarterly for one year. Three of the OSI wells (MW-322 to MW-324) have been incorporated in LTM for Dunn Field; the other six wells were abandoned in May 2024 (Figure 16). Well abandonment activities will be described in the 2024 LTM report.

The OSI found that groundwater analytical results provide sufficient evidence of an unidentified contaminant source contributing to contaminant concentrations in groundwater on Dunn Field. DCE concentrations above the MCL are currently limited to wells north of Dunn Field. TCE concentrations above the MCL are present at least 300 ft northeast of Dunn Field, and TCE and PCE concentrations above the LOQ are present at least 500 ft northeast of Dunn Field. The *Offsite Groundwater Investigation Report, Revision 1* (HDR, 2022b) was submitted to USEPA and TDEC in October 2022.

3.1.7.2 Dunn Field West Investigation

CVOC concentrations in LTM wells south of the offsite plume and immediately west of the boundary were reduced below MCLs or TCs between April 2007 and April 2012 and have generally remained below those limits; MW-06 and MW-87 are the only wells to exceed the limits for extended periods since 2012. CVOC concentrations at MW-87 began to rebound in 2013; concentrations increased above the MCL for TCE in April 2016 and for CF in April 2017. In May 2020, CVOC concentrations at MW-06 increased above MCLs for TCA and TCE and above TCs for TeCA and CF. Supplemental investigation at Dunn Field West (DFW) was conducted to evaluate the source of increasing CVOC concentrations in groundwater in preparation for the planned transfer of the remaining government-owned property on Dunn Field.

Soil, soil vapor and groundwater samples were collected from May 2020 to August 2021 and analyzed for VOCs; these and previous analytical results were evaluated through a human health risk assessment. The investigation improved delineation of CVOC concentrations in groundwater for this area of Dunn Field and off-site to the west. The investigation also identified an area of residual soil contamination with CVOC and petroleum-related VOC concentrations above RGs and groundwater contamination with TeCA, TCA, CF and TCE above MCLs and/or TCs (Figure 17).

The *Dunn Field West Post-ROD Supplemental Investigation Report, Revision 1* (HDR, 2023b) was submitted to USEPA and TDEC in April 2023. The report noted the potential for unacceptable hazards from exposure to chemicals of potential concern in soil, groundwater and soil vapor for future onsite workers and current and future offsite residents. However, there are no complete pathways of exposure at this time; Dunn Field is not developed, and potable groundwater is provided by MLGW. Exposure pathways for current off-site residents are not believed to be complete; soil contamination is limited to Dunn Field, potable groundwater is provided by MLGW; only CF and TCE have been detected in wells located west of Dunn Field, slightly above the groundwater vapor intrusion (VI) screening level (VISL; target cancer risk of 1E-06, target hazard quotient of 0.1). The report referenced a 2009 VI study (HDR, 2011) in the Off Depot area that indicated the loess and upper fluvial deposits provide a good barrier to vertical migration of soil vapor from groundwater contaminants.

Vapor Intrusion Investigation

Additional study is underway to evaluate the potential for unacceptable risks to current off-site residents from COCs in soil vapor via the VI pathway. The *Dunn Field West Vapor Intrusion Sampling and Analysis Plan, Revision 1* (DFW VI SAP; HDR, 2024a) was completed in January 2024 with concurrence from TDEC and USEPA. The DFW VI SAP requires installation of shallow and deep VMPs at three locations and collection of pressure and photoionization detector measurements and vapor samples at four existing VMPs and the six new VMPs.

The VMPs were installed, and the initial set of measurements and vapor samples were collected in September 2024, in accordance with the DFW VI SAP. The VISL for residential or commercial exposure was exceeded for one or more CVOCs in all deep samples, which are collected from sample screens in the fluvial deposit sand; VISLs for residential exposure of CVOCs were not exceeded in any shallow samples, which are collected from sample screens in the loess at 5 ft bgs (Figure 18). A second set of measurements and vapor samples were collected in January 2025. The DFW VI Study Report will be prepared following review of validated analytical results and calculation of the VI risk and hazard for a current off-site resident; the report will be provided to TDEC and USEPA for review.

Soil Investigation

Additional investigation is also being conducted for the identified area of residual soil contamination to evaluate ET&D as a remedial action. The findings of the investigation will be included in an Explanation of Significant Differences (ESD) to support the remedial action. The *Dunn Field West Data Collection Work Plan* (DFW Work Plan; HDR, 2024e) was prepared to describe the investigation activities to be performed in accordance with the *Final MW-87 Area Investigation Work Plan* (HDR, 2020b) and the *Final MW-87 Area Investigation Work Plan Addendum* (HDR, 2021a). The activities are vegetation clearing, geophysical survey and soil sampling.

Vegetation within the survey area was removed to provide access for the geophysical investigation and soil sampling. The geophysical survey used electrical resistivity tomography and electromagnetic transects to locate buried objects (e.g., metal drums) within the survey

area, which extends from the western side of the former TA-3 Loess Excavation Area to the DFW chain link fence and from south of MW-6 to north of MW-87.

Ten soil borings were advanced up to 35 ft bgs to evaluate geophysical survey anomalies and confirm previous analytical results. A total of 50 soil samples were collected at varying depths based on field observations and submitted for laboratory analysis.

A data report describing field activities during the geophysical survey and soil sampling, evaluation of the geophysical data, data validation of laboratory analyses, analytical data tables, and conclusions and recommendations on limits of excavation to achieve RGs and contaminants of concern for confirmation sampling and off-site disposal was completed in February 2025; the report was provided to USEPA and TDEC for their information on 1 March 2025. Additional soil sampling will be performed in early April 2025 to improve delineation of areas to be excavated. A final data report will be prepared, and the findings will be incorporated in the ESD.

3.2 Main Installation (OU-2, 3 and 4)

The MI contains approximately 567 acres with open storage areas, warehouses, former military family housing, and outdoor recreational areas. All of the MI property has been transferred for reuse through public benefit and economic development conveyances (see Section 3.4).

Site investigations from 1989 to 2001 are described in the *Memphis Depot Main Installation Remedial Investigation Report* (MI RI; CH2M HILL, 2000). The MI RI identified contamination in surface soil and ground water. Surface soil contaminants requiring response consisted of metals, pentachlorophenol (PCP), PCBs, polyaromatic hydrocarbons (PAHs), and a pesticide, dieldrin. Groundwater contamination requiring response was limited to CVOCs primarily PCE, TCE, CT, and CF; CVOC concentrations detected in MI RI soil samples did not warrant remedial action.

3.2.1 Prior Removal Actions

The following actions were taken on the MI prior to the ROD. The locations are shown on Figure 3.

- Approximately 602 CY of surface and subsurface soil were removed from the PCP dip vat area (Building 737) because of elevated levels of PCP (O. H. Materials, 1986).
- Approximately 60,000 gallons of hazardous and petroleum/oil/lubricants materials from damaged drums were reclaimed and repackaged at Building 873 in 1985. Soil sampling was conducted east of Building 873. Surficial soil contamination indicated numerous spills of limited quantities in outside storage areas. Removal and disposal of contaminated soil was within the scope but was not described in the report (O. H. Materials, 1986).
- Approximately 5,000 tons (3,700 CY) of surface soil in the Housing Area were removed in 1998 because of the presence of dieldrin (OHM Remediation Services, 1999a). The

Housing Area is an exception to the overall industrial land use for MI and cleanup levels were based on residential reuse.

- Approximately 530 tons (400 CY) of surface soil surrounding the cafeteria (Building 274) were removed in 1998 because of elevated levels of PCBs (OHM Remediation Services, 1999b).
- Approximately 980 CY of surface and subsurface soil from BRAC Parcels 35 and 28 near Buildings 1084, 1085, 1087, 1088, 1089 and 1090 were removed in 2000 because of elevated levels of metals and PAHs (Jacobs-Sverdrup, 2000).

3.2.2 Record of Decision

The *Memphis Depot Main Installation Record of Decision* (MI ROD; CH2M HILL, 2001) received final approval in September 2001. The MI ROD specified the RAOs that the selected remedy was expected to meet in order to protect human health and the environment. The RAOs were developed to allow the lease and later transfer of the MI for its intended land uses (industrial and recreational). The RAOs are:

Surface Soil

- Prevent direct contact/ingestion of surface soils contaminated with lead in excess of industrial worker risk-based criteria.
- Prevent direct contact/ingestion of surface soils contaminated with dieldrin and arsenic in excess of human health risk assessment criteria for residents.
- Prevent direct contact/ingestion of surface soils contaminated with lead in excess of risk-based criteria for protection of residential children.

Groundwater

- Prevent human ingestion of water contaminated with VOCs in excess of MCLs from potential future on-site wells.
- Reduce concentrations of COCs to MCLs or lower.
- Prevent horizontal and vertical off-site migration of groundwater contaminants in excess of MCLs.

The selected remedy presented in the MI ROD contained the following components:

- ET&D of lead contaminated surface soil near the southeast corner of Building 949 in FU4. [Note: ET&D of approximately 300 CY of soil (see Figure 3) was completed (Jacobs Federal Programs, 2002) prior to final execution of the ROD and noted as a significant change in the ROD.]
- Deed restrictions and LUCs to prevent residential land use on the MI, except at the existing housing area; to implement daycare restrictions; to prevent production/consumptive use of groundwater in the FDAQ and drilling into deeper

aquifers on the MI; and to eliminate casual access through maintenance of a boundary fence around the golf course.

- Enhanced bioremediation treatment (EBT) of CVOCs in the most contaminated part of the groundwater plume.
- Long-term groundwater monitoring to document changes in plume concentrations and to detect potential plume migration to off-site areas or into deeper aquifers.
- Five-Year Reviews (FYRs) of the selected remedy.

The RAOs for surface soil have been met through removal actions and LUCs. The RAOs for groundwater have been partially met through groundwater treatment and LUCs. Ingestion of water contaminated with VOCs above MCLs has been prevented because there are no current production wells on-site or within 0.5 miles of the MI, and LUCs prevent installation of production wells within that area. COCs have not been reduced to MCLs or lower although concentrations have been reduced by remedial actions. Off-site migration of groundwater contaminants in excess of MCLs does not occur in the FDAQ because groundwater flow is on to the MI from all sides. However, this flow results in vertical contaminant migration from the FDAQ to the IAQ and from the IAQ to the MAQ; concentrations in some wells within the MAQ are slightly above MCLs. Additional information on remedial actions, supplemental investigation, groundwater monitoring and LUCs for the MI is presented in following sections of this SMP.

3.2.3 Enhanced Bioremediation Treatment

The selected remedy included EBT in the most contaminated areas with the assumption that "untreated parts of the groundwater plume would degrade under natural attenuation". The *Memphis Depot Main Installation Final Remedial Design, Revision 1* (MI RD) (CH2M HILL, 2004c) was approved by USEPA in August 2004. Groundwater concentrations equal to or greater than 100 µg/L for PCE and TCE were used to delineate the EBT treatment areas. Sodium lactate was chosen for injection in two target treatment areas (TTA-1 and TTA-2). The MI RD also included an LTM plan and a Land Use Control Implementation Plan (LUCIP).

The initial remedy implementation (EBT-1) included sodium lactate injections into the FDAQ within the two treatment areas from September 2006 through February 2009 and performance monitoring from October 2006 through March 2009. CVOC concentrations for parent compounds (PCE, TCE, CT and CF) were reduced over 90 percent in injection wells (IWs) and over 80 percent in monitoring wells at locations with baseline concentrations above 100 µg/L.

The *Main Installation Source Areas Investigation* (e^2M, 2009b) was performed in 2008 to identify potential source areas for CVOCs in groundwater on the MI. The magnitude and extent of CVOCs in soil were characterized by a membrane interface probe (MIP) survey and confirmation soil samples. The MIP survey identified several areas of possible soil contamination, but the CVOC concentrations did not warrant remedial action.

The *Interim Remedial Action Completion Report, Main Installation, Revision 1* (MI IRACR) (HDR|e^2M, 2010), including an OPS determination, was approved by USEPA in March 2010. Although EBT did not achieve the goal of reducing concentrations below MCLs, the additional

field investigation, groundwater modeling and trend analysis indicated that additional remedial action was not necessary.

Following rebound in CVOC concentrations in 2010 LTM samples, EBT-2 was conducted in areas where individual CVOC concentrations of parent compounds PCE, TCE and CT in groundwater exceeded 100 µg/L. Quarterly injections were made from November 2012 to August 2014 and performance monitoring was conducted from February 2013 to November 2014. The final report for EBT-2, *Main Installation Year Four Enhanced Bioremediation Treatment Report* (HDR, 2015), was approved by USEPA and TDEC in May 2015. While EBT-2 reduced CVOC concentrations, it was not sufficient to meet the groundwater RAOs for the MI. Supplemental remedial investigation (SRI) was conducted and a feasibility study prepared to identify alternative remedial technologies for the MI (see Section 3.2.5).

Since IWs have not been used for injections since 2014 and are not planned for future use, the wells are being abandoned in phases. A total of 51 IWs, with 4-inch inner diameter casing, were installed for EBT; 21 IWs were abandoned prior to EBT-2. The 30 remaining IWs are located in the southwest MI on Barnhart Crane property (15 in TTA-1S and 8 in TTA-1N) and in the southeast MI on Memphis Depot Industrial Park property (7 in TTA-2) (Figure 19). IWs located on Barnhart Crane property were selected for abandonment because the wells are more likely to be damaged by the heavy equipment used in that area. Fourteen IWs were abandoned in November 2024. Well abandonment activities will be described in the 2024 LTM report.

3.2.4 Long-Term Monitoring

MI LTM is performed to document changes in plume concentrations, to detect potential plume migration to off-site areas or into deeper aquifers, and to track progress toward meeting RAOs in accordance with the LTM Plan in Appendix B of the MI RD (CH2M HILL, 2004c). LTM sample analyses include most USEPA TCL VOCs; analytical summary tables include the primary CVOCs and other VOCs detected above the laboratory limit of quantitation (LOQ) in one or more samples. The primary CVOCs for the MI are the groundwater contaminants detected most frequently: CT, CF, PCE, TCE, cDCE and VC.

As noted in Section 3.1.6, LTM wells are assigned to the Fluvial, Intermediate or Memphis Aquifers. The uppermost clay layer in the upper Claiborne, which usually forms the base of the FDAQ, is absent in the central section of the MI, and the Fluvial sand and the upper Claiborne sand form a single water table aquifer. Several deeper wells in this area are designated Upper Claiborne and are grouped with the IAQ wells. In addition, the MI LTM wells are grouped in the following area/plumes: TTA-1 North, TTA-1 South, TTA-2, West-Central, Building 835, North-Central, South-Central, Southeast, Window and Background. The Background wells were selected based on criteria in the MI LTM Plan (wells upgradient of or at a distance from groundwater plumes and with no, or low, previous detections of site contaminants).

MW-100B in TTA-1 North was observed to be damaged and irreparable in October 2023. The well was abandoned, and a replacement well (MW-331) installed in May 2024. Well abandonment and installation activities will be described in the 2024 LTM report.

MI LTM comprises 188 wells. The wells are listed on Table 6 and the locations, color-coded by area, are shown on Figure 20. The number of wells and sample frequencies by aquifer in 2024 are:

- 146 FDAQ – semiannual (54), annual (44) and biennial (48).
- 37 IAQ/UC – semiannual (11), annual (11) and biennial (15).
- 5 MAQ – semiannual (1), annual (2) and biennial (2).

The April 2024 LTM event consisted of a water level sweep of all MI LTM wells and semiannual groundwater sampling at 62 wells. The most recent analytical results for the primary CVOCs from the sample events in October 2022, October 2023 and April 2024 were reviewed to evaluate extent of contamination and prepare CVOC concentration maps. The analytical results discussed herein will be presented in the 2024 LTM report.

The number of MI LTM wells with primary CVOCs exceeding an MCL and the maximum concentration for CVOCs exceeding MCLs in the most recent samples as of April 2024 are summarized by aquifer and area on Table 7. A total of 96 MI LTM wells had concentrations above the MCL for one or more primary CVOCs. PCE and TCE were the CVOCs most often detected above MCLs and had maximum concentrations of 302 µg/L (MW-278) and 145 µg/L (MW-330), respectively. Concentrations of the initial groundwater contaminants (PCE, TCE and CT) were greater than 50 µg/L in ten wells; these wells are screened in the FDAQ and three are located off-site, west of the MI. Concentrations and isopleths for PCE and TCE from the April 2024 semiannual LTM event are shown on Figures 21 and 22. PCE and TCE concentrations are shown at wells on a cross-section through the window on Figure 23.

3.2.5 Supplemental Remedial Investigation and Focused Feasibility Study

The *2020 Supplemental Remedial Investigation Report, Revision 1* (HDR, 2021b), which describes activities and analytical results for Phase 1 through 4, was submitted with agency comments and responses and TDEC approval in July 2021. USEPA provided a conditional approval letter in August 2021 stating neither approval nor agreement on SRI completion.

A Focused Feasibility Study (FFS) was conducted to identify and screen remedial action alternatives. The FFS identified AS/SVE to actively remediate COCs in groundwater and SVE as a presumptive remedy to actively remediate COCs in subsurface soil vapor source areas, in combination with LUCs requiring notification of the property owner of the potential for VI. AS/SVE has been successfully implemented in the Off Depot Area west of Dunn Field (Section 3.1.5.2) SVE has been successfully implemented at DDMT with removal of approximately 4,000 lbs of VOCs on Dunn Field (Section 3.1.4) and approximately 200 lbs of CVOCs during the MI pilot test at TTA-2. In both areas, SVE was effective in reducing VOC concentrations in soil vapor and groundwater.

The *Final Main Installation Focused Feasibility Study Report* (HDR, 2024d) was submitted in July 2024 following approval by USEPA and TDEC. Following a USEPA management review of

the FFS, new comments on the FFS were submitted 14 November 2024. An updated Draft Final FFS report is to be submitted 1 April 2025.

Army submitted the *Draft Revised Proposed Plan* (HDR, 2024c) to EPA and TDEC for comment; EPA comments were provided in September 2024. Responses to EPA comments will be provided following submittal of the final FFS. Once the Revised Proposed Plan has been finalized a public meeting will be held by Army. After the public meeting and comment period, a ROD Amendment will be submitted for agency review. Further RA will be implemented after completion of the ROD Amendment and the remedial design.

3.2.6 Risk Assessment

The Baseline Risk Assessment (BRA) conducted during the MI RI (CH2M HILL, 2000) included a human health risk assessment (HHRA) and screening level ecological risk assessment (SLERA). An updated HHRA for potential groundwater exposures and reviews of the HHRA for potential soil exposures and the SLERA for the MI were prepared in 2018. The *Human Health and Ecological Risk Assessment, Revision 1* (HDR, 2020a) (HHERA) was submitted in February 2020 following conditional approval by USEPA.

The updated Groundwater HHRA confirmed the BRA finding that there is potential for receptors to experience adverse health effects from exposure to contaminated on-site groundwater, and that exposures are currently being prevented by the existing land use restrictions at the MI.

The Soil HHRA review found that most organic and inorganic constituents detected at DDMT are present at levels that do not exceed current Industrial USEPA Regional Screening Levels (RSLs). However, additional risk assessment was recommended in a few areas to assure protectiveness of the remedy: additional soil sampling for lead and chromium speciation analysis; and review of the current status of dioxin and PCP-related land use restrictions.

The SLERA review found that concentrations of certain COCs in environmental media exceed their respective ecological screening levels. The MI is approximately 90% developed with warehouses, paved roads and parking areas, and gravel-covered storage/laydown areas; the landscaped areas are maintained; and the undeveloped areas are regularly mowed. Based on the absence of suitable habitat for ecological receptors, there are no complete ecological pathways of exposure on the MI. However, the detection of dioxin/furans in on-site soils, as well as in surface water and sediment, was determined to warrant additional study due to potential for human health impacts.

The *Human Health Environmental Risk Assessment Review Sampling and Analysis Plan, Revision 1* (HHERA Review SAP; HDR, 2022a) was completed in May 2022 following approval by TDEC and conditional approval by EPA. The HHERA Review SAP documented the available information from previous sampling of environmental media at DDMT and described plans for additional sampling and analysis, and the applicable guidance for additional risk assessment.

Soil sampling for chromium speciation and dioxins/furans, and sediment and surface water sampling for dioxins/furans was conducted in July and August 2022. The *Sampling and Risk Screening Report, Revision 1 Final* (SRS Report; HDR, 2024b) was submitted in May 2024 with

approval from TDEC; USEPA approval was received in June 2024. The report concluded that no further action was necessary, except for additional sampling for dioxins and furans in the Former PCP Pallet Drying Area (Site 46, Table 2).

Soil samples for analysis of dioxins and furans were collected in 2022 at depths of 0 to 5 ft bgs from twelve borings per the HHERA Review SAP. Four soil samples collected at depths of 0 to 0.5 ft bgs in the Former PCP Pallet Drying Area exceeded the non-carcinogenic EPA Industrial RSL of 720 picogram per gram (pg/g) for 2,3,7,8-tetrachlorodibenzo-p-dioxin toxicity equivalent (TCDD TEQ). Soil samples were collected at 0 to 1 ft bgs from sixteen soil borings (four borings around each of the 2022 sample locations) in September 2024; five soil samples from four borings exceeded the TCDD TEQ RSL. Additional soil samples were collected in January 2025 to delineate the area with surface soil exceeding the RSL. The SRS Update will be prepared following receipt of the analytical results, data validation and risk screening and will include recommendations for additional action, as necessary; the report will be provided to USEPA and TDEC for review.

3.2.7 Vapor Intrusion

Potential VI issues at the MI are being evaluated through a study performed in accordance with guidance from DoD (TSERAW, 2009), USEPA (USEPA, 2015), and TDEC (TDEC, 2016). The *Vapor Intrusion Sampling and Analysis Plan, Revision 1* (VI SAP; HDR, 2023a) was submitted in May 2023, following approval by TDEC and concurrence by USEPA. Activities included gathering information on buildings within VI inclusion zones through building plan reviews, interviews and visual inspections; and a phased approach for vapor sampling; risk assessment and reporting.

The initial phase of investigation was passive soil vapor screening to identify areas on the MI with VOCs in shallow soil vapor above USEPA VISLs and to evaluate potential preferential pathways along sewer lines and other underground utility corridors. The second phase was the installation of VMPs and sampling to confirm areas of VOC concentrations based on screening sample concentrations greater than VISLs and historic groundwater sample concentrations. VMPs screens were installed in the loess (5 ft bgs); above the base of upper fluvial deposits (25 ft bgs); below the top of the lower fluvial deposits (30 ft bgs); and in the lower fluvial deposits approximately 10 ft above the water table (70 ft bgs). The third phase was collection of sub-slab vapor and indoor air samples at buildings selected based on soil vapor analytical results and building construction/use.

Review of building plans and inspections was performed in May and June 2023. During this same period, passive vapor (PV) samples from shallow soil (2 to 3 ft bgs) were collected at 20 locations on a site-wide grid and 78 locations on smaller grid spacings in the areas with the highest CVOC concentrations in groundwater (TTA-1 and TTA-2). CVOCs greater than commercial VISLs were generally limited to TTA-1 and TTA-2, with most exceedances for PCE or TCE. All PV sample locations and concentrations for PCE and TCE with contour shading are shown on Figure 24 and 25, respectively.

Installation and sampling of the Phase 2 VMPs and sub-slab sample ports was conducted in October and November 2023. Soil vapor sample results confirmed the greatest concentrations

of CVOCs are present in TTA-1 (Figure 26) and TTA-2 (Figure 27). Buildings 260, 265 and 972 were found to have the greatest potential for a complete VI pathway based on concentrations of CVOCs detected in soil vapor samples, building conditions and occupancy.

Indoor air and sub-slab soil vapor samples were collected from the three buildings in March and April 2024. The sub-slab sample results were consistent with results of the initial sub-slab samples collected in 2023. The only primary CVOCs detected above commercial VISLs in one or more sub-slab samples were PCE, TCE and CT; maximum concentrations were 110,000 micrograms per cubic meter (µg/m^3) for PCE, 12,000 µg/m^3 for TCE and 31 µg/m^3 for CT.

Indoor air samples did not have CVOC concentrations above USEPA RSLs for industrial exposure. Other VOCs were detected above industrial RSLs in one or more indoor air samples: acrolein, benzene, ethyl acetate, naphthalene and 1,2-dibromo 3-chloropropane. These other VOCs appear to be related to activities within the buildings or to background conditions based on detections in outdoor air samples.

A second round of samples was collected in November 2024 including soil vapor in all VMPs and sub-slab sample ports and indoor air at the initial sample locations. The MI VI Study Report is in preparation.

3.3 Additional Site-wide Investigation

USEPA has identified per- and polyfluoroalkyl substances (PFAS) as emerging constituents of concern (USEPA, 2022). A Preliminary Assessment (PA) for PFAS-containing materials has been conducted in accordance with Army guidance (U.S. Army, 2018) to identify areas of potential interest (AOPIs) based on use, storage, or disposal of potential PFAS-containing materials, including aqueous film-forming foam (AFFF). The PA for DDMT was performed to assess potential PFAS release areas and exposure pathways; the PA report (Leidos, 2023a) was completed in August 2023.

The entire DDMT installation was assessed, and 28 preliminary areas were identified and evaluated for potential use, storage and/or disposal of PFAS-containing materials. These areas were further refined during the PA and either identified as an area not retained for further investigation or as an AOPI. Six of the preliminary areas were identified as AOPIs:

- Five AFFF storage and/or release areas (Buildings 529, 560, 865, and 873, and Building 308/DRMO concrete hardstand [Figure 3]).
- One crash site with potential AFFF use (Building 550) and the associated remnant burial site (Dunn Field Site 18 [Figure 5]).

A Site Investigation (SI) was conducted in accordance with USEPA guidance and DoD policy and guidance for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorobutane sulfonate (PFBS), perfluorononanoic acid (PFNA), perfluorohexane sulfonate (PFHxS), and hexafluoropropylene oxide dimer acid (HFPO-DA). The samples collected during this SI were compared to risk screening levels (SLs) established as residential SLs calculated using the USEPA RSL calculator for soil and the tap water criteria for groundwater (DoD, 2022).

SI field activities at DDMT were conducted in March 2023. Samples were collected for surface and subsurface soil from soil borings, groundwater from existing monitoring wells, and sediment and surface water where these media were present at the AOPIs. Groundwater and soil (surface and subsurface) samples were collected in all six AOPIs; surface water samples were collected in three AOPIs (Building 560, Building 308 and Site 18) and sediment samples were only collected at one AOPI (Building 560).

Groundwater samples exceeded SLs at each AOPI, and surface water samples exceeded SLs at one AOPI (Building 560). Soil and sediment samples did not exceed SLs. All six AOPIs were recommended for further study. The SI Report was completed in November 2023 (Leidos, 2023b).

The PFAS PA and SI reports for DDMT were provided to USEPA and TDEC, and agency comments were reviewed and used for scoping the PFAS RI for DDMT. A task order for the PFAS RI at DDMT has been awarded, and a kick-off meeting to discuss contractual and administrative issues was held in January 2025. Army will notify EPA and TDEC when specific dates are established and will incorporate them into annual SMP updates. In the interim, PFAS RI submittals will be tracked similarly to other documents identified in this SMP.

3.4 Property Transfer and Land Use Controls

All DDMT property has been made available for transfer through six Findings of Suitability to Transfer (FOSTs). The FOSTs summarize how applicable requirements and notifications for hazardous substances on the property were satisfied in order for DoD to provide the applicable CERCLA 120(h)(3) or CERCLA 120(h)(4) covenants. Each FOST states the property is environmentally suitable for transfer and contains a description of any long-term remedies (including land-use controls) and responsibilities for their maintenance and reporting. For NPL sites, such as DDMT, the FOST is forwarded to the State and to USEPA for review and comment, but approval is not required. A notice of the intent to sign a FOST is published and the FOST, the environmental baseline study and other supporting documentation are made available for a 30-day comment period (DoD, 2006).

The area covered by each FOST is shown on Figure 28. Following approval of FOST 6, USEPA issued the *Superfund Property Reuse Evaluation Checklist for Reporting the Site Wide Ready for Anticipated Use Measure* (USEPA, 2010b) documenting that all cleanup goals affecting current and reasonably anticipated future land uses have been achieved, and all institutional or other controls required in the RODs have been put in place. This was based on USEPA concurrence with interim remedial action completion reports for DDMT and findings that remedies were ‘operating properly and successfully’, and on implementation of requirements of the approved LUCIP.

Property transfers through deed or letter of assignment have been completed for all FOSTs, except for 26 acres in the western and northern area on Dunn Field, shown as DF West on Figure 28. The acreage, type of conveyance, type of transfer, receiving party and date of transfer are listed on Table 8. DF West was approved for transfer through FOST #5 in June 2010. However, the property has not been transferred as of March 2025.

The Army plans to transfer DF West through a competitive public sale. Additional remedial action is planned prior to transfer (Section 3.1.7.2). In accordance with the FFA, an amendment to FOST #5 will be prepared to describe the provisions made for the continued operation and maintenance of any response and/or corrective action(s) installed or implemented on the property for concurrence by USEPA and TDEC. The Amendment will also document material changes that have occurred since FOST 5 was completed. Deeds transferring real property from DoD will contain, to the extent required by law, the notices, descriptions, and covenants specified in Section 120(h) of CERCLA and be submitted to USEPA for concurrence.

An Environmental Condition of Property (ECP) Update for DF West will be prepared to identify any environmental conditions that may have changed materially since completion of the 2014 ECP Update and to identify any recognized environmental conditions (REC) on Dunn Field prior to disposal.

DDMT is currently zoned for light industrial use. The MI is used for commercial warehousing and light manufacturing, except in the southeast quadrant of the MI where the Airways police station, a homeless shelter for veterans and a golf course are located; Dunn Field is undeveloped (Figure 2). The current property owners, acreage and land use are listed on Table 9.

LUCs have been established for the MI and Dunn Field and will remain in place until concentrations of COCs have been reduced to levels that allow for unlimited use and unrestricted exposure. Annual inspections are conducted to determine whether the required LUCs remain effective and that land use restrictions are being achieved.

The *Draft 2024 Annual Site Inspection Report, Revision 0* for land use controls was submitted to USEPA and TDEC for review in August 2024. TDEC approved the report in December 2024. USEPA provided comments in September 2024, and Army submitted responses to the comments in December 2024. USEPA submitted its review of the responses and requested clarification or additional information for several responses on 17 January 2025. Army provided responses to the comments and supporting information to USEPA on 20 February 2025, and USEPA approved the responses on 13 March 2025. The final report was submitted 26 March 2025. The LUCs and the findings of the 2024 site inspection are presented in the following sub-sections.

3.4.1 Main Installation

LUCs for the MI are described in the LUCIP in Appendix C of the MI RD (CH2M HILL, 2004c). The LUCs prevent residential use for most of the MI and production or consumptive use of groundwater or drilling of groundwater supply wells throughout the MI; the areas covered by the LUCs are shown on Figure 29.

The MI LUCIP was implemented in 2005. The Notice of Land Use Restrictions for the MI was recorded at the City of Memphis/Shelby County Register of Deeds in January 2005. Deed restrictions have been included in property transfers from Army. Annual inspections have been performed since 2005 and reports have been distributed in accordance with the LUCIP. The 2024 site inspection did not identify any deficiencies.

3.4.2 Dunn Field

LUCs for Dunn Field are described in the LUCIP in Appendix A of the Off Depot RD (CH2M HILL, 2008). The LUCs are to limit use of the Disposal Area to light industrial land uses, to prevent residential use of Dunn Field, and to prevent exposure to contaminated groundwater. The majority of the eastern section of Dunn Field was approved for unrestricted use in the Dunn Field ROD (CH2M HILL, 2004a). The areas covered by the LUCs are shown on Figure 30.

The Dunn Field LUCIP was implemented in 2009. The Notice of Land Use Restrictions for Dunn Field was recorded at the City of Memphis/Shelby County Register of Deeds in June 2009. Annual inspections have been performed since 2009 and reports have been distributed in accordance with the LUCIP. The 2024 site inspection report did not identify any deficiencies.

4 Activities Required for Site Completion

Selected remedies for DDMT have been implemented in accordance with the MI ROD and the Dunn Field ROD Amendment, and the IRACRs have been approved by USEPA and TDEC. The Preliminary Closeout Report (USEPA, 2010a) has been issued, and the NPL site status is Construction Complete.

The selected remedies met soil cleanup standards. Requirements for completion of remedial action are that groundwater concentrations for CVOCs, which are the contaminants of concern, are below MCLs and the need for additional remediation based on the ongoing investigations for the MI Dip Vat area, MI VI, DFW VI, DFW soil contamination and PFAS on the MI and Dunn Field is determined and implemented as needed.

Ongoing and planned activities are summarized below. The timeline for site activities is discussed in Section 4.3.

- The Final MI FFS Report (HDR, 2024d) was submitted in July 2024 following approval by USEPA and TDEC (Section 3.2.5). Additional comments for the FFS were provided in November 2024 following a USEPA management review. Following additional correspondence between Army and USEPA, an updated Draft Final FFS is in preparation for submittal on 1 April 2025. Work on the Revised Proposed Plan and ROD Amendment will resume following acceptance of the FFS.
- The Final SRS Report (HDR, 2024b) was submitted in May 2024 and approved by USEPA in June 2024. The report documented the presence of dioxins and furans above the USEPA Industrial RSL in the former dip vat area. Additional soil samples were collected in September 2024 and January 2025 (Section 3.2.6). The SRS Update will be prepared following receipt of the analytical results, data validation and risk screening and will include recommendations for additional action, as necessary; the report will be provided to USEPA and TDEC for review.
- The MI VI SAP Revision 1 (HDR, 2023a) for evaluation of VI impacts on the MI was submitted in May 2023 (Section 3.2.7). Building inspections and passive vapor sampling, installation of VMPs and active vapor sampling and sub-slab and indoor air sampling were conducted from May 2023 to April 2024. The passive and active vapor sampling showed that contaminant concentrations above VISLs were generally limited to the area surrounding a few buildings in the southwest and southeast MI. Indoor air samples in these areas did not have CVOC concentrations above RSLs for industrial exposure. The final round of soil vapor and indoor air samples was conducted in November 2024; the MI VI Study Report is in preparation.
- The AS/SVE system has met the criteria for shutdown in accordance with the Dunn Field ROD Amendment (e^2M, 2009a) and the Off Depot RD (CH2M HILL, 2008). The system was shut-down on 31 July 2023 (Section 3.1.5.2). Groundwater concentrations in the Off Depot area have remained below the active remediation criteria with no apparent rebound through April 2024. A decision on removal of the AS/SVE system will be considered after review of the April 2025 LTM results.

- The DFW investigation in 2021 and 2022 improved delineation of groundwater contamination for the west-central area of Dunn Field and off-site to the west and identified an on-site area of residual soil contamination with CVOCs and petroleum-related VOC concentrations above screening levels. The DFW Post-ROD SI Report noted the potential for unacceptable hazards from exposure to chemicals of potential concern in soil, groundwater and soil vapor for future onsite workers and current and future offsite residents. A VI study to evaluate potential risk to current off-site residents and a soil investigation to determine limits of soil contamination for remedial action are in progress.
    - Soil vapor sampling of six new VMPs and four existing VMPs was conducted in September 2024 (Section 3.1.7.2). A second round of vapor samples was conducted 15 to 16 January 2025. The DFW VI Study Report will be prepared following review of validated analytical results and calculation of the VI risk and hazard for a current off-site resident; the report will be provided to TDEC and USEPA for review.
    - Ten soil borings were located based on a geophysical survey and previous analytical results; fifty soil samples were collected at multiple depths from the borings and submitted for laboratory analysis in October 2024 (Section 3.1.7.2). A data report describing the geophysical survey and soil analyses was provided to EPA and TDEC in March 2025. Additional soil sampling and analysis will be collected in April 2025. The ESD will be prepared following validation of the analytical results and review of the excavation areas.
- A PA/SI for PFAS contaminants at DDMT was conducted in 2023 (Section 3.3). Further study was recommended, and a task order for a PFAS RI at DDMT has been awarded. A kick-off meeting to discuss contractual and administrative issues was held on 16 January 2025. Army will discuss the scope of the RI with USEPA and TDEC and will notify the agencies when specific dates for RI activities are established.
- An Environmental Condition of Property Update and a FOST 5 Amendment (Section 3.4) will be prepared for the planned transfer of Dunn Field West. These documents will be completed following acceptance of an Operating Properly and Successfully determination after the DFW RA has begun.
- LTM at Dunn Field (Section 3.1.6) and the MI (Section 3.2.4) will continue until CVOC concentrations are at or below MCLs.

4.1 Land Use Controls

The LUCs applicable to the MI and Dunn Field are described in the LUCIPs in the MI RD (CH2M HILL, 2004c) and the Off Depot RD (CH2M HILL, 2008). The areas covered by the LUCs are shown on Figures 29 and 30. LUCs remain in place until concentrations of contaminants of concern are reduced to levels that allow for unrestricted use and unlimited exposure (UU/UE). The cleanup levels in the MI and Dunn Field RODs will not reduce contaminants sufficiently for UU/UE; therefore, the LUCs will remain in place for an indefinite period.

As described in Section 3.4, annual inspections are conducted to determine whether the required LUCs remain effective and that land use restrictions are being achieved. No deficiencies were identified in 2024.

4.2 Five-Year Reviews

The continued effectiveness of the selected remedies at the MI and Dunn Field are evaluated in CERCLA FYRs because hazardous substances remain at the site above levels that allow for unrestricted use and unlimited exposure. Because the final remedies for both the MI and Dunn Field include LUCs in perpetuity, the period over which FYRs will be required is indefinite. During each future FYR, the Army will assess the feasibility of achieving UU/UE, document progress, and consider adjustments to expedite achieving remedial goals, which may be an indefinite period.

The initial statutory review, *Memphis Depot, Dunn Field Five Year Review* (CH2M HILL, 2003a), was triggered by initiation of the IRA groundwater recovery system at Dunn Field on DDMT in 1998. The *Second Five-Year Review, Revision 1* (e^2M, 2007) was approved in January 2008, and the *Third Five-Year Review, Revision 1* (HDR, 2012b) was approved in January 2013. The *Fourth Five-Year Review, Revision 2* (HDR, 2018) was approved and signed by USEPA in April 2018.

The Fifth FYR was conducted from March to June 2022 in accordance with *Comprehensive Five-Year Review* Guidance (USEPA, 2001). The findings for the MI were generally the same as in the Fourth FYR; issues and recommendations regarding the selected remedy and the VI study were identified. The status of the SRI and the FFS were discussed in Section 3.2.5 and the VI study in Section 3.2.7. The Fifth FYR identified a new issue resulting from the DFW Post-ROD SI (Section 3.1.7.2), which identified residual soil contamination and potential VI hazard to future onsite workers and offsite residents. This issue is considered by Army to affect future protectiveness but not current protectiveness. A second new issue, which is not considered to affect protectiveness, is the potential presence of PFAS discussed in Section 3.3. The issues, recommended actions and target completion dates are shown on Table 10.

The *Fifth Five-Year Review, Revision 1* (HDR, 2023c) was added to the DDMT AR in June 2023. The USEPA letter dated January 2023 with revised Issues/Recommendations and a Protectiveness Deferred determination for OU-1 is appended to the FYR. The VI study to evaluate the potential VI hazard to future onsite workers and offsite residents is in progress (Section 3.1.7.2). Army and USEPA will submit an FYR Addendum with the final determination of protectiveness for OU-1 upon completion of the DFW VI study. Army is providing semiannual status letters for the DDMT FYR Addendum activities to USEPA and TDEC.

4.3 Timeline for Site Completion

The master schedule, shown on Figure 31, lists activities and documents for the MI, Dunn Field and site-wide through planned site completion in January 2047. The schedule notes the status of each document as ’P’ for primary and ‘S’ for secondary, as defined and identified in the FFA, Section XV (USEPA, 1995). Primary Documents include those reports, plans and studies that are major, discrete portions of the response action process, and the specified dates are

deadlines. Secondary documents include those reports, plans and studies that are discrete portions of the Primary documents, and the specified dates are targets.

The master schedule incorporates timelines stated in the FFA for review and revision of each document: USEPA and TDEC have 60 days following submittal of a Draft document for agency review and submittal of comments. Army then has 60 days to submit responses to agency comments and another 60 days to submit the Draft Final document. The FFA assumes only one cycle of review and revision for each document, and that is provided in the master schedule. If agency comments are received for the Draft Final document, Army will have the same period (120 days total) for submittal of responses and a revised Draft Final document; this will extend the schedule for that document and any dependent activities or documents.

The estimated timeline of activities and documents required for site completion are listed below. Document dates are for submittal of draft final documents to USEPA and TDEC.

- Dunn Field Update
  - Dunn Field West VI Investigation Report to be submitted in December 2025.
  - Dunn Field West ESD to be submitted in February 2026.
  - Dunn Field West RD to be submitted in December 2026.
  - Dunn Field West Remedial Action Work Plan (RAWP) to be submitted in September 2027.
  - Dunn Field West ET&D and SVE O&M to be completed in May 2032.
  - Dunn Field West property transfer to be completed in August 2032.
  - Dunn Field LTM and LUC Monitoring through May 2037 with final quarterly groundwater compliance monitoring in May 2038.
  - Dunn Field Remedial Action Completion Report to be submitted in March 2039.
- Main Installation Update
  - FFS to be submitted in April 2025.
  - MI VI study to be submitted in December 2025.
  - MI SRS Update to be submitted in February 2026.
  - ROD Amendment to be completed in September 2026.
  - New MI RD to be submitted in January 2028.
  - New MI RAWP to be submitted in November 2028.
  - Additional MI RA O&M from June 2029 through April 2035.
  - MI LTM and LUC monitoring through June 2044 with LTM quarterly groundwater compliance monitoring to be completed in June 2045.
  - MI Remedial Action Completion Report to be submitted in February 2046.
- Final Closeout Report to be completed in January 2047.

The timeline described above is considered a reasonable estimate given current information. Significant variables include the time required for additional RA to achieve RAOs on the MI and Dunn Field West, the extent of further action near the PCP Dip Vat to reduce risks from dioxins-furans in surface soils to acceptable levels, whether additional RA is necessary for VI on the MI and whether remedial action is necessary for PFAS.

The schedule assumes additional remedial action for Off Depot Groundwater will not be required following completion of two years of monitoring LTM results for rebound in April 2025.

5 Schedule and Fiscal Year Requirements

5.1 Response Schedules

The environmental restoration activities currently planned for the next three fiscal years are summarized below. Table 11 lists primary and secondary documents for the DDMT environmental restoration program through FY27 as identified on the master schedule (Figure 31).

5.1.1 FY25

- Dunn Field West (DFW) VI Study
  - Complete sampling and submit Draft DFW VI Study Report.
- Off Depot/ Dunn Field West RA
  - Complete evaluation of LTM results in Off Depot wells for rebound of CVOCs in groundwater after shutdown of the AS/SVE system.
  - Complete DFW Soil Investigation.
  - Submit Draft Dunn Field West Explanation of Significant Differences (ESD).
- Dunn Field LTM
  - Perform groundwater LTM.
- MI Risk Assessment
  - Complete additional soil sampling in the former PCP Dip Vat Area and review of worker exposure and submit Draft Sampling and Risk Screening (SRS) Update.
- MI VI Study
  - Complete soil vapor, sub-slab and indoor air sampling and analysis and submit Draft MI VI Study Report.
- MI RA
  - Submit Final FFS Report v2.
  - Submit Draft Final Revised Proposed Plan.
  - Hold Revised Proposed Plan public meeting and comment period.
  - Begin MI ROD Amendment.
- MI LTM
  - Perform groundwater LTM.
- Site-wide Continuing Activities
  - Submit Draft and Draft Final 2025 SMP
  - Submit Draft and Draft Final 2024 LTM Report.
  - Conduct annual LUC inspections and submit the 2025 Annual Site Inspection Report.

  - Maintain phoneline for community calls and document comments/questions and responses.
  - Distribute annual EnviroNews to community and civic officials.
  - Maintain administrative record and information repository.
  - Begin PFAS RI.

5.1.2 FY26

- Dunn Field West (DFW) VI Study
  - Submit the Draft Final DFW VI Study Report.

- Off Depot/ Dunn Field West RA
  - Submit Draft and Draft Final AS/SVE Rebound Monitoring Memoranda.
  - Submit Draft Final DFW ESD.
  - Submit Draft DFW RD.

- Dunn Field LTM
  - Perform groundwater monitoring in accordance with LTM plan.

- MI Risk Assessment
  - Submit Draft Final SRS Update Report.

- MI VI Study
  - Submit Draft Final MI VI Study Report.

- MI RA
  - Submit Draft and Draft Final MI ROD Amendment.

- MI LTM
  - Perform groundwater monitoring in accordance with LTM plan.

- Site-wide Continuing Activities
  - Submit Draft and Draft Final Fifth FYR Addendum.
  - Submit Draft and Draft Final 2026 SMP.
  - Submit Draft and Draft Final 2025 LTM Report.
  - Conduct annual LUC inspections and submit the 2026 Annual Site Inspection Report.
  - Maintain phoneline for community calls and document comments/questions and responses.
  - Distribute annual EnviroNews to community and civic officials.
  - Maintain administrative record and information repository.
  - Continue PFAS RI.

5.1.3 FY27

- Dunn Field West RA
  - Submit Draft Final DFW RD.
  - Submit Draft and Draft Final DFW RAWP.
- Dunn Field LTM
  - Perform groundwater monitoring in accordance with LTM plan.
- MI RA
  - Conduct Preliminary Design Investigation and submit the Draft MI RD.
- MI LTM
  - Perform groundwater monitoring in accordance with LTM plan.
- Site-wide Continuing Activities
  - Conduct the Sixth FYR and submit Draft and Draft Final FYR Reports.
  - Submit Draft and Draft Final 2027 SMP.
  - Submit Draft and Draft Final 2026 LTM Report.
  - Conduct annual LUC inspections and submit the 2027 Annual Site Inspection Report.
  - Maintain phoneline for community calls and document comments/questions and responses.
  - Distribute annual EnviroNews to community and civic officials.
  - Maintain administrative record and information repository.
  - Continue PFAS RI.

5.2 Requirements by Fiscal Year

The financial requirements by fiscal year for the environmental program at DDMT are summarized in Table 12, which lists estimated annual costs on a site-wide basis. These requirements are revised annually in accordance with updates to the cost-to-complete database (Headquarters Army Environmental System) maintained by Army.

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Tables

TABLE 1
FUNCTIONAL UNIT AND AREA DESCRIPTIONS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Main Installation

Functional Unit	Name	Size[1] (Acres)	Common Past Land Use	Description
1	Twenty Typical Warehouses	89	Transportation to and storage in closed warehouses	Located in the northeastern area of the MI, consisting of about 20 large warehouses, with interspersed roadways and railroad tracks.
2	Southeast Golf Course/ Recreational Area	53	Golf, other recreation	Located in the southeastern corner of the MI, consisting of golf course (Parcel 3). This FU also includes a baseball field and a small playground in the southeastern corner. This FU includes two constructed ponds and two concrete-lined drainage ditches from the ponds leading to the off-site area.
3	Southwest Open Area	92	Transportation to and storage in open-sided warehouses, painting and sandblasting, open storage	Located in the southwestern corner of the MI, consisting of varied type of parcels and sites.
4	Northern and Open Areas	193	Open storage, and transportation to and storage in closed warehouses	Located in the north-central to northwest area of the MI, covering a large area.
5	Newer Warehouses	109	Transportation to and storage in closed warehouses	Located in the south-central area of the MI and includes 10 large warehouse buildings.
6	Administrative and Residential Areas	33	Offices, equipment storage and maintenance, on-base housing	Located along the property boundary of the Depot along the Airways Boulevard. This FU includes the old Residential Unit Area, parking lots, and other asphalt-paved areas.
7	Groundwater at the Main Installatiion	-	No past use of groundwater	Includes all groundwater beneath the Main Installation.

Dunn Field

Area	Size[1] (Acres)	Description
Northeast Open Area	20	Land in the northeast quadrant of Dunn Field, mostly grass covered with some lightly wooded areas.
Disposal Area	14	Open land in the northwest quadrant of Dunn Field, where the majority of disposal sites are located.
Stockpile Area	30	Open land in the southern half of Dunn Field. Area of former bauxite and fluorspar stockpiles (removed in 1999) and burial areas in the eastern and southwestern portions of Dunn Field.

Notes:
1) Acreage is approximate
FU: Functional Unit
MI: Main Installation

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
Operable Unit 1: Dunn Field			
1	36.16	Mustard and Lewisite Training Sets (9 sets) Burial Site (1955)	A CERCLA Removal Action took place for this area in 2000-2001. No further action is required for this site.
2	36.1	Ammonia Hydroxide (7 pounds) and Acetic Acid (1 gallon) Burial (1955)	No further action is required for this site.
3	36.2	Mixed Chemical Burial Site (orthotoluidine dihydrochloride) (1955)	The selected CERCLA remedy included excavation of contaminated soils/waste materials and off-site disposal. Excavation of this site began in March 2005 and was completed in 2006. USEPA approved the RACR in August 2006. No further action is required for this site.
4	36.3	POL Burial Site (thirteen 55-gallon drums of oil, grease, and paint)	This site is associated with Dunn Field remedial action and land use restrictions for administrative purposes. Remedial actions included excavation and off-site disposal in March and April 2005, SVE in coarse-grained lower fluvial deposits from July 2007 to July 2012 and in situ thermal desorption in fine-grained loess and upper fluvial deposits from May until December 2008. USEPA approved the Source Areas OPS determination in October 2009 and the Source Areas IRACR in November 2009. The Off Depot groundwater air sparging (AS)/SVE system began operating in December 2009. USEPA approved the Off Depot IRACR in August 2011. Due to contamination levels in one monitoring well (MW-159) at the AS/SVE system, additional AS wells were installed and began operation in 2020. Contamination levels decreased below the active remediation goal of 50 micrograms per liter (µg/L) in 2021. The AS/SVE system was shutdown in July 2023; two years of groundwater monitoring for rebound will be conducted before the decison on removal of the AS/SVE equipment and abandonment of SVE wells and VMPs. Offsite Groundwater Investigation (OSI) monitoring wells were installed in June 2020 near the northeast corner of Dunn Field for additional investigation of offsite sources of the plume along the northern boundary of Dunn Field. Sampling of the new wells and existing TDEC wells was conducted quarterly through July 2021. The OSI report completed in 2022 supported the presence of an offsite source. No additional investigation by Army is planned. Soil, soil vapor, and groundwater samples were collected from May 2020 to July 2021 for investigation of increased groundwater contamination in Dunn Field West (DFW). An area of residual soil contamination with CVOCs and other VOCs (petroleum constituents) was identified and contaminant concentrations in soil, soil vapor, and groundwater exceeded screening levels. Human health risk assessment found potential exposure to constituents of potential concern but no complete exposure pathways. The DFW Post-ROD Supplemental Investigation report was submitted in 2022. The DFW VI Sampling and Analysis Plan was completed in January 2024. Installation of VMPs and vapor sampling was conducted in September 2025 to characterize the potential VI risk and hazard to off-site residents west of Dunn Field. A geophysical survey and soil sampling was conducted in the area of residual soil contamination for planning remedial action; laboratory analysis of the soil samples is in progress. Army intends to transfer Dunn Field West through competitive public sale. An environmental condition of property update will be prepared to determine if the area meets requirements for property transfer. A FOST amendment will also be prepared.
5	36.4	Methyl Bromide Burial Site A (3 cubic feet) (1955)	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
6	36.20	40,037 units ointment (eye) Burial Site (1955)	No further action is required for this site.
7	36.5	Nitric Acid Burial Site (1,700 quart bottles) (1954)	No further action is required for this site.
8	36.6	Methyl Bromide Burial Site B (3,768 1-gallon cans) (1954)	No further action is required for this site.
9	36.17	Ashes and Metal Burial Site (burning pit refuse) (1955)	No further action is required for this site.
10	36.21	Solid Waste Burial Site (near MW-10) (metal, glass, trash, etc.)	The selected CERCLA remedy included excavation of contaminated soils/waste materials and off-site disposal. Excavation of this site was conducted in March and April 2005. USEPA approved the RACR in August 2006. No further action is required for this site.
11	36.7	Trichloroacetic Acid Burial (1,433 1-ounce bottles) (1965)	No further action is required for this site.
12	36.8	Sulfuric and Hydrochloric Acid Burial (1965)	No further action is required for this site.
13	36.9	Mixed Chemical Burial (Acid, 900 pounds; unnamed solids, 8,100 pounds)	The selected CERCLA remedy included excavation of contaminated soils/waste materials and off-site disposal. Excavation of this site was conducted in April 2005. USEPA approved the RACR in August 2006. No further action is required for this site.
14	36.22	Municipal Waste Burial Site B (near MW-12) (food, paper products)	No further action is required for this site.
15	36.23	Sodium Burial Sites (1968)	No further action is required for this site.
16	36.10	Unknown Acid Burial Site (1969)	No further action is required for this site.
17	36.11	Mixed Chemical Burial Site C (1969)	No further action is required for this site.
18	36.15	Plane Crash Residue (Dunn Field)	No further action is required for this site.
19	36.24	Former Tear Gas Canister Burn Site (Dunn Field)	No further action is required for this site.
20	36.25	Probable Asphalt Burial Site (Dunn Field)	No further action is required for this site.
21	36.26	XXCC-3 Burial Site (Dunn Field)	No further action is required for this site.
22	36.15	Hardware Burial Site (nuts and bolts) (Dunn Field)	No further action is required for this site.
23	36.29	Construction Debris and Food Burial Site (Dunn Field)	No further action is required for this site.
24	36.29	Former Burial/Burn Site and Neutralization Pit	Beginning in August 2000 all 29 bomb casings were recovered from the burial site and 900 cubic yards of soil contaminated with mustard degradation by-products were excavated and disposed offsite. Beginning in November 2000, 33 cubic yards of soil contaminated with mustard and degradation by-products were excavated from the neutralization pit and disposed offsite. In March 2001, the CERCLA Removal Action was complete. No further action is required for this site.
50	36.27	Dunn Field Northeastern Quadrant Drainage Ditch	No further action is required at this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
60	36.14	Pistol Range Impact Area/Bullet Stop	A CERCLA Removal Action for lead in surface soil was conducted in 2003. No further action is required for this site.
61	36.28	Buried Drain Pipe (Northwestern Quadrant of Dunn Field)	No further action is required for this site.
62	36.12/36.13	Bauxite Storage (Northeastern Quadrant of Dunn Field)	No further action is required for this site.
63	36.29/36.30	Fluorspar Storage (10 mounds in Southeastern Quadrant of Dunn Field, 1 mound in Southwestern Quadrant of Dunn Field) All mounds removed by 1999	No further action is required for this site.
64	36.29	Bauxite Storage (Southwestern Quadrant of Dunn Field Removed in 1972), CC-2 Burial Site, IA Site 31 (smoke pot burn/disposal area)	The selected CERCLA remedy for IA Site 31 included excavation of contaminated soils/waste materials and off-site disposal. For the remaining portions of the site no further action is required. Excavation of this site was completed in March 2005. USEPA approved the RACR in August 2006. No further action is required for this site.
71	Multiple	Herbicide (All railroad tracks) (used to clear tracks)	No further action is required for this site.
73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	No further action is required for this site.
85	36.14	Old Pistol Range Building 1184/Temporary Pesticide Storage	A CERCLA Removal Action for lead in surface soil was conducted in 2003. No further action is required for this site.
86	36.18/36.19	Food Supplies (Dunn Field)	No further action is required for this site.
90	36.3	POL Burial Site (thirty-two 55-gallon drums of oil, grease, and thinner; previously listed as Site No. 4.1) (1955)	The selected CERCLA remedy includes excavation of contaminated soils/waste materials and off-site disposal. Excavation and off-site disposal of this site was completed in March 2005. USEPA approved the RACR in August 2006. No further action is required for this site.
91	36.23	Sodium Phosphate Burial previously listed as Site No. 15.1 (1968)	No further action is required for this site.
92	36.23	14 Burial Pits: Na_2PO_4, sodium, acid, medical supplies, and chlorinated lime previously listed as Site No. 15.2 (1969)	No further action is required for this site.
93	36.10	Acid Burial Site previously listed as Site No. 16.1	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
Operable Unit 2: Southwestern Quadrant, MI			
27	24.1	Former Recoupment Area (Building 873)	Contaminated soil removed in 1985 as part of pre-Remedial Investigation activities. No further action is required for this site.
29	35.2	Former Underground Waste Oil Storage Tank	The tank removed during a CERCLA Removal Action in 2000. Contaminated soils were disposed as special waste and the tank contents were disposed as RCRA hazardous waste. This site is associated with MI groundwater remediation for administrative purposes. The MI ROD selected EBT as the groundwater remedy. EBT was initially performed from May 2006 until February 2009. USEPA approved the MI IRACR and the OPS determination in March 2010. Additional EBT was conducted from November 2012 to August 2014. Further MI groundwater remedial action has been halted until the selected remedy has been confirmed or revised. The Supplemental Remedial Investigation (SRI) report was completed in July 2021. The Focused Feasibility Study (FFS) was approved by TDEC in January 2023 and by USEPA in July 2024; USEPA noted reevaluation of the FFS may be required due to significant opposition in the public comment period or to reservation from TDEC or USEPA management. The Revised Proposed Plan (RPP) was submitted to TDEC and USEPA in July 2024; a public meeting and comment period will be conducted following approval of the RPP, and a ROD Amendment will then be completed. The Baseline Risk Assessment (BRA) conducted for the 2000 MI RI was reviewed to evaluate changes in toxicity values, exposure factors and pathways, and risk assessment methodology, which may impact the current remedy. The review confirmed the potential for adverse health effects from exposure to contaminated on-site groundwater, and that exposure is currently being prevented by the existing land use restrictions. Additional evaluation of analytical data from the 2000 MI RI was recommended for dioxins, furans, chromium, and lead in soil for human health exposures, as well as for contaminants in surface water and sediment for human and ecological impacts in downstream receiving waterbodies. The review led to preparation of the HHERA Review Sampling and Analysis Plan for soil, sediment and surface water. Samples were collected in July and August 2022, and the Sampling and Risk Screening Report was submitted in May 2024. The report concluded that further action was not needed, except for dioxins and furans in the former dip vat area. (See Site No. 42.) The Fourth Five-Year Review for DDMT determined that additional lines of evidence are needed for assessment of vapor intrusion (VI) risk. Initial soil vapor samples collected in 2018 confirmed the need for additional investigation. The MI VI Sampling and Analysis Plan was completed in May 2023. Sampling conducted from May 2023 through April 2024 has included site-wide passive vapor sampling to identify areas with potential for VI, active vapor sampling from VMPs in the identified areas, and sub-slab vapor and indoor air sampling in buildings within those areas. While contaminant concentrations in some soil vapor and sub-slab samples greatly exceeded USEPA vapor intrusion screening levels at some locations, concentrations of these contaminants in indoor air samples did not exceed regional screening levels. The final sampling event for this investigation will be conducted November 2024 for all VMPs, sub-slab and indoor air location; the report is to be completed in March 2025.
30	24.3/35.3	Paint Spray Booths (2 of 3 total; Buildings 770 and 1086)	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
31	35.4	Former Paint Spray Booth (Building 1087)	Building 1087 was decontaminated by vacuuming to remove free dust and pressure washing. The surface soil outside the building was excavated to a depth of one foot and replaced with clean backfill. The excavated soil was disposed off-site as special waste. This CERCLA Removal Action was completed in 2000. No further action is required for this site.
32	35.5	Sandblasting Waste Accumulation Area	Building 1088 was decontaminated by vacuuming to remove free dust and pressure washing. The surface soil outside the building was excavated to a depth of one foot and replaced with clean backfill. The excavated soil was disposed off-site as special waste. This CERCLA Removal Action was completed in 2000. No further action is required for this site.
33	35.4	Sandblasting Waste Drum Storage Area (metal shed south of Building 1088)	The surface soil in this area was excavated to a depth of one foot and replaced with clean backfill. The excavated soil was disposed off-site as special waste. This CERCLA Removal Action was completed in 2000. No further action is required for this site.
34	24.3	Building 770 Underground Oil Storage Tanks	The underground storage tanks were removed in 1989. No further action is required for this site.
40	24.3	Safety Kleen Units - 5 of 9 total (all located in Building 770)	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
41	24.3	Satellite Drum Accumulation Areas - 1 of 4 total (vicinity Building 770)	No further action is required for this site.
71	Multiple	Herbicide (All railroad tracks) (used to clear tracks)	No further action is required for this site.
73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	No further action is required for this site.
82	23.7/23.8	Flammables (Buildings 783 and 793)	No further action is required for this site.
84	27.2	Flammables, Solvents, Waste Oil, etc. (Building 972)	No further action is required for this site.
87	35.2	DDT, banned pesticides (Building 1084)	Building 1084 was demolished and the debris was disposed off-site at a solid waste landfill. A concrete sump beneath the building was excavated; the contaminated soil was disposed off-site as special waste. This CERCLA Removal Action was completed in 2000. No further action is required for this site.
88	35.2	POL (Building 1085)	The concrete slab and hydraulic lift were removed during a CERCLA Removal Action in 2000; the contaminated soils were disposed offsite as special waste and the lift and cylinders were cleaned and disposed as scrap metal. The concrete debris was disposed offsite as construction debris. No further action is required for this site.
89	28.2	Acids (Building 1089)	Building 1089 was decontaminated by vacuuming to remove free dust and pressure washing. The surface soil in areas outside the southern end of the building were excavated to a depth of one foot and replaced with clean backfill. The excavated soil was disposed off-site as special waste. This CERCLA Removal Action was completed in 2000. No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
Operable Unit 3: Southeastern Watershed And Golf Course, MI			
25	3.8	Golf Course Pond	No further action is required for this site.
26	3.6	Lake Danielson	No further action is required for this site.
30	4.4	Paint Spray Booths (1 of 3 total - Building 260)	No further action is required for this site.
40	4, 19, and 21	Safety Kleen Units - 4 of 9 total units (Buildings 253, 469, 490, and 689)	No further action is required for these sites.
41	4 and 19	Satellite Drum Accumulation Areas - 2 of 4 total areas (Buildings 260 and 469)	No further action is required for this site.
48	5.2	Former PCB Transformer Storage Area	Site remediation by removal of surface soil was completed in 1998. No further action is required for this site.
49	17.3	Medical Waste Storage Area	No further action is required for this site.
51	3.7	Lake Danielson Outlet Ditch	No further action is required for this site.
52	3.9	Golf Course Pond Outlet Ditch	No further action is required for this site.
58	4.9	Pesticides, Herbicides (Pad 267)	No further action is required for this site.
59	4.10	Pesticides, Cleaners (Building 273)	No further action is required for this site.
65	7.2	XXCC-3 (Building 249)	No further action is required for this site.
66	4.11	POL (Building 253)	No further action is required for this site.
67	4.7	MOGAS (Building 257	No further action is required for this site.
68	4.8	POL (Building 263) (20 by 40 feet)	No further action is required for this site.
69	3.11	2,4-D, M2A1, and M4 Flamethrower Liquid Fuels (surface application)	No further action is required for this site.
73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	No further action is required for this site.
75	21.5	Unknown Wastes near Building 689	No further action is required for this site.
76	21.5	Unknown Wastes near Building 690	No further action is required for this site.
77	22.2	Unknown Wastes near Buildings 689 and 690	No further action is required for this site.
78	21.3	Alcohol, Acetone, Toluene, Naphtha; Hydrofluoric Acid Spill	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
Operable Unit 4: North-Central Area, MI			
28	32.3	Recoupment Area (Building 865)	No further action is required for this site.
35	15.2	DRMO Building S308 - Hazardous Waste Storage	This site was decontaminated and certified clean November 2001 in accordance with the RCRA Closure Plan (Permit TNHW-053). No further action is required for this site.
36	15.5	DRMO Hazardous Waste Concrete Storage Pad	No further action is required for this site.
37	15.5	DRMO Hazardous Waste Gravel Storage Pad	No further action is required for this site.
38	15.5	DRMO Damaged/Empty Hazardous Materials Drum Storage Area	No further action is required for this site.
39	15.5	DRMO Damaged/Empty Lubricant Container Area	No further action is required for this site.
41	13.4	Satellite Drum Accumulation Area (1 of 4 total - Building 210)	No further action is required for this site.
42	33.9	Former PCP Dip Vat Area	In 1986, the dip vat was removed and the soil was excavated to a depth of 10 feet. Soil with PCP concentrations greater than 200 ppb remained beneath the excavated area. The excavation was backfilled with clean soil and with gravel or concrete placed on top of the fill. The LUCIP included a 'No Dig' restriction in this area. No further action is required for this site.
43	33.9	Former Underground PCP Tank Area	The tank was brought above ground in 1986 and drained into drums. The soil around the site was excavated to a depth of 10 to 15 feet, 20 feet wide and 22 feet long. The pumps and lines were also removed. The excavation was backfilled with clean soil and with gravel or concrete placed on top of the clean fill. The LUCIP included a 'No Dig' restriction in this area. No further action is required for this site.
44	33.6	Former Wastewater Treatment Unit Area	No further action is required for this site.
45	33.9	Former Contaminated Soil Staging Area	No further action is required for this site.
46	33.9	Former PCP Pallet Drying Area	No further action for this site was required by the MI ROD. However, the 2018 Human Health and Ecological Risk Assessment (HHERA) identified a data gap where previous dioxin/furan limits of quantitation were above current soil screening levels. Four soil samples collected from this area in 2022, per the HHERA Review Sampling and Analysis Plan, exceeded the non-carcinogenic USEPA Industrial RSL of 720 pg/g for 2,3,7,8-tetrachlorodibenzo-p-dioxin toxicity equivalent (TCDD TEQ). The Sampling and Risk Screening Report concluded that additional sampling for TCDD TEQ was required in the dip vat area. Soil samples were collected in September 2024. Analytical results are expected in October 2024.
47	33.9	Former Contaminated Soil Drum Storage Area (removed 1988)	No further action is required for this site.
53	30.2	X-25 Flammable Solvents Storage Area (near Building 925)	No further action is required for this site.
54	15.6	MI - DRMO East Stormwater Runoff Canal	No further action is required for this site.

TABLE 2
ENVIRONMENTAL RESTORATION SITES
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Site No.	Parcel No.	Description	Site Status
55	15.6	MI - DRMO North Stormwater Runoff Canal	No further action is required for this site.
56	29.3	MI - West Stormwater Drainage Canal	No further action is required for this site.
57	12.1	Building 629 Spill Area	No further action is required for this site.
70	Multiple	POL, Various Chemical Leaks (railroad tracks 1, 2, 3, 4, 5, and 6)	No further action is required for this site.
71	Multiple	Herbicide (all railroad tracks) (used to clear tracks)	No further action is required for this site.
72	15.5/15.6	Waste Oil (DRMO yard) (surface application for dust control)	No further action is required for this site.
73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	No further action is required for this site.
74	15.3	Flammables, Toxics (West End - Building 319)	No further action is required for this site.
79	15.6	Fuels, Miscellaneous Liquids, Wood, and Paper (Vicinity S702)	No further action is required for this site.
80	33.13	Fuel and Cleaners Dispensing (Building 720)	No further action is required for this site.
81	33.7	Fuel Oil AST (Building 765 – removed in 1994)	No further action is required for this site.
83	30.5	Disposal of Dried Paint Residues - South of Building 949	Lead contaminated soil was removed from an area of approximately 7,200 square feet. The CERCLA Removal Action was completed in 2001. No further action is required for this site.

Notes:
AS: Air Sparging
AST: aboveground storage tank
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
DDT: 4,4′-dichlorodiphenyltrichloroethane
DRMO: Defense and Reutilization Marketing Office
IRACR: Interim Remedial Action Completion Report
MI: Main Installation
MOGAS: motor gasoline
Na: sodium
OPS: Operating Properly and Successfully
PCB: polychlorinated biphenyl
PCP: pentachlorophenol
PO4: phosphate
POL: petroleum, oil, and lubricants
RACR: Remedial Action Completion Report
RCRA: Resource Conservation and Recovery Act
SRI: Supplemental Remedial Investigation
SVE: soil vapor extraction
USEPA: United States Environmental Protection Agency

TABLE 3
REMEDIAL GOAL OBJECTIVES FROM DUNN FIELD RECORD OF DECISION
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

	Remedial Goal Objectives				
	Site-Specific Soil Screening Levels to be Protective of Groundwater		Protective Soil Vapor Concentration		Groundwater Target Concentrations at 10-4 Target Risk Levels and Target HI=1.0 (µg/L)
Parameter	Loess Specific Values (mg/kg)	Fluvial Deposit Specific Values (mg/kg)	Loess Specific Values (ppbv)	Fluvial Deposit Specific Values (ppbv)	
Carbon Tetrachloride	0.2150	0.1086	28.14	14.22	3.0
Chloroform	0.9170	0.4860	61.57	32.63	12.0
Dichloroethane, 1,2-	0.0329	0.0189	1.12	0.64	—
Dichloroethene, 1,1-	0.1500	0.0764	57.00	29.03	7.0
Dichloroethene, cis-1,2-	0.7550	0.4040	73.86	39.52	35.0
Dichloroethene, trans-1,2-	1.5200	0.7910	256.53	133.50	50.0
Methylene Chloride	0.0305	0.0169	5.14	2.85	—
Tetrachloroethane, 1,1,2,2-	0.0112	0.0066	0.03	0.55	2.2
Tetrachloroethene	0.1806	0.0920	15.18	0.99	2.5
Trichloroethane, 1,1,2	0.0627	0.0355	0.84	2.03	1.9
Trichloroethene	0.1820	0.0932	10.56	2.06	5.0
Vinyl Chloride	0.0294	0.0150	28.94	14.77	—

Notes:
HI: hazard index
mg/kg: milligrams per kilogram
ppbv: parts per billion by volume
µg/L: micrograms per liter
—: Not available for groundwater cleanup goals because of low number of detections or detected values consistently less than maximum contaminant levels.
Source: Table 2-21G, *Memphis Depot Dunn Field Record of Decision* (CH2M HILL, 2004a)

TABLE 4
DUNN FIELD LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
MW-03	Fluvial	Offsite	281596	802101	292.35	290.40	65.5	10	75.5
MW-04	Fluvial	Background	281279	802369	301.61	300.00	60.0	20	80.0
MW-06	Fluvial	DF West	280605	802069	288.66	288.78	51.0	20	71.0
MW-07	Fluvial	Offsite	281840	802482	295.10	293.10	67.0	10	77.0
MW-08	Fluvial	Offsite	282001	802728	292.59	292.74	56.5	10	66.5
MW-13	Fluvial	Background	281034	802369	300.01	300.10	66.0	15	81.0
MW-15	Fluvial	DF West	280349	801985	295.12	295.23	63.4	15	78.4
MW-28	Fluvial	Background	281569	803154	294.79	294.89	54.3	15	69.3
MW-31	Fluvial	Offsite	281652	801784	290.37	287.50	64.1	15	79.1
MW-44	Fluvial	Off Depot	281074	800601	269.07	269.40	64.0	10	74.0
MW-54	Fluvial	Off Depot	281159	801184	295.39	295.57	84.5	10	94.5
MW-57	Fluvial	DF West	280184	802006	290.77	291.10	60.0	10	70.0
MW-58	Fluvial	Background	279845	802066	290.51	290.70	57.0	10	67.0
MW-67	Memphis	Background	280473	800934	278.21	275.53	260.0	15	275.0
MW-68	Fluvial	Offsite	281501	802040	291.69	291.60	72.5	10	82.5
MW-69	Fluvial	DF West	281203	802011	307.02	304.90	82.1	10	92.1
MW-70	Fluvial	DF West	281030	801988	304.99	302.80	80.8	10	90.8
MW-71	Fluvial	DF West	280585	801805	294.40	291.90	65.5	10	75.5
MW-76	Fluvial	Off Depot	281312	801643	302.71	303.30	73.0	20	93.0
MW-77	Fluvial	Off Depot	281143	801815	304.42	304.70	68.0	20	88.0
MW-78	Fluvial	Offsite	282052	802065	275.01	275.20	44.5	20	64.5
MW-79	Fluvial	Offsite	281794	800899	285.03	285.40	82.5	20	102.5
MW-80	Fluvial	Background	281418	800199	273.81	274.00	53.0	20	73.0
MW-87	Fluvial	DF West	280696	802039	294.93	292.80	63.0	15	78.0
MW-91	Fluvial	DF West	280475	802014	291.99	289.30	55.0	15	70.0
MW-126	Fluvial	Background	282390	800492	252.22	252.49	16.0	10	26.0
MW-129	Fluvial	Offsite	282271	803129	293.01	293.33	65.0	15	80.0
MW-130	Fluvial	Offsite	282117	803241	293.17	293.77	59.5	20	79.5
MW-134	Fluvial	DF West	281013	802103	300.81	301.05	75.0	15	90.0
MW-144	Fluvial	Off Depot	281139	801529	291.60	291.89	55.9	20	76.3
MW-145	Fluvial	Off Depot	280968	800823	284.72	284.86	76.6	20	97.0
MW-147	Fluvial	Offsite	281502	801674	289.76	289.93	57.8	20	78.1
MW-148	Fluvial	Off Depot	281378	801462	294.71	294.87	67.8	20	88.1
MW-149	Fluvial	Off Depot	281130	800983	287.18	287.44	81.6	20	101.9
MW-150	Fluvial	Off Depot	281240	801284	296.86	297.00	71.2	20	91.4
MW-151	Fluvial	Off Depot	281290	800875	284.27	284.42	76.5	20	96.8
MW-152	Fluvial	Off Depot	281516	800893	289.59	289.82	90.9	20	111.1
MW-153	Fluvial	Offsite	282119	800952	279.17	279.26	76.1	20	96.3
MW-154	Fluvial	Background	280502	800919	273.81	274.07	52.5	15	67.7
MW-155	Fluvial	Off Depot	281325	801169	291.54	291.83	76.6	20	96.8
MW-157	Fluvial	Off Depot	281051	801348	286.47	286.55	57.0	20	77.3
MW-158	Fluvial	Off Depot	281434	801005	294.07	294.38	91.1	15	106.6
MW-158A	Fluvial	Off Depot	281444	801006	293.95	294.22	78.4	15	93.6
MW-159	Fluvial	Off Depot	281304	801007	286.36	286.68	79.3	20	99.5
MW-160	Fluvial	Off Depot	281367	801304	293.84	294.13	65.8	20	86.0
MW-163	Fluvial	Off Depot	281153	801487	290.63	290.81	56.5	20	76.7
MW-164	Fluvial	Off Depot	280998	801497	287.48	287.71	55.3	20	75.5
MW-165	Fluvial	Off Depot	281385	800855	287.06	287.35	88.1	15	103.3
MW-165A	Fluvial	Off Depot	281384	800866	287.26	287.53	71.3	15	86.5
MW-166	Fluvial	Off Depot	281225	800928	282.72	283.29	84.2	15	99.4
MW-166A	Fluvial	Off Depot	281213	800927	282.90	283.36	67.6	15	82.8
MW-167	Fluvial	Background	281394	800619	284.82	285.21	67.7	15	82.9
MW-169	Upper Claiborne	Background	282491	800957	261.90	262.17	68.0	20	88.2
MW-170	Fluvial	Background	282443	801260	273.75	273.98	59.7	20	79.9
MW-171	Fluvial	Offsite	282315	801058	270.69	271.02	53.2	15	68.4
MW-174	Fluvial	DF West	280352	802092	296.56	296.83	67.0	10	77.0

TABLE 4
DUNN FIELD LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
MW-176	Fluvial	DF West	280824	802032	299.68	299.92	76.0	10	86.0
MW-180	Fluvial	Offsite	281476	802132	296.14	296.39	72.0	10	82.0
MW-182	Fluvial	Background	280524	800623	272.63	272.90	59.2	10	69.2
MW-184	Fluvial	Off Depot	280903	801442	283.12	283.34	58.0	10	68.0
MW-187	Fluvial	Background	280563	802348	302.74	303.21	76.0	10	86.0
MW-190	Fluvial	Off Depot	281139	801596	297.32	297.58	78.0	10	88.0
MW-220	Fluvial	Offsite	281617	802167	293.29	290.31	64.9	15	79.9
MW-221	Fluvial	DF West	281400	802100	301.52	298.37	73.1	15	88.1
MW-222	Fluvial	DF West	280986	802146	303.82	301.06	74.2	15	89.2
MW-223	Fluvial	DF West	280914	802104	303.00	300.41	73.9	15	88.9
MW-224	Fluvial	DF West	281018	802182	304.13	301.18	73.7	15	88.7
MW-225	Fluvial	DF West	280947	802071	304.52	301.30	75.0	15	90.0
MW-226	Fluvial	DF West	280932	802147	303.19	300.56	74.2	15	89.2
MW-227	Fluvial	DF West	280258	802081	299.70	296.64	63.6	15	78.6
MW-228	Fluvial	DF West	280252	802157	301.65	298.59	64.1	15	79.1
MW-230	Fluvial	Offsite	281843	802800	286.57	286.66	59.2	15	74.2
MW-235	Fluvial	Background	280728	800448	264.00	264.21	50.6	10	60.8
MW-237	Intermediate	Off Depot	281356	800964	289.18	289.53	166.5	10	176.7
MW-241	Fluvial	Off Depot	281390	801397	292.97	293.16	73.4	15	88.4
MW-242	Fluvial	Off Depot	281297	801229	295.40	295.94	73.2	16	88.7
MW-243	Fluvial	Off Depot	281363	801115	292.29	292.56	80.7	20	100.7
MW-244	Fluvial	Off Depot	281333	801101	288.72	289.45	76.3	20	96.3
MW-245	Fluvial	Off Depot	281379	801035	290.48	290.62	85.1	20	105.1
MW-246	Fluvial	Off Depot	281387	800952	288.17	288.49	85.2	20	105.2
MW-247	Fluvial	Off Depot	281319	800900	286.17	286.63	80.5	20	100.5
MW-248	Fluvial	Off Depot	281254	800720	275.45	275.93	67.5	20	87.5
MW-249	Fluvial	Off Depot	281030	800790	285.53	285.89	78.0	20	98.0
MW-250	Intermediate	Off Depot	281046	800900	289.66	290.19	168.7	15	183.7
MW-251	Intermediate	Off Depot	281212	801022	285.83	286.16	160.2	15	175.2
MW-322	Fluvial	Offsite	281914	803177	286.63	286.87	57.3	10	67.5
MW-323	Fluvial	Offsite	282143	802968	275.33	275.82	48.5	10	58.7
MW-324	Fluvial	Offsite	282371	802892	278.70	279.14	58.1	10	68.3
MW-328	Fluvial	DF West	280591	802012	288.58	288.92	58.4	10	68.6
MW-329	Fluvial	Background	280662	802255	298.80	299.17	66.6	10	76.8

Notes:
ft: feet
btoc: below top of casing
NAVD: North American Vertical Datum of 1988
OSI: Offsite Groundwater Investigation

TABLE 5
DUNN FIELD MCL EXCEEDANCE SUMMARY, APRIL 2024
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

			TeCA		TCA		PCE		TCE		DCE	
Area	No. of Wells	No. of Wells >TC or MCL	No. of Wells >TC	Maximum Concentration (µg/L)	No. of Wells >TC or MCL	Maximum Concentration (µg/L)	No. of Wells >TC or MCL	Maximum Concentration (µg/L)	No. of Wells >TC or MCL	Maximum Concentration (µg/L)	No. of Wells >TC or MCL	Maximum Concentration (µg/L)
Fluvial												
Offsite	18	11	0	-	0	-	9	*12.7*	10	*78.1*	0	-
DF West	20	3	3	*31.8*	3	*13.1*	0	-	2	*10.9*	0	-
Off Depot	34	3	1	*2.42*	0	-	0	-	2	*19*	0	-
Background	13	0	0	-	0	-	0	-	0	-	0	-
Fluvial Summary	**85**	**17**	**4**	***31.8***	**3**	***13.1***	**9**	***12.7***	**14**	***78.1***	**0**	***0***
IAQ/UC												
Off Depot	3	0	0	-	0	-	0	-	0	-	0	-
Background	1	0	0	-	0	-	0	-	0	-	0	-
IAQ/UC Summary	**4**	**0**	**0**	**-**	**0**	**-**	**0**	**-**	**0**	**-**	**0**	**-**
MAQ												
Background	1	0	0	-	0	-	0	-	0	-	0	-
MAQ Summary	**1**	**0**	**0**	**-**	**0**	**-**	**0**	**-**	**0**	**-**	**0**	**-**
DF Summary	**90**	**17**	**4**	**31.8**	**3**	**13.1**	**9**	**12.7**	**14**	**78.1**	**0**	**0**

Notes:
µg/L: micrograms per liter
MCL: maximum contaminant level
TC: target concentration

TABLE 5
DUNN FIELD MCL EXCEEDANCE SUMMARY, APRIL 2024
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

			VC		CF	
Area	No. of Wells	No. of Wells >TC or MCL	No. of Wells >MCL	Maximum Concentration (µg/L)	No. of Wells >TC or MCL	Maximum Concentration (µg/L)
Fluvial						
Offsite	18	11	0	-	0	-
DF West	20	3	0	-	3	*87*
Off Depot	34	3	0	-	1	*14.5*
Background	13	0	0	-	0	-
Fluvial Summary	**85**	**17**	**0**	**-**	**4**	***87***
IAQ/UC						
Off Depot	3	0	0	-	0	-
Background	1	0	0	-	0	-
IAQ/UC Summary	**4**	**0**	**0**	**-**	**0**	**-**
MAQ						
Background	1	0	0	-	0	-
MAQ Summary	**1**	**0**	**0**	**-**	**0**	**-**
DF Summary	**90**	**17**	**0**	**0**	**4**	**87**

Notes:
µg/L: micrograms per liter
MCL: maximum contaminant level
TC: target concentration

TABLE 6
MAIN INSTALLATION LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
DR1-1	Fluvial	TTA-1S	276300	800856	293.14	293.42	121.7	20	141.7
DR1-1A	Fluvial	TTA-1S	276307	800863	293.00	293.37	89.2	20	109.2
DR1-2	Fluvial	TTA-1N	276537	801153	290.00	291.39	97.7	20	117.7
DR1-3	Fluvial	TTA-1S	276527	801416	290.93	291.11	109.7	20	129.7
DR1-4	Fluvial	TTA-1S	276231	801400	292.78	293.00	106.3	20	126.3
DR1-5	Fluvial	TTA-1S	276080	800828	294.46	294.86	124.7	20	144.7
DR1-5A	Fluvial	TTA-1S	276087	800835	294.51	294.87	90.0	20	110.0
DR1-6	Fluvial	TTA-1S	276044	801103	293.17	293.50	114.4	20	134.4
DR1-6A	Fluvial	TTA-1S	276035	801104	293.28	293.58	90.9	20	110.9
DR1-7	Fluvial	TTA-1N	276791	801441	289.15	289.46	108.3	20	128.3
DR1-8	Fluvial	TTA-1N	276752	800875	290.09	290.47	92.7	20	112.7
DR2-1	Fluvial	TTA-2	276772	806498	304.90	305.08	73.9	20	93.9
DR2-2	Fluvial	TTA-2	276771	806659	304.30	304.67	78.4	15	93.4
DR2-3	Fluvial	TTA-2	276539	806203	303.44	303.66	93.0	20	113.0
DR2-4	Fluvial	TTA-2	276456	806633	303.55	303.96	88.1	20	108.1
DR2-5	Fluvial	TTA-2	276831	806180	305.41	305.72	84.5	15	99.5
DR2-6	Fluvial	TTA-2	276644	805861	304.70	304.92	94.6	20	114.6
MW-16	Fluvial	Background	278838	807100	299.86	300.19	57.6	15	72.6
MW-19	Fluvial	Background	278946	800782	290.57	290.86	83.1	10	93.1
MW-21	Fluvial	TTA-1N	276473	800602	295.00	295.30	92.1	15	107.1
MW-22	Fluvial	TTA-1S	275912	800702	298.04	298.49	95.4	10	105.4
MW-23	Fluvial	Background	275791	801817	298.99	299.24	101.2	10	111.2
MW-24	Fluvial	Background	275616	803539	299.51	299.81	97.3	15	112.3
MW-25A	Fluvial	TTA-2	275975	805521	269.88	270.13	73.0	10	83.0
MW-26	Fluvial	TTA-2	276509	805963	303.38	303.80	97.6	10	107.6
MW-34	Intermediate	Window	279411	801918	299.97	300.80	136.6	20	156.6
MW-38	Intermediate	Window	279141	802450	307.45	308.45	139.9	15	154.9
MW-39	Fluvial	W-C	277281	802598	296.28	296.58	95.5	20	115.5
MW-39A	Upper Claiborne	W-C	277278	802608	298.61	298.70	148.1	20	168.1
MW-50	Fluvial	TTA-2	276456	807065	298.82	299.32	115.0	10	125.0
MW-52	Fluvial	SE	275372	805897	279.26	279.71	94.0	10	104.0
MW-53	Fluvial	Background	279177	805136	306.38	305.58	72.5	10	82.5
MW-55	Fluvial	Background	279301	801205	292.08	292.48	64.0	10	74.0
MW-62	Fluvial	B-835	278290	801858	293.71	293.90	86.1	10	96.1
MW-63A	Fluvial	N-C	278200	803573	305.96	306.33	130.0	10	140.0
MW-63B	Fluvial	N-C	278201	803558	305.78	306.22	115.0	10	125.0
MW-64	Fluvial	TTA-2	276952	805006	304.21	304.46	102.0	10	112.0
MW-66A	Fluvial	TTA-1N	276626	799793	284.22	284.34	74.6	20	94.6
MW-85	Fluvial	TTA-2	276704	806065	304.13	304.50	95.9	15	110.9
MW-88	Fluvial	TTA-2	276879	806513	305.15	305.47	82.0	15	97.0
MW-89	Intermediate	Window	278287	802555	303.98	304.38	147.0	30	177.0
MW-90	Intermediate	Window	278284	802540	304.19	304.64	115.0	30	145.0
MW-92	Fluvial	TTA-2	276614	806490	304.41	304.78	93.0	15	108.0
MW-93	Fluvial	Background	275542	804440	294.08	294.31	92.0	15	107.0
MW-94A	Fluvial	W-C	276806	803086	303.00	303.23	109.6	10	119.6
MW-96	Fluvial	TTA-2	276310	806320	289.02	289.67	75.5	20	95.5
MW-98	Fluvial	W-C	276891	802573	294.43	294.93	137.0	10	147.0
MW-99	Fluvial	Background	277443	801115	285.33	285.69	91.5	20	111.5
MW-101[1]	Fluvial	TTA-1S	276204	801110	291.74	291.98	89.0	15	104.0
MW-102B	Fluvial	Background	275761	800708	311.40	312.07	120.5	20	140.5
MW-103	Fluvial	N-C	278691	805160	301.37	301.89	70.0	20	90.0
MW-104	Fluvial	N-C	278676	805417	291.98	292.18	70.5	20	90.5
MW-107[2]	Upper Claiborne	Window	278419	803010	304.92	305.18	128.0	15	143.0
MW-108	Upper Claiborne	W-C	277658	802986	303.07	303.25	160.0	10	170.0
MW-113	Fluvial	TTA-2	276685	806279	304.81	304.92	96.0	10	106.0
MW-140	Memphis	Window	279061	801716	298.12	298.16	224.6	20	244.6
MW-141	Intermediate	Window	278019	802571	303.71	303.70	148.7	20	168.7

TABLE 6
MAIN INSTALLATION LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
MW-142	Fluvial	B-835	278056	801629	291.18	291.49	85.0	20	105.0
MW-143	Fluvial	B-835	278301	801201	290.66	290.90	78.6	20	98.6
MW-197A	Upper Claiborne	W-C	276975	802042	291.64	291.54	161.7	15	176.7
MW-197B	Fluvial	W-C	276973	802037	291.43	291.43	93.8	15	108.8
MW-198	Fluvial	B-835	277776	802142	291.78	292.20	90.3	15	105.3
MW-199A	Intermediate	B-835	277756	802574	301.90	301.84	146.1	15	161.1
MW-199B	Fluvial	B-835	277752	802576	302.06	302.07	104.6	15	119.6
MW-200	Fluvial	W-C	277006	802859	300.18	300.51	102.9	15	117.9
MW-202A	Intermediate	Window	278686	802111	299.67	299.69	176.2	15	191.2
MW-202B	Intermediate	Window	278693	802112	299.92	299.74	118.8	15	133.8
MW-203A	Upper Claiborne	W-C	276842	801740	290.70	290.80	142.9	20	162.9
MW-203B	Fluvial	W-C	276821	801742	290.87	291.10	93.0	20	113.0
MW-204A	Fluvial	W-C	276725	802168	292.59	292.49	133.3	15	148.3
MW-204B	Fluvial	W-C	276708	802167	292.71	293.00	94.9	15	109.9
MW-205A	Upper Claiborne	W-C	277157	802277	292.30	292.40	141.3	15	156.3
MW-205B	Fluvial	W-C	277173	802278	292.16	292.30	97.3	15	112.3
MW-206A	Fluvial	W-C	277219	802792	300.32	300.35	127.3	15	142.4
MW-206B	Fluvial	W-C	277201	802795	300.30	300.12	96.7	15	111.7
MW-207A	Upper Claiborne	N-C	277653	803192	304.05	304.45	149.9	15	164.9
MW-207B	Fluvial	N-C	277665	803193	304.06	304.42	108.5	15	123.5
MW-208A	Upper Claiborne	W-C	277382	802799	302.21	302.40	183.5	15	198.5
MW-208B	Fluvial	W-C	277397	802815	302.13	302.08	106.7	15	121.7
MW-209A	Intermediate	B-835	277574	802507	298.45	298.36	189.0	15	204.0
MW-209B	Fluvial	B-835	277582	802520	298.89	298.72	102.3	15	117.3
MW-210A	Intermediate	W-C	277239	801958	289.61	289.70	177.0	15	192.0
MW-210B	Fluvial	W-C	277228	801952	289.54	289.53	97.0	15	112.0
MW-211	Intermediate	Window	278001	802974	304.14	304.09	166.3	15	181.3
MW-212	Fluvial	B-835	278028	802225	295.74	295.68	85.3	15	100.3
MW-213	Fluvial	B-835	278427	801669	294.22	294.20	77.3	15	92.3
MW-214A	Upper Claiborne	N-C	277878	803907	304.01	303.96	119.1	15	134.1
MW-214B	Upper Claiborne	N-C	277876	803922	304.10	303.96	101.6	15	116.6
MW-215A	Upper Claiborne	N-C	277298	804164	304.97	304.86	128.8	15	143.8
MW-215B	Fluvial	N-C	277298	804177	305.03	304.98	105.4	15	120.4
MW-216	Fluvial	S-C	276025	801996	297.72	297.63	99.9	15	115.0
MW-217	Fluvial	TTA-2	276671	805214	304.65	304.51	101.8	15	116.8
MW-218	Fluvial	TTA-2	276937	805628	306.07	306.00	98.9	15	114.0
MW-219	Fluvial	TTA-1N	276429	800461	295.13	295.00	98.0	15	113.0
MW-229	Memphis	Window	279294	802837	311.78	312.09	188.4	20	208.4
MW-252	Intermediate	Window	278789	801365	294.16	294.40	126.1	20	146.1
MW-253	Intermediate	Window	278287	801191	290.47	290.80	118.3	20	138.3
MW-254	Memphis	Window	279334	800858	292.84	293.28	285.8	20	305.8
MW-255	Memphis	Window	279305	801227	291.84	292.38	284.7	20	304.7
MW-256	Intermediate	Window	279302	801244	292.68	293.40	127.1	20	147.1
MW-258	Fluvial	N-C	278126	804427	304.37	304.83	79.3	20	99.3
MW-259	Fluvial	TTA-2	276279	804451	290.77	291.44	98.6	20	118.6
MW-260	Fluvial	N-C	278398	804376	304.16	304.45	68.0	20	88.3
MW-261	Fluvial	S-C	276391	802592	293.52	293.79	90.0	20	110.3
MW-262	Intermediate	Window	279334	800833	293.22	293.50	154.4	10	164.6
MW-263	Fluvial	N-C	278945	805817	291.40	291.78	69.1	10	79.3
MW-264	Upper Claiborne	N-C	278411	804590	303.72	304.00	104.8	10	115.0
MW-265	Fluvial	N-C	278112	804710	305.15	305.61	85.8	10	96.0
MW-266	Fluvial	TTA-2	277092	806686	304.68	305.10	77.1	10	87.3
MW-267	Fluvial	TTA-2	277161	806001	303.84	304.30	71.9	10	82.1
MW-268	Upper Claiborne	TTA-2	277204	805284	304.59	304.92	109.5	10	119.7
MW-269	Fluvial	TTA-1N	276369	800127	290.05	290.50	92.2	10	102.4

TABLE 6
MAIN INSTALLATION LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
MW-270	Fluvial	SE	275483	805042	281.74	282.20	78.4	10	88.6
MW-271	Fluvial	S-C	276315	803774	294.91	295.50	134.7	10	144.9
MW-272	Fluvial	Background	275880	804037	293.27	293.70	112.8	10	123.0
MW-273	Intermediate	Window	279713	800122	284.73	285.00	128.1	10	138.3
MW-274	Fluvial	Background	275726	806543	294.30	294.60	89.3	10	99.5
MW-275	Fluvial	Background	275232	805306	272.31	272.59	80.5	10	90.7
MW-276	Fluvial	Background	275564	804697	288.68	288.91	87.5	10	97.7
MW-277	Fluvial	Background	275532	803998	301.67	301.96	102.3	10	112.5
MW-278	Fluvial	TTA-1N	276294	799814	292.18	292.46	91.0	10	101.2
MW-279	Fluvial	TTA-1S	275982	800579	299.89	300.17	113.0	10	123.2
MW-280	Fluvial	TTA-2	277390	806313	306.36	306.57	76.0	10	86.2
MW-281	Fluvial	N-C	278155	804123	304.56	305.03	81.7	10	91.9
MW-282	Fluvial	Background	278710	804033	307.81	308.14	76.0	10	86.2
MW-283	Fluvial	Background	278176	806074	304.34	304.87	77.0	10	87.2
MW-284	Fluvial	N-C	277049	803765	303.99	304.35	109.0	10	119.0
MW-285	Fluvial	Window	278102	803184	304.61	304.98	99.5	10	110.5
MW-286	Fluvial	Window	278427	803027	305.04	305.41	102.0	10	112.0
MW-287	Fluvial	N-C	278236	803971	304.67	305.01	84.0	10	94.0
MW-288	Fluvial	N-C	277932	803895	304.69	305.07	90.0	10	100.0
MW-289	Fluvial	N-C	277865	804526	305.41	305.85	78.0	10	88.0
MW-290	Memphis	Background	277046	803795	304.22	304.49	214.0	10	224.0
MW-291	Fluvial	N-C	278371	804963	303.59	303.97	74.0	10	84.0
MW-292	Fluvial	TTA-2	276981	806334	304.83	305.28	73.0	10	83.0
MW-293	Upper Claiborne	Window	278143	803188	304.34	304.77	152.5	10	162.5
MW-294	Fluvial	TTA-2	277351	805966	304.38	304.84	70.0	10	80.0
MW-295	Fluvial	TTA-2	277222	805292	304.35	304.72	73.0	10	83.5
MW-296	Fluvial	S-C	276362	803345	296.32	296.74	100.0	10	110.0
MW-297	Fluvial	S-C	276351	802850	297.91	298.46	100.0	10	110.0
MW-298	Fluvial	S-C	276100	802436	296.50	297.04	100.0	10	110.0
MW-299	Fluvial	B-835	278329	801532	292.71	293.04	86.0	10	96.0
MW-300	Fluvial	B-835	278451	801082	290.26	290.64	85.0	10	95.0
MW-301	Fluvial	SE	275494	805309	271.03	271.33	74.0	10	84.0
MW-302	Intermediate	TTA-2	276266	804423	291.60	291.92	160.0	10	170.0
MW-303	Fluvial	TTA-2	277667	806230	305.33	305.43	76.6	10	86.9
MW-304	Fluvial	N-C	277866	803514	304.83	305.00	96.0	10	106.2
MW-305	Fluvial	Window	278490	802793	305.07	305.16	108.2	10	118.4
MW-306	Fluvial	N-C	278351	805279	304.30	304.40	73.0	10	83.2
MW-307	Fluvial	N-C	276724	803761	302.88	303.20	99.7	10	110.0
MW-308	Fluvial	Window	278614	803419	304.68	304.82	93.0	10	103.3
MW-309	Intermediate	Window	279457	801203	290.31	290.38	130.1	10	140.4
MW-310	Fluvial	N-C	279434	806304	289.81	290.07	52.7	10	62.9
MW-311	Upper Claiborne	N-C	277065	803600	303.99	304.26	173.1	10	183.3
MW-312	Fluvial	Background	275294	804746	285.49	285.78	80.4	10	90.7
MW-313	Fluvial	SE	275537	805666	282.48	282.64	84.7	10	95.0
MW-314	Fluvial	TTA-1S	275873	800241	304.68	305.13	100.0	10	110.2
MW-315	Fluvial	TTA-1N	276486	800059	289.89	290.09	86.5	10	96.7
MW-316	Fluvial	TTA-1N	276232	800124	291.53	292.04	89.7	10	100.0
MW-317A	Fluvial	Window	278370	803123	305.00	305.30	100.6	2.5	103.3
MW-317B	Fluvial	Window			305.03		112.4	2.5	115.1
MW-317C	Upper Claiborne	Window			305.04		136.2	2.5	138.9
MW-317D	Upper Claiborne	Window			305.00		152.0	2.5	154.7
MW-318A	Fluvial	N-C	277363	803309	304.46	304.59	116.6	2.5	119.3
MW-318B	Fluvial	N-C			304.45		139.7	2.5	142.4
MW-318C	Upper Claiborne	N-C			304.53		163.3	2.5	166.0
MW-318D	Upper Claiborne	N-C			304.49		178.2	2.5	180.9
MW-330	Fluvial	S-C	276076	802123	300.59	297.48	92.3	10	102.3
MW-331	Fluvial	TTA-1N	276609	800855	291.03	291.47	80.0	10	90.2

TABLE 6
MAIN INSTALLATION LTM WELLS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Well	Aquifer	Area	Northing (ft)	Easting (ft)	Top of Casing Elevation (ft, NAVD)	Ground Elevation (ft, NAVD)	Riser Length (ft)	Screen Length (ft)	Total Well Depth (ft, btoc)
PMW21-01	Fluvial	TTA-1N	276533	800600	294.76	295.00	88.4	20	108.4
PMW21-02	Fluvial	TTA-1N	276575	800701	292.98	293.19	91.3	20	111.3
PMW21-03	Fluvial	TTA-1N	276573	800743	292.11	292.72	90.3	20	110.3
PMW21-04	Fluvial	TTA-1N	276602	800772	291.87	292.20	89.0	20	109.0
PMW21-05	Fluvial	TTA-1N	276628	801130	288.53	288.92	94.3	20	114.3
PMW85-01	Fluvial	TTA-2	276802	806146	305.08	305.39	93.2	10	103.2
PMW85-05	Fluvial	TTA-2	276752	806222	305.12	305.32	93.2	10	103.2
PMW92-02	Fluvial	TTA-2	276667	806476	304.17	304.35	94.8	10	104.8
PMW92-03	Fluvial	TTA-2	276679	806439	303.91	304.17	92.5	10	102.5
PMW101-02A	Fluvial	TTA-1S	276282	801145	292.00	292.29	117.7	20	137.7
PMW101-02B	Fluvial	TTA-1S	276286	801145	291.98	292.24	97.8	20	117.8
PMW101-03A	Fluvial	TTA-1S	276348	801198	291.61	291.99	119.2	20	139.2
PMW101-03B	Fluvial	TTA-1S	276353	801194	291.55	291.82	99.3	20	119.3
PMW101-04A	Fluvial	TTA-1S	276299	801182	291.07	291.43	117.9	20	137.9
PMW101-04B	Fluvial	TTA-1S	276296	801187	291.47	291.75	98.6	20	118.6
PMW101-06A	Fluvial	TTA-1S	276192	801187	292.13	292.72	120.0	20	140.0
PMW101-06B	Fluvial	TTA-1S	276195	801184	292.17	292.40	99.3	20	119.3
PMW101-07A	Fluvial	TTA-1S	276143	801172	292.20	292.52	117.9	20	137.9
PMW101-07B	Fluvial	TTA-1S	276142	801177	292.36	292.70	98.0	20	118.0

Notes:
1: MW-101 has three screened sections at the following depths (ft, btoc): 89-104, 109-119 and 124-134.
2: MW-107 has two screened sections at the following depths (ft, btoc): 128-143 and 148-158.
btoc: below top of casing
ft: feet
NAVD: North American Vertical Datum of 1988

TABLE 7
MAIN INSTALLATION MCL EXCEEDANCE SUMMARY, APRIL 2024
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

			PCE		TCE		cDCE		VC		CT	
Area	No. of Wells	No. of Wells >MCL	No. of Wells >MCL	Maximum Concentration (µg/L)	No. of Wells >MCL	Maximum Concentration (µg/L)	No. of Wells >MCL	Maximum Concentration (µg/L)	No. of Wells >MCL	Maximum Concentration (µg/L)	No. of Wells >MCL	Maximum Concentration (µg/L)
Fluvial												
TTA-1N	16	9	8	*159.0*	7	*42.4*	0	-	1	*20*	0	-
TTA-1S	22	7	5	*25.7*	2	*42.6*	0	-	1	*2.45*	0	-
TTA-2	29	19	14	*73.7*	13	*36.5*	0	-	5	*16.6*	4	*31.0*
West-Central	13	10	8	*17.4*	9	*27.6*	0	-	1	*2.59*	0	-
Building 835	10	6	0	-	6	*79.9*	0	-	0	-	0	-
North-Central	22	13	8	*48.1*	13	*41.8*	0	-	0	-	0	-
South-Central	7	5	1	*21.4*	5	*145.0*	0	-	0	-	0	-
Southeastern MI	4	4	3	*9.5*	1	*19.7*	0	-	0	-	0	-
Window	6	3	3	*28.4*	1	*6.22*	0	-	0	-	0	-
Background	17	0	0	-	0	-	0	-	0	-	0	-
Fluvial Summary	**146**	**76**	**50**	***159***	**57**	***145***	**0**	***0***	**8**	***20***	**4**	***31***
IAQ/UC												
TTA-2	2	1	1	*7.97*	1	*5.62*	0	-	0	-	1	*6.33*
West-Central	7	6	3	*9.25*	4	*11.1*	0	-	1	*4.94*	0	-
Building 835	2	1	0	-	1	*15.9*	0	-	0	-	0	-
North-Central	8	5	5	*22.4*	5	*13.9*	0	-	0	-	0	-
Window	18	6	4	*28.3*	1	*9.44*	0	-	0	-	0	-
IAQ/UC Summary	**37**	**19**	**13**	***28.3***	**12**	***15.9***	**0**	**-**	**1**	***4.94***	**1**	***6.33***
MAQ												
Window	4	1	1	*11.7*	1	*11.9*	0	-	0	-	0	-
Background	1	0	0	-	0	-	0	-	0	-	0	-
MAQ Summary	**5**	**1**	**1**	***11.7***	**1**	***11.9***	**0**	**-**	**0**	**-**	**0**	**-**
MI Summary	**188**	**96**	**64**	**159**	**70**	**145**	**0**	**0**	**9**	**20**	**5**	**31**

Notes:
MCL: maximum contaminant level
µg/L: micrograms per liter

TABLE 8
PROPERTY TRANSFER STATUS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

FOST No.	Area	Date FOST signed	Acres[1]	Type of Conveyance	Type of Transfer (Transferee)	Date of Transfer[2]
1	MI	23-Feb-01	6.5	PBC	Deed (Alpha Omega Veterans)	26-Sep-01
2	MI	27-Sep-01	4.7	PBC	Deed (Memphis Police Department)	6-Feb-02
			13.4	EDC	Deed (DRC)	6-May-02
3	MI	1-Jul-04	302.5	EDC	Deed (DRC)	4-Apr-06
			46.7	PBC	Deed (Memphis)	18-Aug-06
4	DF	4-Mar-05	1.6	PBC	Deed (Memphis)	2-Sep-05
			39.4	CPS	Deed (Dunn Field Business Park, LLC)	17-Oct-07
5	DF	12-Jul-10	26.0			
6	MI	2-Aug-10	193.0	EDC	Deed (DRC)	30-Mar-11

Notes:
1): Listed acres are approximate.
2): Date Federal Agency signed Quitclaim Deed.
CPS: Competitive Public Sale
DF: Dunn Field
DOI/NPS: Department of Interior/National Parks Service
DRC: Depot Redevelopment Corporation
EDC: Economic Development Conveyance
MI: Main Installation
PBC: Public Benefit Conveyance

TABLE 9
PROPERTY OWNERSHIP AND USE
2025 SITE MANAGMENT PLAN
Defense Depot Memphis, Tennessee

Property Owner	Acreage[1]	Use
Main Installation		
Memphis Depot TIC LLC and DP 107 LLC	250.6	Warehousing/logistics – Memphis Depot Industrial Park managed by Colliers International. Buildings are leased to multiple tenants.
Barnhart Crane & Rigging	143.8	Engineering, construction and maintenance of complex lifting and transportation equipment for heavy industry.
Memphis Depot Land LLC	69.9	Primarily undeveloped property for future warehousing/logistics or light industrial development.
City of Memphis	46.7	Recreation - Golf Course operated by Vietnam Veterans of America Chapter 1113.
Depot Owners Association, LLC	35.6	Memphis Depot Parkway and stormwater basins.
Supply Chain Solutions, LLC	8.2	Warehousing/logistics.
Alpha Omega Veterans Services	6.5	Veterans' housing and services.
Memphis Police Department	4.7	Airways Police Station.
Dunn Field		
Dunn Field Business Park, LLC	39.4	Undeveloped property for future warehousing/ logistics or light industrial development.
Army	26.2	Undeveloped.
City of Memphis	1.6	Realignment of Hayes Road.

Note:
1) Acreage is approximate

TABLE 10
FOLLOW-UP ACTIONS FROM FIFTH FIVE-YEAR REVIEW
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

OU #	Issue	Recommendation	Current Status	Current Implementation Status Description	Completion Date[1]
1	Investigation of increased COC concentrations in groundwater confirmed residual soil contamination and potential vapor intrusion hazard to future onsite workers and offsite residents.	Develop plan for additional sampling, through coordination with USEPA and TDEC, to evaluate potential exposure to offsite residents; conduct sampling, analysis and risk assessment; identify necessary changes to land use controls and other actions necessary to ensure future protectiveness; and issue report.	In progress	The *Dunn Field West Vapor Intrusion Sampling and Analysis Plan, Revision 1* was completed in January 2024 with approval by EPA and TDEC. The final round of soil vapor sampling will be conducted in January 2025. *The Draft Dunn Field West Vapor Intrusion Study Report* is planned for submittal in July 2025.	Target Date: 12/31/25
2, 3 & 4	Selected remedy component, EBT, has not shown expected progress toward the RAOs.	Complete the MI FFS and ROD Amendment for alternative remedial action to ensure protectiveness.	In progress	The FFS report was approved by TDEC in January 2023 and USEPA in August 2024. USEPA has stated additional comments were made during management review. The Draft RPP was submitted to TDEC and USEPA in July 2024, and USEPA comments were received in September 2024. Further work on the RPP and ROD Amendment will begin upon resolution of USEPA comments on the FFS.	Target Date: 1/11/27
2, 3 & 4	Additional lines of evidence are needed for an assessment of Vapor Intrusion (VI) risk.	Complete and implement the MI VI SAP to evaluate the VI pathway and issue the VI Study Report.	In progress	The *Main Installation Vapor Intrusion Sampling and Analysis Plan, Revision 1* was completed in May 2023 following approval by TDEC and concurrence by USEPA. The final round of active vapor and indoor air sampling will be conducted in November 2024, followed by preparation of the MI VI Study report. The *Draft Main Installation Vapor Intrusion Study Report* is planned for submittal in July 2025.	Target Date: 11/28/25
1, 2, 3 & 4	Potential presence of Per- and Polyfluoroalkyl Substances (PFAS).	Complete preliminary assessment and site inspection (PA/SI) to evaluate presence of PFAS and issue report.	Completed	The PA report was issued in August 2023 and the SI report was issued in November 2023. The reports were provided to USEPA and TDEC.The DDMT PFAS RI contract has been awarded; additional information will be provided to USEPA and TDEC as it becomes available.	Target Date: 11/2/23

Notes:

1) The target completion dates are planned dates for completion of the Dunn Field West VI Study Report in Recomendation 1, the MI ROD Amendment in Recommendation 2, the MI VI Sampling Report in Recommendation 3 and the DDMT PFAS PA/SI Report in Recommendation 4.

CSM: Conceptual Site Model
DoD: Department of Defense
EBT: enhanced bioremediation treatment
FFS: Focused Feasibility Study
LTM: long-term monitoring
RAOs: Remedial Action Objectives
ROD: Record of Decision
RPP: Revised Proposed Plan
SRI: Supplemental Remedial Investigation
VI: vapor intrusion
VMP: vapor monitoring point
TDEC: Tennessee Department of Environment and Conservation
USEPA: United States Environmental Protection Agency

TABLE 11
PRIMARY AND SECONDARY DOCUMENTS, FY25 THROUGH FY27
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis Tennessee

Activity	2025 SMP Date	Date Type
OU 1, Dunn Field		
Fiscal Year 2025	**1-Oct-2024**	
Draft Dunn Field West VI Study Report	13-Jun-2025	Target
Draft Dunn Field Explanation of Significant Differences	9-Aug-2025	Deadline
Fiscal Year 2026	**1-Oct-2025**	
Draft AS/SVE Rebound Monitoring Memorandum	29-Oct-2025	Target
Draft Final Dunn Field West VI Study Report	10-Dec-2025	Target
Draft Final Dunn Field Explanation of Significant Differences	5-Feb-2026	Deadline
Draft Final AS/SVE Rebound Monitoring Memorandum	27-Apr-2026	Target
Draft Dunn Field West Remedial Design	26-Jun-2026	Deadline
Fiscal Year 2027	**1-Oct-2026**	
Draft Final Dunn Field West Remedial Design	23-Dec-2026	Deadline
Draft Dunn Field West Remedial Action Work Plan	23-Mar-2027	Deadline
Draft Final Dunn Field West Remedial Action Work Plan	19-Sep-2027	Deadline
OU 2, 3 & 4, Main Installation		
Fiscal Year 2025	**1-Oct-2024**	
Draft Final MI FFS v.2	1-Apr-2025	Deadline
Draft MI VI Study Report	4-Jun-2025	Target
Draft Final Revised Proposed Plan (RPP)	30-Jul-2025	Deadline
Public Notice of RPP Public Meeting	4-Aug-2025	Target
Draft Sampling and Risk Screening Update	6-Aug-2025	Target
Fiscal Year 2026	**1-Oct-2025**	
Draft Final MI VI Study Report	1-Dec-2025	Target
Draft MI ROD Amendment	1-Dec-2025	Deadline
Draft Final Sampling and Risk Screening Update	2-Feb-2026	Target
Draft Final MI ROD Amendment	30-May-2026	Deadline
Fiscal Year 2027	**1-Oct-2026**	
Draft MI Remedial Design	21-Jul-2027	Deadline
Site-Wide		
Fiscal Year 2025	**1-Oct-2024**	
Final 2023 LTM Report	7-Oct-2024	Target
Draft 2025 Site Management Plan	21-Nov-2024	Deadline
Draft Final 2025 Site Management Plan	21-Jan-2025	Deadline
Draft 2024 LTM Report	29-Apr-2025	Target
Draft Final 2024 LTM Report	26-Oct-2025	Target
Draft 2025 Annual Site Inspection Report	29-Aug-2025	Target
Fiscal Year 2026	**1-Oct-2025**	
Draft 2026 Site Management Plan	1-Dec-2025	Deadline
Draft Final 2026 Site Management Plan	30-Jan-2026	Deadline
Draft 2025 LTM Report	28-Feb-2026	Target
Draft Fifth FYR Addendum	10-Mar-2026	Deadline
Draft Final 2025 LTM Report	27-Aug-2026	Target
Draft 2026 Annual Site Inspection Report	29-Aug-2026	Target
Draft Final Fifth FYR Addendum	6-Sep-2026	Deadline

TABLE 11
PRIMARY AND SECONDARY DOCUMENTS, FY25 THROUGH FY27
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis Tennessee

Fiscal Year 2027	**1-Oct-2026**	
Draft 2027 Site Management Plan	1-Dec-2026	Deadline
Draft Final 2027 Site Management Plan	30-Jan-2027	Deadline
Draft 2026 LTM Report	28-Feb-2027	Target
Draft Sixth FYR	3-Mar-2027	Deadline
Draft Final 2026 LTM Report	27-Aug-2027	Target
Draft 2027 Annual Site Inspection Report	29-Aug-2027	Target
Draft Final Sixth FYR	30-Aug-2027	Deadline

Notes:

1. Section XV. of the DDMT Federal Facilities Agreement (FFA) states DoD is responsible for issuing Primary and Secondary Documents to EPA and TDEC in accordance with the schedule provided in the latest approved SMP.

a. Deadlines are the scheduled submittal dates for Primary Documents; DoD may be assessed stipulated penalties for failure to meet a Deadline (FFA, Section XXIV).

b. Targets are the scheduled submittal dates for Secondary Documents; stipulated penalties do not apply to Targets.

c. Primary Documents are those reports, plans and studies that are major, discrete portions of the response action process.

d. Secondary Documents are those reports, plans and studies that are discrete portions of the Primary Documents and are typically input or feeder documents.

TABLE 12
FISCAL YEAR REQUIREMENTS
2025 SITE MANAGEMENT PLAN
Defense Depot Memphis, Tennessee

Description	2025	2026	2027	2028	2029	2030	Out Years	Total
Remedial Action Sites	$ 3,103,000	$ 2,134,000	$ 3,790,000	$ 1,321,000	$ 1,258,000	$ 1,258,000	$ 1,611,000	$ 14,475,000

Note: Planned funding is from the BRAC Fiscal Year 2024 Cost to Complete Estimates. Funding for 2025 has been awarded for ongoing task orders.

Figures

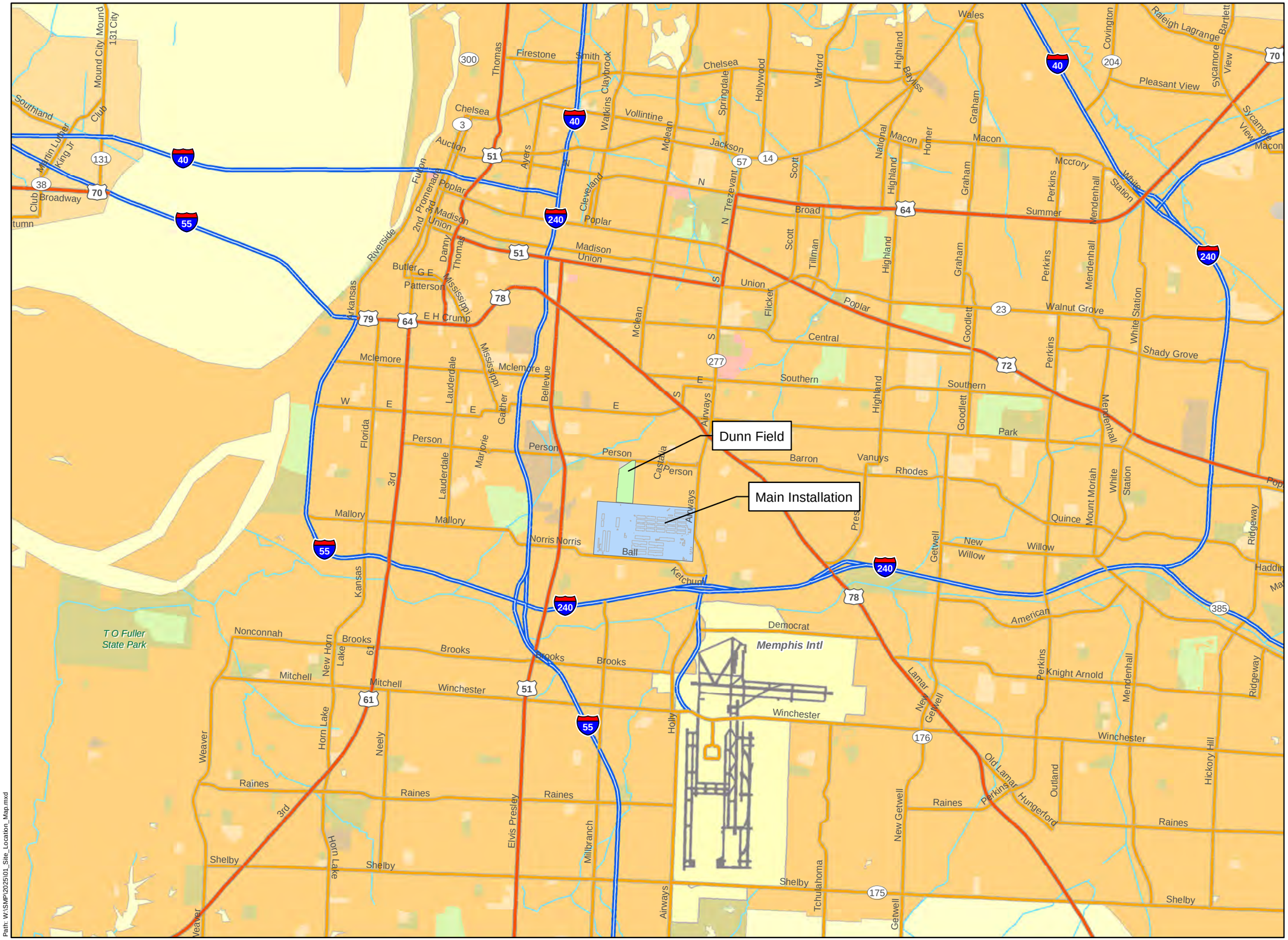


Figure 1

Site Location Map

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

N
W E
S

0 1 2
Miles

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

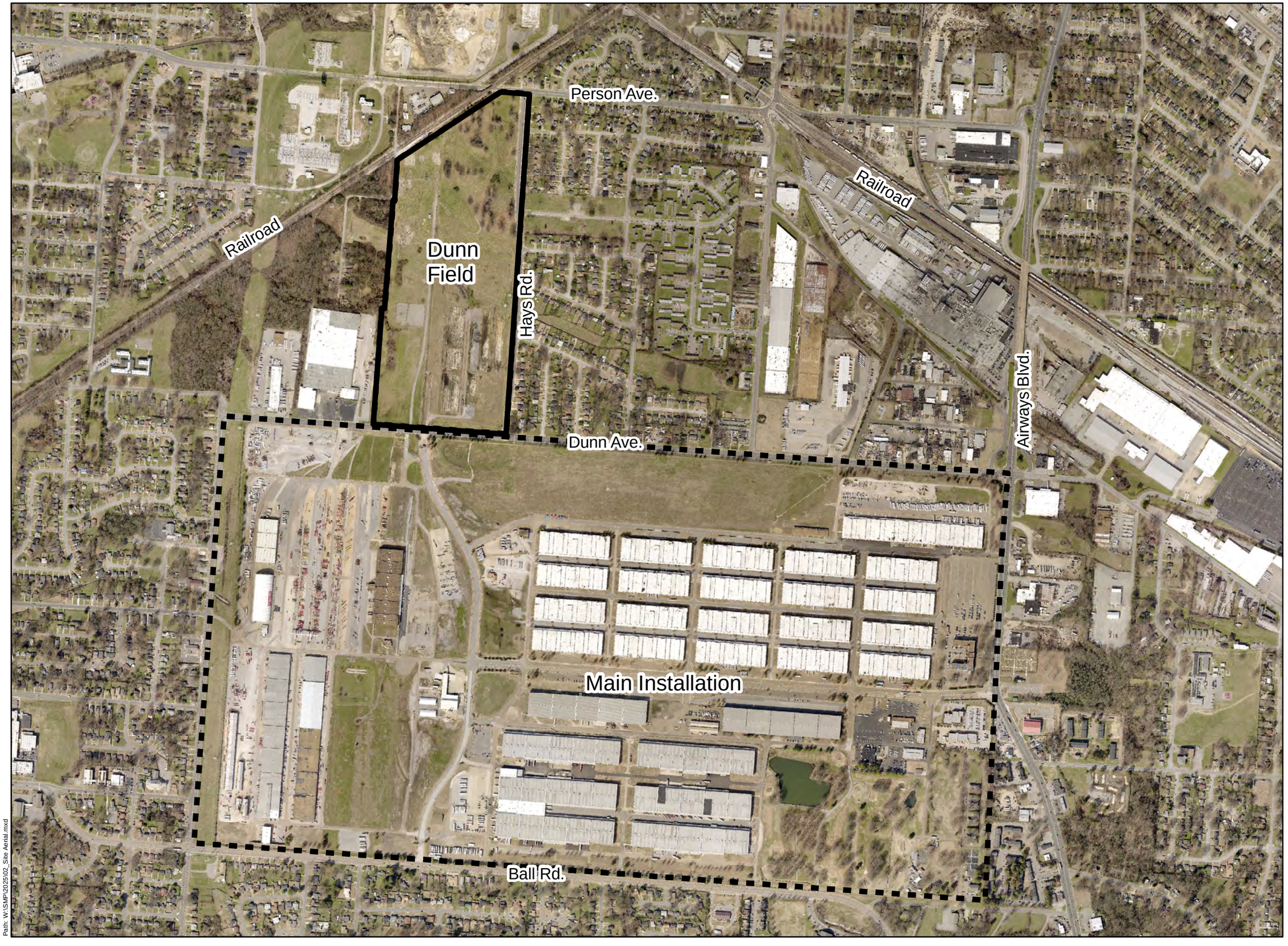


Figure 2

Site Aerial Photograph

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Main Installation Perimeter
- Dunn Field Perimeter

Notes:
1. Aerial date: 2019.
2. Source: Shelby County TN Regional GIS Department.

N
W E
S

0 500 1,000
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

Path: W:\SMP\2025\02_Site Aerial.mxd

Figure 3

Main Installation Unit Boundaries and Response Actions

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

OU-1
OU-2
OU-3
OU-4

FU-1
FU-2
FU-3
FU-4
FU-5
FU-6

Bldg. 949 Surface Soil Removal Action (2001)

Former PCP Dip Vat Soil Removal Action (1985)

Cafeteria (Bldg 274) Surface Soil Removal Action (1998)

BRAC Parcels 35 & 28 Surface Soil Removal Action (2000)

Building 873 Recoupment (1985)

Housing Area Surface Soil Removal Action (1998)

Hays St
Castalia
Dunn Ave
Airways Blvd
Perry Rd
W E Freeman
Memphis Depot Pkwy
Amido
Ball Rd
Vista
Sides St

925 949 835 865 995 970 972 1089 1086 1088 1090 1087 720 737 756 770 560 670 689 685 690 629 630 649 650 529 530 549 550 429 430 449 450 319 329 330 349 350 210 229 230 249 250 144 468 469 360 470 489 490 263 260 265 270 271 274

Legend

- Operable Units (OU-#)
- Past Response Actions
- Functional Unit Boundary (FU-#)
- Area Available for Unrestricted Use
- Buildings *490 - DDMT Assigned Number*
- Roads

N
W E
S

0 500 1,000
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

Path: W:\SMP\2025\03_MI Units and Actions.mxd



Path: W:\SMP\2025\04_DF Areas and Actions.mxd

Figure 4

Dunn Field
Area Designations, Removal Actions and Interim Remedial Action

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Original Dunn Field Boundary
- IRA Recovery Well
- IRA Discharge Conveyance Line
- Area Designations
- Removal Actions
- Unrestricted Use Area
- Paved Area
- Roads
- Railroad

N
W E
S

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

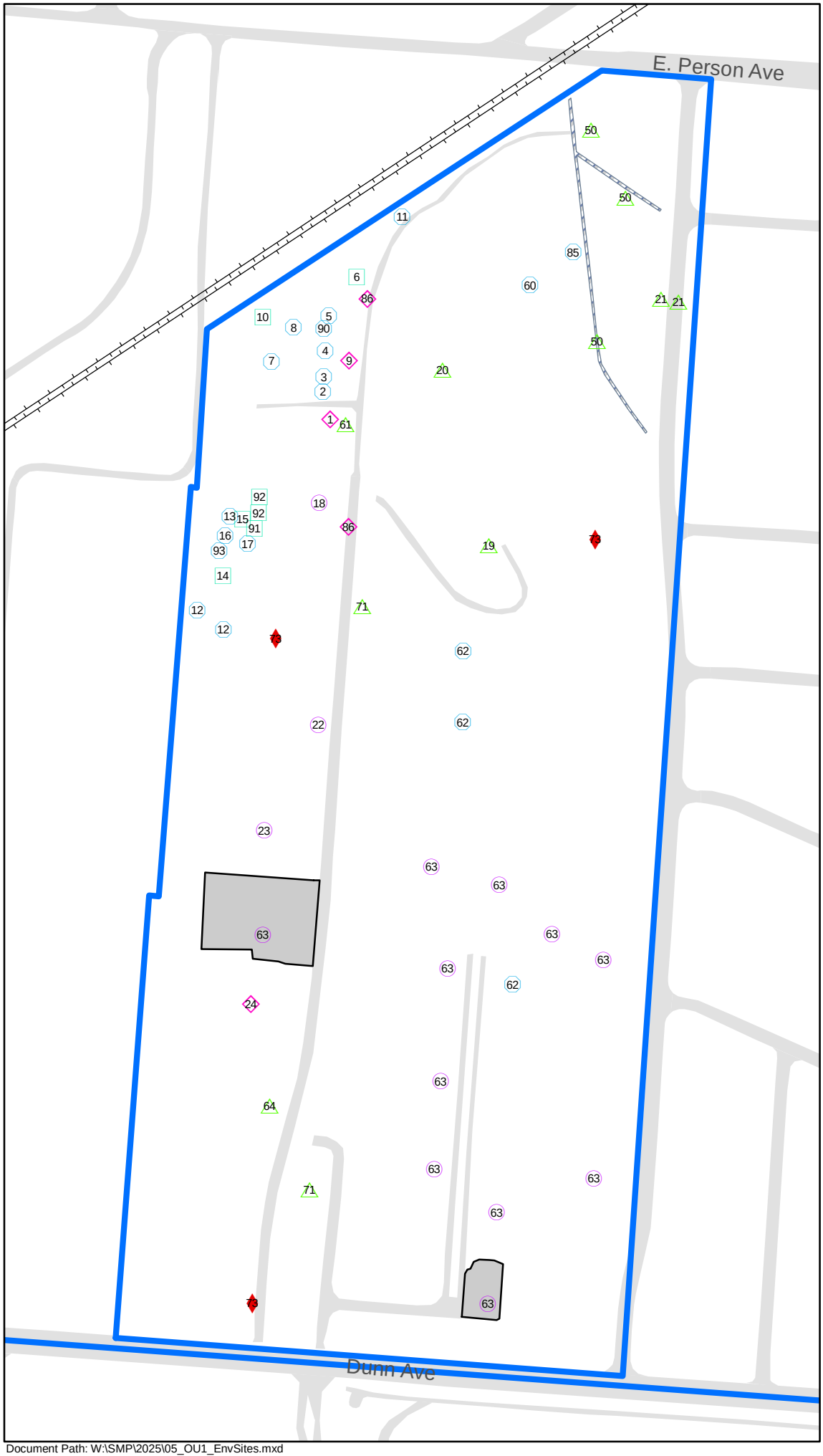


Figure 5

OU-1 Site Locations
Dunn Field

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

Environmental Sites

- Chemical Warfare Manag. Plan Site
- Proposed Early Removal Site
- Feasibility Study Site
- No Further Action Site
- Remedial Investigation Site
- Screening Site
- Operable Units
- Paved Area
- Concrete Ditches
- Railroad
- Roads

N
W E
S

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

Document Path: W:\SMP\2025\05_OU1_EnvSites.mxd



Figure 6

OU-2 Site Locations Main Installation Southwest Quadrant

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Proposed Early Removal Site
- Feasibility Study Site
- No Further Action Site
- Remedial Investigation Site
- Screening Site
- Operable Units
- Holding Pond
- Paved Area
- Gravel Storage Area
- Roads
- Buildings *490 - DDMT Assigned Number*

N
W E
S

0 200 400
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0

Path: W:\SMP\2025\06_OU2 Sites.mxd



Path: W:\SMP\2025\07_OU3 Sites.mxd

Figure 7

OU-3 Site Locations Main Installation Southeastern Watershed and Golf Course

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

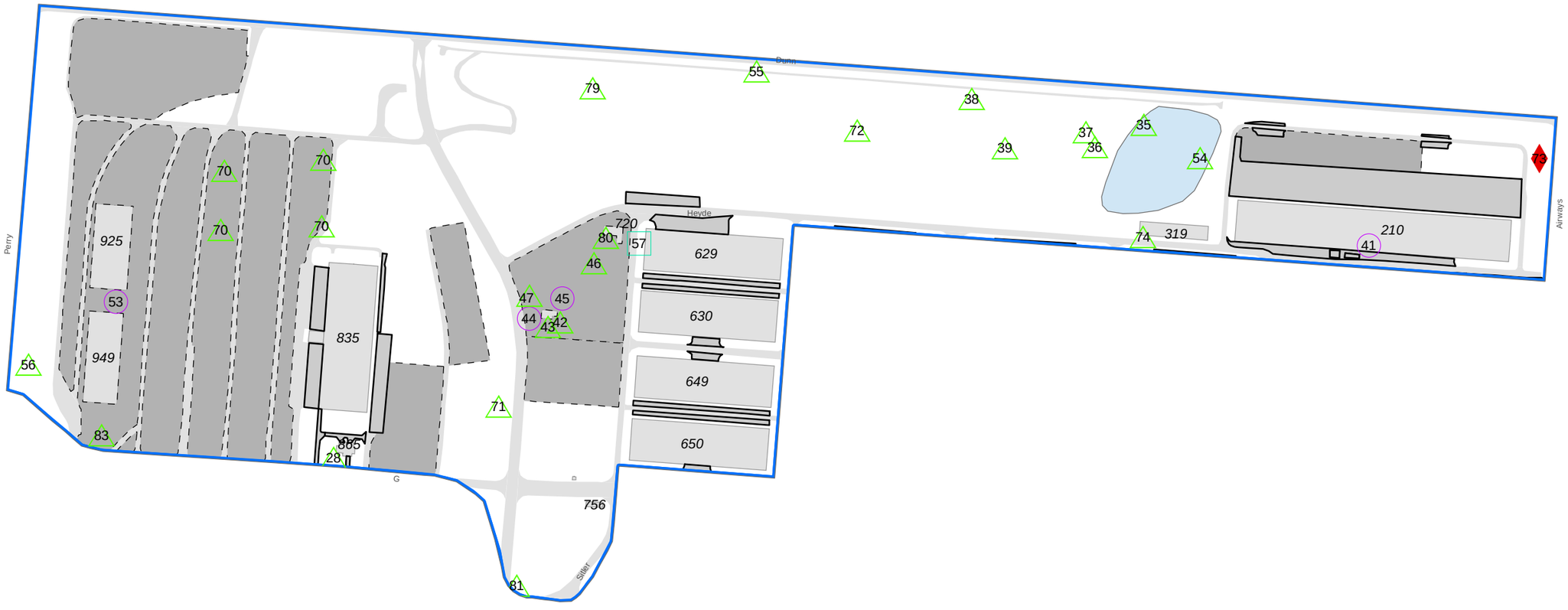
- Feasibility Study Site
- No Further Action Site
- Remedial Investigation Site
- Screening Site
- Operable Units
- Surface Water
- Paved Area
- Gravel Storage Area
- Roads
- Buildings *490 - DDMT Assigned Number*

N
W E
S

0 300 600
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0



Path: W:\SMP\2025\08_OU4 Sites.mxd

Figure 8

OU-4 Site Locations
Main Installation
North Central Area

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Feasibility Study Site
- No Further Action Site
- Remedial Investigation Site
- Screening Site
- Operable Units
- Holding Pond
- Paved Area
- Gravel Storage Area
- Roads
- Buildings *490 - DDMT Assigned Number*

N
W E
S

0 500 1,000
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 9/23/2024
Edition: Rev 0


Erosional Window
MW-169 209.98
MW-170 224.09
MW-171 222.71
MW-126 237.85
MW-153 222.17
MW-324 239.40
MW-129 240.76
MW-323 239.68
MW-130 241.32
MW-08 235.45
MW-322 240.06
MW-230 235.94
MW-07 233.95
MW-78 232.14
MW-28 242.07
MW-80 222.62
MW-246 223.43
MW-245 223.76
MW-243 224.00
MW-79 222.82
MW-158A 223.58
MW-158 223.61
MW-155 224.25
MW-242 224.79
MW-165A 223.38
MW-152 223.37
MW-165 223.35
MW-147 227.38
MW-31 228.29
MW-03 231.34
MW-220 232.02
MW-68 230.91
MW-180 231.61
MW-221 231.43
MW-241 225.36
MW-148 225.74
MW-76 227.16
MW-167 222.84
MW-247 225.53
MW-160 224.81
MW-69 230.93
MW-04 232.71
MW-151 223.71
MW-248 223.38
MW-150 224.87
MW-163 226.33
MW-190 227.00
MW-77 229.35
MW-134 231.69
MW-166 223.72
MW-166A 223.73
MW-44 223.23
MW-149 223.94
MW-70 231.09
MW-13 232.66
MW-224 231.97
MW-249 223.68
MW-157 225.67
MW-164 226.63
MW-144 226.59
MW-225 231.73
MW-222 231.89
MW-145 223.78
MW-54 224.55
MW-184 226.54
MW-226 232.01
MW-223 231.86
MW-235 214.65
MW-159 223.81
MW-244 223.91
MW-176 231.64
MW-87 231.65
MW-329 232.55
MW-182 218.83
MW-154 222.63
MW-71 230.83
MW-325 231.64
MW-06 231.86
MW-187 232.60
MW-91 231.57
MW-174 231.77
MW-15 231.67
MW-227 231.77
MW-57 231.17
MW-228 231.82
MW-58 229.72
MW-55 222.11
MW-19 216.36
MW-282 228.46
MW-308 216.97
MW-305 213.05
MW-317A 214.80
MW-286 214.34
MW-317B 214.70
MW-63B 215.98
MW-63A 215.87
MW-285 214.87
MW-287 225.15
MW-281 226.37
MW-258 228.23
MW-288 220.90
MW-289 228.76
MW-304 214.24
MW-207B 212.20
MW-318B 211.96
MW-318A 212.07
MW-2158 212.20
MW-103 233.35
MW-104 234.52
MW-263 237.06
MW-16 246.67
MW-260 230.67
MW-291 232.02
MW-306 233.64
MW-265 230.12
MW-283 235.71
MW-303 236.01
MW-280 235.02
MW-294 233.56
MW-295 226.92
MW-267 231.95
MW-266 232.97
MW-292 228.13
MW-88 229.54
MW-64 212.21
MW-218 216.24
MW-284 211.52
MW-94A 211.67
MW-307 211.06
MW-217 212.76
PMW85-01 217.29
PMW85-05 217.26
PMW92-03 218.29
PMW92-02 218.32
MW-85 217.17
DR2-5 218.61
DR2-1 221.97
DR2-2 229.32
DR2-6 216.48
DR2-3 217.44
DR2-4 219.05
MW-26 216.77
MW-92 218.45
MW-113 217.88
MW-96 217.77
MW-50 222.15
MW-310 244.12
MW-53 234.01
MW-25A 213.48
MW-313 213.68
MW-274 216.94
MW-52 213.60
MW-312 211.77
MW-275 212.49
MW-270 211.92
MW-301 212.37
MW-277 211.15
MW-93 210.78
MW-276 210.97
MW-24 211.36
MW-272 210.31
MW-23 214.96
MW-102B 216.39
MW-22 216.05
MW-314 217.30
MW-279 216.36
MW-316 217.36
MW-278 217.90
MW-269 217.25
MW-315 217.44
MW-66A 218.09
MW-235 214.65
PMW21-01 216.07
PMW21-02 215.42
PMW21-04 215.23
PMW21-03 215.29
MW-21 216.07
MW-219 216.45
DR1-8 215.25
DR1-7 213.62
DR1-3 213.98
DR1-2 214.68
DR1-1 215.33
DR1-1A 215.42
PMW21-05 214.17
MW-100B 215.18
PMW101-03B 214.56
PMW101-04B 214.50
PMW101-02B 215.07
PMW101-06B 214.68
PMW101-07B 214.83
DR1-4 214.80
DR1-5A 215.50
DR1-5 215.47
DR1-6 215.22
DR1-6A 215.23
MW-101 215.22
MW-216 214.35
MW-330 214.07
MW-298 212.65
MW-261 212.05
MW-297 211.75
MW-296 211.39
MW-271 210.69
MW-259 209.58
MW-203B 213.27
MW-204A 212.63
MW-204B 212.73
MW-210B 212.53
MW-205B 212.39
MW-197B 212.61
MW-98 212.17
MW-200 211.61
MW-206B 211.93
MW-206A 211.92
MW-39 210.02
MW-208B 211.78
MW-199B 212.17
MW-209B 212.15
MW-99 213.89
MW-198 212.70
MW-212 212.78
MW-142 213.64
MW-62 214.08
MW-213 214.77
MW-297 214.56
MW-143 214.97
MW-300 215.27
MW-19 216.36
Erosional Window
Heyde Ave
Troyer Ave
Danielson Pl
Memphis Depot Pkwy
Behrke
Dunn Ave
Ball Rd
Amido
Airways Blvd
Fillmore
Freemont
Carver Ave
Ferrell Ave
E. Person Ave
Wabash Ave
S McLean Blvd
Menager Rd
Elliston
Sparks
Cane
Morley
Norris
Ravern
Mallory
Dodia
Caruso
Kingsview
Peabody
Manchester
Prentiss
Perry Rd
Airways Blvd
Hicks St
Stahl St
Berkshire St
Lapsley
Cedars
Carolina Dr
W Dakota Cir
E Dakota Cir
Wabash
Doris
Silver
Dunlap
Durfee
Stark
Ravern
Sparks
Morley
Cane
Elliston
Mallory
Norris
Dodia
Caruso
Kingsview
Peabody
Manchester
Prentiss
Perry Rd
Airways Blvd
Fillmore
Freemont
Carver Ave
Ferrell Ave
Wabash Ave
S McLean Blvd
E. Person Ave
Menager Rd
Dunn Ave
Ball Rd
Amido
Behrke
Danielton Pl
Memphis Depot Pkwy
Troyer Ave
Heyde Ave
Hicks St
Stahl St
Berkshire St
Lapsley
Cedars
Carolina Dr
W Dakota Cir
E Dakota Cir
Legend
Fluvial Aquifer Well
Upper Claiborne
Groundwater Flow Direction
Potentiometric surface of the Fluvial Aquifer 1-ft. contour
Potentiometric surface of the Fluvial Aquifer 5-ft. contour
Potentiometric surface extrapolation
Property Boundary
Roads
Buildings
Clay Elevation Exceeds Fluvial Aquifer Groundwater Elevation
MW-03 231.34 Fluvial Aquifer, used for groundwater contours
MW-169 209.98 Intermediate/ Upper Claiborne Aquifer, used for groundwater contours
Groundwater elevations are in ft, NAVD
Figure 9
Fluvial Deposits Aquifer Groundwater Elevations - April 2024
2025 Site Management Plan
Defense Depot Memphis, Tennessee
N
W
E
S
0
250
500
Feet
Projection: NAD 1927 StatePlane Tennessee Units: Feet, Elevation Units: Feet , NAVD88
Date: 9/23/2024
Edition: Rev 0
HDR

Figure 10

Dunn Field Disposal Sites, Source Areas and Off-Depot Groundwater Remedial Actions

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

DS 4/90 (2005)
DS10 (2005)
EISR Treatment Area
DS 3 (2006)
Off Depot Groundwater Remedial Action
DS 13 (2005)
Treatment Area 2
MW-87
Treatment Area 3
Excavation TA-3
DS 64 (IA Site 31) (2005)
E. Person Ave
Rozelle
S McLean Blvd
Silver
Rayner
Ragan
Menager Rd
Westmere
Carver Ave
State St
Barksdale St
Hays St
Hearst Ave
State
Barksdale
Ferber Ave
Freemont
S Barksdale St
Dunn Ave

Legend

- Original Dunn Field Boundary
- Fluvial SVE Conveyance Line
- Disposal Sites Excavation Area
- Off Site Treatment Areas
- Off Depot Air Sparge Area
- EISR Treatment Area
- *Loess Excavation Areas*
- *Loess Thermal-Enhanced SVE Treatment Areas*
- Fluvial SVE Well 60-foot radius of influence
- Unrestricted Use Area from ROD
- Buildings
- Paved Area
- Roads
- Railroad

TA: Treatment Area
DS: Disposal Site
EISR: Early Implementation-Selected Remedy

N
W E
S

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Path: W:\SMP\2025\10_DF Remedial Actions.mxd

Figure 11

Dunn Field
Fluvial SVE System

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Abandoned in 2024
- SVE Well *(Soil Vapor Extraction)*
- VMP *(Vapor Monitoring Point)*
- Monitoring Well Screened in the Fluvial Aquifer
- Monitor Well Screened in the Intermediate Aquifer
- Current Federal Property Boundary
- Conveyance Line
- Control Building
- Concrete Pad
- 60-foot Radius of Influence

N E S W

0 100 200
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Path: W:\SMP\2025\11_FluvialSVESystem.mxd

Figure 12

Off Depot Groundwater Remedial Action AS/SVE System

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

MW-152
Ragan
MW-158A
VMP-06A/B
MW-158
MW-165
MW-165A
MW-246
MW-245
MW-243
VMP-07A/B
Menager Rd
SVE-03
SVE-04
SVE-05
SVE-06
SVE-07
SVE-10
SVE-09
SVE-11
SVE-12
MW-237
VMP-05A/B
VMP-02A/B
MW-160
MW-241
VMP-01A/B
MW-148
Rozelle St
MW-244
MW-155
VMP-04A/B
MW-247
ODSVE-02
VMP-09A/B
MW-159
MW-151
SVE-01
VMP-10A/B
VMP-08A/B
SVE-08
MW-242
VMP-03A/B
MW-166
MW-166A
MW-251
MW-150
MW-54
MW-149

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- AS Location (1/2 time)
- AS Location (full time)
- AS Location (closed)
- New AS Location (full time)
- VMP Location
- SVE Location
- Conveyance Lines
- New Conveyance Line
- SVE Compound
- Roads
- Railroad
- Parcel Boundary

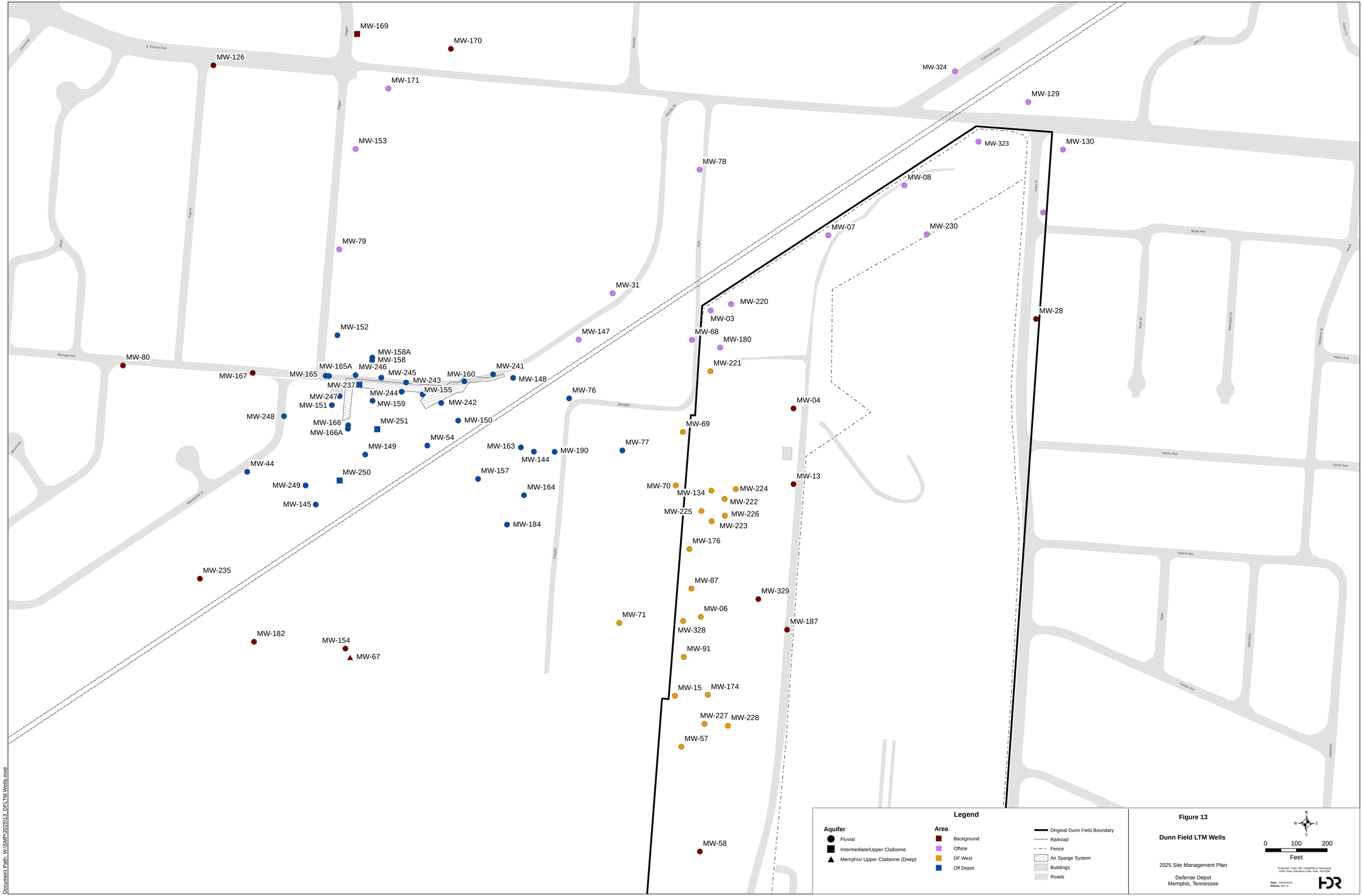
N
W E
S

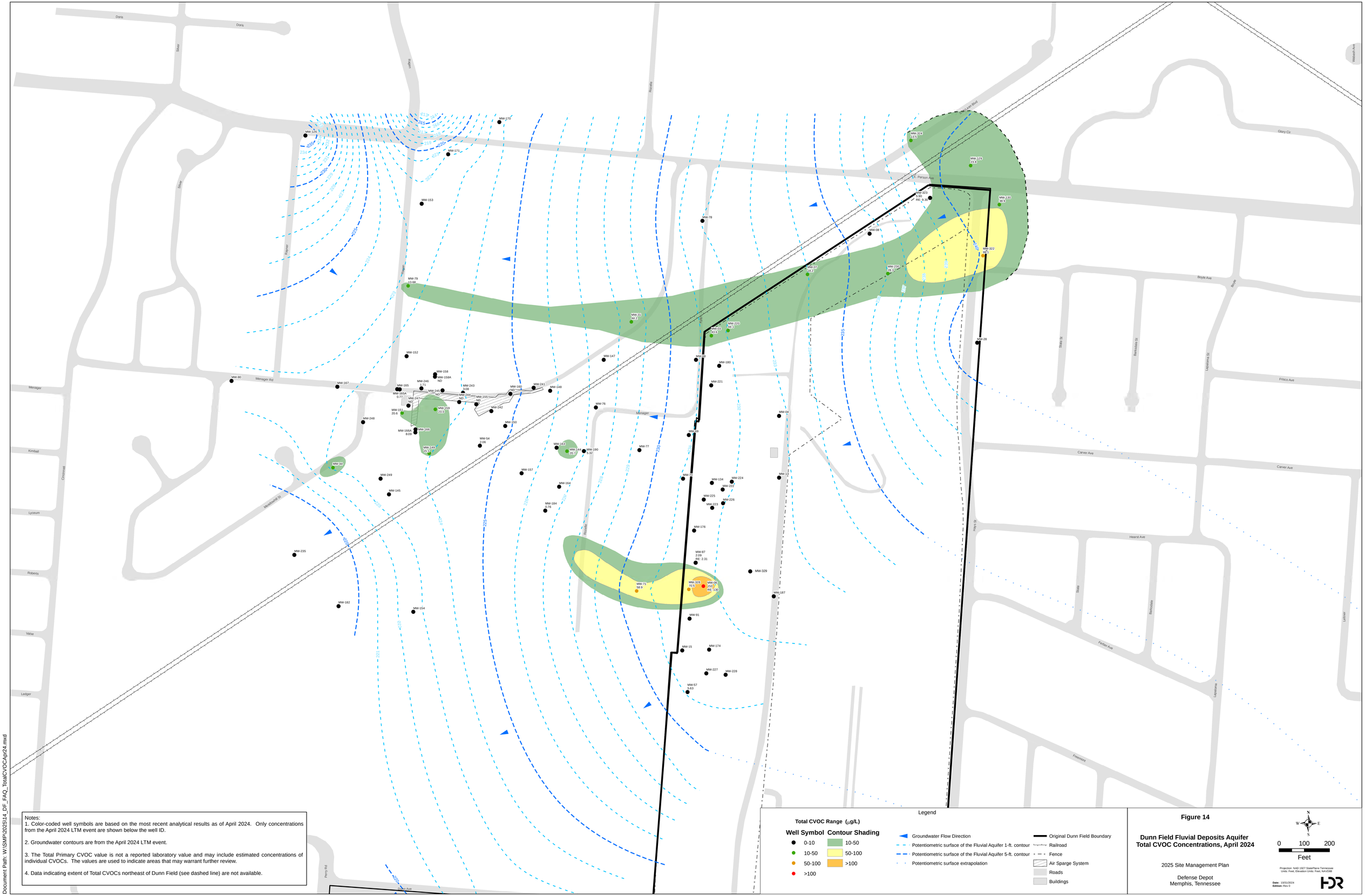
0 25 50
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet , mean sea level

Date: 10/31/2024
Edition: Rev 0

Path: W:\SMP\2025\12_OD_GW_Remedial Action AS-SVE System.mxd


MW-169
MW-170
MW-126
MW-171
MW-153
MW-79
MW-80
MW-167
MW-152
MW-158A
MW-158
MW-165
MW-165A
MW-246
MW-245
MW-243
MW-237
MW-247
MW-244
MW-155
MW-159
MW-242
MW-241
MW-160
MW-148
MW-151
MW-248
MW-166
MW-166A
MW-251
MW-150
MW-54
MW-149
MW-44
MW-250
MW-249
MW-145
MW-157
MW-164
MW-184
MW-163
MW-144
MW-190
MW-77
MW-76
MW-147
MW-31
MW-235
MW-182
MW-154
MW-67
MW-324
MW-129
MW-323
MW-130
MW-78
MW-08
MW-07
MW-230
MW-220
MW-03
MW-68
MW-180
MW-221
MW-04
MW-69
MW-13
MW-70
MW-134
MW-224
MW-222
MW-225
MW-226
MW-223
MW-176
MW-87
MW-329
MW-06
MW-71
MW-328
MW-187
MW-91
MW-15
MW-174
MW-227
MW-228
MW-57
MW-58
MW-28
E. Person Ave
Ragon
Rozelle
Rozelle St
Rayner
Silver
Kyle
Hays St
S McLean Blvd
Glory Cir
Corn Cir
Boyle Ave
Boyle
State St
Berkshire St
Oklahoma St
Frisco Ave
Carver Ave
Hearst Ave
Ferber Ave
Lapsonna
Berkshire
Menager Rd
Menager
Westmore
Mesopotamia St
Rozelle
Legend
Aquifer
Fluvial
Intermediate/Upper Claiborne
Memphis/ Upper Claiborne (Deep)
Area
Background
Offsite
DF West
Off Depot
Original Dunn Field Boundary
Railroad
Fence
Air Sparge System
Buildings
Roads
Figure 13
Dunn Field LTM Wells
2025 Site Management Plan
Defense Depot
Memphis, Tennessee
N
W
E
S
0
100
200
Feet
Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88
Date: 10/31/2024
Edition: Rev 0
Document Path: W:\SMP\2025\13_DFLTM Wells.mxd



Notes:
1. Color-coded well symbols are based on the most recent analytical results as of April 2024. Only concentrations from the April 2024 LTM event are shown below the well ID.

2. Groundwater contours are from the April 2024 LTM event.

3. The Total Primary CVOC value is not a reported laboratory value and may include estimated concentrations of individual CVOCs. The values are used to indicate areas that may warrant further review.

4. Data indicating extent of Total CVOCs northeast of Dunn Field (see dashed line) are not available.

Legend

Total CVOC Range (µg/L)

Well Symbol
- 0-10
- 10-50
- 50-100
- >100

Contour Shading
- 10-50
- 50-100
- >100

- Groundwater Flow Direction
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface extrapolation
- Original Dunn Field Boundary
- Railroad
- Fence
- Air Sparge System
- Roads
- Buildings

Figure 14

Dunn Field Fluvial Deposits Aquifer
Total CVOC Concentrations, April 2024

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

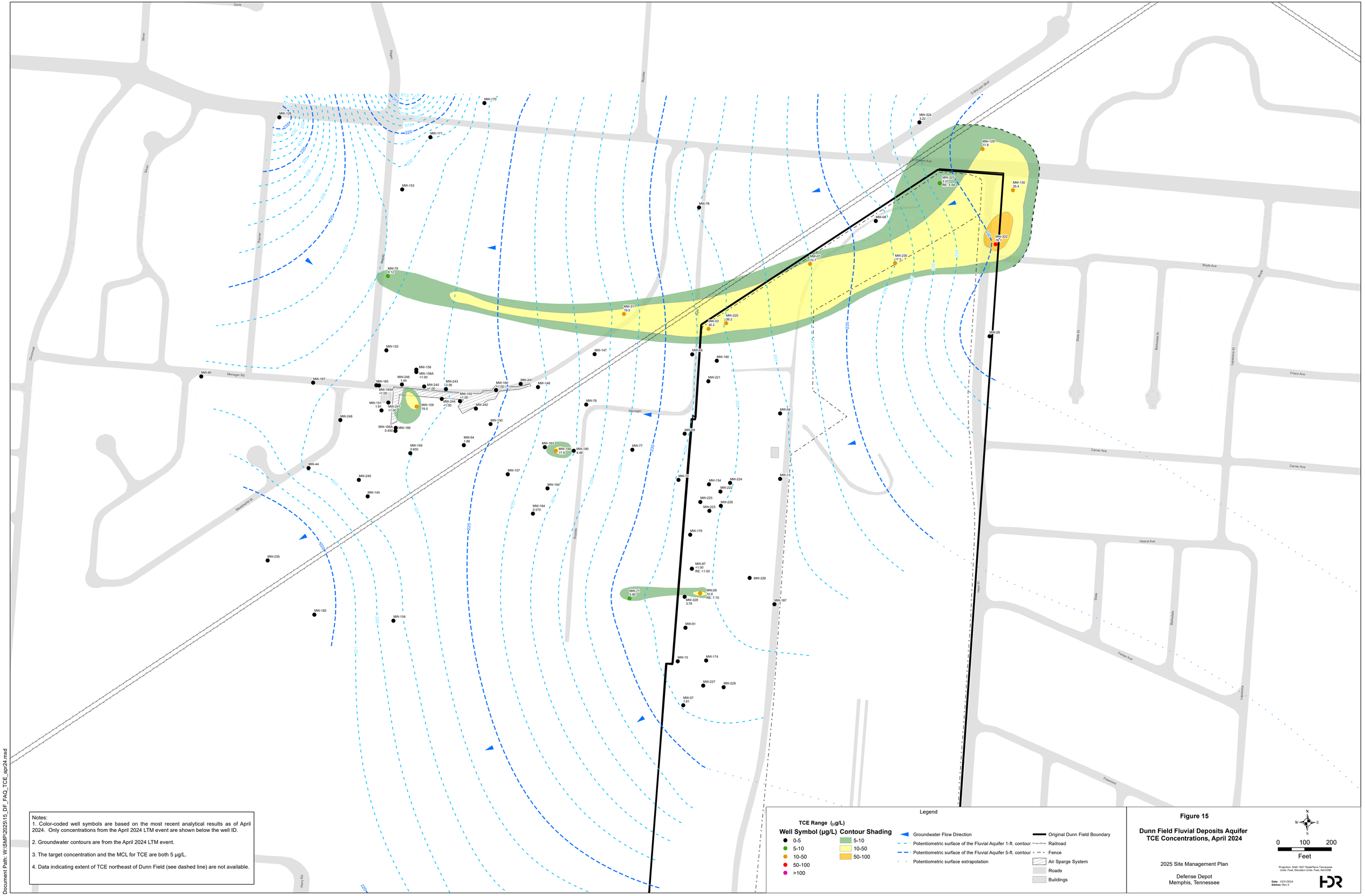
N
W E
S

0 100 200
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Document Path: W:\SMP\2025\14_DF_FAQ_TotalCVOCApr24.mxd



Notes:
1. Color-coded well symbols are based on the most recent analytical results as of April 2024. Only concentrations from the April 2024 LTM event are shown below the well ID.

2. Groundwater contours are from the April 2024 LTM event.

3. The target concentration and the MCL for TCE are both 5 µg/L.

4. Data indicating extent of TCE northeast of Dunn Field (see dashed line) are not available.

Legend

TCE Range (µg/L)

Well Symbol (µg/L)
- 0-5
- 5-10
- 10-50
- 50-100
- >100

Contour Shading
- 5-10
- 10-50
- 50-100

- Groundwater Flow Direction
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface extrapolation
- Original Dunn Field Boundary
- Railroad
- Fence
- Air Sparge System
- Roads
- Buildings

Figure 15

Dunn Field Fluvial Deposits Aquifer TCE Concentrations, April 2024

2025 Site Management Plan

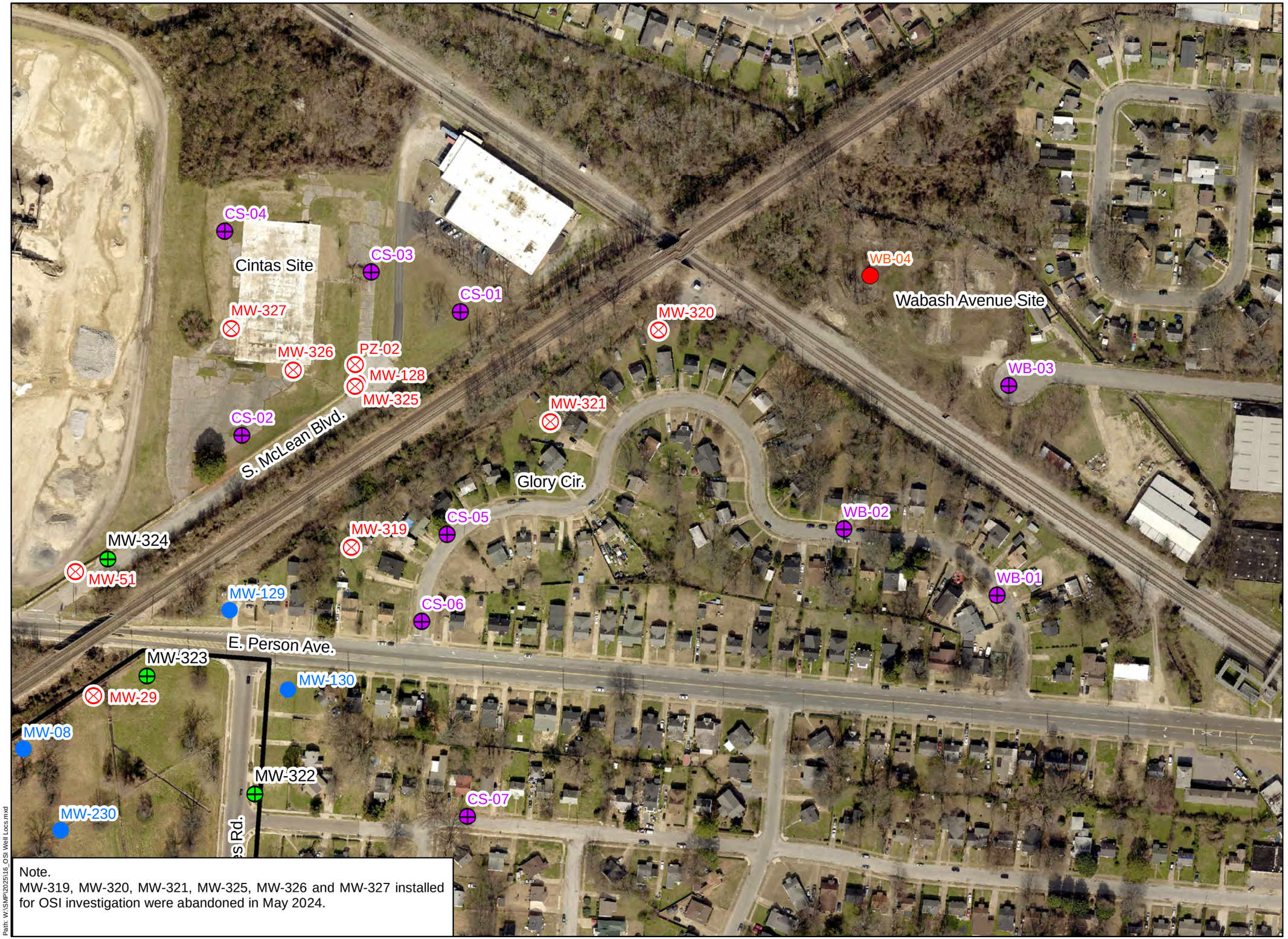
Defense Depot
Memphis, Tennessee

0 100 200
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Document Path: W:\SMP\2025\15_DF_FAQ_TCE_apr24.mxd



Path: W:\SMP\2025\16_OSI Well Locs.mxd

Figure 16

Offsite Well Locations

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

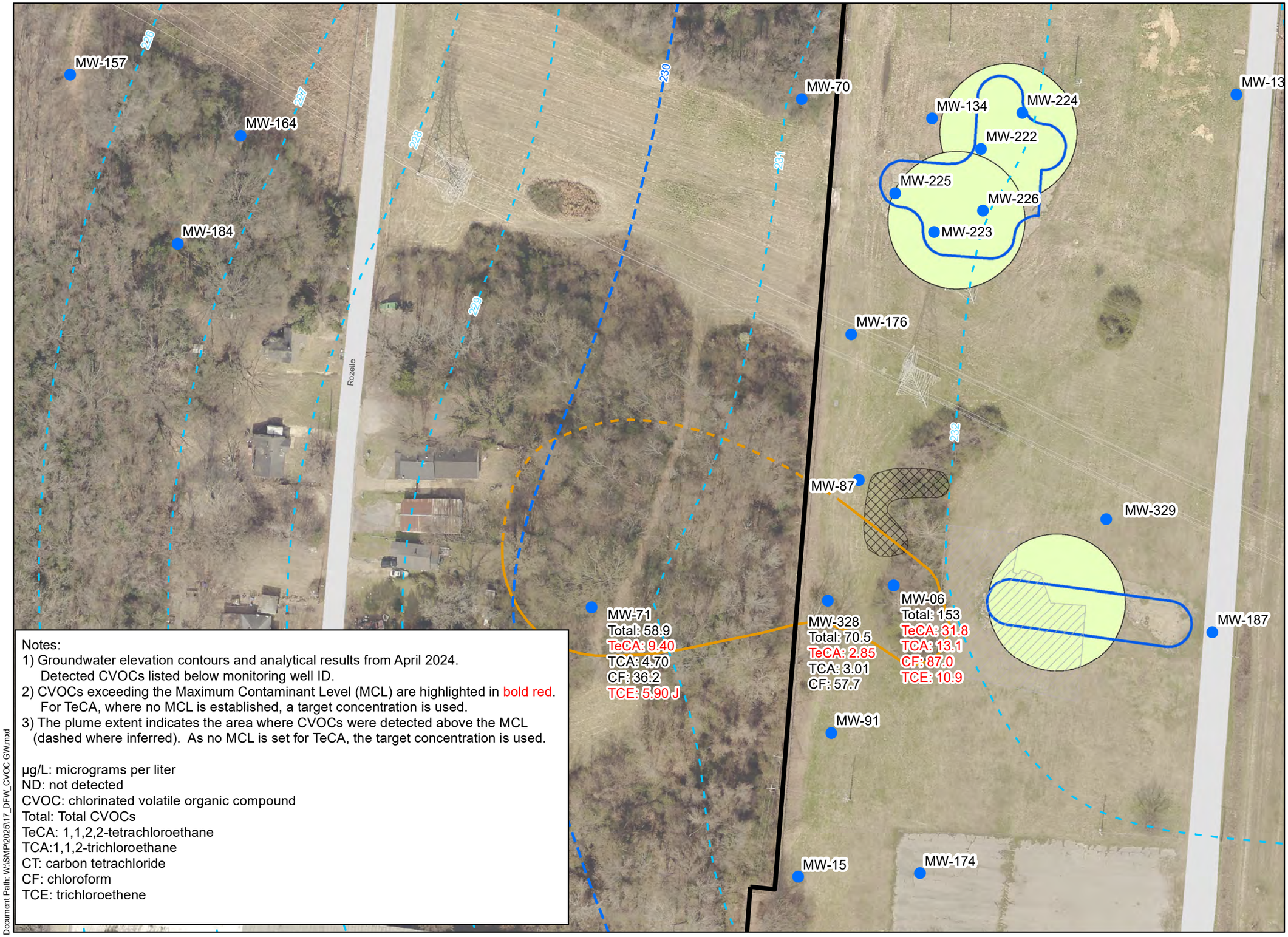
- Abandoned Well
- OSI Well
- LTM Well
- TDEC Well
- Unusable Well
- Original Dunn Field Boundary

N
W E
S

0 100 200
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0



Notes:
1) Groundwater elevation contours and analytical results from April 2024.
   Detected CVOCs listed below monitoring well ID.
2) CVOCs exceeding the Maximum Contaminant Level (MCL) are highlighted in bold red.
   For TeCA, where no MCL is established, a target concentration is used.
3) The plume extent indicates the area where CVOCs were detected above the MCL (dashed where inferred). As no MCL is set for TeCA, the target concentration is used.

µg/L: micrograms per liter
ND: not detected
CVOC: chlorinated volatile organic compound
Total: Total CVOCs
TeCA: 1,1,2,2-tetrachloroethane
TCA:1,1,2-trichloroethane
CT: carbon tetrachloride
CF: chloroform
TCE: trichloroethene

Document Path: W:\SMP2025\17_DFW_CVOC GW.mxd

Figure 17

CVOC Concentrations in Groundwater, Dunn Field West

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

Aquifer

- FDAQ LTM Well
- Plume Extent
- Inferred Plume Extent
- Fluvial Aquifer 1-ft. contour
- Fluvial Aquifer 5-ft. contour
- Original Dunn Field Boundary
- Soil Contamination Area
- Roads
- Loess Excavation Areas
- In Situ Thermal Desorption Treatment Areas
- Fluvial SVE Well - 60-foot radius of influence

N
W E
S

0 50 100
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 11/1/2024
Edition: Rev 0

Figure 18

VISL Exceedances in Vapor Samples, Dunn Field West

2025 Site Managment Plan

Defense Depot
Memphis, Tennessee

MW-157
MW-164
MW-184
MW-70
TCE: 1.30
MW-134
MW-224
MW-13
MW-225
MW-226
MW-223
MW-176
VMP-28S
No VISL Exceedances
VMP-28D
CF: 5.9
AC: 1.7 J
VMP-6D
VC: 760 J
BZ: 6,700
CX: 37,000
EBZ: 910 J
HX: 25,000
nH: 7,700
VMP-6S
BZ: 100
MW-87
VMP-27S
No VISL Exceedances
VMP-26S
No VISL Exceedances
VMP-7S
No VISL Exceedances
MW-329
VMP-27D
CF: 21
TCE: 8.7
VMP-26D
TeCA: 8.7 J
CF: 4.9 J
TCE: 59
1-3B: 230
BZ: 32
PrP: 11,000
VMP-7D
DCE: 880 J
cDCE: 58,000
PCE: 2,900
TCE: 9,400
VC: 200,000
BZ: 2,700
CX: 150,000
EBZ: 340 J
HX: 140,000
nH: 15,000
MW-71
TeCA: 9.40
TCA: 4.70
CF: 36.2
TCE: 5.90 J
MW-328
CF: 57.7
MW-06
TCA: 13.1
CF: 87
TCE: 10.9
MW-187
MW-91
Rozelle

Notes:
1) Groundwater analytical results and elevation contours are from April 2024.
2) Groundwater results detected above commercial or residential groundwater VISL presented in bold/red.
3) Soil vapor results detected above commercial or residential soil vapor VISL presented in bold/red.
4) Groundwater VISL calculated using site specific 0.0005 groundwater to indoor air attenuation factor and 20.3 C groundwater temperature.

1-3B: 1,3-Butadiene	nH: n-Heptane
AC: Acrolein	PCE: tetrachloroethene
BZ: Benzene	PrP: Propene
CF: chloroform	TCE: trichloroethene
CX: cyclohexane	TCA:1,1,2-trichloroethane
cDCE: cis-1,2-dichloroethene	TeCA: 1,1,2,2-tetrachloroethane
DCE: 1,1-Dichloroethene	VC: vinyl chloride
EBZ: ethylbenzene	
HX: Hexane	

Legend

Aquifer

- FDAQ LTM Well
- Vapor Sample Location
- Fluvial Aquifer 1-ft. contour
- Fluvial Aquifer 5-ft. contour
- Original Dunn Field Boundary
- Roads
- Loess Excavation Areas
- In Situ Thermal Desorption Treatment Areas
- Fluvial SVE Well - 60-foot radius of influence

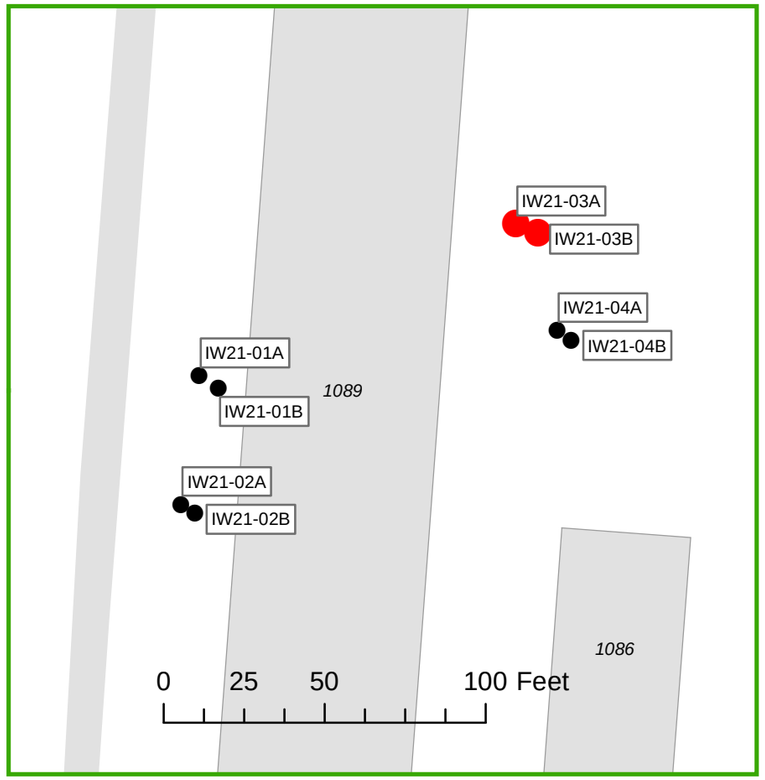
N
W E
S

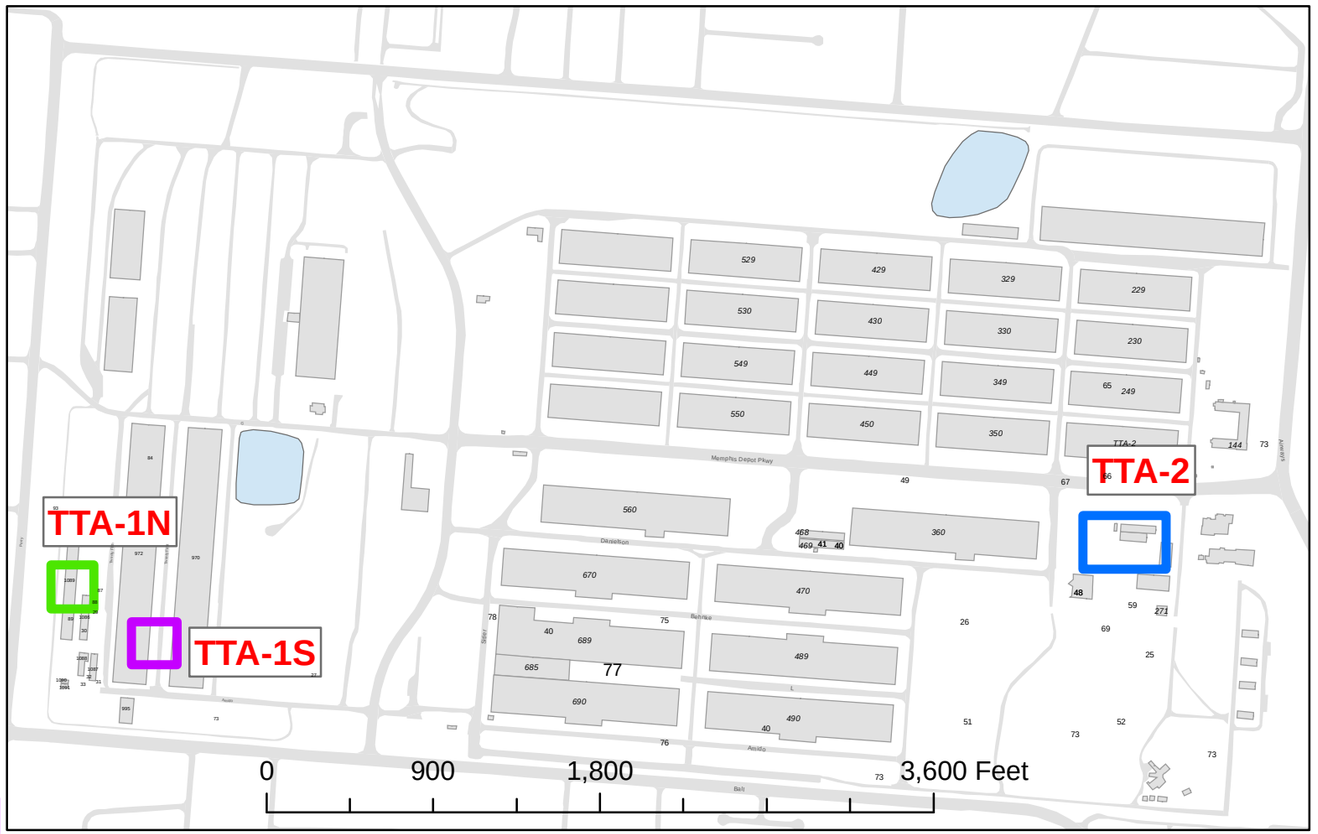
0 75 150
Feet

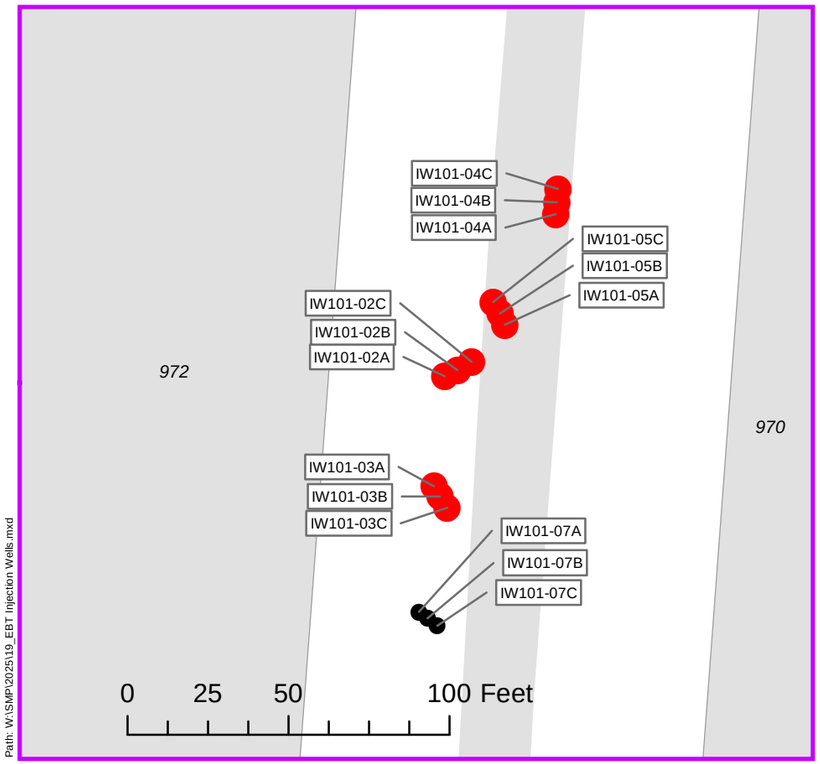
Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 11/18/2024
Edition: Rev 0

Document Path: W:\SMP\2025\18_Vapor Sample Locationsrev2.mxd







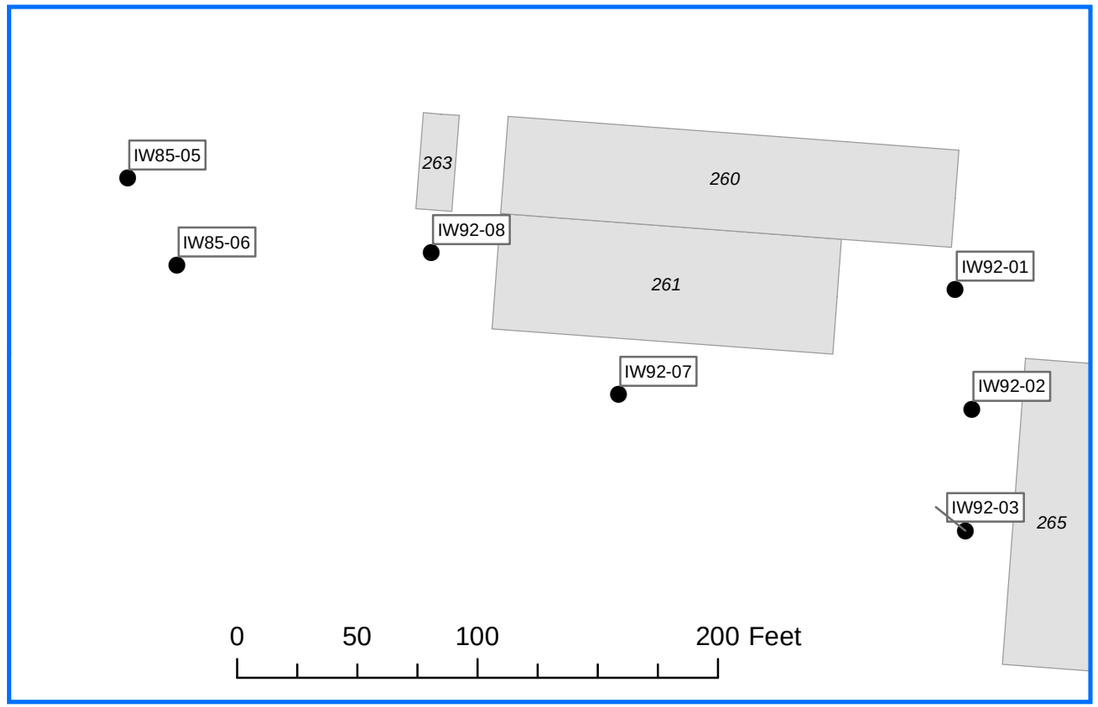


Figure 19

EBT Injection Wells

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

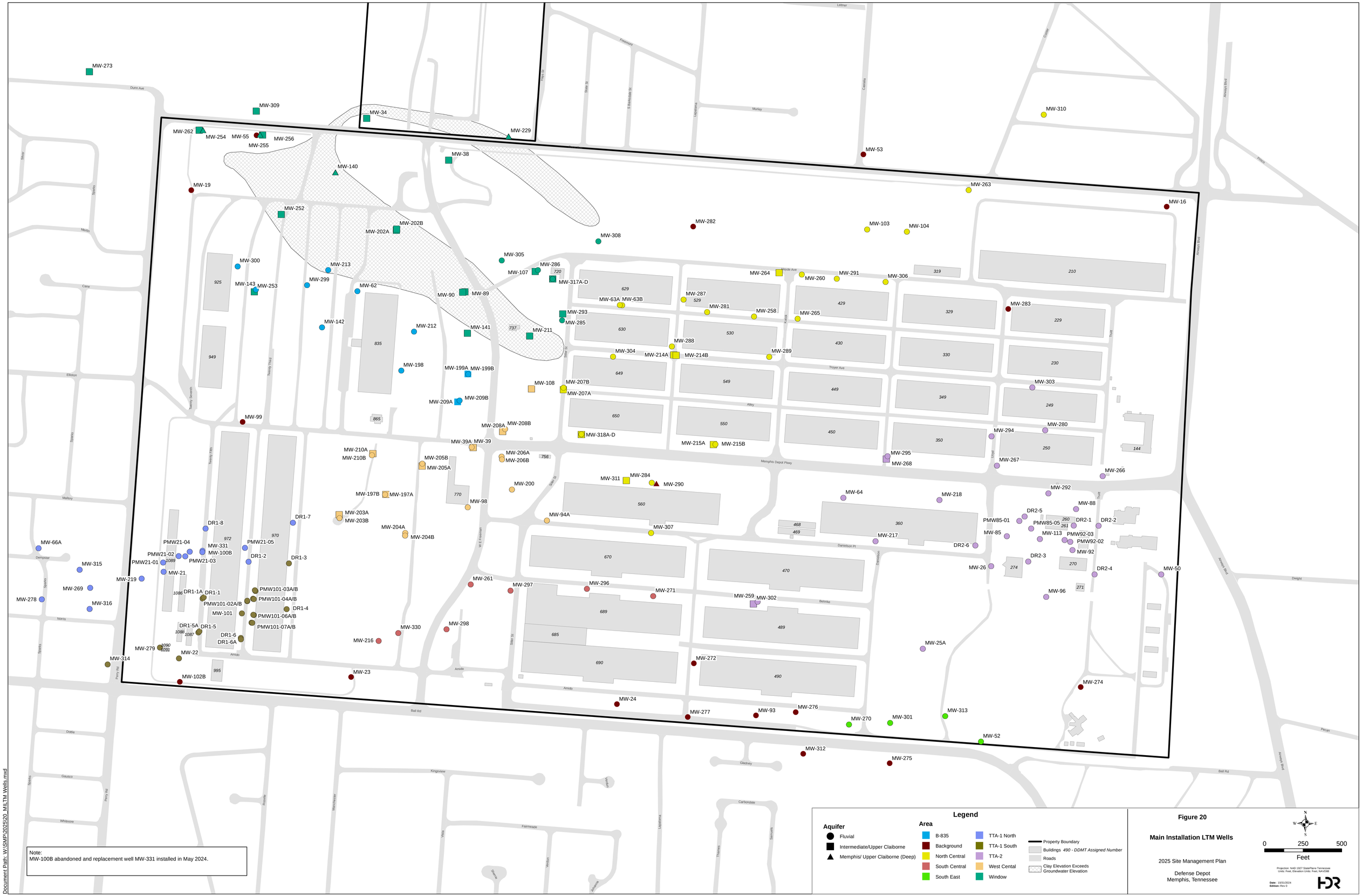
- Injection Wells Abandoned in 2024
- Remaining Injection Wells
- Roads
- Buildings *490 - DDMT Assigned Number*

N
W E
S

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 1/20/2025
Edition: Rev 0

Path: W:\SMP\2025\19_EBT Injection Wells.mxd


MW-273
MW-309
MW-34
MW-262
MW-254
MW-55
MW-256
MW-255
MW-229
MW-38
MW-140
MW-19
MW-252
MW-202B
MW-202A
MW-308
MW-282
MW-53
MW-310
MW-263
MW-16
MW-103
MW-104
MW-305
MW-286
MW-107
MW-317A-D
MW-264
MW-260
MW-291
MW-306
MW-300
MW-213
MW-143
MW-253
MW-299
MW-62
MW-90
MW-89
MW-63A
MW-63B
MW-287
MW-281
MW-258
MW-265
MW-283
MW-293
MW-285
MW-142
MW-212
MW-141
MW-211
MW-288
MW-304
MW-214A
MW-214B
MW-289
MW-198
MW-199A
MW-199B
MW-108
MW-207B
MW-207A
MW-303
MW-209A
MW-209B
MW-99
MW-208A
MW-208B
MW-318A-D
MW-280
MW-294
MW-39A
MW-39
MW-215A
MW-215B
MW-210A
MW-210B
MW-205B
MW-205A
MW-206A
MW-206B
MW-295
MW-268
MW-267
MW-266
MW-311
MW-284
MW-290
MW-200
MW-292
MW-64
MW-218
MW-88
MW-197B
MW-197A
MW-98
MW-203A
MW-203B
MW-204A
MW-204B
MW-94A
MW-307
DR2-5
PMW85-01
PMW85-05
DR2-1
DR2-2
MW-85
MW-113
PMW92-03
PMW92-02
MW-92
DR1-8
DR1-7
MW-66A
PMW21-04
PMW21-05
MW-331
MW-100B
PMW21-02
PMW21-01
PMW21-03
DR1-2
DR1-3
MW-315
MW-21
MW-219
MW-269
MW-278
MW-316
DR1-1A
DR1-1
PMW101-03A/B
PMW101-04A/B
DR1-4
MW-101
PMW101-06A/B
PMW101-07A/B
DR1-5A
DR1-5
DR1-6
DR1-6A
MW-279
MW-22
MW-314
MW-102B
MW-23
MW-330
MW-216
MW-298
MW-261
MW-297
MW-296
MW-271
MW-259
MW-302
MW-217
DR2-6
MW-26
DR2-3
DR2-4
MW-50
MW-96
MW-25A
MW-272
MW-24
MW-277
MW-93
MW-276
MW-270
MW-301
MW-313
MW-52
MW-274
MW-312
MW-275
925
949
835
865
995
649
650
629
630
737
720
529
549
550
689
685
690
560
670
468
469
360
470
489
490
319
210
429
329
229
530
430
330
230
449
349
249
450
350
250
144
756
770
972
970
1089
1086
1088
1087
1090
1091
Twenty Third
Twenty Seventh
Twenty Fifth
Elliston
Cane
Mallory
Dempster
Norris
Dottie
Galusce
Whitmore
Kingsview
Gladney
Carbondale
Fairmeade
Ball Rd
Amido
Alley
Troyer Ave
Memphis Depot Pkwy
Danielson Pl
Behnke
Florida
Thrift
Dwight
Pecan
Lamar
Sparks
Perry Rd
Riverdale
Manchester
Vista
Median
Jackson
Lagoona
Thames
Semmes
Steele St
H E Freeman
Lepanto
Murley
Fremont
Lettner
Cielito
Cielito
Avenue Blvd
Note:
MW-100B abandoned and replacement well MW-331 installed in May 2024.
Legend
Aquifer
Fluvial
Intermediate/Upper Claiborne
Memphis/ Upper Claiborne (Deep)
Area
B-835
Background
North Central
South Central
South East
TTA-1 North
TTA-1 South
TTA-2
West Cental
Window
Property Boundary
Buildings 490 - DDMT Assigned Number
Roads
Clay Elevation Exceeds Groundwater Elevation
Figure 20
Main Installation LTM Wells
2025 Site Management Plan
Defense Depot
Memphis, Tennessee
N
W
E
S
0
250
500
Feet
Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88
Date: 10/31/2024
Edition: Rev 0
Document Path: W:\SMP\2025\20_MI\LTM Wells.mxd

Notes:
1. Color-coded well symbols are based on the most recent analytical results as of April 2024. Only concentrations from the April 2024 LTM event are shown below the well ID.

2. Groundwater contours are from the April 2024 LTM event.

Aquifer
- Fluvial
- Intermediate/Upper Claiborne

PCE Range

Well Symbol (µg/L)
- 0-5
- 5-10
- 10-50
- 50-100
- >100

Contour Shading IUC (µg/L)
- 5-10
- >10

Contour Shading (µg/L)
- 5-10
- 10-50
- 50-100
- >100

Legend
- Property Boundary
- Buildings
- Roads
- Clay Elevation Exceeds Fluvial Aquifer Groundwater Elevation
- Groundwater Flow Direction (Intermediate)
- Groundwater Flow Direction
- Intermediate Aquifer Contours
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface extrapolation

Figure 21

Main Installation
PCE Concentrations, April 2024

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Document Path: W:\SMP\2025\21_PCE_FAQ_Apr2024.mxd

Notes:
1. Color-coded well symbols are based on the most recent analytical results as of April 2024. Only concentrations from the April 2024 LTM event are shown below the well ID.

2. Groundwater contours are from the April 2024 LTM event.

Aquifer
- Fluvial
- Intermediate/Upper Claiborne

TCE Range

Well Symbol (µg/L)
- 0-5
- 5-10
- 10-50
- 50-100
- >100

Contour Shading IUC (µg/L)
- 5-10
- >10

Contour Shading (µg/L)
- 5-10
- 10-50
- 50-100
- >100

Legend
- Property Boundary
- Buildings
- Roads
- Clay Elevation Exceeds Fluvial Aquifer Groundwater Elevation
- Groundwater Flow Direction (Intermediate)
- Groundwater Flow Direction
- Intermediate Aquifer Contours
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface extrapolation

Figure 22

Main Installation
TCE Concentrations, April 2024

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

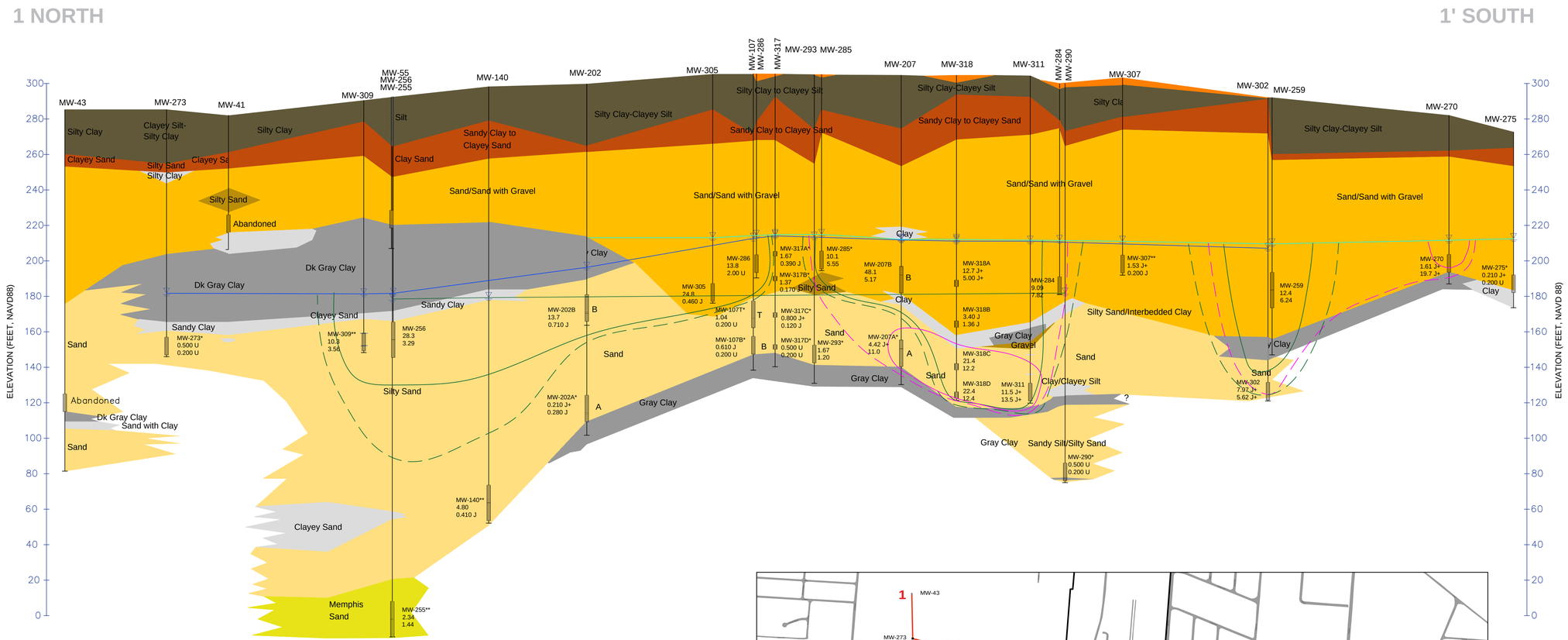
Document Path: W:\SMP\2025\22_TCE_FAQ_Apr2024.mxd

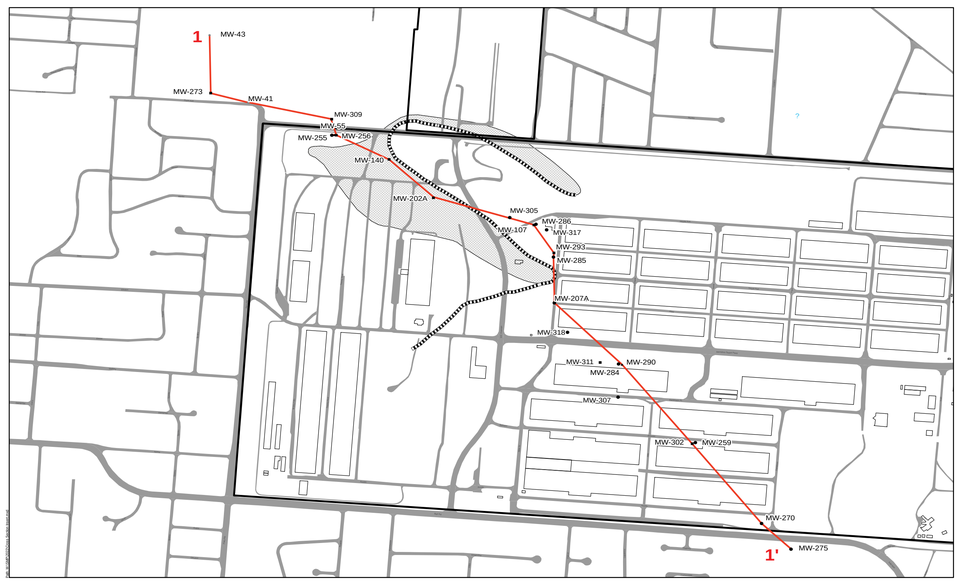
Figure 23

Cross Section 1, MW-43 to MW-275

2025 Site Management Plan

Defense Depot Memphis, Tennessee





Cross-Section Location

Fill

Silty Clay to Clayey Silt

Sandy Clay to Clayey Sand

Fluvial Sand or Sand with Gravel

Clayey Sand to Silty Clay

Silty Sand-Sandy Silt

Intermediate Sand

Clay

Memphis Sand

Groundwater Elevation

Fluvial Aquifer Groundwater Elevation

Intermediate Aquifer Groundwater Elevation

Memphis Aquifer Groundwater Elevation

Well Screen Interval

PCE 5 ug/L

PCE 10 ug/L

TCE 5 ug/L

TCE 10 ug/L

Well ID
PCE Result ug/L
TCE Result ug/L

Results from April 2024
****Results from April 2023**
*** Results from October 2022**

Note: Water levels measured during LTM in April 2024.

20
0
200

Date: September 2023
Edition: Rev 0

Figure 24

Site-Wide Passive Vapor, PCE Concentrations

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

LEGEND

1,000 MICROGRAMS/CUBIC METER

▲ PASSIVE SOIL-GAS SAMPLE LOCATION (August 2023)

◆ PASSIVE SOIL-GAS SAMPLE LOCATION (June 2023)

Color Scale µg/m³ (Log Scale)

30,000
10,000
1,000
100
10
1

N
W E
S

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/30/2024
Edition: Rev 0

Source: Beacon Environmental Map Report
dated September 19, 2023

Path: W:\SMP\2025\15_PassivePCE.mxd

Figure 25

Site-Wide Passive Vapor, TCE Concentrations

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

LEGEND

1,000 MICROGRAMS/CUBIC METER

▲ PASSIVE SOIL-GAS SAMPLE LOCATION (August 2023)

◆ PASSIVE SOIL-GAS SAMPLE LOCATION (June 2023)

Color Scale µg/m³ (Log Scale)

9,000
6,000
600
60
6
1

N
W E
S

0 250 500
Feet

Source: Beacon Environmental Map Report
dated September 19, 2023

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/30/2024
Edition: Rev 0

Path: W:\SMP\20251\6_PassiveTCE.mxd

Legend

- SVE Pilot Test VMP
- FDAQ Well
- Buildings

Total CVOC ug/m3

- 0 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- >1,000,000

Soil Vapor CVOC Contours (ug/m3)

- 1,000
- 10,000
- 100,000
- 1,000,000

Notes:
1) Analytical results in micrograms per cubic meter
2) Total CVOCs include chloroform, carbon tetrachloride, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride.
3) CVOCs not detected in indoor air above commercial RSL.
4) MW-100B abandoned and replacement well MW-331 installed in May 2024.

SS-115
DR1-8
VMP-102A/C/D
TTA1N-1
TTA1N-2
TTA1N-5
PMW21-04
MW-100B/MW-331
PMW21-02
TTA1N-3
TTA1N-6
VMP-101A
PMW21-03
TTA1N-4
1089
PMW21-01
MW-21
MW-219
1086
1088
1087
1090
MW-279
1091
MW-22
MW-102B
972
SS-114
SS-101
VMP-103A/B/C
SS-111
SS-110
SS-112
SS-113
VMP-104A/B/C/D
DR1-1A
DR1-1
VMP-105A
VMP-106A
SS-109
VMP-107A
VMP-108A/C/D
DR1-5A
DR1-5
VMP-109A
VMP-110A/B/C
SS-108
SS-102
SS-107
VMP-112A/B
VMP-113A/B/C/D
SS-118
SS-119
VMP-114A
VMP-111A
DR1-6
DR1-6A
995
970
PMW21-05
DR1-2
PMW101-03A/B
PMW101-04A/B
PMW101-02A/B
MW-101
PMW101-06A/B
PMW101-07A/B

Document Path: W:\SMP\2025\26_TTA1NS VMP Sample Locations.mxd

0 100 200
Feet

Aerial Photo Data: 2019
Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

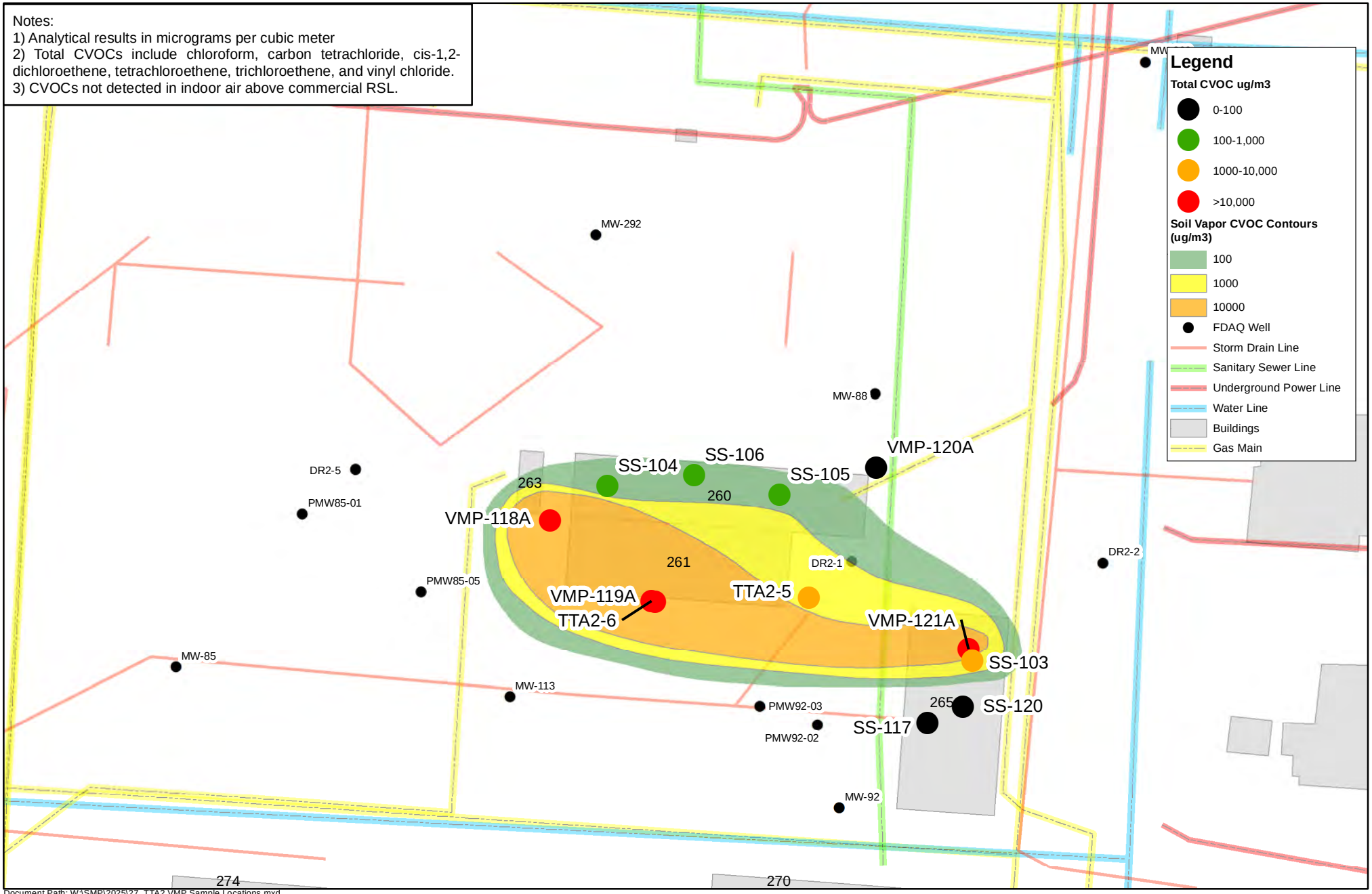
N W E S

Figure 26

TTA-1 Soil Vapor CVOC Concentrations

2025 Site Management Plan

Defense Depot
Memphis, Tennessee



Document Path: W:\SMP\2025\27_TTA2 VMP Sample Locations.mxd

Aerial Photo Data: 2019
Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Figure 27

TTA-2 Soil Vapor CVOC Concentrations

2025 Site Management Plan

Defense Depot
Memphis, Tennessee



Path: W:\SMP\2025\28_FOST Map.mxd

Figure 28

Finding of Suitability to Transfer Map

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Property Boundary

Date of Quitclaim Deed(s) [1]

- *9/26/01*
- *2/6/02 and 5/6/02*
- *4/4/06 and 8/18/06*
- *9/2/05 and 10/17/07*
- *Not transferred as of 9/30/24*
- *3/30/11*

Note:
1) Date of signature by Army or other agency on deed.

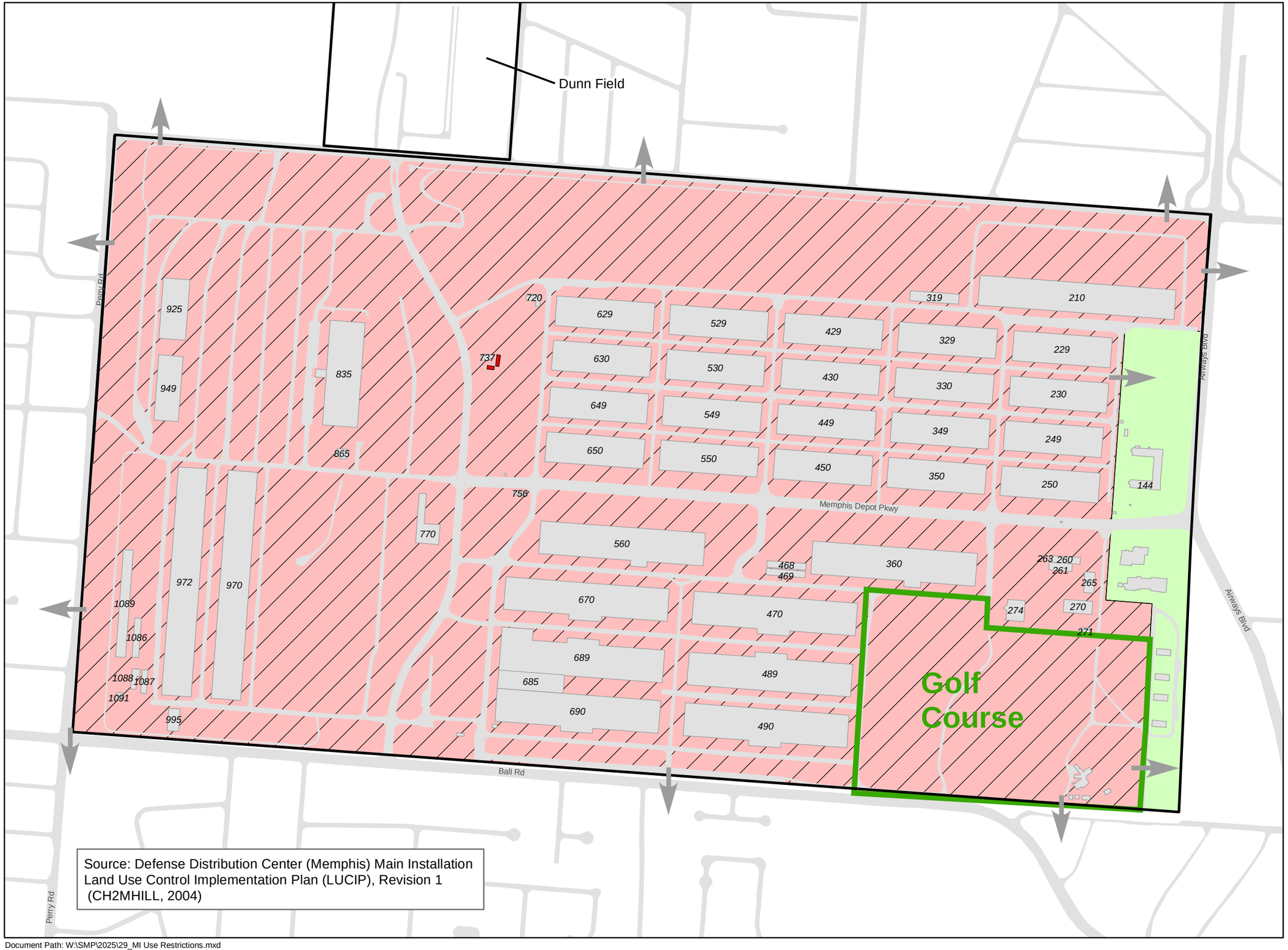
- Buildings *490 - DDMT Assigned Number*
- Roads

N
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S

0 500 1,000
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0



Source: Defense Distribution Center (Memphis) Main Installation Land Use Control Implementation Plan (LUCIP), Revision 1 (CH2MHILL, 2004)

Figure 29

Main Installation Land and Groundwater Use Restrictions

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

Legend

- Property Boundary
- Buildings — *490 - DDMT Assigned Number*
- Roads
- Bldg. 737 No Dig Areas
- Golf Course Boundary
- No productive/consumptive use of groundwater or drilling of groundwater wells.
- Area Available for Unrestricted Use
- No Residential Development or Child Daycare Uses
- No placement of groundwater wells within a half mile of the Main Installation land use controls boundary, per Shelby County Rules and Regulations .

N
W E
S

0 500 1,000
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Document Path: W:\SMP\2025\29_MI Use Restrictions.mxd

Figure 30

Dunn Field Land and Groundwater Use Restrictions

2025 Site Management Plan

Defense Depot
Memphis, Tennessee

NORTHEAST OPEN AREA

DUNN FIELD WEST

DISPOSAL AREA

DUNN FIELD EAST

STOCKPILE AREA

Main Installation

Source: Defense Distribution Center (Memphis)Dunn Field Land Use Control Implementation Plan (LUCIP), Revision 2 (CH2MHILL, 2008)

Note:
MCL Exceedance Areas determined using October 2023 and/or April 2024 groundwater LTM results. Shading used to identify where CVOC was detected in groundwater greater than the MCL.

Legend

- Railroad
- Fence
- Fence Required by Dunn Field ROD
- Original Property Boundary
- Extent of plume based on April 2024 LTM groundwater concentrations exceeding maximum contaminant levels or target concentrations from the Dunn Field Record of Decision.
- Area Designations
- Roads

Use Restrictions:

- Unrestricted Use Area
- Area subject to use restrictions
- No placement of groundwater wells within a half mile of Dunn Field West and plume boundaries, per Shelby County Rules and Regulations.

N
W E
S

0 250 500
Feet

Projection: NAD 1927 StatePlane Tennessee
Units: Feet, Elevation Units: Feet, NAVD88

Date: 10/31/2024
Edition: Rev 0

Figure 31
Master Schedule

ID	Status	Document Type	Task Name	Duration	Start	Finish
1			**DUNN FIELD OU 1**	**6198 d**	**Mon 8/1/22**	**Wed 7/20/39**
2	**o**		**Dunn Field Off Depot GW Remedial Action**	**1366 d**	**Mon 8/1/22**	**Mon 4/27/26**
3	x		Dunn Field Off Depot AS/SVE Operations, Year 12	365 d	Mon 8/1/22	Mon 7/31/23
4	x	S	Final Year 12 AS/SVE Report	1 d	Wed 7/17/24	Wed 7/17/24
5			AS/SVE System Inspection & Rebound Monitoring	731 d	Tue 8/1/23	Thu 7/31/25
6			Prepare and Submit Draft Rebound Monitoring Memorandum	60 d	Sun 8/31/25	Wed 10/29/25
7			Agency Review & Submit Comments on Draft AS/SVE Rebound Monitoring Memorandum	60 d	Thu 10/30/25	Sun 12/28/25
8			Submit Responses to Agency Comments & Draft Final AS/SVE Rebound Monitoring Memorandum	120 d	Mon 12/29/25	Mon 4/27/26
9	**o**		**Dunn Field Supplemental Investigation and Remedial Action**	**1 d**	**Thu 4/20/23**	**Thu 4/20/23**
10	x		Dunn Field West Post-ROD Supplemental Investigation Report Rev1	1 d	Thu 4/20/23	Thu 4/20/23
11	**o**		**Dunn Field West Vapor Investigation Study**	**463 d**	**Wed 9/4/24**	**Wed 12/10/25**
12	x	S	VMP Installation and Initial Soil Vapor Sampling	6 d	Wed 9/4/24	Mon 9/9/24
13			Round 2 Soil Vapor Sampling	4 d	Mon 1/13/25	Thu 1/16/25
14			Data Validation and Risk Screening	28 d	Sun 2/16/25	Sat 3/15/25
15	**o**	**S**	**DFW VI Report**	**270 d**	**Sun 3/16/25**	**Wed 12/10/25**
16			Prepare and Submit Draft DFW VI Report	90 d	Sun 3/16/25	Fri 6/13/25
17			Agency Review & Submit Comments on Draft DFW VI Report	60 d	Sat 6/14/25	Tue 8/12/25
18			Submit Responses to Agency Comments & Draft Final DFW VI Report	120 d	Wed 8/13/25	Wed 12/10/25
19	**o**	**P**	**Dunn Field West Decision Document**	**3107 d**	**Tue 8/20/24**	**Sun 2/20/33**
20	o		DFW Soil Investigation	265 d	Tue 8/20/24	Sun 5/11/25
21			**Dunn Field West Explanation of Significant Differences (DFW ESD)**	**270 d**	**Mon 5/12/25**	**Thu 2/5/26**
22			Prepare and Submit Draft DFW ESD	90 d	Mon 5/12/25	Sat 8/9/25
23			Agency Review & Submit Comments on Draft DFW ESD	60 d	Sun 8/10/25	Wed 10/8/25
24			Submit Responses to Agency Comments & Draft Final DFW ESD	120 d	Thu 10/9/25	Thu 2/5/26
25	**o**		**DFW Remedial Action**	**2551 d**	**Fri 2/27/26**	**Sun 2/20/33**
26	**o**	**P**	**DFW Remedial Design (RD)**	**300 d**	**Fri 2/27/26**	**Wed 12/23/26**
27			Prepare and Submit Draft DFW RD	120 d	Fri 2/27/26	Fri 6/26/26
28			Agency Review & Submit Comments on Draft DFW RD	60 d	Sat 6/27/26	Tue 8/25/26
29			Submit Responses to Agency Comments & Draft Final DFW RD	120 d	Wed 8/26/26	Wed 12/23/26
30	**o**	**P**	**DFW Remedial Action Work Plan (RAWP)**	**270 d**	**Thu 12/24/26**	**Sun 9/19/27**
31			Prepare and Submit Draft DFW RAWP	90 d	Thu 12/24/26	Tue 3/23/27
32			Agency Review & Submit Comments on Draft DFW RAWP	60 d	Wed 3/24/27	Sat 5/22/27
33			Submit Responses to Agency Comments & Draft Final DFW RAWP	120 d	Sun 5/23/27	Sun 9/19/27
34	o	**S**	**DFW RA Implementation to Achieve Remedy in Place**	1 d	Sun 12/19/27	Sun 12/19/27
35	**o**		**DFW Soil Excavation, Transport and Disposal (ET&D)**	**390 d**	**Mon 12/20/27**	**Fri 1/12/29**
36			Soil Excavation, Confirmation Sampling and Data Validation	120 d	Mon 12/20/27	Mon 4/17/28
37	**o**	**S**	**DFW Soil ET&D Report**	**270 d**	**Tue 4/18/28**	**Fri 1/12/29**
38			Prepare and Submit Draft DFW ET&D Report	90 d	Tue 4/18/28	Sun 7/16/28
39			Agency Review and Submit Comments on Draft DFW ET&D Report	60 d	Mon 7/17/28	Thu 9/14/28
40			Submit Responses to Agency Comments & Draft Final DFW ET&D Re	120 d	Fri 9/15/28	Fri 1/12/29
41	**o**		**DFW SVE Construction, Operations, Monitoring and Reporting (Y1-Y3)**	**1680 d**	**Mon 7/17/28**	**Sun 2/20/33**
42			SVE System Construction and Start-up	45 d	Mon 7/17/28	Wed 8/30/28
43			**SVE System Construction Report**	**270 d**	**Thu 8/31/28**	**Sun 5/27/29**
44			Prepare and Submit Draft DFW SVE Construction Report	90 d	Thu 8/31/28	Tue 11/28/28
45			Agency Review and Submit Comments on Draft DFW SVE Construction Report	60 d	Wed 11/29/28	Sat 1/27/29

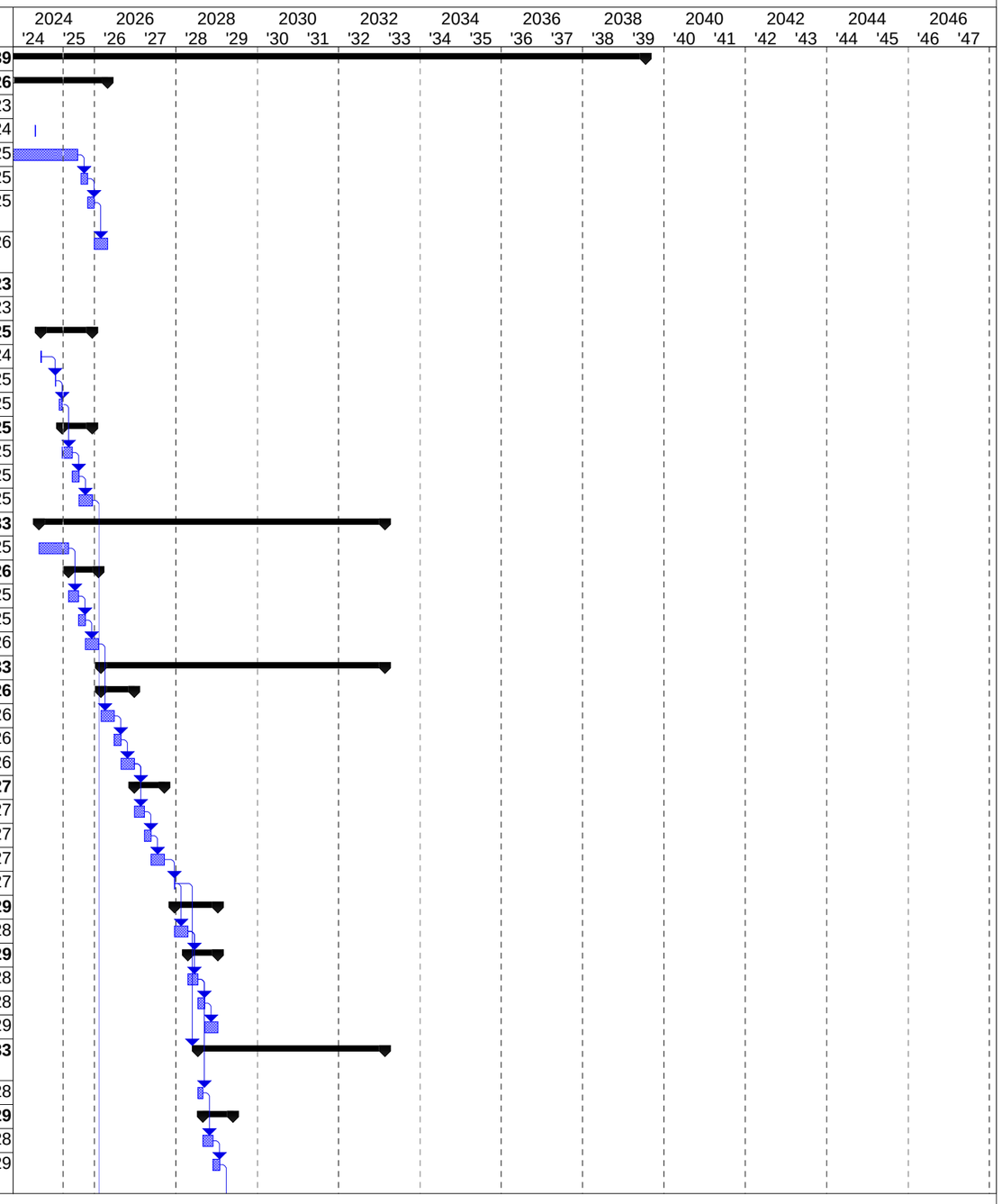


Figure 31
Master Schedule

ID	Status	Document Type	Task Name	Duration	Start	Finish
46			Submit Responses to Agency Comments & Draft Final DFW SVE Construction Report	120 d	Sun 1/28/29	Sun 5/27/29
47			SVE System Operations, Monitoring and Reporting	1095 d	Mon 5/28/29	Wed 5/26/32
48	o	S	**Year 1 DFW SVE Annual O&M Report**	**270 d**	**Tue 5/28/30**	**Fri 2/21/31**
49			Prepare and Submit Draft Y1 DFW SVE Report	90 d	Tue 5/28/30	Sun 8/25/30
50			Agency Review and Submit Comments on Draft Y1 DFW SVE Report	60 d	Mon 8/26/30	Thu 10/24/30
51			Submit Responses to Agency Comments & Draft Final Y1 DFW SVE Report	120 d	Fri 10/25/30	Fri 2/21/31
52	o	P	**DFW SVE Operating Properly and Successfully (OPS) Determination**	**270 d**	**Sat 7/27/30**	**Tue 4/22/31**
53			Prepare and Submit Draft DFW SVE OPS Determination	90 d	Sat 7/27/30	Thu 10/24/30
54			Agency Review and Submit Comments on Draft DFW SVE OPS Determination	60 d	Fri 10/25/30	Mon 12/23/30
55			Submit Responses to Agency Comments & Draft Final DFW SVE OPS Determination	120 d	Tue 12/24/30	Tue 4/22/31
56	o	S	**Year 2 DFW SVE Annual O&M Report**	**270 d**	**Wed 5/28/31**	**Sat 2/21/32**
57			Prepare and Submit Draft Y2 DFW SVE Report	90 d	Wed 5/28/31	Mon 8/25/31
58			Agency Review and Submit Comments on Draft Y2 DFW SVE Report	60 d	Tue 8/26/31	Fri 10/24/31
59			Submit Responses to Agency Comments & Draft Final Y2 DFW SVE Report	120 d	Sat 10/25/31	Sat 2/21/32
60	o	S	**Year 3 DFW SVE Annual O&M and Completion Report**	**270 d**	**Thu 5/27/32**	**Sun 2/20/33**
61			Prepare and Submit Draft Y3 DFW SVE Report	90 d	Thu 5/27/32	Tue 8/24/32
62			Agency Review and Submit Comments on Draft Y3 DFW SVE Report	60 d	Wed 8/25/32	Sat 10/23/32
63			Submit Responses to Agency Comments & Draft Final Y3 DFW SVE Report	120 d	Sun 10/24/32	Sun 2/20/33
64	o		**Dunn Field West Property Transfer**	**480 d**	**Wed 4/23/31**	**Sat 8/14/32**
65		S	Prepare and Submit Draft ECP and FOST 5 Amendment	120 d	Wed 4/23/31	Wed 8/20/31
66			Agency Review and Submit Comments on Draft ECP and FOST 5 Amend.	60 d	Thu 8/21/31	Sun 10/19/31
67			Submit Responses to Agency Comments & Draft Final ECP and FOST 5 Amend.	120 d	Mon 10/20/31	Mon 2/16/32
68			Notification of Intent to Sign FOST 5 Amendment	30 d	Tue 2/17/32	Wed 3/17/32
69			DFW Competitive Public Sale	120 d	Thu 3/18/32	Thu 7/15/32
70			DFW Sale Closing and Transfer Deed	30 d	Fri 7/16/32	Sat 8/14/32
71			**Post-RA Groundwater and Land Use Controls Monitoring (5 Years)**	1826 d	Thu 5/27/32	Tue 5/26/37
72	o		**Dunn Field Groundwater Compliance Monitoring**	365 d	Wed 5/27/37	Wed 5/26/38
73	o	P	**Dunn Field RA Completion Report**	**330 d**	**Thu 5/27/38**	**Thu 4/21/39**
74			Prepare and Submit Draft DF RACR Submittal	120 d	Thu 5/27/38	Thu 9/23/38
75			Agency Review & Submit Comments on Draft DF RACR	60 d	Fri 9/24/38	Mon 11/22/38
76			Submit Responses to Agency Comments & Draft Final DF RACR	120 d	Tue 11/23/38	Tue 3/22/39
77			Agency Concurrence	30 d	Wed 3/23/39	Thu 4/21/39
78			**Dunn Field Well Abandonment**	90 d	Fri 4/22/39	Wed 7/20/39
79						
80			**MAIN INSTALLATION (MI) OU 2, 3 & 4**	**8956 d**	**Fri 9/30/22**	**Sun 4/7/47**
81	o		**Dip Vat Delineation Sampling and Risk Screening (SRS) Update**	**515 d**	**Fri 9/6/24**	**Mon 2/2/26**
82	x		Initial Dip Vat Sampling	5 d	Fri 9/6/24	Tue 9/10/24
83	x		Worker Exposure Review	60 d	Fri 10/11/24	Mon 12/9/24
84	x		Data Validation and Summary	30 d	Sun 11/10/24	Mon 12/9/24
85	x		Follow-Up Dip Vat Sampling	5 d	Tue 1/14/25	Sat 1/18/25
86			Data Validation	35 d	Thu 3/20/25	Wed 4/23/25
87			Analytical Data Review and Risk Screening	15 d	Thu 4/24/25	Thu 5/8/25
88	o	S	**Sampling and Risk Screening (SRS) Update**	**270 d**	**Fri 5/9/25**	**Mon 2/2/26**

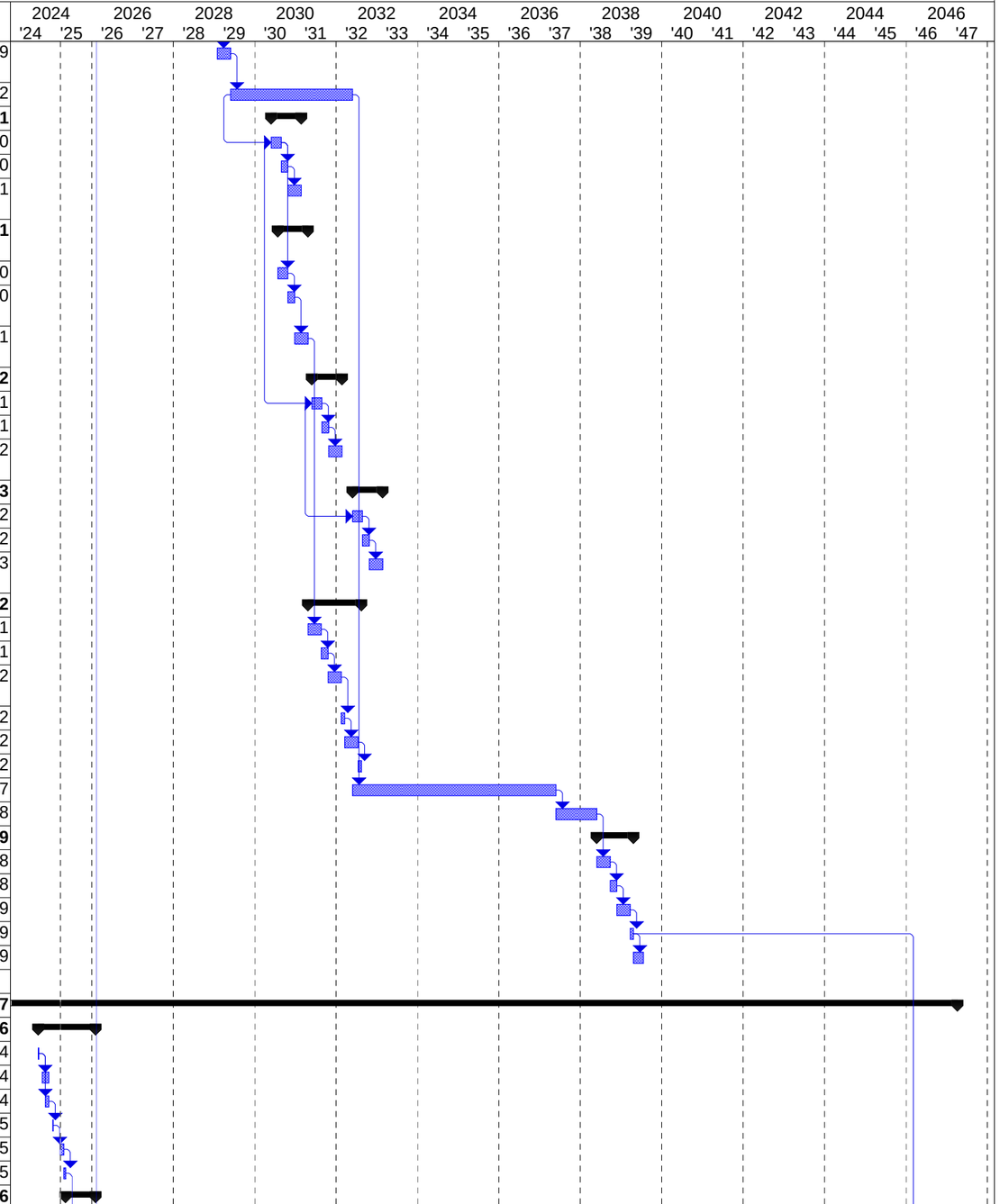


Figure 31
Master Schedule

ID	Status	Document Type	Task Name	Duration	Start	Finish
89			Prepare and Submit Draft SRS Update	90 d	Fri 5/9/25	Wed 8/6/25
90			Agency Review & Submit Comments on Draft SRS Update Report	60 d	Thu 8/7/25	Sun 10/5/25
91			Submit Responses to Agency Comments & Draft Final SRS Update	120 d	Mon 10/6/25	Mon 2/2/26
92			**MI Vapor Intrusion (VI) Study**	**945 d**	**Tue 5/2/23**	**Mon 12/1/25**
93	**o**		**MI VI Sampling Program**	**705 d**	**Tue 5/2/23**	**Sat 4/5/25**
94	x	**S**	MI VI SAP Rev. 1	1 d	Tue 5/2/23	Tue 5/2/23
95	x		Passive Vapor Screening, Active Vapor & Indoor Air Sampling and Data Reports	330 d	Wed 5/24/23	Wed 4/17/24
96	x		Round 2 Soil and Sub-Slab Vapor and Indoor Air Samples	40 d	Tue 11/12/24	Sat 12/21/24
97			Analytical Data Validation, Review and Risk Screening	60 d	Wed 2/5/25	Sat 4/5/25
98	**o**	**S**	**MI VI Study Report**	**270 d**	**Fri 3/7/25**	**Mon 12/1/25**
99			Prepare and Submit Draft MI VI Study Report	90 d	Fri 3/7/25	Wed 6/4/25
100			EPA & TDEC Review	60 d	Thu 6/5/25	Sun 8/3/25
101			Submit Responses to Agency Comments & Draft Final MI VI Study Report	120 d	Mon 8/4/25	Mon 12/1/25
102	**o**		**Alternative Remedy Selection**	**1458 d**	**Fri 9/30/22**	**Sat 9/26/26**
103	**o**	**P**	**FFS Report**	**915 d**	**Fri 9/30/22**	**Tue 4/1/25**
104	x		Draft MI FFS Report	1 d	Fri 9/30/22	Fri 9/30/22
105	x		Responses to Agency Comments and Correspondence	540 d	Mon 12/19/22	Mon 6/10/24
106	x		Draft Final MI FFS Report	11 d	Tue 6/11/24	Fri 6/21/24
107	x		EPA Review and Request for Final MI FFS	12 d	Sat 6/22/24	Wed 7/3/24
108	x		Final MI FFS	3 d	Thu 7/4/24	Sat 7/6/24
109	x		EPA Management Review and Comment	131 d	Sun 7/7/24	Thu 11/14/24
110			Submit Responses to Agency Comments & Draft Final MI FFS Report, v.2	138 d	Fri 11/15/24	Tue 4/1/25
111	**o**		**Record of Decision (ROD) Amendment**	**854 d**	**Sun 5/26/24**	**Sat 9/26/26**
112	**o**	**P**	**Revised Proposed Plan (RPP)**	**431 d**	**Sun 5/26/24**	**Wed 7/30/25**
113	x		Prepare and Submit Draft RPP	45 d	Sun 5/26/24	Tue 7/9/24
114	x		Agency Review and Submit Comments on Draft RPP	63 d	Wed 7/10/24	Tue 9/10/24
115			Submit Responses to Agency Comments & Draft Final RPP revised per Responses and Revisions per Draft Final FFS, v.2	120 d	Wed 4/2/25	Wed 7/30/25
116	**o**		**Public Comment Period**	**36 d**	**Thu 7/31/25**	**Thu 9/4/25**
117			Public Notice of RPP Comment Period and Public Meeting	5 d	Thu 7/31/25	Mon 8/4/25
118			RPP Public Comment Period	31 d	Tue 8/5/25	Thu 9/4/25
119			Public Meeting	7 d	Fri 8/15/25	Thu 8/21/25
120	**o**	**P**	**ROD Amendment**	**387 d**	**Fri 9/5/25**	**Sat 9/26/26**
121			Prepare and Submit Draft MI ROD Amendment	88 d	Fri 9/5/25	Mon 12/1/25
122			Agency Review and Submit Comments on Draft MI ROD Amendment	60 d	Tue 12/2/25	Fri 1/30/26
123			Submit Responses to Agency Comments & Draft Final MI ROD Amendment	120 d	Sat 1/31/26	Sat 5/30/26
124			Prepare and Submit Final MI ROD Amendment	60 d	Sun 5/31/26	Wed 7/29/26
125			Process MI ROD Amendment through Army, TDEC, EPA	45 d	Thu 7/30/26	Sat 9/12/26
126			Final MI ROD Amendment	7 d	Sun 9/13/26	Sat 9/19/26
127			Public Notice of MI ROD Amendment	7 d	Sun 9/20/26	Sat 9/26/26
128	**o**		**Additional Remedial Action**	**3122 d**	**Sun 9/20/26**	**Sat 4/7/35**
129	o	S	Preliminary Design Investigation (PDI)	185 d	Sun 9/20/26	Tue 3/23/27
130	**o**	**P**	**New MI Remedial Design (RD)**	**300 d**	**Wed 3/24/27**	**Mon 1/17/28**
131			Prepare and Submit Draft MI RD	120 d	Wed 3/24/27	Wed 7/21/27
132			Agency Review and Submit Comments on Draft MI RD	60 d	Thu 7/22/27	Sun 9/19/27
133			Submit Responses to Agency Comments & Draft Final MI RD	120 d	Mon 9/20/27	Mon 1/17/28
134	**o**	**P**	**New MI Remedial Action Work Plan (RAWP)**	**300 d**	**Tue 1/18/28**	**Sun 11/12/28**
135			Prepare and Submit Draft MI RAWP	120 d	Tue 1/18/28	Tue 5/16/28

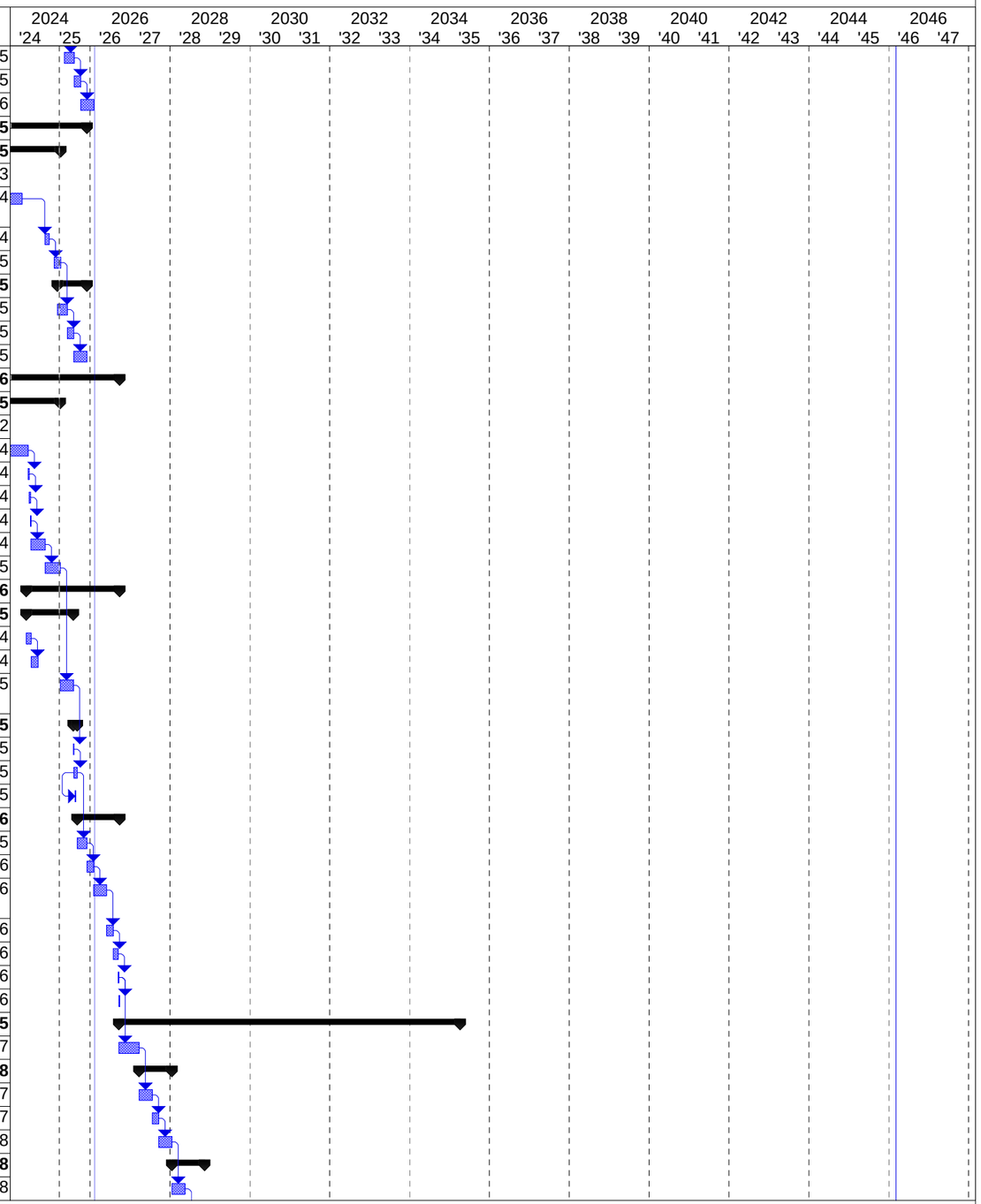


Figure 31
Master Schedule

ID	Status	Document Type	Task Name	Duration	Start	Finish
136			Agency Review and Submit Comments on Draft MI RAWP	60 d	Wed 5/17/28	Sat 7/15/28
137			Submit Responses to Agency Comments & Draft Final MI RAWP	120 d	Sun 7/16/28	Sun 11/12/28
138	o	P	**MI RA Implementation to Achieve Remedy in Place**	1 d	Tue 3/13/29	Tue 3/13/29
139	**o**		**MI RA Construction**	**360 d**	**Wed 3/14/29**	**Fri 3/8/30**
140			RA Construction and Start-up	90 d	Wed 3/14/29	Mon 6/11/29
141		S	**MI RA Construction Report**	**270 d**	**Tue 6/12/29**	**Fri 3/8/30**
142			Prepare and Submit Draft MI RA Construction Report	90 d	Tue 6/12/29	Sun 9/9/29
143			Agency Review and Submit Comments on Draft MI RA Construction Report	60 d	Mon 9/10/29	Thu 11/8/29
144			Submit Responses to Agency Comments & Draft Final MI RA Construction Report	120 d	Fri 11/9/29	Fri 3/8/30
145	**o**		**MI RA Operations, Monitoring and Reporting (Y1-Y5)**	**2126 d**	**Tue 6/12/29**	**Sat 4/7/35**
146			MI RA Operations and Monitoring	1825 d	Tue 6/12/29	Sat 6/10/34
147	**o**	S	**Year 1 MI RA Annual O&M Report**	**300 d**	**Wed 6/12/30**	**Mon 4/7/31**
148			Prepare and Submit Draft Y1 MI RA Report	120 d	Wed 6/12/30	Wed 10/9/30
149			Agency Review and Submit Comments on Draft Y1 MI RA Report	60 d	Thu 10/10/30	Sun 12/8/30
150			Submit Responses to Agency Comments & Draft Final Y1 MI RA Report	120 d	Mon 12/9/30	Mon 4/7/31
151	**o**	S	**MI RA Operating Properly and Successfully (OPS) Determination**	**270 d**	**Thu 10/10/30**	**Sun 7/6/31**
152			Prepare and Submit Draft MI OPS Determination	90 d	Thu 10/10/30	Tue 1/7/31
153			Agency Review and Submit Comments on Draft MI OPS Determination	60 d	Wed 1/8/31	Sat 3/8/31
154			Submit Responses to Agency Comments & Draft Final MI OPS Determination	120 d	Sun 3/9/31	Sun 7/6/31
155	**o**	S	**Year 2 MI RA Annual O&M Report**	**300 d**	**Thu 6/12/31**	**Tue 4/6/32**
156			Prepare and Submit Draft Y2 MI RA Report	120 d	Thu 6/12/31	Thu 10/9/31
157			Agency Review and Submit Comments on Draft Y2 MI RA Report	60 d	Fri 10/10/31	Mon 12/8/31
158			Submit Responses to Agency Comments & Draft Final Y2 MI RA Report	120 d	Tue 12/9/31	Tue 4/6/32
159	**o**	S	**Year 3 MI RA Annual O&M Report**	**300 d**	**Sat 6/12/32**	**Thu 4/7/33**
160			Prepare and Submit Draft Y3 MI RA Report	120 d	Sat 6/12/32	Sat 10/9/32
161			Agency Review and Submit Comments on Draft Y3 MI RA Report	60 d	Sun 10/10/32	Wed 12/8/32
162			Submit Responses to Agency Comments & Draft Final Y3 MI RA Report	120 d	Thu 12/9/32	Thu 4/7/33
163	**o**	S	**Year 4 MI RA Annual O&M Report**	**300 d**	**Sun 6/12/33**	**Fri 4/7/34**
164			Prepare and Submit Draft Y4 MI RA Report	120 d	Sun 6/12/33	Sun 10/9/33
165			Agency Review and Submit Comments on Draft Y4 MI RA Report	60 d	Mon 10/10/33	Thu 12/8/33
166			Submit Responses to Agency Comments & Draft Final Y4 MI RA Report	120 d	Fri 12/9/33	Fri 4/7/34
167	**o**	S	**Year 5 MI RA Annual O&M and Completion Report**	**300 d**	**Mon 6/12/34**	**Sat 4/7/35**
168			Prepare and Submit Draft Y5 MI RA Report	120 d	Mon 6/12/34	Mon 10/9/34
169			Agency Review and Submit Comments on Draft Y5 MI RA Report	60 d	Tue 10/10/34	Fri 12/8/34
170			Submit Responses to Agency Comments & Draft Final Y5 MI RA Report	120 d	Sat 12/9/34	Sat 4/7/35
171			**Post-RA Groundwater and Land Use Controls Monitoring (10 Years)**	3653 d	Sun 6/11/34	Fri 6/10/44
172	o		**Main Installation Compliance Monitoring**	366 d	Sat 6/11/44	Sun 6/11/45
173	**o**	P	**Main Installation RA Completion Report**	**270 d**	**Mon 6/12/45**	**Thu 3/8/46**
174			Prepare and Submit Draft MI RACR	60 d	Mon 6/12/45	Thu 8/10/45
175			Agency Review & Submit Comments on Draft MI RACR	60 d	Fri 8/11/45	Mon 10/9/45
176			Submit Responses to Agency Comments & Draft Final MI RACR	120 d	Tue 10/10/45	Tue 2/6/46
177			Agency Concurrence	30 d	Wed 2/7/46	Thu 3/8/46
178	o		**Main Installation Well Abandonment**	30 d	Sat 3/9/47	Sun 4/7/47
179						
180			**MEMPHIS DEPOT NPL SITE-WIDE ACTIVITIES**	**8157 d**	**Tue 9/3/24**	**Wed 1/2/47**
181	**o**		**Site-Wide LTM Reports**	**1030 d**	**Fri 11/1/24**	**Fri 8/27/27**
182		S	**2024 LTM Report**	**360 d**	**Fri 11/1/24**	**Sun 10/26/25**

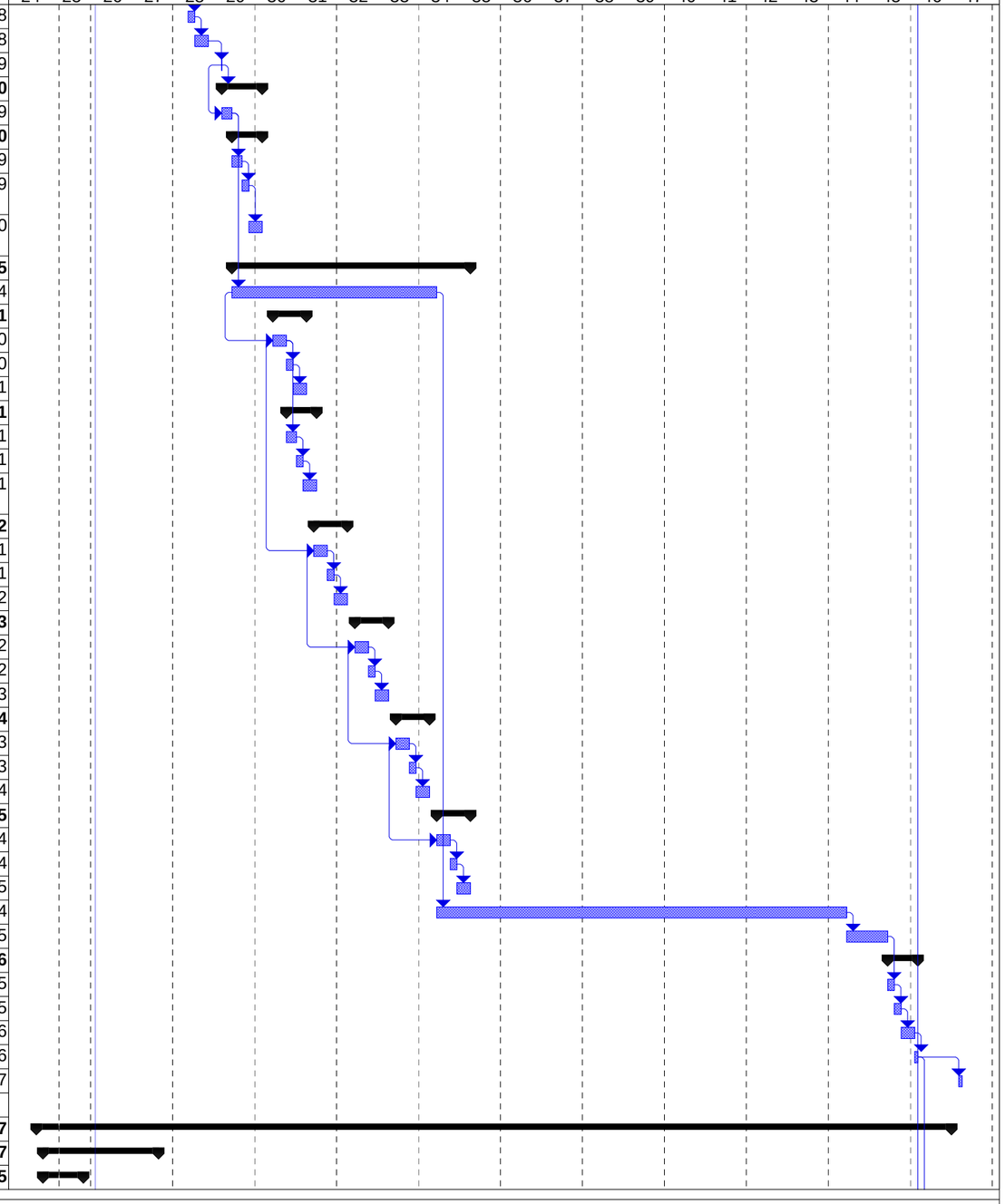
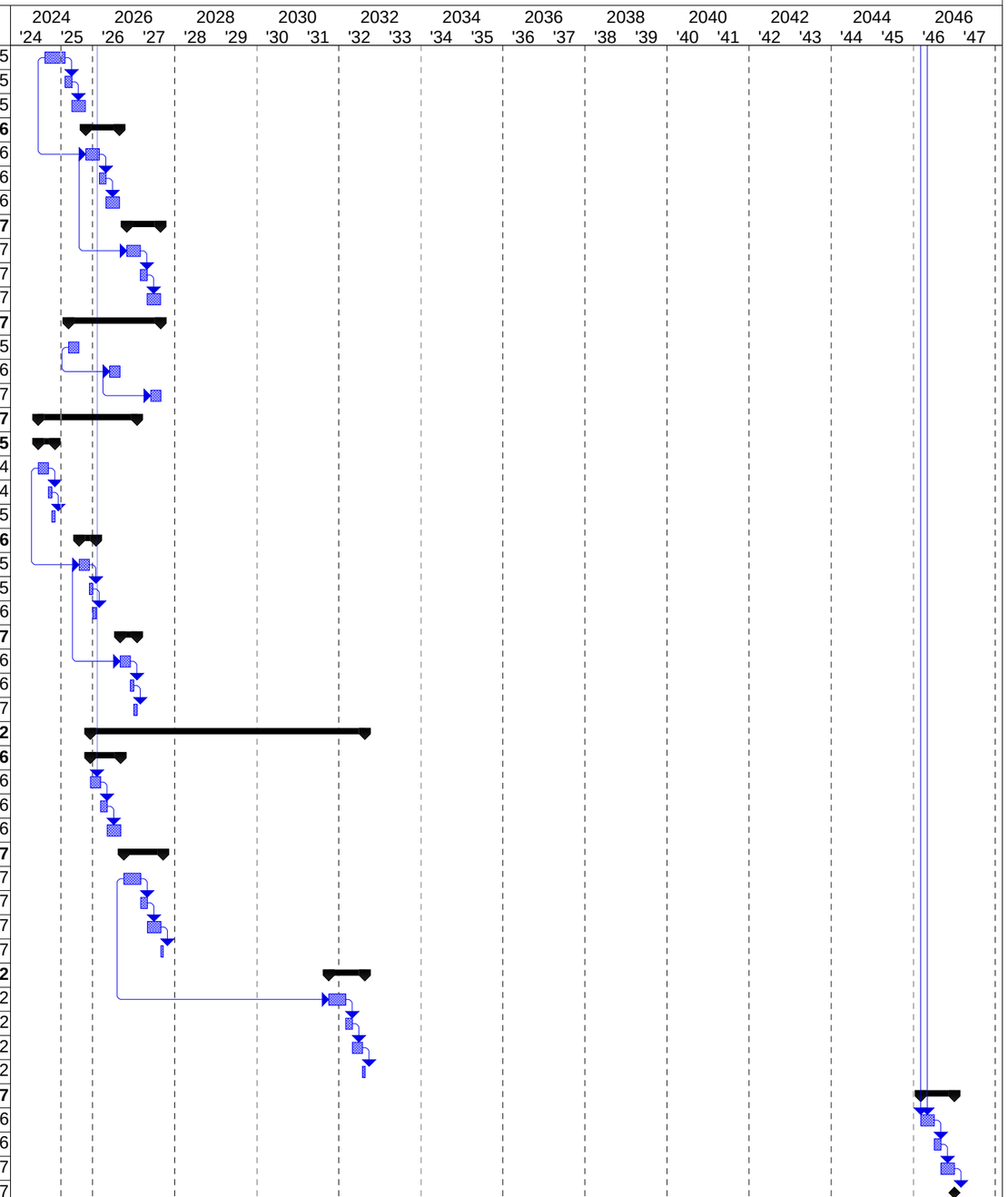


Figure 31
Master Schedule

ID	Status	Document Type	Task Name	Duration	Start	Finish
183			Prepare and Submit Draft 2024 LTM Report	180 d	Fri 11/1/24	Tue 4/29/25
184			Agency Review & Submit Comments on Draft 2024 LTM Report	60 d	Wed 4/30/25	Sat 6/28/25
185			Submit Responses to Agency Comments & Draft Final 2024 LTM Report	120 d	Sun 6/29/25	Sun 10/26/25
186	o	S	**2025 LTM Report**	**300 d**	**Sat 11/1/25**	**Thu 8/27/26**
187			Prepare and Submit Draft 2025 LTM Report	120 d	Sat 11/1/25	Sat 2/28/26
188			Agency Review & Submit Comments on Draft 2025 LTM Report	60 d	Sun 3/1/26	Wed 4/29/26
189			Submit Responses to Agency Comments & Draft Final 2025 LTM Report	120 d	Thu 4/30/26	Thu 8/27/26
190	o	S	**2026 LTM Report**	**300 d**	**Sun 11/1/26**	**Fri 8/27/27**
191			Prepare and Submit Draft 2026 LTM Report	120 d	Sun 11/1/26	Sun 2/28/27
192			Agency Review & Submit Comments on Draft 2026 LTM Report	60 d	Mon 3/1/27	Thu 4/29/27
193			Submit Responses to Agency Comments & Draft Final 2026 LTM Report	120 d	Fri 4/30/27	Fri 8/27/27
194	o		**Annual Site Inspection Reports**	**820 d**	**Sun 6/1/25**	**Sun 8/29/27**
195		S	Annual Site Inspection Report - 2025	90 d	Sun 6/1/25	Fri 8/29/25
196		S	Annual Site Inspection Report - 2026	90 d	Mon 6/1/26	Sat 8/29/26
197		S	Annual Site Inspection Report - 2027	90 d	Tue 6/1/27	Sun 8/29/27
198			**Site Management Plan (SMP) Updates**	**880 d**	**Tue 9/3/24**	**Sat 1/30/27**
199	o	P	**2025 Site Management Plan**	**150 d**	**Tue 9/3/24**	**Thu 1/30/25**
200			Prepare and Submit Draft 2025 SMP	90 d	Tue 9/3/24	Sun 12/1/24
201			Agency Review & Submit Comments on Draft 2025 SMP	30 d	Mon 12/2/24	Tue 12/31/24
202			Submit Responses to Agency Comments & Draft Final 2025 SMP	30 d	Wed 1/1/25	Thu 1/30/25
203	o	P	**2026 Site Management Plan**	**150 d**	**Wed 9/3/25**	**Fri 1/30/26**
204			Prepare and Submit Draft 2026 SMP	90 d	Wed 9/3/25	Mon 12/1/25
205			Agency Review & Submit Comments on Draft 2026 SMP	30 d	Tue 12/2/25	Wed 12/31/25
206			Submit Responses to Agency Comments & Draft Final 2026 SMP	30 d	Thu 1/1/26	Fri 1/30/26
207	o	P	**2027 Site Management Plan**	**150 d**	**Thu 9/3/26**	**Sat 1/30/27**
208			Prepare and Submit Draft 2027 SMP	90 d	Thu 9/3/26	Tue 12/1/26
209			Agency Review & Submit Comments on Draft 2027 SMP	30 d	Wed 12/2/26	Thu 12/31/26
210			Submit Responses to Agency Comments & Draft Final 2027 SMP	30 d	Fri 1/1/27	Sat 1/30/27
211			**CERCLA Five-Year Reviews**	**2444 d**	**Thu 12/11/25**	**Thu 8/19/32**
212	o	P	**CERCLA Fifth Five-Year Review Addendum**	**270 d**	**Thu 12/11/25**	**Sun 9/6/26**
213			Prepare and Submit Draft 5th FYR Addendum	90 d	Thu 12/11/25	Tue 3/10/26
214			Agency Review & Submit Comments on Draft 5th FYR Addendum	60 d	Wed 3/11/26	Sat 5/9/26
215			Submit Responses to Agency Comments & Draft Final 5th FYR Addendum	120 d	Sun 5/10/26	Sun 9/6/26
216	o	P	**CERCLA Sixth Five-Year Review**	**351 d**	**Mon 10/5/26**	**Mon 9/20/27**
217			Prepare and Submit Draft 6th FYR	150 d	Mon 10/5/26	Wed 3/3/27
218			Agency Review & Submit Comments on Draft 6th FYR	60 d	Thu 3/4/27	Sun 5/2/27
219			Submit Responses to Agency Comments & Draft Final 6th FYR	120 d	Mon 5/3/27	Mon 8/30/27
220			Circulate Final 6th FYR For Signatures	21 d	Tue 8/31/27	Mon 9/20/27
221	o		**CERCLA Seventh Five-Year Review**	**321 d**	**Sat 10/4/31**	**Thu 8/19/32**
222			Prepare and Submit Draft 7th FYR	150 d	Sat 10/4/31	Mon 3/1/32
223			Agency Review & Submit Comments on Draft 7th FYR	60 d	Tue 3/2/32	Fri 4/30/32
224			Submit Responses to Agency Comments & Draft Final 7th FYR	90 d	Sat 5/1/32	Thu 7/29/32
225			Circulate Final 7th FYR For Signatures	21 d	Fri 7/30/32	Thu 8/19/32
226	o	P	**Site Closeout Report (SCOR)**	**300 d**	**Fri 3/9/46**	**Wed 1/2/47**
227			Prepare and Submit Draft SCOR	120 d	Fri 3/9/46	Fri 7/6/46
228			Agency Review & Submit Comments on Draft SCOR	60 d	Sat 7/7/46	Tue 9/4/46
229			Submit Responses to Agency Comments & Draft Final SCOR	120 d	Wed 9/5/46	Wed 1/2/47
230			**Site Completion**	0 d	Wed 1/2/47	Wed 1/2/47



A

Appendix A.

Responses to USEPA and TDEC Comments

REGION 4
ATLANTA, GA 30303

12/23/2024

Mr. James Foster
Department of the Army
Office of the Deputy Chief of Staff, G9
Base Realignment and Closure Branch, ISE Division
600 Army Pentagon
Washington, DC 20310-0600

Dear Mr. Foster,

The Environmental Protection Agency (EPA) has completed its regulatory review of the Draft 2025 Site Management Plan (SMP) for the Defense Depot of Memphis, Tennessee (DDMT), submitted in November 2024. The review identified several necessary changes to ensure compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations and to enhance the effectiveness of site remediation efforts. The comments below aim to aligning the Site Management Plan with CERCLA's statutory requirements and the Site's Federal Facility Agreement, which govern the investigation, remediation, and restoration of contaminated sites to protect human health and the environment.

Comments

1. Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation (RI) Timeline: The SMP should be revised to include a specific timeline for the PFAS RI in accordance with CERCLA §120(e). This timeline must detail the anticipated start date, key milestones (e.g., work plan approval, fieldwork initiation, draft report submission), and an estimated completion date. Incorporating this information will enhance project transparency and facilitate better tracking of progress in addressing emerging contaminants.

2. Master Schedule: A comprehensive Master Schedule should be developed and integrated into the SMP to align with CERCLA requirements. This schedule should outline all ongoing and planned remedial activities, key decision points and deliverables, timelines for achieving site-specific cleanup goals, and projected dates for attaining Unlimited Use/Unrestricted Exposure (UU/UE) standards. The Master Schedule must comply with CERCLA §120(e) timeframes to

facilitate timely completion of remedial actions while providing a clear roadmap for site restoration.

3. Five-Year Review (FYR) and Land Use Controls (LUCs) Statement Correction: The statement regarding FYRs and LUCs should be revised to accurately reflect CERCLA §121(c) and the National Contingency Plan (NCP) at 40 CFR 300.430(f)(4)(ii). It should emphasize the goal of aquifer restoration while clarifying that FYRs are required when hazardous substances remain above levels allowing for UU/UE but are not intended to continue indefinitely. Instead, these reviews serve as tools to evaluate progress toward fully restoring the Memphis Sand Aquifer for beneficial use as a drinking water source.

The lead agency should assess the potential for achieving UU/UE during each FYR, document progress toward this goal, and consider modifications to the remedy that could expedite cleanup efforts. LUCs should be regarded as temporary measures rather than permanent solutions; their necessity should be regularly re-evaluated with the aim of removing them as site conditions improve. The statement should emphasize that both FYRs and LUCs will remain in effect only until the site achieves levels that allow for unlimited use and unrestricted exposure of groundwater resources, aligning with CERCLA's goal of full site restoration.

4. The EPA recommends that the lead agency reassess its proposed timelines to ensure proper alignment and preparedness among all stakeholders. Considering this, the lead agency should consider revising the master schedule to account for potential delays in submitting secondary documents. This process should involve conducting a comprehensive review of current timelines, identifying potential areas of concern, and making reasonable adjustments to target dates for each secondary document, while ensuring that any changes do not compromise overall project goals. It is crucial to emphasize that the timelines for primary documents must strictly adhere to the previously approved 2024 Site Management Plan unless written approval for changes to submittal dates has been explicitly provided by the regulators.

By implementing these strategic adjustments, the lead agency can enhance overall project management efficiency, optimize scheduling to accommodate realistic timeframes, and maintain steady progress on deliverables. These proactive measures will improve planning effectiveness and inter-stakeholder coordination, while also reinforcing compliance with CERCLA regulations and promoting more effective management of remediation efforts at the DDMT site. Ultimately, these adjustments will contribute to a more robust and adaptable project timeline, leading to improved outcomes and smoother execution of the remediation process.

The EPA commends the Army for its efforts on further investigating the DDMT environmental conditions. If you have any questions about this letter, please contact me via email at martinez-torres.fernando@epa.gov or at 404-695- 4991.

Sincerely,

Fernando Martinez-Torres

Digitally signed by Fernando Martinez-Torres
Date: 2024.12.23 07:06:08 -05'00'

Fernando Martinez Torres
Remedial Project Manager
Department of Defense Section
Superfund & Emergency Management Division
United States Environmental Protection Agency

cc: Jamie A. Woods, TDEC
William Millar, CALIBRE
James Ferreira, EPA, R4
Kevin Koporec, EPA, R4
Shannon Berg, EPA, R4

Responses to Comments from
U.S. Environmental Protection Agency (EPA) Region 4 on:
Draft 2025 Site Management Plan, November 2024
Defense Depot Memphis, Tennessee
Comments Received: 23 December 2024

Comment 1: Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation (RI) Timeline: The SMP should be revised to include a specific timeline for the PFAS RI in accordance with CERCLA §120(e). This timeline must detail the anticipated start date, key milestones (e.g., work plan approval, fieldwork initiation, draft report submission), and an estimated completion date. Incorporating this information will enhance project transparency and facilitate better tracking of progress in addressing emerging contaminants.

Response 1 The SMP reflects available information, including known dates and milestones. Specific timelines for PFAS RI activities depend on coordination with the contractor. As stated in the December 2024 Site Management Team meeting, a kickoff is planned for mid-January 2025. Army will notify EPA and TDEC when specific dates are established and will incorporate them into annual SMP updates. In the interim, PFAS RI-related submittals will be tracked similarly to other documents in the SMP.

Comment 2: Master Schedule: A comprehensive Master Schedule should be developed and integrated into the SMP to align with CERCLA requirements. This schedule should outline all ongoing and planned remedial activities, key decision points and deliverables, timelines for achieving site-specific cleanup goals, and projected dates for attaining Unlimited Use/Unrestricted Exposure (UU/UE) standards. The Master Schedule must comply with CERCLA §120(e) timeframes to facilitate timely completion of remedial actions while providing a clear roadmap for site restoration.

Response 2: Table 11 lists primary and secondary documents for the DDMT environmental restoration program for FY2025 through FY2027, in accordance with the DDMT Federal Facility Agreement (FFA). A master schedule (Gantt chart) will be provided listing activities and schedules for primary and secondary documents through the Final Close-Out report, as outlined in Section 4.3.

Comment 3: Five-Year Review (FYR) and Land Use Controls (LUCs) Statement Correction: The statement regarding FYRs and LUCs should be revised to accurately reflect CERCLA §121(c) and the National Contingency Plan (NCP) at 40 CFR 300.430(f)(4)(ii). It should emphasize the goal of aquifer restoration while clarifying that FYRs are required when hazardous substances remain above levels allowing for UU/UE but are not intended to continue indefinitely. Instead, these reviews serve as tools to evaluate progress toward fully restoring the Memphis Sand Aquifer for beneficial use as a drinking water source. The lead agency should assess the potential for achieving UU/UE during each FYR, document progress toward this goal, and consider modifications to the remedy that could expedite cleanup efforts. LUCs should be regarded as temporary measures rather than permanent solutions; their necessity should be regularly re-evaluated with the aim of removing them as site conditions improve. The statement should emphasize that both FYRs and LUCs will remain in effect only until the site achieves levels that allow for unlimited use and unrestricted exposure of groundwater resources, aligning with CERCLA's goal of full site restoration.

Response 3: Army's intent is to meet MCLs for groundwater over time. However, the cleanup levels in the MI and Dunn Field RODs will not reduce soil contaminants sufficiently for UU/UE; therefore, the LUCs will have to remain in place for an ***indefinite period.***

Section 4.2 will be revised to add the following to the first paragraph: "During each FYR, the Army will assess the feasibility of achieving UU/UE, document progress, and consider adjustments to expedite achieving remedial goals."

Comment 4: The EPA recommends that the lead agency reassess its proposed timelines to ensure proper alignment and preparedness among all stakeholders. Considering this, the lead agency should consider revising the master schedule to account for potential delays in submitting secondary documents. This process should involve conducting a comprehensive review of current timelines, identifying potential areas of concern, and making reasonable adjustments to target dates for each secondary document, while ensuring that any changes do not compromise overall project goals. It is crucial to emphasize that the timelines for primary documents must strictly adhere to the previously approved 2024 Site Management Plan unless written approval for changes to submittal dates has been explicitly provided by the regulators.

Response 4: As stated in Response 2, an updated Master Schedule will be included in the Draft Final 2025 SMP. The schedule presents Army's best estimate of the schedule for necessary activities and documents. Deadlines for Primary Documents and Target Dates for Secondary Documents will be listed on Table 11 for FY2025 through FY2027.

The master schedule incorporates timelines stated in the FFA for review and revision of each document: EPA and TDEC have 60 days following submittal of a Draft document for agency review and submittal of comments. Army then has 60 days to submit responses to agency comments and another 60 days to submit the Draft Final document, The FFA assumes only one cycle of review and revision for each document, and that is provided in the master schedule. If agency comments are received for the Draft Final document, Army will have the same period (120 days total) for submittal of responses and a revised Draft Final document; this will extend the schedule for that document and any dependent activities or documents.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Remediation
Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, TN 38133-4119

January 13, 2025

James C. Foster
BRAC Program Manager
Headquarters Department of the Army,
Assistant Chief of Staff for
Installation Management (DAIM-ODB)
Army Pentagon,
2530 Crystal Drive,
Arlington, VA 22202-3934

Subject: **2025 Site Management Plan**
Defense Depot Memphis, Tennessee
TDoR ID # 79-736
TN4210020570

Mr. Foster,

TDEC-DoR has reviewed the **2025 Site Management Plan** and has no comments regarding the document's contents. If there are questions regarding the approval, please contact me at (901) 686-2802 or at jamie.woods@tn.gov .

Regards,



Jamie A. Woods, P.G.
Project Manager
Division of Remediation
Memphis Environmental Field Office

cc: Bill Millar (CALIBRE)
T. Holmes (HDR Inc)
F. Martinez-Torres (EPA-PM)
TDEC DOR: file # 79-736

From: Martinez-Torres, Fernando <martinez-torres.fernando@epa.gov>
Sent: Friday, February 7, 2025 12:35 PM
To: Millar, William W Sr CTR USARMY HQDA DCS G-9 (USA) <william.w.millar.ctr@army.mil>; Jamie Woods <Jamie.Woods@tn.gov>; Ferreira, James <Ferreira.James@epa.gov>; Koporec, Kevin <Koporec.Kevin@epa.gov>; Berg, Shannon <Berg.Shannon@epa.gov>; McRae, Mac <mac.mcrae@techlawinc.com>
Cc: Foster, James C CIV USARMY HQDA DCS G-9 (USA) <james.c.foster10.civ@army.mil>; Melissa.L.Shirley <Melissa.L.Shirley@usace.army.mil>; Chase.E.Carter <chase.e.carter@usace.army.mil>; Holmes, Thomas C <Thomas.Holmes@hdrinc.com>; Mokri, Clayton R <clayton.mokri@hdrinc.com>; Larry Pannell <lpannell@komangs.com>; Brett Anchukaitis <BAnchukaitis@komangs.com>
Subject: RE: DDMT Draft Final 2025 SMP for review

Good afternoon, Bill,

Please provide the Final version of the Site Management Plan (SMP), incorporating the previously agreed-upon changes, including the Master Schedule, for my review and final approval.

Sincerely,

Fernando Martinez Torres
U.S. Environmental Protection Agency/R4
Federal Facilities Branch
Department of Defense Section
404-695-4991

You are the driving force behind our ability to achieve our objectives of safeguarding the environment, protecting live, and ensuring a sustainable future.

From: Millar, William W Sr CTR USARMY HQDA DCS G-9 (USA) <william.w.millar.ctr@army.mil>
Sent: Wednesday, January 22, 2025 3:54 PM
To: Martinez-Torres, Fernando <martinez-torres.fernando@epa.gov>; Jamie Woods (Jamie.Woods@tn.gov) <Jamie.Woods@tn.gov>; Ferreira, James (he/him/his) <Ferreira.James@epa.gov>; Koporec, Kevin <Koporec.Kevin@epa.gov>; Berg, Shannon <Berg.Shannon@epa.gov>; McRae, Mac <mac.mcrae@techlawinc.com>
Cc: Foster, James C CIV USARMY HQDA DCS G-9 (USA) <james.c.foster10.civ@army.mil>; Shirley, Melissa L CIV USARMY CESAM (USA) <Melissa.L.Shirley@usace.army.mil>; Carter, Chase E CIV USARMY CESAM (USA) <chase.e.carter@usace.army.mil>; Holmes, Thomas C <Thomas.Holmes@hdrinc.com>; Mokri, Clayton R <clayton.mokri@hdrinc.com>; Larry Pannell <lpannell@komangs.com>; Brett Anchukaitis <BAnchukaitis@komangs.com>
Subject: DDMT Draft Final 2025 SMP for review

All,

I am sending you the Draft Final 2025 SMP documents via DoD SAFE.

Thanks.

Bill Millar
CALIBRE
703-819-0100