



Department of Energy

Portsmouth/Paducah Project Office
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October 29, 2025

Mr. Brian Begley
Federal Facility Agreement Manager
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

PPPO-02-10035282-26

Ms. April Webb
Interim Federal Facility Agreement Manager
Hazardous Waste Branch Manager
Division of Waste Management
Kentucky Department for Environmental Protection
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

Dear Mr. Begley and Ms. Webb:

**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR THE
SECOND HALF OF FISCAL YEAR 2025 PADUCAH, KENTUCKY,
DOE/LX/07-2518/V2**

Enclosed is the *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the Second Half of Fiscal Year 2025 Paducah, Kentucky*, DOE/LX/07-2518/V2, and the associated certification page. This report is required by Sections XXIII and XXXII.F of the Federal Facility Agreement (FFA) and Part IV (Corrective Action) of the Hazardous Waste Management Facility Permit.

In accordance with Section XX of the Paducah FFA, the U.S. Environmental Protection Agency and the Kentucky Department for Environmental Protection have a 90-day review period. If the FFA parties have no substantive comments, the U.S. Department of Energy requests a letter of concurrence.

If you have any questions or require additional information, please contact me at (270) 217-2029.

Sincerely,

**APRIL
LADD**

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April Ladd
Federal Facility Agreement Manager
Portsmouth/Paducah Project Office

Enclosures:

1. Certification Page
2. *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the Second Half of Fiscal Year 2025 Paducah, Kentucky, DOE/LX/07-2518/V2*

General Reference Compendium

cc w/ enclosures:

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CERTIFICATION

Document Identification: *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the Second Half of Fiscal Year 2025 Paducah, Kentucky, DOE/LX/07-2518/V2, dated October 2025*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Four Rivers Nuclear Partnership, LLC

MYRNA REDFIELD
(Affiliate)

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Myrna E. Redfield, Program Manager/Date Signed
Four Rivers Nuclear Partnership, LLC

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U.S. Department of Energy

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April Ladd, Paducah Site Lead/Date Signed
Portsmouth/Paducah Project Office
U.S. Department of Energy

**DOE/LX/07-2518/V2
Secondary Document**

**U.S. Department of Energy
Paducah Gaseous Diffusion Plant
Federal Facility Agreement
Semiannual Progress Report for the
Second Half of Fiscal Year 2025
Paducah, Kentucky**



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**U.S. Department of Energy
Paducah Gaseous Diffusion Plant
Federal Facility Agreement
Semiannual Progress Report for the
Second Half of Fiscal Year 2025
Paducah, Kentucky**

Date Issued—October 2025

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
FOUR RIVERS NUCLEAR PARTNERSHIP, LLC,
managing the
Deactivation and Remediation Project at the
Paducah Gaseous Diffusion Plant
under Contract DE-EM0004895

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ACRONYMS

AR	Administrative Record
BGOU	Burial Grounds Operable Unit
CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRP	community relations plan
D&D	deactivation and decommissioning
DNAPL	dense nonaqueous-phase liquid
DOE	U.S. Department of Energy
EIC	Environmental Information Center
EPA	U.S. Environmental Protection Agency
EW	extraction well
FFA	Federal Facility Agreement
FRNP	Four Rivers Nuclear Partnership, LLC
GRC	general reference compendium
GWOU	Groundwater Operable Unit
IRA	interim remedial action
KDEP	Kentucky Department for Environmental Protection
LUCIP	land use control implementation plan
MCL	maximum contaminant level
MW	monitoring well
MWG	modeling working group
NEPCS	Northeast Plume Containment System
NTCRA	non-time-critical removal action
NTU	nephelometric turbidity unit
NWPGS	Northwest Plume Groundwater System
O&M	operation and maintenance
OSWDF	on-site waste disposal facility
OU	operable unit
PD	post-decision
PEGASIS	PPPO Environmental Geographic Analytical Spatial Information System
PPPO	Portsmouth/Paducah Project Office
PVA	property valuation administrator
RMD	risk methods document
RGA	Regional Gravel Aquifer
ROD	Record of Decision
SMP	site management plan
SST	Swift & Staley Team
SWMU	solid waste management unit
SWOU	Surface Water Operable Unit
VOC	volatile organic compound
WAG	waste area grouping
WDA	waste disposal alternatives

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FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT SECOND HALF OF FISCAL YEAR 2025

Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025

INTRODUCTION

The Paducah Gaseous Diffusion Plant was placed on the National Priorities List on May 31, 1994. In accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the U.S. Department of Energy (DOE) entered into a Federal Facility Agreement (FFA) with the U.S. Environmental Protection Agency (EPA) and Kentucky Department for Environmental Protection (KDEP) on February 13, 1998. The FFA established one set of consistent requirements for achieving comprehensive site remediation in accordance with the Resource Conservation and Recovery Act and CERCLA, including stakeholder involvement.

Site cleanup activities are integrated into the following operable units (OUs) and decisions.

- C-400 Complex OU
- Groundwater OU (GWOU)
- Surface Water OU (SWOU)
- Soils OU
- Burial Grounds OU (BGOU)
- Environmental Media Decision¹
- Deactivation and Decommissioning (D&D) OU¹
- Facility Decommissioning OU¹
- Lagoons OU
- Depleted Uranium Hexafluoride (DUF₆) Footprint Underlying Soils OU
- Soils and Slabs OU
- CERCLA Waste Disposal Alternatives (WDA) OU
- Comprehensive Site OU

Section XXIII of the FFA requires that DOE prepare a regulatory semiannual progress report that describes the actions that DOE has taken during the previous six months to implement FFA requirements, as well as the schedules of activities to be taken during the upcoming six months.² Activities that have taken place after the reporting period end date are not included in this report, but will be included in the reporting period in which they occur. Projects and activities reported in this update are grouped by the OUs listed in Table 1.

¹ Updated from the approved *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2025*, DOE/LX/07-2508&D2.

² Schedules are included for information and planning purposes only; enforceable schedules are established in the site management plan (SMP).

Table 1. OUs and Corresponding Report Topics

OUs	Project/Activities
C-400 Complex OU	• C-400 D&D • C-400 Final Remedial Action
GWOU	• C-400 Interim Remedial Action (IRA) • Southwest Plume Sources Remedial Action • Dissolved-Phase Plumes Remedial Action • Northeast Plume IRA • Northwest Plume IRA
BGOU	• C-749 Uranium Burial Ground Solid Waste Management Unit (SWMU) 2
SWOU	• Remedial Action
CERCLA WDA OU	• CERCLA WDA Evaluation
Environmental Media Decision	• Soils SWMUs • Soils and Slabs • Facility decommissioning (at and below grade features) • C-400 Complex [at and below grade features and confirmed/probable dense nonaqueous-phase liquid (DNAPL) in groundwater] • Burial Grounds • Groundwater — Southwest Plume sources [above the Regional Gravel Aquifer (RGA)] — Potential additional groundwater sources (above the RGA) • Surface Water • Lagoons
D&D OU	• Facility decommissioning (abovegrade structures only) • C-400 Complex (abovegrade structures only) • Remaining non-CERCLA decommissioning activities (not currently in an OU)
Water Policy	• Removal Action
Additional Reporting	• Waste Area Groupings (WAGs) 1 and 7 • Community Relations Plan (CRP) • SMP • CERCLA Five-Year Review

The approved *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2025*, DOE/LX/07-2508&D2, documents the FFA parties’ conceptual alignment on the integrated and accelerated approach to site cleanup; the FFA parties continue to work toward implementing this strategy and the details of the approach. Previous OU scope descriptions, shown in Table 1, remain largely unchanged in this document and will be updated after the proposed decision documents [i.e., Environmental Media Record of Decision (ROD), D&D ROD, WDA ROD] are signed. Table 2 illustrates the OU decision crosswalk and conceptual approach. DOE intends to work with the FFA parties to provide additional details on executing this approach. Three remedial investigations/feasibility studies, proposed plans, and RODs are proposed for submittal in 2029 (or earlier). The Environmental Media ROD will combine cleanup actions for at and below grade features (e.g., slabs, utilities, basement structures), soils, surface water, C-400 confirmed/probable DNAPL, slabs, lagoons, and burial grounds into a single final

decision, establishing final cleanup levels for the entire Paducah Site based on anticipated future use.³ The sitewide D&D ROD will combine all abovegrade structures into a single final decision (incorporating deactivation under the FFA/CERCLA process, as defined in the ROD). The WDA ROD will make a final waste disposition decision for waste generated by the D&D and Environmental Media decisions. A final Comprehensive Site OU would consider appropriate actions for remaining contamination, after actions determined by the three decision documents are complete, for groundwater actions (Dissolved-Phase Plumes, Northeast and Northwest Plumes, and Water Policy), for DUF₆ footprint underlying soil (and other site components required for DUF₆ operations), and for comprehensive risk review of remaining site conditions.

Table 2. OU Decision Crosswalk

ROD	Current OUs
WDA OU	• WDAs
D&D OU	• Facility decommissioning (abovegrade structures only) • C-400 Complex (abovegrade structures only) • Remaining non-CERCLA decommissioning activities (not currently in an OU)
Environmental Media	• Soils (SWMUs) • Soils and Slabs • Facility decommissioning (at and below grade) • C-400 Complex (at and below grade) and confirmed/probable DNAPL in groundwater • Burial Grounds • Groundwater Sources — Southwest Plume sources (above the RGA) — Potential additional groundwater sources (above the RGA) • Surface Water (on-site and off-site) • Lagoons
CSOU	• DUF₆ Footprint Underlying Soil (and other site components required for DUF₆ operations) • Groundwater Dissolved-Phase Plume — Northeast Plume (interim ROD transition to final remedy) — Northwest Plume (interim ROD transition to final remedy) — Dissolved-Phase Plumes — Water Policy (removal action transition to final remedy) — Potential additional groundwater sources (RGA) • Comprehensive risk review of remaining site conditions

Each section of this update has been divided into nine sections as follows.

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan)
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction)

³ Scope does not include groundwater for Northeast Plume (interim ROD transition through final remedy), Northwest Plume (interim ROD transition through final remedy), Dissolved-Phase Plumes (as identified in the SMP) and Water Policy (removal action transition through final remedy).

- III. Identity and assigned tasks of DOE contractors for work to be performed for this project
- IV. Statement of the manner and extent to which the requirements and time schedules are being met
- V. Primary/Secondary Document Tracking System
 - A) Documents under review and/or preparation for this reporting period
 - B) Due dates for completion of review/modification tasks
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay)
- VII. Summary of all contacts with local community, public interest groups, or state government
- VIII. Changes in relevant personnel
- IX. Actual cost for operation and maintenance (O&M), if appropriate

Each section satisfies a reporting requirement for the FFA Semiannual Progress Report or the Hazardous Waste Management Facility Permit and has been formatted in accordance with the template found in Appendix D of the FFA.

To account for sample analysis time and the data assessment process, the analytical data included in this report lags operational data by three months. This is in accordance with agreements made among the FFA parties during the July 14, 2022, FFA managers meeting.

This report includes five appendices as follows.

- Appendix A contains Northeast and Northwest Plumes Water Withdrawal Reports for the January 1, 2025, through June 30, 2025, reporting period.
- Appendix B contains Figures B.1 through B.30, as referenced in the Northeast and Northwest Plumes updates. All groundwater data are available in the PPPO Environmental Geographic Analytical Spatial Information System (PEGASIS) and, therefore, have not been summarized in this semiannual report.
- Appendix C contains a map depicting monitoring well (MW) locations for the C-746-K Landfill and graphical presentations of trichloroethene (TCE) concentrations in these wells over time. These data are currently collected semiannually. All groundwater data are available in PEGASIS and, therefore, have not been summarized in this semiannual report.
- Appendix D contains updates to the Administrative Record (AR) index since the last progress report. This is required by the Paducah FFA (Section XXXII.F). In October 2018, DOE began a comprehensive review of the Paducah Environmental Information Center (EIC) to ensure that the project document files were complete. As part of this effort, DOE reorganized the Paducah EIC to include the original three categories: (1) AR File, (2) Post-Decision (PD) File, and (3) General Reference Compendium (GRC); and added (4) AR Reference File and (5) AR Archive File. The AR Reference File contains programmatic documents that support the AR [e.g., SMP, Risk Methods Document (RMD)]. As a result of this reorganization of the EIC, Appendix D has been expanded to include updates to the AR index that include the AR File, PD File, and AR Reference File.

The AR Archive File contains documents for projects that originally were expected to have a decision document (i.e., ROD or Action Memorandum), but had been resequenced prior to a final decision. These documents have been archived within the AR Archive File to establish future AR files for projects and, as a result, are not included in Appendix D. The AR Archive File can be viewed on the EIC website.

The GRC, which supplements the Paducah AR, contains technical documents associated with the Paducah Site that do not meet the CERCLA criteria of an AR File or a PD File (e.g., CRP, CERCLA Five-Year Review, Annual Site Environmental Report); but are deemed important in understanding the Paducah Site environmental remedial efforts. Because the GRC is not part of the AR, it is not included as part of the update to Appendix D. The GRC can be viewed on the EIC website.

- Appendix E contains figures depicting the C-749 Uranium Burial Ground (SWMU 2) groundwater MW network and a summary of the SWMU 2 trends for TCE and technetium-99 (Tc-99) for a period of five years. All groundwater data are available in PEGASIS and, therefore, have not been summarized in this semiannual report.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

C-400 COMPLEX OPERABLE UNIT

The C-400 Complex OU was established in a *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (C-400 Complex OU MOA), signed August 8, 2017; the agreement then was incorporated into the SMP. The following two projects are included in the C-400 Complex OU.

- C-400 D&D
- C-400 Final Remedial Action

On September 16, 2022, the FFA parties executed an FFA milestone modification, which incorporated the C-400 D&D into the C-400 Final Remedial Action. Because the demolition of the C-400 Cleaning Building will be incorporated into the C-400 Final Remedial Action, milestones associated with the C-400 D&D, which was intended to be a non-time-critical removal action (NTCRA), will not be necessary. Per the Memorandum, *Suspension of D1 and D2 Comprehensive Environmental Response, Compensation, and Liability Act Documents Associated with the C-400 Cleaning Building Non-Time-Critical Removal Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (C-400 Building D&D MOA), dated October 2, 2019, the original NTCRA documents were not approved, and the NTCRA was suspended. With the FFA parties' execution of the FFA milestone modification, the C-400 Building D&D MOA is superseded, and the planning documents associated with the NTCRA and their associated milestones are no longer required because the C-400 Cleaning Building will be demolished as part of the remedial action. Additionally, under the FFA parties' FFA milestone modification, the milestone dates in the C-400 Complex OU MOA, which provided for enforceable milestones and planning dates and was later extended due to the force majeure related to COVID-19, are also superseded.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

C-400 COMPLEX OPERABLE UNIT: C-400 Final Remedial Action

The C-400 Final Remedial Action will investigate the C-400 Complex OU and associated SWMUs, evaluate potential remedial alternatives, develop decision documents selecting an alternative(s), and design and implement the remedial alternative(s).

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Finalized and submitted the *Addendum to the Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2/A1, to EPA and KDEP on June 13, 2025.
- Received EPA and KDEP concurrence on the *Addendum to the Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2/A1, on August 27, 2025, and July 18, 2025, respectively.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- None.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the C-400 Complex OU belongs to Four Rivers Nuclear Partnership, LLC (FRNP). FRNP also provides programmatic and technical support, analytical services, and business management services. Swift & Staley Team (SST) manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

Requirements for the C-400 Complex Remedial Action are being met consistent with the following documents:

- *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, signed August 8, 2017;
- *Memorandum of Agreement for Resolution of Formal Dispute Regarding the Non-Concurrence by EPA and KDEP on the DOE Milestone Modification Request for Submittal of the Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning*

Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2407&D1), signed September 28, 2017;

- *Memorandum of Agreement for Resolution of Formal Disputes on EPA Conditional Concurrence on the Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2420&D2 and the Engineering Evaluation/Cost Analysis for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2425&D2, signed August 1, 2019; and*
- *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2025, DOE/LX/07-2508&D2.*

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Addendum to the Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2474&D2/A1, was under development, the document was under review, and the document was concurred on by EPA and KDEP during this reporting period.*

B) Due dates for completion of review/modification tasks:

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site Citizens Advisory Board (CAB), FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025⁴**

GROUNDWATER OPERABLE UNIT

The scope of the GWOU includes performing investigations, conducting baseline risk assessments, evaluating removal/remedial alternatives, and selecting and implementing actions necessary to achieve protection of human health and the environment from exposure to groundwater contamination that could result in an unacceptable risk.

Within the GWOU are these projects: C-400 IRA, Southwest Plume Sources Remediation, Dissolved-Phase Plumes, Northeast Plume IRA, and Northwest Plume IRA.

The overall objective of the GWOU is to remove/mitigate ongoing sources and to remediate the groundwater to target contaminant concentrations. The predominant contaminant of concern in the groundwater plumes is TCE. Table 3 provides an overall picture of the TCE mass removed [TCE values may contain other volatile organic compounds (VOCs)] by various actions.

Table 3. Cumulative TCE* Removed at Paducah

Source Area	Cumulative TCE Removed (gal)*
Northwest Plume Pump-and-Treat	4,076**
Northeast Plume Pump-and-Treat	381**
C-400 Six-Phase Treatability Study	1,900
C-400 Phase I	535
C-400 Phase IIa	1,137
Southwest Plume (SWMU 1)	24***
Other sources (i.e., SWMU 91–LASAGNA™)	246
Total	8,299

*TCE values may contain other VOCs.

** Cumulative through June 30, 2025.

*** Removed during deep soil mixing operations.

⁴ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

GROUNDWATER OPERABLE UNIT PROJECT: C-400 IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Continued long-term monitoring of the C-400 IRA groundwater monitoring network as required by the *Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2150&D2/R2.
- Conducted annual inspections in accordance with the *Land Use Control Implementation Plan for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2151&D2/R2.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue long-term monitoring for the C-400 IRA. Data from long-term monitoring for the C-400 IRA are available in PEGASIS.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the C-400 IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements for the C-400 IRA are being met consistent with the following documents:

- *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, signed August 8, 2017;
- *Memorandum of Agreement for Resolution of Formal Dispute Regarding the Non-Concurrence by EPA and KDEP on the DOE Milestone Modification Request for Submittal of the Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-2407&D1)*, signed September 28, 2017;

- *Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2150&D2/R2; and*
- *Land Use Control Implementation Plan: Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2151&D2/R2.*

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- None.

B) Due dates for completion of review/modification tasks:

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- Sampling of the C-400 IRA wells has been incorporated into the Environmental Monitoring Program. O&M cost for sampling for the C-400 IRA Project is not tracked separately.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

GROUNDWATER OPERABLE UNIT PROJECT: Southwest Plume Sources

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

SWMU 1

- Continued long-term monitoring of the SWMU 1 MW network as required by the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Conducted inspections of land use control implementation plan (LUCIP) warning signs at SWMU 1 and verified the Excavation/Penetration Permit program for the Southwest Plume area as required by the *Record of Decision for Solid Waste Management Units 1, 211-A, 211-B, and Part of 102 Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0365&D2/R1*.

SWMUs 211-A and 211-B

- Continued performance and long-term MW network sample collection at SWMU 211-A as prescribed in the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Initiated development of a summary of preliminary performance MW results collected through March 2025 as prescribed in the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Conducted inspections of LUCIP warning signs at SWMU 211-A and SWMU 211-B and verified the Excavation/Penetration Permit Program for the Southwest Plume areas as required by the *Record of Decision for Solid Waste Management Units 1, 211-A, 211-B, and Part of 102 Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0365&D2/R1*.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

SWMU 1

- Continue long-term monitoring of the SWMU 1 MW network as required by the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Conduct inspections of LUCIP warning signs at SWMU 1 and verify the Excavation/Penetration Permit Program for the Southwest Plume area as required by the *Record of Decision for Solid Waste Management Units 1, 211-A, 211-B, and Part of 102 Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0365&D2/R1*.

SWMUs 211-A and 211-B

- Continue performance and long-term MW network sample collection at SWMU 211-A, as prescribed in the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Conduct inspections of LUCIP warning signs at SWMU 211-A and SWMU 211-B and verify the Excavation/Penetration Permit Program for the Southwest Plume areas as required by the *Record of Decision for Solid Waste Management Units 1, 211-A, 211-B, and Part of 102 Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0365&D2/R1*.
- Finalize a summary of preliminary performance MW results collected through March 2025 as prescribed in the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.
- Initiate a summary of preliminary performance MW results collected through September 2025 as prescribed in the *Operation and Maintenance and Environmental Monitoring Plan for Solid Waste Management Units 1 and 211-A Remedial Actions for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2501&D2*.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the Southwest Plume Sources belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements for the SWMU 1 portion of the Southwest Plume sources remedial action subproject are being met consistent with the SMP, the FFA, and as agreed to by the FFA parties.
 - The requirements for the SWMU 211-A portion of the Southwest Plume subproject are being met consistent with the SMP, the FFA, and as agreed to by the FFA parties.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- None.
- B) Due dates for completion of review/modification tasks:**
- None.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.
- VII. Summary of all contacts with local community, public interest groups, or state government:**
- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.
- VIII. Changes in relevant personnel:**
- None.
- IX. Actual cost for O&M, if appropriate:**
- Sampling of SWMU 1 and SWMU 211-A has been incorporated into the Environmental Monitoring Program. O&M cost for this project is not tracked separately.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

GROUNDWATER OPERABLE UNIT PROJECT: Dissolved-Phase Plumes

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):**
- Met with the Modeling Working Group (MWG) during this reporting period on April 2, 2025.
- II. Schedule of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- Following the April 2, 2025, MWG meeting, the FFA parties agreed by consensus to suspend the MWG indefinitely.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:**
- Reporting responsibility for the work to be performed in support of the Dissolved-Phase Plume belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.
- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements and time schedules are being met.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- None.
- B) Due dates for completion of review/modification tasks:**
- None.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025⁵**

GROUNDWATER OPERABLE UNIT PROJECT: Northeast Plume IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Treated 41,808,084 gal of contaminated groundwater, with an average system treatment rate of 160 gal per minute during this reporting period. The system is designed so that continuous operation of the Northeast Plume Containment System (NEPCS) is possible when only one of the two extraction wells (EWs) is functional. The NEPCS achieved an average operational efficiency, as a whole, of 92.8%. Operational online efficiencies for the reporting period for C-765 were as follows: January 2025, 99.8%; February 2025, 99.9%; March 2025, 97.4%; April 2025, 21.4%; May 2025, 99.0%; and June 2025, 97.1%. The C-765-A operational online efficiencies for the reporting period were as follows: January 2025, 99.9%; February 2025, 99.9%; March 2025, 100%; April 2025, 99.5%; May 2025, 99.4%; and June 2025, 99.9%.

A) Process Operations:

The NEPCS consists of two EWs (EW234 and EW235), transfer piping, two treatment units for air stripping and suspended solids removal, and MW network. The old EWs, EW331 and EW332, equalization tank, and old transfer piping have been placed in standby mode.

B) Process Testing:

Operation of the NEPCS began February 28, 1997. As of June 30, 2025, the NEPCS has processed a total of approximately 2,399,991,153 gal of water. The monthly withdrawal volumes for this reporting period are presented in Appendix A, Table A.1, of this report. This table includes a summary of the withdrawn water volumes and average daily rates.

C) NEPCS Influent, Effluent, and Extraction Well Testing:

Due to sample analysis time and the data assessment process, there is a three-month lag in the analytical data and operational data. Graphs in this report present analytical data through June 30, 2025. Data are available in PEGASIS.

Influent TCE analytical data from 2020 through the end of June 2025 are presented in Appendix B. Environmental samples were collected monthly from the treatment system influent and weekly from the treatment system effluent for the period of January 1, 2025, through June 30, 2025. High, low, and average influent and effluent TCE concentrations for these months are presented in Table 4.

⁵ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

Table 4. TCE Concentrations for Northeast Plume

	TCE (µg/L)		
	High	Low	Average
Influent C-765 (EW234)	13.8	7.91	10.4
Influent C-765-A (EW235)	53.9	40.6	46.5
Effluent from C-765	< 1	< 1	< 1
Effluent from C-765-A	< 1	< 1	< 1
Effluent (CERCLA Outfall C001)	< 1	< 1	< 1

NOTE: Data rejected by validation or assessment are not included on the table.

As presented in Table 4, the NEPCS continued to remove TCE effectively. The systems operated with an average removal efficiency of 90.3% for EW234 and 97.8% for EW235 for TCE.

The EWs were sampled monthly during this reporting period. For the period of January 1, 2025, through June 30, 2025, EW234 had an average TCE concentration of 10.4 µg/L, while EW235 had an average concentration of 46.5 µg/L.

Treated groundwater for the Northeast Plume is discharged to a CERCLA outfall, and data associated with the CERCLA outfall are included as part of Appendix B of this report.

D) Maintenance Activities:

Routine Maintenance Activities:

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Northwest/Northeast Plume Daily Operational Data Collection and Maintenance*, CP4-ER-0017.

- C-765 system was shut down for 14.75 hours for planned maintenance during this reporting period.
- C-765-A system was shut down for 1.5 hours for planned maintenance during this reporting period.

Non-routine Maintenance Activities:

- C-765 system was shut down for a total of 600.25 hours during this reporting period due to unexpected repairs and power disruptions. The majority of these hours shut down were due to a well pump motor fault on EW234. The system was shut down for 24.5 days (584.75 hours) until a new pump motor was installed on April 24, 2025, and the system restarted.
- C-765-A system was shut down for a total of 8.5 hours during this reporting period due to unexpected repairs and power disruptions.

E) Effectiveness Monitoring—Monitoring Well Results:

Figure B.1, included in Appendix B, shows locations of the MWs and EWs. Figure B.2 shows system influent TCE concentrations, and Figure B.3 includes a summary of the Tc-99 activities in the Northeast Plume EWs. Figure B.4 shows the estimated cumulative amount of TCE removed since the NEPCS began operations in 1997. Figures B.5 through B.14, presented in Appendix B, show TCE concentrations and Tc-99 activities in upgradient transect wells, MWs near the EWs, downgradient wells, distal downgradient wells, and wells near the C-400 Complex. The EWs are working well to increase TCE mass removal and to enhance control of the plume. This is shown in Figure B.4 in Appendix B with an increase in mass removal beginning in October 2017, with initiation of pumping from the optimized EWs.

During this reporting period, the FFA parties reviewed and assessed the Northeast Plume TCE and Tc-99 transect well results on a quarterly basis. The analytical results can be found in Appendix B, along with analytical results for other NEPCS MWs. This information is used by the FFA parties when considering if additional adjustments are needed to minimize undesirable expansion of high concentrations of Tc-99 and TCE within the Northeast Plume. As agreed to by the FFA parties, 100 gal per minute and 75 gal per minute are the target flowrates for EW234 and EW235, respectively. The NEPCS continues to operate under Condition #3 of the *Memorandum of Agreement for Resolution of Formal Dispute of the Explanation of Significant Differences to the Record of Decision for the Interim Remedial Action of the Northeast Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-1291&D2)*, and *Remedial Action Work Plan for Optimization of the Northeast Plume Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-1280&D2)*.

F) Modification of the NEPCS Operations or Configuration:

- None.

G) See Section V for work related to document preparation and review.

II. Schedule of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue to conduct and document the necessary tasks required for equipment maintenance, calibration, and operation as specified in the *Operation and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2470&D1*.
- Provide TCE and Tc-99 transect MW sampling results to EPA and KDEP on a quarterly basis.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the Northeast Plume IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The effluent concentration goal of 30 µg/L for TCE was met during the reporting period. The NEPCS remained operational 92.8% of the time during this reporting period.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- None.
- B) Due dates for completion of review/modification tasks:**
- None.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.
- VII. Summary of all contacts with local community, public interest groups, or state government:**
- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.
- VIII. Changes in relevant personnel:**
- None.
- IX. Actual cost for O&M, if appropriate:**
- Actual costs for O&M of the Northwest and Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was approximately \$469,000.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025⁶**

GROUNDWATER OPERABLE UNIT PROJECT: Northwest Plume IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Treated 51,286,381 gal of contaminated groundwater, with an average monthly operational efficiency of 99.5% during this reporting period. The average system treatment rate for the reporting period was approximately 197 gal per minute. Operational efficiencies for the reporting period were as follows: January 2025, 99.0%; February 2025, 99.7%; March 2025, 99.5%; April 2025, 98.9%; May 2025, 99.8%; and June 2025, 99.8%.

A) Process Operations:

The Northwest Plume Groundwater System (NWPGS) consists of two EWs (EW232 and EW233), located just north of the Paducah Site, and underground transfer pipeline for moving comingled groundwater from the EWs to the C-612 treatment facility. The treatment facility has an operational capacity of 220 gal per minute and utilizes air stripping for removal of TCE in groundwater, ion exchange for removal of Tc-99 in groundwater, and vapor phase carbon for capturing TCE from the exhaust of the air stripper. Treated groundwater is released to a tributary that flows to Kentucky Pollutant Discharge Elimination System Outfall 001. A MW network is used to evaluate performance and effectiveness of the optimized EWs.

B) Process Testing:

Operation of the NWPGS began on August 28, 1995. As of June 30, 2025, the NWPGS has processed a total of approximately 2,982,978,631 gal of water. The monthly withdrawal volumes for the reporting period are presented in Appendix A, Table A.2, of this report. This table includes a summary of the withdrawn water volumes and average daily rates.

C) NWPGS Influent, Effluent, and Extraction Well Testing:

Due to sample analysis time and the data assessment process, there is a three-month lag in the analytical data and operational data. Graphs in this report present data through June 2025. Data are available in PEGASIS.

Figure B.15, included in Appendix B, shows locations of the Northwest Plume MWs. Influent TCE and Tc-99 analytical data are presented in Appendix B on Figures B.16 and B.17. Figures B.18 and B.19 include a summary of the TCE and Tc-99 concentrations of the effluent versus time at the NWPGS. Figure B.20 shows the cumulative estimated amount of TCE removed since the NWPGS began operations in 1995. The influent sample results, compared

⁶ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

to the NWPGS effluent results, indicated that the NWPGS continues to remove TCE and Tc-99 effectively.

For radionuclides, all reported values, including negative values, are used to derive averages. Negative Tc-99 results may be reported due to a statistical determination of the counts seen by a detector, minus a background count. High, low, and average treatment facility influent and effluent TCE and Tc-99 concentrations from January 1, 2025, through June 30, 2025, are presented in Table 5.

Table 5. TCE and Tc-99 Concentrations at the C-612 Treatment Facility for Northwest Plume (January 1, 2025, through June 30, 2025)

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
Influent from EW232 and EW233 (combined)	294	72.2	198	839	280	392
Effluent from C-612 NW Plume treatment facility	< 1*	< 1*	< 1*	65.2	18.6	38.1

*The values denoted are below the detection limit.

The treatment system influent was sampled monthly. The effluent was sampled weekly. These sampling frequencies were conducted in accordance with the *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2. As presented in Table 5, the NWPGS continued to remove TCE and Tc-99 effectively. The system operated with an average removal efficiency of 99.5% for TCE and 90.3% for Tc-99.

The average TCE effluent concentration for this reporting period was less than 1 µg/L, which is less than the treatment goal of 5 µg/L. The average Tc-99 effluent value was 38.1 pCi/L, which is less than the operational goal of 900 pCi/L, during the reporting period.

High, low, and average sample results for this reporting period at the EWs are shown in Table 6. EW232 and EW233 were sampled quarterly in accordance with the *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2.

Table 6. TCE and Tc-99 Concentrations for Northwest Plume Extraction Wells (January 1, 2025, through June 30, 2025)

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
EW232	165	73.6	119	68.5	25.0	46.8
EW233	403	251	342	543	497	514

D) Treatment Media:

Ion Exchange Resins:

The NWPGS is equipped with four ion exchange columns used for Tc-99 removal. Purolite® A520E resin is used in the columns, which are arranged in a lead/lag configuration in a trailer. The ion exchange resin is changed out as needed.

Activated Carbon Media:

The NWPGS is equipped with two carbon columns that contain granular activated carbon for absorption of VOCs from the vapor-phase effluent of the air stripper unit. The *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2, requires that spent carbon be replaced every 6 months. The last carbon changeout was completed on September 25, 2025. The next carbon changeout is projected for March 2026.

E) Maintenance Activities:

Routine Maintenance Activities:

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Northwest/Northeast Plume Daily Operational Data Collection and Maintenance*, CP4-ER-0017, and *Monthly, Quarterly and Annual Maintenance at the C-612 Northwest Plume Groundwater System*, CP4-ER-0016.

- The NWPGS was shut down for a total of 12.5 hours for planned maintenance activities.

Non-routine Maintenance Activities:

- The NWPGS was shut down for a total of 11.5 hours for the repair of failed components and unexpected power disruptions.

F) Effectiveness Monitoring—Monitoring Well Results:

Figures B.21 through B.30 presented in Appendix B, show TCE and Tc-99 concentrations in EWs and nearby MWs from 2020 through June 2025.

G) Modification of the NWPGS Operations or Configuration:

- None.

H) See Section V for work related to document preparation and review.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue to conduct and document the necessary tasks required for equipment maintenance, calibration, and operation, as specified in the *Operation and Maintenance Plan for the*

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the Northwest Plume IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The average NWPGS water effluent concentrations met the operational goals of 5 µg/L for TCE and 900 pCi/L for Tc-99 during the reporting period. The NWPGS has maintained an average monthly operational efficiency of 99.5% during this reporting period.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- None.

B) Due dates for completion of review/modification tasks:

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, and reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- Actual costs for O&M of the Northwest and Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was approximately \$469,000.

**FEDERAL FACILITY AGREEMENT
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**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

BURIAL GROUNDS OPERABLE UNIT

The scope of the BGOU includes a remedial investigation, baseline human health risk assessment, evaluation of remedial alternatives, remedy selection, and implementation of actions, as necessary, for protection of human health and the environment for the following burial grounds: C-749 (SWMU 2); C-404 (SWMU 3); C-747/C-748-B (SWMU 4); C-746-F (SWMU 5); C-747-B (SWMU 6); C-747-A (SWMUs 7 and 30), which includes the area beneath C-747-A (SWMU 12); the residential/inert borrow area (SWMU 145); and the C-746-S&T Landfills (SWMUs 9 and 10, respectively).

This section also includes information on the sampling activities being conducted at the C-749 Uranium Burial Ground, as required in the *Record of Decision for Interim Remedial Action at Solid Waste Management Units 2 and 3 of Waste Area Group 22 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1351&D1, signed in 1995.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025⁷**

BURIAL GROUNDS OPERABLE UNIT PROJECT: C-749 Uranium Burial Ground (SWMU 2)

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Continued groundwater monitoring at the C-749 Uranium Burial Ground (SWMU 2), as required by the *Record of Decision for Interim Remedial Action at Solid Waste Management Unit 2 and 3 of Waste Area Group 22 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1351&D1. Appendix E contains figures depicting the C-749 Uranium Burial Ground (SWMU 2) groundwater MW locations and a summary of the SWMU 2 trends for TCE and Tc-99 for a period of five years. All groundwater data are available in PEGASIS and, therefore, have not been summarized in this report.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue groundwater monitoring at the C-749 Uranium Burial Ground, as required by the *Record of Decision for Interim Remedial Action at Solid Waste Management Unit 2 and 3 of Waste Area Group 22 at the Paducah Gaseous Diffusion Plant Paducah, Kentucky*, DOE/OR/06-1351&D1.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the C-749 Uranium Burial Ground belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE and maintains existing burial ground cover.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation during this reporting period:

- None.

B) Due dates for completion of review/modification tasks:

⁷ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- Sampling of the C-749 Uranium Burial Ground has been incorporated into the Environmental Monitoring Program. O&M cost for this project is not tracked separately.

**FEDERAL FACILITY AGREEMENT
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**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

SURFACE WATER OPERABLE UNIT

The SWOU includes the Surface Water Removal Action and Surface Water Remedial Action projects. O&M is performed on North-South Diversion Ditch Sections 1 and 2 and institutional controls, as required by the *Operation and Maintenance Plan for Sections 1 and 2 of the North-South Diversion Ditch at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2484&D2*, and *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-1904&D1/R2*; and O&M activities for the C-613 Sedimentation Basin are maintained in accordance with the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2044&D1/R4*, respectively.

Per the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2044&D1/R4*, the relationship of turbidity to total suspended solids is compared on a quarterly basis. An update to the existing linear regression model was performed in June 2025, and the current maximum discharge limit for turbidity is 89 nephelometric turbidity units (NTUs), with a 30-day average not to exceed 41 NTUs.

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Reporting Period: 4/1/2025–9/30/2025**

SURFACE WATER OPERABLE UNIT PROJECT: Remedial Action

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Conducted inspections in accordance with the *Land Use Control Implementation Plan for the North-South Diversion Ditch at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1949&D2/R2.
- Conducted inspections for Environmental Indicator signs and Institutional Control measures in April 2025 and May 2025 in accordance with the *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1904&D1/R2.
- Revised and submitted the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R5, to EPA and KDEP for review on September 30, 2025.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Conduct inspections in accordance with the *Land Use Control Implementation Plan for the North-South Diversion Ditch at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1949&D2/R2.
- Conduct inspections for Environmental Indicator signs and Institutional Control measures in accordance with the *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1904&D1/R2.
- Receive comments from EPA and KDEP on the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R5, during the next reporting period.
- Revise and submit the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D2, to EPA and KDEP for review during the next reporting period.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the SWOU Remedial Action belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements and time schedules are being met for the SWOU consistent with the SMP and as agreed to by the FFA parties.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R5, was under development and the document was under EPA and KDEP review during this reporting period.
- B) Due dates for completion of review/modification tasks:**
- Comments on the *Operation and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R5, are due during the next reporting period by December 29, 2025.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.
- VII. Summary of all contacts with local community, public interest groups, or state government:**
- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.
- VIII. Changes in relevant personnel:**
- None.
- IX. Actual cost for O&M, if appropriate:**
- O&M activities have been incorporated into the Environmental Monitoring Program. O&M cost for this project is not tracked separately.

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CERCLA WASTE DISPOSAL ALTERNATIVES OPERABLE UNIT

The scope of the WDA OU includes an update to the remedial investigation and evaluation of remedial alternatives, development of a decision document, as well as the design and implementation of an on-site waste disposal facility (OSWDF) for disposal options of CERCLA waste generated by removal and remedial actions. Accordingly, the scope of the remedial investigation/feasibility study will be focused and tailored to the nature of this project; potential releases will not be investigated, evaluated, and/or remediated. The decision about whether to implement an OSWDF will be documented in a ROD.

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**Facility: Paducah Gaseous Diffusion Plant
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Reporting Period: 4/1/2025–9/30/2025**

**CERCLA WASTE DISPOSAL ALTERNATIVES OPERABLE UNIT PROJECT:
CERCLA Waste Disposal Alternatives Evaluation**

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

- Finalized and submitted a revision to the *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1/R1, to EPA and KDEP on September 9, 2025.
- Received EPA concurrence on the revision to the *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1/R1, on September 25, 2025.
- Continued development of an addendum to the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2/R2/A1.⁸
- Continued collection of geotechnical and geophysical data in accordance with the *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1 Errata.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue development of an addendum to the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2/R2/A1.
- Continue collection of geotechnical and geophysical data in accordance with the *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1/R1.

⁸ The *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2/R2, was previously approved by EPA and KDEP in 2018.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the CERCLA WDA evaluation belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1/R1, the document was under development, the document was under review by EPA and KDEP, and the document was concurred on by EPA during this reporting period.
- An addendum to the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2/R2/A1, was under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- Comments on the *Geotechnical Sampling and Analysis Plan at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2507&D1/R1, are due by KDEP within 30 days of document issuance or October 9, 2025. EPA concurred on the document on September 25, 2025, during this reporting period.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

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ENVIRONMENTAL MEDIA DECISION

In 2023, DOE proposed to integrate and accelerate Paducah Site cleanup decisions for environmental media, D&D, and waste disposition. This new cleanup strategy for the site was discussed among the FFA parties in late FY 2023 and is documented in the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2025*, DOE/LX/07-2508&D2. The three remedial investigations/feasibility studies, proposed plans, and RODs are proposed for submittal in 2029 (or earlier). Environmental Media ROD will propose and combine cleanup actions for at and below grade features (e.g., slabs, utilities, basement structures), soils, surface water, C-400 confirmed/probable DNAPL, slabs, lagoons, and burial grounds into a single final decision, establishing final cleanup levels for the entire Paducah Site based on anticipated future use.⁹

⁹ Scope does not include groundwater for the Northeast Plume (interim ROD transition through final remedy), Northwest Plume (interim ROD transition through final remedy), dissolved-phase plumes (as identified in the SMP), and Water Policy (removal action transition through final remedy).

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**ENVIRONMENTAL MEDIA DECISION PROJECT:
Environmental Media Remedial Investigation/Feasibility Study**

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

- Finalized and submitted the *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2515&D1, to EPA and KDEP on April 18, 2025.
- Initiated scoping meetings for the baseline risk assessment approach to be discussed in the *Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2519&D1, with EPA and KDEP in June 2025.
- Received EPA and KDEP comments on the *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2515&D1, on July 18, 2025, and July 17, 2025, respectively.
- Developed and submitted the *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2515&D2, to EPA and KDEP on September 16, 2025.
- Received EPA concurrence on the *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2515&D2, on September 30, 2025.
- Continued development of the *Environmental Media Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2519&D1.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue scoping meetings for the baseline risk assessment approach to be discussed in the *Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2519&D1, with EPA and KDEP.
- Continue development of the *Environmental Media Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2519&D1.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the Environmental Media remedial investigation/feasibility study belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2515&D1*, was under development and the document was under review by EPA and KDEP during this reporting period.
- *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2515&D2*, was under development, the document was under review by EPA and KDEP, and the document was concurred on by EPA during this reporting period.
- *Environmental Media Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2519&D1*, was under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- Approval of the *Scoping Document and Work Plan for the Environmental Media Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2515&D2*, is due by KDEP within 30 days of document issuance or October 16, 2025. EPA concurred on the document on September 30, 2025, during this reporting period.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

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DEACTIVATION AND DECOMMISSIONING OPERABLE UNIT

In 2023, DOE proposed to integrate and accelerate Paducah cleanup decisions for environmental media, D&D, and waste disposition. This new cleanup strategy for the site was discussed among the FFA parties in late FY 2023 and is documented in the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2025*, DOE/LX/07-2508&D2. The three remedial investigations/feasibility studies, proposed plans, and RODs are proposed for submittal in 2029 (or earlier). The scope of the sitewide D&D ROD will include D&D of the abovegrade portion of structures at the Paducah Site. Decommissioning includes activities that take place after a facility has been deactivated and can include decontamination and dismantlement. Dismantlement involves the disassembly, or demolition and removal, of any structure or system. The sitewide D&D ROD will propose and combine all abovegrade structures into a single final decision (incorporating deactivation following the FFA/CERCLA process, as defined in the ROD).

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**DEACTIVATION AND DECOMMISSIONING OPERABLE UNIT PROJECT:
Deactivation and Decommissioning Remedial Investigation/Feasibility Study**

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

- Finalized and submitted the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, to EPA and KDEP on April 30, 2025.
- Received EPA and KDEP comments on Appendix C of the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, on June 9, 2025, and June 4, 2025, respectively.
- Received EPA and KDEP comments on the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, on June 30, 2025, and July 29, 2025, respectively.
- Received FFA parties' approval that comments received from EPA and KDEP on Appendix C of the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, were resolved and fieldwork associated with Appendix C could commence in advance of the transmittal of the D2 version of the document for subsequent review and approval by the FFA parties, as documented in a Record of Conversation dated July 10, 2025.
- Initiated and completed fieldwork associated with Appendix C of the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, on July 14, 2025, and August 12, 2025, respectively.
- Developed and submitted the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D2, to EPA and KDEP on September 18, 2025.
- Received EPA concurrence on the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D2, on September 30, 2025.

- Initiated development of the *Deactivation and Decommissioning Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2520&D1.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue development of the *Deactivation and Decommissioning Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2520&D1.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the D&D remedial investigation/feasibility study belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D1, was under development and the document was under review by EPA and KDEP during this reporting period.
- *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D2, was under development, the document was under review by EPA and KDEP, and the document was concurred on by EPA during this reporting period.
- *Deactivation and Decommissioning Remedial Investigation/Feasibility Study Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2520&D1, was under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- Approval of the *Scoping Document and Work Plan for the Deactivation and Decommissioning Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2514&D2, is due by KDEP within 30 days of document issuance or October 18, 2025. EPA concurred on the document on September 30, 2025, during this reporting period.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

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WATER POLICY

Pursuant to the June 1994 *Action Memorandum for the Water Policy at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1201&D2, that was approved by EPA in August 1994, municipal water service was offered at no cost to all existing private residences and businesses within the Water Policy-affected area. The affected area is defined as follows:

The affected area is generally bounded by the Ohio River to the north, DOE property boundary to the south, Metropolis Lake Road to the east, and Bethel Church Road to the west. Specifically, on the west side, the boundary follows the DOE property boundary northwest to the intersection with Big Bayou Creek. At that point, it moves west to the intersection of Bethel Church Road and the centerline of a powerline easement just south of Bobo Lane. Property fronting the north end of Bethel Church Road is included in the affected area north of the intersection with the powerline easement to the Ohio River. Specifically, on the east side, the boundary follows the DOE property boundary northwest to the southern point of private property that fronts Ogden Landing Road (identified in McCracken County Property Valuation Office records as #20-27-1A). At that point, it moves east along the southern edge of properties that front the south side of Ogden Landing Road to the intersection of Ogden Landing Road with Metropolis Lake Road. Property fronting on both sides of Metropolis Lake Road is included in the affected area north of this intersection of the roads to the Ohio River.

There are approximately 116 acres within the Water Policy-affected area (i.e., excluding DOE property) that lie over the 2024 TCE groundwater plume (*Trichloroethene and Technetium-99 Groundwater Contamination in the Regional Gravel Aquifer for Calendar Year 2024 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0380) above the 5 µg/L maximum contaminant level (MCL); approximately 77 acres are owned by either West Kentucky Wildlife Management Area or the Tennessee Valley Authority, and approximately 39 acres are owned by private residents or businesses. Previously there were 158 acres of land owned by private residents or businesses that were above the 5 µg/L MCL overlaying the 2020 TCE groundwater plume. DOE has implemented various water policy activities that ensure proper management of the Water Policy and assist in DOE's long-term protectiveness of residents and businesses located within the Water Policy-affected area. These activities include the following: (1) update water policy area information by maintaining an annual subscription to the online McCracken County Property Valuation Administrator (PVA) office and verifying land ownership with the PVA office; (2) review the monthly billing register, ensuring water bill payments and assessing trends; (3) manage license agreements; (4) provide sampling results; (5) provide an annual water policy educational fact sheet to all residents and businesses within the affected area; (6) perform annual cap and lock inspections; and (7) demonstrate, on an annual basis, that residents and businesses located over the groundwater plume are not utilizing the groundwater.

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**Facility: Paducah Gaseous Diffusion Plant
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Reporting Period: 4/1/2025–9/30/2025¹⁰**

PROJECT: Water Policy

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

License Agreements:

- Offered 13 license agreements during this reporting period. Eleven license agreements have been signed by the landowners. One license agreement that was sent during the previous reporting period was signed by the landowner during this reporting period. One landowner sold part of a parcel, which resulted in an increase from 124 parcels to a total of 125 private or business-owned parcels in the Water Policy-affected area. As of September 30, 2025, 114 of 125 parcels within the Water Policy-affected area are inhabitable (i.e., house or mobile/manufactured home with active municipal water). A total of 91% of the inhabitable parcels are covered by a license agreement. There are eight parcels that overlies the current groundwater plumes in the Water Policy-affected area (i.e., excluding DOE property). One hundred percent of these parcels are under a license agreement.
- All parcel owners have been offered license agreements.

Water Bills:

- Reviewed all water bills for properties that DOE pays and noted no significant trends during this reporting period.

Water Policy Educational Fact Sheet Mailer:

- Finalized and submitted the *Water Policy Educational Fact Sheet* mailer to EPA and KDEP on April 22, 2025.
- Received EPA and KDEP approval of the *Water Policy Educational Fact Sheet* mailer on April 23, 2025.
- Issued the *Water Policy Educational Fact Sheet* mailer to area residents and made the fact sheet available to the public in the Paducah EIC on May 7, 2025.

¹⁰ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

Demonstration that Residents in the Water Policy-Affected Area Are Protected:

- Continued work on annual demonstration that residents, including those residing on parcels located over the contaminated groundwater plume, are not accessing groundwater from any residential well located within the Water Policy-affected area. This demonstration included the following:
 - Continued monthly review of water bills to ensure no downward trends in usage that could indicate that property owners are using groundwater instead of municipal water. This review includes the eight parcels that currently lie over the 5 µg/L or greater portion of the 2024 TCE groundwater plumes. No issues were identified during this review.
 - Reviewed the Kentucky Geological Survey water well database and ensured that no additional groundwater wells have been installed in the area, which included the area over the 5 µg/L or greater portion of the TCE groundwater plumes, as delineated for 2024. No issues were identified during this review.
 - Received and reviewed the Kentucky Division of Water well notification report, which includes scans for newly submitted drilling logs for any water wells drilled within the area. No issues were identified during this review.
 - Conducted visual assessments (i.e., drive-bys, Google Earth images) of parcels overlying or immediately adjacent to the 5 µg/L or greater portion of the TCE groundwater plumes, as delineated for 2024. No issues were identified during these assessments.
 - Performed semiannual verification of land ownership by reviewing the PVA website in June 2025. No issues were identified during this assessment. Updated ownership list emailed to KDEP on June 30, 2025.

Monitoring:

- Routine monitoring was conducted in accordance with the following documents:
 - *Operation and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2470&D1; and*
 - *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2469&D2.*
- Data collected in support of water policy monitoring will be made available in PEGASIS once data have been reported to the landowners.

Northeast:

- Nine MWs and seven residential wells are monitored routinely in accordance with the *Operation and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2470&D1.*

- Sampled nine MWs in May 2025 and September 2025 during this reporting period. Analytical data for three MWs sampled in March 2025, during the previous reporting period, have been included in this report. TCE analytical data for MW411, sampled in March 2025, was assessed as being unusable due to historical trending (i.e., outlier). MW411 was resampled in May 2025 and the analytical data was reported as nondetect for TCE. All remaining MWs sampled in March 2025 and May 2025 did not exhibit detections greater than the MCL for TCE (5 µg/L). Analytical data are pending for the samples collected in September 2025.

Northwest:

- Thirteen MWs and five residential wells are monitored routinely in accordance with the *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2. (Note: Tc-99 was added as a result of the *Memorandum of Agreement for Resolution of Informal Dispute Concerning U.S. Environmental Protection Agency and Kentucky Department for Environmental Protection Requirements for Additional Actions or Modifications Regarding the CY 2018 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2426&D2, dated June 22, 2020.)
- Sampled 13 MWs and five residential wells in May 2025 and August 2025, during this reporting period, in accordance with the Water Policy Boundary Monitoring Program per the Environmental Monitoring Plan. Analytical data for MWs and residential wells sampled in February 2025, during the previous reporting period, have been included in this report. All MWs and residential wells sampled in February 2025, during the previous reporting period, and in May 2025 were below the MCL for TCE (5 µg/L). None of the MWs or residential wells sampled in February 2025 or May 2025 exhibited detections of Tc-99. Analytical data are pending for samples collected in August 2025.
- Sampled residential well R40 in May 2025 and August 2025 during this reporting period. Analytical data for R40 sampled in February 2025, during the previous reporting period, has been included in this report. Analytical data for the May 2025 TCE sample result for R40 was reported with an estimated value of 0.8 µg/L. All remaining samples collected in February 2025 and May 2025 had results less than the MCL for vinyl chloride and TCE. Analytical data are pending for the samples collected in August 2025. As of the next reporting period, R40 will no longer be sampled for vinyl chloride, and will only be sampled for TCE.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

Demonstration that Residents in the Water Policy-Affected Area Are Protected:

- Continue monthly review of the area water bills and ensure no downward trends in usage that could indicate that property owners are using groundwater instead of municipal water. This review includes the eight parcels that currently lie over the 5 µg/L or greater portion of the 2024 TCE groundwater plumes.
- Perform semiannual verification of land ownership by reviewing the PVA website in December 2025.
- Receive and review the Kentucky Division of Water well notification report, which includes scans for newly submitted drilling logs for any water wells drilled within the area.

- Conduct visual assessments (i.e., drive-bys, Google Earth images) of properties overlying or immediately adjacent to the 5 µg/L or greater TCE groundwater plumes, as delineated for 2024.

Cap and Lock Inspection:

- Complete the annual inspection of the caps and locks installed on the residential wells located on properties with current license agreements.

Water Policy Educational Fact Sheet Mailer:

- Develop the *Water Policy Educational Fact Sheet* mailer and submit to EPA and KDEP for review and approval.
- Issue *Water Policy Educational Fact Sheet* mailer to area residents and publish the fact sheet to the public on the Paducah EIC website.

Monitoring:

- Continue routine monitoring and reporting in accordance with the *Operation and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2470&D1; and the *Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the Water Policy belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Water Policy Educational Fact Sheet* mailer was finalized, and the document was under EPA and KDEP review during this reporting period.

B) Due dates for completion of review/modification tasks:

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- Water bill payments are included in DOE's annual operating budget for the Paducah Site.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

ADDITIONAL REPORTING

Presented in this Additional Reporting section are updates for the following:

- WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites, Underground Storage Tanks, and Kentucky Ordnance Works sites);
- CRP;
- SMP; and
- CERCLA Five-Year Review.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025¹¹**

**PROJECT: WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites,
Underground Storage Tanks, and Kentucky Ordnance Works Sites)**

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):**
- Continued monitoring around the C-746-K Landfill, as required by the *Record of Decision for Waste Area Groups 1 and 7 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1470&D3. Appendix C contains a map depicting MW locations for the C-746-K Landfill and graphical presentations of TCE concentrations in these wells over time.
 - Conducted inspections of warning signs, riprap, and deed notice/restrictions at the C-746-K Landfill, as required by the *Record of Decision for Waste Area Groups 1 and 7 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1470&D3.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- Monitoring will continue around C-746-K Landfill, as required by the ROD. This monitoring is conducted and reported in accordance with other site programs, such as the Environmental Monitoring Program.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:**
- Reporting responsibility for the work to be performed in support of WAGs 1 and 7 belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.
- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements and time schedules are being met.

¹¹ The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- None.

B) Due dates for completion of review/modification tasks:

- None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- Sampling activities for the C-746-K Landfill have been incorporated into the Environmental Monitoring Program. O&M cost for this project is not tracked separately.

FEDERAL FACILITY AGREEMENT

**SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

PROJECT: Community Relations Plan

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):**
- No activities were performed for this project during this reporting period.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- No activities are scheduled for this project during the upcoming reporting period.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:**
- Reporting responsibility for the work to be performed in support of the CRP belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.
- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements and time schedules are being met.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- None.
- B) Due dates for completion of review/modification tasks:**
- None.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

PROJECT: Site Management Plan

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

- Held scoping meetings with EPA and KDEP for the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1, in July 2025, August 2025, and September 2025.
- Initiated development of the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Finalize and submit the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

- Reporting responsibility for the work to be performed in support of the SMP belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1, was under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1, is due to EPA and KDEP no later than November 15, 2025.

- Comments on the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky Annual Revision—FY 2026*, DOE/LX/07-2526&D1, are due within 30 days of document issuance or December 15, 2025.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

- None.

VII. Summary of all contacts with local community, public interest groups, or state government:

- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL PROGRESS REPORT
SECOND HALF OF FISCAL YEAR 2025**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 4/1/2025–9/30/2025**

PROJECT: CERCLA Five-Year Review

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):**
- No activities were performed for this project during this reporting period.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- No activities are scheduled for this project during the upcoming reporting period.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:**
- Reporting responsibility for the work to be performed in support of the Five-Year Review belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.
- IV. Statement of the manner and extent to which the requirements and time schedules are being met:**
- The requirements and time schedules are being met.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- None.
- B) Due dates for completion of review/modification tasks:**
- None.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):**
- None.
- VII. Summary of all contacts with local community, public interest groups, or state government:**
- DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

- None.

IX. Actual cost for O&M, if appropriate:

- None.

APPENDIX A

NORTHEAST AND NORTHWEST PLUME WATER WITHDRAWAL REPORTS

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**Table A.1. Northeast Plume Containment System Water Withdrawal Reporting Form
(Gal of Water Pumped)**

Day	January 2025	February 2025	March 2025	April 2025	May 2025	June 2025
1	247,476	252,609	252,924	107,926	249,732	249,599
2	247,476	252,609	252,924	107,414	247,389	249,599
3	254,756	252,610	252,923	111,212	247,389	218,302
4	254,756	245,321	248,716	99,410	247,389	245,989
5	254,756	246,302	249,151	99,410	247,387	258,869
6	254,754	256,316	253,739	99,410	248,595	252,282
7	234,696	254,126	250,742	99,408	249,318	252,282
8	250,864	254,126	250,742	111,670	254,559	252,282
9	253,666	254,126	250,742	106,447	251,875	252,281
10	250,506	254,122	250,740	110,839	251,875	246,134
11	250,506	241,915	245,171	107,569	251,875	250,635
12	250,506	252,582	250,672	107,569	251,871	194,503
13	250,507	251,741	253,779	107,569	256,814	252,820
14	255,681	253,545	251,621	107,567	239,792	252,820
15	242,277	253,545	251,621	105,530	250,729	252,820
16	254,457	253,545	251,621	108,986	250,705	256,454
17	253,402	253,544	251,622	108,949	250,705	241,497
18	253,402	245,396	251,035	108,949	250,705	232,445
19	253,402	256,869	251,906	108,949	250,704	249,815
20	253,402	256,868	248,759	108,949	237,501	249,815
21	253,398	248,100	253,260	108,948	250,678	249,815
22	245,464	248,100	253,260	105,231	257,695	249,815
23	255,627	248,100	253,260	107,732	252,455	249,818
24	251,975	248,100	253,258	106,915	252,455	256,208
25	251,975	243,929	248,304	246,144	252,455	248,248
26	251,975	253,830	253,331	246,144	252,455	244,593
27	251,975	253,993	256,520	246,144	252,458	253,813
28	250,389	252,924	245,482	246,145	233,046	253,813
29	248,341		245,482	249,811	251,776	253,813
30	249,109		245,482	247,323	249,599	253,811
31	252,609		245,478		249,599	
Monthly Total	7,784,085	7,038,893	7,774,267	4,044,269	7,741,580	7,424,990
Daily Average	251,100	251,389	250,783	134,809	249,728	247,500

Total (January 2025–June 2025) = 41,808,084 gal
Average (January 2025–June 2025) = 230,984 gal per day (gpd)

**Table A.2. Northwest Plume Groundwater System Water Withdrawal Reporting Form
(Gal of Water Pumped)**

Day	January 2025	February 2025	March 2025	April 2025	May 2025	June 2025
1	281,806	284,964	284,709	284,156	271,826	288,301
2	281,806	284,964	284,709	285,106	287,841	288,301
3	284,914	274,556	284,707	286,936	287,841	282,076
4	284,914	267,426	280,636	247,511	287,841	286,796
5	284,914	281,836	288,196	277,241	287,841	288,536
6	284,912	284,476	283,836	277,241	284,796	287,739
7	272,396	284,966	286,549	277,241	286,806	287,739
8	281,686	284,966	286,549	290,266	287,256	287,739
9	283,806	284,966	286,549	283,136	286,821	283,277
10	279,961	284,966	271,682	288,546	286,821	279,926
11	279,961	278,846	258,246	284,954	286,821	287,516
12	268,069	283,846	284,186	284,954	286,821	283,796
13	279,961	284,756	283,986	284,954	292,646	287,916
14	285,006	285,971	285,134	284,952	279,876	287,916
15	260,068	285,971	285,134	284,316	287,746	287,916
16	260,126	285,971	285,134	286,256	287,809	287,916
17	284,068	238,402	285,132	286,778	287,809	282,856
18	284,068	285,496	283,796	286,778	287,809	283,686
19	284,068	287,086	284,466	286,778	287,807	287,924
20	284,068	287,086	284,216	286,778	283,246	287,924
21	284,068	282,041	286,104	286,778	286,446	287,924
22	282,216	282,041	286,104	284,646	289,326	287,924
23	283,406	282,041	286,104	285,476	286,590	281,978
24	285,216	282,041	280,156	285,076	284,961	283,426
25	285,216	280,366	274,396	287,674	285,014	282,646
26	285,216	285,846	286,316	287,674	286,590	284,986
27	285,216	284,736	286,446	287,674	289,795	285,179
28	278,256	284,709	285,506	287,672	269,527	285,179
29	267,954		285,506	281,423	285,226	285,179
30	265,886		285,506	269,127	288,301	285,177
31	284,964		285,506		288,301	
Monthly Total	8,678,192	7,885,339	8,785,202	8,498,098	8,864,157	8,575,394
Daily Average	279,942	281,619	283,394	283,270	285,941	285,846

Total (January 2025–June 2025) = 51,286,381 gal
Average (January 2025–June 2025) = 283,350 gpd

APPENDIX B

NORTHEAST PLUME AND NORTHWEST PLUME GRAPHS, DATA, AND MAPS (FIGURES B.1 THROUGH B.30)

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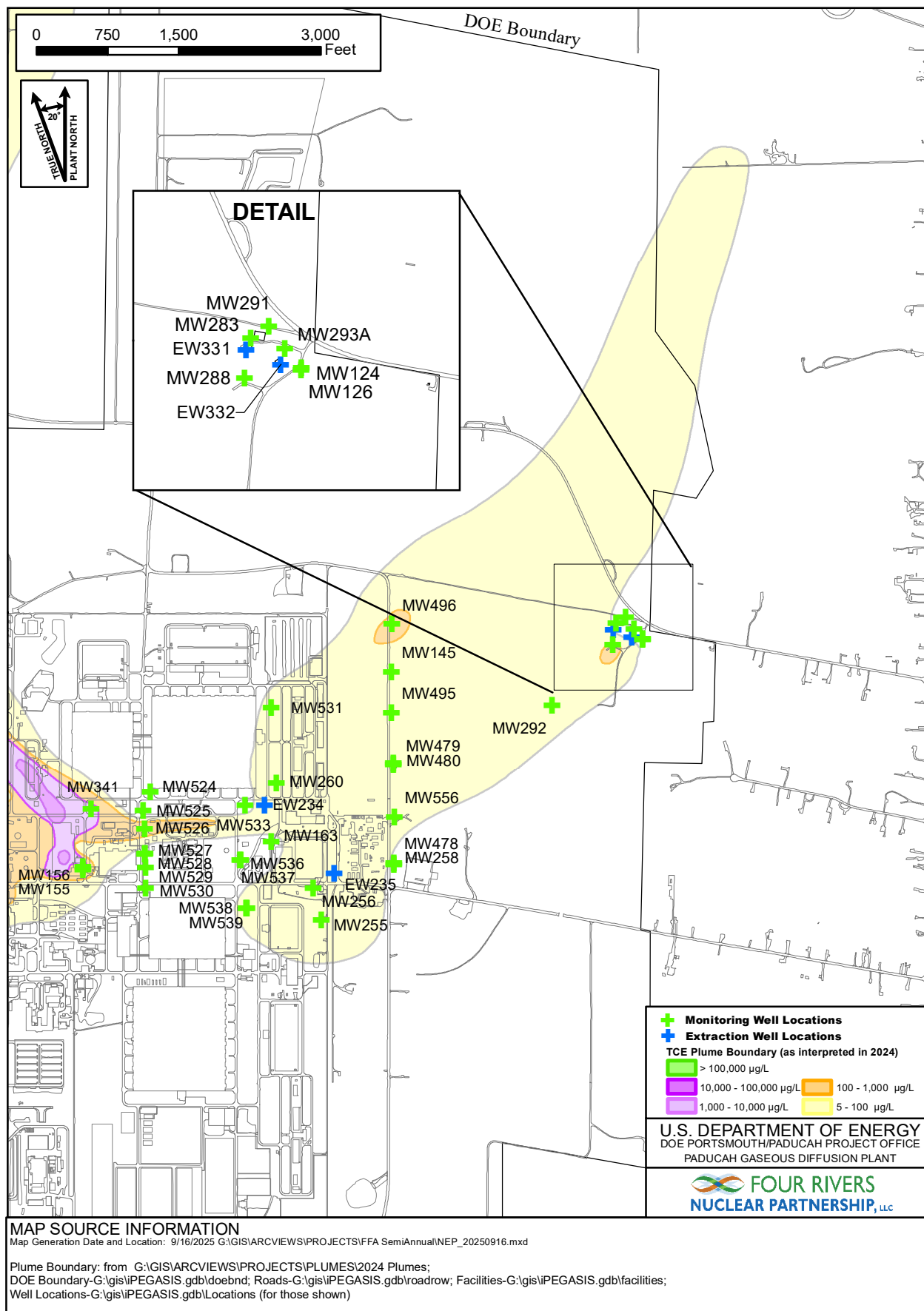
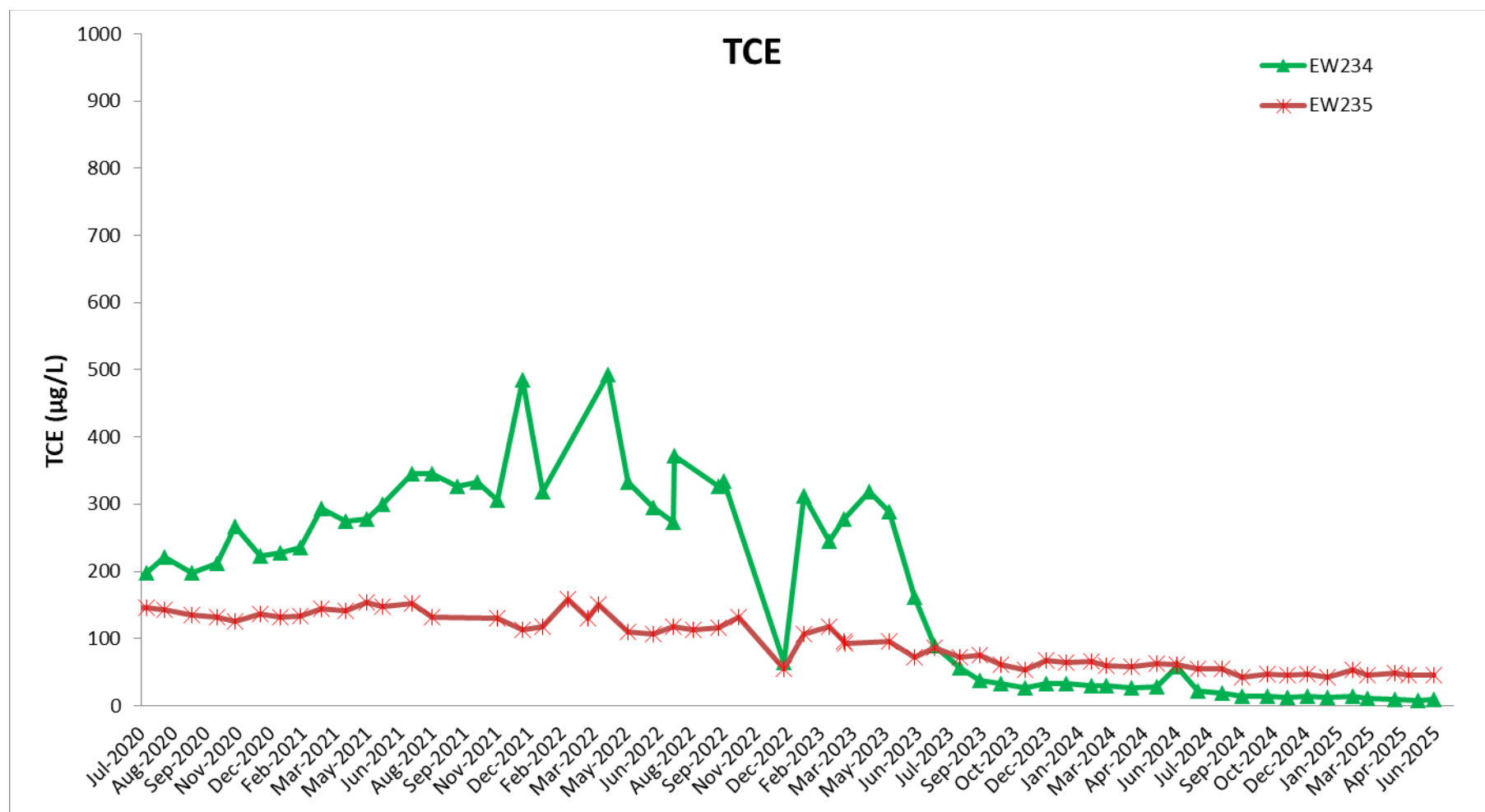


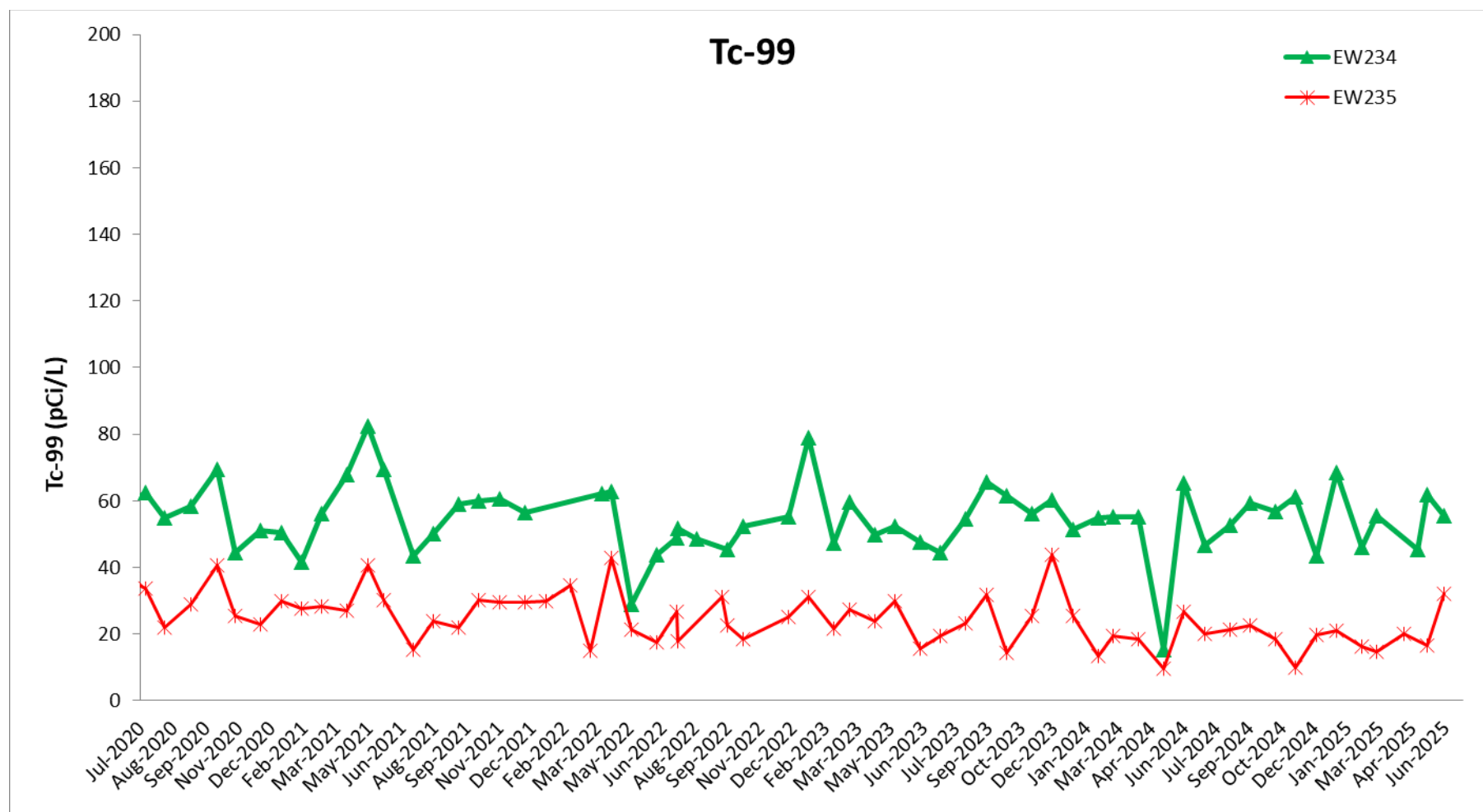
Figure B.1. Northeast Plume Groundwater Wells and Extraction Wells



NOTE: Data rejected by validation or assessment have not been graphed.

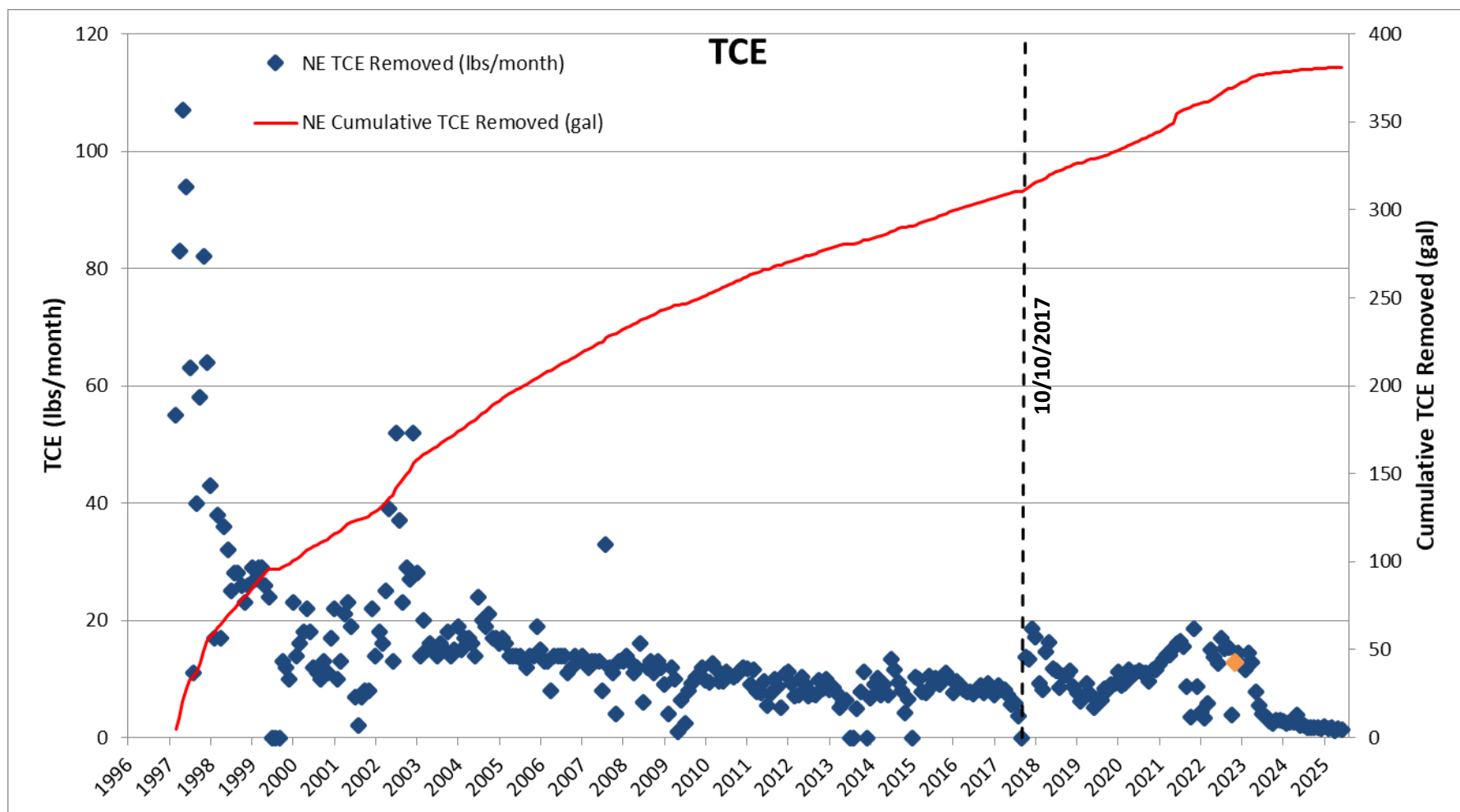
*TCE influent data was not collected from EW234 and EW235 for November 2022.

Figure B.2. Northeast Plume Containment System Influent TCE Concentrations



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.3. Northeast Plume—Tc-99 Activities in Extraction Wells



NOTE: Data rejected by validation or assessment have not been graphed.

◆ TCE influent data was not collected from EW234 and EW235 for November 2022. The average useable data for the rest of the reporting period [July 2022 – December 2022 (282 µg/L)] was used to calculate lbs of TCE removed.

Figure B.4. Northeast Plume Containment System TCE Removed

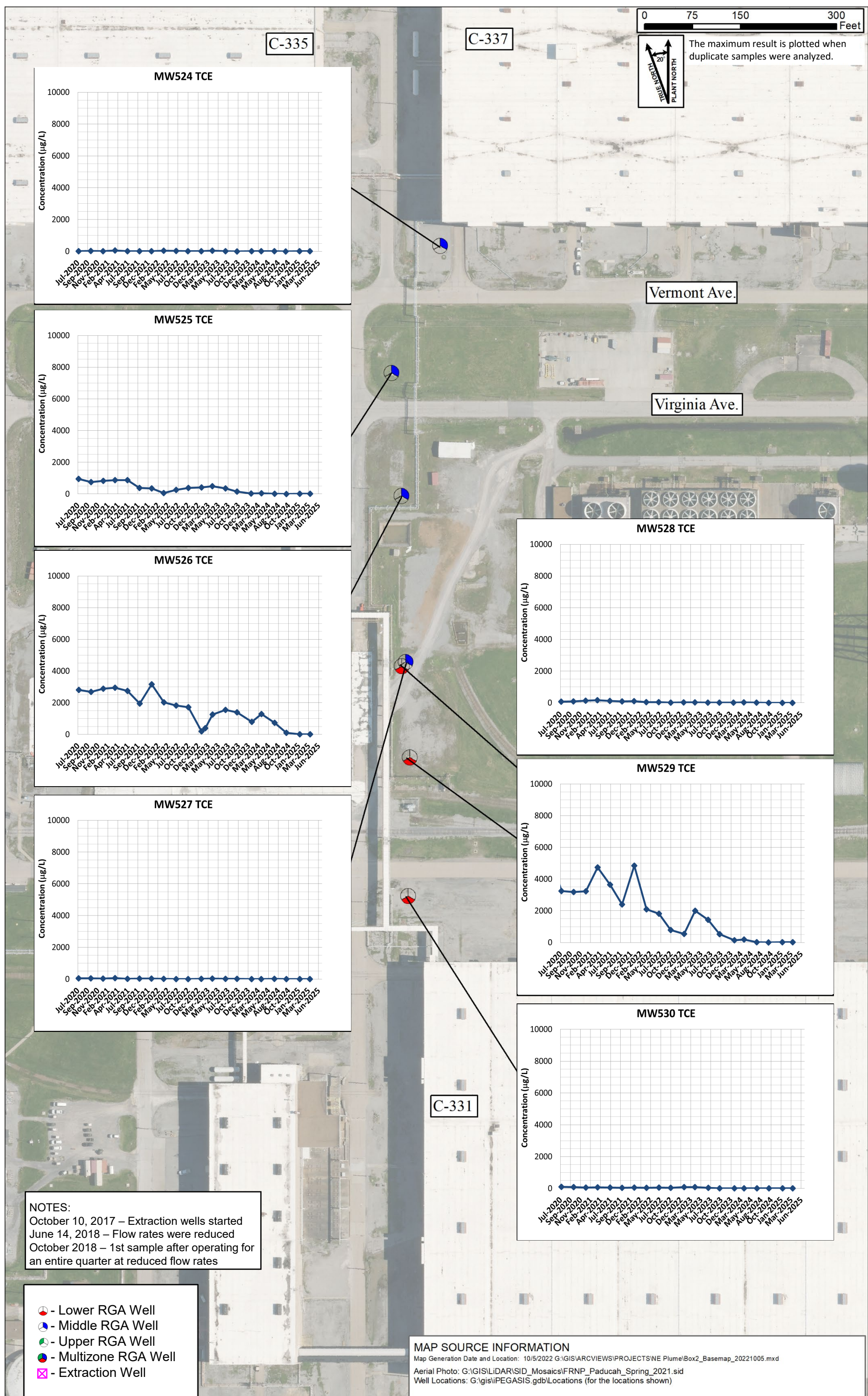


Figure B.5. Northeast Plume—Upgradient Transect Wells - TCE Trends

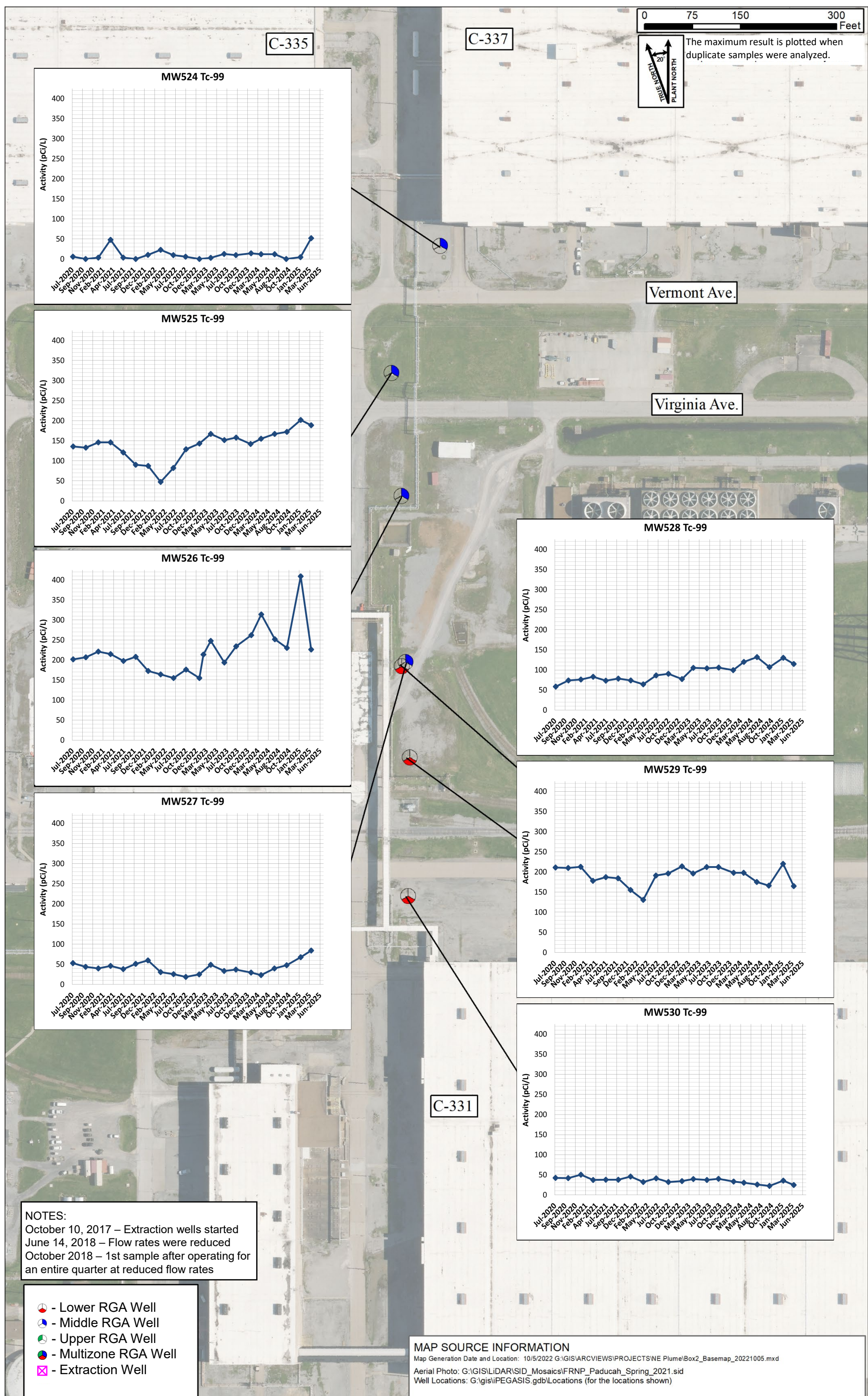


Figure B.6. Northeast Plume—Upgradient Transect Wells – Tc-99 Trends

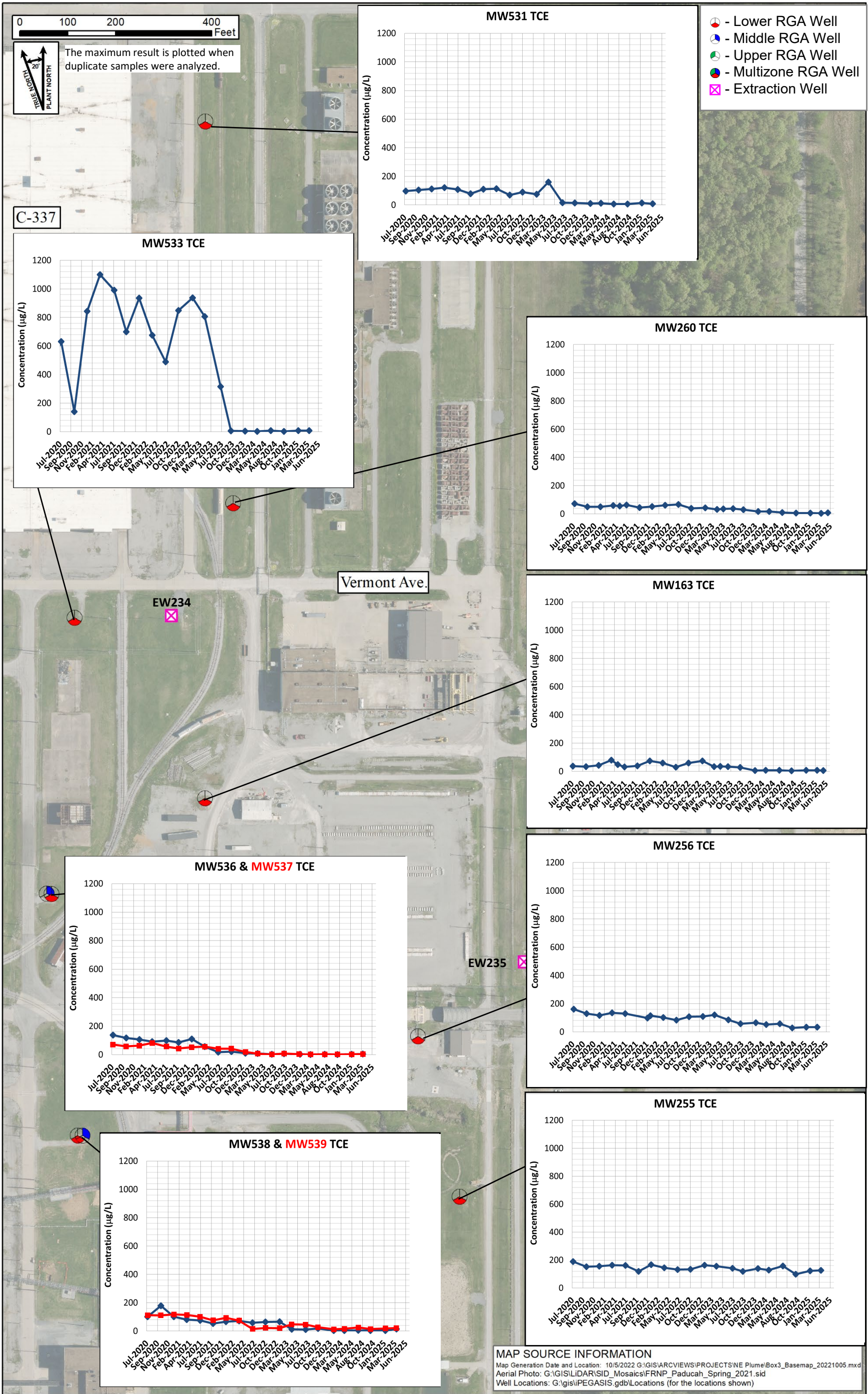


Figure B.7. Northeast Plume—Monitoring Wells near Extraction Wells—TCE Trends

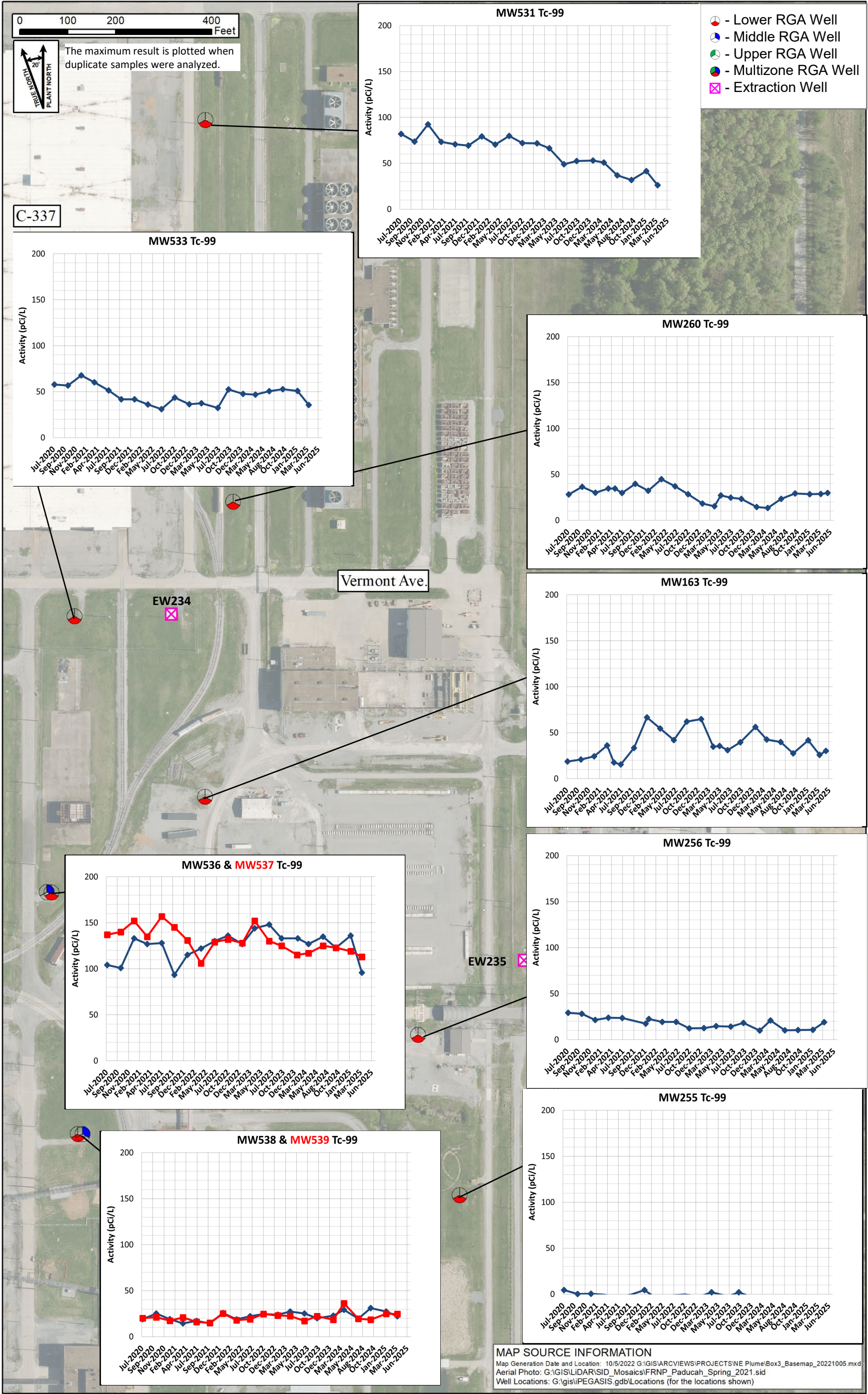


Figure B.8. Northeast Plume—Monitoring Wells near Extraction Wells—Tc-99 Trends

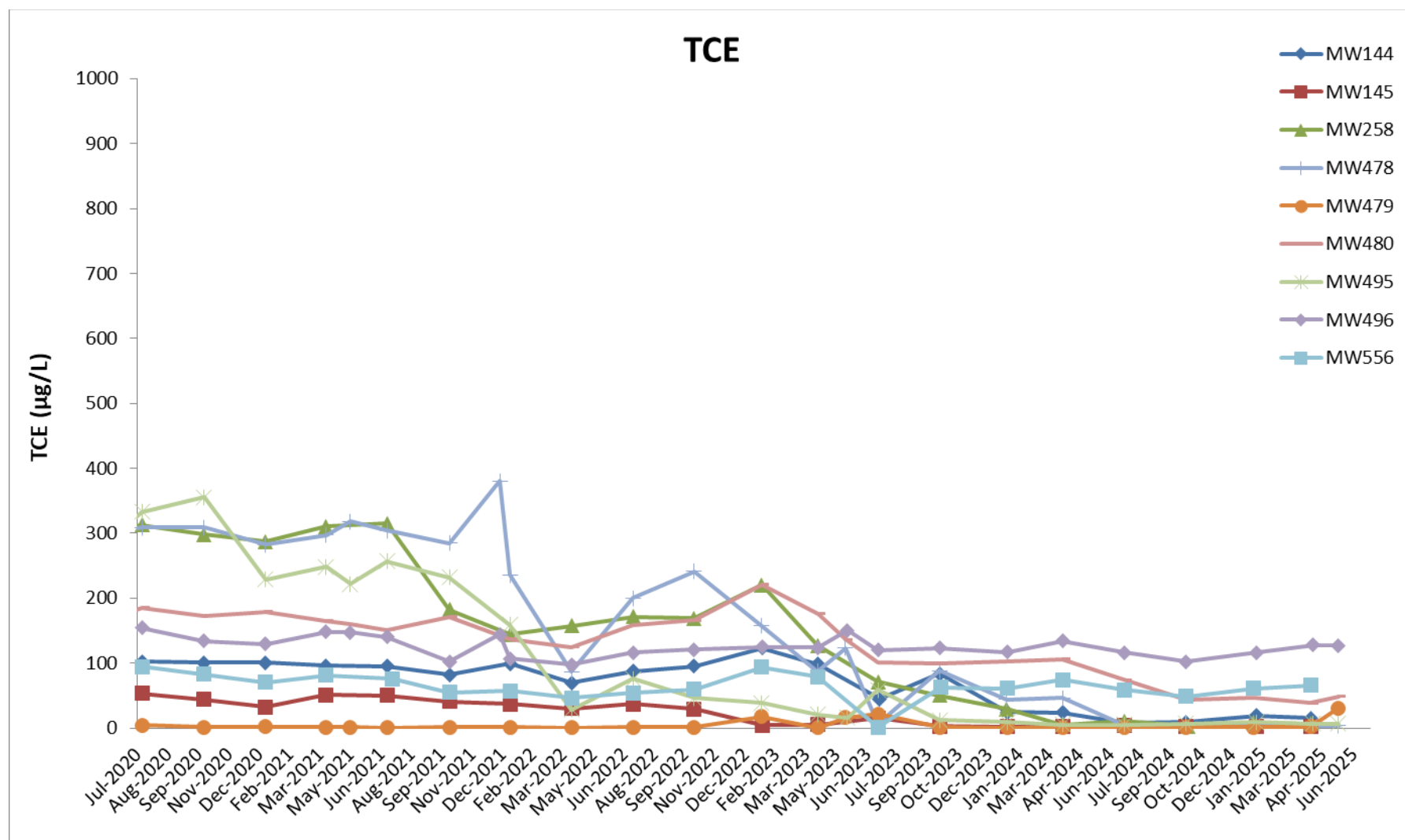


Figure B.9. Northeast Plume—TCE Concentrations in Downgradient Wells

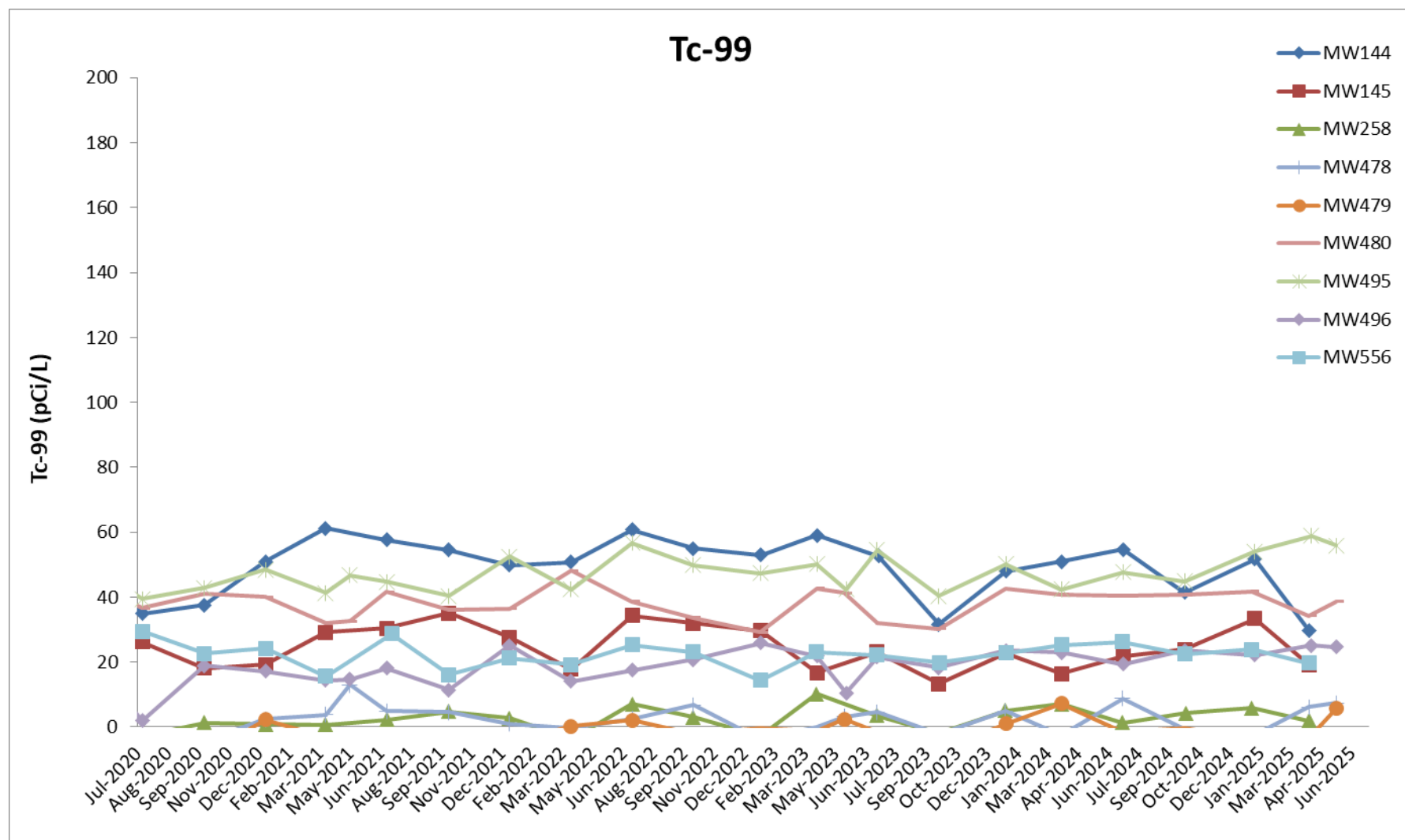
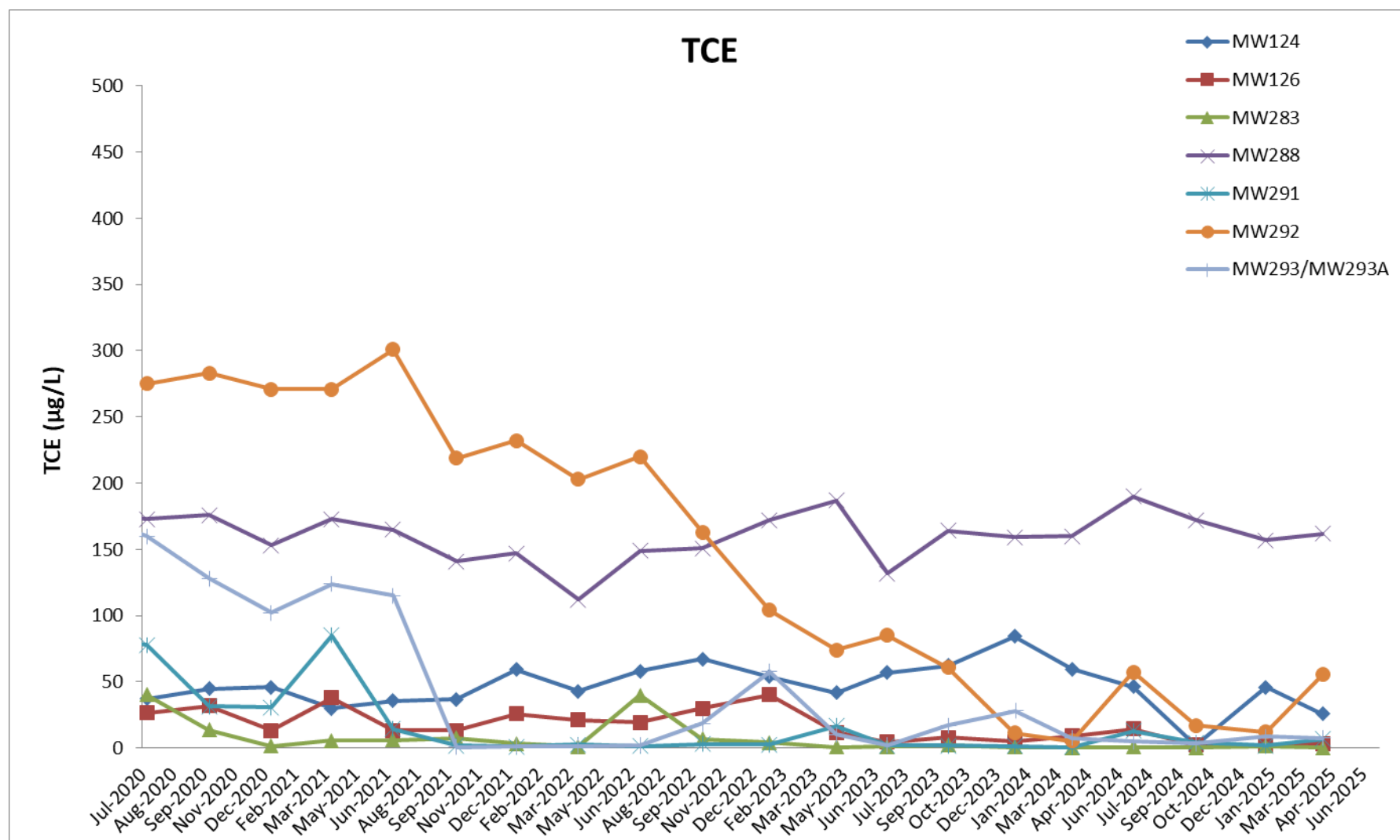


Figure B.10. Northeast Plume—Tc-99 Activities in Downgradient Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.11. Northeast Plume—TCE Concentrations in Distal Downgradient Wells

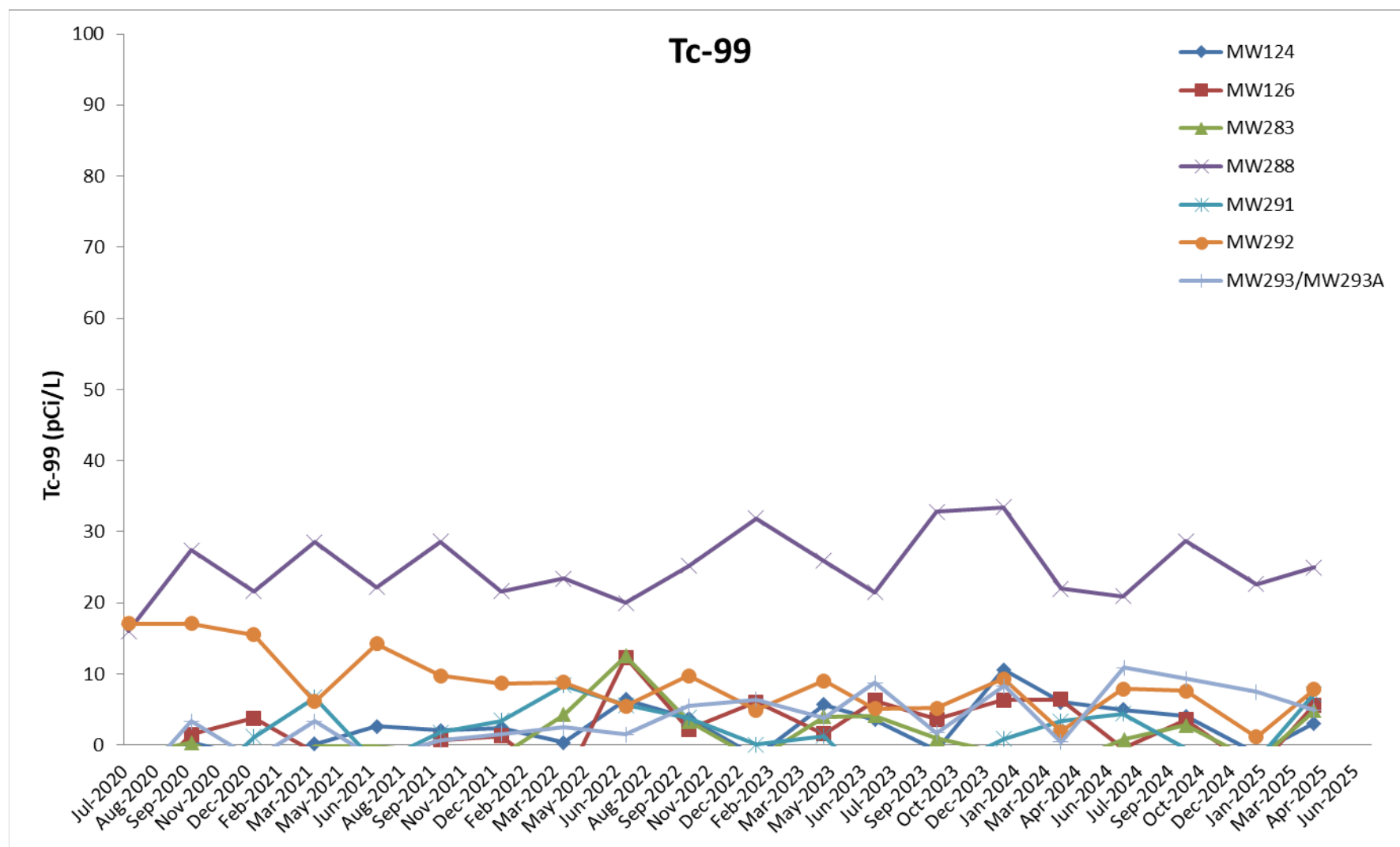
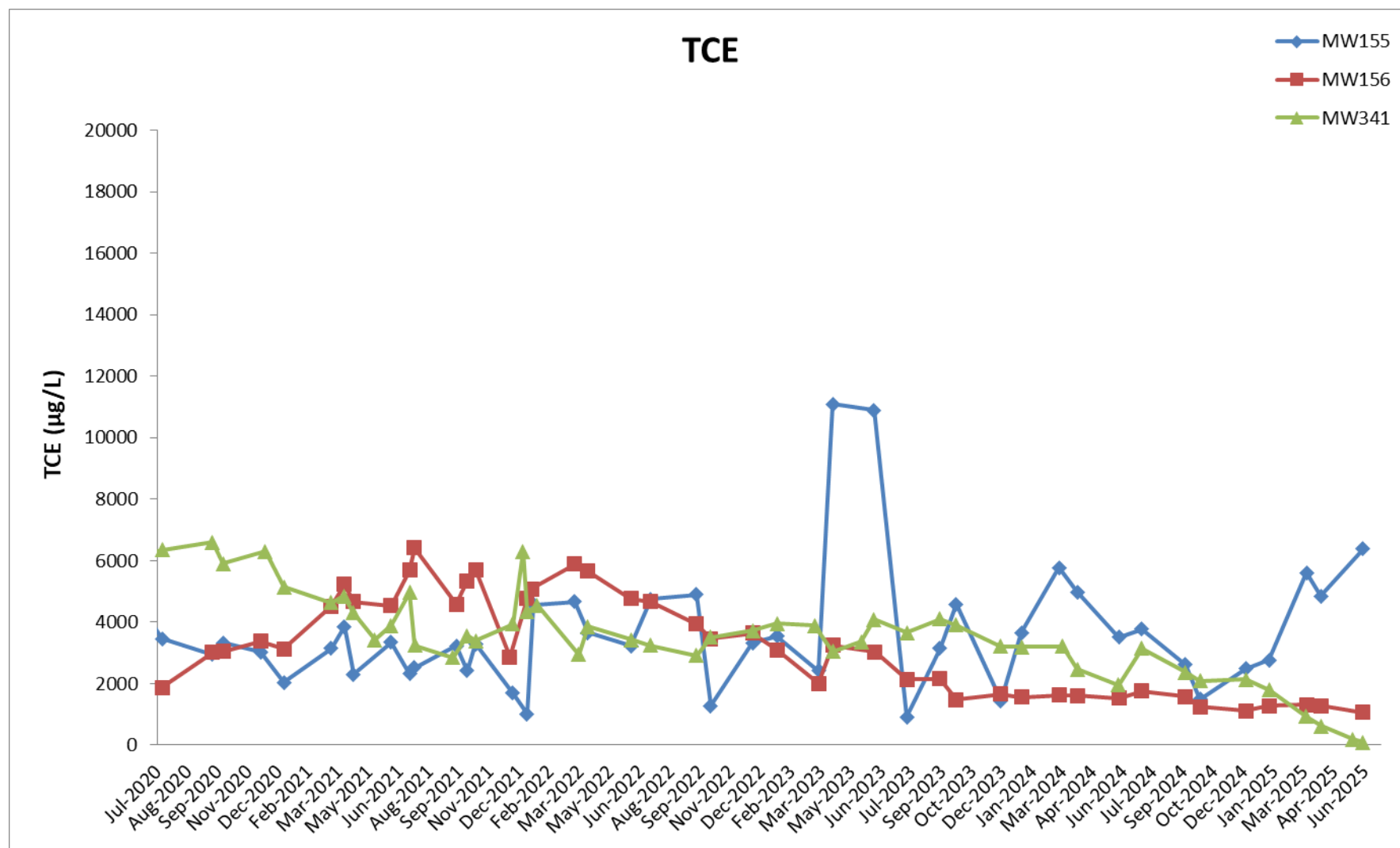
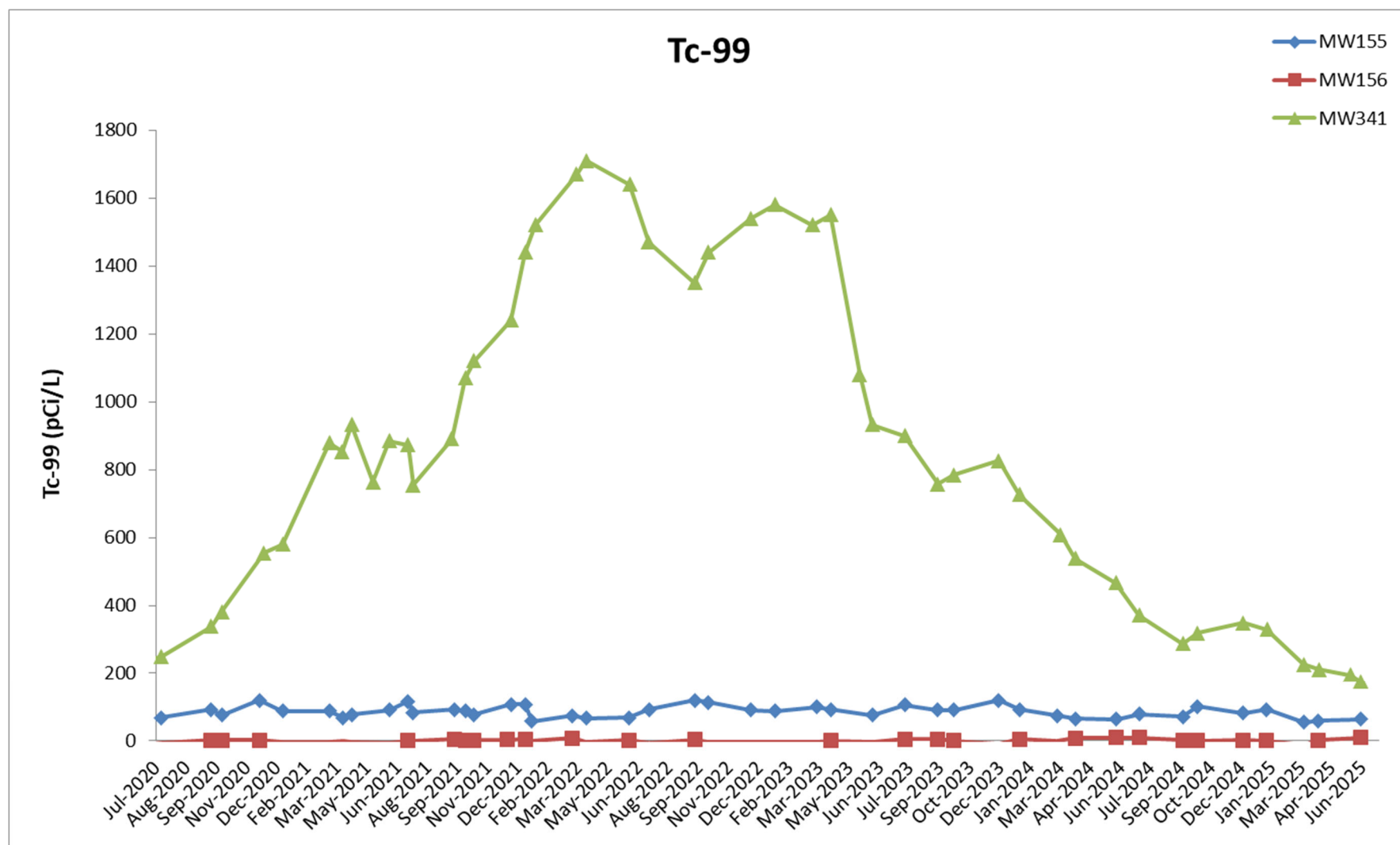


Figure B.12. Northeast Plume—Tc-99 Activities in Distal Downgradient Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.13. Northeast Plume—TCE Activities in Wells near C-400 Complex



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.14. Northeast Plume—Tc-99 Activities in Wells near C-400 Complex

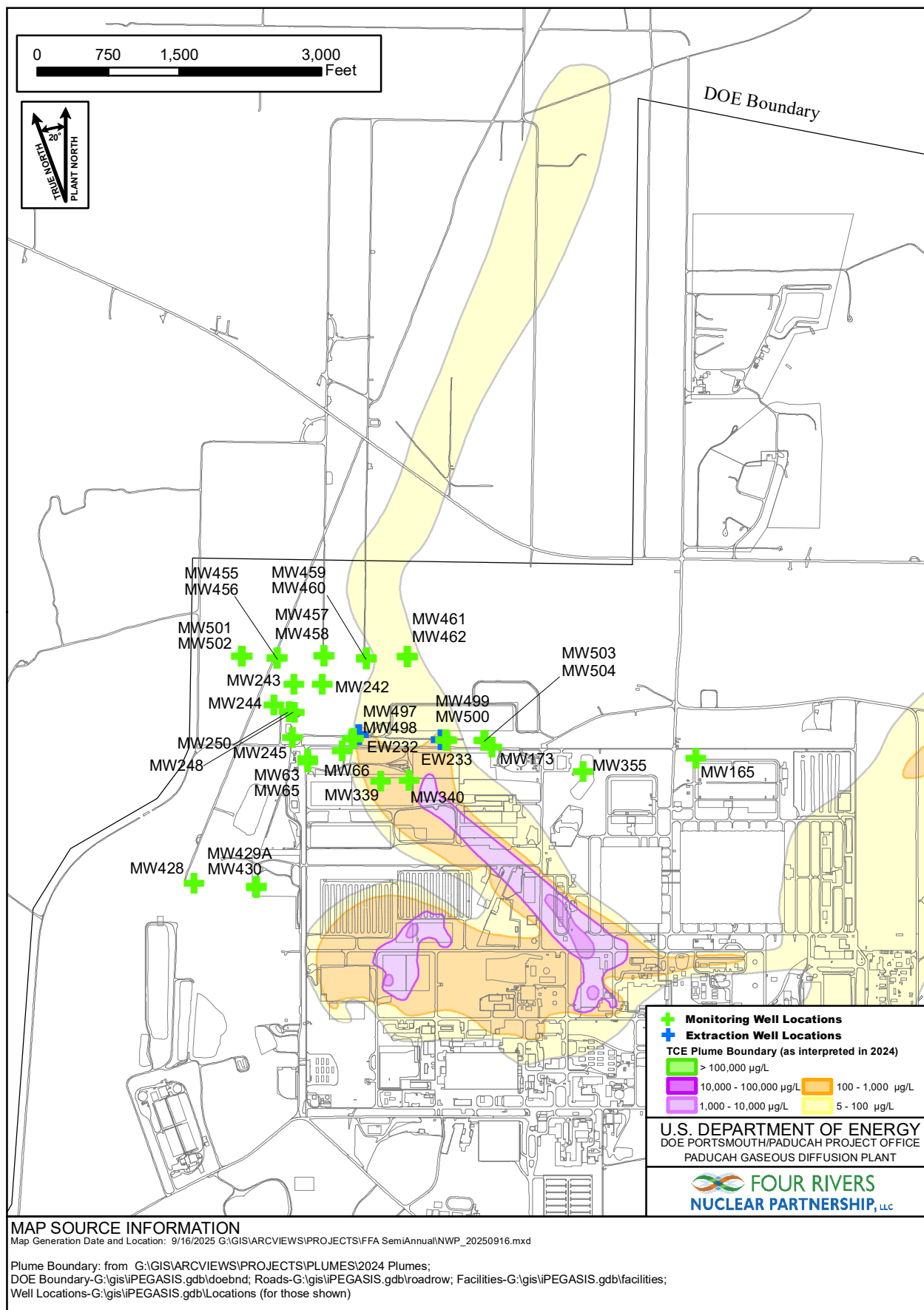
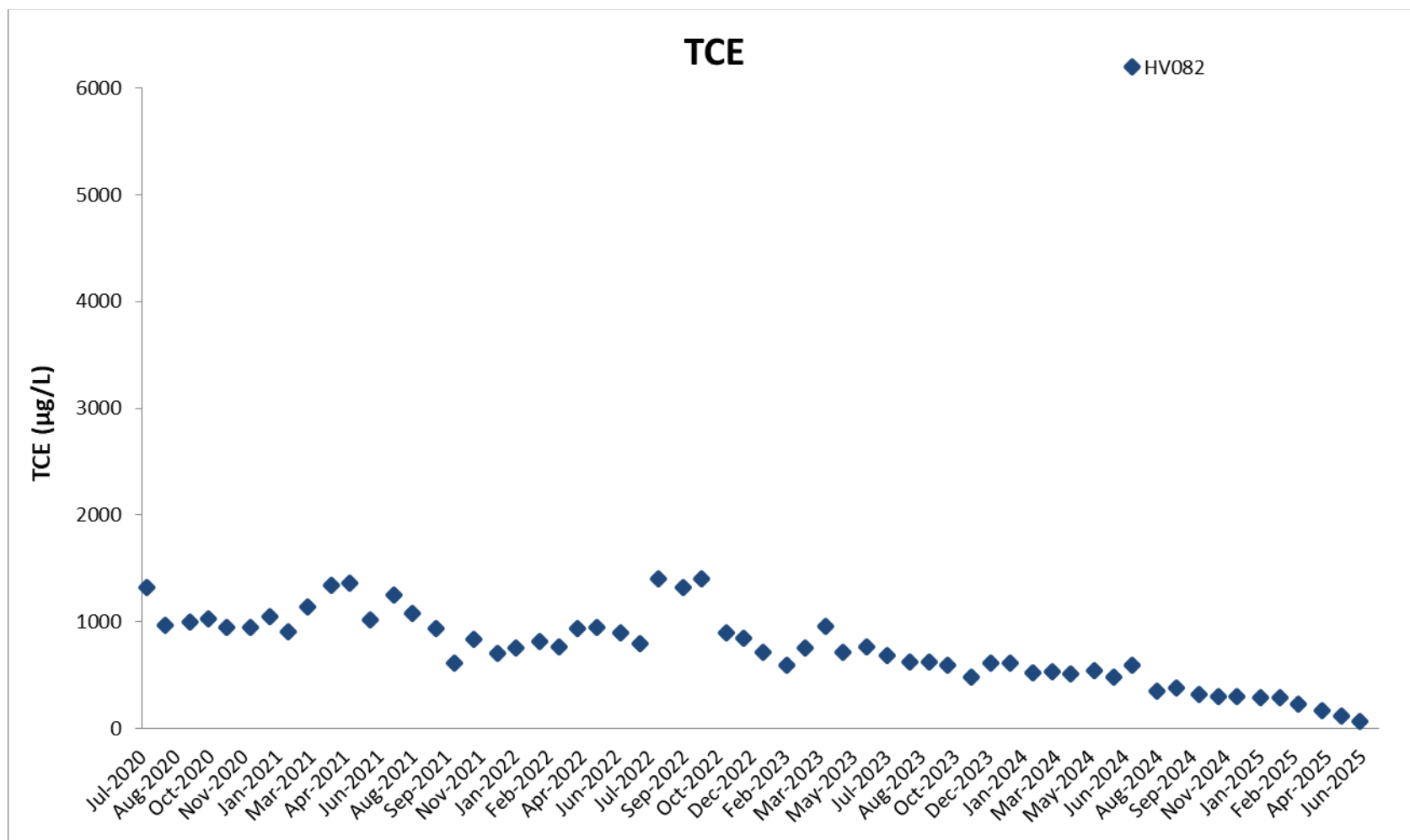
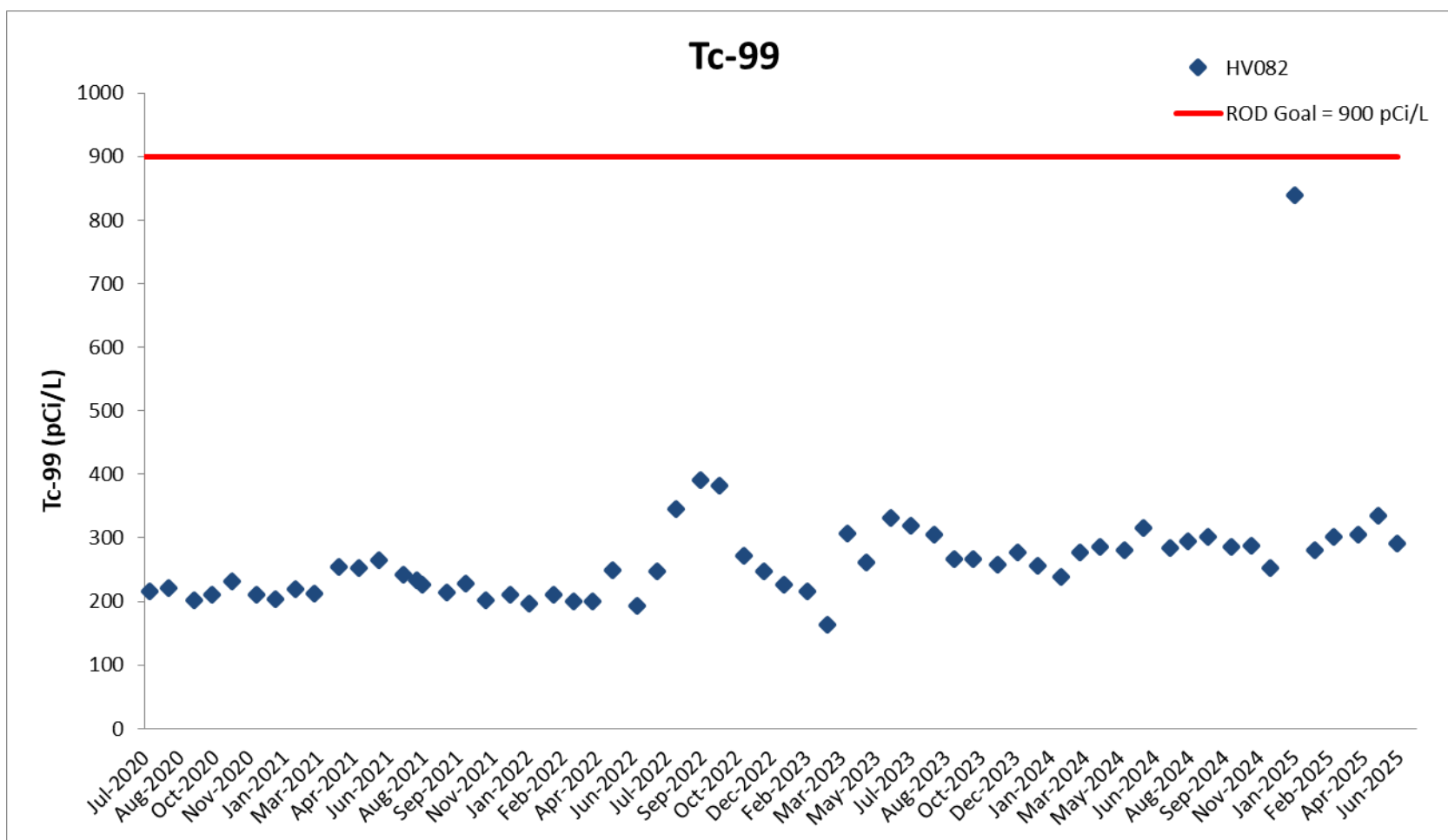


Figure B.15. Northwest Plume Groundwater Wells



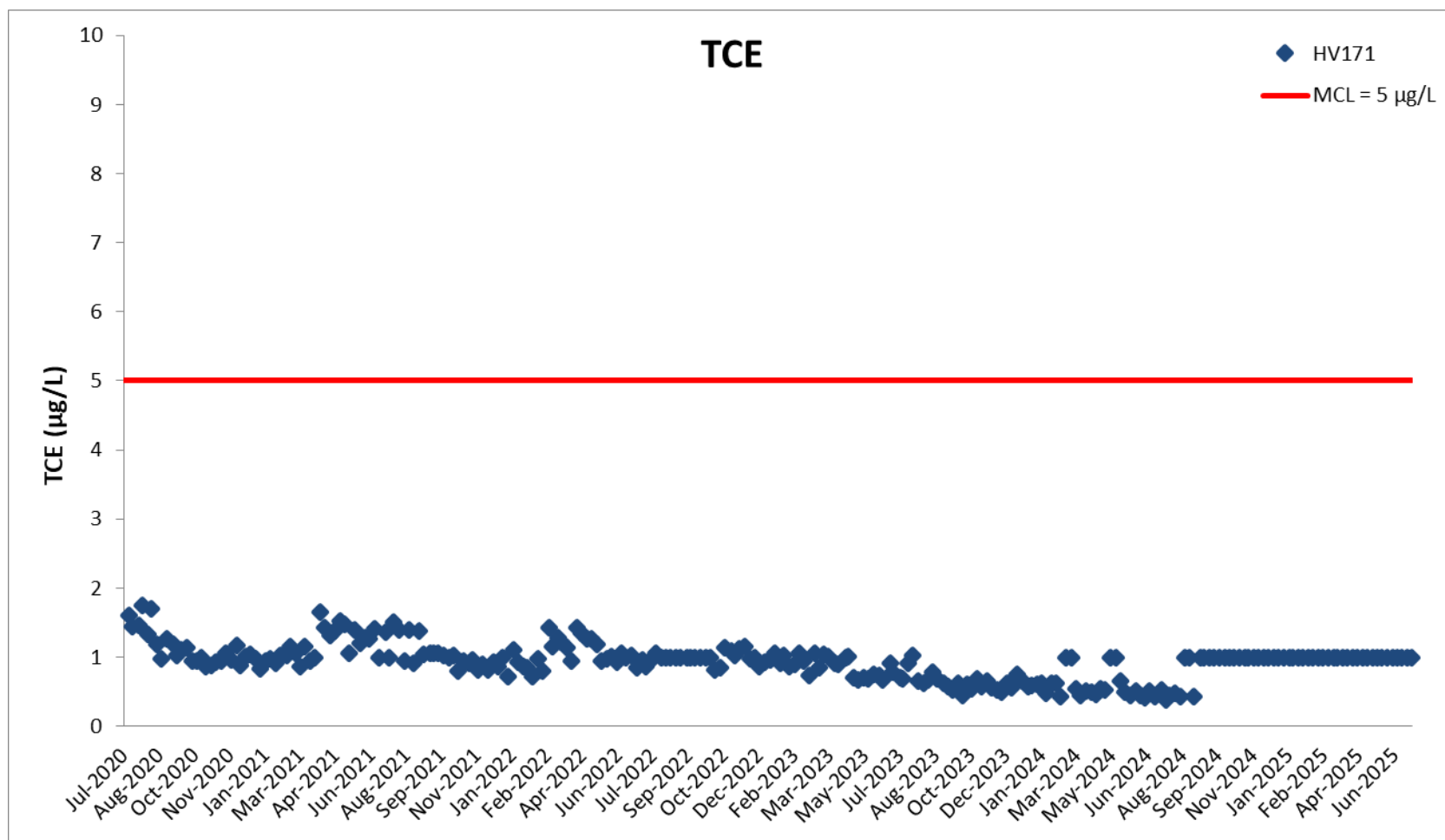
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.16. Northwest Plume Groundwater System Influent TCE Concentrations



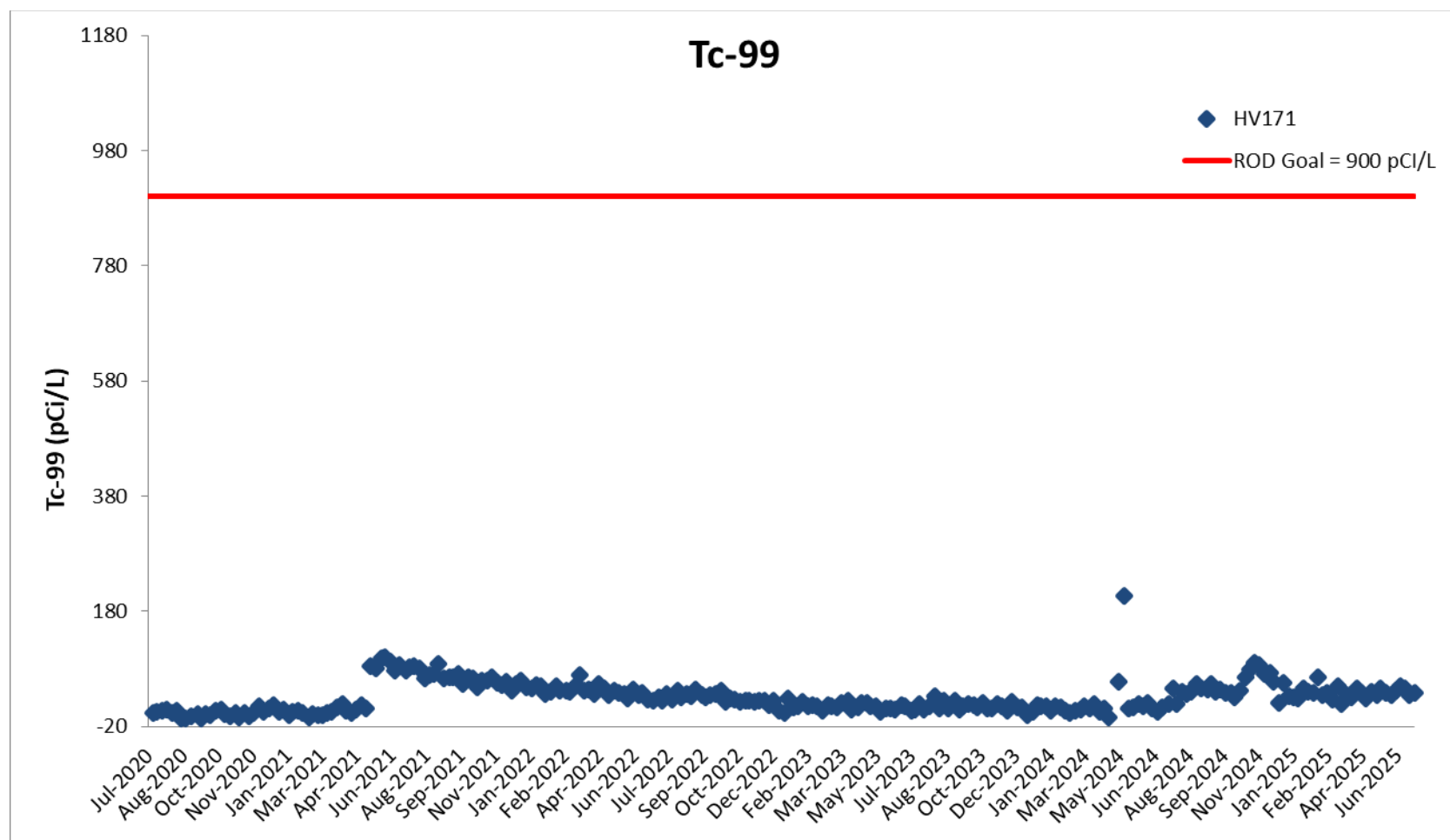
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.17. Northwest Plume Groundwater System Influent Tc-99 Activities



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.18. Northwest Plume Groundwater System Effluent TCE Concentrations



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.19. Northwest Plume Groundwater System Effluent Tc-99 Activities

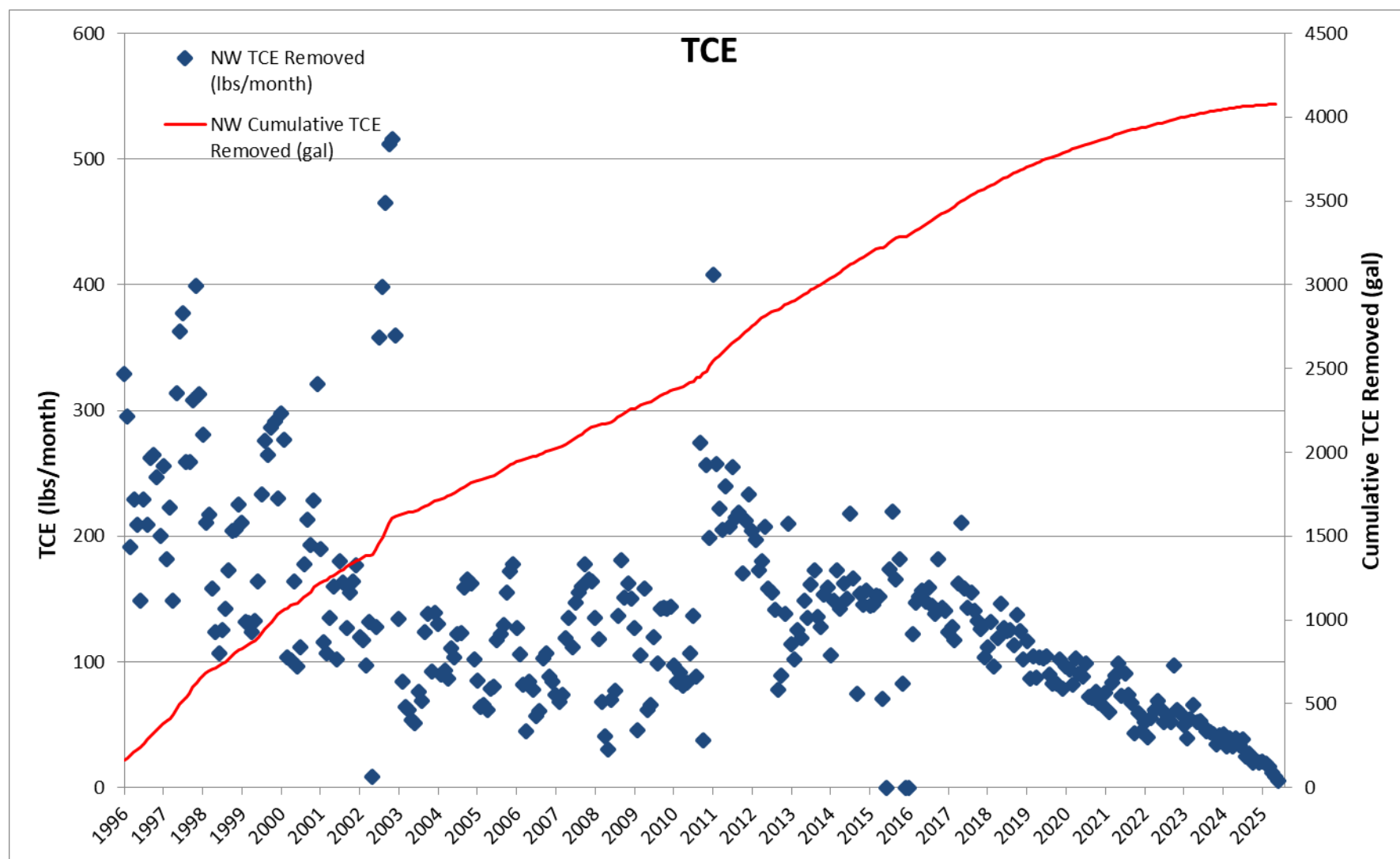


Figure B.20. Northwest Plume Groundwater System TCE Removed

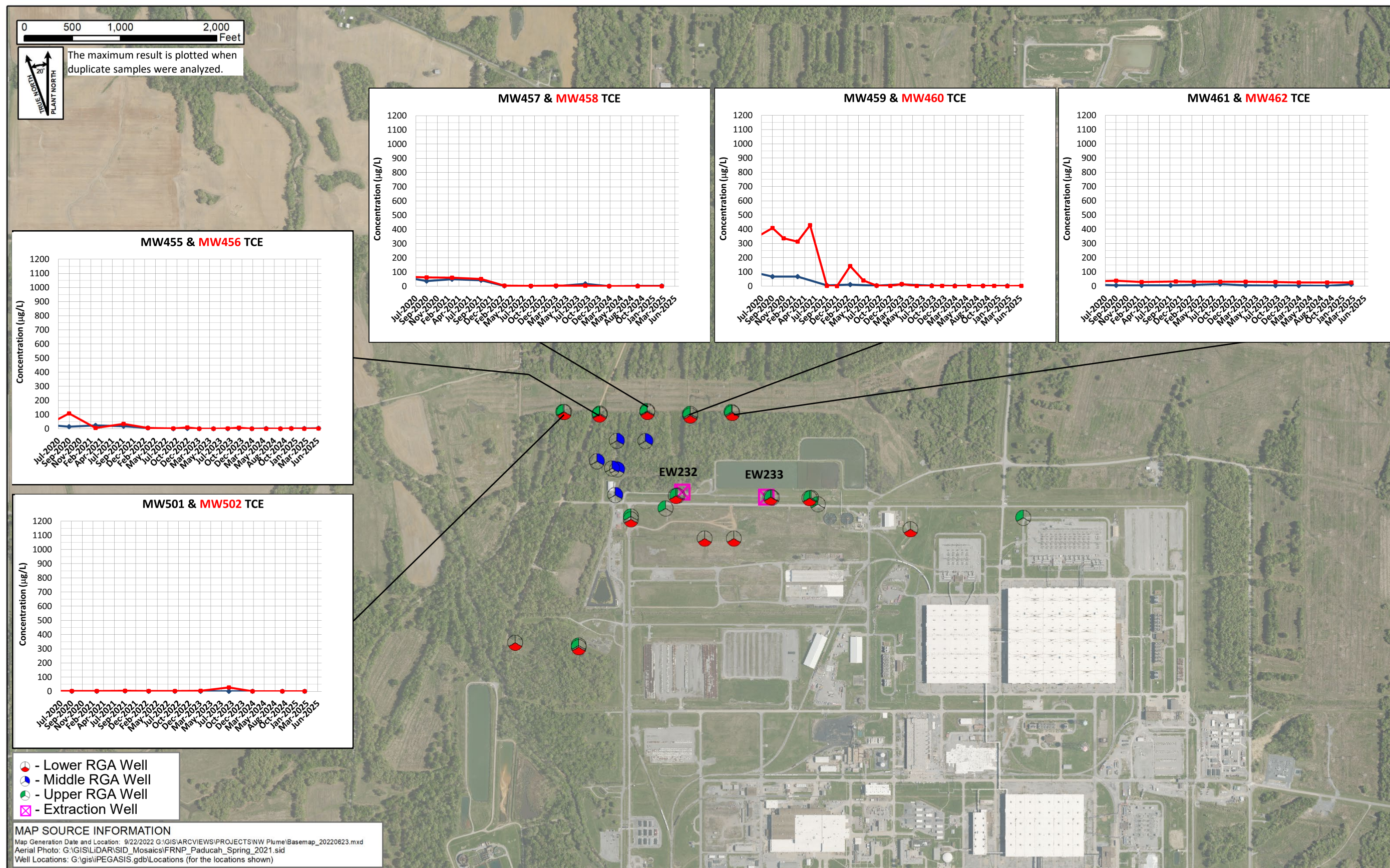


Figure B.21. Northwest Plume—Downgradient of New Well Field—TCE Trends

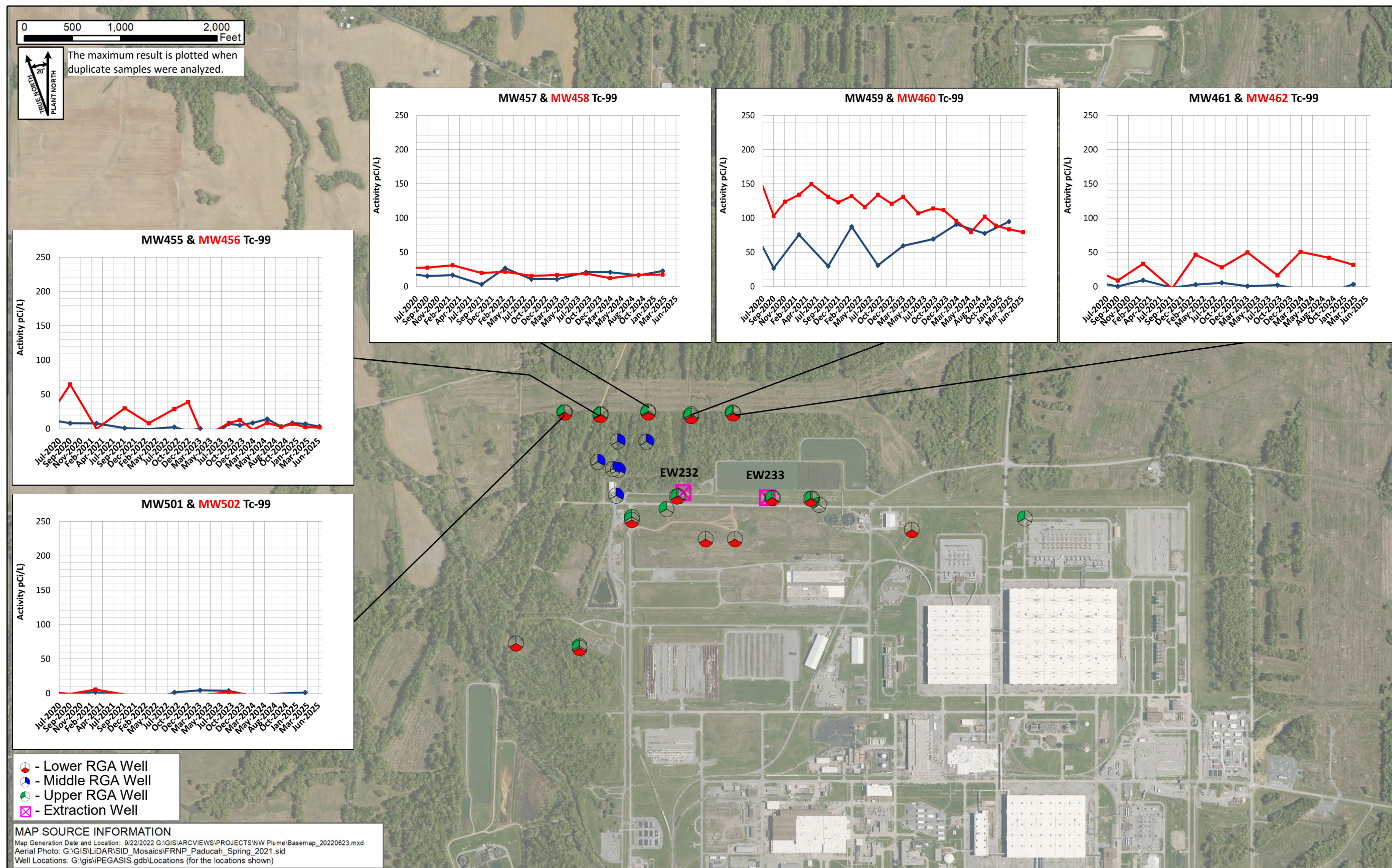


Figure B.22. Northwest Plume—Downgradient of New Well Field—Tc-99 Trends

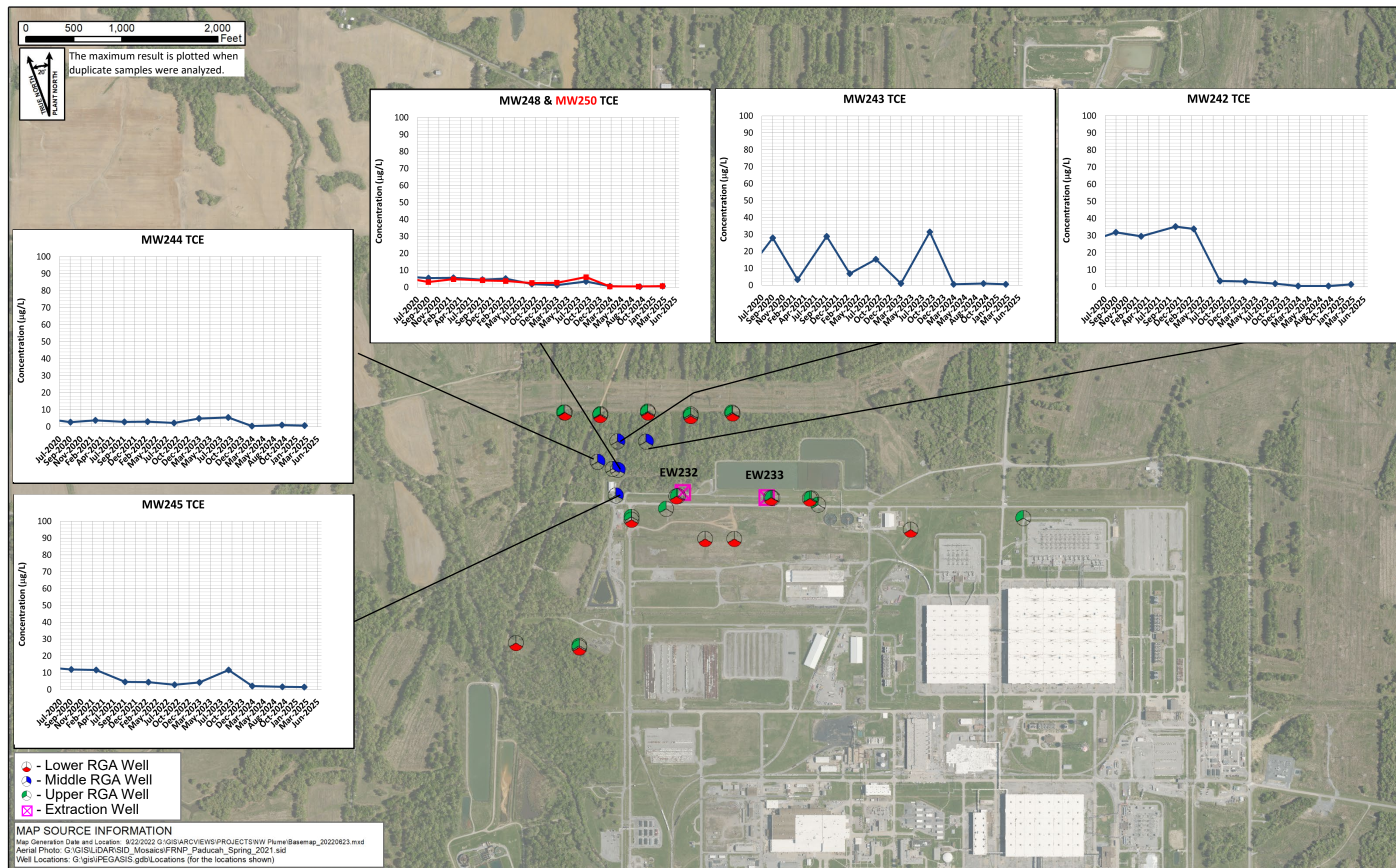


Figure B.23. Northwest Plume—South Well Field TCE Trends

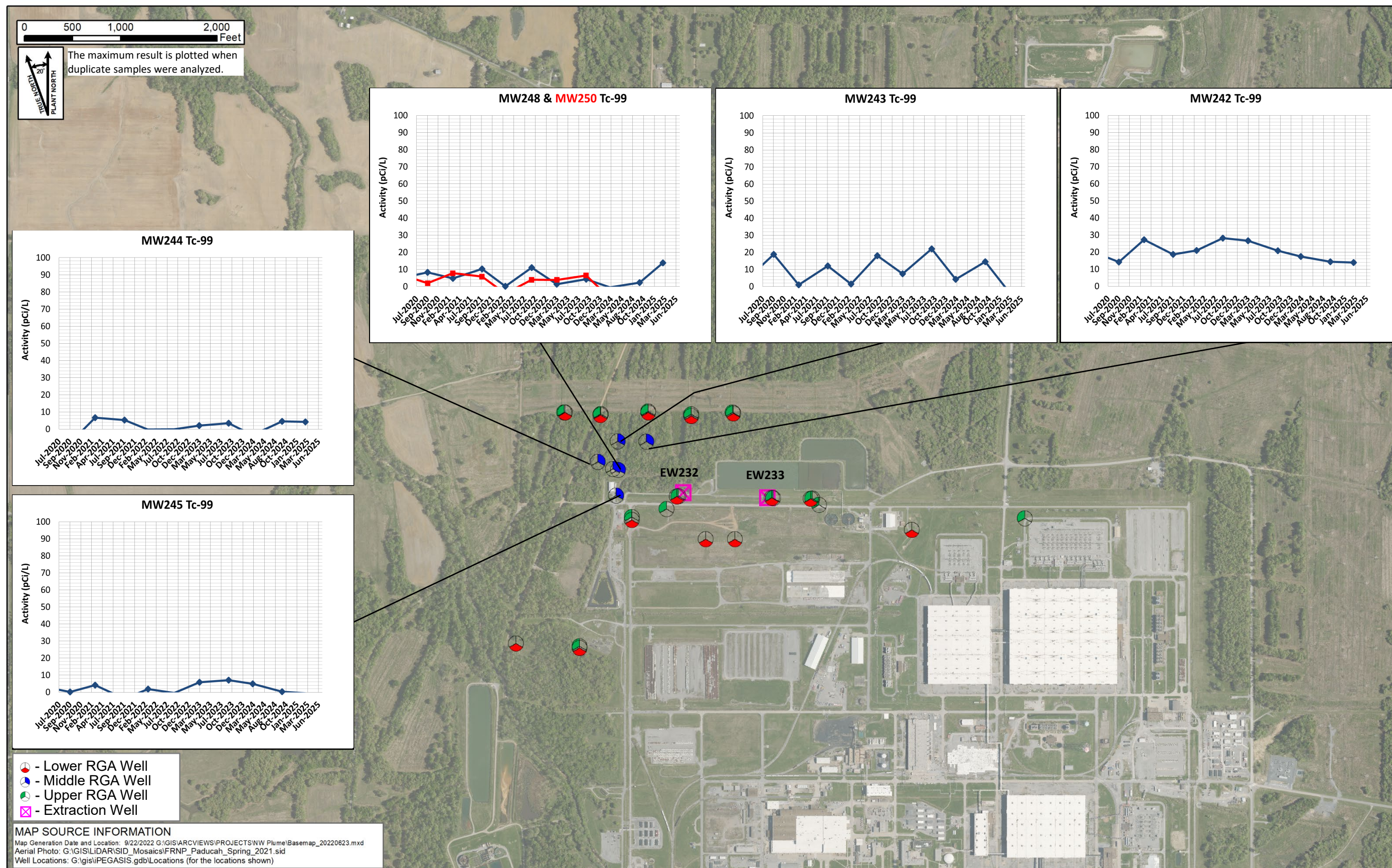


Figure B.24. Northwest Plume—South Well Field—Tc-99 Trends

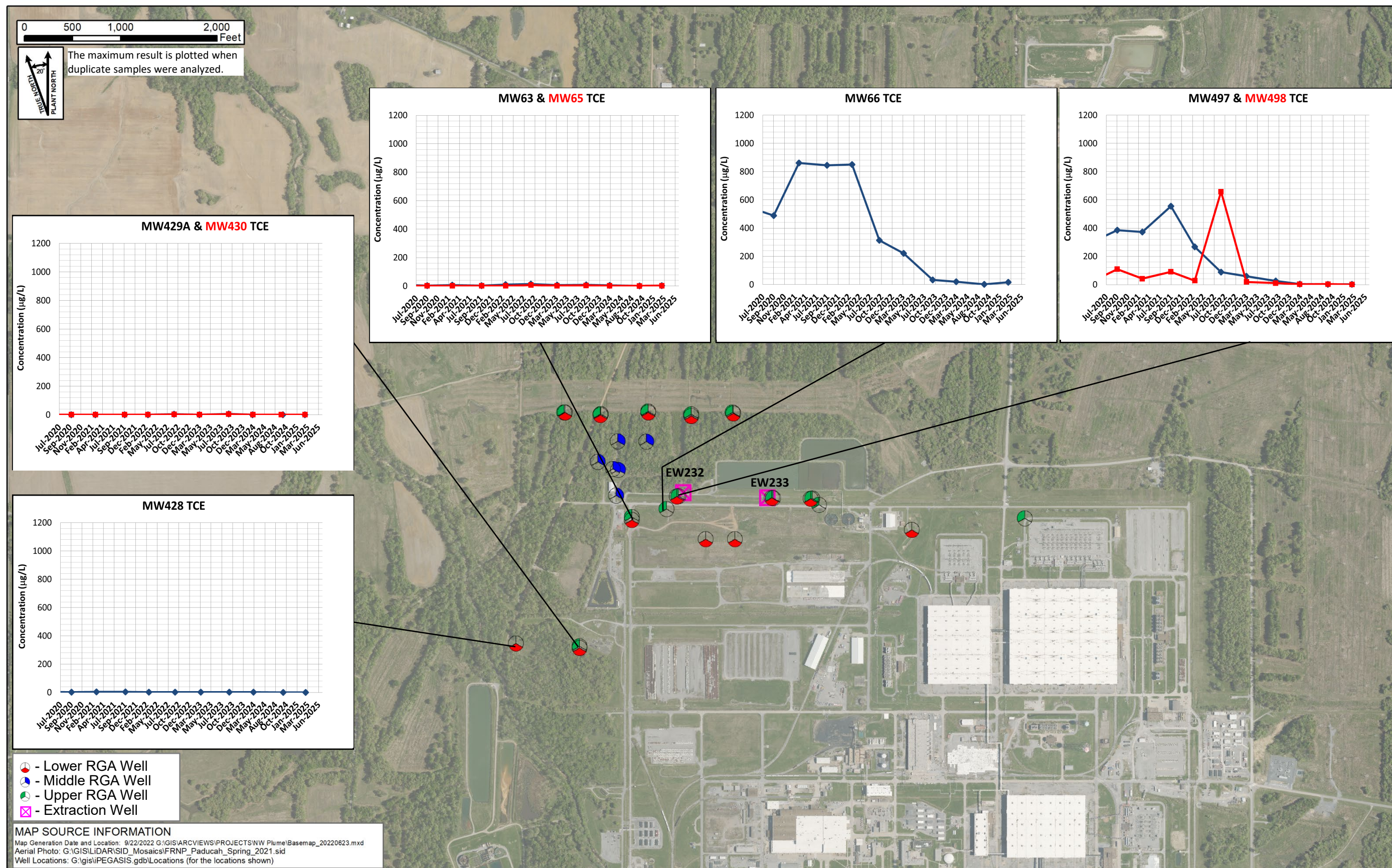


Figure B.25. Northwest Plume—New Well Field—TCE Trends

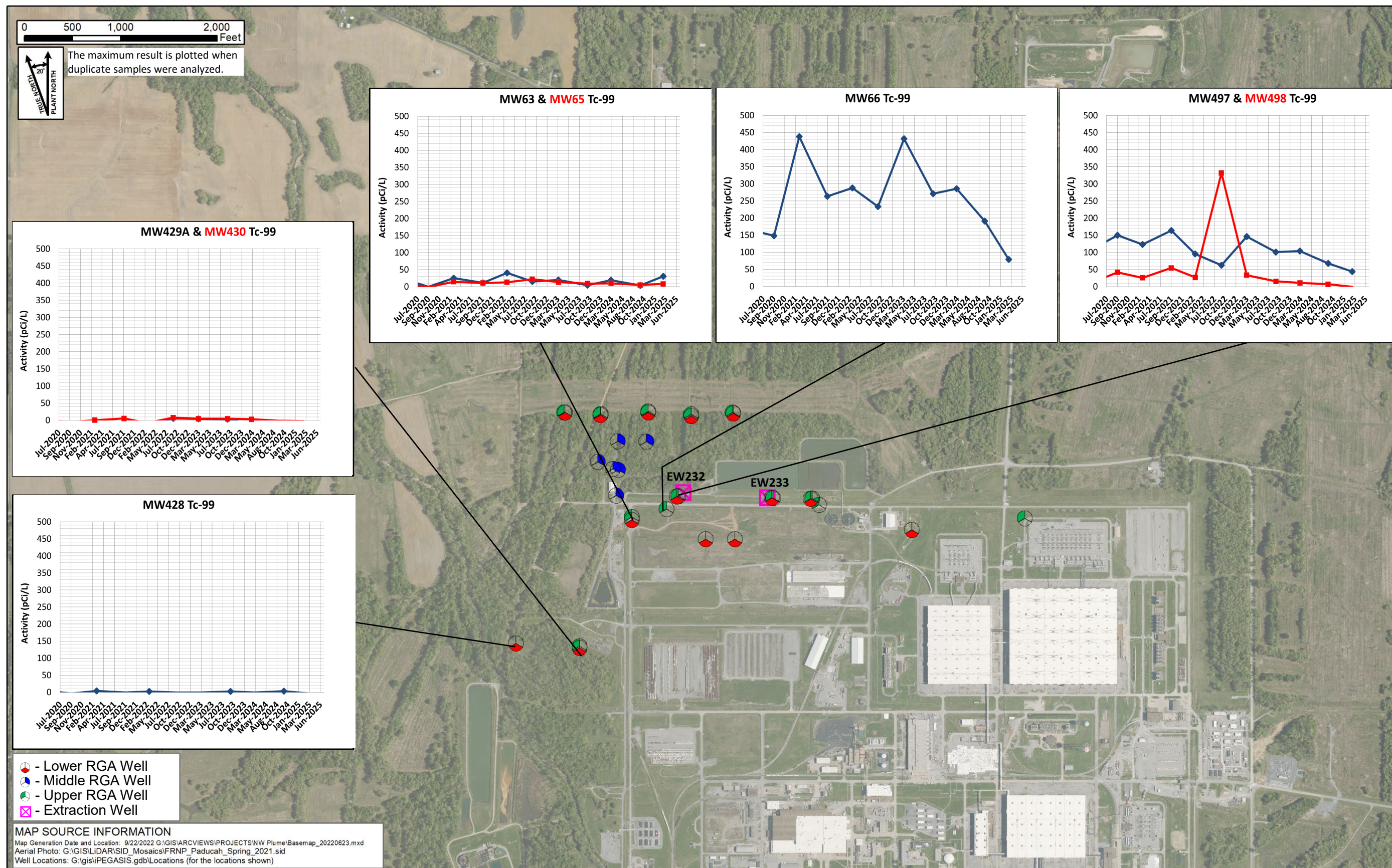


Figure B.26. Northwest Plume—New Well Field—Tc-99 Trends

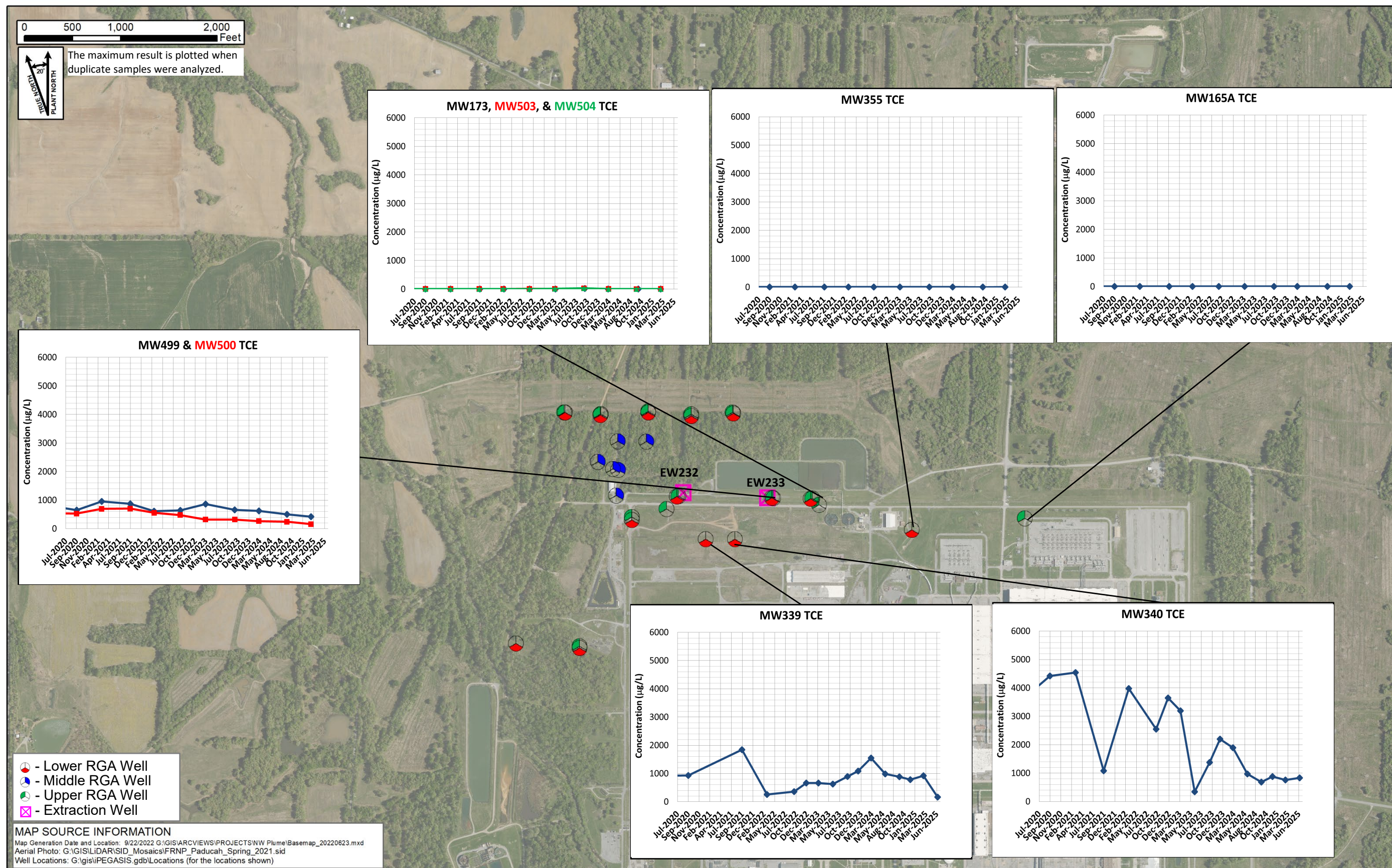


Figure B.27. Northwest Plume—Upgradient of Extraction Wells—TCE Trends

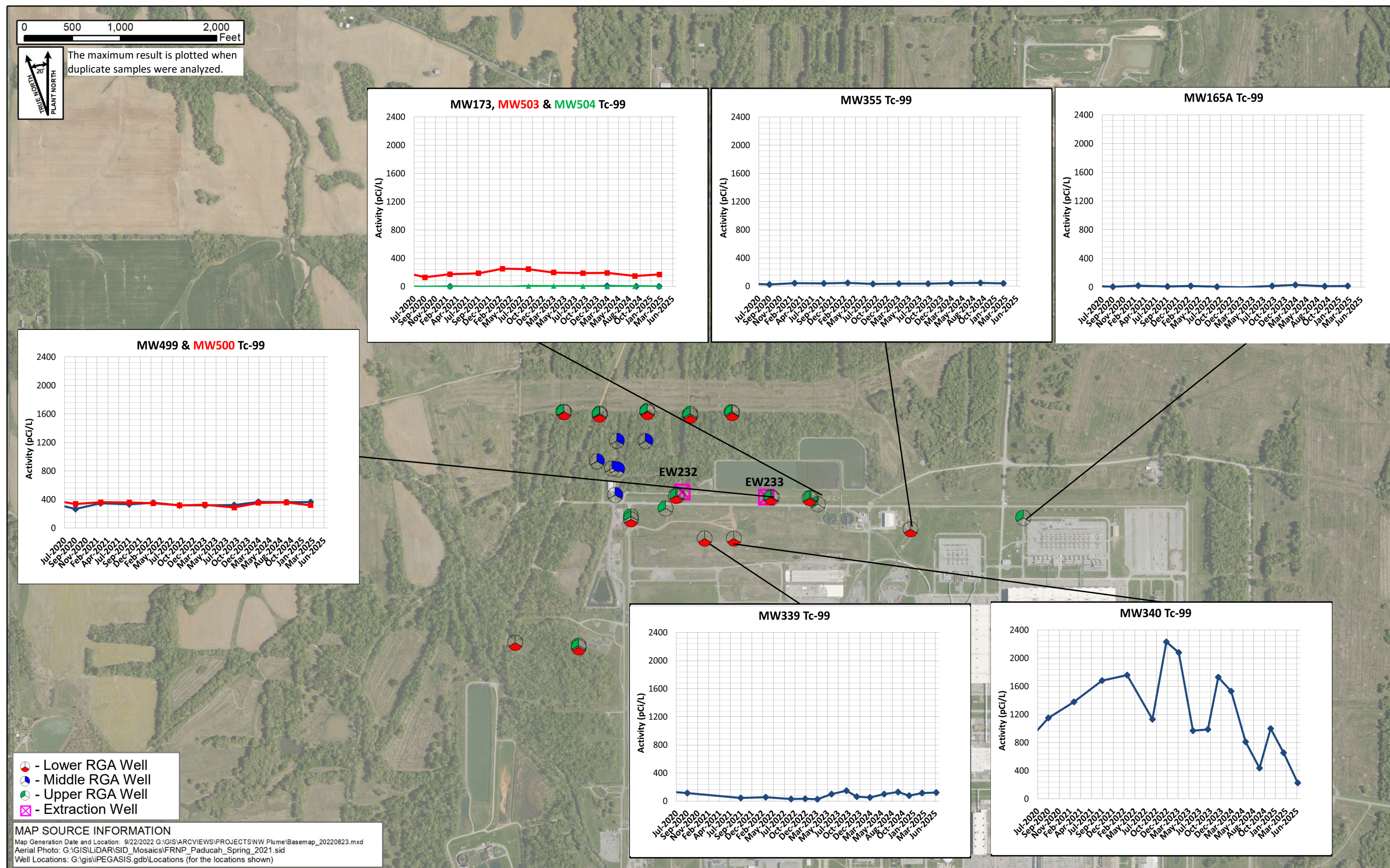
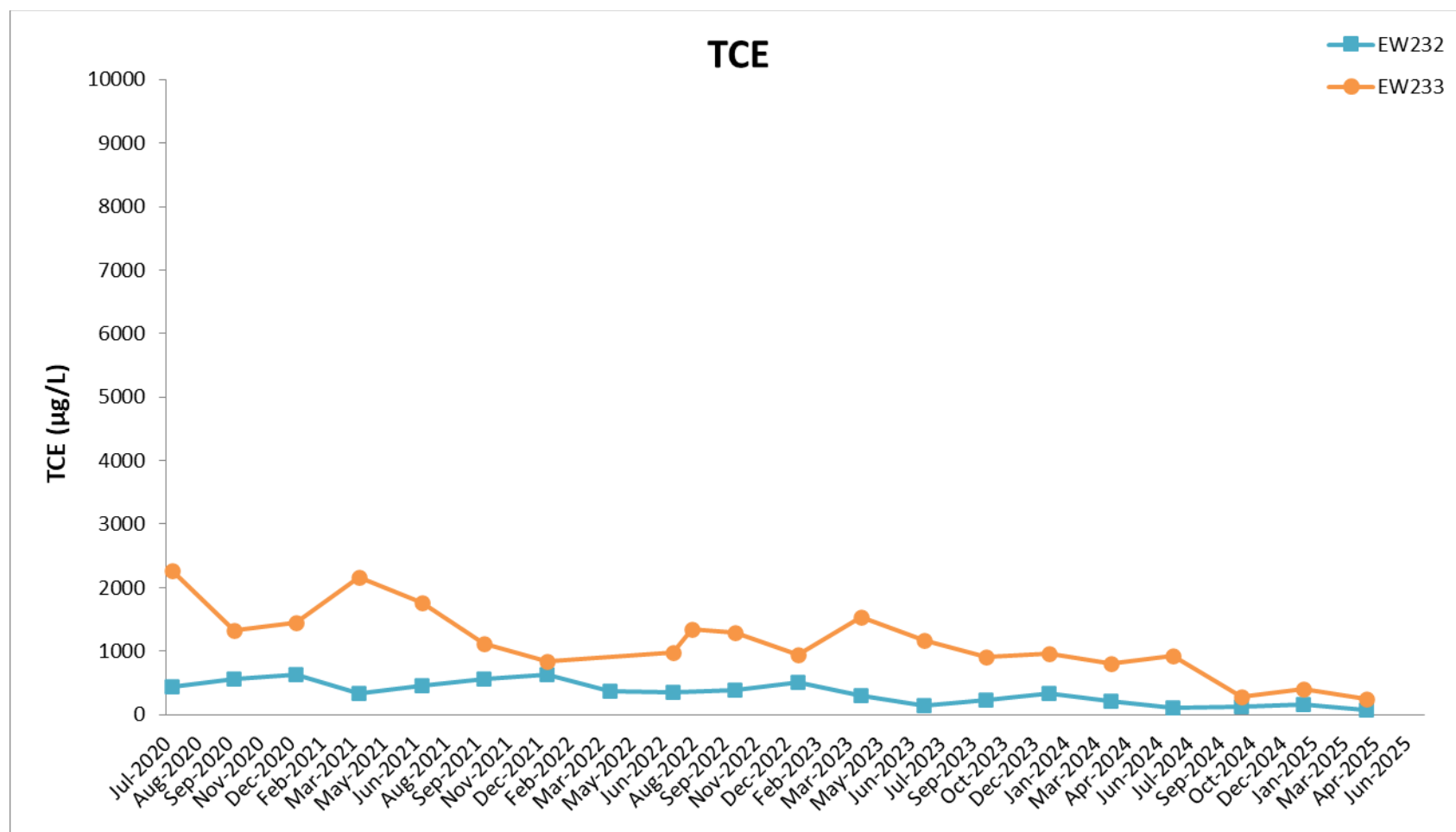
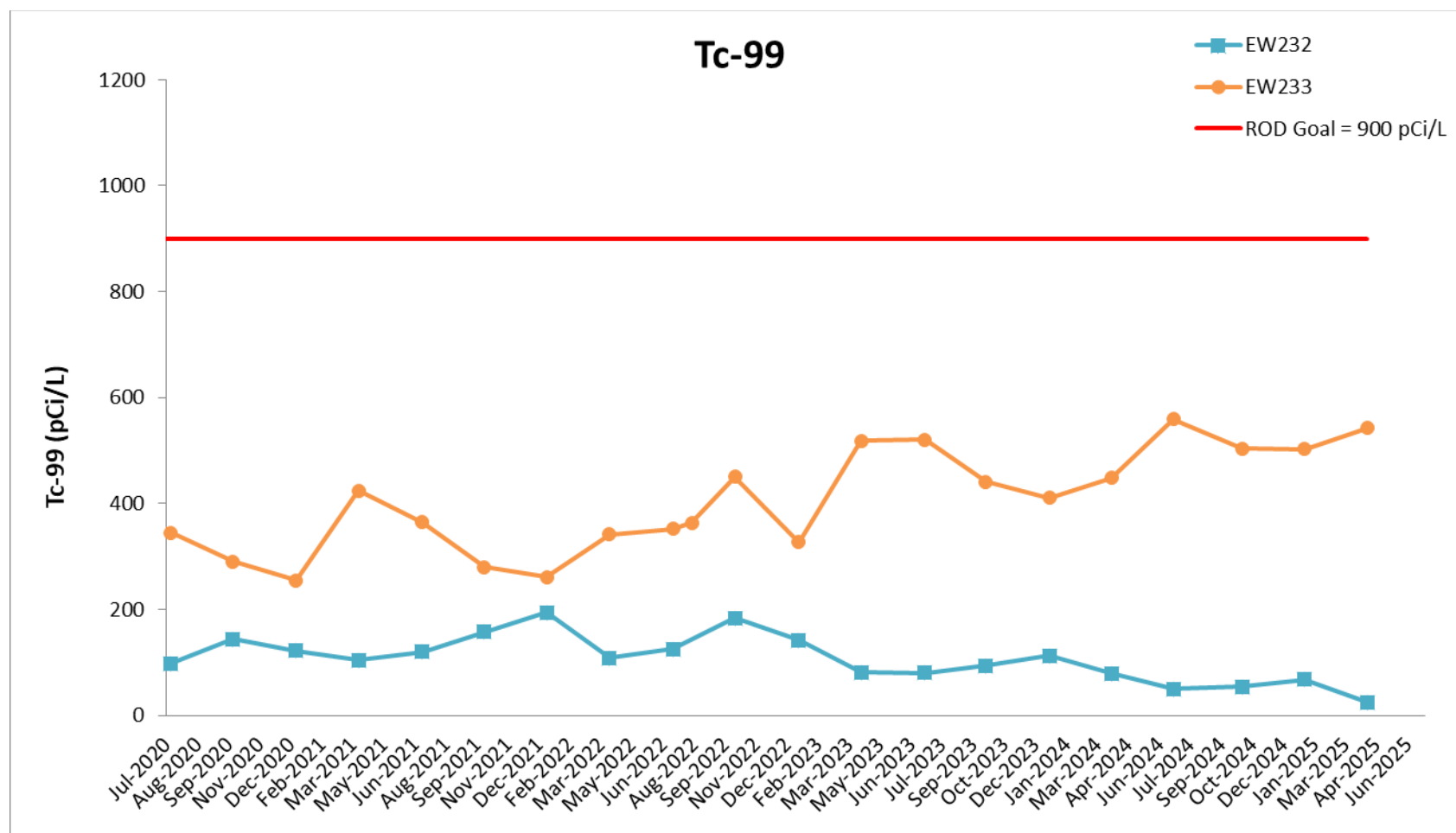


Figure B.28. Northwest Plume—Upgradient of Extraction Wells—Tc-99 Trends



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.29. Northwest Plume—TCE Concentrations in Extraction Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.30. Northwest Plume—Tc-99 Activities in Extraction Wells

APPENDIX C

C-746-K LANDFILL (SWMU 8) DATA

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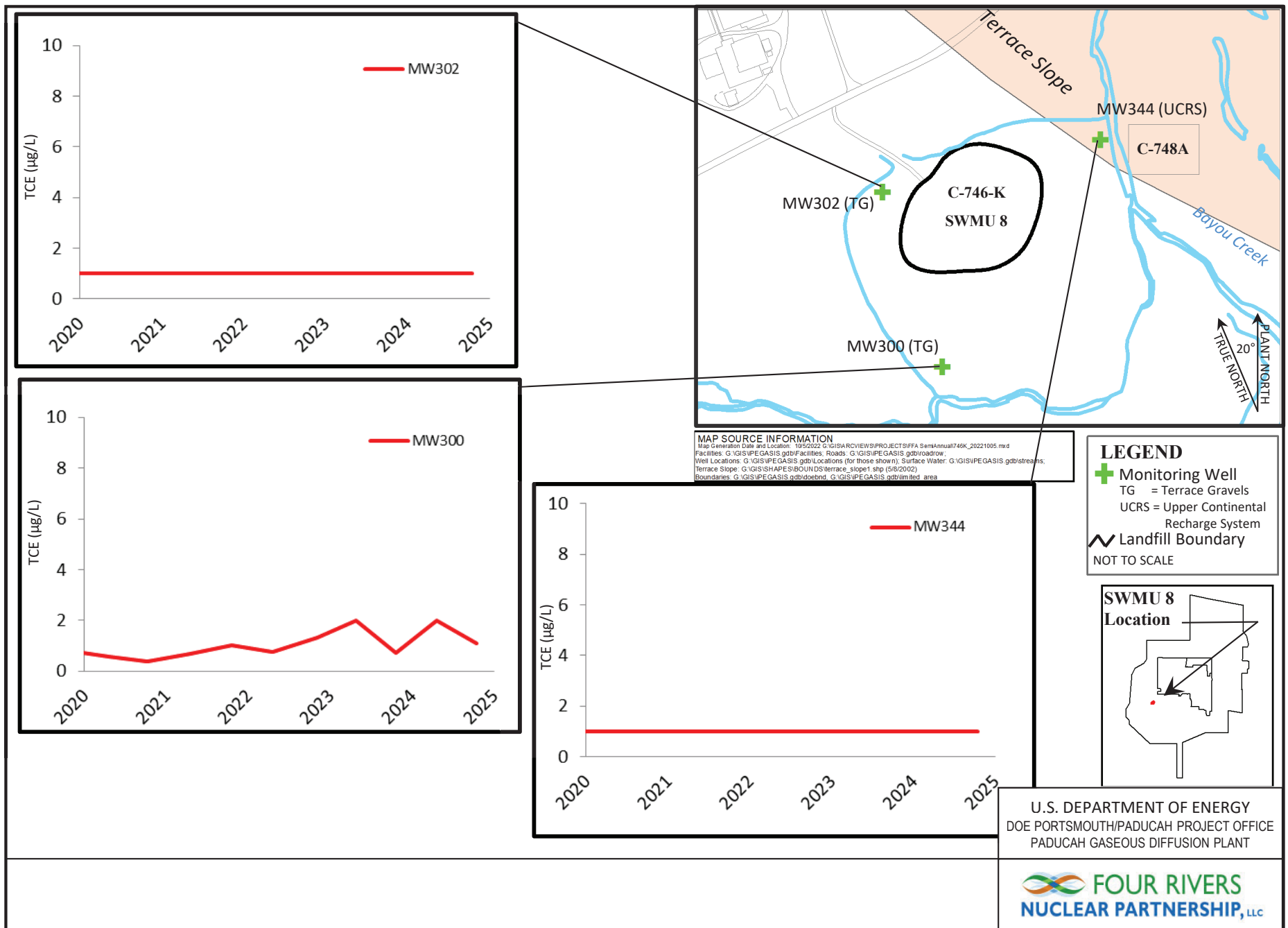


Figure C.1. TCE Trends in SWMU 8 Wells

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APPENDIX D

ADMINISTRATIVE RECORD, POST-DECISION RECORD, AND ADMINISTRATIVE RECORD REFERENCE INDICES

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Paducah Documents Added to the Administrative Record Files-Second Quarter CY2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF WDA	3/17/2025	N/A	HEALTH AND SAFETY PLAN (HASP) FOR ON-SITE WASTE DISPOSAL FACILITY (OSWDF) GEOTECHNICAL FIELD WORK	DOE	KDEP; USEPA-4	INF-RECMGMT-HASP OSWDF GEOTECH WRK-2025-03-17	4/23/2025

Paducah Documents Added to the Post-Decision Files-Second Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
1/7-PD	9/25/2024	SA-FY24-0091	SELF-ASSESSMENT REPORT - SOUTHWEST PLUME AND WASTE AREA GROUPINGS (WAGS) 1&7 LAND USE CONTROL (LUC) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	FRNP	INF-RECMGMT-SA-FY24-0091-SW PLUME WAG 17 LUC IMP ASMNT-2024-09-25	5/19/2025
C400SOURCE-PD	9/25/2024	SA-FY24-0090	SELF-ASSESSMENT REPORT - C-400 AND NORTH SOUTH DIVERSION DITCH (NSDD) LAND USE CONTROL IMPLEMENTATION PLAN IMPLEMENTATION (LUCIP) - SITE MANAGEMENT PLAN	FRNP	FRNP	INF-RECMGMT-SA-FY24-0090-C400 NSDD LUCIP SELF ASMNT-2024-09-25	5/19/2025
NSDD-PD	5/12/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - MAY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-C400L NS STORM EVENT-2025-05-19	6/17/2025
NSDD-PD	5/27/2025	CP3-ES-0041-F04	CP3-ES-0041-F04 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (QUARTERLY) - MAY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F04-C400L NS CHKLST QTRLY MAY-2025-05-27	6/17/2025
NSDD-PD	5/27/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - MAY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-C400L NS WKLY CKLIST-2025-05-27	6/17/2025
NSDD-PD	9/25/2024	SA-FY24-0090	SELF-ASSESSMENT REPORT - C-400 AND NORTH SOUTH DIVERSION DITCH (NSDD) LAND USE CONTROL IMPLEMENTATION PLAN IMPLEMENTATION (LUCIP) - SITE MANAGEMENT PLAN	FRNP	FRNP	INF-RECMGMT-SA-FY24-0090-C400 NSDD LUCIP SELF ASMNT-2024-09-25	5/19/2025
NSDD-PD	4/21/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - APRIL 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-C400L NSDD INSP APRIL-2025-04-21	5/19/2025
NSDD-PD	4/28/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (WEEKLY) - MARCH 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-C400L NSDD INSP APRIL-2025-04-28	5/19/2025
NSDD-PD	3/26/2025	CP3-ES-0041-F18	CP3-ES-0041-F18 - WINTERIZATION CHECKLIST - NORTH-SOUTH DIVERSION DITCH (WEEKLY) - MARCH 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F18-WNTRZTION CHKLST NSDD-2025-03-26	4/23/2025
NSDD-PD	3/31/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - MARCH 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-C400L NSDD INSP MARCH-2025-03-31	4/23/2025

Paducah Documents Added to the Post-Decision Files-Second Quarter CY 2025 (Continued)

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
NSDD-PD	3/31/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - MARCH 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-C400L NSDD INSP MARCH-2025-03-31	4/23/2025
SWP-PD	5/28/2025	CP3-ES-0041-F15	CP3-ES-0041-F15 - QUARTERLY SOUTHWEST PLUME SOLID WASTE MANAGEMENT UNIT INSPECTIONS - MAY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F15-QTRLY SWMU INSPECTIONS-2025-05-28	6/17/2025
SWP-PD	9/25/2024	SA-FY24-0091	SELF-ASSESSMENT REPORT - SOUTHWEST PLUME AND WASTE AREA GROUPINGS (WAGS) 1&7 LAND USE CONTROL (LUC) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	FRNP	INF-RECMGMT-SA-FY24-0091-SW PLUME WAG 17 LUC IMP ASMNT-2024-09-25	5/19/2025
SWP-PD	3/5/2025	CP3-ES-0041-F15	CP3-ES-0041-F15 - QUARTERLY SOUTHWEST PLUME SOLID WASTE MANAGEMENT UNIT (SWMU) INSPECTIONS - MARCH 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F15-QRTLY SW PLUME INSP-2025-03-05	4/23/2025
WP-PD	5/6/2025	N/A	UNITED STATES DEPARTMENT OF ENERGY, PORTSMOUTH PADUCAH PROJECT OFFICE, PADUCAH GASEOUS DIFFUSION PLANT WATER POLICY INFORMATION FOR RESIDENTS AND BUSINESSES	DOE	RESIDENT	INF-RECMGMT-2025 PAD WTR POLICY FACT SHT-2025-05-06	5/19/2025

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Paducah Documents Added to the Administrative Record Reference Files-Second Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ARR	1/31/2024	DOE/OR/07-1707; PRS-035	FEDERAL FACILITY AGREEMENT FOR THE PADUCAH GASEOUS DIFFUSION PLANT	USEPA-4; DOE; KDEP	USEPA-4; DOE; KDEP	INF-RECMGMT-DOEOR07-1707-FED FAC AGRMNT UPDTE-2024-01-31	4/23/2025
ARF ARR	3/14/2025	FR-25-1073	FISH AND WILDLIFE SERVICE (FWS) 2025-0060044; PARCEL 1 MATERIAL REMOVAL, MCCracken COUNTY, KENTUCKY	KDFWR	FRNP	INF-RECMGMT-FR-25-1073-PRCL 1 MTRL REMVL-2025-03-14	4/23/2025
ARF ARR	3/24/2025	FR-25-1076	PARCEL 1 (209 ACRES) TRANSFER OF LAND FROM THE U. S. DEPARTMENT OF ENERGY PADUCAH PROJECT OFFICE TO THE COUNTY GOVERNMENT FOR INDUSTRIALIZATION, KEVIL, KENTUCKY	KHC	FRNP	INF-RECMGMT-FR-25-1076-PARCEL 1 LAND TRNSFR-2025-03-24	4/23/2025
ARF ARR	3/11/2025	PPPO-02-10031428-25	FEDERAL FACILITY AGREEMENT BUDGET REPORTING - FISCAL YEAR 2027 BUDGET TARGET FUNDING GUIDANCE NOTIFICATION	DOE	KDEP; USEPA-4	INF-RECMGMT-PPPO-02-10031428-25-FFA FY 27 BDGT TRGET-2025-03-11	4/23/2025
ARF ARR	3/20/2025	PPPO-02-10032091-25	FEDERAL FACILITY AGREEMENT BUDGET REPORTING - PRELIMINARY ASSESSMENT OF FISCAL YEAR 2027 BUDGET FORMULATION GUIDANCE AND UPDATE OF THE FISCAL YEAR 2027 BUDGET TARGETS ON SITE PRIORITIES (INTEGRATED PRIORITY LIST)	DOE	KDEP; USEPA-4	INF-RECMGMT-PPPO-02-10032091-25-FFA PRELIM ASMNT FY 27 BDGT-2025-03-20	4/23/2025
ARF ARR	3/19/2025	PPPO-02-10032092-25	PADUCAH FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION - CONTINUING RESOLUTION	DOE	KDEP; USEPA-4	INF-RECMGMT-PPPO-02-10032092-25-FFA BDGT NOTIFCTION-2025-03-19	4/23/2025
ARF ARR	2/28/2025	DOE/OR/07-1707; PRS-035	FEDERAL FACILITY AGREEMENT FOR THE PADUCAH GASEOUS DIFFUSION PLANT	USEPA-4; DOE; KDEP	USEPA-4; DOE; KDEP	INF-RECMGMT-FED FAC AGRMNT 2025-2025-02-28	5/19/2025
ARF ARR	6/4/2025	PPPO-02-10030951-25	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2026 PRESIDENT'S BUDGET	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10030951-25-FFA 2026 PRES BUDGET-2025-06-04	6/17/2025
ARF ARR	6/9/2025	PPPO-02-10033020-25B, FRNP-RPT-0380	TRANSMITTAL OF THE TRICHLOROETHENE AND TECHNETIUM-99 GROUNDWATER CONTAMINATION IN THE REGIONAL GRAVEL AQUIFER FOR CALENDAR YEAR 2024 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, FRNP-RPT-0380	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10033020-25B-TRANSMITTAL AQUIFER-2025-06-09	6/17/2025

Paducah Documents Added to the Administrative Record Files-Third Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	6/13/2025	PPPO-02-10032947-25, DOE/LX/07-2474&D2/A1	TRANSMITTAL OF THE ADDENDUM TO THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2474&D2/A1)	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10032947-25-TRANSMIT RI FOR C400 OU-2025-06-13	7/17/2025
ARF 400OUREME DIAL	7/18/2025	FR-25-1113, DOE/LX/07-2474&D2/A1	KENTUCKY CONCURRENCE WITH THE ADDENDUM TO THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-2474&D2/A1) PADUCAH SITE PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-25-1113-KY CONCUR ADDEN RIR C400-2025-07-18	8/18/2025
ARF 400OUREME DIAL	8/27/2025	FR-25-1118, DOE/LX/07-2474&D2/A1	US ENVIRONMENTAL PROTECTION AGENCY (US EPA) SIGNED CONCURRENCE ON THE C-400 COMPLEX OPERABLE UNIT (OU) REMEDIAL INVESTIGATION REPORT (RIR) ADDENDUM DOE/LX/07-2474&D2/A1	USEPA-4	DOE	INF-RECMGMT-FR-25-1118-EPA CONCUR RIR ADDENDUM-2025-08-27	9/25/2025
ARF DD	6/4/2025	FR-25-1090, DOE/LX/07-2514&D1	KENTUCKY DIVISION OF WASTE MANAGEMENT SUBMITTAL OF COMMENTS TO THE SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY (DOE/LX/07-2514&D1) PADUCAH SITE PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-25-1090-KDWM COMMENT SCOPING AND WRK PLN-2025-06-04	7/17/2025
ARF DD	6/9/2025	FR-25-1092, DOE/LX/07-2514&D1	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 4 COMMENTS ON APPENDIX C OF THE D1 SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2514&D1)	USEPA-4	DOE	INF-RECMGMT-FR-25-1092-EPA COMMENTS SOPING AND WRK PLN-2025-06-09	7/17/2025
ARF DD	6/30/2025	FR-25-1094, DOE/LX/07-2514&D1	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 4 COMMENTS ON THE D1 SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2514&D1)	USEPA-4	DOE	INF-RECMGMT-FR-25-1094-EPA COMMENT SCOPING AND WRK PLN-2025-06-30	7/17/2025
ARF DD	7/10/2025	PPPO-02-10033146-25, DOE/LX/07-2514&D1	RECORD OF CONVERSATION CONCERNING APPROVAL OF APPENDIX C SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2514&D1	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10033146-25-ROC APP C SCOPING DOC-2025-07-10	7/17/2025
ARF DD	6/21/2025	N/A	U.S. DEPARTMENT OF ENERGY PUBLIC NOTICE ADMINISTRATIVE RECORD OPENING ON ENVIRONMENTAL MEDIA DECISION AND DEACTIVATION AND DECOMMISSIONING OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT	DOE	RESIDENTS	INF-RECMGMT-PUBLIC NOTICE ENVMEDIA AND DD-2025-06-21	7/17/2025
ARF DD	4/30/2025	PPPO-02-10032681-25, DOE/LX/07-2514&D1	TRANSMITTAL OF THE SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2514&D1	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10032681-25-TRANSMITTAL SCOPING DOC-2025-04-30	7/17/2025
ARF DD	7/29/2025	FR-25-1114, DOE/LX/07-2514&D1	KENTUCKY DEPARTMENT OF WASTE MANAGEMENT SUBMITTAL OF COMMENTS TO THE SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY (DOE/LX/07-2514&D1) PADUCAH SITE PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-25-1114-KY COMMENT SCOP DOC AND WORK PLAN-2025-07-29	8/18/2025

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Paducah Documents Added to the Administrative Record Files-Third Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ENVMEDIA	7/11/2025	DOE/LX/07-2514&D1	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4, OFFICE OF REGIONAL COUNSEL, AND KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION LEGAL COUNSEL RECOMMENDED DISCHARGE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR C-400 REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)	USEPA-4	DOE	INF-RECMGMT-EPA ORC AND KDEP LEGAL COMM C400 RIFS-2025-07-11	7/17/2025
ARF ENVMEDIA	6/21/2025	N/A	U.S. DEPARTMENT OF ENERGY PUBLIC NOTICE ADMINISTRATIVE RECORD OPENING ON ENVIRONMENTAL MEDIA DECISION AND DEACTIVATION AND DECOMMISSIONING OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT	DOE	RESIDENTS	INF-RECMGMT-PUBLIC NOTICE ENVMEDIA AND DD-2025-06-21	7/17/2025
ARF ENVMEDIA	4/18/2025	PPPO-02-10032086-25, DOE/LX/07-2515&D1	TRANSMITTAL OF THE SCOPING DOCUMENT AND WORK PLAN FOR THE ENVIRONMENTAL MEDIA REMEDIAL INVESTIGATION/FEASIBILITY STUDY, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2515&D1	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10032086-25-TRANSMITTAL SCOPING DOC-2025-04-18	7/17/2025
ARF ENVMEDIA	7/17/2025	FR-25-1110, DOE/LX/07-2515&D1	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 4 COMMENTS ON THE D1 SCOPING DOCUMENT AND WORK PLAN FOR THE ENVIRONMENTAL MEDIA REMEDIAL INVESTIGATION/FEASIBILITY STUDY, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2515&D1)	USEPA-4	DOE	INF-RECMGMT-FR-25-1110-EPA COMMENT D1 SCOPING AND WP-2025-07-17	8/18/2025
ARF ENVMEDIA	7/18/2025	FR-25-1111, DOE/LX/07-2515&D1	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 4 FINAL COMMENTS ON THE D1 ENVIRONMENTAL MEDIA SCOPING DOCUMENT REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) WORK PLAN (WP) DOE/LX/07-2515&D1	USEPA-4	DOE	INF-RECMGMT-FR-25-1111-EPA FINAL COMMENT D1 SCOPING-2025-07-18	8/18/2025
ARF ENVMEDIA	7/17/2025	FR-25-1112, DOE/LX/07-2515&D1	KENTUCKY DEPARTMENT OF WASTE MANAGEMENT (KDWM) SUBMITTAL OF COMMENTS TO THE SCOPING DOCUMENT AND WORK PLAN FOR THE ENVIRONMENTAL MEDIA REMEDIAL INVESTIGATION/FEASIBILITY STUDY (DOE/LX/07-2515&D1) PADUCAH SITE PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-25-1112-KY COMMENT SCOPING DOC-2025-07-17	8/18/2025
ARF WDA	9/9/2025	PPPO-02-10034286-25, DOE/LX/07-2507&D1/R1	TRANSMITTAL OF THE GEOTECHNICAL SAMPLING AND ANALYSIS PLAN AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2507&D1/R1)	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10034286-25-GEOTECH SAMPLE AND ANALYSIS-2025-09-09	9/25/2025

Paducah Documents Added to the Post-Decision Files-Third Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
C400SOURCE-PD	8/12/2025	CP3-ES-0041-F14	CP3-ES-0041-F14 - C-400 LAND USE CONTROL IMPLEMENTATION PLAN (LUCIP) INSPECTION - AUGUST 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F14-C400 AUG INSP-2025-08-12	9/25/2025
NSDD-PD	6/30/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - JUNE 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-C400L WKLY CHKLST-2025-06-30	7/17/2025
NSDD-PD	6/30/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - JUNE 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-C400L STORM EVENT-2025-06-30	7/17/2025
NSDD-PD	7/29/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - JULY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-C400L NS WEEKLY CHKLST-2025-07-29	8/18/2025
NSDD-PD	7/14/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - JULY 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-C400L NS STORM CHKLST-2025-07-14	8/18/2025
NSDD-PD	8/25/2025	CP3-ES-0041-F03	CP3-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - AUGUST 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F03-NS WEEKLY CHKLST-2025-08-25	9/25/2025
NSDD-PD	8/25/2025	CP3-ES-0041-F04	CP3-ES-0041-F04 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (QUARTERLY) - AUGUST 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F04-NS QTRLY CHKLST-2025-08-25	9/25/2025
NSDD-PD	8/19/2025	CP3-ES-0041-F05	CP3-ES-0041-F05 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (NSDD) SURGE BASIN/CONCRETE DITCH (SEMI-ANNUAL)	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F05-NSDD SURGE BASIN CHKLST-2025-08-19	9/25/2025
NSDD-PD	8/20/2025	CP3-ES-0041-F07	CP3-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - AUGUST 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F07-NS STORM EVENT CHKLST-2025-08-20	9/25/2025

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Paducah Documents Added to the Post-Decision Files-Third Quarter CY 2025 (Continued)

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
SWP-PD	8/12/2025	CP3-ES-0041-F15	CP3-ES-0041-F15 - QUARTERLY SOUTHWEST PLUME SOLID WASTE MANAGEMENT UNIT (SWMU) INSPECTIONS - AUGUST 2025	FRNP	DOE	INF-RECMGMT-CP3-ES-0041-F15-QRTLY SW PLUME SWMU INSP-2025-08-12	9/25/2025

Paducah Documents Added to the Administrative Record Reference Files-Third Quarter CY 2025

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ARR	7/11/2025	N/A	KENTUCKY EMAIL 2024 TRICHLOROETHENE (TCE) AND TECHNETIUM (TC-99) GROUNDWATER CONTAMINATION IN THE REGIONAL GRAVEL AQUIFER (RGA) REPORT	KDEP	FRNP, DOE	INF-RECMGMT-KY EMAIL TCE AND TC99 RGA RPT-2025-07-11	7/17/2025
ARF ARR	7/10/2025	PPPO-02-10033146-25, DOE/LX/07-2514&D1	RECORD OF CONVERSATION CONCERNING APPROVAL OF APPENDIX C SCOPING DOCUMENT AND WORK PLAN FOR THE DEACTIVATION AND DECOMMISSIONING REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2514&D1	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10033146-25-ROC APP C SCOPING DOC-2025-07-10	7/17/2025
ARF ARR	7/23/2025	N/A	EMAIL - EPA ACCEPTANCE OF CALENDAR YEAR 2024 TRICHLOROETHENE (TCE) & TECHNETIUM-99 (TC-99) GROUNDWATER (GW) CONTAMINATION IN REGIONAL GRAVEL AQUIFER (RGA) AT PADUCAH GASEOUS DIFFUSION PLANT (FRNP-RPT-0380)	USEPA-4	DOE	INF-RECMGMT-EPA ACCEPT CY2024 TCE TC-99 GW CONT RGA-2025-07-23	8/18/2025
ARF ARR	7/3/2025	FR-25-1102	A PHASE I ARCHAEOLOGICAL RECONNAISSANCE FOR LEASING PARCEL A, MCCracken COUNTY, KENTUCKY BY MICHAEL J. CURRAN AND ANDREW V. MARTIN	Kentucky State Historic Preservation Office	FRNP	INF-RECMGMT-FR-25-1102-PHASE I RECON PARCEL A-2025-07-03	8/18/2025
ARF ARR	8/1/2025	FR-25-1115	A PHASE I ARCHAEOLOGICAL RECONNAISSANCE OF PARCEL 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT, MCCracken COUNTY, KENTUCKY BY MICHAEL J. CURRAN	Kentucky State Historic Preservation Office	FRNP	INF-RECMGMT-FR-25-1115-PHASE I RECON PARCEL 1-2025-08-01	8/18/2025
ARF ARR	8/7/2025	PPPO-02-10034075-25	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2025 FUNDING ALLOCATION EVALUATION	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-10034075-25-FFA FY25 FUNDING-2025-08-07	8/18/2025
ARF ARR	8/18/2025	FR-25-1116	US FISH AND WILDLIFE SERVICE FWS 2025-0124757; C-613 SEDIMENTATION BASIN OVERFLOW TREE REMOVAL, MCCracken COUNTY, KENTUCKY	FWS	FRNP	INF-RECMGMT-FR-25-1116-C613 SED BASIN TREE REMOVE-2025-08-18	9/25/2025

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APPENDIX E

C-749 URANIUM BURIAL GROUND (SWMU 2) GROUNDWATER MONITORING WELL DATA

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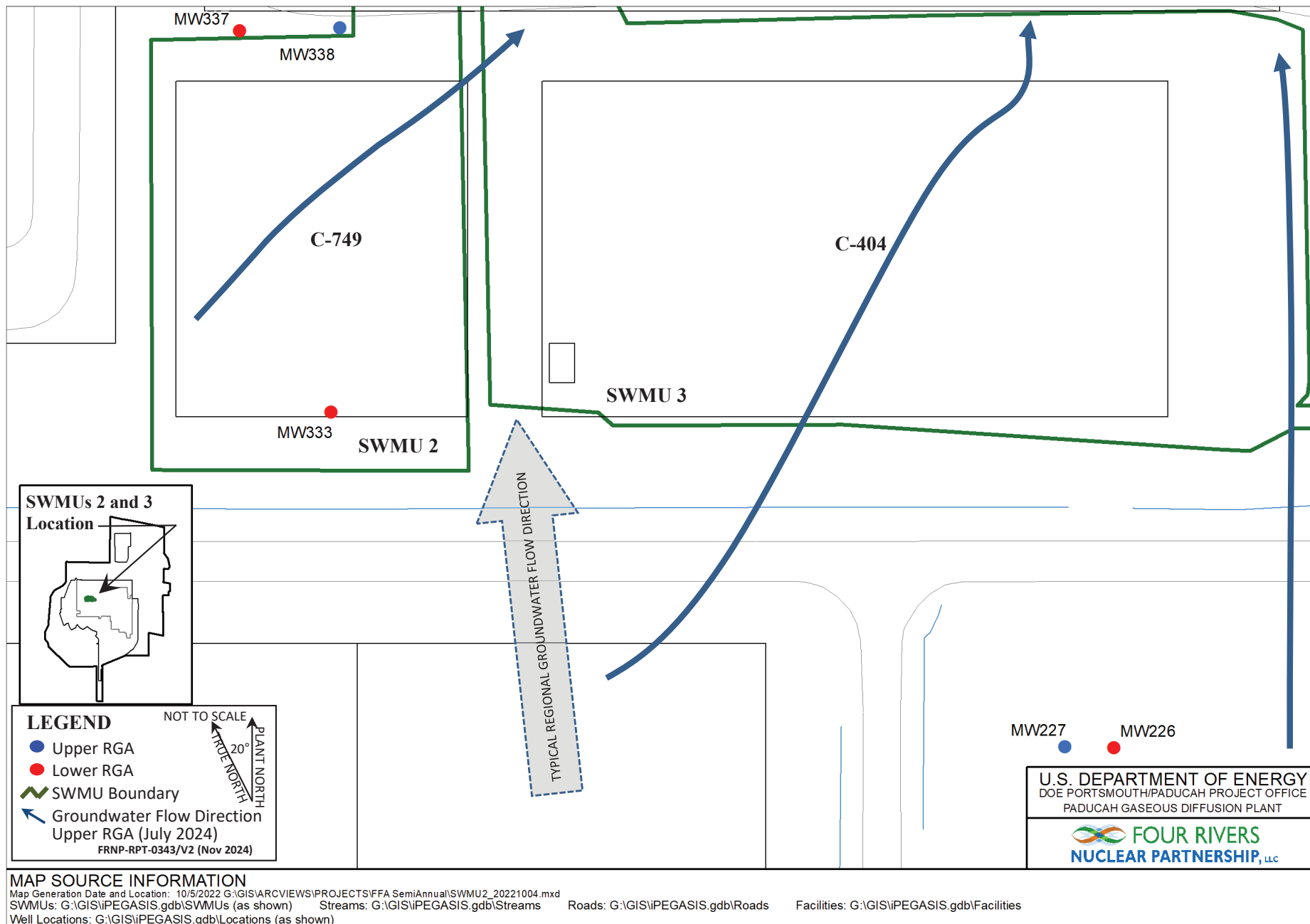


Figure E.1. SWMU 2 Wells Location

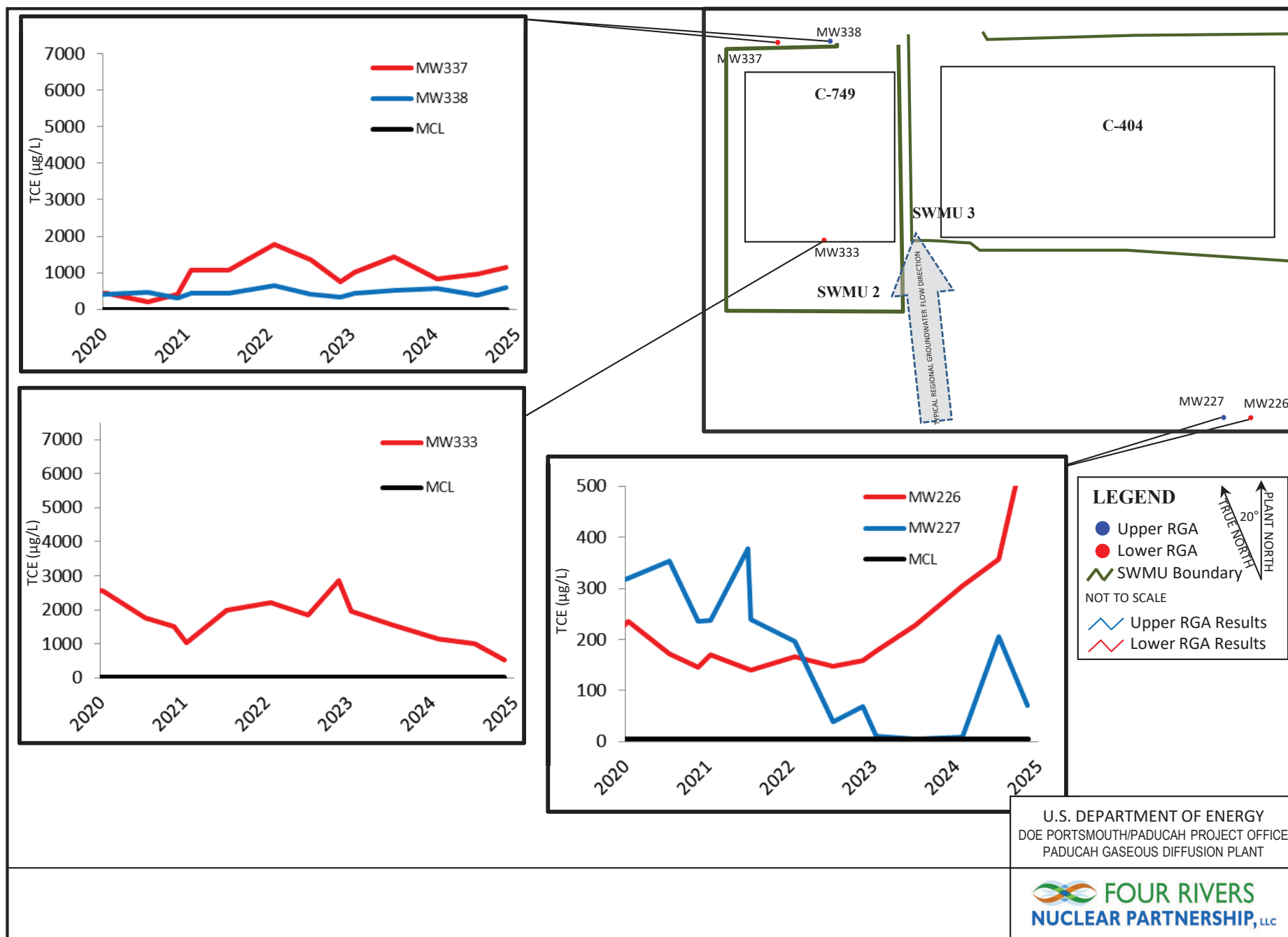


Figure E.2. TCE Trends in SWMU 2 Wells

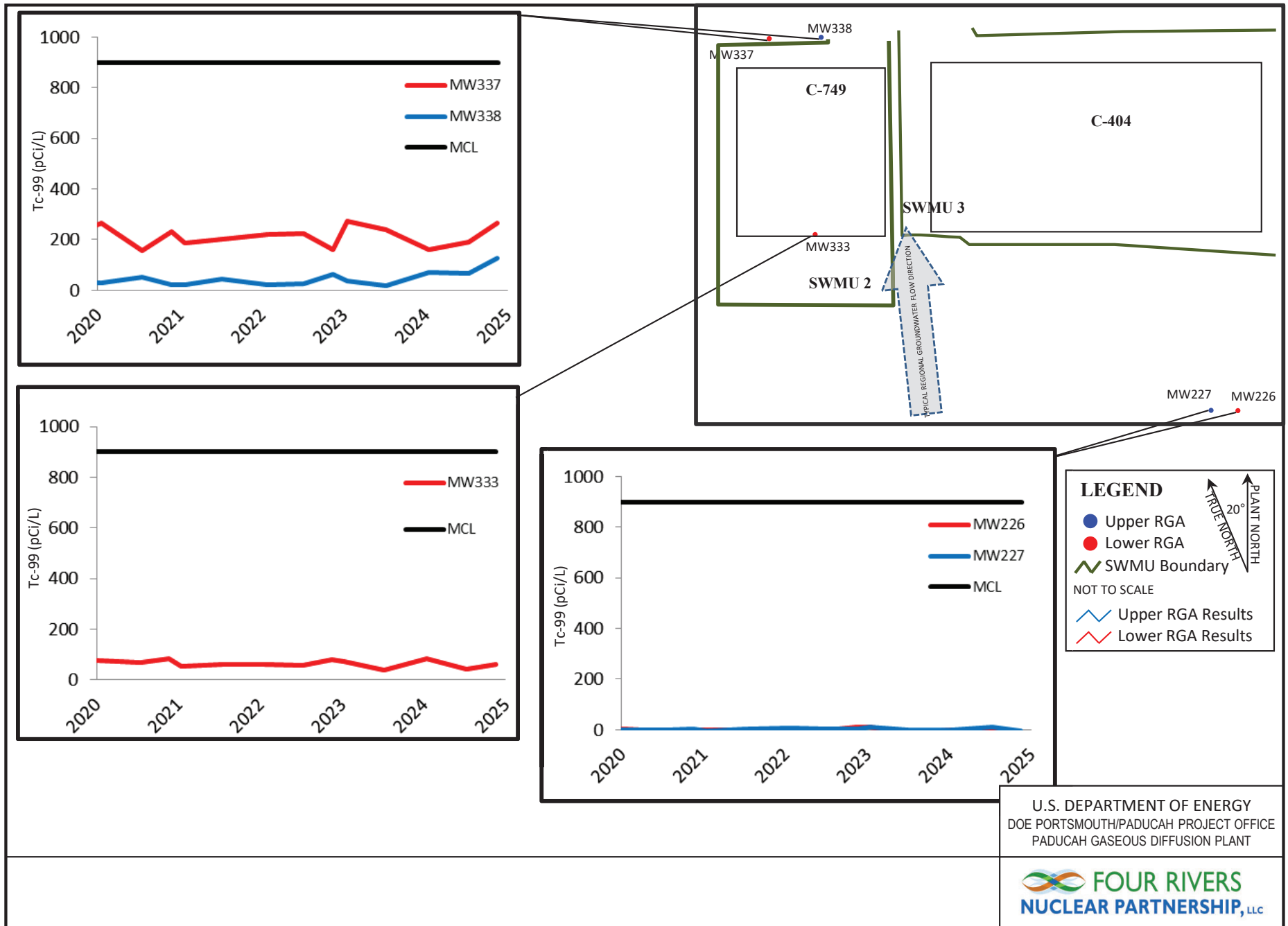


Figure E.3. Tc-99 Trends in SWMU 2 Wells

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