



## Department of Energy

Portsmouth/Paducah Project Office  
1017 Majestic Drive, Suite 200  
Lexington, Kentucky 40513  
(859) 219-4000

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

PPPO-02-10027459-24B

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

Dear Ms. Webb, and Mr. Weeks:

**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT  
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR THE  
FIRST HALF OF FISCAL YEAR 2024, PADUCAH, KENTUCKY, DOE/LX/07-2500/V1**

Enclosed is the *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2024, Paducah, Kentucky*, DOE/LX/07-2500/V1, 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, then 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  
Federal Facility Agreement Manager  
Portsmouth/Paducah Project Office

Enclosures:

1. Certification Page
2. FFA Semiannual Progress Report for the First Half of Fiscal Year 2024

General Reference Compendium

cc w/enclosures:

abigail.parish@pppo.gov, PPPO  
april.ladd@pppo.gov, PPPO  
april.webb@ky.gov, KDEP  
arcorrespondence@pad.pppo.gov  
bruce.ford@pad.pppo.gov, FRNP  
bwhatton@tva.gov, TVA  
dcnorman0@tva.gov, TVA  
emilye.garner@pad.pppo.gov, FRNP  
eric@pgdpcab.org, PGDP CAB  
frnpcorrespondence@pad.pppo.gov  
hjlawrence@tva.gov, TVA  
joel.bradburne@pppo.gov, PPPO  
kentuckyES@fws.gov, FWS  
leanne.garner@pad.pppo.gov, FRNP  
mac.mcrae@TechLawInc.com, EPA  
megan.mulry@pad.pppo.gov, FRNP  
myrna.redfield@pad.pppo.gov, FRNP  
nathan.garner@ky.gov, KYRHB  
nrepcdep-dwm-hwb-pgdp@ky.gov  
pad.rmc@pad.pppo.gov  
rebecca.goodman@ky.gov, KEEC  
reinhard.knerr@pppo.gov, PPPO  
robert.smith@pppo.gov, PPPO  
sebenton@tva.gov, TVA  
sonja.smiley@ky.gov, KDEP  
stephaniec.brock@ky.gov, KYRHB  
testher@tva.gov, TVA  
thhenry@tva.gov, TVA  
timothy.kreher@ky.gov, KDFWR  
weeks.victor@epa.gov, EPA

**CERTIFICATION**

**Document Identification:** *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2024 Paducah, Kentucky, DOE/LX/07-2500/V1, April 2024*

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)



Digitally signed by MYRNA REDFIELD (Affiliate)  
Date: 2024.04.23 15:02:14 -05'00'

---

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

---

Date Signed

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

APRIL LADD



Digitally signed by APRIL LADD  
Date: 2024.04.25 10:04:24 -05'00'

---

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

---

Date Signed

**DOE/LX/07-2500/V1  
Secondary Document**

**U.S. Department of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
First Half of Fiscal Year 2024  
Paducah, Kentucky**



**CLEARED FOR PUBLIC RELEASE**



**DOE/LX/07-2500/V1  
Secondary Document**

**U.S. Department of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
First Half of Fiscal Year 2024  
Paducah, Kentucky**

Date Issued—April 2024

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

**CLEARED FOR PUBLIC RELEASE**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# CONTENTS

TABLES .....	v
ACRONYMS.....	vii
INTRODUCTION .....	1
C-400 COMPLEX OPERABLE UNIT .....	5
GROUNDWATER OPERABLE UNIT .....	11
BURIAL GROUNDS OPERABLE UNIT .....	31
SURFACE WATER OPERABLE UNIT .....	35
WATER POLICY .....	39
ADDITIONAL REPORTING .....	47
APPENDIX A: NORTHEAST AND NORTHWEST PLUME WATER WITHDRAWAL REPORTS.....	A-1
APPENDIX B: NORTHEAST PLUME AND NORTHWEST PLUME GRAPHS, DATA, AND MAPS (FIGURES B.1 THROUGH B.30).....	B-1
APPENDIX C: C-746-K LANDFILL (SWMU 8) DATA .....	C-1
APPENDIX D: ADMINISTRATIVE RECORD, POST-DECISION RECORD, AND ADMINISTRATIVE RECORD REFERENCE INDICES .....	D-1
APPENDIX E: C-749 URANIUM BURIAL GROUND (SWMU 2) GROUNDWATER MONITORING WELL DATA .....	E-1



**THIS PAGE INTENTIONALLY LEFT BLANK**

## TABLES

1. Operable Units and Corresponding Report Topics .....	2
2. Cumulative TCE Removed at Paducah.....	11
3. TCE Concentrations for Northeast Plume .....	22
4. TCE and Tc-99 Concentrations at the C-612 Treatment Facility for Northwest Plume (July 1, 2023, through December 31, 2023).....	26
5. TCE and Tc-99 Concentrations for Northwest Plume Extraction Wells (July 1, 2023, through December 31, 2023).....	27

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 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	decontamination and decommissioning
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
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
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

**THIS PAGE INTENTIONALLY LEFT BLANK**

# FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FIRST HALF OF FISCAL YEAR 2024

**Facility: Paducah Gaseous Diffusion Plant**  
**Plant EPA I.D. No.: KY8-890-008-982**  
**Reporting Period: 10/1/2023–3/31/2024**

## 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).

- C-400 Complex OU
- Groundwater OU (GWOU)
- Surface Water OU (SWOU)
- Soils OU
- Burial Grounds OU (BGOU)
- Facility Decontamination and Decommissioning (D&D) OU
- Lagoons OU
- Depleted Uranium Hexafluoride (DUF<sub>6</sub>) Footprint Underlying Soils OU
- Soils and Slabs OU
- CERCLA Waste Disposal Alternatives 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.<sup>1</sup> 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.

---

<sup>1</sup> Schedules are included for information and planning purposes only; enforceable schedules are established in the site management plan (SMP).

**Table 1. Operable Units and Corresponding Report Topics**

<b>Operable Unit</b>	<b>Project/Activities</b>
C-400 Complex Operable Unit	<ul style="list-style-type: none"> <li>• C-400 D&amp;D</li> <li>• C-400 Final Remedial Action</li> </ul>
Groundwater Operable Unit	<ul style="list-style-type: none"> <li>• C-400 Interim Remedial Action (IRA)</li> <li>• Southwest Plume Sources Remedial Action</li> <li>• Dissolved-Phase Plumes Remedial Action</li> <li>• Northeast Plume IRA</li> <li>• Northwest Plume IRA</li> </ul>
Burial Grounds Operable Unit	<ul style="list-style-type: none"> <li>• C-749 Uranium Burial Ground Solid Waste Management Unit (SWMU) 2</li> </ul>
Surface Water Operable Unit	<ul style="list-style-type: none"> <li>• Remedial Action</li> </ul>
Water Policy	<ul style="list-style-type: none"> <li>• Removal Action</li> </ul>
Additional Reporting	<ul style="list-style-type: none"> <li>• Waste Area Groupings (WAGs) 1 and 7</li> <li>• Community Relations Plan (CRP)</li> <li>• SMP</li> <li>• CERCLA Five-Year Review</li> <li>• Plant Industrial Area Vapor Intrusion Assessment</li> </ul>

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)
- 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 July 1, 2023, through December 31, 2023, 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 Portsmouth/Paducah Project Office (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., Record of Decision (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.



**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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):**

- Submitted a notification to EPA and KDEP on November 2, 2023, and received approval for the bifurcation of the *Remedial Investigation/Feasibility Study Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D1, into the *Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2, and a separate C-400 Complex OU feasibility study.
- Submitted a 14-day extension notification to EPA and KDEP on November 17, 2023, and received EPA and KDEP approval on December 6, 2023, for the submittal of the *Remedial Investigation/Feasibility Study Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2, to December 15, 2023.
- Finalized and submitted the *Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2, to EPA and KDEP on December 15, 2023.
- Received EPA and KDEP approval of the *Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2474&D2, on December 18, 2023, and December 19, 2023, respectively.
- Held scoping meetings with EPA and KDEP for the C-400 Complex OU investigation of the adjacent area north of the complex on January 25, 2024, and February 1, 2024.
- Developed and submitted the *Addendum to the Remedial Investigation/Feasibility Study Work Plan for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2433&D2/R1/A1, to EPA and KDEP on March 19, 2024.

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

- Receive EPA and KDEP approval of the *Addendum to the Remedial Investigation/Feasibility Study Work Plan for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2433&D2/R1/A1.

**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 2024, DOE/LX/07-2495&D1*.

**V. Primary/Secondary Document Tracking System:**

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

- *Remedial Investigation Report for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2474&D2*, was under development and under review by EPA and KDEP during this reporting period.
- *Addendum to the Remedial Investigation/Feasibility Study Work Plan for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2433&D2/R1/A1*, was under development during this reporting period and under review by EPA and KDEP during this reporting period.

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

- EPA and KDEP approval of the *Addendum to the Remedial Investigation/Feasibility Study Work Plan for the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2433&D2/R1/A1, is due within 90 days of issuance, or June 17, 2024.

**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.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>2</sup>**

**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 2 provides an overall picture of the TCE mass removed [TCE values may contain other volatile organic compounds (VOCs)] by various actions.

**Table 2. Cumulative TCE\* Removed at Paducah**

Source Area	Cumulative TCE Removed (gal)*
Northwest Plume Pump-and-Treat	4,039**
Northeast Plume Pump-and-Treat	378**
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
<b>Total</b>	<b>8,259</b>

\*TCE values may contain other VOCs.

\*\*Cumulative through December 31, 2023.

\*\*\*Removed during deep soil mixing operations.

---

<sup>2</sup> The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.



**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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.*

**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.
- Conduct annual inspections in accordance with the *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.*

**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  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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 *Remedial Action Work Plan for In Situ Source Treatment by Deep Soil Mixing of the Southwest Groundwater Plume Volatile Organic Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1287&D2/A1/R1.*
- 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.*
- Initiated development of 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&D1.*

**SWMUs 211-A and 211-B**

- Conducted review of performance MW results collected through March 2023 as prescribed in the *Certified for Construction Remedial Design Report for SWMU 211-A for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2435&D2.*
- Initiated development of a summary for performance MW results collected through September 2023 as prescribed in the *Certified for Construction Remedial Design Report for SWMU 211-A for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2435&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.*

- Initiated development of 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&D1.

**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 *Remedial Action Work Plan for In Situ Source Treatment by Deep Soil Mixing of the Southwest Groundwater Plume Volatile Organic Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1287&D2/A1/R1.
- 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.
- Finalize and submit 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&D1.

**SWMUs 211-A and 211-B**

- Continue performance and long-term MW network sample collection at SWMU 211-A, as prescribed in the *Certified for Construction Remedial Design Report for SWMU 211-A for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2435&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 and submit 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&D1.
- Finalize and submit a summary of preliminary performance MW results collected through September 2023 as prescribed in the *Certified for Construction Remedial Design Report for SWMU 211-A for Volatile Organic Compound Sources to the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2435&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:**

- *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&D1*, was under development 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:**

- None.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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 quarterly with the Modeling Working Group (MWG) during this reporting period on October 4, 2023, and January 10, 2024.
  - Finalized the *2023 Update of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow Model*, DOE/LX/07-2488&D1, and initiated a third-party review by the DOE Low-Level Waste Disposal Facility Federal Review Group and a subject matter expert from the DOE Portsmouth project team.
  - Initiated development of the *2023 Update of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow Model*, DOE/LX/07-2488&D1/R1.
- II. Schedule of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- Conduct quarterly meetings with the MWG, which are currently planned for April 3, 2024, and July 17, 2024.
  - Finalize and submit the *2023 Update of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow Model*, DOE/LX/07-2488&D1/R1.
- 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. The MWG will continue to support Paducah Site projects.



**V. Primary/Secondary Document Tracking System:**

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

- *2023 Update of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow Model, DOE/LX/07-2488&D1/R1*, was under development 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:**

- None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>3</sup>**

**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 45,995,887 gal of contaminated groundwater, with an average system treatment rate of 174 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 99.1%. Operational online efficiencies for the reporting period for C-765 were as follows: July 2023, 99.3%; August 2023, 99.4%; September 2023, 93.6%; October 2023, 100%; November 2023, 99.6%; and December 2023, 100%. The C-765-A operational online efficiencies for the reporting period were as follows: July 2023, 98.1%; August 2023, 99.4%; September 2023, 99.3%; October 2023, 100%; November 2023, 99.9%; and December 2023, 100%.

**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 December 31, 2023, the NEPCS has processed a total of approximately 2,266,551,581 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 December 31, 2023. Data are available in PEGASIS.

Influent TCE analytical data from 2019 through the end of December 2023 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 July 1, 2023, through

---

<sup>3</sup> The analytical data included in this report lags operational data by three months due to sample analysis time and the data assessment process.

December 31, 2023. High, low, and average influent and effluent TCE concentrations for these months are presented in Table 3.

**Table 3. TCE Concentrations for Northeast Plume**

	TCE (µg/L)		
	High	Low	Average
Influent C-765 (EW234)	56.2	27.2	36.6
Influent C-765-A (EW235)	75.5	53.1	64.2
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.

\*The values denoted are below the detection limit.

As presented in Table 3, the NEPCS continued to remove TCE effectively. The systems operated with an average removal efficiency of 97.3% for EW234 and 98.4% for EW235 for TCE.

The EWs were sampled monthly during this reporting period. For the period of July 1, 2023, through December 31, 2023, EW234 had an average TCE concentration of 36.6 µg/L, while EW235 had an average concentration of 64.2 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 18.5 hours for planned maintenance during this reporting period.
- C-765-A system was shut down for 1.75 hours for planned maintenance during this reporting period.

##### **Non-routine Maintenance Activities:**

- C-765 system was shut down for a total of 40 hours during this reporting period due to unexpected repairs and power disruptions.
- C-765-A system was shut down for a total of 23 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 99.1% 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 \$526,000.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>4</sup>**

**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 51,276,249 gal of contaminated groundwater, with an average monthly operational efficiency of 97.3% during this reporting period. The average system treatment rate for the reporting period was approximately 194 gal per minute. Operational efficiencies for the reporting period were as follows: July 2023, 97.0%; August 2023, 98.9%; September 2023, 98.5%; October 2023, 99.8%; November 2023, 99.6%; and December 2023, 90.2%.
- Initiated development of a remedial action work plan for optimization of the Northwest Plume.
- Submitted a 30-day extension notification to EPA and KDEP on February 27, 2024, for the submittal of a remedial action work plan for optimization of the Northwest Plume to July 2, 2024.
- Initiated development of the *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file.
- Submitted a 30-day extension notification for the submittal of the *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file, to February 28, 2024.
- Submitted a 30-day extension notification on February 27, 2024, for the submittal of the *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file, to March 29, 2024.

**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

---

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

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 December 31, 2023, the NWPGS has processed a total of approximately 2,830,318,300 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 December 2023. 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 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 July 1, 2023, through December 31, 2023, are presented in Table 4.

**Table 4. TCE and Tc-99 Concentrations at the C-612 Treatment Facility for Northwest Plume (July 1, 2023, through December 31, 2023)**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
Influent from EW232 and EW233 (combined)	681	484	604	319	258	280
Effluent from C-612 NW Plume treatment facility	1.03	< 1*	< 1*	31.8	-0.60*	14.5*

\*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 4, the NWPGS continued to remove TCE and Tc-99 effectively. The system operated with an average removal efficiency of 99.9% for TCE and 94.8% 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 14.5 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 5. 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 5. TCE and Tc-99 Concentrations for Northwest Plume Extraction Wells (July 1, 2023, through December 31, 2023)**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
EW232	229	142	173	94.2	64.5	79.6
EW233	1,170	902	1,036	521	441	481

**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.

**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 March 21, 2024. The next carbon changeout is projected for September 2024.

**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 eight hours for planned maintenance activities.

**Non-routine Maintenance Activities:**

- The NWPGS was shut down for a total of 110.5 hours for the repair of failed components and unexpected power disruptions.



**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 2019 through December 2023.

**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 Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2469&D2.
- Finalize development of a remedial action work plan for optimization of the Northwest Plume.
- Finalize and submit the *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file.

**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 97.3% during this reporting period.

**V. Primary/Secondary Document Tracking System:**

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

- A remedial action work plan or an addendum to the remedial action work plan for the Northwest Plume interim remedial action optimization was under development during this reporting period.
- *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file, was under development during this reporting period.

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

- A remedial action work plan or an addendum to the remedial action work plan for the Northwest Plume interim remedial action optimization is due to EPA and KDEP on August 1, 2024.
- *Nonsignificant Change for the Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, memorandum to file, is due to EPA and KDEP on April 28, 2024.

**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 \$526,000.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>5</sup>**

**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, 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.

---

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

**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-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  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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/OR/07-2057&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 January 2024, and the current maximum discharge limit for turbidity is 86 nephelometric turbidity units (NTUs), with a 30-day average not to exceed 41 NTUs.



**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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 October 2023 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.
- Initiated development, finalized, and submitted 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&D1 (previously DOE/OR/07-2057&D2) on March 19, 2024.
- Received EPA and KDEP comments to 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&D1, on March 23, 2024, and March 25, 2024, respectively.
- Initiated development of 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.

**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.
- Finalize 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.

**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 Sections 1 and 2 of the North-South Diversion Ditch at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2484&D1 (previously DOE/OR/07-2057&D2), was under development, and the document was under review by EPA and KDEP during this reporting period.*

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

- Finalization and submittal of 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*, is due to EPA and KDEP on May 9, 2024.

**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.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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 680.5 acres within the Water Policy-affected area (i.e., excluding DOE property) that lie over the 2020 TCE groundwater plume above the 5 µg/L maximum contaminant level (MCL); 522.5 acres are owned by either West Kentucky Wildlife Management Area or the Tennessee Valley Authority, and 158 acres are owned by private residents or businesses. 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.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>6</sup>**

**PROJECT: Water Policy**

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

**License Agreements:**

- Offered one new license agreement and one license agreement renewal during this reporting period. Three new license agreements and one renewal are pending landowner signature. Three license agreements that were sent during the previous reporting period were signed by the landowner during this reporting period. Twenty-three renewal agreements, expiring in October, November, and December, were signed by the landowner during this reporting period. One renewal agreement expiring in the next reporting period was signed. As of March 31, 2024, 112 of 124 parcels within the Water Policy-affected area are inhabitable (i.e., house or mobile/manufactured home with active municipal water). A total of 90.2% of the inhabitable parcels are covered by a license agreement. There are 10 parcels that overlie the groundwater plumes. Ninety percent of these parcels are under a license agreement, and the one unlicensed parcel is vacant.
- 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:***

- Prepared the annual *Water Policy Educational Fact Sheet* mailer.

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

- Continued work on annual demonstration that residents, including parcels located over the contaminated groundwater plume, are not accessing groundwater from any residential well located within the Water Policy area. This demonstration included the following:
  - Continued monthly review of the Water Policy-affected 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 10 parcels that lie over the 5 µg/L or

---

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

greater portion of the 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 Water Policy-affected area, which included the area over the 5 µg/L or greater portion of the TCE groundwater plumes, as delineated for 2022. 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 Water Policy 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 2022. No issues were identified during these assessments.
- Performed semiannual verification of land ownership by reviewing the PVA website in December 2023. No issues were identified during this assessment. Updated ownership list emailed to KDEP.

#### **Cap and Lock Inspection:**

- Conducted the annual inspection of the caps and locks installed on residential wells located on parcels with current license agreements. During the inspections, two issues were discovered. One residential well had a cap that had been damaged and had a crack across the top. The second issue was with a well cap located on an unoccupied property where the house had been demolished. This well cap had been damaged and cracked off the base. Both the cracked and damaged well caps were replaced on December 18, 2023.

#### **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 two MWs during this reporting period. One was sampled in November 2023, and two were sampled in March 2024. MW410, sampled September 19, 2023, during the previous reporting period, reported TCE at 6.95 µg/L. A duplicate sample for MW410 and the sample for MW409, performed in September 2023, did not exhibit detections greater than the MCL for TCE (5 µg/L). Analytical data are pending for the samples collected in March 2024.
- Sampled seven residential wells during this reporting period. All seven were sampled in November 2023 and were reported as nondetect for TCE.

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 MWs and residential wells in November 2023 and February 2024, 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 August 2023 were not available for reporting in the previous reporting period; the analytical data have been included in this report. All MWs and residential wells sampled in August 2023, during the previous reporting period, and in November 2023 were below the MCL for TCE except for MW426, which was reported at 6.71 µg/L. TCE has been detected at this well in the past; however, the detection at MW426 is inconsistent with previous detections and will continue to be evaluated. None of the MWs or residential wells sampled in August 2023 or November 2023 exhibited detections of Tc-99. Analytical data are pending for samples collected in February 2024.
- Sampled residential well R40 in November 2023 and February 2024 during this reporting period. Analytical data for R40 sampled in August 2023 were not available for reporting in the previous reporting period; the analytical data are summarized in this report. The samples collected in August 2023 and November 2023 had results less than the MCL for vinyl chloride and TCE. Analytical data are pending for the samples collected in February 2024.

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

- Continue monthly review of the Water Policy-affected 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 10 parcels that lie over the 5 µg/L or greater portion of the TCE groundwater plumes.
- 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 Water Policy 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 2022.



- Finalize *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.
- 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.
- Perform semiannual verification of land ownership by reviewing the PVA website in June 2024.

**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:**

- 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:**

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

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**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;
- CERCLA Five-Year Review; and
- Plant Industrial Area Vapor Intrusion Assessment.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024<sup>7</sup>**

**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.

**V. Primary/Secondary Document Tracking System:**

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

- None.

---

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

**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  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**PROJECT: Community Relations Plan**

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):**
- Initiated development of the *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant, DOE/LX/07-2503&D1*.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- Finalize and submit the *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant, DOE/LX/07-2503&D1*, to EPA and KDEP on or before June 30, 2024.
- 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:**
- *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant, DOE/LX/07-2503&D1*, was under development during this reporting period.
- B) Due dates for completion of review/modification tasks:**
- *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant, DOE/LX/07-2503&D1*, is due to EPA and KDEP on June 30, 2024.



**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  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**PROJECT: Site Management Plan**

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

- Finalized and submitted the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2024*, DOE/LX/07-2495&D1, to EPA and KDEP on November 15, 2023.
- Received KDEP approval of the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2024*, DOE/LX/07-2495&D1, on December 4, 2023.
- Received EPA concurrence on the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2024*, DOE/LX/07-2495&D1, on December 5, 2023.
- Developed and submitted the *Paducah Gaseous Diffusion Plant Data Management Plan*, DOE/LX/07-2498&D1, to EPA and KDEP on February 8, 2024.
- Received EPA concurrence and KDEP approval of the *Paducah Gaseous Diffusion Plant Data Management Plan*, DOE/LX/07-2498&D1, on February 9, 2024. The *Paducah Gaseous Diffusion Plant Data Management Plan*, DOE/LX/07-2498&D1, will be incorporated into the fiscal year 2025 annual revision of the SMP.

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

- Begin scoping meetings for the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2025*, with EPA and KDEP in July 2024.

**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 2024, DOE/LX/07-2495&D1*, was under development and under review by EPA and KDEP during this reporting period.
- *Paducah Gaseous Diffusion Plant Data Management Plan, DOE/LX/07-2498&D1*, was under development and under review 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 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  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**PROJECT: CERCLA Five-Year Review**

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

- Received EPA and KDEP comments on the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D1, on October 5, 2023, and October 9, 2023, respectively.
- Submitted a 30-day extension notification for the submittal of the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2, to December 23, 2023.
- Held comment resolution meetings for the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D1, with EPA and KDEP on November 9, 2023, and November 14, 2023.
- Developed and submitted to EPA and KDEP the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2, on December 20, 2023.
- Received KDEP approval of the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2, on January 8, 2024.
- Removed secondary document designation on the *CY 2023 Five-Year Review for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1, per the FFA Manager’s agreement reached on February 15, 2024.
- Developed and submitted to EPA and KDEP the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1, on March 1, 2024.
- Received KDEP concurrence on the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1, on March 5, 2024.
- Initiated development of a public notice announcing the completion of the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1.

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

- Receive EPA concurrence of the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1.
- Finalize the public notice announcing the completion of the *CY 2023 Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1, and publish the public notice in *The Paducah Sun*.

**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:**

- *CY 2023 CERCLA Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2, was under review by EPA and KDEP during this reporting period.
- *CY 2023 CERCLA Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2492&D2/R1, was under development and was under review 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 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.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL PROGRESS REPORT  
FIRST HALF OF FISCAL YEAR 2024**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 10/1/2023–3/31/2024**

**PROJECT: Plant Industrial Area Vapor Intrusion Assessment**

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):**
- Finalized and submitted the *Addendum to the Plant Industrial Area Vapor Intrusion Preliminary Risk Assessment Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2471&D2/A1/R1*, to EPA and KDEP on October 10, 2023.
  - Received EPA and KDEP approval of the *Addendum to the Plant Industrial Area Vapor Intrusion Preliminary Risk Assessment Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2471&D2/A1/R1*, on October 12, 2023.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):**
- Evaluate the vapor intrusion pathway to a building or proposed building if or when the use of an occupiable building at the Paducah Site changes, a new building is constructed, or a parcel of land is transferred for a different use, consistent with the requirements in the RMD.
- 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 Plant Industrial Area Vapor Intrusion Assessment subproject 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 related to the Plant Industrial Area Vapor Intrusion subproject are being met.
- V. Primary/Secondary Document Tracking System:**
- A) Documents under review and/or preparation for this reporting period:**
- *Addendum to the Plant Industrial Area Vapor Intrusion Preliminary Risk Assessment Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2471&D2/A1/R1*, was under development and under review 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 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**

**THIS PAGE INTENTIONALLY LEFT BLANK**

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

Day	July 2023	August 2023	September 2023	October 2023	November 2023	December 2023
1	251,791	253,700	249,610	252,349	252,586	250,023
2	251,791	249,850	249,610	252,348	257,806	250,023
3	251,787	283,712	249,610	246,306	253,527	250,023
4	252,651	247,344	249,610	262,232	253,527	250,025
5	252,650	247,344	249,607	252,857	253,527	248,210
6	255,844	247,344	235,731	249,801	253,525	257,833
7	249,096	247,345	258,212	249,801	252,287	269,812
8	249,096	252,713	193,765	249,801	245,531	257,667
9	249,096	247,207	193,765	249,802	253,013	257,667
10	249,097	253,416	193,765	241,732	253,598	257,667
11	192,860	245,933	193,764	256,650	253,598	257,666
12	250,656	245,933	253,894	250,284	253,598	266,686
13	257,506	245,933	244,561	251,977	253,598	248,171
14	252,096	245,934	248,741	251,977	245,903	259,172
15	252,096	251,987	253,374	251,977	274,454	259,415
16	252,096	256,819	253,374	251,975	233,872	259,415
17	252,094	256,412	253,374	249,057	250,667	259,415
18	251,198	250,326	253,375	252,140	250,667	259,413
19	262,771	250,326	254,067	252,825	250,667	224,487
20	202,700	250,326	245,055	252,291	250,663	254,641
21	251,879	250,325	252,046	252,291	246,107	259,245
22	251,879	249,922	249,467	252,291	253,738	248,805
23	251,879	252,795	249,467	252,287	253,738	248,805
24	251,880	252,180	249,467	251,847	253,738	248,805
25	251,477	245,390	249,469	251,957	253,738	248,805
26	251,511	245,390	254,658	253,297	253,738	248,805
27	267,112	245,390	267,219	253,574	253,734	248,802
28	250,681	245,388	240,544	253,574	251,722	252,073
29	250,681	246,856	252,349	253,574	250,213	247,876
30	250,681	251,758	252,349	253,575	256,730	247,876
31	250,681	251,140		240,774		247,876
Monthly Total	7,719,313	7,766,438	7,293,899	7,797,223	7,573,810	7,845,204
Daily Average	249,010	250,530	243,130	251,523	252,460	253,071

**Total (July 2023–December 2023) =** 45,995,887 gal  
**Average (July 2023–December 2023) =** 249,978 gal  
 per day (gpd)

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

Day	July 2023	August 2023	September 2023	October 2023	November 2023	December 2023
1	283,411	282,176	283,204	282,761	282,346	283,416
2	283,411	281,576	283,204	282,761	283,566	283,416
3	283,411	311,836	283,204	281,486	283,086	283,416
4	281,191	276,534	283,204	285,616	283,086	283,416
5	281,191	276,534	283,204	282,926	283,086	272,936
6	285,076	276,534	282,796	282,444	283,086	283,356
7	282,939	276,532	287,106	282,444	282,906	282,346
8	282,939	283,256	282,561	282,444	279,286	283,164
9	282,939	277,206	282,561	282,442	282,106	283,164
10	282,937	283,606	282,561	281,306	282,544	283,164
11	207,556	278,959	282,561	281,676	282,544	283,162
12	273,496	278,959	276,496	282,196	282,544	280,466
13	285,546	278,959	282,996	282,931	282,542	274,996
14	283,226	278,957	277,426	282,931	279,856	265,376
15	283,226	266,186	285,206	282,931	283,406	191,296
16	283,226	286,036	285,206	282,931	278,986	191,296
17	283,226	283,206	285,206	281,356	283,621	191,296
18	281,556	282,649	285,206	282,216	283,621	191,296
19	264,346	282,649	274,786	282,606	283,621	244,566
20	236,836	282,649	278,046	280,476	283,621	282,186
21	283,361	282,647	282,136	280,476	278,866	277,196
22	283,361	281,226	281,366	280,476	281,781	282,229
23	283,361	283,716	281,366	280,476	281,781	282,229
24	283,361	282,746	281,366	281,866	281,781	282,229
25	282,806	280,086	281,366	282,366	281,781	282,229
26	281,786	280,086	246,296	281,156	281,781	282,229
27	289,516	280,086	282,866	282,824	281,781	282,231
28	282,066	280,086	275,866	282,824	280,076	281,246
29	282,066	281,446	282,761	282,824	272,286	281,630
30	282,066	283,526	282,761	282,822	268,506	281,630
31	282,066	283,026		278,966		281,630
Monthly Total	8,627,486	8,723,661	8,424,875	8,745,941	8,439,865	8,314,423
Daily Average	278,306	281,408	280,829	282,127	281,329	268,207

**Total (July 2023–December 2023) = 51,276,249 gal**  
**Average (July 2023–December 2023) = 278,675 gpd**

## **APPENDIX B**

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

**THIS PAGE INTENTIONALLY LEFT BLANK**

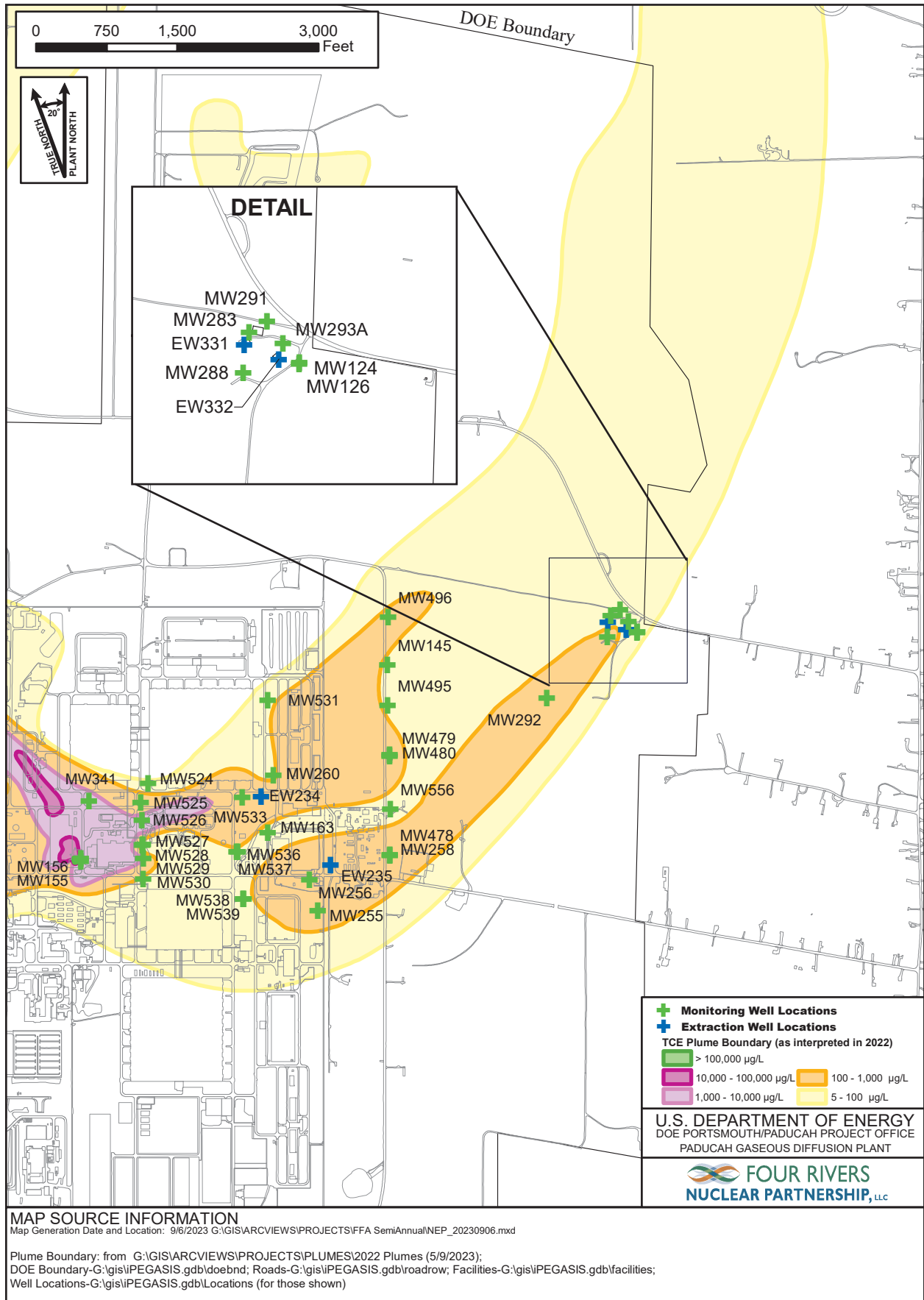
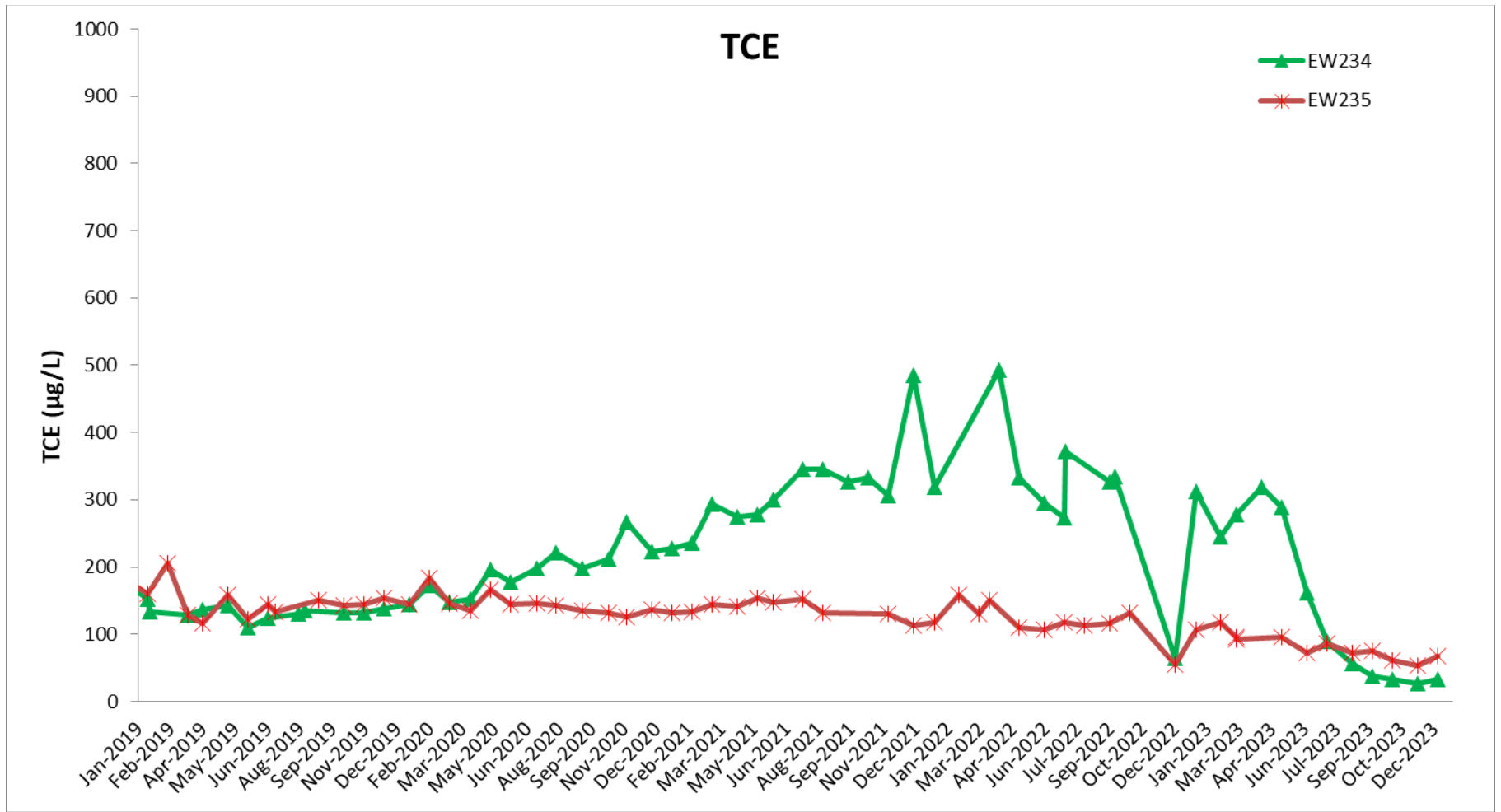


Figure B.1. Northeast Plume Groundwater Wells and Extraction Wells

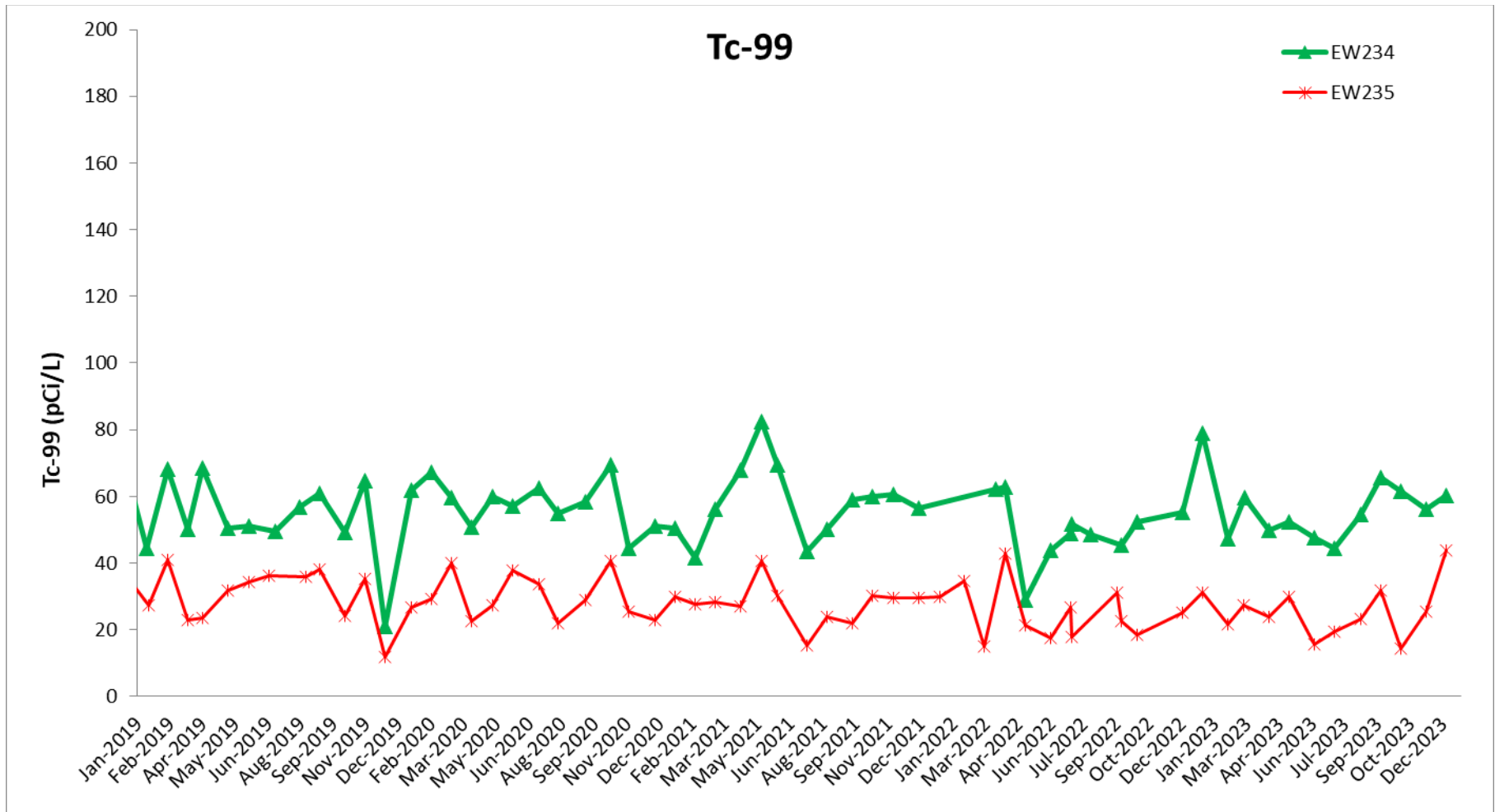




NOTE: Data rejected by validation or assessment have not been graphed.

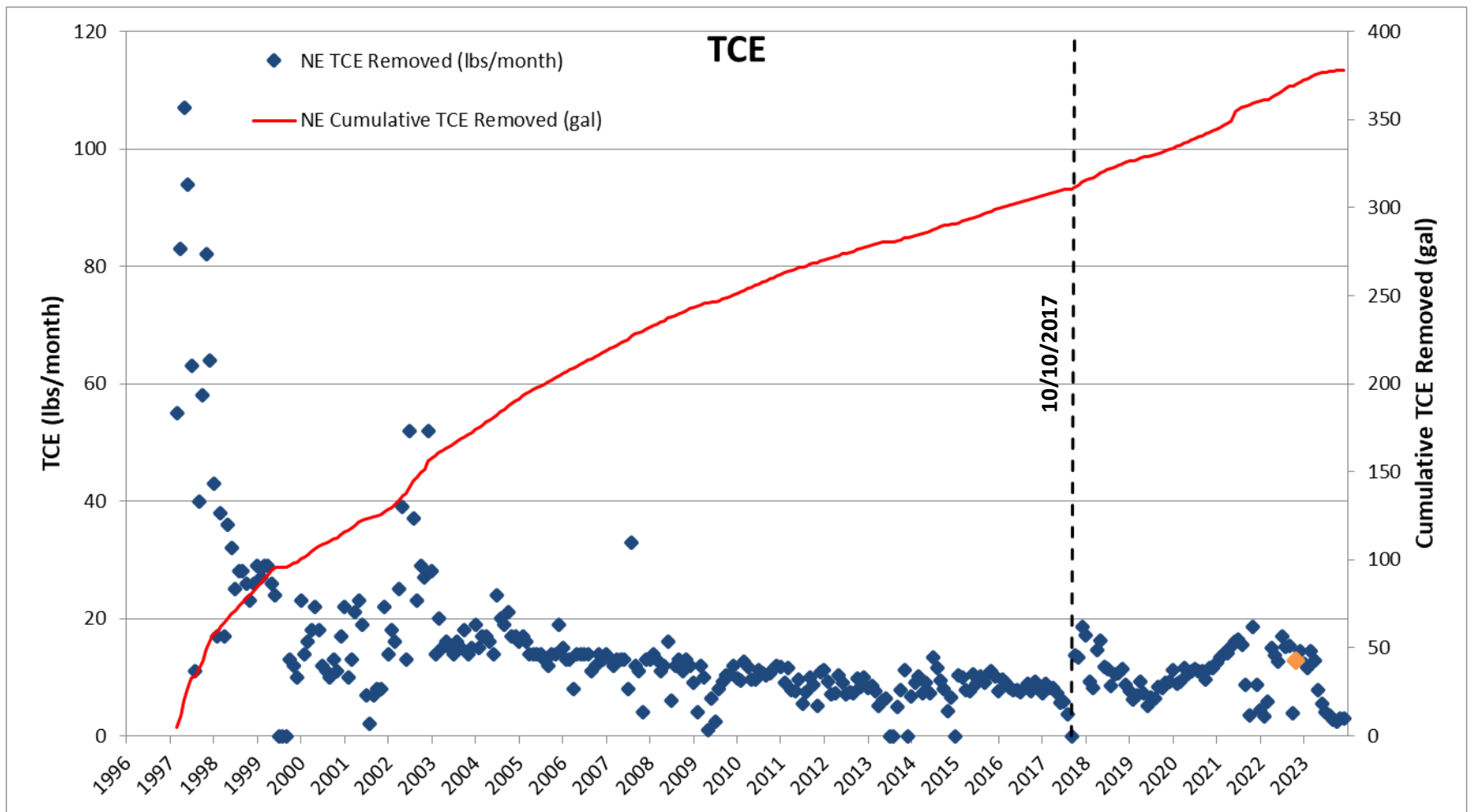
\*TCE influent data was not collected from EW234 and EW235 for November 2022.

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



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

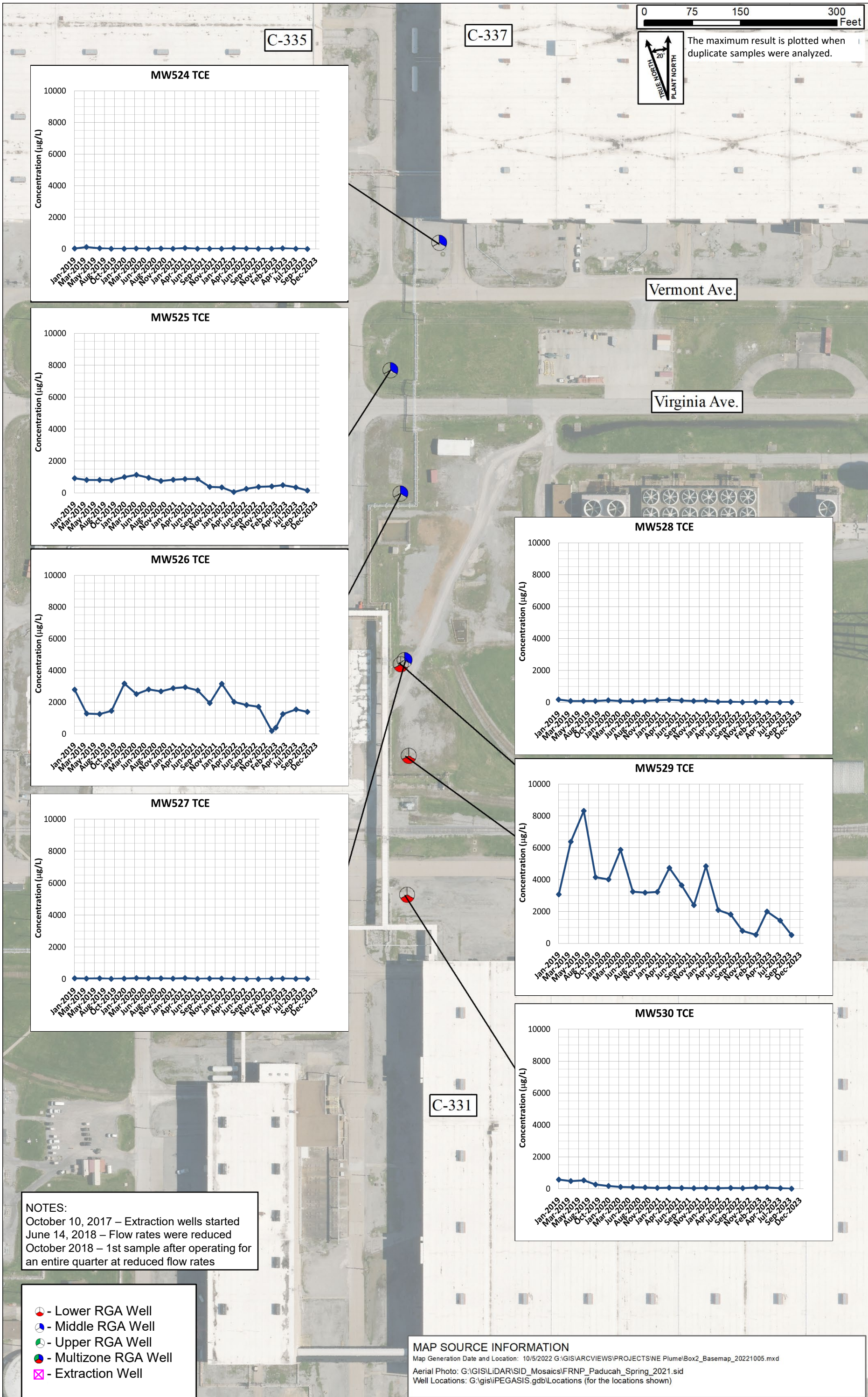
**Figure B.3. Northeast Plume—Tc-99 Activities in Extraction Wells**



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

◆ 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 lb of TCE removed.

**Figure B.4. Northeast Plume Containment System TCE Removed**

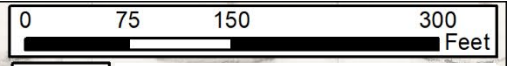


B-7

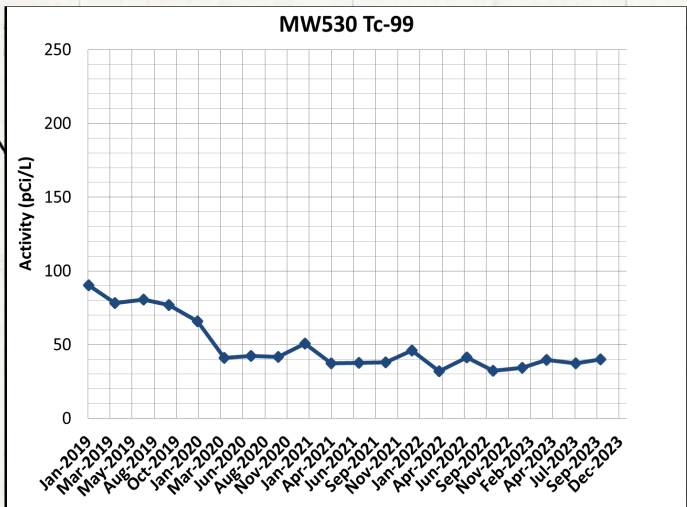
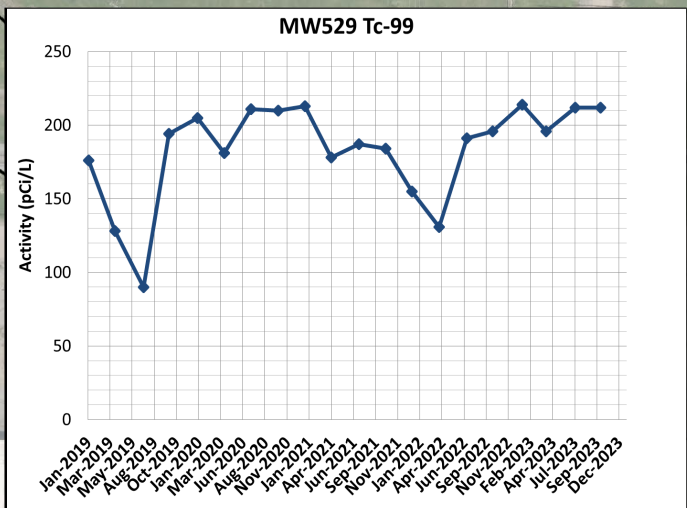
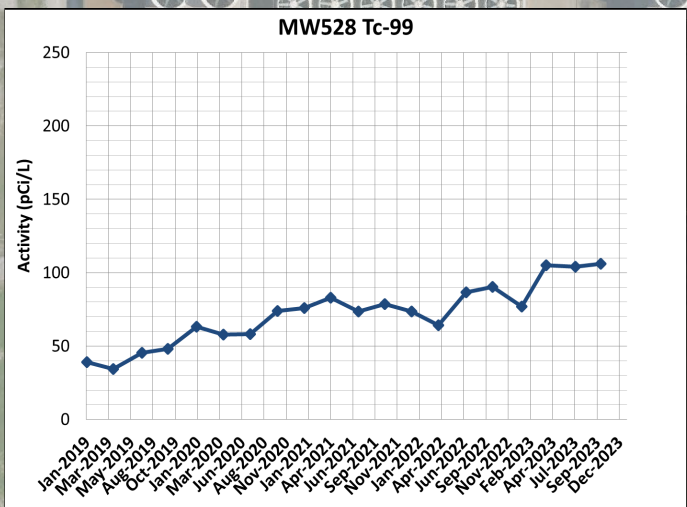
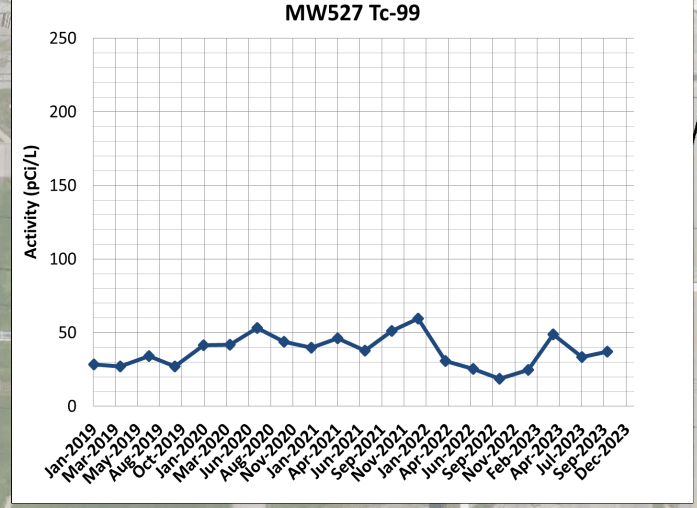
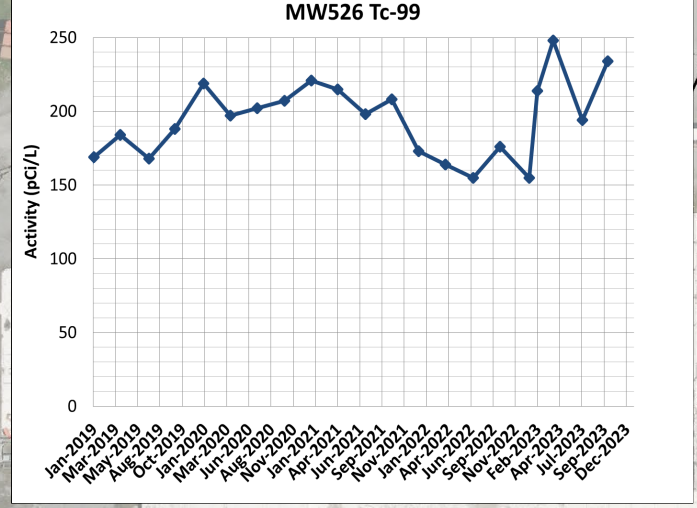
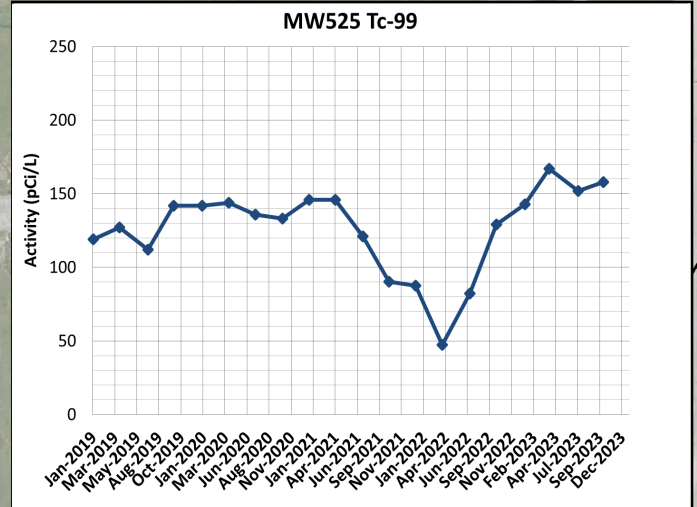
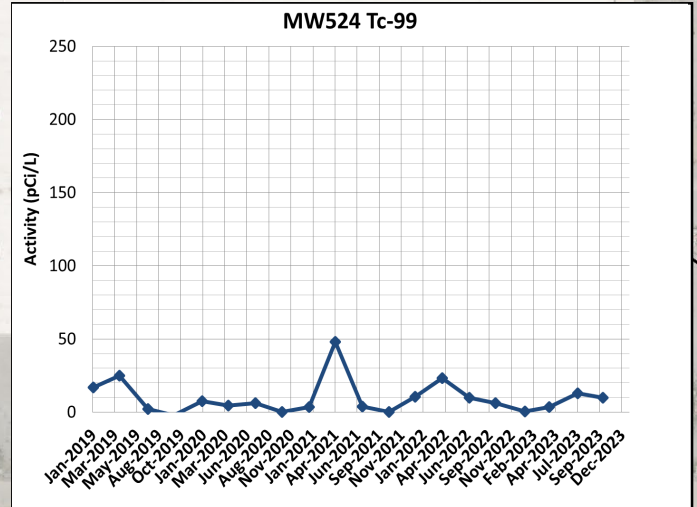
Figure B.5. Northeast Plume—Upgradient Transect Wells—TCE Trends

C-335

C-337



The maximum result is plotted when duplicate samples were analyzed.



Vermont Ave.

Virginia Ave.

C-331

NOTES:  
 October 10, 2017 – Extraction wells started  
 June 14, 2018 – Flow rates were reduced  
 October 2018 – 1st sample after operating for an entire quarter at reduced flow rates

- Lower RGA Well
- Middle RGA Well
- Upper RGA Well
- Multizone RGA Well
- Extraction Well

MAP SOURCE INFORMATION

Map Generation Date and Location: 10/5/2022 G:\GIS\ARCVIEWS\PROJECTS\NE Plume\Box2\_Basemap\_20221005.mxd  
 Aerial Photo: G:\GIS\LIDAR\SID\_Mosaics\FRNP\_Paducah\_Spring\_2021.sid  
 Well Locations: G:\gis\PEGASIS.gdb\Locations (for the locations shown)

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

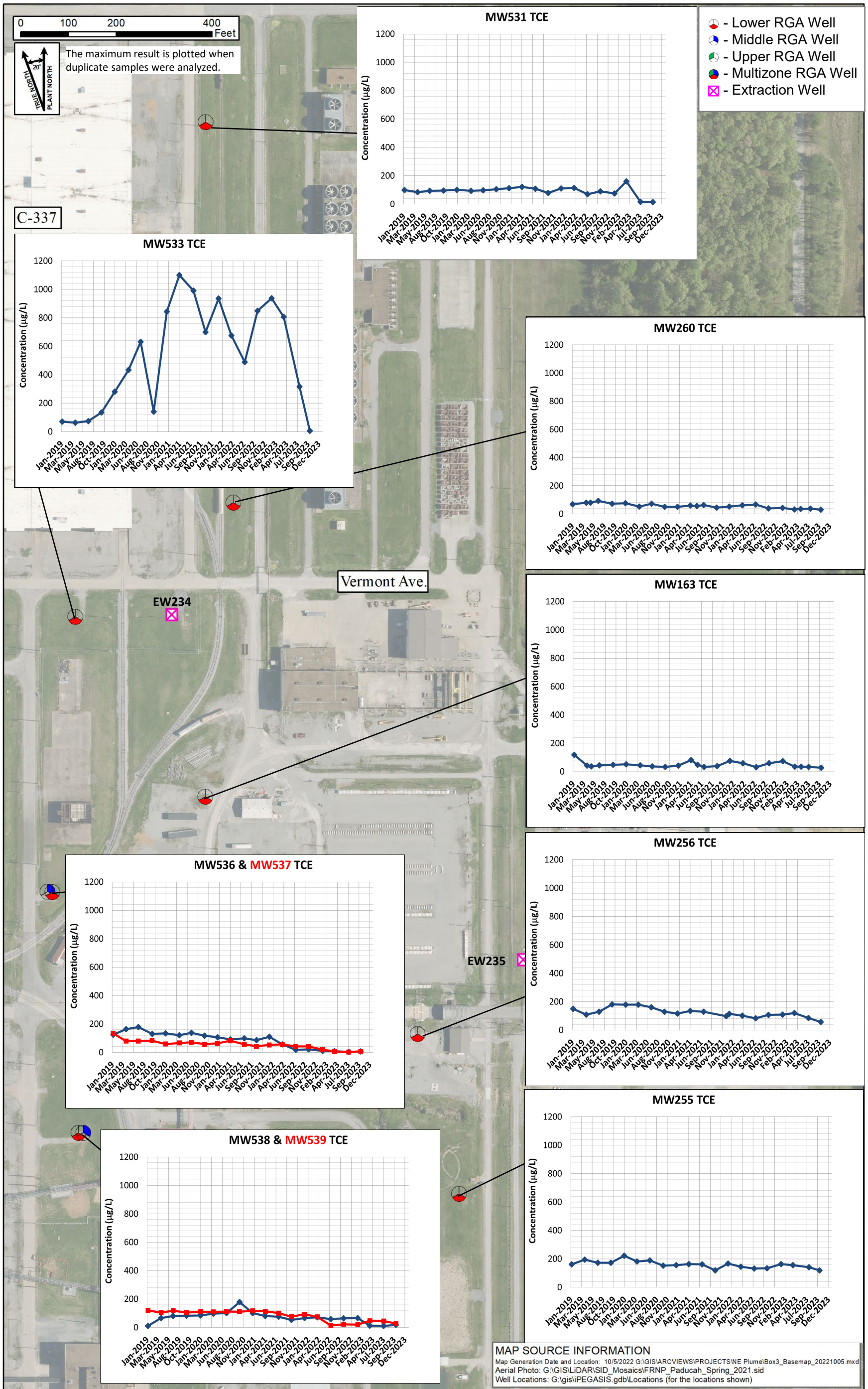


Figure B.7. Northeast Plume—Monitoring Wells near Extraction Wells—TCE Trends

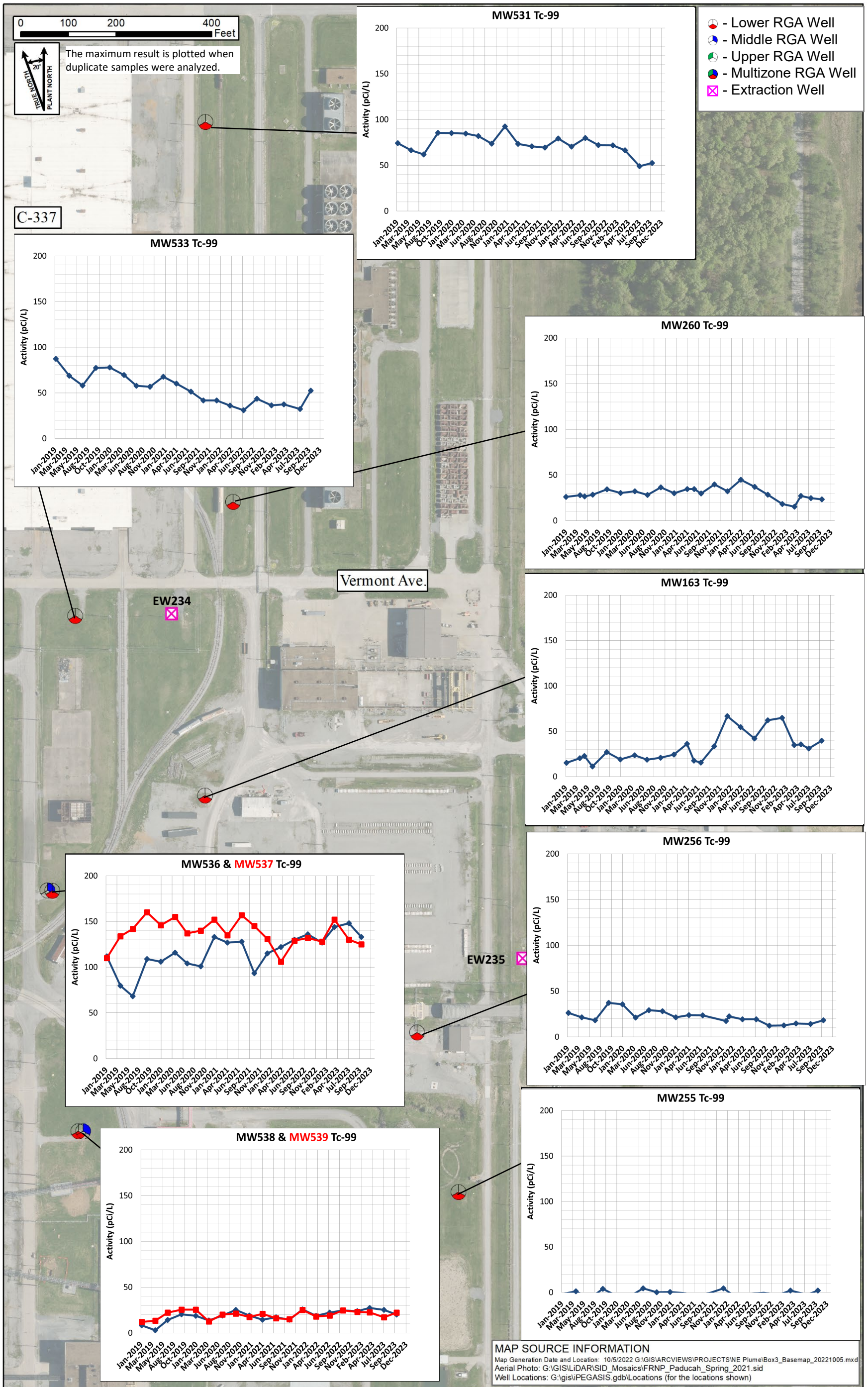
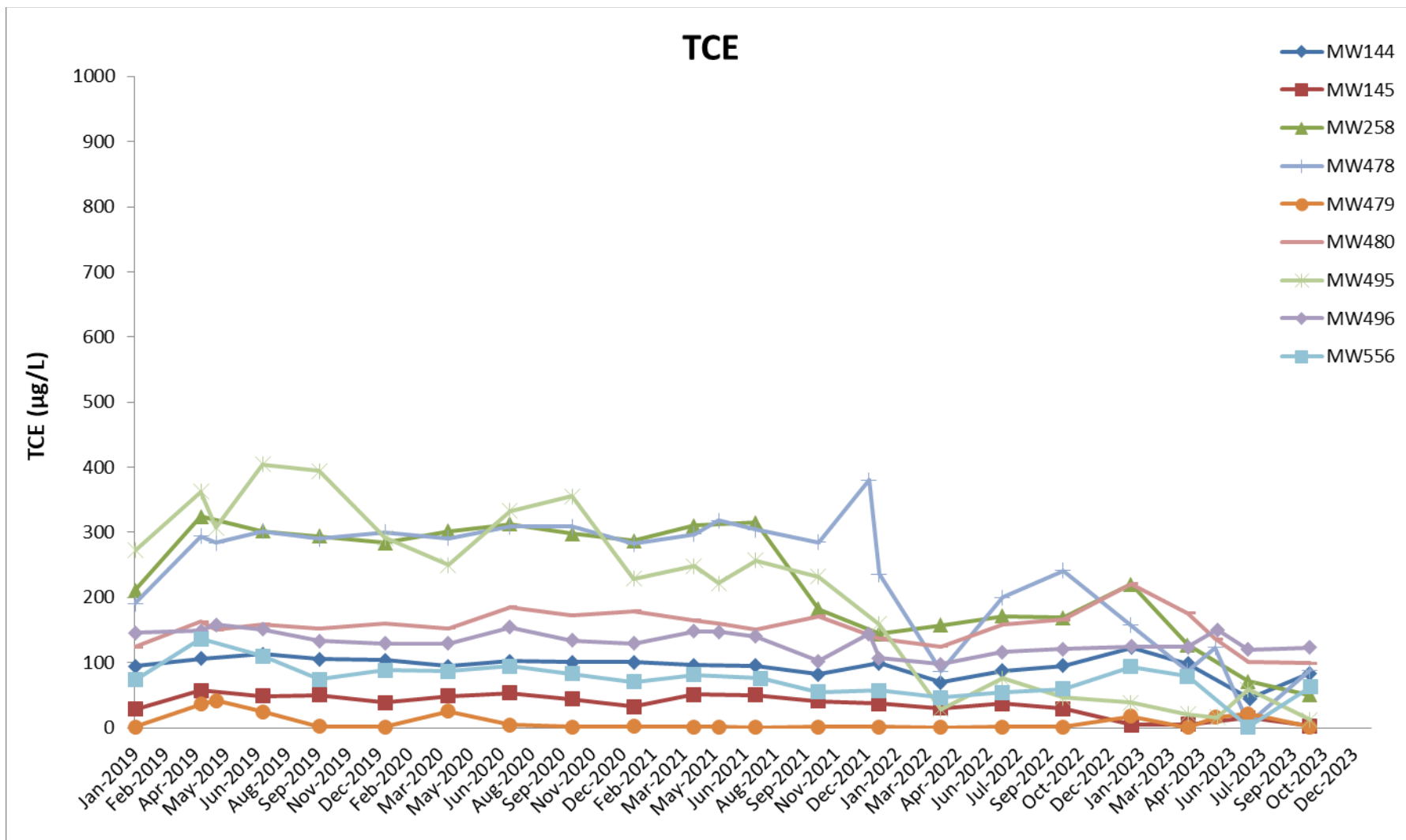


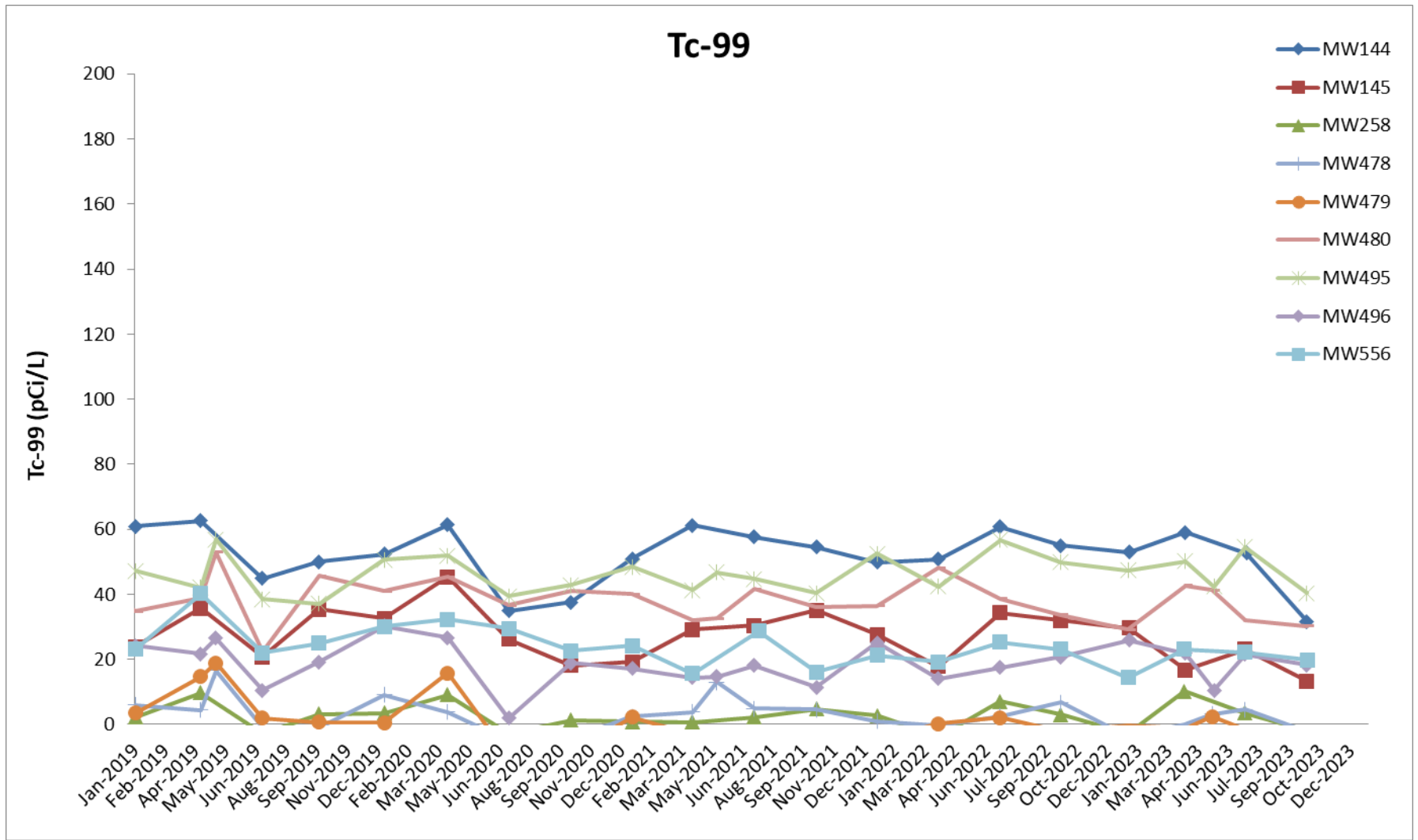
Figure B.8. Northeast Plume—Monitoring Wells near Extraction Wells—Tc-99 Trends



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

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





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

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

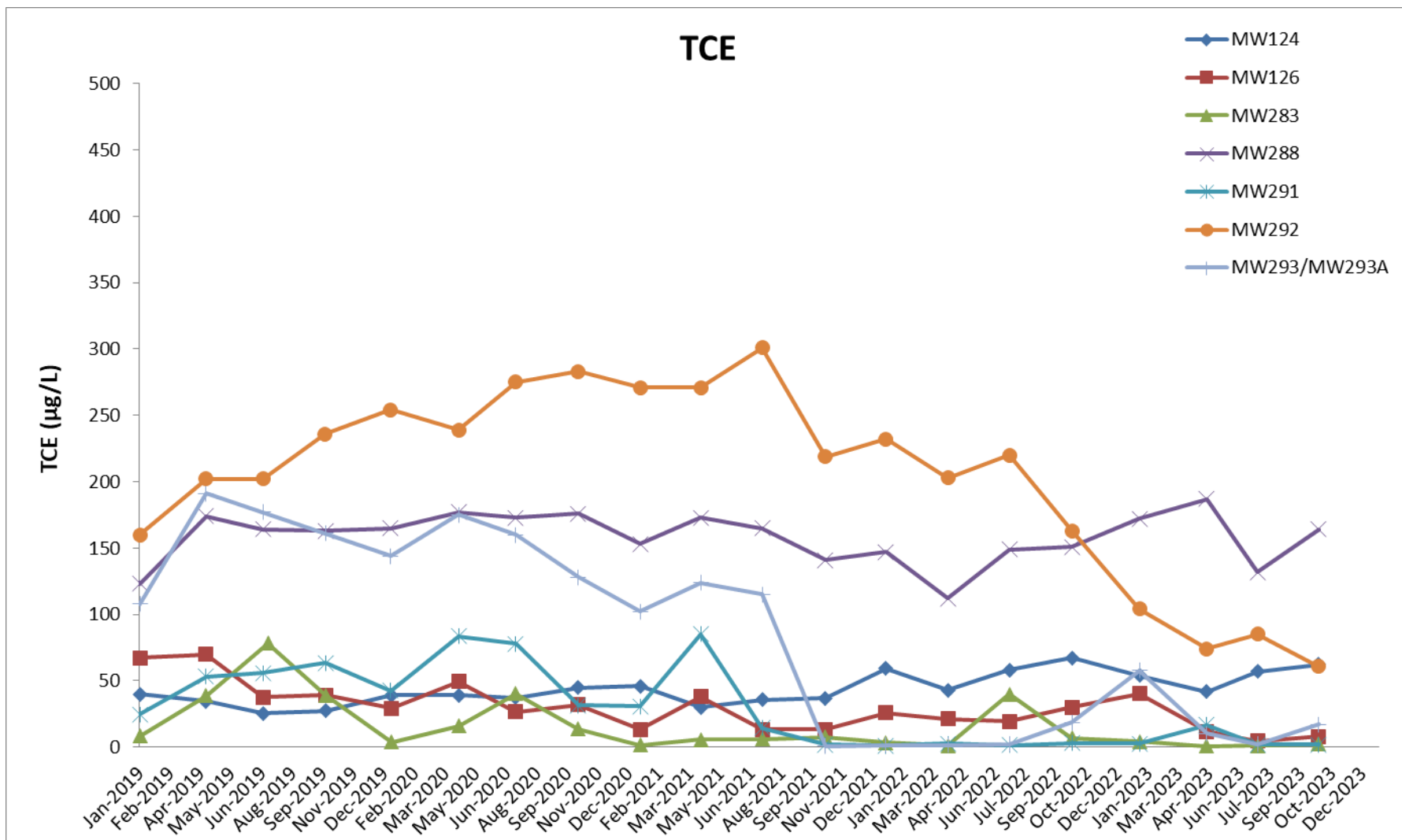
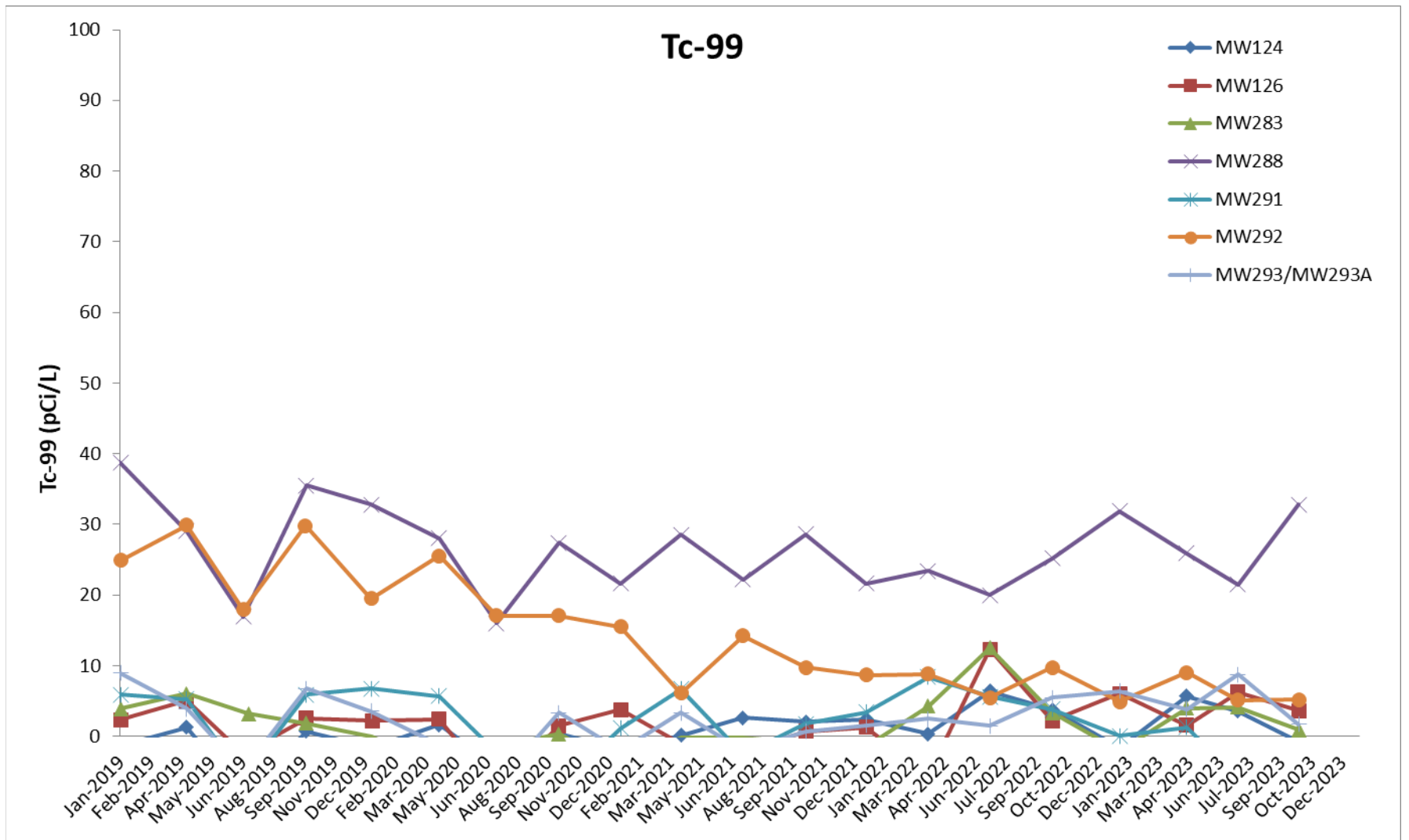
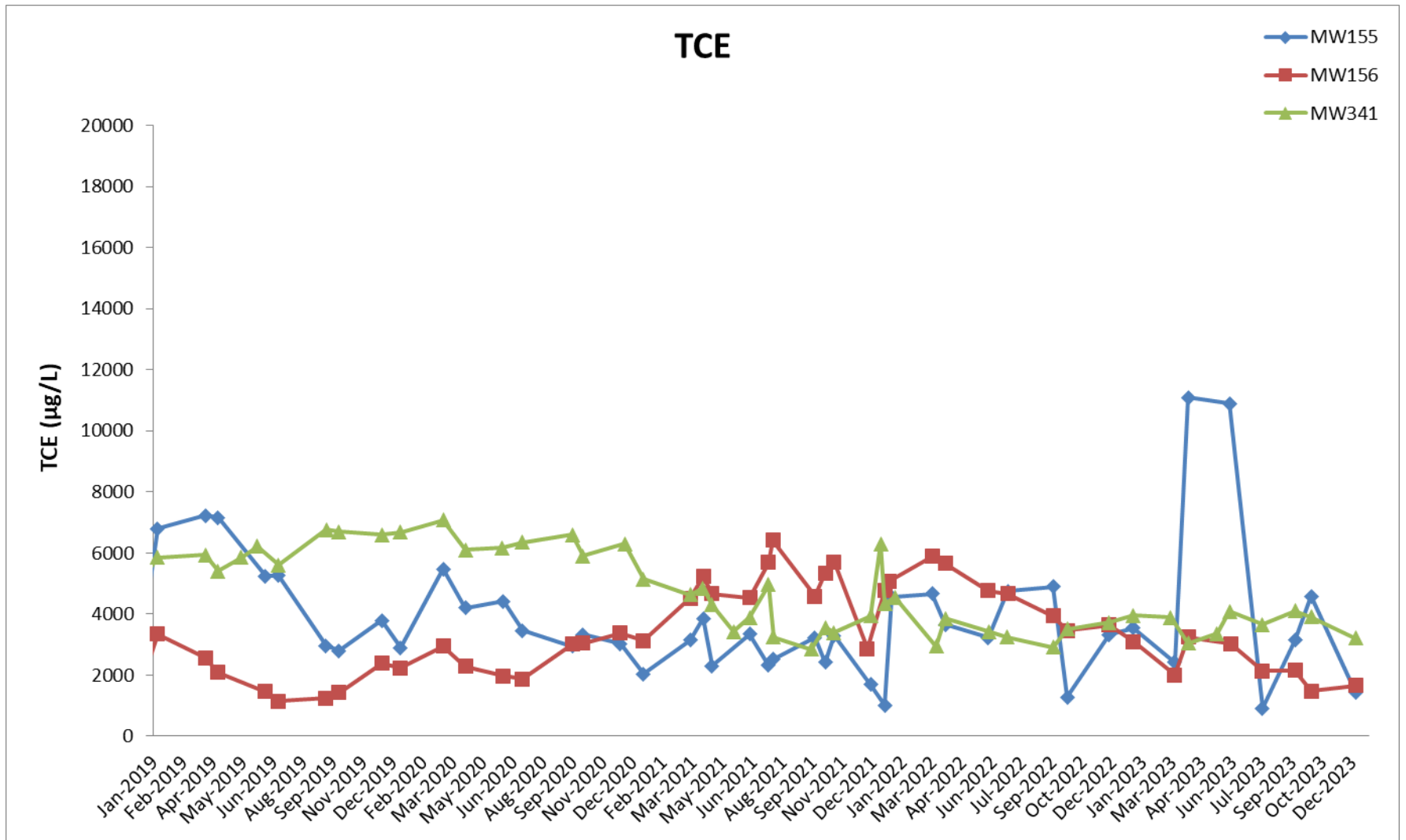


Figure B.11. Northeast Plume—TCE Concentrations in Distal Downgradient Wells



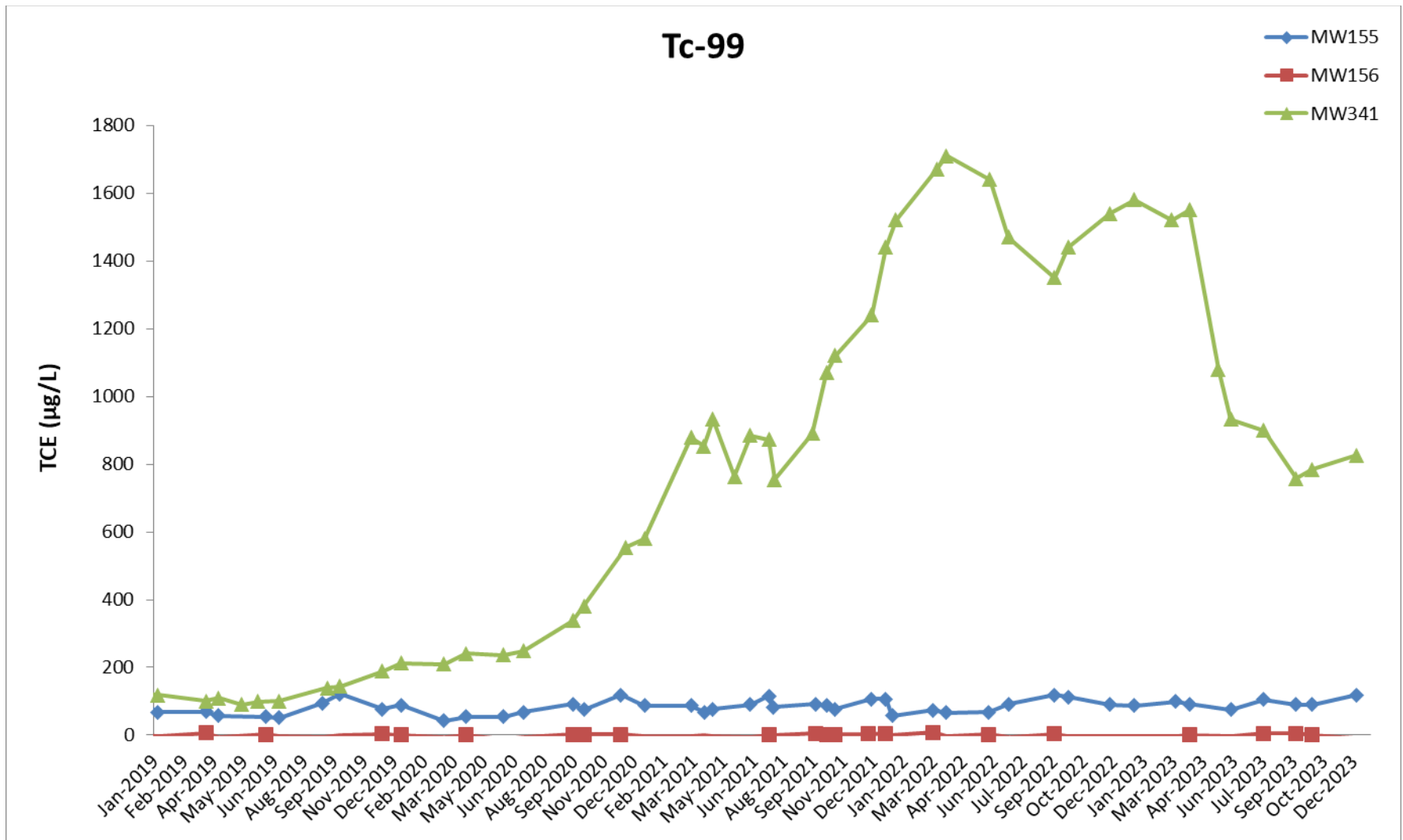
NOTE: Data rejected by validation or assessment have not been graphed.

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

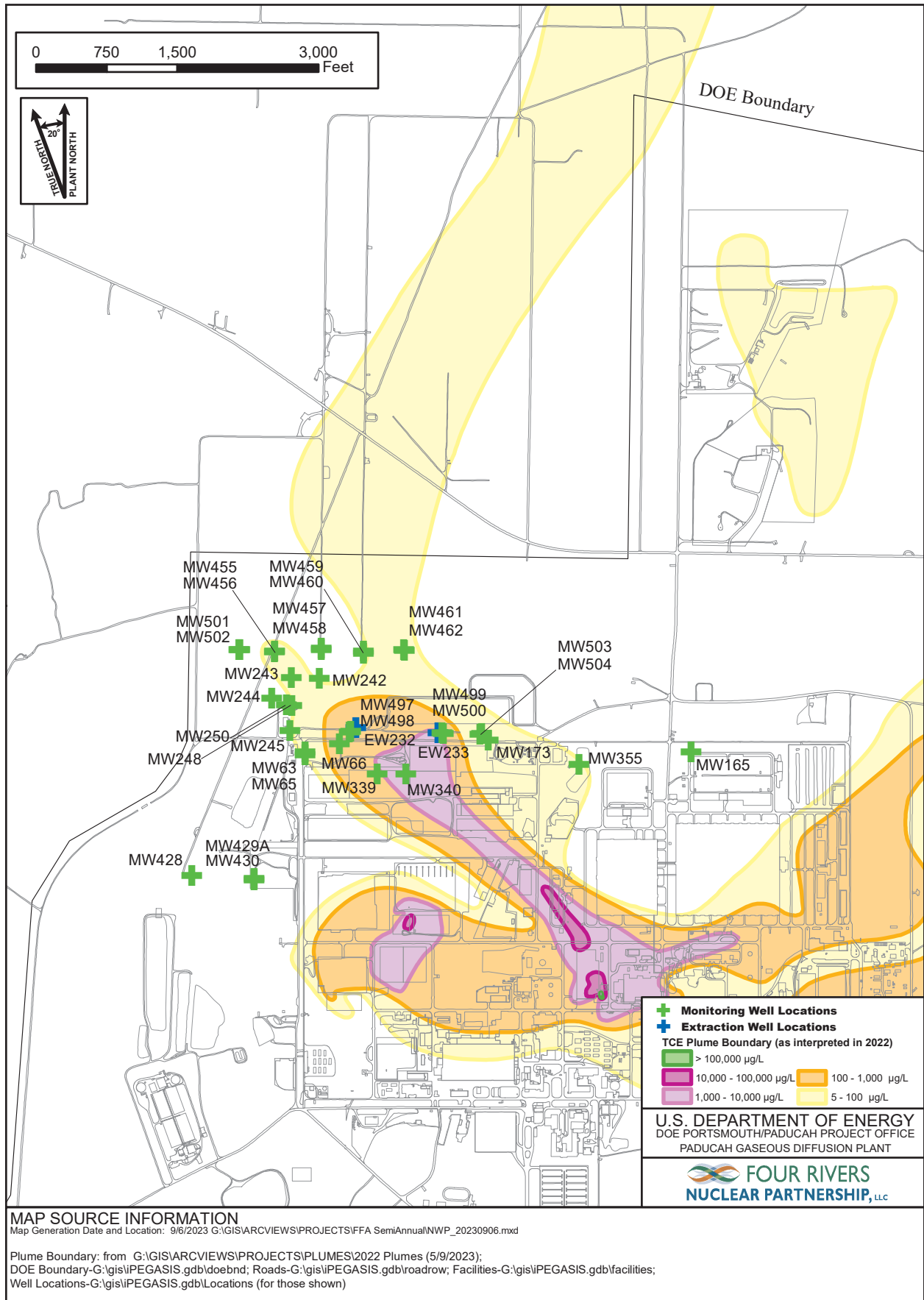
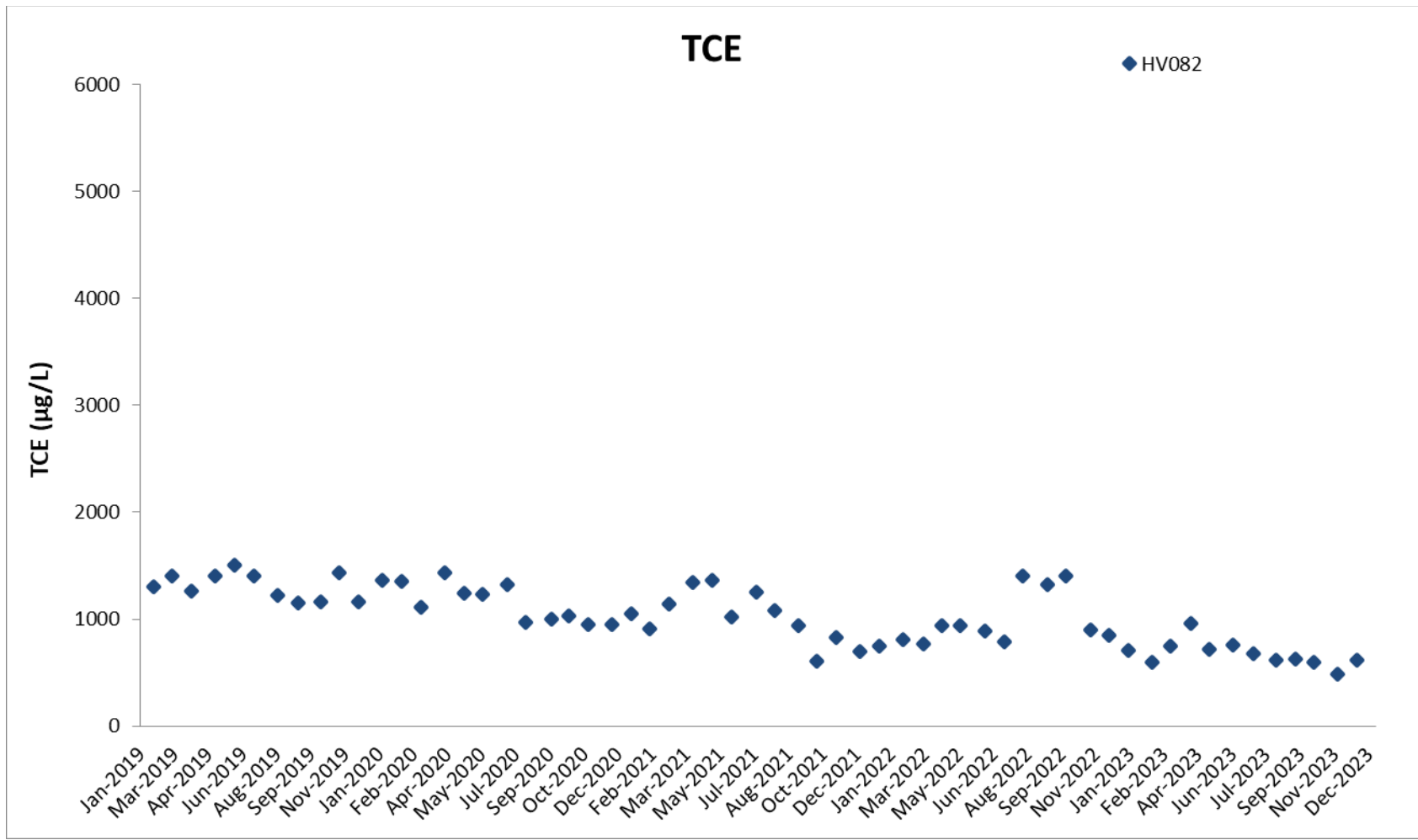
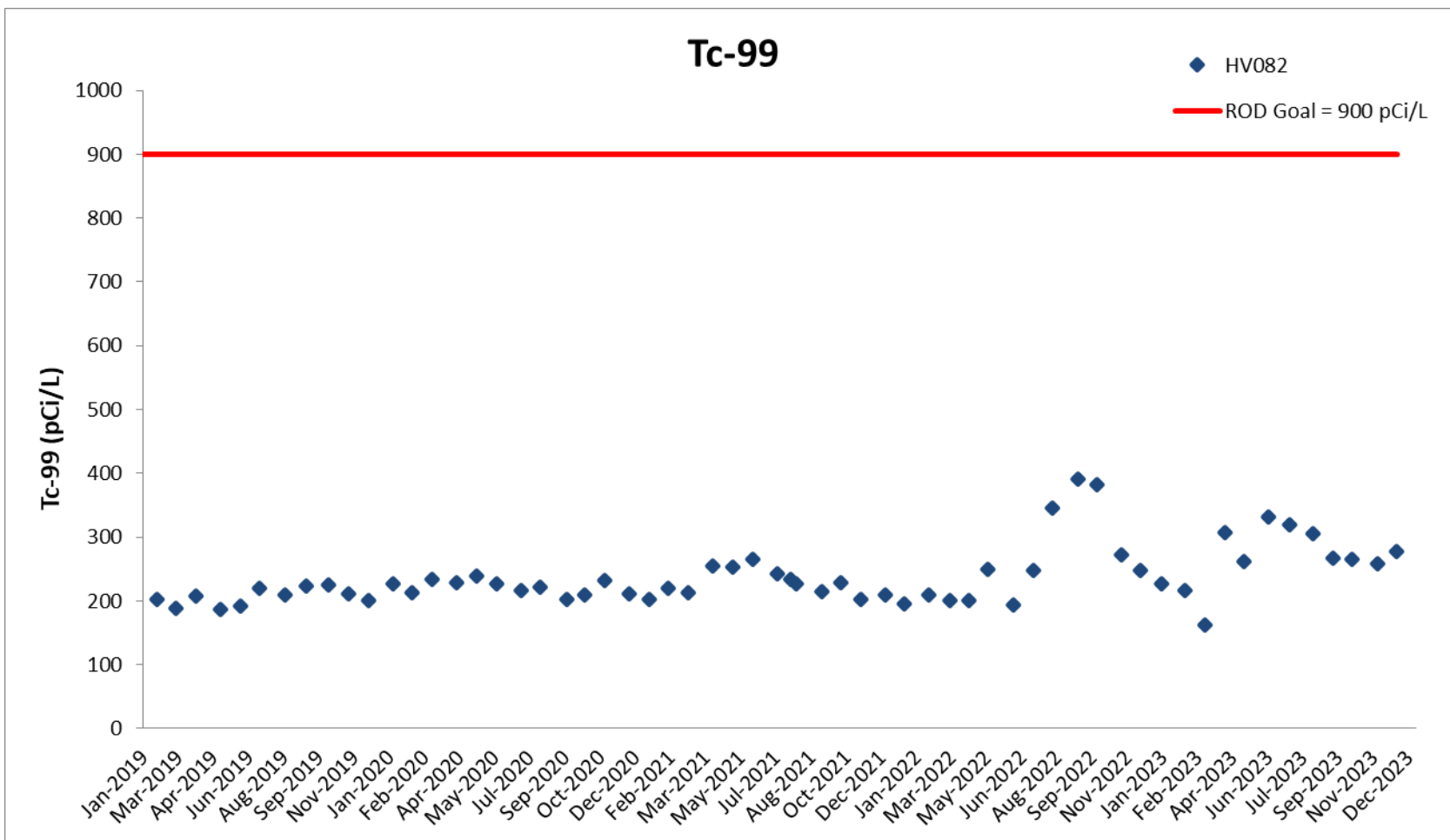


Figure B.15. Northwest Plume Groundwater Wells



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

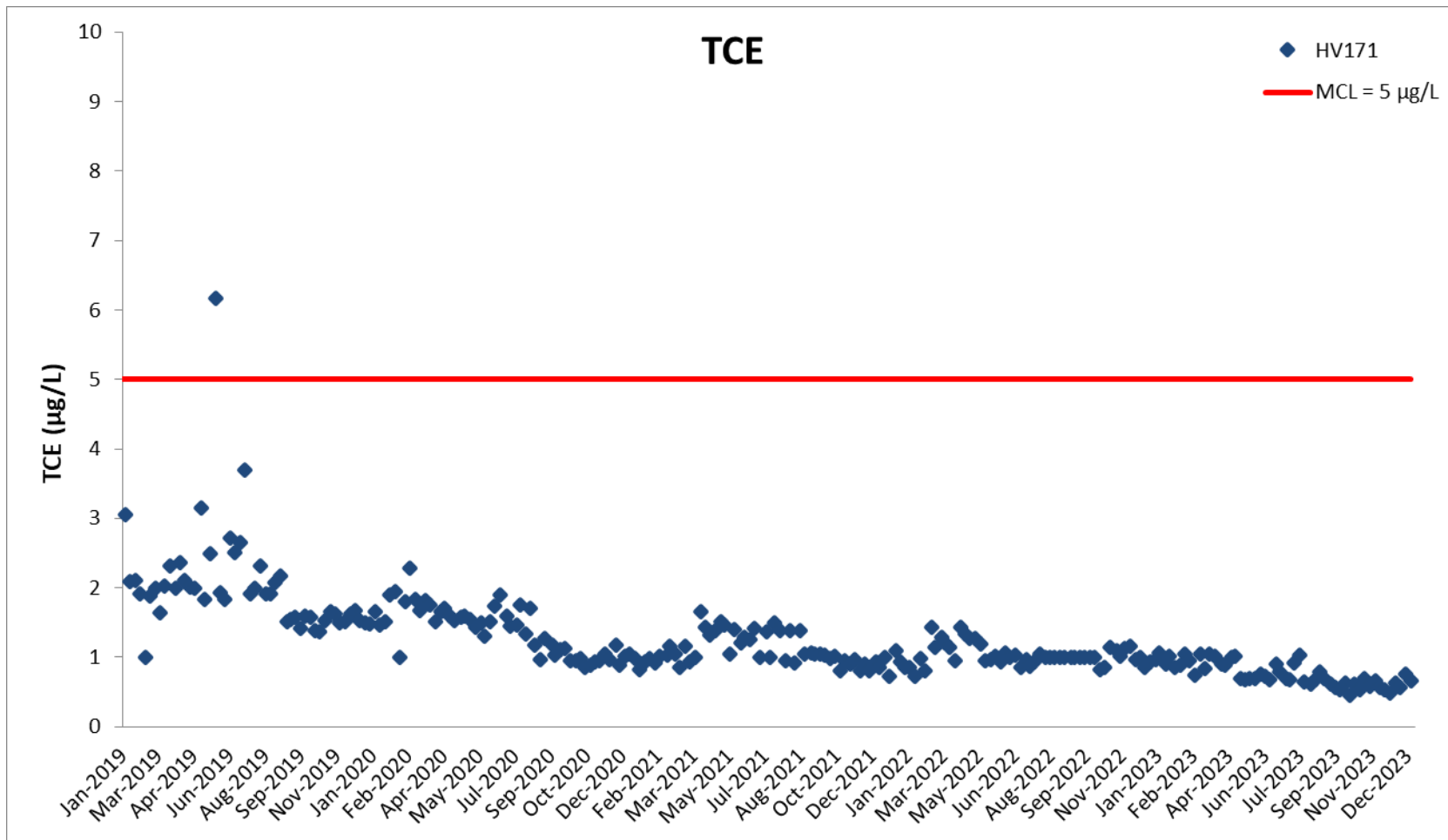
**Figure B.16. Northwest Plume Groundwater System Influent TCE Concentrations**



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

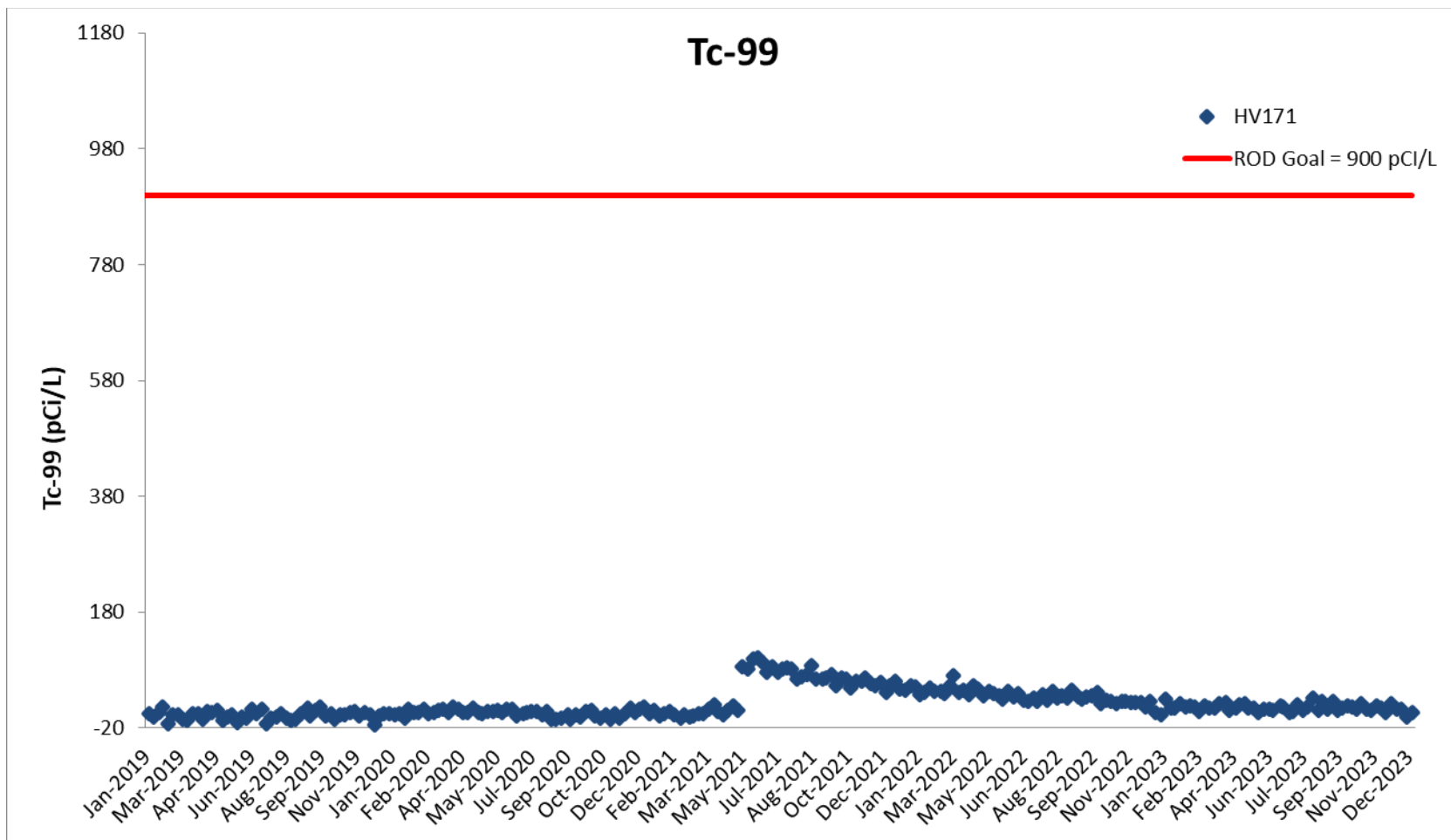
**Figure B.17. Northwest Plume Groundwater System Influent Tc-99 Activities**





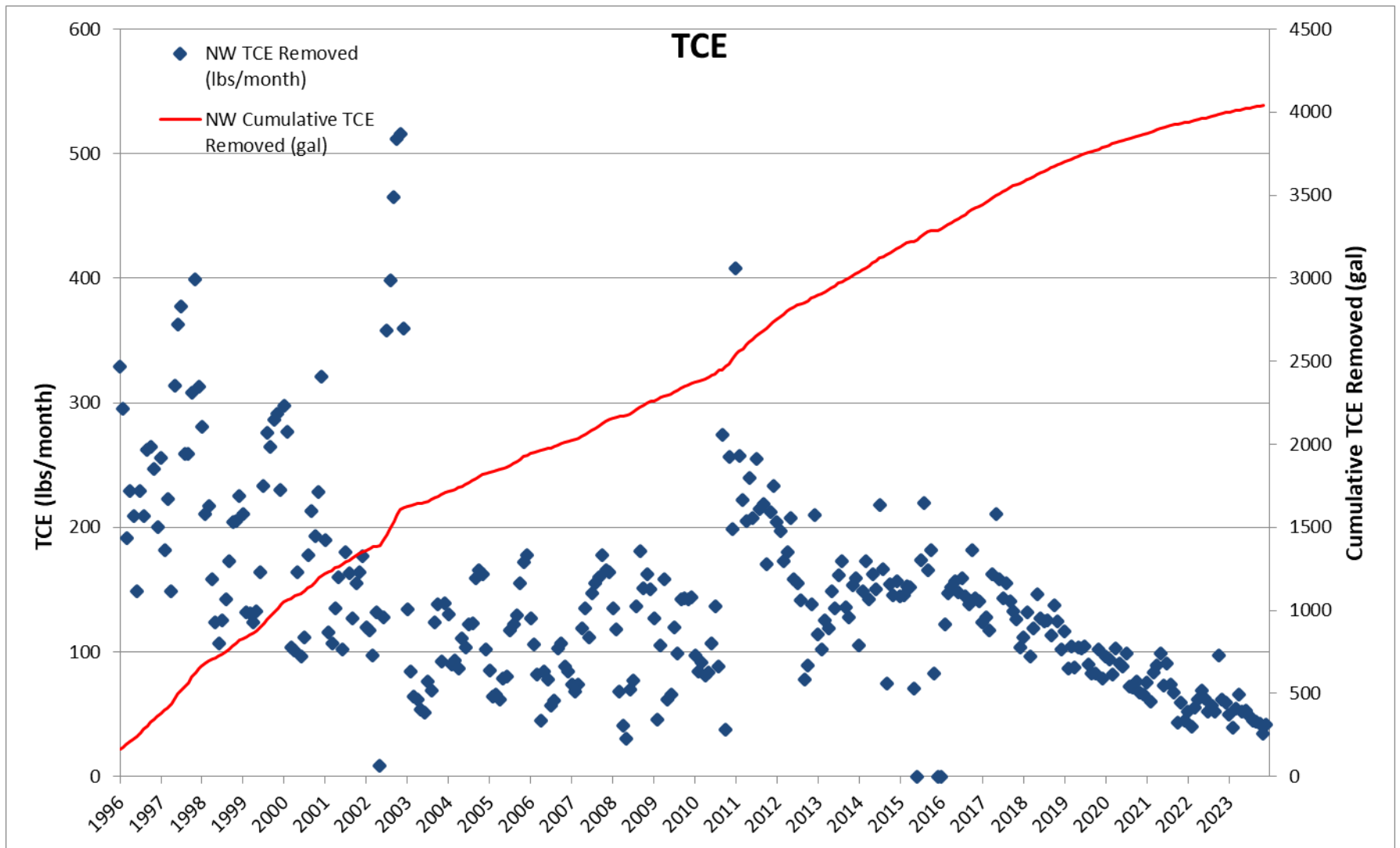
NOTE: Data rejected by validation or assessment have not been graphed.

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**



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

Figure B.20. Northwest Plume Groundwater System TCE Removed

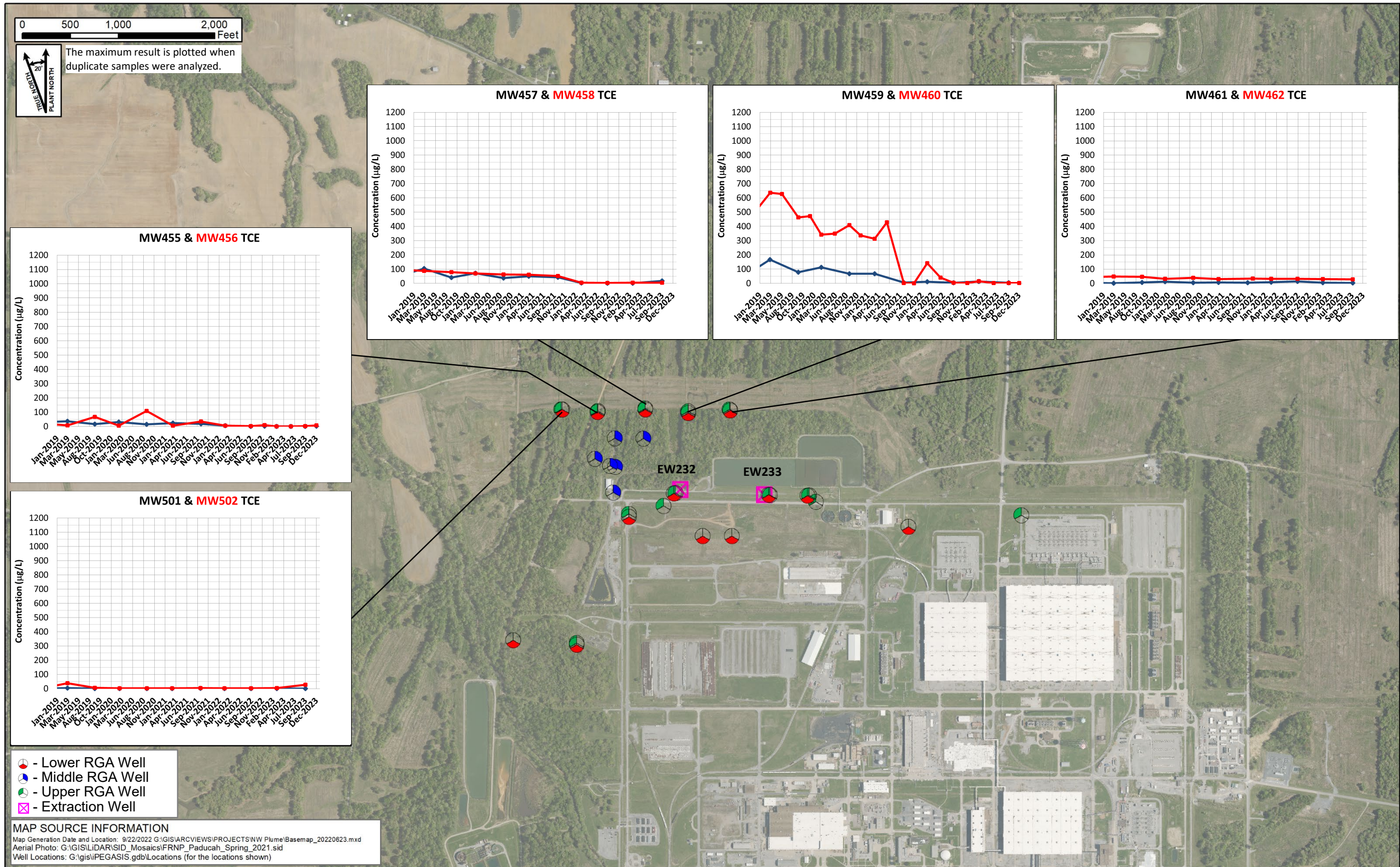


Figure B.21. Northwest Plume—Downgradient of New Well Field—TCE Trends

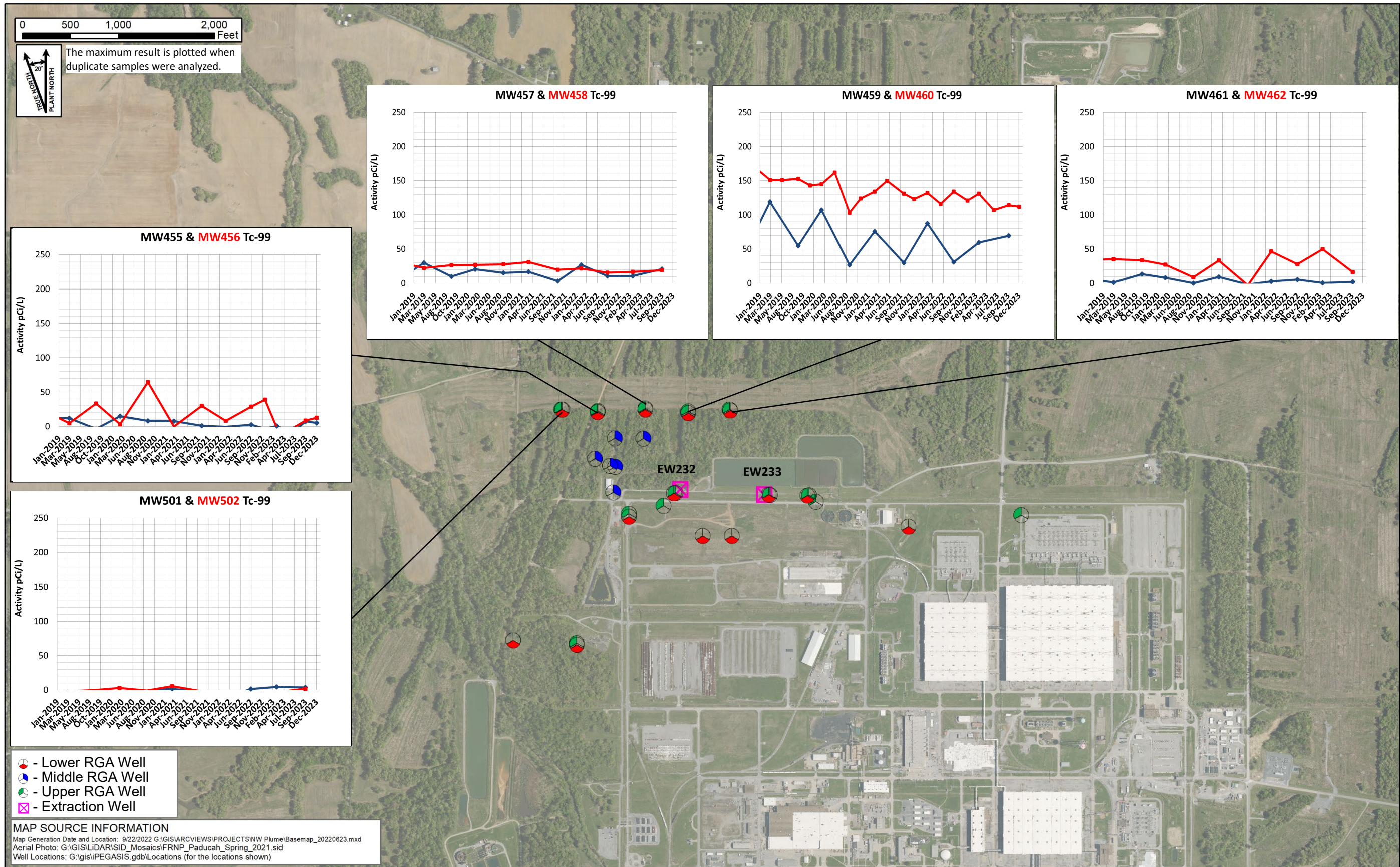


Figure B.22. Northwest Plume—Downgradient of New Well Field—Tc-99 Trends

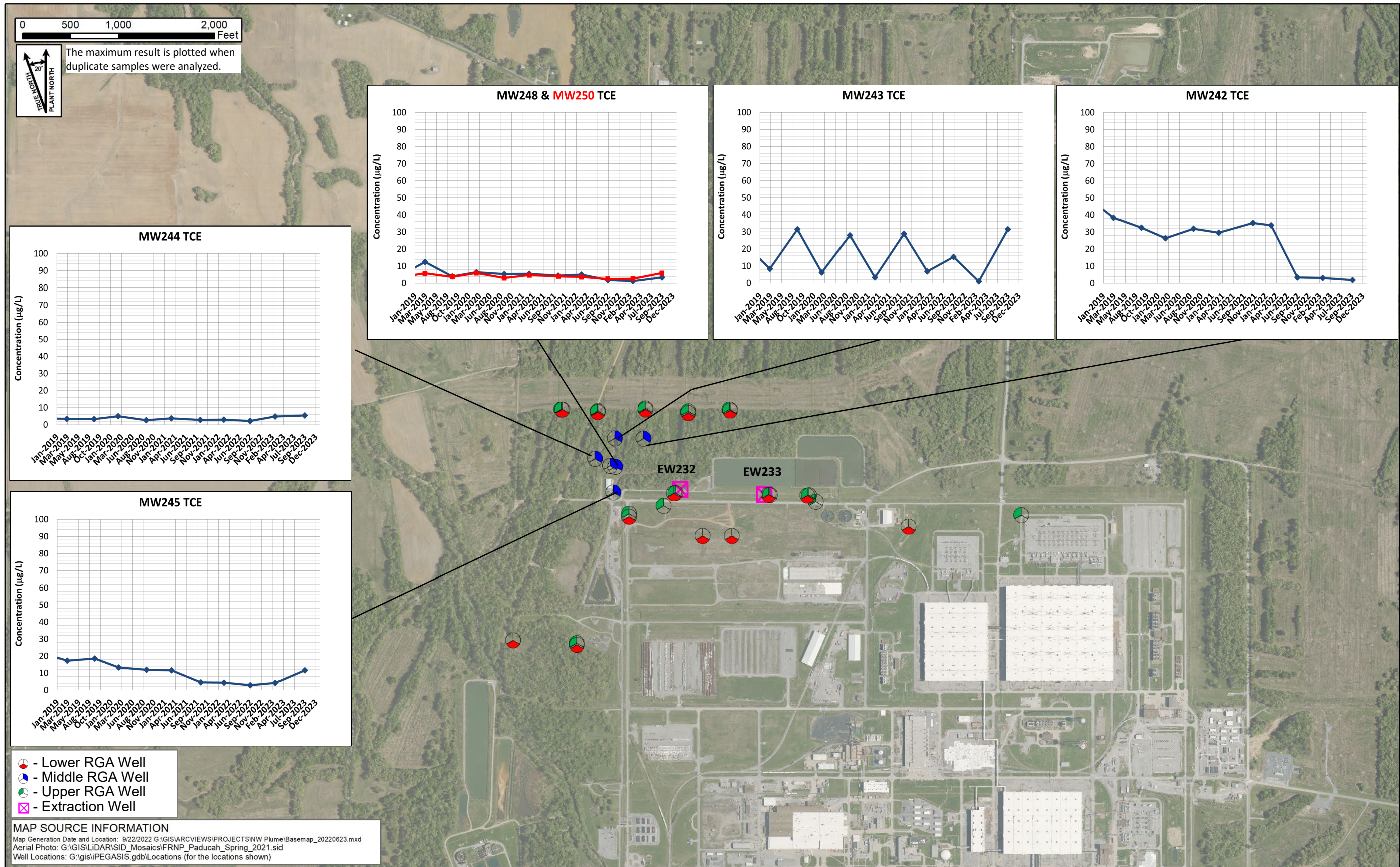


Figure B.23. Northwest Plume—South Well Field TCE Trends

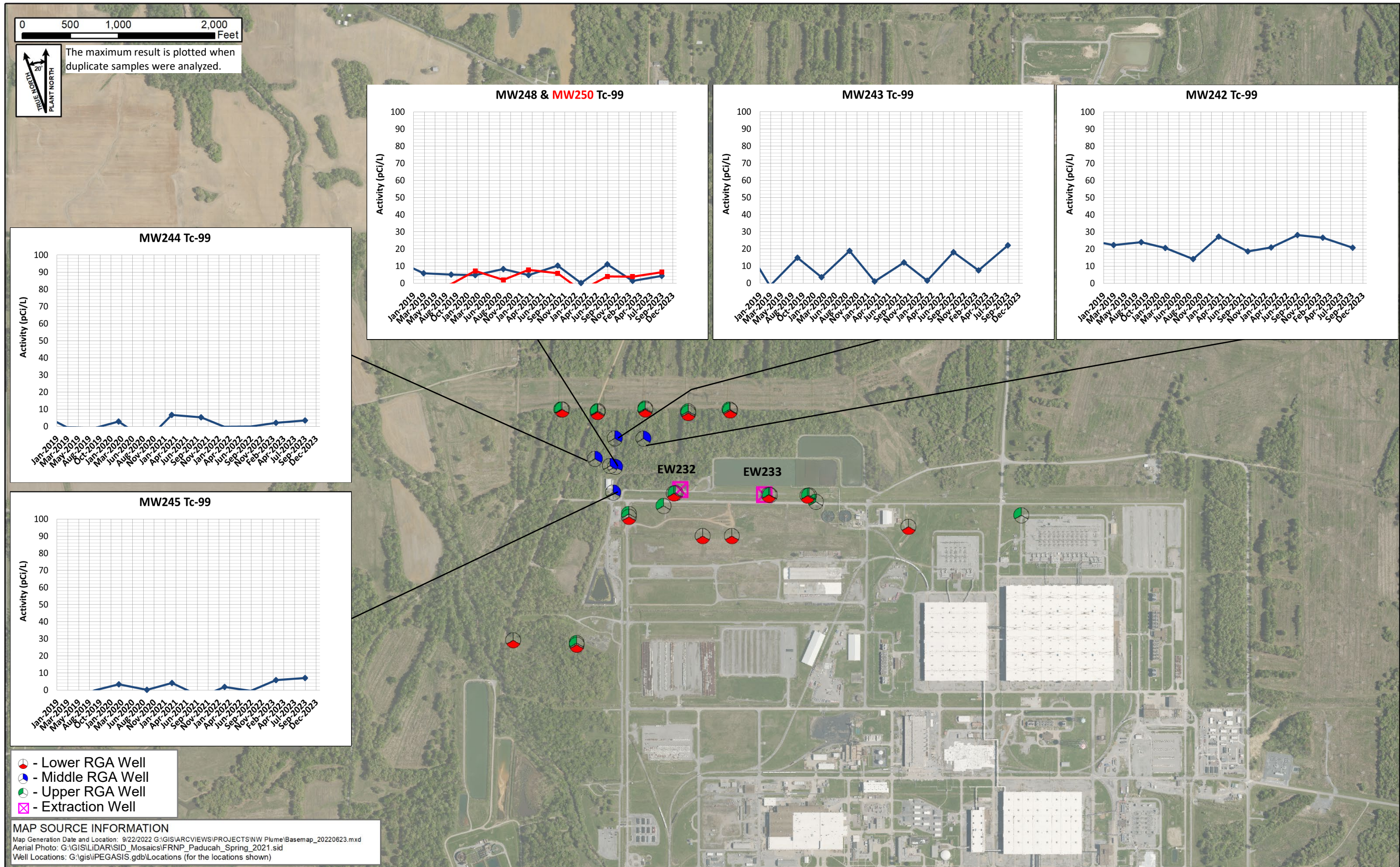


Figure B.24. Northwest Plume—South Well Field—Tc-99 Trends

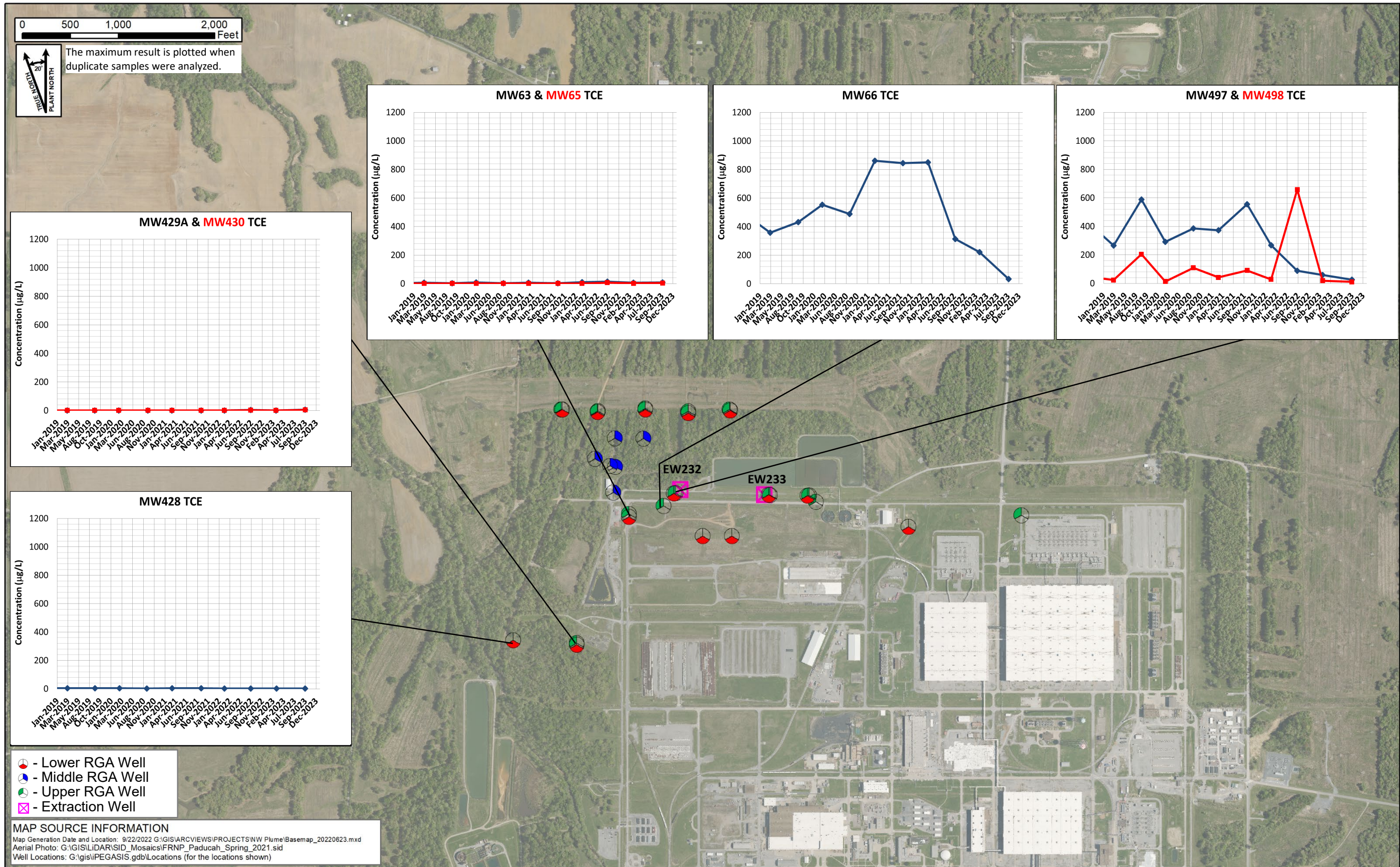


Figure B.25. Northwest Plume—New Well Field—TCE Trends



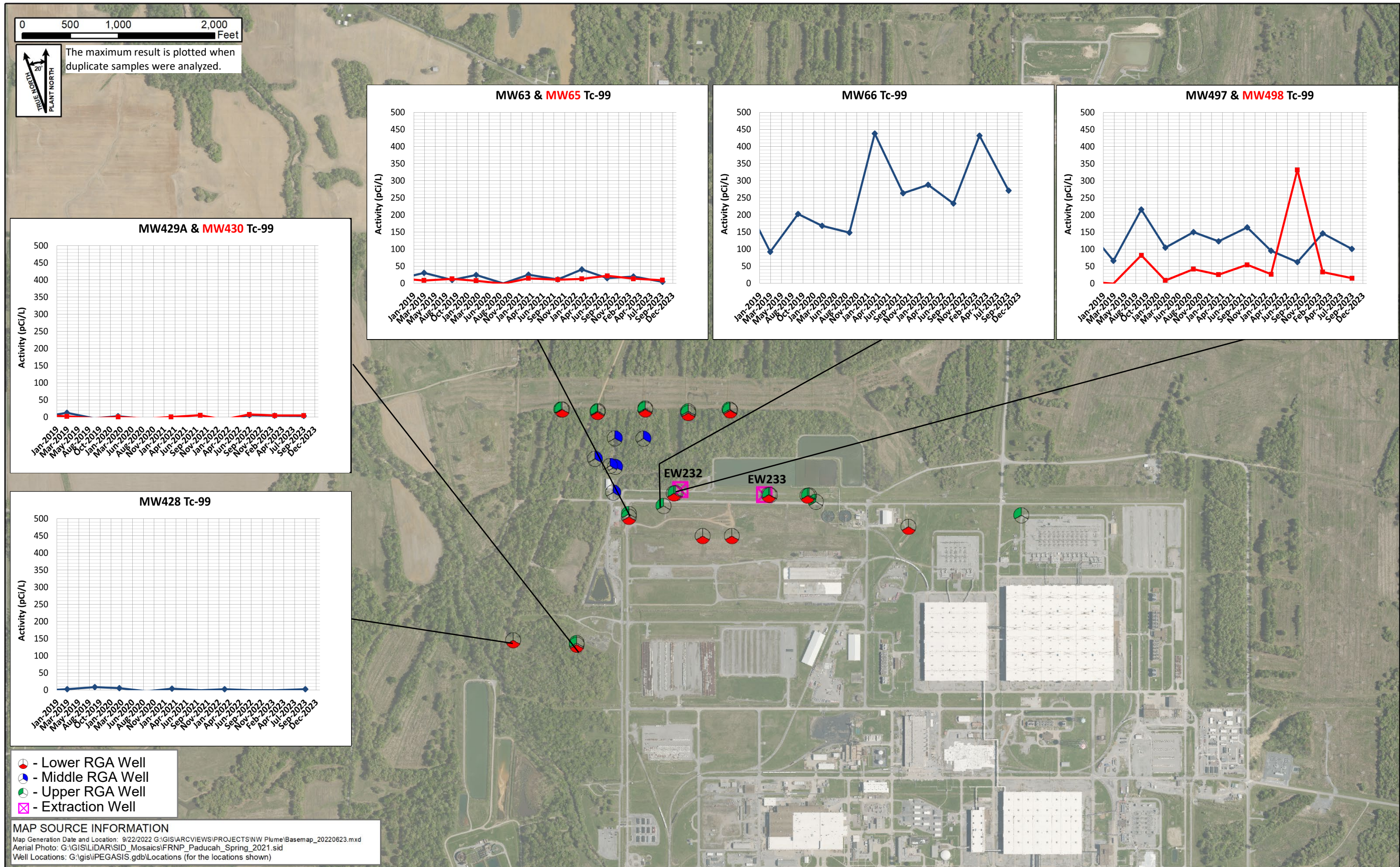


Figure B.26. Northeast Plume—New Well Field—Tc-99 Trends

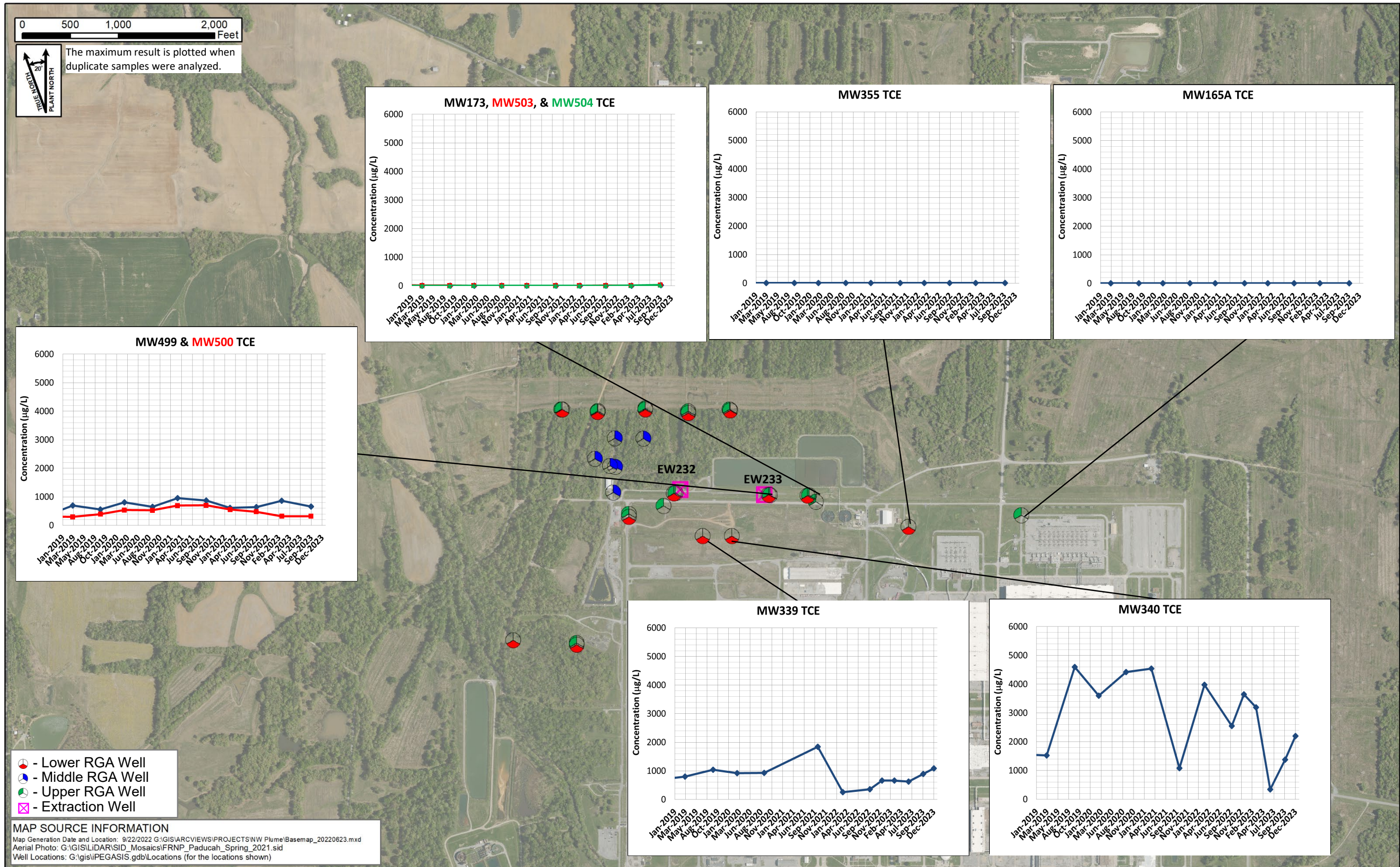


Figure B.27. Northwest Plume—Upgradient of Extraction Wells—TCE Trends

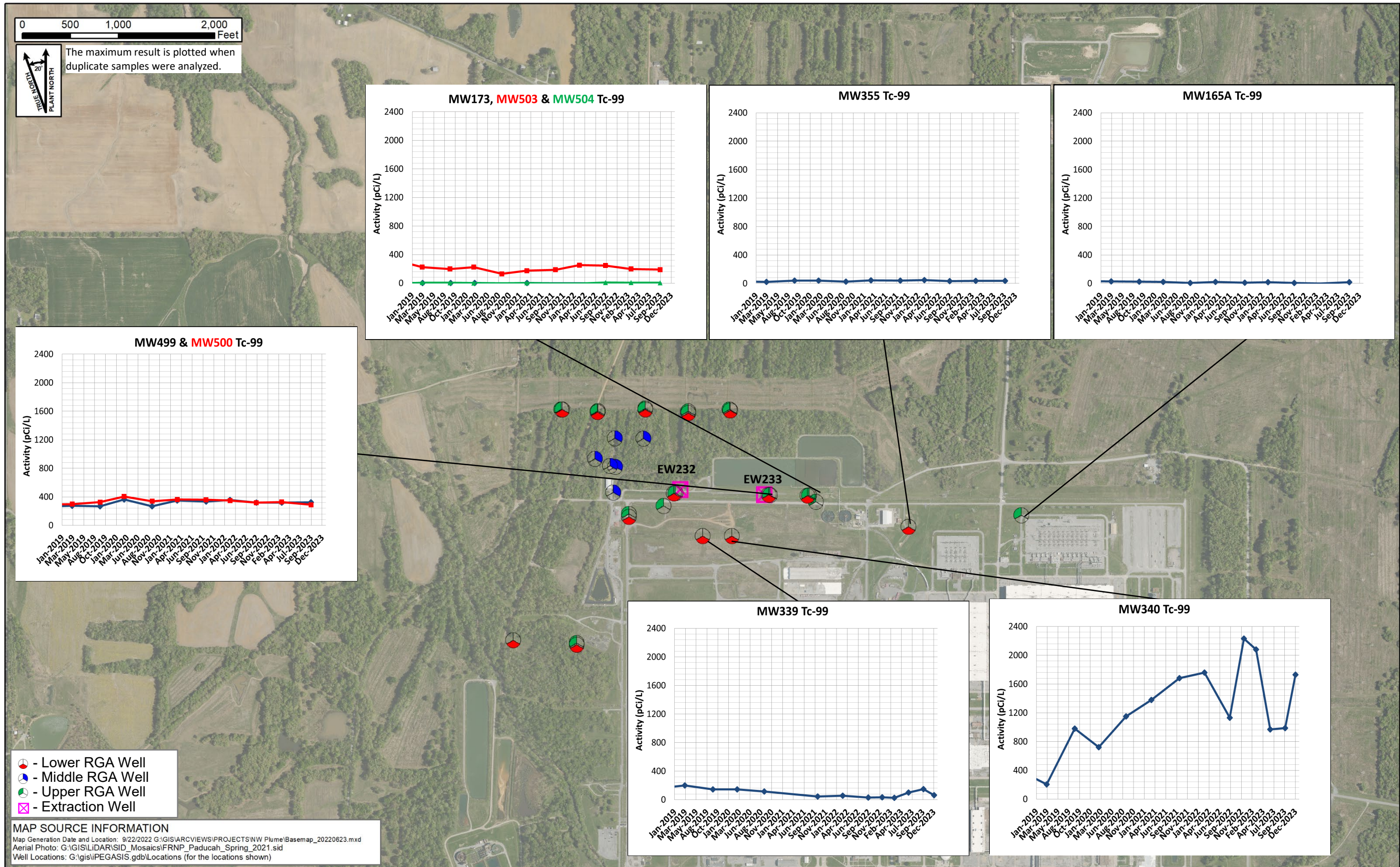
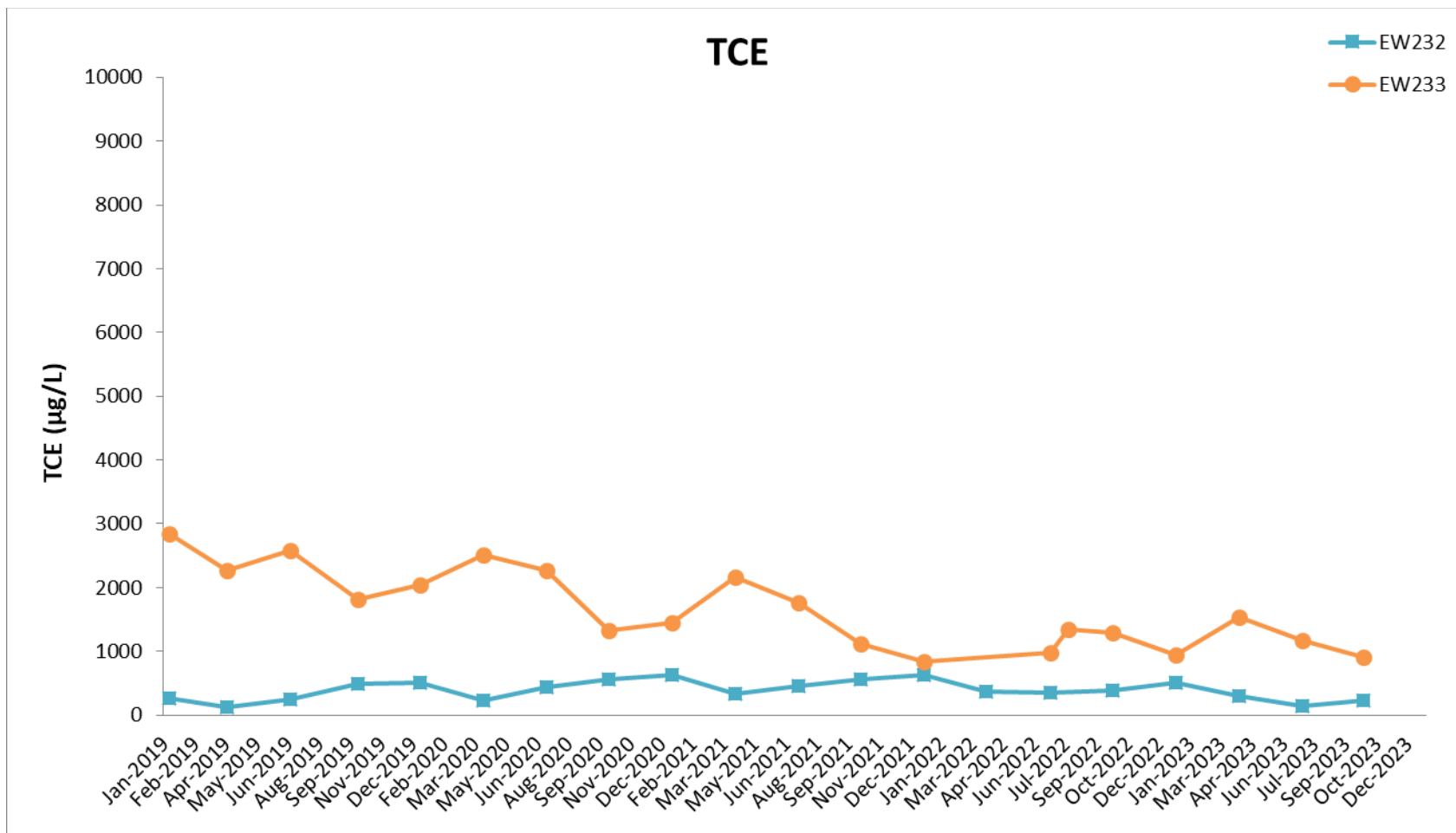
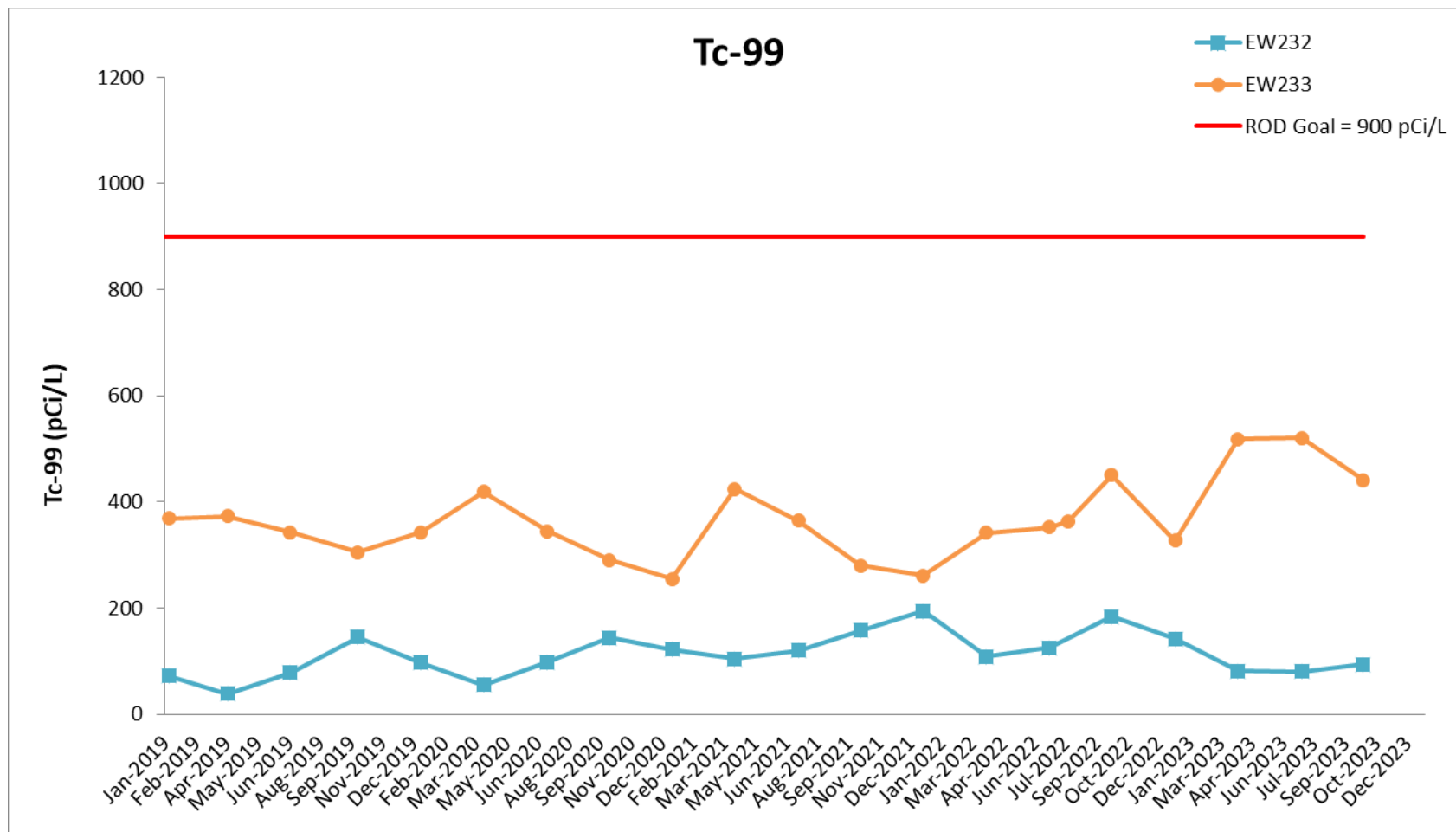


Figure B.28. Northwest Plume—Upgradient of Extraction Wells—Tc-99 Trends



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**

**THIS PAGE INTENTIONALLY LEFT BLANK**

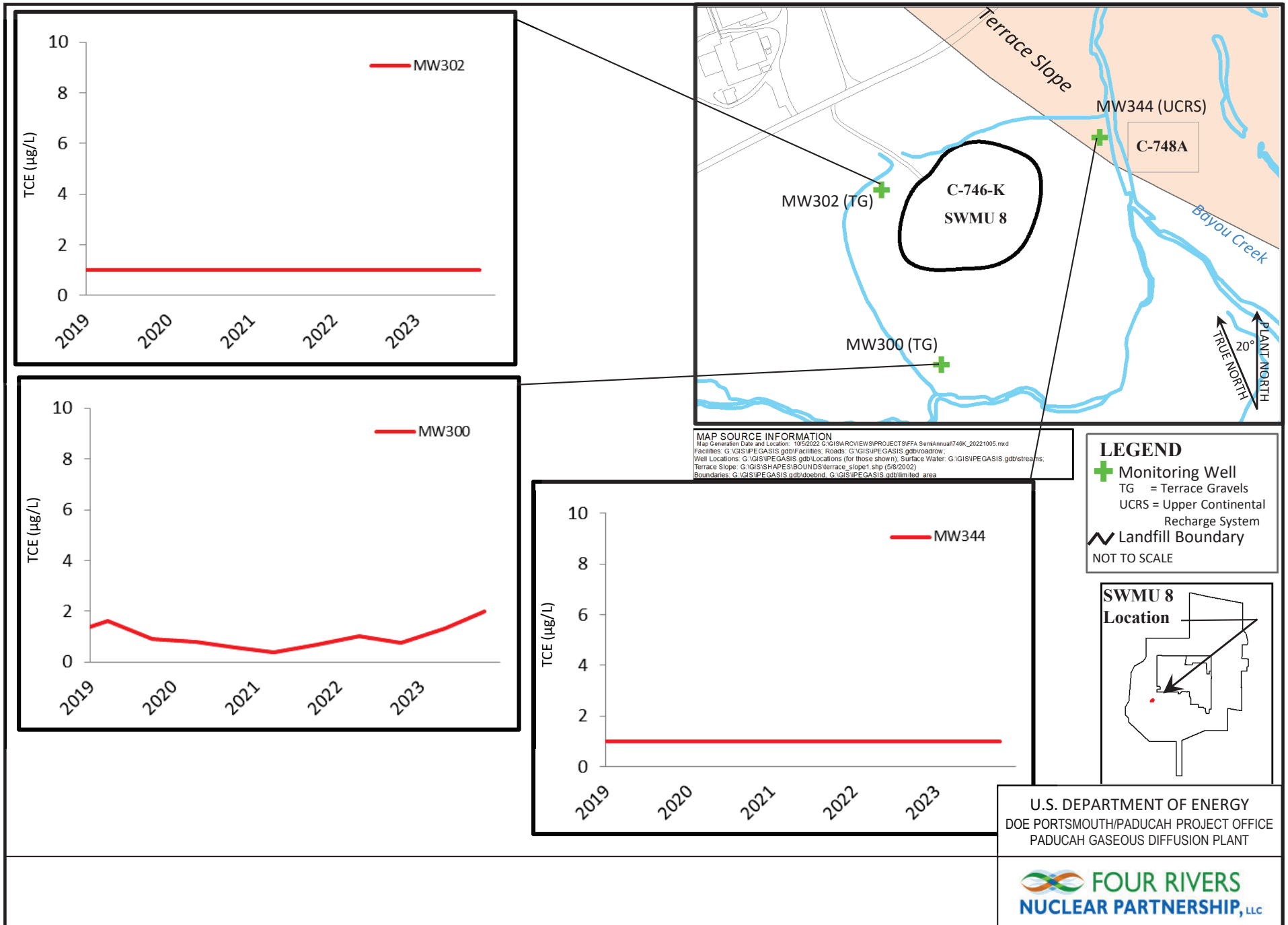


Figure C.1. TCE Trends in SWMU 8 Wells



**THIS PAGE INTENTIONALLY LEFT BLANK**

**APPENDIX D**

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

**THIS PAGE INTENTIONALLY LEFT BLANK**

## Paducah Documents Added to the Administrative Record Files-Fourth Quarter CY2023

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	9/8/2023	FR-23-0910, DOE/LX/07-2474&D2	MODIFICATION TO THE PADUCAH FEDERAL FACILITY AGREEMENT C-400 COMPLEX OPERABLE UNIT	DOE, KDEP, USEPA-4	DOE, KDEP, USEPA-4	INF-RECMGMT-FR-23-0910-C-400 FFA MOD-2023-09-08	10/19/2023
ARF 400OUREME DIAL	9/8/2023	PPPO-02-10025567-23, DOE/LX/07-2474&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025567-23-EXT REQ C-400 RIFS-2023-09-08	10/19/2023
ARF 400OUREME DIAL	9/28/2023	PPPO-02-10025802-23, DOE/LX/07-2474&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025802-23-EXT REQ C-400 RIFS-2023-09-28	10/19/2023
ARF 400OUREME DIAL	10/2/2023	PPPO-02-10025876-24, DOE/LX/07-2474&D2	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025876-24-FFA SIGNED MOD C-400-2023-10-02	10/19/2023
ARF 400OUREME DIAL	11/2/2023	PPPO-02-10026190-24, DOE/LX/07-2474&D2	REQUEST FOR SEPARATION OF THE D2 REMEDIAL INVESTIGATION REPORT AND FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026190-24-SEP OF D2 FIFS-2023-11-02	11/28/2023
ARF SWP	11/1/2023	N/A	REOPENING OF ADMINISTRATIVE RECORD FILE AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	DOE	EIC	INF-RECMGMT-REOPEN ARF SWP FILE-2023-11-01	11/28/2023
ARF 400OUREME DIAL	11/17/2023	PPPO-02-10026329-24, DOE/LX/07-2474&D2	EXTENSION REQUEST FOR THE D2 C-400 COMPLEX OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026329-24-EXT REQ C400 RIFS-2023-11-17	12/19/2023
ARF 400OUREME DIAL	12/6/2023	PPPO-02-10026438-24	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE SEPARATION OF C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026438-24-SEP OF C400 COMP DOCS-2023-12-06	12/19/2023

D-3

## Paducah Documents Added to the Post-Decision Files-Fourth Quarter CY2023

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
NSDD-PD	09/28/23	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (WEEKLY) - SEPTEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-C-400 WEEKLY CKLIST-2023-09-28	10/19/2023
NSDD-PD	5/23/2023	CP4-ES-0041-F04	CP4-ES-0041-F04 -WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (QUARTERLY) - MAY 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F04-C400 QUARTERLY CKLIST-2023-05-23	10/19/2023
NSDD-PD	9/13/2023	CP4-ES-0041-F06	CP4-ES-0041-F06 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (ANNUAL) - SEPTEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F06-C-400 ANNUAL CKLIST-2023-09-13	10/19/2023
NSDD-PD	9/6/2023	CP4-ES-0041-F07	CP4-ES-0041-F07 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - SEPTEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F07-C-400-L STORM EVENT-2023-09-06	10/19/2023
C400SOURCE-PD	8/31/2023	CP4-ES-0041-F16	CP4-ES-0041-F16 - C-400 LAND USE CONTROL IMPLEMENTATION PLAN (LUCIP) INSPECTION - AUGUST 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F16-C-400 LUCIP-2023-08-31	10/19/2023
NSDD-PD	11/30/22	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST - NORTH-SOUTH DIVERSION DITCH (WEEKLY) - NOVEMBER 2022	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C-400-L ELECT INSP-2022-11-30	10/19/2023
C400SOURCE-PD	9/25/2023	SA-FY23-0059	SELF-ASSESSMENT - C-400 AND NORTH-SOUTH DIVERSION DITCH (NSDD) LAND USE CONTROL IMPLEMENTATION PLAN (LUCIP) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	DOE	INF-RECMGMT-SA-FY23-0059-C-400 AND NSDD LUCIP SELF ASSES-2023-09-25	10/19/2023
NSDD-PD	9/25/2023	SA-FY23-0059	SELF-ASSESSMENT - C-400 AND NORTH-SOUTH DIVERSION DITCH (NSDD) LAND USE CONTROL IMPLEMENTATION PLAN (LUCIP) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	DOE	INF-RECMGMT-SA-FY23-0059-C-400 AND NSDD LUCIP SELF ASSES-2023-09-25	10/19/2023
1/7-PD	09/25/23	SA-FY23-0060	SELF-ASSESSMENT - SOUTHWEST PLUME AND WASTE AREA GROUPS (WAGs) 1&7 LAND USE CONTROLS (LUC) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	DOE	INF-RECMGMT-SA-FY23-0060-WAG 1 7 LUC-2023-09-25	10/19/2023
SWP-PD	9/25/2023	SA-FY23-0060	SELF-ASSESSMENT - SOUTHWEST PLUME AND WASTE AREA GROUPS (WAGs) 1&7 LAND USE CONTROLS (LUC) IMPLEMENTATION - SITE MANAGEMENT PLAN	FRNP	DOE	INF-RECMGMT-SA-FY23-0060-WAG 1 7 LUC-2023-09-25	10/19/2023
NSDD-PD	10/26/2023	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - OCTOBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-NS WEEKLY CHECKLIST-2023-10-26	11/28/2023

D-4

## Paducah Documents Added to the Post-Decision Files-Fourth Quarter CY2023

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
NSDD-PD	10/30/2023	CP4-ES-0041-F07	CP4-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - OCTOBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F07-NS STORM CHECKLIST-2023-10-30	11/28/2023
NSDD-PD	10/25/2023	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - OCTOBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C400L NS WEEKLY-2023-10-25	11/28/2023
WP-PD	10/24/2023	PPPO-02-10026088-24	TRANSMITTAL OF REVISED WATER POLICY LICENSE AGREEMENT TEMPLATE	DOE	EIC	INF-RECMGMT-PPPO-02-10026088-24-WATER POLICY TEMPLATE-2023-10-24	11/28/2023
NSDD-PD	11/29/2023	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - NOVEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-C400L NS WEEKLY CHKLIST-2023-11-29	12/19/2023
NSDD-PD	11/20/23	CP4-ES-0041-F04	CP4-ES-0041-F04 - WALKTHROUGH CHECKLIST-NORTH-SOUTH DIVERSION DITCH (QUARTERLY) - NOVEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F04-C400L NS QUARTERLY CHKLIST-2023-11-20	12/19/2023
NSDD-PD	11/21/2023	CP4-ES-0041-F07	CP4-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - NOVEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F07-C400L NS STORM EVENT-2023-11-21	12/19/2023
SWP-PD	11/16/2023	CP4-ES-0041-F17	CP4-ES-0041-F17 - QUARTERLY SOUTHWEST (SW) PLUME SOLID WASTE MANAGEMENT UNIT (SWMU) INSPECTIONS	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F17-SW SWMU INSPECTION-2023-11-16	12/19/2023
NSDD-PD	3/29/2023	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST-NORTH-SOUTH DIVERSION DITCH (WEEKLY) - MARCH 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C400L CHKLIST OCT MAR-2023-03-29	12/19/2023
NSDD-PD	11/30/23	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST-NORTH-SOUTH DIVERSION DITCH (WEEKLY) - NOVEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C400L NS WEEKLY OCT MAR-2023-11-30	12/19/2023

D-5

## Paducah Documents Added to the Administrative Record Reference Files-Fourth Quarter CY2023

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ARR	9/8/2023	FR-23-0910, DOE/LX/07-2474&D2	MODIFICATION TO THE PADUCAH FEDERAL FACILITY AGREEMENT C-400 COMPLEX OPERABLE UNIT	DOE, KDEP, USEPA-4	DOE, KDEP, USEPA-4	INF-RECMGMT-FR-23-0910-C-400 FFA MOD-2023-09-08	10/19/2023
ARF ARR	9/27/2023	FR-23-0919, DOE/LX/07-2496&D1	APPROVAL OF THE REVISED SOLID WASTE MANAGEMENT UNIT (SWMU) ASSESSMENT REPORT (SAR) FOR SWMU 89 (DOE/LX/07-2496&D1) PADUCAH SITE PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-23-0919-KY APPROVE SWMU 89-2023-09-27	10/19/2023
ARF ARR	10/12/2010	PPPO-02-1037501-11	FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION	DOE	USEPA-4, KDEP	INF-RECMGMT-PPPO-02-1037501-11-FFA BUDGET NOTIFICATION-2010-10-12	10/19/2023
ARF ARR	9/13/2023	PPPO-02-10025428-23, DOE/LX/07-2496&D1	C-637 PUMPHOUSE AND COOLING TOWER SLABS AND ASSOCIATED SOILS, SOLID WASTE MANAGEMENT UNIT (SWMU) ASSESSMENT REPORT FOR AREA OF CONCERN 89, HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT NUMBER KY8-890-008-982, AGENCY INTEREST NO. 3059	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025428-23-C-637 PUMPHOUSE-2023-09-13	10/19/2023
ARF ARR	9/8/2023	PPPO-02-10025567-23, DOE/LX/07-2474&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025567-23-EXT REQ C-400 RIFS-2023-09-08	10/19/2023
ARF ARR	10/10/2023	PPPO-02-10025801-24	PADUCAH FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025801-24-FFA BUDGET-2023-10-10	10/19/2023
ARF ARR	9/28/2023	PPPO-02-10025802-23, DOE/LX/07-2474&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025802-23-EXT REQ C-400 RIFS-2023-09-28	10/19/2023
ARF ARR	10/2/2023	PPPO-02-10025876-24, DOE/LX/07-2474&D2	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025876-24-FFA SIGNED MOD C-400-2023-10-02	10/19/2023
ARF ARR	10/12/2023	FR-24-0925, DOE/LX/07-2471&D2/A1/R1	U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGION 4 ACKNOWLEDGEMENT OF RECEIPT AND APPROVAL FOR THE DEPARTMENT OF ENERGY'S (DOE'S) ADDENDUM TO THE PLANT INDUSTRIAL AREA VAPOR INTRUSION PRELIMINARY RISK ASSESSMENT REPORT, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2471&D2/A1/R1, TRANSMITTAL DATE OF OCTOBER 10, 2023	USEPA-4	DOE	INF-RECMGMT-FR-24-0925-EPA ACK VAPOR INT RISK ASSMT-2023-10-12	11/28/2023
ARF ARR	10/12/2023	FR-24-0926, DOE/LX/07-2471&D2/A1/R1	KENTUCKY DEPARTMENT OF WASTE MANAGEMENT APPROVAL OF THE ADDENDUM TO THE PLANT INDUSTRIAL AREA VAPOR INTRUSION PRELIMINARY RISK ASSESSMENT REPORT (DOE/LX/07-2471&D2/A1/R1) PADUCAH SITE PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-24-0926-KDEP APP VAPOR INT RISK-2023-10-12	11/28/2023

D-6

## Paducah Documents Added to the Administrative Record Reference Files-Fourth Quarter CY2023

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ARR	10/10/2023	PPPO-02-10025727-24B, DOE/LX/07-2471&D2/A1/R1	TRANSMITTAL OF THE ADDENDUM TO THE PLANT INDUSTRIAL AREA VAPOR INTRUSION PRELIMINARY RISK ASSESSMENT REPORT, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2471&D2/A1/R1)	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025727-24B-VAPOR INTRUSION RISK-2023-10-10	11/28/2023
ARF ARR	11/2/2023	PPPO-02-10026190-24, DOE/LX/07-2474&D2	REQUEST FOR SEPARATION OF THE D2 REMEDIAL INVESTIGATION REPORT AND FEASIBILITY STUDY REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, AND MILESTONE MODIFICATION FOR THE C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026190-24-SEP OF D2 FIFS-2023-11-02	11/28/2023
ARF ARR	12/4/2023	FR-24-0935	KENTUCKY DIVISION OF WASTE MANAGEMENT (KDWM) APPROVAL OF THE 2024 SITE MANAGEMENT PLAN (DOE/LX/07-2495&D1) PADUCAH SITE PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-24-0935-KY APPROVAL 2024 SMP-2023-12-04	12/19/2023
ARF ARR	12/5/2023	FR-24-0937	U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGION 4 ACKNOWLEDGEMENT OF RECEIPT AND CONCURRENCE FOR THE DEPARTMENT OF ENERGY'S (DOE'S) PADUCAH SITE FISCAL YEAR 2024 SITE MANAGEMENT PLAN, DOE/LX/07-2495&D1	USEPA-4	DOE	INF-RECMGMT-FR-24-0937 EPA CONCUR 2024 SMP-2023-12-05	12/19/2023
ARF ARR	12/1/2023	PPPO-02-10026302-24	PADUCAH FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026302-24-FFA BUDGET-2023-12-01	12/19/2023
ARF ARR	12/5/2023	PPPO-02-10026426-24, DOE/LX/07-2495&D1	RESPONSE TO LETTERS FOR SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, ANNUAL REVISION-FY 2024 (DOE/LX/07-2495&D1)	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026426-24-LETTERS FOR SMP-2023-12-05	12/19/2023
ARF ARR	12/6/2023	PPPO-02-10026438-24	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE SEPARATION OF C-400 COMPLEX OPERABLE UNIT DOCUMENTS	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026438-24-SEP OF C400 COMP DOCS-2023-12-06	12/19/2023
ARF ARR	11/15/2023	PPPO-02-10025789-24B, DOE/LX/07-2495&D1	TRANSMITTAL OF THE D1 SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, ANNUAL REVISION-FY 2024, DOE/LX/07-2495&D1	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025789-24B-2024 SMP-2023-11-15	12/19/2023

D-7



## Paducah Documents Added to the Administrative Record Files-First Quarter CY2024

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	12/18/2023	FR-24-0937, DOE/LX/07-2474&D2	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 4 ACKNOWLEDGEMENT OF RECEIPT AND CONCURRENCE FOR THE DEPARTMENT OF ENERGY'S REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT, DOE/LX/07-2474&D2	USEPA-4	DOE	INF-RECMGMT-FR-24-0937-EPA CONCUR RI C400-2023-12-18	1/29/2024
ARF 400OUREME DIAL	12/19/2023	FR-24-0938, DOE/LX/07-2474&D2	APPROVAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT (DOE/LX/07-2474&D2) PADUCAH SITE PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE	INF-RECMGMT-FR-24-0938-KY APPROVAL RI C400-2023-12-19	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C- 400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX A TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C- 400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX C3 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C- 400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI 677536_Kd TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C- 400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 672014 _Hydraulic, SwRI SDG 672014_Soil Matric, SwRI SDG 672014_Clay TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C- 400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 672014_FOC,CEC,AEC,PNOD, SwRI SDG 677536_Clay TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 672014_Kd, SwRI SDG 672911_Clay TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945- 24C, DOE/LX/07- 2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 672911.Hydraulic, SwRI SDG 672911_Soil Matric, SwRI SDG 677536_Hydraulic, SwRI SDG 679275_Hydraulic TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02- 10025945-24C-C400 RI REPORT- 2023-12-15	1/29/2024

D-8

**Paducah Documents Added to the Administrative Record Files-First Quarter CY2024**

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 672911_FOC,CEC,AEC,PNOD_Rev2 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 677536_FOC,CEC,AEC,PNOD TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 677536_Soil Matric, SwRI SDG 679275_Clay, SwRI SDG 679275_Soil Matric TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 679211_Kd PART 1 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 679211_Kd PART 2 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 679211_Kd PART 3 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 679275_FOC,CEC,AEC,PNOD_Rev1 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D- GEOTECHNICAL-GEOCHEMICAL-SwRI SDG 679275_Kd TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-CROSS SECTIONS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-DYELIF LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-GEOTECHNICAL-GEOCHEMICAL-ER120-C400-GEOTECH ATT SDG 3110 FILES (25 FILES) AND MASTER GEOTECHNICAL DATA SPREADSHEET REV 7 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024

D-9

## Paducah Documents Added to the Administrative Record Files-First Quarter CY2024

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-LITHOLOGY LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-MIP LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-SECTOR 4 PHOTO LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-SECTORS 1A AND 1B AND MW PHOTO LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-SECTORS 1C AND 1D PHOTO LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-SECTORS 2 AND 3 PHOTO LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-SECTORS 5, 6 AND 7 PHOTO LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-STANDARD PENETRATION TESTS FIELD LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES DRAINS UNDER DEGREASER CO-216 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES DRAINS UNDER DEGREASER FD-4 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES STORM DRAIN OUTSIDE C400 24 INCH BORESCOPE #2 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES STORM DRAIN OUTSIDE C400 8 INCH LINE BORESCOPE #2 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024

D-10

**Paducah Documents Added to the Administrative Record Files-First Quarter CY2024**

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES STORM DRAIN OUTSIDE C400 8 INCH LINE PART 1 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES STORM DRAIN OUTSIDE C400 8 INCH LINE PART 2 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-VIDEO BORESCOPES STORM DRAIN OUTSIDE C400-MANHOLE ACCESS TO STORM DRAIN TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX D-WELL COMPLETION LOGS TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/23	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	APPENDIX E-TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	ATTACHMENT B3 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024
ARF 400OUREME DIAL	12/15/2023	PPPO-02-10025945-24C, DOE/LX/07-2474&D2	ATTACHMENT B4 TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE C-400 COMPLEX OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2474&D2	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10025945-24C-C400 RI REPORT-2023-12-15	1/29/2024

D-11

## Paducah Documents Added to the Post-Decision Files-First Quarter CY2024

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
NSDD-PD	12/28/23	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (Weekly) - DECEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-C400L WEEKLY CHKLS-2023-12-28	1/29/2024
NSDD-PD	12/11/23	CP4-ES-0041-F07	CP4-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - DECEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F07-C400L STORM CHKLS-2023-12-11	1/29/2024
NSDD-PD	12/27/2023	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - DECEMBER 2023	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C400L OCT MARCH CHKLS-2023-12-27	1/29/2024
SWP-PD	12/04/14	N/A	EMAIL SOLID WASTE MANAGEMENT UNIT (SWMU) 211 DOWNGRADIENT TRICHLOROETHENE (TCE) ESTIMATES - K. DAVIS	LATA	LATA, DOE, P2S, KDEP	INF-RECMGMT-EMAIL SWMU 211 DOWNGRADE TCE-2014-12-04	1/29/2024
NSDD-PD	1/24/2024	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - JANUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-C400L WEEKLY CHKLS-2024-01-24	2/20/2024
NSDD-PD	1/24/2024	CP4-ES-0041-F07	CP4-ES-0041-F07 - WALKTHROUGH CHECKLIST- NORTH-SOUTH DIVERSION DITCH (STORM EVENT) - JANUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F07-C400L STORM EVENT CHKLS-2024-01-24	2/20/2024
NSDD-PD	1/31/2024	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - JANUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-WINTERIZATION CHKLS-2024-01-31	2/20/2024
NWP PT-PD	1/29/2024	PPPO-02-10026786-24A	EXTENSION REQUEST FOR SUBMITTAL OF THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND MILESTONE MODIFICATION FOR THE DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026786-24A-EXTENSION REQ NW PLUME-2024-01-29	2/20/2024
NSDD-PD	2/29/2024	CP4-ES-0041-F03	CP4-ES-0041-F03 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (WEEKLY) - FEBRUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F03-C400L WEEKLY CHKLS-2024-02-29	3/19/2024
NSDD-PD	2/21/2024	CP4-ES-0041-F04	CP4-ES-0041-F04 - WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (QUARTERLY) - FEBRUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F04-C400L QTR CHKLS-2024-02-21	3/19/2024
NSDD-PD	2/21/2024	CP4-ES-0041-F05	CP4-ES-0041-F05 -WALKTHROUGH CHECKLIST - NORTH-SOUTH DIVERSION DITCH (NSDD) SURGE BASIN CONCRETE DITCH (SEMI-ANNUAL) - FEBRUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F05-WALKTHROUGH CHKLS-2024-02-21	3/19/2024
SWP-PD	2/22/2024	CP4-ES-0041-F17	CP4-ES-0041-F17 - QUARTERLY SOUTHWEST PLUME SOLID WASTE MANAGEMENT UNIT INSPECTIONS - FEBRUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F17-QTR SW PLUME INSP-2024-02-22	3/19/2024

D-12

## Paducah Documents Added to the Post-Decision Files-First Quarter CY2024

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
NSDD-PD	02/28/24	CP4-ES-0041-F20	CP4-ES-0041-F20 - WINTERIZATION CHECKLIST- NORTH-SOUTH DIVERSION DITCH (WEEKLY) - FEBRUARY 2024	FRNP	DOE	INF-RECMGMT-CP4-ES-0041-F20-C400L WINTER CHKLST-2024-02-28	3/19/2024
NWP PT-PD	2/22/2024	PPPO-02-10026786-24B	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE NORTHWEST PLUME TECHNICAL MEMORANDUM	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026786-24B-FFA NW PLUME TECH-2024-02-22	3/19/2024
NWP PT-PD	2/27/2024	PPPO-02-10027122-24	EXTENSION REQUEST FOR SUBMITTAL OF THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND MILESTONE MODIFICATION FOR THE TECHNICAL MEMORANDUM AND SUBSEQUENT DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10027122-24-EXT REQ NW PLUME MEMO-2024-02-27	3/19/2024
NWP PT-PD	3/1/2024	PPPO-02-10027154-24	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND SUBSEQUENT DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10027154-24-FFA NW PLUME TECH MEMO MOD-2024-03-01	3/19/2024

D-13

## Paducah Documents Added to the Administrative Record Reference Files-First Quarter CY2024

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Name	Date Added
ARF ARR	9/25/2001	LB09905-1117, DOE/OR/07-1506/D1/V1/R0	APPROVAL OF METHODS FOR CONDUCTING HUMAN HEALTH RISK ASSESSMENTS AND RISK EVALUATIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY DOE/OR/07-1506/D1/V1/R0 MCCRACKEN COUNTY, KENTUCKY PERMIT #KY8-890-008-982	KDEP	DOE, BJC	INF-RECMGMT-LB09905-1117-KY APPROVE RISK ASSESS-2001-09-25	1/29/2024
ARF ARR	10/16/2001	LB09905-1118, DOE/OR/07-1506D1/V1/R0, DOE/OR/07-1506/V2&D1/R1	METHODS FOR DESIGNING AND CONDUCTING RISK EVALUATIONS/ASSESSMENTS FOR ECOLOGICAL AND HUMAN, HEALTH, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT	USEPA-4	DOE, BJC	INF-RECMGMT-LB09905-1118-EPA RISK ASSESS-2001-10-16	1/29/2024
ARF ARR	9/26/2001	LB09905-1122, DOE/OR/07-1506/V2&D1/R1	METHODS FOR CONDUCTING ECOLOGICAL RISK ASSESSMENTS AND RISK EVALUATIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/OR/07-1506/V2&D1/R1 MCCRACKEN COUNTY, KENTUCKY PERMIT #KY8-890-008-982	KDEP	DOE, BJC	INF-RECMGMT-LB09905-1122-KY APPROVAL ECOLOGICAL RISK-2001-09-26	1/29/2024
ARF ARR	12/15/2023	PPPO-02-10026538-24	PADUCAH FEDERAL FACILITY AGREEMENT MODIFICATION—FISCAL YEAR 2024 SITE MANAGEMENT PLAN, ENFORCEABLE COMMITMENTS, AND LIST OF SOLID WASTE MANAGEMENT UNITS/AREAS OF CONCERN	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026538-24-FFA CY24 SMP ENF COMM-2023-12-15	1/29/2024
ARF ARR	1/9/2024	PPPO-02-10026688-24	PADUCAH FEDERAL FACILITY AGREEMENT SIGNED MODIFICATION-FISCAL YEAR 2024 SITE MANAGEMENT PLAN, ENFORCEABLE COMMITMENTS, AND LIST OF SOLID WASTE MANAGEMENT UNITS/AREAS OF CONCERN	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026688-24-SIGNED FY24 SMP ENF COM-2024-01-09	1/29/2024
ARF ARR	1/23/2024	PPPO-02-10026744-24, DOE/OR/07-1707, PRS-035	PADUCAH FEDERAL FACILITY AGREEMENT MODIFICATION-MINOR TEXT UPDATES	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026744-24-FFA MOD MINOR TEXT UPDATE-2024-01-23	2/20/2024
ARF ARR	1/29/2024	PPPO-02-10026768-24	PADUCAH FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026768-24-FFA CONT RESOLUTION-2024-01-29	2/20/2024
ARF ARR	1/29/2024	PPPO-02-10026786-24A	EXTENSION REQUEST FOR SUBMITTAL OF THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND MILESTONE MODIFICATION FOR THE DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026786-24A-EXTENSION REQ NW PLUME-2024-01-29	2/20/2024
ARF ARR	2/22/2024	PPPO-02-10026786-24B	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE NORTHWEST PLUME TECHNICAL MEMORANDUM	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026786-24B-FFA NW PLUME TECH-2024-02-22	3/19/2024
ARF ARR	2/12/2024	PPPO-02-10026823-24	PADUCAH FEDERAL FACILITY AGREEMENT DRAFT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGETS ON SITE PRIORITIES-FISCAL YEAR 2026	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026823-24-FFA DRAFT IPL-2024-02-12	2/20/2024
ARF ARR	2/6/2024	PPPO-02-10026950-24	PADUCAH FEDERAL FACILITY AGREEMENT MODIFICATION-SIGNED MINOR TEXT UPDATES	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10026950-24-FFA MINOR TEXT UPDATES-2024-02-06	2/20/2024
ARF ARR	2/27/2024	PPPO-02-10027122-24	EXTENSION REQUEST FOR SUBMITTAL OF THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND MILESTONE MODIFICATION FOR THE TECHNICAL MEMORANDUM AND SUBSEQUENT DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10027122-24-EXT REQ NW PLUME MEMO-2024-02-27	3/19/2024
ARF ARR	3/1/2024	PPPO-02-10027154-24	PADUCAH FEDERAL FACILITY AGREEMENT-SIGNED MILESTONE MODIFICATION FOR THE NORTHWEST PLUME TECHNICAL MEMORANDUM AND SUBSEQUENT DOCUMENT	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10027154-24-FFA NW PLUME TECH MEMO MOD-2024-03-01	3/19/2024
ARF ARR	3/5/2024	PPPO-02-10027186-24	PADUCAH FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE	KDEP, USEPA-4	INF-RECMGMT-PPPO-02-10027186-24-FFA CONT RES-2024-03-05	3/19/2024

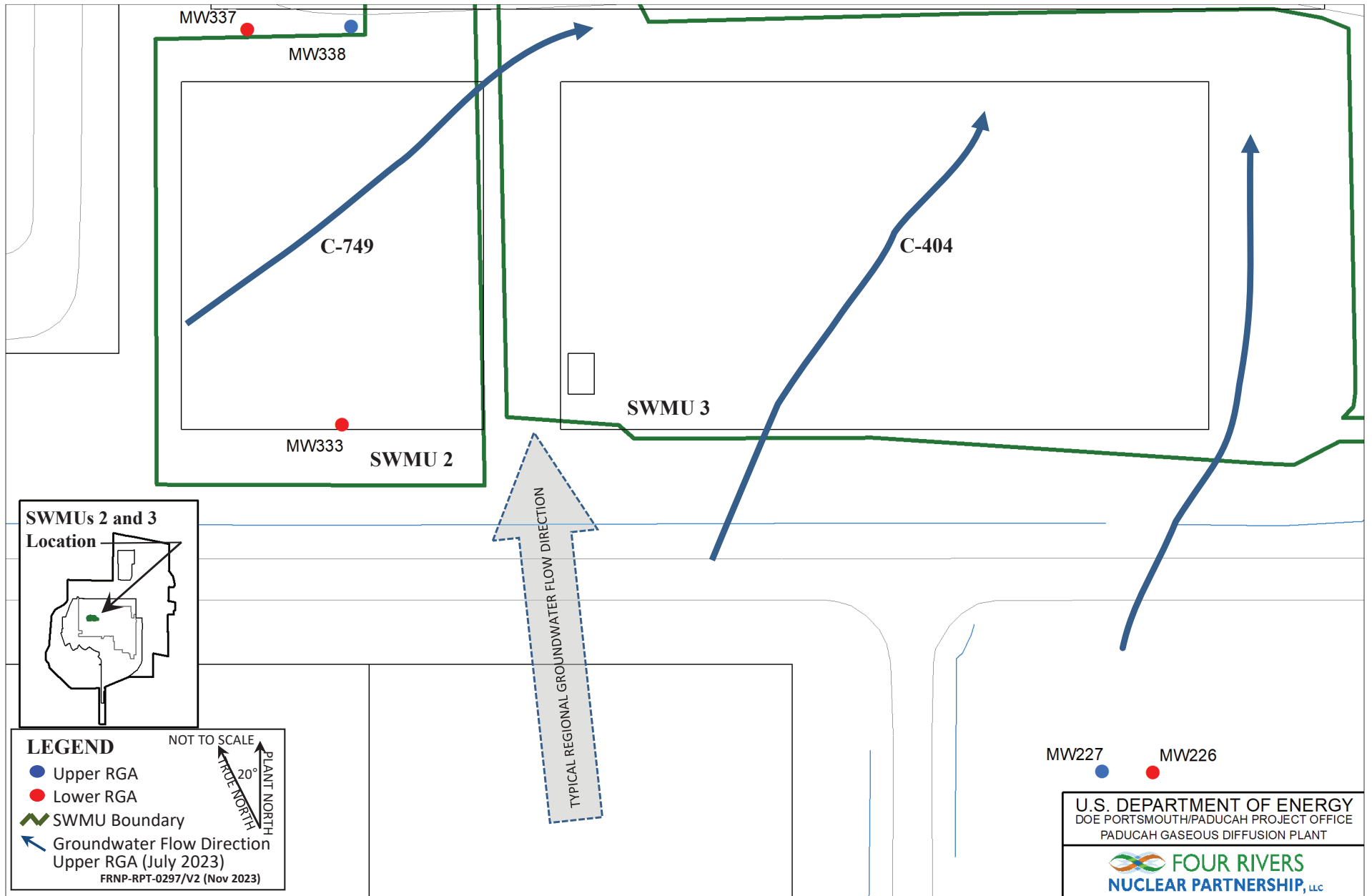
D-14

**APPENDIX E**

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

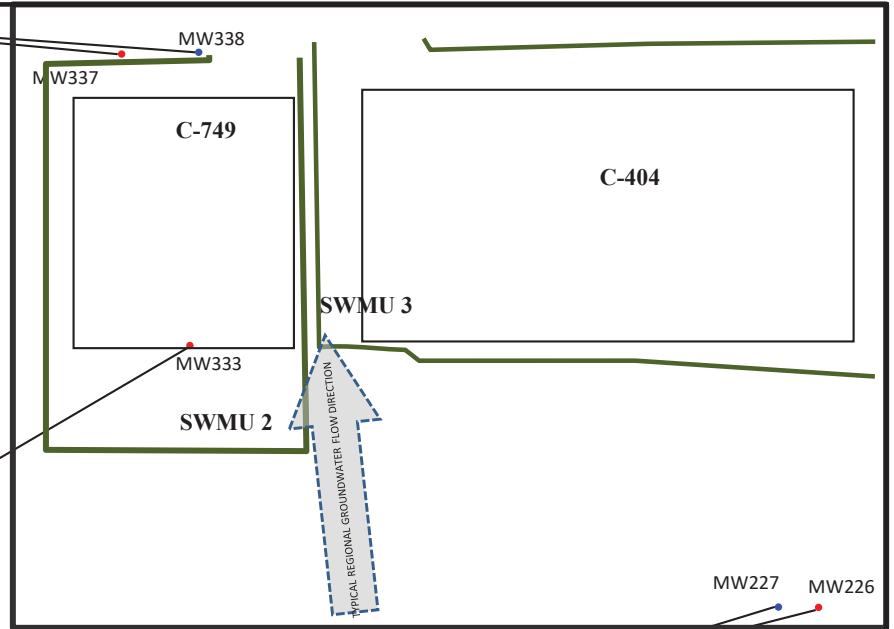
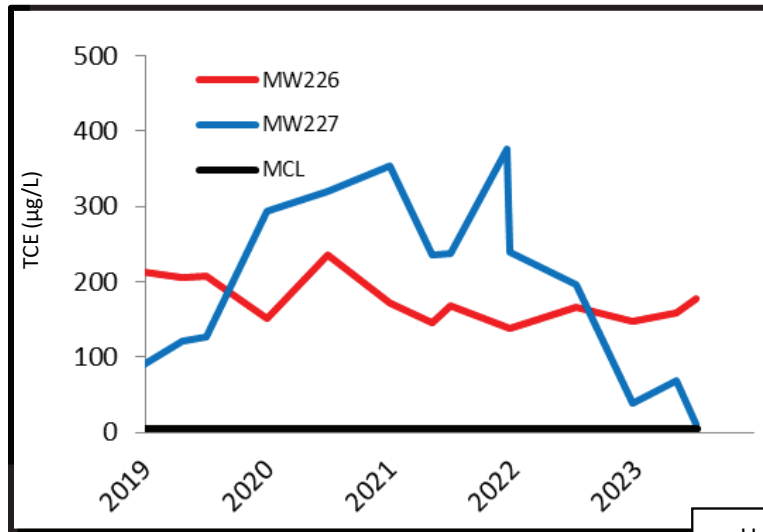
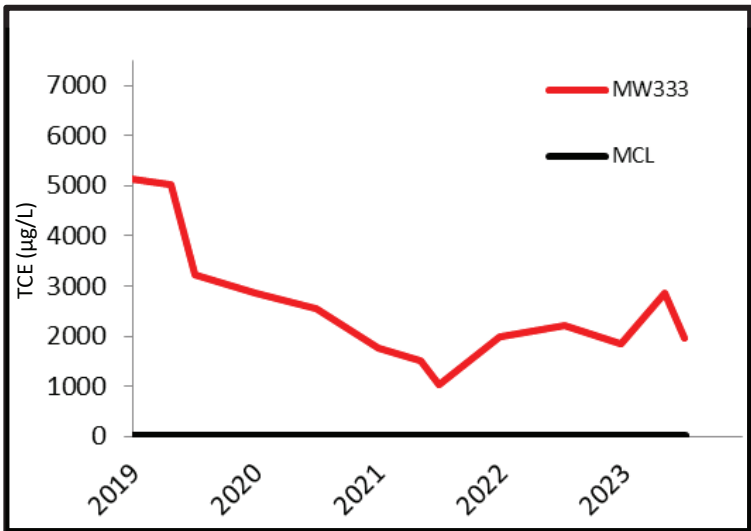
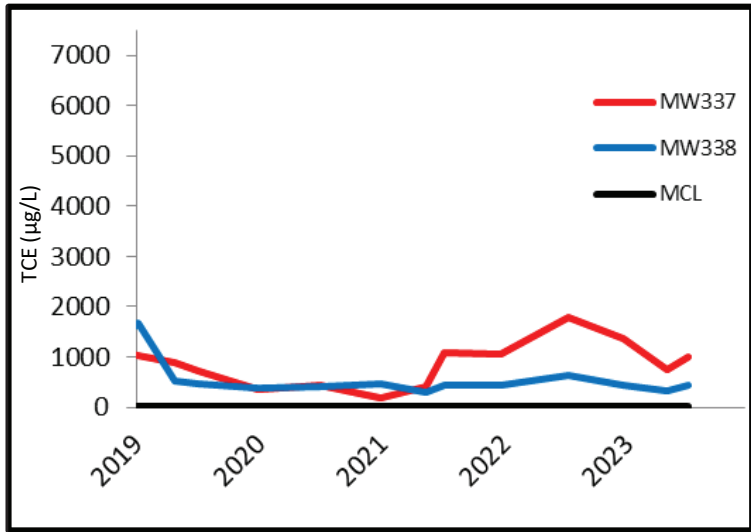


**THIS PAGE INTENTIONALLY LEFT BLANK**



**MAP SOURCE INFORMATION**  
 Map Generation Date and Location: 10/5/2022 G:\GIS\ARCVIEWS\PROJECTS\FFA SemiAnnual\SWMU2\_20221004.mxd  
 SWMUs: G:\GIS\PEGASIS.gdb\SWMUs (as shown) Streams: G:\GIS\PEGASIS.gdb\Streams Roads: G:\GIS\PEGASIS.gdb\Roads Facilities: G:\GIS\PEGASIS.gdb\Facilities  
 Well Locations: G:\GIS\PEGASIS.gdb\Locations (as shown)

Figure E.1. SWMU 2 Wells Location



**LEGEND**

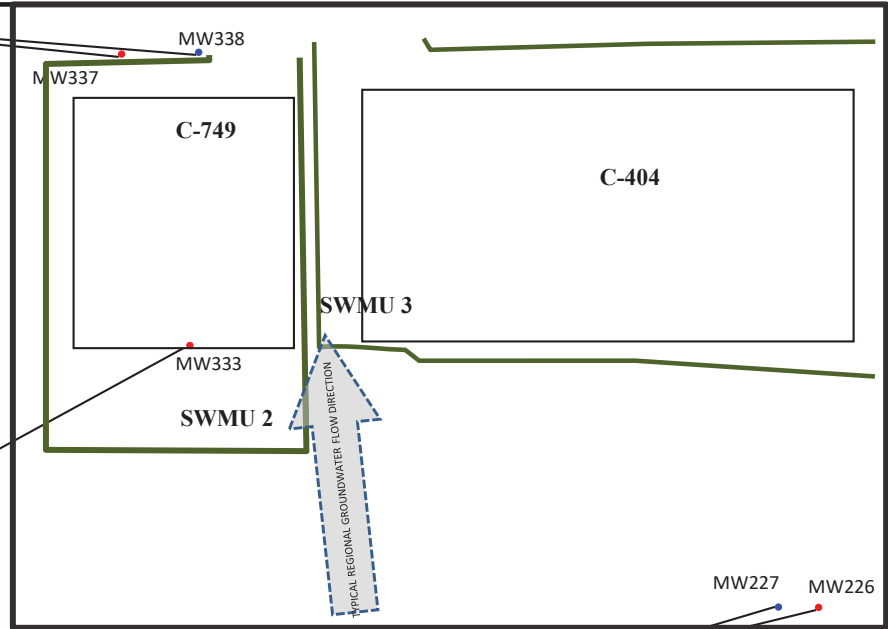
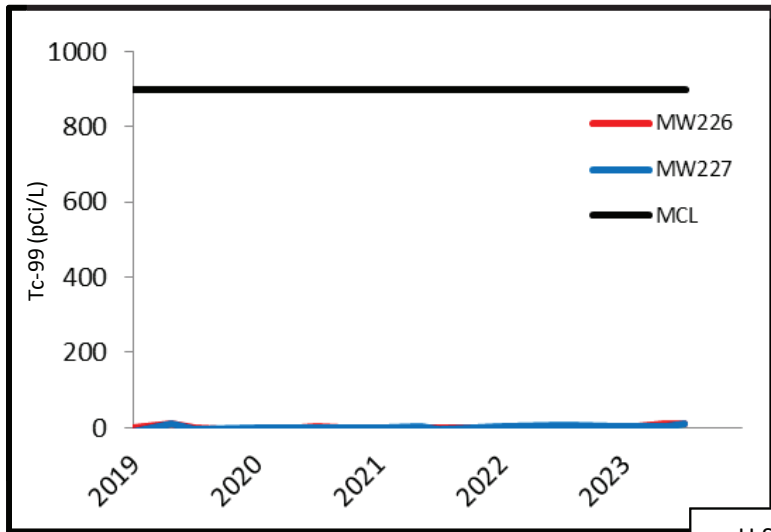
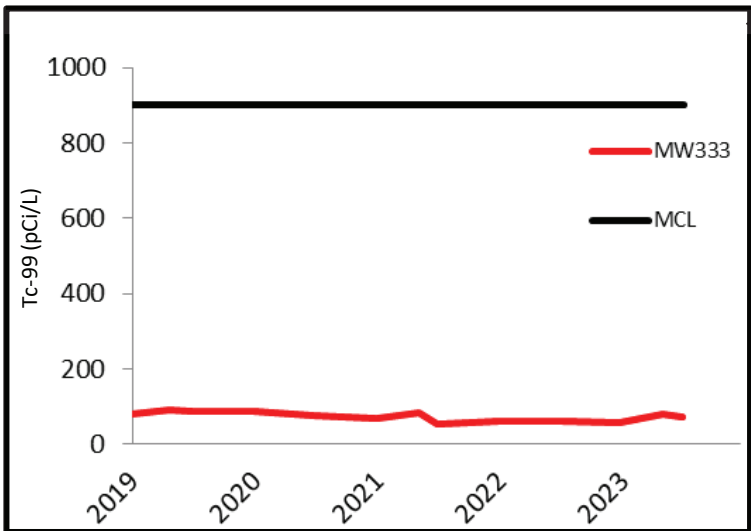
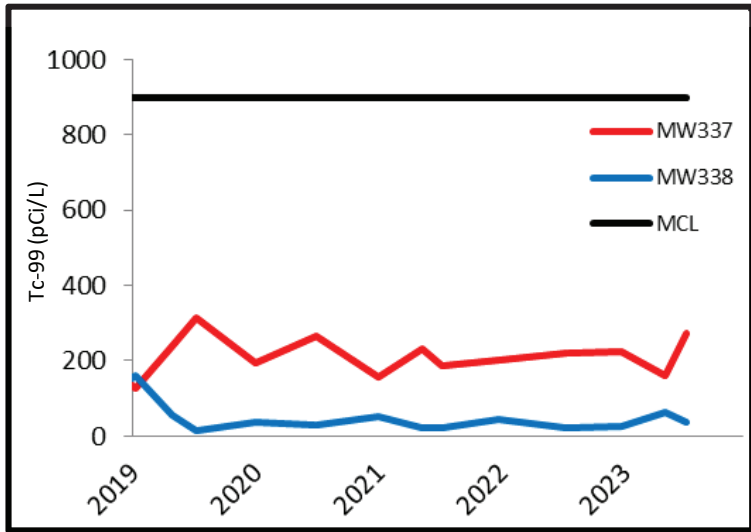
- Upper RGA
- Lower RGA
- SWMU Boundary
- NOT TO SCALE
- Upper RGA Results
- Lower RGA Results

TRUE NORTH  
20°  
PLANT NORTH

U.S. DEPARTMENT OF ENERGY  
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE  
PADUCAH GASEOUS DIFFUSION PLANT



Figure E.2. TCE Trends in SWMU 2 Wells



**LEGEND**

- Upper RGA
- Lower RGA
- SWMU Boundary
- NOT TO SCALE
- ∩ Upper RGA Results
- ∧ Lower RGA Results

TRUE NORTH  
20°  
PLANT NORTH

U.S. DEPARTMENT OF ENERGY  
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE  
PADUCAH GASEOUS DIFFUSION PLANT



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

**THIS PAGE INTENTIONALLY LEFT BLANK**