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March 31, 2026

Ms. Myrna Redfield, Program Manager
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PPPO-02-10036602-26

Dear Ms. Redfield:

DE-EM0004895: APPROVAL OF DELIVERABLE NO. 37, 2025 ANNUAL EXTERNAL RADIATION MONITORING REPORT, FRNP-RPT-0409

Reference: Letter from M. Redfield to J. Stokes, "Four Rivers Nuclear Partnership, LLC—Deliverable No. 37—*2025 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0409," (FRNP-26-10040), dated March 18, 2026

The U.S. Department of Energy reviewed and approves the Four Rivers Nuclear Partnership, LLC Deliverable No. 37, *2025 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0409, as submitted.

If you have any questions or require additional information, please contact Josh Koster at (270) 816-6790.

Sincerely,

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FRNP-RPT-0409

2025 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky

FOUR RIVERS NUCLEAR PARTNERSHIP, LLC

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FRNP-RPT-0409

2025 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—March 2026

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

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

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ACRONYMS

ANSI	American National Standards Institute
D&R	deactivation and remediation
DOE	U.S. Department of Energy
E	effective dose
EDL	environmental dosimeter location
GLE	Global Laser Enrichment
GPS	global positioning system
HPS	Health Physics Society
LA	Limited Area
MEI	maximally exposed individual
N/A	not applicable
ND	not detected
O	Order
PPA	Property Protection Area
TVA	Tennessee Valley Authority
WKWMA	West Kentucky Wildlife Management Area

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EXECUTIVE SUMMARY

The dose from the direct radiation pathway is evaluated by its contribution to the U.S. Department of Energy (DOE) total dose limit of 100 millirem (mrem) per year from all relevant pathways (i.e., air, surface water, sediment, direct radiation). In 2025, the estimated dose to the maximally exposed individual member of the public from the direct radiation pathway at the Paducah Site was 2.23E-01 mrem, which represents 0.22% of the DOE annual dose limit and 0.9% of the 25 mrem radioactive waste public dose constraint.

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1. INTRODUCTION

U.S. Department of Energy (DOE) Order (O) 458.1 Chg 5 (AdminChg), *Radiation Protection of the Public and the Environment*, has requirements in place to protect the public and environment from radiation exposure. Energy absorbed from radioactive materials outside the body is referred to as an external dose. At the Paducah Site, external doses come from direct ionizing radiation, which includes natural radioactivity from cosmic and terrestrial sources and man-made radioactive sources. This report summarizes the results of external gamma and neutron radiation monitoring conducted in 2025.

2. BACKGROUND

The external radiation monitoring program is designed to provide exposure data on direct radiation from DOE operations to members of the public. The Deactivation and Remediation (D&R) Contractor uses a surveillance network of environmental dosimeters to monitor this direct radiation. The surveillance network is divided into five groups, which are used to monitor locations inside the Limited Area (LA), locations outside the LA and inside the Property Protection Area (PPA), locations outside the PPA and inside the DOE boundary, locations outside the DOE boundary, and background locations. Figure 1 shows the LA boundary, PPA boundary, DOE boundary, and environmental dosimeter locations (EDLs).

The primary sources for radiation exposure to areas outside of the LA are the uranium hexafluoride (UF_6) cylinder storage yards, which are also shown in Figure 1.

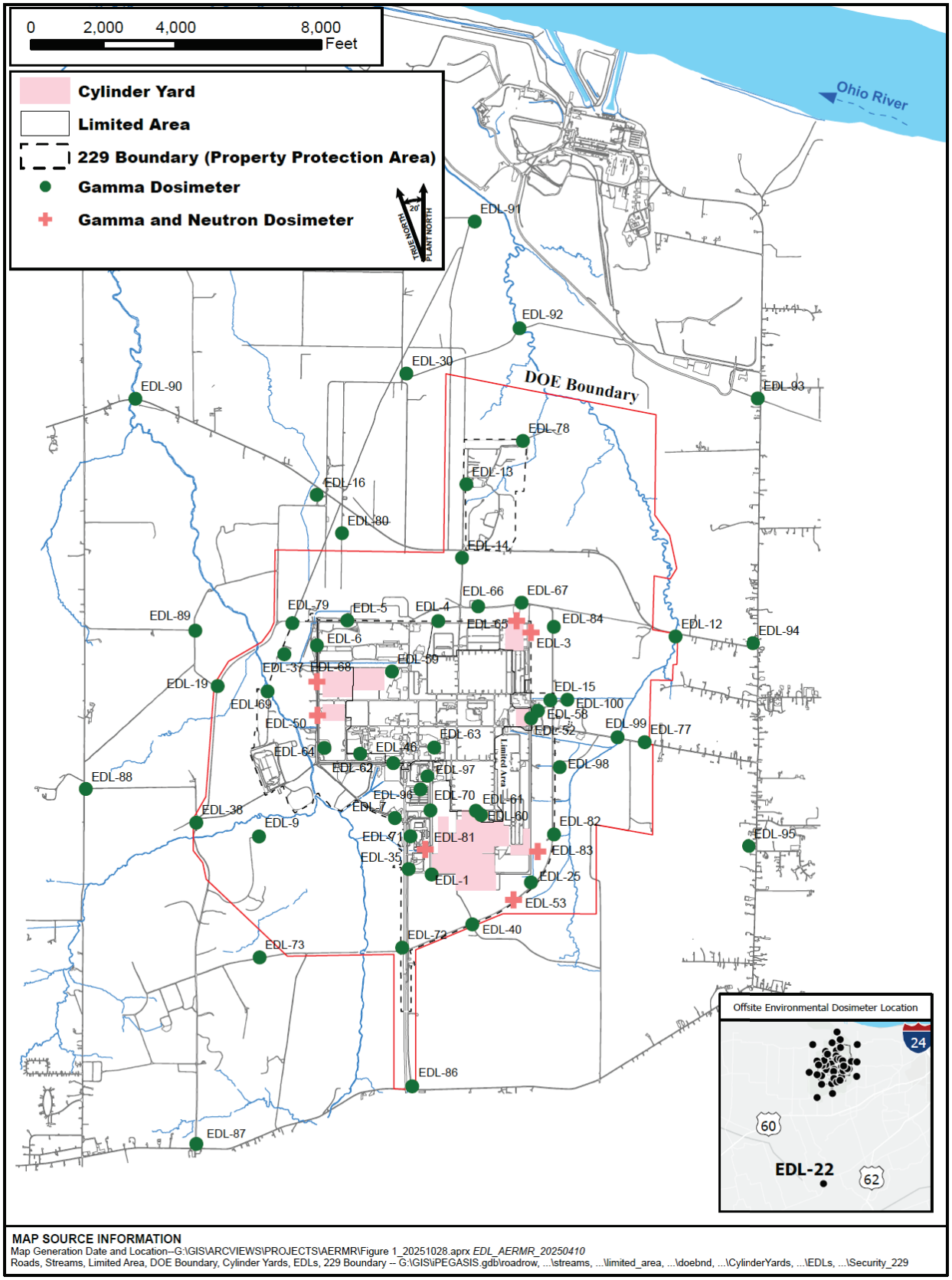
Historical monitoring for the past five years has shown that the background-corrected external gamma radiation effective dose (E) from routine DOE operations to the maximally exposed individual (MEI) has been 5 millirem (mrem) per year or less and the collective population E has been < 1 person-rem per year for the exposed population.

3. MONITORING AND OBJECTIVES

In 2025, the D&R Contractor conducted routine surveillance of external gamma and neutron radiation exposure to monitor any effects due to past releases of radionuclides and current operations involving radioactive sources (e.g., depleted UF_6 cylinder management). External gamma radiation monitoring provides data to model the direct radiation pathway from sources located on-site to members of the public, consistent with DOE O 458.1. Neutron radiation monitoring that is in place near cylinder yards is for information purposes only and not used in the direct radiation pathway calculations.

For 2025, the objectives for external exposure monitoring were the following.

- Establish the radiation dose potentially received by a member of the public from direct exposure to DOE operations.
- Calculate the E to a member of the public in areas freely accessible to members of the public.
- Calculate the E to a member of the public at the DOE boundary.
- Calculate the E to the MEI member of the public.



MAP SOURCE INFORMATION
Map Generation Date and Location--G:\GIS\ARCVIEWS\PROJECTS\AERMR\Figure 1_20251028.aprx *EDL_AERMR_20250410*
Roads, Streams, Limited Area, DOE Boundary, Cylinder Yards, EDLs, 229 Boundary -- G:\GIS\iPEGASIS.gdb\roadrow, ...\streams, ...\limited_area, ...\doebnd, ...\CylinderYards, ...\EDLs, ...\Security_229

Figure 1. Dosimeter Locations

4. METHODOLOGY

4.1 MEASUREMENT OF GAMMA RADIATION

The D&R Contactor used the LANDAUER® InLight® EX Environmental dosimeter to measure external gamma radiation. Landauer, Inc. of Glenwood, Illinois, supplied this dosimeter. This environmental dosimeter meets American National Standards Institute (ANSI) N545-1975, *Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry (Environmental Applications)* and ANSI/Health Physics Society (HPS) N13.37-2014, *Environmental Dosimetry—Criteria for System Design and Implementation*.

The dosimeter consists of a case that contains metal and plastic filters and a plastic slide that contains detector elements. The detector element is a layer of aluminum oxide (Al_2O_3) sandwiched between two layers of polyester for a total thickness of 0.3 mm. The method of analysis applied to the detector is optically stimulated luminescence.

The vendor literature supporting the use of this dosimeter indicates the following:

- Photons (x-rays and gamma rays) with energies above 15 kiloelectron volt (keV) nominally: 0.1 mrem to 1,000 mrem; and
- Beta particles with energies greater than approximately 500 keV average energy: 20 mrem to 1,000 mrem.

Landauer, Inc. processed the dosimeters received from the D&R Contractor, following its internal processes, protocols, and quality control routines, and provided reports of the results to the D&R Contractor.

The D&R Contractor normalized the reported gamma radiation and compared it to a normalized baseline background to determine if the monitoring location had a facility-related dose. Sections 5 through 9 provide the results of this comparison.

4.2 MEASUREMENT OF NEUTRON RADIATION

The D&R Contactor used the LANDAUER® Neutrak® Type E dosimeter to measure external neutron radiation. Landauer, Inc. of Glenwood, Illinois, supplied this dosimeter. This environmental dosimeter is Department of Energy Laboratory Accreditation Program-accredited and used to collect external neutron radiation dose for information only.

The Neutrak® detector is a CR-39 (ally diglycol carbonate) based solid-state nuclear track detector that is not sensitive to x-ray, beta, or gamma radiation. The CR-39 is laser engraved for permanent identification and wrapped with a 2-D bar code to assure efficient chain-of-custody. The Neutrak® Type E detects fast, intermediate, and thermal neutrons.

The vendor literature supporting this dosimeter indicates the following:

- An energy range of 0.25 electron volt (eV) to 40 mega electron volt (MeV); and
- A dose measurement range of 10 mrem to 25 rem.

Landauer, Inc. processed the dosimeters received from the D&R Contractor, following its internal processes, protocols, and quality control routines, and provided reports of the results to the D&R Contractor. The neutron results are discussed in Section 10.

4.3 ENVIRONMENTAL DOSIMETER SURVEILLANCE NETWORK

The D&R Contractor started the year with 68 locations to measure external gamma radiation, and seven locations to measure external neutron radiation for information only, and one control location. During the year, there were changes to the environmental dosimeter surveillance network which resulted in a final total of 64 locations to measure external gamma radiation and seven locations to measure external neutron radiation for information only.

Changes to the EDLs were the following.

1. On January 7, 2025, EDL-1 was moved from its original location on the depleted uranium hexafluoride (DUF_6) cylinder yard fence to the southwest corner of the same fence to accommodate construction activities.

2. On January 7, 2025, three new EDLs (EDL-98, 99, and 100) were installed outside the PPA boundary and west of Little Bayou Creek to gather additional information outside the PPA boundary and inside the DOE boundary.

3. On August 7, 2025, EDL-40 was moved from its original location outside the DOE boundary to its current location inside the PPA boundary at the PPA-32 gate. The reason for this was this parcel of property was purchased by Global Laser Enrichment (GLE) and GLE installed perimeter fencing for this area, which meant access to the original location was no longer available.

4. On August 14, 2025, EDL-74, 75, and 76 were removed from GLE property because they were no longer needed as monitoring locations to determine dose to the public from DOE operations.

5. On August 14, 2025, EDL-2 and EDL-53 were removed because they were in the General Matter-leased area.

6. On October 7, 2025, EDL-53 was placed at a new location inside the PPA boundary at the PPA-31 gate. This location included a gamma and a neutron dosimeter.

7. On October 7, 2025, EDL-19 was moved from its original location at MW426. The reason for the move was a cattle gate was installed across the road so it could not be accessed by vehicle. The new location was installed at the cattle gate on the road that leads to MW426.

Analysis of the data from this network of EDLs served to monitor changes in external radiation measurements over time and any accidental releases of radioactive material related to D&R Contractor operational activities conducted for DOE.

The network of EDLs was divided into the following groups.

- Group 1 EDLs provided background analysis. Group 1 gamma results and data analysis are discussed in Section 5.

- Group 2 EDLs were located inside or on the perimeter of the LA. Group 2 gamma results and data analysis are discussed in Section 6, and neutron results are discussed in Section 10.

- Group 3 EDLs were located outside the LA and inside the PPA boundary. Group 3 gamma results and data analysis are discussed in Section 7, and neutron results are discussed in Section 10.

- Group 4 EDLs were located outside the PPA and inside the DOE boundary. Group 4 gamma results and data analysis are discussed in Section 8.

- Group 5 EDLs were located outside the DOE boundary. Group 5 gamma results and data analysis are discussed in Section 9.

The control location for the environmental dosimeters was the C-101 Cafeteria dosimetry office, which is located outside the LA boundary but inside the PPA boundary.

The coordinates for the monitoring locations were determined using a differential global positioning system (GPS), and data were entered into the Paducah Site geographic information system. No EDLs were placed in radiologically contaminated areas. The monitoring locations are shown in Figure 1 and location descriptions and coordinates are listed in the appendix.

4.4 DATA COLLECTION

Environmental dosimeters were collected and analyzed quarterly. When the environmental dosimeters were collected, the following quarter's dosimeters were placed at the same locations when possible. The appendix lists the dosimeter collection dates.

One gamma dosimeter per quarterly sampling event was designated as a field blank and was carried to all monitoring locations during placement and collection of the environmental dosimeters. One control gamma dosimeter (i.e., trip blank) was retained in the C-101 Cafeteria dosimetry office and then used as a transit blank that accompanied the environmental dosimeters when they were shipped off-site for analysis. This control was not subtracted from the dosimeter results.

Each gamma dosimeter was placed in a wide-mouth plastic sample bottle when deployed to the monitoring location. A lid was screwed onto the bottle, and a nylon wire tie was wrapped around each bottle under the lid to secure it to a fence or other fixed structure, usually at a height of approximately 3–4 ft aboveground. The sample bottle provided a sturdy weather-resistant package that did not significantly attenuate gamma radiation (i.e., induce a negative bias on the measurement).

Each neutron dosimeter was placed in a wide-mouth plastic sample bottle when deployed to the monitoring location. A lid was screwed onto the bottle; a nylon wire tie was wrapped around each bottle under the lid to secure it to a Lucite® block, which simulated the albedo effect; and the bottle was attached to a fence or other fixed structure, usually at a height of approximately 3–4 ft aboveground.

Based on process knowledge from historical surveys, the siting of dosimeters outside the bounds of radiological contamination areas, and the Class 3 radiological surveys performed by Radiation Protection to release the dosimeters prior to shipment to the vendor, the dosimeters were below the DOE release criteria and U.S. Department of Transportation level for regulated materials.

5. GROUP 1

Group 1 collected gamma background information from 11 locations that were unaffected by Paducah Site operations or other site-specific radiation sources.

5.1 GROUP 1 QUARTERLY MEASURED FIELD DOSE

The measured field dose (M_F) was successfully obtained from the Group 1 locations for all four quarters, except for EDL-86, which was missing when the second quarter dosimeters were collected. Because EDL-86 was missing, the second quarter M_F was estimated using the following equation:

$$M_F = (M_F \text{ for first quarter} + M_F \text{ for third quarter} + M_F \text{ for fourth quarter}) \div 3$$

Table 1 shows the Group 1 quarterly M_F and includes decimal places not shown when rounding.

Table 1. Group 1 Quarterly M_F

Quarter	1		2		3		4	
EDL Number	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)
22	85	21.3	97	24.4	91	26.2	92	28.1
86	84	20.9	98	25.4	90	27.4	93	27.8
87	84	19.1	98	22.0	90	21.8	93	25.5
88	85	21.9	97	24.1	90	28.0	93	26.0
89	85	19.7	97	23.8	90	22.9	93	23.4
90	84	20.3	98	22.2	90	26.0	93	25.8
91	84	20.0	98	20.6	90	22.9	93	25.2
92	84	19.4	98	22.1	92	26.2	91	23.4
93	84	21.5	98	25.4	92	25.4	91	24.9
94	84	22.7	98	27.0	90	25.1	93	24.9
95	84	20.8	98	24.6	90	22.1	93	30.6

5.2 GROUP 1 NORMALIZED QUARTERLY FIELD DOSE

The M_F in Table 1 was adjusted for a standardized 91-day period. This correction adjusts for the actual number of days of field deployment, which varied due to weather, holidays, and the fact that the number of days in a year is not exactly divisible by four. The normalized quarterly field dose (M_Q) is determined by the following equation:

$$M_Q = M_F \times 91 \text{ days} \div \text{number of days in the field}$$

The corresponding normalized annual dose (M_A), then, is the sum of the four normalized quarterly doses. Table 2 shows the Group 1 M_Q and M_A and includes decimal places not shown when rounding.

Table 2. Group 1 M_Q and M_A

Quarter	1	2	3	4	
EDL Number	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_A (mrem)
22	22.8	22.9	26.2	27.8	99.7
86	22.6	23.6	27.7	27.2	101.1
87	20.7	20.4	22.0	25.0	88.1
88	23.4	22.6	28.3	25.4	99.8
89	21.1	22.3	23.2	22.9	89.5
90	22.0	20.6	26.3	25.2	94.1
91	21.7	19.1	23.2	24.7	88.6
92	21.0	20.5	25.9	23.4	90.9
93	23.3	23.6	25.1	24.9	96.9
94	24.6	25.1	25.4	24.4	99.4
95	22.5	22.8	22.3	29.9	97.7

5.3 BASELINE QUARTERLY AND ANNUAL INFORMATION

The D&R Contractor changed to new types of environmental dosimeters at the beginning of 2024. In order to facilitate this change, a trial period was conducted during the second, third, and fourth quarters of 2023. ANSI/HPS N13.37-2014 recommends using five to 10 years of historical environmental radiation monitoring data for the baseline information. Because there are not five years of historical data, the baseline is based on available results.

Group 1 locations were unaffected by Paducah Site operations or other site-specific radiation sources, so a baseline background dose was established for each monitoring location using quarterly measurements. Each of the quarterly measurements were normalized to a standard 91-day quarter.

Table 3 shows the Group 1 M_Q for each monitoring location and includes decimal places not shown when rounding.

Table 3. Baseline M_Q

EDL	2023 Second Quarter M_Q (mrem)	2023 Third Quarter M_Q (mrem)	2023 Fourth Quarter M_Q (mrem)	2024 First Quarter M_Q (mrem)	2024 Second Quarter M_Q (mrem)	2024 Third Quarter M_Q (mrem)	2024 Fourth Quarter M_Q (mrem)	2025 First Quarter M_Q (mrem)	2025 Second Quarter M_Q (mrem)	2025 Third Quarter M_Q (mrem)	2025 Fourth Quarter M_Q (mrem)
22	20.3	24.0	23.8	23.2	23.2	23.7	22.1	22.8	22.9	26.2	27.8
86	19.8	26.2	20.2	22.6	21.3	24.4	22.9	22.6	23.6	27.7	27.2
87	18.3	25.2	17.6	22.3	20.0	20.5	20.5	20.7	20.4	22.0	25.0
88	20.7	27.3	18.3	23.6	22.8	24.9	21.2	23.4	22.6	28.3	25.4
89	16.9	24.4	20.7	24.5	20.5	25.0	20.0	21.1	22.3	23.2	22.9
90	19.1	24.7	17.2	21.4	21.7	23.4	21.7	22.0	20.6	26.3	25.2
91	18.2	25.4	18.5	22.6	18.5	20.1	20.1	21.7	19.1	23.2	24.7
92	17.4	24.7	18.8	21.2	20.7	22.8	19.8	21.0	20.5	25.9	23.4
93	20.3	26.1	20.6	25.2	20.5	23.7	23.3	23.3	23.6	25.1	24.9
94	23.1	28.1	21.6	24.5	22.4	25.2	23.1	24.6	25.1	25.4	24.4
95	19.6	23.6	20.3	26.2	21.4	23.9	22.0	22.5	22.8	22.3	29.9

5.3.1 Baseline Quarterly Information

The baseline quarterly dose (B_Q), baseline standard deviation dose (S_Q), and coefficient of variation (CV) for each monitoring location were determined using the following equations.

$$B_Q = \text{AVERAGE } (M_{Q1} + M_{Q2} \ldots M_{QN})$$

Where:

M_Q = each quarter's M_Q, shown in Table 3
N = number of data points for the location

$$S_Q = \text{STDEV } (M_{Q1} + M_{Q2} \ldots M_{QN})$$

Where:

M_Q = each quarter's M_Q, shown in Table 3
N = number of data points for the location

$$CV = S_Q \div B_Q$$

Table 4 shows the baseline B_Q, S_Q, and CV for each monitoring location and includes decimal places not shown when rounding.

Table 4. Baseline B_Q, S_Q, and CV

EDL	B_Q (mrem)	S_Q (mrem)	CV $S_Q \div B_Q$
22	23.6	2.0	0.08
86	23.5	2.7	0.11
87	21.1	2.4	0.11
88	23.5	2.9	0.12
89	22.0	2.4	0.11
90	22.1	2.7	0.12
91	21.1	2.6	0.12
92	21.5	2.5	0.12
93	23.3	2.0	0.09
94	24.3	1.8	0.07
95	23.1	2.9	0.12

The B_Q and S_Q values shown in Table 4 were used to determine the 90th percentile values for the background. The 90th percentile was chosen to account for inherent variability in the range of normal environmental measurements.

The 90th percentile (σB_Q) value of 23.6 mrem was used as the representative baseline quarterly background dose for comparison to the normalized 2025 dose at each monitoring location and was determined using the following equation.

$$\sigma B_Q = \text{PERCENTILE.INC}\ (B_{Q1}:B_{QN},0.9)$$

Where:

$B_{Q1}:B_{QN}$ = the range from the first B_Q value to the last B_Q value, shown in Table 4
0.9 = the 90th percentile of the range given in the equation

The 90th percentile (σS_Q) value of 2.87 mrem was used as the representative baseline standard deviation to determine the minimum differential dose for the quarterly measurements and was determined using the following equation.

$$\sigma S_Q = \text{PERCENTILE.INC}\ (S_{Q1}:S_{QN},0.9)$$

Where:

$S_{Q1}:S_{QN}$ = the range from the first S_Q first value to the last S_Q value, shown in Table 4
0.9 = the 90th percentile of the range given in the equation

The quarterly minimum differential (MDD_Q) dose is the smallest facility-related dose that can be detected during a quarter above the baseline quarterly background. The calculated MDD_Q was 8.6 mrem and was determined using the following equation.

$$MDD_Q = 3 \times \sigma S_Q$$

5.3.2 Baseline Annual Information

The M_A was determined by summing the quarterly M_Q results shown in Table 3 for each year.

The annual baseline (B_A) was determined for each monitoring location using the following equation.

$$B_A = \text{AVERAGE } (M_{A1} + M_{A2} \ldots M_{AN})$$

Where:

M_A = each annual E
N = number of data points for the location

The standard deviation (S_A) of the B_A was determined using the following equation.

$$S_A = \text{STDEV } (M_{A1} + M_{A2} \ldots M_{AN})$$

Where:

M_A = each annual E
N = number of data points for the location

$$CV = S_A \div B_A$$

Table 5 shows the baseline M_A, B_A, S_A, and CV for each monitoring location and includes decimal places not shown when rounding.

Table 5. Baseline M_A, B_A, S_A, and CV

EDL	2023 M_A (mrem)*	2024 M_A (mrem)	2025 M_A (mrem)	B_A (mrem)	S_A (mrem)	CV $S_A \div B_A$
22	90.8	92.2	99.7	94.2	4.8	0.05
86	88.3	91.3	101.1	93.6	6.7	0.07
87	81.5	83.3	88.1	84.3	3.4	0.04
88	88.4	92.5	99.8	93.6	5.8	0.06
89	82.7	90.1	89.5	87.4	4.1	0.05
90	81.3	88.2	94.1	87.9	6.4	0.07
91	82.8	81.3	88.6	84.2	3.8	0.05
92	81.1	84.5	90.9	85.5	4.9	0.06
93	89.3	92.7	96.9	93.0	3.8	0.04
94	96.9	95.2	99.4	97.2	2.1	0.02
95	84.7	93.5	97.7	91.9	6.6	0.07

*In order to provide M_A information equivalent to a full year for 2023, the B_Q for the three quarters of 2023 was determined; then, that value was added to the B_Q result to get the M_A value.

The B_A and S_A values shown in Table 5 were used to determine the 90th percentile values for the background. The 90th percentile was chosen to account for inherent variability in the range of normal environmental measurements.

The 90th percentile (σB_A) value of 94.2 mrem was used as the representative baseline annual background dose for comparison to the normalized 2025 dose at each monitoring location and was determined using the following equation.

$$\sigma B_A = \text{PERCENTILE.INC } (B_{A1}:B_{AN},0.9)$$

Where:

B_{A1}:B_{AN} = the range from the first B_A value to the last B_A value, shown in Table 5
0.9 = the 90th percentile of the range given in the equation

The 90th percentile (σS_A) value of 6.64 mrem was used as the representative baseline standard deviation to determine the minimum differential dose for the annual measurements and was determined using the following equation.

$$\sigma S_A = \text{PERCENTILE.INC}\ (S_{A1}:S_{AN},0.9)$$

Where:

S_{A1}:S_{AN} = the range from the first S_A value to the last S_A value, shown in Table 5
0.9 = the 90th percentile of the range given in the equation

The annual minimum differential (MDD_A) dose is the smallest facility-related dose that can be detected during a year above the baseline annual background. The calculated MDD_A was 19.9 mrem. The MDD_A was determined using the following equation.

$$MDD_A = 3 \times \sigma S_A$$

5.3.3 Facility-Related Dose

The quarterly facility-related dose (F_Q) is the dose received during a quarter by a field dosimeter at a monitoring location due to radiation from the monitored facility. F_Q excludes the background quarterly radiation dose of 23.6 mrem plus the MDD_Q of 8.6 mrem. The F_Q is represented as follows:

If $M_Q > (\sigma B_Q + MDD_Q)$, then $F_Q = M_Q - \sigma B_Q$
If $M_Q \leq (\sigma B_Q + MDD_Q)$, then F_Q = not detected (ND)

The annual facility-related dose (F_A) is the dose received during a year by a field dosimeter at a monitoring location due to radiation from the monitored facility. F_A excludes the background annual radiation dose of 94.2 mrem plus the MDD_A of 19.9 mrem. The FA is represented as follows:

If $M_A > (\sigma B_A + MDD_A)$, then $F_A = M_A - \sigma B_A$
If $M_A \leq (\sigma B_A + MDD_Q)$, then F_A = ND

5.4 GROUP 1 FACILITY-RELATED DOSE

Group 1 collected gamma data from 11 locations. These locations were unaffected by Paducah Site operations or other site-specific radiation sources.

Table 6 shows the Group 1 F_Q and F_A for each monitoring location and includes decimal places not shown when rounding.

Table 6. Group 1 Facility-Related Dose

EDL	σB_Q (mrem)	M_Q (mrem)				$F_Q = M_Q - \sigma B_Q$ (mrem)				σB_A (mrem)	M_A (mrem)	$F_A = M_A - \sigma B_A$ (mrem)
		1	2	3	4	1	2	3	4			
22	23.6	22.8	22.9	26.2	27.8	ND	ND	ND	ND	94.2	99.7	ND
86		22.6	23.6	27.7	27.2	ND	ND	ND	ND		101.1	ND
87		20.7	20.4	22.0	25.0	ND	ND	ND	ND		88.1	ND
88		23.4	22.6	28.3	25.4	ND	ND	ND	ND		99.8	ND
89		21.1	22.3	23.2	22.9	ND	ND	ND	ND		89.5	ND
90		22.0	20.6	26.3	25.2	ND	ND	ND	ND		94.1	ND
91		21.7	19.1	23.2	24.7	ND	ND	ND	ND		88.6	ND
92		21.0	20.5	25.9	23.4	ND	ND	ND	ND		90.9	ND
93		23.3	23.6	25.1	24.9	ND	ND	ND	ND		96.9	ND
94		24.6	25.1	25.4	24.4	ND	ND	ND	ND		99.4	ND
95		22.5	22.8	22.3	29.9	ND	ND	ND	ND		97.7	ND

NOTES:
ND = Not detected, where $M_Q \leq (\sigma B_Q + MDD_Q)$
ND = Not detected, where $M_A \leq (\sigma B_A + MDD_A)$

6. GROUP 2

Group 2 collected gamma data from 10 locations inside or on the perimeter of the LA.

6.1 GROUP 2 QUARTERLY MEASURED FIELD DOSE

The M_F was successfully obtained from the Group 2 locations for all four quarters. Table 7 shows the Group 2 quarterly M_F and includes decimal places not shown when rounding.

Table 7. Group 2 Quarterly M_F

Quarter	1		2		3		4	
EDL Number	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)
3	85	18.9	97	27.2	91	24.8	92	24.7
4	84	21.6	97	23.1	92	22.9	92	27.2
5	84	21.6	97	23.7	92	23.4	92	24.9
6	84	17.9	97	20.5	92	22.5	92	24.3
52	85	17.6	97	20.1	91	21.5	92	20.9
59	83	14.1	97	18.6	91	21.3	93	19.9
60	83	337.2	97	442.6	91	433.0	93	374.6
61	83	506.6	97	705.3	91	716.5	93	591.4
63	83	14.0	97	17.5	91	20.3	93	19.5
65	85	16.7	97	19.7	91	17.6	92	21.8

6.2 GROUP 2 NORMALIZED QUARTERLY FIELD DOSE

The M_F in Table 7 was adjusted for a standardized 91-day period. This correction adjusts for the actual number of days of field deployment, which varied due to weather, holidays, and the fact that the number of days in a year is not exactly divisible by four. The M_Q is determined by the following equation.

$$M_Q = M_F \times 91 \text{ days} \div \text{number of days in the field}$$

The corresponding M_A, then, is the sum of the four normalized quarterly doses. Table 8 shows Group 2 M_Q and M_A and includes decimal places not shown when rounding.

Table 8. Group 2 M_Q and M_A

Quarter	1	2	3	4	
EDL Number	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_A (mrem)
3	20.2	25.5	24.8	24.4	95.0
4	23.4	21.7	22.7	26.9	94.6
5	23.4	22.2	23.1	24.6	93.4
6	19.4	19.2	22.3	24.0	84.9
52	18.8	18.9	21.5	20.7	79.9
59	15.5	17.4	21.3	19.5	73.7
60	369.7	415.2	433.0	366.5	1584.5
61	555.4	661.7	716.5	578.7	2512.3
63	15.3	16.4	20.3	19.1	71.1
65	17.9	18.5	17.6	21.6	75.5

6.3 GROUP 2 FACILITY-RELATED DOSE

Group 2 collected gamma data from the LA and consisted of 10 locations. The LA is not regularly accessible to members of the public and does not represent actual E to members of the public. Locations 60 and 61 indicated a facility-related dose during the monitoring period. Locations 60 and 61 are close to the perimeter of the DUF_6 facility or its operations, so gamma dose rates at these locations are subject to change. Historically, these locations have shown a facility-related dose.

Table 9 shows the Group 2 F_Q and F_A for each monitoring location and includes decimal places not shown when rounding.

Table 9. Group 2 Facility-Related Dose

EDL	σB_Q (mrem)	M_Q (mrem)				$F_Q = M_Q - \sigma B_Q$ (mrem)				σB_A (mrem)	M_A (mrem)	$F_A = M_A - \sigma B_A$ (mrem)
		1	2	3	4	1	2	3	4			
3	23.6	20.2	25.5	24.8	24.4	ND	ND	ND	ND	94.2	95.0	ND
4		23.4	21.7	22.7	26.9	ND	ND	ND	ND		94.6	ND
5		23.4	22.2	23.1	24.6	ND	ND	ND	ND		93.4	ND
6		19.4	19.2	22.3	24.0	ND	ND	ND	ND		84.9	ND
52		18.8	18.9	21.5	20.7	ND	ND	ND	ND		79.9	ND
59		15.5	17.4	21.3	19.5	ND	ND	ND	ND		73.7	ND
60		369.7	415.2	433.0	366.5	346.1	391.6	409.4	342.9		1584.5	1490.2
61		555.4	661.7	716.5	578.7	531.8	638.0	692.9	555.0		2512.3	2418.1
63		15.3	16.4	20.3	19.1	ND	ND	ND	ND		71.1	ND
65		17.9	18.5	17.6	21.6	ND	ND	ND	ND		75.5	ND

NOTES:
ND = Not detected, where $M_Q \leq (\sigma B_Q + MDD_Q)$
ND = Not detected, where $M_A \leq (\sigma B_A + MDD_A)$

7. GROUP 3

Group 3 collected gamma data from 26 locations outside the LA boundary and inside the PPA boundary.

7.1 GROUP 3 QUARTERLY MEASURED FIELD DOSE

The M_F was successfully obtained from the Group 3 locations for all four quarters.

Table 10 shows the Group 3 quarterly M_F and includes decimal places not shown when rounding.

Table 10. Group 3 Quarterly M_F

Quarter	1		2		3		4	
EDL Number	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)
1	84	134.5	98	174.5	91	174.5	92	165.6
2[a]	85	304.5	96	340.1	38	147.2	Not applicable (N/A)	N/A
7	84	29.2	97	34.0	91	35.8	93	29.7
13	84	23.1	98	27.4	90	24.9	93	27.8
15	85	17.7	96	19.4	92	22.3	92	22.5
25	85	24.7	97	25.9	91	34.2	92	32.5
35	84	25.7	97	29.5	91	31.1	93	30.3
37	84	19.0	97	22.1	92	21.3	92	22.6
40[b]	N/A	N/A	N/A	N/A	N/A	N/A	92	28.6
46	84	18.7	97	21.9	91	23.3	93	24.5
50	84	34.1	97	41.6	92	38.2	92	43.0
53[c,d]	85	92.8	96	120.7	38	56.5	92	34.6
58	85	15.9	97	18.4	91	21.2	92	20.9
62	84	17.9	97	19.9	91	18.8	93	21.8
64	84	15.4	97	17.9	92	18.1	92	18.7
68	84	20.5	97	24.5	92	25.3	92	26.8
69	84	16.4	97	18.9	92	20.4	92	21.1
70	84	47.6	98	65.2	91	59.8	92	44.7
71	84	57.1	98	57.0	91	47.1	92	29.9
72	84	21.5	98	23.8	90	27.9	93	24.3
78	84	22.8	98	25.8	90	26.2	93	28.8
81	84	86.1	98	97.0	91	113.7	92	110.1
82	85	25.6	96	33.0	92	29.8	92	34.4
83	85	53.9	97	55.8	92	47.8	91	52.4
96	84	19.8	98	22.2	91	22.9	92	23.3
97	84	16.5	97	20.7	91	19.0	93	22.2

[a] On August 14, 2025, EDL-2 was removed from service because it was in the General Matter-leased area.
[b] On August 7, 2025, EDL-40 was moved from outside the DOE boundary to inside the PPA boundary at PPA Gate-32. This move was initiated by no longer having access to the GLE property where EDL-40 was previously located.
[c] On August 14, 2025, EDL-53 was removed from service because it was in the General Matter-leased area.
[d] On October 7, 2025, EDL-53 was placed at its new location inside the PPA boundary at PPA Gate-31.

7.2 GROUP 3 NORMALIZED QUARTERLY FIELD DOSE

The M_F in Table 10 was adjusted for a standardized 91-day period. This correction adjusts for the actual number of days of field deployment, which varied due to weather, holidays, and the fact that the number of days in a year is not exactly divisible by four. The M_Q is determined by the following equation.

$$M_Q = M_F \times 91 \text{ days} \div \text{number of days in the field}$$

The corresponding M_A, then, is the sum of the four normalized quarterly doses. Table 11 shows Group 3 M_Q and M_A and includes decimal places not shown when rounding.

Table 11. Group 3 M_Q and M_A

Quarter	1	2	3	4	
EDL Number	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_A (mrem)
1	145.7	162.0	174.5	163.8	646.0
2	326.0	322.4	352.5	N/A	1000.9
7	31.6	31.9	35.8	29.1	128.4
13	25.0	25.4	25.2	27.2	102.8
15	18.9	18.4	22.1	22.3	81.7
25	26.4	24.3	34.2	32.1	117.1
35	27.8	27.7	31.1	29.6	116.3
37	20.6	20.7	21.1	22.4	84.7
40	N/A	N/A	N/A	28.3	28.3
46	20.3	20.5	23.3	24.0	88.1
50	36.9	39.0	37.8	42.5	156.3
53	99.4	114.4	135.3	34.2	383.3
58	17.0	17.3	21.2	20.7	76.2
62	19.4	18.7	18.8	21.3	78.2
64	16.7	16.8	17.9	18.5	69.9
68	22.2	23.0	25.0	26.5	96.7
69	17.8	17.7	20.2	20.9	76.5
70	51.6	60.5	59.8	44.2	216.1
71	61.9	52.9	47.1	29.6	191.5
72	23.3	22.1	28.2	23.8	97.4
78	24.7	24.0	26.5	28.2	103.3
81	93.3	90.1	113.7	108.9	405.9
82	27.4	31.3	29.5	34.0	122.2
83	57.7	52.3	47.3	52.4	209.7
96	21.5	20.6	22.9	23.0	88.0
97	17.9	19.4	19.0	21.7	78.0

7.3 GROUP 3 FACILITY-RELATED DOSE

Group 3 collected gamma data from locations outside the LA boundary and inside the PPA boundary. This area is not regularly accessible to members of the public and does not represent actual E to members of the public. Locations 1, 2, 7, 25, 35, 50, 53, 70, 71, 81, 82, and 83 indicated a facility-related dose during the monitoring period. These locations are close to the perimeter of the DUF_6 facility or its operations, so gamma dose rates at these locations are subject to change. This may explain the fluctuations in dose throughout the monitoring period. Historically, these locations have shown a facility-related dose.

Table 12 shows the Group 3 F_Q and F_A for each monitoring location and includes decimal places not shown when rounding.

Table 12. Group 3 Facility-Related Dose

EDL	σB_Q (mrem)	M_Q (mrem)				$F_Q = M_Q - \sigma B_Q$ (mrem)				σB_A (mrem)	M_A (mrem)	$F_A = M_A - \sigma B_A$ (mrem)
		1	2	3	4	1	2	3	4			
1	23.6	145.7	162.0	174.5	163.8	122.1	138.4	150.9	140.2	94.2	646.0	551.8
2		326.0	322.4	352.5	N/A	302.4	298.8	328.9	N/A		1000.9	906.7
7		31.6	31.9	35.8	29.1	ND	ND	12.2	ND		128.4	34.2
13		25.0	25.4	25.2	27.2	ND	ND	ND	ND		102.8	ND
15		18.9	18.4	22.1	22.3	ND	ND	ND	ND		81.7	ND
25		26.4	24.3	34.2	32.1	ND	ND	10.6	ND		117.1	22.9
35		27.8	27.7	31.1	29.6	ND	ND	ND	ND		116.3	22.0
37		20.6	20.7	21.1	22.4	ND	ND	ND	ND		84.7	ND
40		N/A	N/A	N/A	28.3	N/A	N/A	N/A	ND		28.3	ND
46		20.3	20.5	23.3	24.0	ND	ND	ND	ND		88.1	ND
50		36.9	39.0	37.8	42.5	13.3	15.4	14.1	18.9		156.3	62.1
53		99.4	114.4	135.3	34.2	75.7	90.8	111.7	10.6		383.3	289.1
58		17.0	17.3	21.2	20.7	ND	ND	ND	ND		76.2	ND
62		19.4	18.7	18.8	21.3	ND	ND	ND	ND		78.2	ND
64		16.7	16.8	17.9	18.5	ND	ND	ND	ND		69.9	ND
68		22.2	23.0	25.0	26.5	ND	ND	ND	ND		96.7	ND
69		17.8	17.7	20.2	20.9	ND	ND	ND	ND		76.5	ND
70		51.6	60.5	59.8	44.2	27.9	36.9	36.2	20.6		216.1	121.9
71		61.9	52.9	47.1	29.6	38.2	29.3	23.5	ND		191.5	97.2
72		23.3	22.1	28.2	23.8	ND	ND	ND	ND		97.4	ND
78		24.7	24.0	26.5	28.2	ND	ND	ND	ND		103.3	ND
81		93.3	90.1	113.7	108.9	69.6	66.4	90.1	85.3		405.9	311.7
82		27.4	31.3	29.5	34.0	ND	ND	ND	10.4		122.2	28.0
83		57.7	52.3	47.3	52.4	34.1	28.7	23.6	28.8		209.7	115.5
96		21.5	20.6	22.9	23.0	ND	ND	ND	ND		88.0	ND
97		17.9	19.4	19.0	21.7	ND	ND	ND	ND		78.0	ND

NOTES:
ND = Not detected, where $M_Q \leq (\sigma B_Q + MDD_Q)$
ND = Not detected, where $M_A \leq (\sigma B_A + MDD_A)$

7.4 FOOD VENDOR ESTIMATED NORMALIZED DOSE

Group 3 locations 96 and 97 were food vendor locations. In 2025, no food vendors used location 96 and five food vendors used location 97. Location 97 did not show a facility-related dose, but an estimated E was calculated to show that the food vendors did not receive dose from DOE operations.

7.4.1 Equations Used to Determine Food Vendor Estimated Normalized Dose

Location 97 M_Q for each quarter shown in Table 12 was divided by 2,184 hours (91 days × 24 hours) to determine an M_Q/hour for the location.

Food Vendor M_Q at the location = (M_Q/hour at location × Number of days Food Vendor at location) × Number of hours/day at location

The background M_Q/hour for each quarter was determined by dividing the baseline background by 2,184 hours.

Background M_Q for time Food Vendor at location = (Background M_Q/hour at location × Number of days Food Vendor at location) × Number of hours/day Food Vendor at location

Net Estimated M_Q = Calculated Food Vendor M_Q – Calculated Background M_Q

Estimated M_Q for Food Vendor = (First quarter Net Estimated M_Q + Second quarter Net Estimated M_Q + Third quarter Net estimated M_Q + Fourth quarter Net Estimated M_Q)

7.4.2 Food Vendor 1 Estimated Normalized Dose

Food Vendor 1 was at location 97 from January 13, 2025, through January 8, 2026.

The estimated M_Q for Food Vendor 1 was determined using the equations shown in Section 7.4.1.

Table 13 shows the estimated M_Q for Food Vendor 1 at location 97 and includes decimal places not shown when rounding. Because the calculated estimated M_Q is a negative value, 0.0 mrem was assigned to the food vendor.

Table 13. Food Vendor 1 Estimated M_Q

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
M_Q/hour at location (mrem)	0.008	0.009	0.009	0.010
Number of days Food Vendor at location	11	11	13	10
Number of hours/day Food Vendor at location	2.5	2.5	2.5	2.5
Food Vendor M_Q at location (mrem)	0.225	0.245	0.283	0.249
Background M_Q/hour at location (mrem)	0.011	0.011	0.011	0.011
Background M_Q for time Food Vendor at location (mrem)	0.298	0.298	0.352	0.271
Net Estimated M_Q (mrem)	-0.073	-0.053	-0.069	-0.022
Estimated M_Q for Food Vendor	**-0.217**			

7.4.3 Food Vendor 2 Estimated Normalized Dose

Food Vendor 2 was at location 97 from January 13, 2025, through January 8, 2026.

The estimated M_Q for Food Vendor 2 was determined using the equations shown in Section 7.4.1.

Table 14 shows the estimated M_Q for Food Vendor 2 at location 97 and includes decimal places not shown when rounding. Because the calculated estimated M_Q is a negative value, 0.0 mrem was assigned to the food vendor.

Table 14. Food Vendor 2 Estimated M_Q

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
M_Q/hour at location (mrem)	0.008	0.009	0.009	0.010
Number of days Food Vendor at location	11	12	11	10
Number of hours/day Food Vendor at location	3	3	3	3
Food Vendor M_Q at location (mrem)	0.270	0.320	0.287	0.298
Background M_Q/hour at location (mrem)	0.011	0.011	0.011	0.011
Background M_Q for time Food Vendor at location (mrem)	0.357	0.390	0.357	0.325
Net Estimated M_Q (mrem)	-0.087	-0.070	-0.070	-0.026
Estimated M_Q for Food Vendor	**-0.253**			

7.4.4 Food Vendor 3 Estimated Normalized Dose

Food Vendor 3 was at location 97 from January 13, 2025, through April 7, 2025.

The estimated M_Q for Food Vendor 3 was determined using the equations shown in Section 7.4.1.

Table 15 shows the estimated M_Q for Food Vendor 3 at location 97 and includes decimal places not shown when rounding. Because the calculated estimated M_Q is a negative value, 0.0 mrem was assigned to the food vendor.

Table 15. Food Vendor 3 Estimated M_Q

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
M_Q/hour at location (mrem)	0.008	0.009	N/A	N/A
Number of days Food Vendor at location	9	1	N/A	N/A
Number of hours/day Food Vendor at location	2.5	2.5	N/A	N/A
Food Vendor M_Q at location (mrem)	0.184	0.022	N/A	N/A
Background M_Q/hour at location (mrem)	0.011	0.011	N/A	N/A
Background M_Q for time Food Vendor at location (mrem)	0.244	0.027	N/A	N/A
Net Estimated M_Q (mrem)	-0.059	-0.005	N/A	N/A
Estimated M_Q for Food Vendor	**-0.064**			

7.4.5 Food Vendor 4 Estimated Normalized Dose

Food Vendor 4 was at location 97 from January 13, 2025, through January 8, 2026.

The estimated M_Q for Food Vendor 4 was determined using the equations shown in Section 7.4.1.

Table 16 shows estimated M_Q for Food Vendor 4 at location 97 and includes decimal places not shown when rounding. Because the calculated estimated M_Q is a negative value, 0.0 mrem was assigned to the food vendor.

Table 16. Food Vendor 4 Estimated M_Q

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
M_Q/hour at location (mrem)	0.008	0.009	0.009	0.010
Number of days Food Vendor at location	9	13	9	14
Number of hours/day Food Vendor at location	3.0	3.0	3.0	3.0
Food Vendor M_Q at location (mrem)	0.221	0.347	0.235	0.418
Background M_Q/hour at location (mrem)	0.011	0.011	0.011	0.011
Background M_Q for time Food Vendor at location (mrem)	0.292	0.422	0.292	0.455
Net Estimated M_Q (mrem)	-0.071	-0.075	-0.057	-0.037
Estimated M_Q for Food Vendor	**-0.241**			

7.4.6 Food Vendor 5 Estimated Normalized Dose

Food Vendor 5 was at location 97 from April 21, 2025, through January 8, 2026.

The estimated M_Q for Food Vendor 5 was determined using the equations shown in Section 7.4.1.

Table 17 shows estimated M_Q for Food Vendor 5 at location 97 and includes decimal places not shown when rounding. Because the calculated estimated M_Q is a negative value, 0.0 mrem was assigned to the food vendor.

Table 17. Food Vendor 5 Estimated M_Q

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
M_Q/hour at location (mrem)	N/A	0.009	0.009	0.010
Number of days Food Vendor at location	N/A	6	5	7
Number of hours/day Food Vendor at location	N/A	2.0	2.0	2.0
Food Vendor M_Q at location (mrem)	N/A	0.107	0.087	0.139
Background M_Q/hour at location (mrem)	N/A	0.011	0.011	0.011
Background M_Q for time Food Vendor at location (mrem)	N/A	0.130	0.108	0.152
Net Estimated M_Q (mrem)	N/A	-0.023	-0.021	-0.012
Estimated M_Q for Food Vendor	**-0.057**			

8. GROUP 4

Group 4 collected gamma data from 14 locations outside the PPA boundary and inside the DOE boundary.

8.1 GROUP 4 QUARTERLY MEASURED FIELD DOSE

The M_F was successfully obtained from all of the Group 4 locations for all four quarters except for EDL-76, which was missing when the first quarter dosimeters were collected. Additionally, EDL-76 was removed on August 14, 2025, because it was on GLE property and no longer accessible.

Because EDL-76 was missing, the first quarter M_F was estimated using the following equation.

$$M_F = (M_F \text{ for second quarter} + M_F \text{ for third quarter}) \div 2$$

Table 18 shows the Group 4 quarterly M_F and includes decimal places not shown when rounding.

Table 18. Group 4 Quarterly M_F

Quarter	1		2		3		4	
EDL Number	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)
9	83	21.1	98	24.4	90	25.9	93	29.3
12	84	19.4	98	20.7	90	23.6	93	24.2
14	84	19.4	98	19.8	91	22.3	92	24.5
19	85	19.5	97	22.0	91	21.7	92	26.4
38	85	19.6	97	23.1	91	22.5	92	24.7
66	85	19.1	97	20.8	91	20.4	92	21.0
67	85	20.1	97	26.1	91	27.7	92	27.0
76	84	20.1	98	20.9	37	19.2	N/A	N/A
77	84	20.6	98	22.0	91	23.5	92	22.5
79	84	18.0	97	19.8	92	21.4	92	22.3
84	85	21.8	97	24.0	91	29.1	92	26.5
98	84	18.5	96	22.6	92	22.7	92	24.7
99	83	21.1	96	21.0	92	21.5	92	23.9
100	82	17.0	97	21.9	91	24.2	92	24.0

8.2 GROUP 4 NORMALIZED QUARTERLY FIELD DOSE

The M_F in Table 18 was adjusted for a standardized 91-day period. This correction adjusts for the actual number of days of field deployment, which varied due to weather, holidays, and the fact that the number of days in a year is not exactly divisible by four. The M_Q is determined by the following equation.

$$M_Q = M_F \times 91 \text{ days} \div \text{number of days in the field}$$

The corresponding M_A, then, is the sum of the four normalized quarterly doses. Table 19 shows the Group 4 M_Q and M_A and includes decimal places not shown when rounding.

Table 19. Group 4 M_Q and M_A

Quarter	1	2	3	4	
EDL Number	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_A (mrem)
9	23.1	22.7	26.2	28.7	100.6
12	21.0	19.2	23.9	23.7	87.8
14	21.0	18.4	22.3	24.2	85.9
19	20.9	20.6	21.7	26.1	89.3
38	21.0	21.7	22.5	24.4	89.6
66	20.4	19.5	20.4	20.8	81.1
67	21.5	24.5	27.7	26.7	100.4
76	21.7	19.4	47.2	N/A	88.3
77	22.3	20.4	23.5	22.3	88.5
79	19.5	18.6	21.2	22.1	81.3
84	23.3	22.5	29.1	26.2	101.2
98	20.0	21.4	22.5	24.4	88.3
99	23.1	19.9	21.3	23.6	87.9
100	18.9	20.5	24.2	23.7	87.4

8.3 GROUP 4 FACILITY-RELATED DOSE

Group 4 collected gamma data from outside the PPA boundary and inside the DOE boundary. None of the locations indicated a facility-related dose.

Table 20 shows the Group 4 F_Q and F_A for each monitoring location and includes decimal places not shown when rounding.

Table 20. Group 4 Facility-Related Dose

EDL	σB_Q (mrem)	M_Q (mrem)				$F_Q = M_Q - \sigma B_Q$ (mrem)				σB_A (mrem)	M_A (mrem)	$F_A = M_A - \sigma B_A$ (mrem)
		1	2	3	4	1	2	3	4			
9	23.6	23.1	22.7	26.2	28.7	ND	ND	ND	ND	94.2	100.6	ND
12		21.0	19.2	23.9	23.7	ND	ND	ND	ND		87.8	ND
14		21.0	18.4	22.3	24.2	ND	ND	ND	ND		85.9	ND
19		20.9	20.6	21.7	26.1	ND	ND	ND	ND		89.3	ND
38		21.0	21.7	22.5	24.4	ND	ND	ND	ND		89.6	ND
66		20.4	19.5	20.4	20.8	ND	ND	ND	ND		81.1	ND
67		21.5	24.5	27.7	26.7	ND	ND	ND	ND		100.4	ND
76		21.7	19.4	47.2	N/A	ND	ND	23.6	N/A		88.3	ND
77		22.3	20.4	23.5	22.3	ND	ND	ND	ND		88.5	ND
79		19.5	18.6	21.2	22.1	ND	ND	ND	ND		81.3	ND
84		23.3	22.5	29.1	26.2	ND	ND	ND	ND		101.2	ND
98		20.0	21.4	22.5	24.4	ND	ND	ND	ND		88.3	ND
99		23.1	19.9	21.3	23.6	ND	ND	ND	ND		87.9	ND
100		18.9	20.5	24.2	23.7	ND	ND	ND	ND		87.4	ND

NOTES:
ND = Not detected, where $M_Q \leq (\sigma B_Q + MDD_Q)$
ND = Not detected, where $M_A \leq (\sigma B_A + MDD_A)$

9. GROUP 5

Group 5 collected gamma data from seven locations outside the DOE boundary.

9.1 GROUP 5 QUARTERLY MEASURED FIELD DOSE

The M_F was successfully obtained from all Group 5 locations for all four quarters.

Table 21 shows the Group 5 quarterly M_F and includes decimal places not shown when rounding.

Table 21. Group 5 Quarterly M_F

Quarter	1		2		3		4	
EDL Number	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)	Days in Field	M_F (mrem)
16	84	21.8	98	24.9	90	26.3	93	26.7
30	84	21.4	98	24.6	90	24.6	93	28.8
40[a]	85	19.9	96	26.4	92	27.1	N/A	N/A
73	84	18.5	98	20.7	90	22.2	93	24.0
74[b]	84	22.1	98	26.1	37	19.7	N/A	N/A
75[b]	84	20.5	98	25.3	37	18.7	N/A	N/A
80	84	17.8	98	20.6	90	23.5	93	22.9

[a.] On August 7, 2025, EDL-40 was moved from outside the DOE boundary to inside the PPA boundary at PPA Gate-32. This move was initiated because access was no longer available to the GLE property where EDL-40 was previously located.
[b.] On August 14, 2025, EDL-74 and EDL-75 was removed from the GLE property because they were no longer needed to determine dose to the public from DOE operations.

9.2 GROUP 5 NORMALIZED QUARTERLY FIELD DOSE

The M_F in Table 21 was adjusted for a standardized 91-day period. This correction adjusts for the actual number of days of field deployment, which varied due to weather, holidays, and the fact that the number of days in a year is not exactly divisible by four. The M_Q is determined by the following equation.

$$M_Q = M_F \times 91 \text{ days} \div \text{number of days in the field}$$

The corresponding M_A, then, is the sum of the four normalized quarterly doses. Table 22 shows Group 5 M_Q and M_A and includes decimal places not shown when rounding.

Table 22. Group 5 M_Q and M_A

Quarter	1	2	3	4	
EDL Number	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_Q (mrem)	M_A (mrem)
16	23.6	23.1	26.6	26.1	99.5
30	23.2	22.8	24.9	28.2	99.1
40	21.3	25.0	26.8	N/A	73.1
73	20.0	19.2	22.4	23.5	85.2
74	23.9	24.2	48.5	N/A	96.6
75	22.2	23.5	46.0	N/A	91.7
80	19.3	19.1	23.8	22.4	84.6

9.3 GROUP 5 FACILITY-RELATED DOSE

Group 5 collected gamma data from seven locations outside the DOE boundary and in the licensed portion of the DOE Reservation. None of the locations indicated a facility-related dose.

Table 23 shows the Group 5 F_Q and F_A for each monitoring location and includes decimal places not shown when rounding.

Table 23. Group 5 Facility-Related Dose

EDL	σB_Q (mrem)	M_Q (mrem)				$F_Q = M_Q - \sigma B_Q$ (mrem)				σB_A (mrem)	M_A (mrem)	$F_A = M_A - \sigma B_A$ (mrem)
		1	2	3	4	1	2	3	4			
16		23.6	23.1	26.6	26.1	ND	ND	ND	ND		99.5	ND
30		23.2	22.8	24.9	28.2	ND	ND	ND	ND		99.1	ND
40		21.3	25.0	26.8	N/A	ND	ND	ND	N/A		73.1	ND
73	23.6	20.0	19.2	22.4	23.5	ND	ND	ND	ND	94.2	85.2	ND
74		23.9	24.2	48.5	N/A	ND	ND	24.8	N/A		96.6	ND
75		22.2	23.5	46.0	N/A	ND	ND	22.4	N/A		91.7	ND
80		19.3	19.1	23.8	22.4	ND	ND	ND	ND		84.6	ND

NOTES:
ND = Not detected, where $M_Q \leq (\sigma B_Q + MDD_Q)$
ND = Not detected, where $M_A \leq (\sigma B_A + MDD_A)$

10. NEUTRON MONITORING AND RESULTS

Locations 2, 3, 50, 53, 65, 68, 81, and 83 were monitored for external neutron radiation for information only. All neutron results were reported as "M" (i.e., dose equivalents below the minimum measurable quantity); therefore, analysis of neutron dose was not required and no dose equations were used.

11. ANALYSIS AND CONCLUSION

Since the fall of 2001, security controls have been in place to restrict public access to areas adjacent to the LA. In 2019, a PPA boundary fence was added to restrict public access to areas between the LA boundary and the PPA boundary.

In 2025, 14 locations showed facility-related dose. All 14 were either within the LA boundary or between the LA boundary and the PPA boundary, which is not regularly accessible to the public. This means the potential external radiation dose calculated from these locations was not representative of the actual public external radiation dose. All 14 locations were the areas with the highest historically measured doses throughout the monitoring period. These locations were adjacent to or in close proximity to the UF_6 cylinder storage yards.

11.1 PUBLIC ACCESS CHANGES TO WEST KENTUCKY WILDLIFE MANAGEMENT AREA

DOE revised the recreational use license agreement with the Kentucky Fish and Wildlife Resources to remove public access from the DOE-owned portions of the West Kentucky Wildlife Management Area (WKWMA) that were used for outdoor recreational activities.

The revision of this license agreement resulted in the following:

1. Public access to the GLE property was removed on February 28, 2025 (Figure 2).

2. Public access to the parcel of land between the PPA boundary and the DOE boundary on the east side of the Paducah Site was removed on June 24, 2025 (Figure 2).

3. Public access to the "A Tracts" south of Ogden Landing Road was removed on December 1, 2025 (Figure 3).

Historically, the areas that are identified in bullets Nos. 1 and 2 were the areas where a member of the public could receive a potential external radiation dose above background from DOE operations. Because these two areas were removed from public access, the determination of the 2025 potential external radiation dose to a member of the public in these two area was truncated at the dates shown.

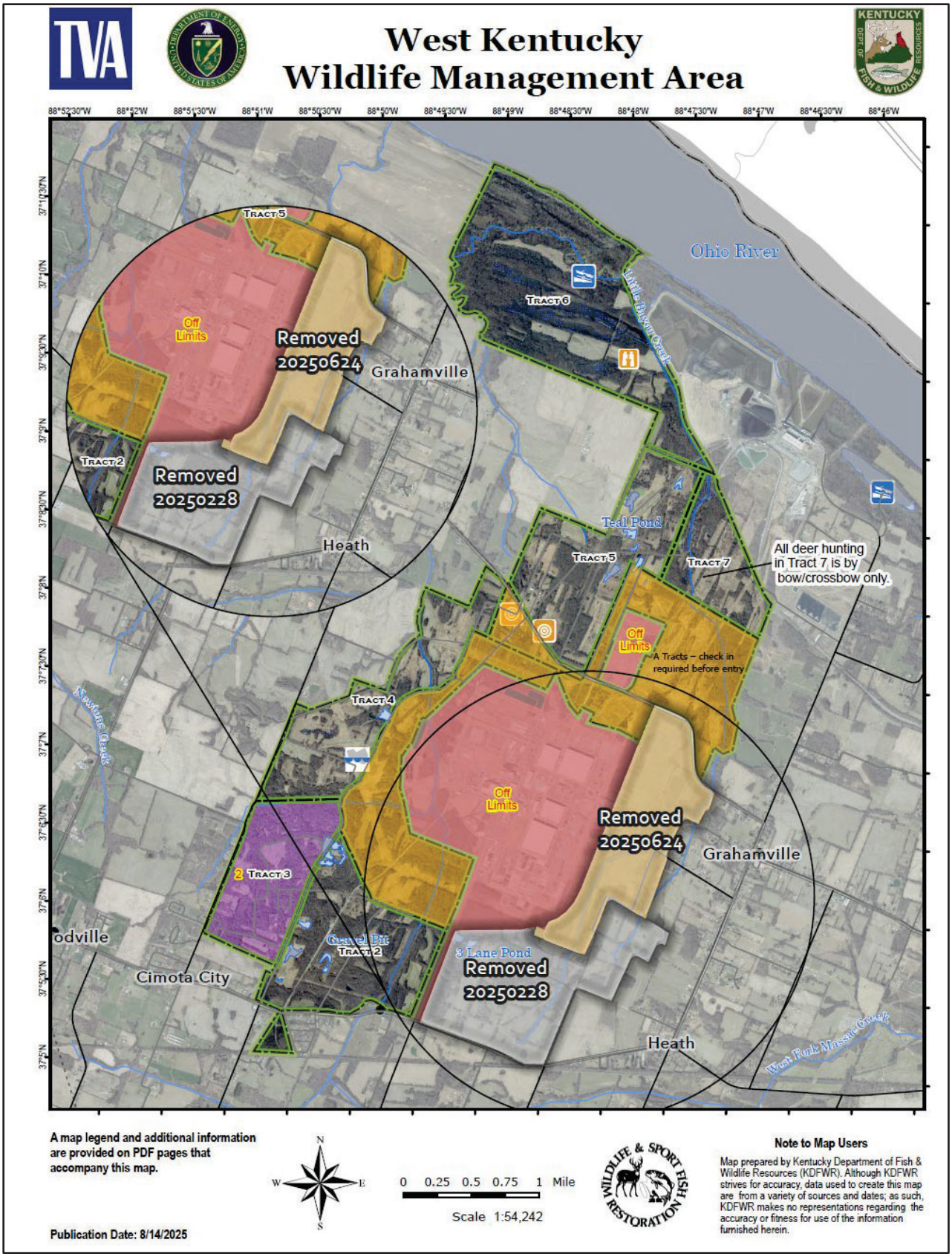


Figure 2. WKWMA Public Access Removal

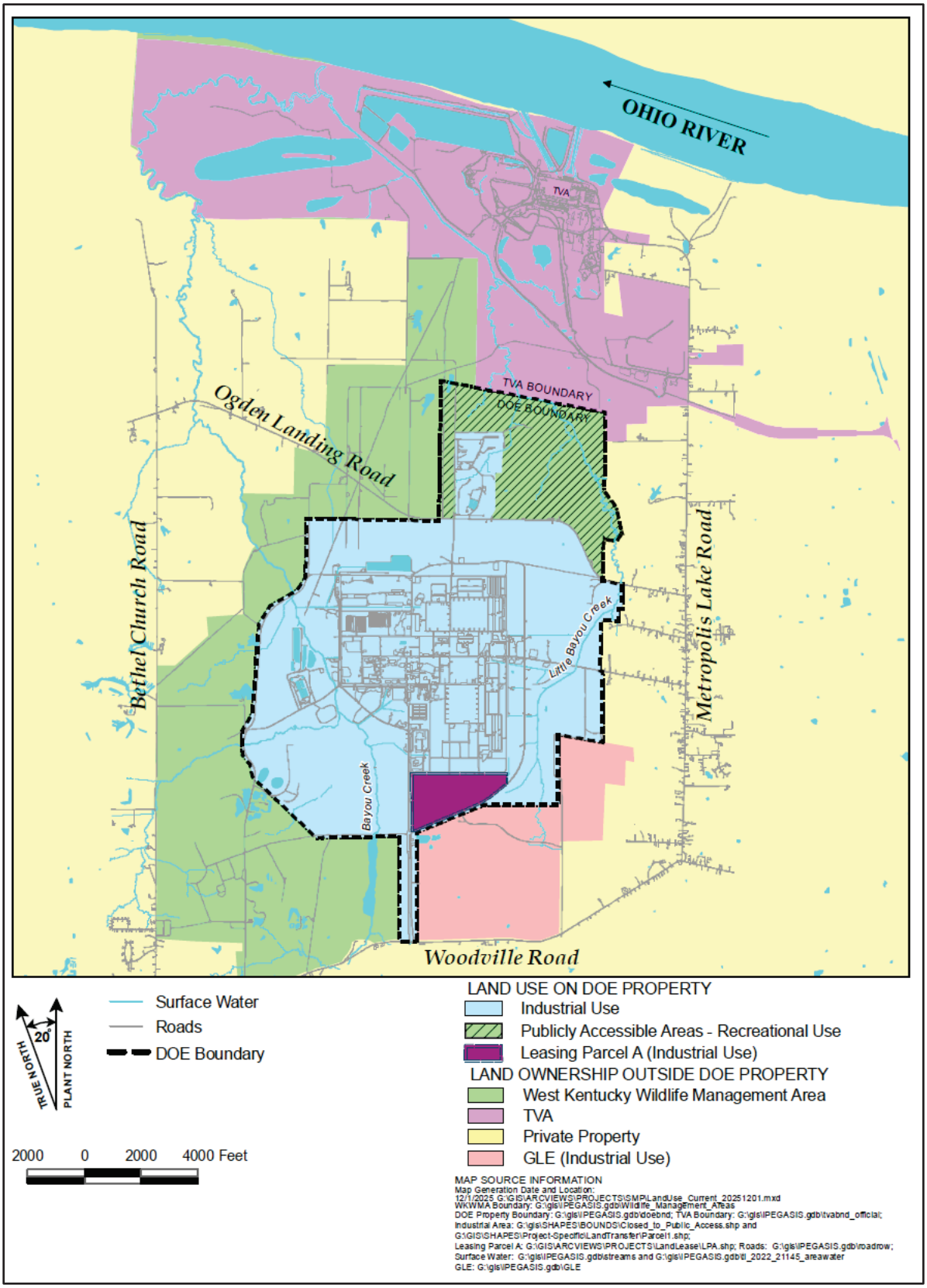


Figure 3. Current Land Use

11.2 PUBLIC DOSE FROM DIRECT EXPOSURE TO DOE OPERATIONS

As stated in Section 11, all the locations with facility-related doses were located within the LA boundary or between the LA boundary and PPA boundary, which is not regularly accessible to the public.

Group 4 locations collected gamma data in the area outside the PPA boundary and inside the DOE boundary within the WKWMA. Section 8.3, Table 20 shows these locations did not receive any facility-related dose.

Because it was possible for a member of the public to walk up to a section of the PPA boundary, a review was performed of the dose assigned to the locations closest to the PPA boundary that indicated a facility-related dose.

The locations along the PPA boundary that indicated a facility-related dose are 25, 53, 82, and 83. These locations are located in close proximity to the C-745 UF_6 cylinder storage yard and inside the PPA boundary along Dyke Road.

Because dose is inversely proportional to the square of the distance from the source, the potential E to a member of the public was determined using the shortest distance between the EDL and the closest point to the PPA boundary.

$$\text{Inverse square law} = \text{mrem}_{\text{PPAboundary}} = \text{mrem}_{\text{EDL}} \times \text{distance}_{\text{EDL}}^{2} \div \text{distance}_{\text{PPAboundary}}^{2}$$

The starting distance from the EDL is 1 inch or 0.08 ft. The distance from the EDL starting point to the closest point of the PPA boundary was determined by GPS coordinates. Table 24 shows the calculated results and includes decimal places not shown when rounding.

Table 24. Calculated Dose at Locations along PPA Boundary with a Facility-Related Dose

EDL-25	**2025**
mrem at EDL	2.29E+01
Starting distance from EDL (ft)	0.08
Shortest distance to PPA boundary (ft)	137
mrem at PPA boundary	7.79E-06
EDL-53	
mrem at EDL	2.89E+02
Starting distance from EDL (ft)	0.08
Shortest distance to PPA boundary (ft)	452
mrem at PPA boundary	9.05E-06
EDL-82	
mrem at EDL	2.80E+01
Starting distance from EDL (ft)	0.08
Shortest distance to PPA boundary (ft)	0.21
mrem at PPA boundary	4.06E+00
EDL-83	
mrem at EDL	1.16E+02
Starting distance from EDL (ft)	0.08
Shortest distance to PPA boundary (ft)	383
mrem at PPA boundary	5.04E-06

Table 24 shows that EDL-82 represents the maximum dose along the PPA boundary based on the inverse square law at 4.06E+00 mrem per year.

Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, Volume 1. Human Health, DOE/LX/07-0107&D2/R15/V1, (RMD) was used to determine a reasonable maximum exposure at this location. RMD Table B.5 lists an adult recreational user exposure frequency of 104 days per year and exposure duration of 10 hours per day (DOE 2024).

Using this information and the following equation, a potential E was determined.

$$(4.06 \text{ mrem} \times 104 \text{ days/year} \times 10 \text{ hours/day}) \div (365 \text{ days/year} \times 24 \text{ hours/day}) = 0.482 \text{ mrem}$$

Because this location was only open to the public for 169 days before DOE removed access, the potential annual dose was adjusted as shown.

$$0.482 \text{ mrem} \times (169 \text{ days} \div 365 \text{ days}) = 0.223 \text{ mrem}$$

A member of the public would receive a potential E of 2.23E-01 mrem per year along the PPA boundary at location 82.

11.3 PUBLIC DOSE IN AREAS FREELY ACCESSIBLE

In 2025, location 14 was freely accessible to members of the public. Location 14 is near Harmony Cemetery and is located north of the LA boundary and south of Ogden Landing Road. The M_A for location 14 was statistically equivalent to naturally occurring background, but below the calculated background for the site; therefore, the potential E to a member of the public at this location was 0.0E+00 mrem.

11.4 PUBLIC DOSE AT THE DOE BOUNDARY

The monitoring location along the DOE boundary with the maximum annual dose was location 40, which is located outside the DOE boundary and within the WKWMA off Dyke Road.

Table 23 shows an M_A of 73.1 mrem at location 40 before it was removed from GLE property. The M_A for location 40 was statistically equivalent to naturally occurring background, but below the calculated background for the site; therefore, the potential E to a member of the public at this location was 0.0E+00 mrem.

11.5 MAXIMALLY EXPOSED INDIVIDUAL DOSE

Based on the results in this section, location 82 represented the MEI location. As shown in Section 11.2, the potential E at location 82 was 2.23E-01 mrem.

An estimated potential collective population E was calculated by multiplying the dose to the MEI by a total estimated number of visitors hiking within the WKWMA annually (i.e., 150 persons as listed in the RMD), which resulted in a representative collective dose of 3.3E-02 person-rem, as shown by the following equation.

$$0.223 \text{ mrem} \times 1 \text{ rem}/1000 \text{ mrem} \times 150 \text{ persons} = 0.033 \text{ person-rem}$$

The data for the past five years show that location 40 was the representative MEI location from 2021 through 2024. Because DOE changed the public access to the WKWMA area during 2025, location 82 became the new MEI location. Table 25 shows the results from 2021 through 2025 and includes decimal places not shown when rounding.

Table 25. Comparison of MEI and Collective Population Potential E

	2021	2022	2023	2024	2025*
MEI calculated E (mrem)	2.1E+00	1.8E+00	6.3E-01	1.1E+00	2.23E-01
Percent of DOE 25 mrem radioactive waste public dose constraint	8.5%	7.1%	2.5%	4.5%	0.9%
Percent of DOE 100 mrem public dose limit	2.1%	1.8%	0.63%	1.1%	0.22%
Population	150	150	150	150	150
Collective population E (person-rem)	3.2E-01	2.7E-01	9.4E-02	1.7E-01	3.3E-02

*In 2025, the MEI location changed from location 40, which is the dose shown for years 2021 through 2024, to location 82. The change in the MEI location for 2025 is due to DOE removal of public access to areas between the PPA boundary and the DOE boundary.

11.6 CONCLUSION

The dose from the direct radiation pathway is evaluated by its contribution to the DOE total dose limit of 100 mrem per year from all relevant pathways (i.e., air, surface water, sediment, direct radiation). In 2025, the estimated dose to the MEI from the direct radiation pathway at the Paducah Site was 2.23E-01 mrem, which represents 0.22% of the DOE annual dose limit and 0.9% of the 25 mrem radioactive waste public dose constraint.

12. REFERENCES

DOE (U.S. Department of Energy) 2024. *Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, Volume 1. Human Health*, DOE/LX/07-0107&D2/R15/V1, U.S. Department of Energy, Paducah, KY, June.

FRNP (Four Rivers Nuclear Partnership, LLC) 2022. *2021 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0227, Four Rivers Nuclear Partnership, LLC, Paducah, KY, July.

FRNP 2023. *2022 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0275, Four Rivers Nuclear Partnership, LLC, Paducah, KY, March.

FRNP 2024. *2023 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0333, Four Rivers Nuclear Partnership, LLC, Paducah, KY, March.

FRNP 2025. *2024 Annual External Radiation Monitoring Report Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0374, Four Rivers Nuclear Partnership, LLC, Paducah, KY, March.

FRNP 2026. *2025 Annual External Radiation Monitoring Report*, DAC-ENV-FA6110-0018, Four Rivers Nuclear Partnership, LLC, Paducah, KY, March.

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APPENDIX

DOSIMETER LOCATIONS AND COLLECTION DATES

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ACRONYMS

DOE	U.S. Department of Energy
EDL	environmental dosimeter location
KOW	Kentucky Ordnance Works
KPDES	Kentucky Pollutant Discharge Elimination System
N/A	not applicable
NSDD	North-South Diversion Ditch
PGDP	Paducah Gaseous Diffusion Plant
WKWMA	West Kentucky Wildlife Management Area

Table A.1. Location Name, Description, and Coordinates

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
Environmental dosimeter location (EDL)-1	Paducah Gaseous Diffusion Plant (PGDP) security fence west of C-745-M Cylinder Storage Yard near intersection of Patrol Road and Alabama Avenue around corner on southwest side.	N 37 06 16.66	W 088 48 55.18	-4172	-5856
EDL-2	PGDP security fence south of C-745-T Cylinder Storage Yard near pole T20-6J. South cylinder yard perimeter fence.	N 37 06 02.15	W 088 48 43.07	-2740	-6427
EDL-3	PGDP security fence east of C-745-H Cylinder Storage Yard near pole 23-31. Perimeter fence northeast corner.	N 37 07 04.17	W 088 47 57.21	-1399	739
EDL-4	North PGDP security fence near the North-South Diversion Ditch (NSDD).	N 37 07 15.74	W 088 48 25.56	-3957	1052
EDL-5	North PGDP security fence north of C-747-A Burial Area near pole T53A1P26G. North perimeter fence between lagoons.	N 37 07 24.38	W 088 48 54.58	-6464	1068
EDL-6	PGDP security fence west of C-746-P1 Scrap Metal Yard (West) near pole 22-4. C-612 Northwest Plume Groundwater System perimeter fence.	N 37 07 20.85	W 088 49 07.22	-7303	382
EDL-7	PGDP perimeter fence adjacent to Curlee Road near entrance to U.S. Department of Energy (DOE) building (C-103 DOE Site Office and Annex). Perimeter fence across from entrance to DOE building.	N 37 06 29.15	W 088 49 02.49	-5153	-4400
EDL-9	Northeast corner of fence of old Kentucky Ordnance Works (KOW) water treatment plant, near MW309. Gate to MW305.	N 37 06 37.12	W 088 49 48.11	-8901	-4907
EDL-12	Institutional controls fence near MW191 where Little Bayou Creek crosses U.S. Highway 358. MW191, Little Bayou Creek, and Ogden Landing Road.	N 37 06 49.62	W 088 47 11.44	2588	626

Table A.1. Location Name, Description, and Coordinates (Continued)

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
EDL-13	West fence of C-746-U Contained Landfill near entrance gate.	N 37 07 48.17	W 088 48 00.61	-3182	4825
EDL-14	Institutional controls fence along the NSDD on west side of 14th Street extension near Highway 358 (K003). Fence at NSDD, north of MW353.	N 37 07 29.75	W 088 48 10.58	-3302	2798
EDL-15	Northeast corner of C-755 Trailer Complex fence behind C-755-D Electrical Storage.	N 37 06 45.01	W 088 47 58.91	-864	-1129
EDL-16	West Kentucky Wildlife Management Area (WKWMA) clubhouse on northwest corner porch post. On porch WKWMA headquarters.	N 37 07 59.44	W 088 48 49.76	-7311	4533
EDL-19 old location	Past pond on right “A” sign next to MW426.	N 37 07 24.43	W 088 49 33.11	-9398	2
EDL-19 new location on 10/7/2025	At the cattle gate at intersection on road toward MW426 at five points.	N 37 07 19.708	W 088 49 43.719	-10041	-741
EDL-22	Outside of the fence of the locked air sampling station at the rear corner of the Bethel Cumberland Presbyterian Church Cemetery.	N 37 00 05.36	W 088 52 36.29	-8159	-46801
EDL-25	On power line tower nearest Dyke Road, southeast of C-745-T Cylinder Storage Yard.	N 37 06 00.02	W 088 48 26.49	-1401	-6172
EDL-30	Take the road by the PGDP landfills, drive past MW98 and MW235. At intersection, the environmental dosimeter located on the inside of the “Warning Fiber Optic” sign at Boldry School Road, west of MW381.	N 37 08 21.060	W 088 45 09.060	-4836	7876
EDL-35	Kentucky Pollutant Discharge Elimination System (KPDES) Outfall 017 off of the plant access road. KPDES Outfall 017 depleted uranium hexafluoride (DUF_6) laydown yard.	N 37 06 21.480	W 088 49 03.960	-4773	-5806
EDL-37	KPDES Outfall 001 behind the Vortec site. K001.	N 37 07 18.600	W 088 49 15.660	-8202	138

Table A.1. Location Name, Description, and Coordinates (Continued)

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
EDL-38	Five-Points Creek with concrete bridge, on tree behind the "2A" sign.	N 37 06 43.320	W 088 50 09.000	-10630	-4528
EDL-40 old location	Turn north on Kelley Road off Woodville Road, go about ½ mile on Kelley Road and then turn left, go about ½ mile. Environmental dosimeter placed within trees on left. Orange sign on blocked road, east of 57 off Dyke Road.	N 37 05 52.200	W 088 48 52.20	-2818	-7551
EDL-40 new location on 8/7/2025	East of 57 off Dyke Road on PPA Gate-32.	N 37 05 54.708	W 088 48 50.132	-3018	-7330
EDL-46	Truck entrance at receiving C-720 Maintenance and Storage Building.	N 37 06 44.700	W 088 49 00.120	-5198	-2865
EDL-50	West Patrol Road fence across from C-745-A Cylinder Storage Yard.	N 37 07 02.88	W 088 49.15.18	-7287	-1547
EDL-52	East Patrol Road fence across from C-745-E Cylinder Storage Yard.	N 37 06 42.18	W 088 48.07.20	-1397	-1628
EDL-53	Security fence at southeast corner of C-745-T Cylinder Storage Yard. Down fence line away from EDL-2.	N 37 06 00.42	W 088 48.37.02	-2220	-6423
EDL-53 new location on 10/7/2025	Off Dyke Road on PPA Gate-31	N 37 05 56.626	W 088 48.33.378	-1809	-6683
EDL-58	West central C-755 Trailer Complex.	N 59 07 98.00	E 22 88 70.74	-1209	-1422
EDL-59	C-752-A Waste Storage Facility break area.	N 59 15 61.62	E 22 78 55.79	-5234	-339
EDL-60	C-333-A Feed Vaporization Facility light pole on fence pole #16.	N 59 02 07.10	E 22 80 71.62	-2919	-4199
EDL-61	West of C-746-Q Hazardous and LLW Storage Facility light pole #14.	N 59 01 58.14	E 22 80 98.35	-2778	-4315
EDL-62	C-743 Office Building light pole #336, behind trailer #3.	N 59 10 20.18	E 22 73 49.81	-6111	-2607
EDL-63	C-412 Trailer Complex, health physics break trailer.	N 59 08 36.46	E 22 79 46.95	-4069	-2435
EDL-64	C-764 T06 Office Trailer.	N 59 11 77.55	E 22 70 88.88	-7098	-2447

Table A.1. Location Name, Description, and Coordinates (Continued)

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
EDL-65	Located outside of north security fence north of C-745-H Cylinder Storage Yard; south of C-762 Gravel Laydown Area with Metal Shed.	N 37 07 08.54386	W 088 48 00.45376	-1795	1062
EDL-66	Located on tree at southeast corner of New Harmony Cemetery; adjacent to last concrete barrier and large metal post.	N 37 07 15.80859	W 088 48 11.08836	-2856	1457
EDL-67	Located on "No Trespassing" sign, north side of Dyke Road, next to security fence north of C-762 Gravel Laydown Area with Metal Shed.	N 37 07 12.70502	W 088 47 56.75697	-1658	1560
EDL-68	West security fence west of C-745-B Cylinder Storage Yard and southeast of the Vortec site.	N 37 07 11.60797	W 088 49 11.43416	-7302	-617
EDL-69	Wooden utility pole (T12-15 H) next to gravel road at northeast corner of pond north of C-611 complex.	N 37 07 13.70394	W 088 49 28.37928	-8664	-888
EDL-70	Outside of west security fence southeast of C-333 Process Building, midway between C-810 Parking Area (C-100) and north DUF_6 security fence.	N 37 06 27.82855	W 088 48 50.25203	-4173	-4189
EDL-71	Outside of west security fence of DUF_6 under security light, northeast of wooden utility pole (11056 KU 78487).	N 37 06 23.05971	W 088 48 59.65074	-4723	-4903
EDL-72	North side of air monitoring station AMD57, northwest of Post 57.	N 37 05 55.32798	W 088 49 15.28582	-4952	-7972
EDL-73	Eastern "Railroad Crossing" sign at train tracks on Acid Road.	N 37 06 06.14205	W 088 50 02.01070	-8883	-8241
EDL-74 was removed on 8/14/2025	Located on "Warning Siren" sign at turnoff north of Magruder Road and Woodville Road intersection.	N 37 05 10.96196	W 088 48 53.61411	-1765	-11586
EDL-75 was removed on 8/14/2025	Located on "Warning Siren" sign north of Kelley Road and Woodville Road intersection.	N 37 05 04.94525	W 088 48 26.65157	496	-11409

Table A.1. Location Name, Description, and Coordinates (Continued)

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
EDL-76 was removed on 8/14/2025	Located on "Tract A" sign below power lines, south side of Kelley Road in sharp curve between Woodville Road and McCaw Road.	N 37 05 55.05466	W 088 48 06.27328	310	-6082
EDL-77	Located on "Warning Siren" sign north side of McCaw Road east of Kelley Road intersection.	N 37 06 25.46598	W 088 47 33.66599	1737	-2287
EDL-78	Northeast corner of C-746-U Contained Landfill security fence.	N 37 07 54.00752	W 088 47 37.45924	-1622	6020
EDL-79	Located on left post of the "Wildlife Management" gate on New Waterline Road southwest of plant gate 41A west of C-612 Northwest Plume Groundwater System.	N 37 07 28.86304	W 88 49 12.50003	-7981	993
EDL-80	Located on "cattle" gate west of MW453 and MW454 on gravel road east of New Waterline Road.	N 37 07 47.29850	W 088 48 46.10944	-6612	3477
EDL-81	Southeast corner of DUF_6 security fence next to gate V1 east of New Waterline east of C-1100 Administration Building.	N 37 06 18.33947	W 088 48 56.42591	-4314	-5262
EDL-82	Short pole east of Dyke Road north of KPDES Outfall 013.	N 37 06 10.13175	W 088 48 13.53048	-765	-4851
EDL-83	Large metal power pole west of Dyke Road south of KPDES Outfall 013.	N 37 06 07.30640	W 088 48 20.71726	-1214	-5319
EDL-84	Located at MW496 on the east side of Dyke Road.	N 37 07 03.50589	W 088 47 49.26485	-769	894
EDL-86	Plant entrance, gravel construction road. Right side on orange "warning signal" sign.	N 37 5 18.8622	W 088 49 28.2282	-4676	-11794
EDL-87	KOW entrance north of Woodville Road north of Kevil Fraternal Order of Eagles. Right side on "orange warning signal" sign.	N 37 05 24.2802	W 088 50 43.9548	-10629	-13381
EDL-88	Bethel Church Road KOW entrance. North of Massey Road, right side on yellow post.	N 37 07 05.4876	W 088 50 37.9608	-13677	-3597

Table A.1. Location Name, Description, and Coordinates (Continued)

Location Name	Location Description	North Latitude (DMS)	West or East Longitude (DMS)	X Coordinate (ft)	Y Coordinate (ft)
EDL-89	Bobo Road, off Bethel Church Road. Continue east 200 yards past end of asphalt. At intersection on orange "warning signal" sign.	N 37 07 35.9976	W 088 49 44.3922	-10657	788
EDL-90	Bridge on Ogden Landing Road east of Lamb Wheel Alignment, LLC. On northeast corner of bridge on "contaminated creek" sign.	N 37 08 54.6714	W 088 47 27.2472	-12310	7182
EDL-91	Boldry School Road on KOW at Shawnee Fossil Plant entrance. On Cattle Gate Road on hill, right side.	N 37 08 40.9884	W 088 49 36.5232	-2952	12069
EDL-92	Second road on right past C-746-U Contained Landfill, cross Iron Bridge, on Institutional Control Measure-02, DOE notice sign on the left.	N 37 08 23.18	W 088 47 25.41	-1717	9125
EDL-93	MW100, north on Metropolis Lake Road past railroad tracks on left side on well bollard.	N 37 08 09.0744	W 088 46 50.9304	4874	7186
EDL-94	Residence; corner of Ogden Landing Road and Metropolis Lake Road.	N 37 05 48.9294	W 088 47 12.4332	4740	436
EDL-95	West McCracken Healthcare, Metropolis Lake Road. On light pole in southwest corner of parking lot.	N 37 06 40.5468	W 088 46 47.2872	4617	-5167
EDL-96	C-810 Parking Area (C-100) on "Operations and Maintenance Parking Only" sign. Fourth sign—environmental dosimeter facing south toward DUF_6 facility.	N 37 06 34.11	W 88 48 50.9616	-4447	-3610
ELD-97	East side of C-100 Administration Building on light pole T13-A.	N 37 06 36.9649	W 88 48 47.1533	-4256	-3233
EDL-98	Turn right off of Dyke Road by K011. Hanging on MW gate on left.	N 37 06 26.9712	W 88 48 01.0351	-605	-2976
EDL-99	Turn right down McCaw Road past PPA fence. Hanging on danger warning sign on left before bridge	N 37 06 29.2242	W 88 47 41.7654	988	-2153
EDL-100	Turn right off of Dyke Road past McCaw Road toward K002, hanging on railing on second set of steps.	N 37 06 43.5378	W 88 47 53.43	-396	-1117

Table A.2. First Quarter Issue and Collection Dates

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
29	1/7/2025 10:25	FO	4/1/2025 12:30	KB	EDL-1	Not applicable (N/A)
30/22	1/7/2025 10:12	FO	4/2/2025 10:14	KB	EDL-2	N/A
31/23	1/7/2025 9:39	FO	4/2/2025 9:35	KB	EDL-3	N/A
32	1/7/2025 13:06	FO	4/1/2025 11:22	KB	EDL-4	N/A
33	1/7/2025 13:00	FO	4/1/2025 13:18	KB	EDL-5	N/A
34	1/7/2025 12:44	FO	4/1/2025 13:10	KB	EDL-6	N/A
35	1/7/2025 12:17	FO	4/1/2025 12:33	KB	EDL-7	N/A
36	1/8/2025 12:15	DL	4/1/2025 10:06	KB	EDL-9	N/A
37	1/7/2025 15:04	FO	4/1/2025 14:22	KB	EDL-12	N/A
38	1/7/2025 15:07	FO	4/1/2025 14:29	KB	EDL-13	N/A
39	1/7/2025 9:30	FO	4/1/2025 15:17	KB	EDL-14	N/A
40	1/7/2025 9:24	FO	4/2/2025 9:18	KB	EDL-15	N/A
41	1/7/2025 15:32	FO	4/1/2025 15:06	KB	EDL-16	N/A
42	1/7/2025 14:52	FO	4/2/2025 8:09	KB	EDL-19	N/A
43	1/7/2025 13:43	FO	4/2/2025 8:33	KB	EDL-22	N/A
44	1/7/2025 10:04	FO	4/2/2025 8:52	KB	EDL-25	N/A
45	1/7/2025 15:26	FO	4/1/2025 14:59	KB	EDL-30	N/A
46	1/7/2025 12:14	FO	4/1/2025 13:34	KB	EDL-35	N/A
47	1/7/2025 12:41	FO	4/1/2025 13:09	KB	EDL-37	N/A
48	1/7/2025 15:58	FO	4/2/2025 8:04	KB	EDL-38	N/A
49	1/7/2025 10:06	FO	4/2/2025 10:19	KB	EDL-40	N/A
50	1/7/2025 12:20	FO	4/1/2025 12:38	KB	EDL-46	N/A
51/24	1/7/2025 12:37	FO	4/1/2025 13:02	KB	EDL-50	N/A
52	1/7/2025 9:16	FO	4/2/2025 9:09	KB	EDL-52	N/A
53	1/7/2025 10:15	FO	4/2/2025 10:23	KB	EDL-53	N/A
54	1/7/2025 9:20	FO	4/2/2025 9:15	KB	EDL-58	N/A
55	1/8/2025 7:00	FO	4/1/2025 9:40	KB	EDL-59	N/A
56	1/8/2025 7:00	FO	4/1/2025 9:30	KB	EDL-60	N/A
57	1/8/2025 7:12	FO	4/1/2025 9:28	KB	EDL-61	N/A
58	1/7/2025 12:24	FO	4/1/2025 12:43	KB	EDL-62	N/A
59	1/8/2025 7:05	FO	4/1/2025 9:34	KB	EDL-63	N/A
60	1/7/2025 13:19	FO	4/1/2025 12:55	KB	EDL-64	N/A
61/25	1/7/2025 9:44	FO	4/2/2025 9:39	KB	EDL-65	N/A
62	1/7/2025 9:31	FO	4/2/2025 9:31	KB	EDL-66	N/A
63	1/7/2025 9:30	FO	4/2/2025 9:25	KB	EDL-67	N/A
64/26	1/7/2025 12:39	FO	4/1/2025 13:05	KB	EDL-68	N/A
65	1/7/2025 12:31	FO	4/1/2025 12:49	KB	EDL-69	N/A
66	1/7/2025 10:47	FO	4/1/2025 10:40	KB	EDL-70	N/A
67	1/7/2025 10:45	FO	4/1/2025 12:32	KB	EDL-71	N/A
68	1/7/2025 10:20	FO	4/1/2025 10:17	KB	EDL-72	N/A
69	1/7/2025 14:09	FO	4/1/2025 10:02	KB	EDL-73	N/A
70	1/7/2025 14:24	FO	4/1/2025 13:43	KB	EDL-74	N/A
71	1/7/2025 14:30	FO	4/1/2025 13:48	KB	EDL-75	N/A
72	1/7/2025 14:46	FO	4/1/2025 14:00	KB	EDL-76	Original lost
73	1/7/2025 14:40	FO	4/1/2025 14:06	KB	EDL-77	N/A
74	1/7/2025 15:10	FO	4/1/2025 14:30	KB	EDL-78	N/A
75	1/7/2025 12:47	FO	4/1/2025 13:14	KB	EDL-79	N/A

Table A.2. First Quarter Issue and Collection Dates (Continued)

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
76	1/7/2025 15:30	FO	4/1/2025 15:02	KB	EDL-80	N/A
77/27	1/7/2025 10:32	FO	4/1/2025 10:33	KB	EDL-81	N/A
78	1/7/2025 9:57	FO	4/2/2025 9:01	KB	EDL-82	N/A
79/28	1/7/2025 9:59	FO	4/2/2025 8:36	KB	EDL-83	N/A
80	1/7/2025 9:28	FO	4/2/2025 9:23	KB	EDL-84	N/A
81	1/7/2025 14:22	FO	4/1/2025 10:13	KB	EDL-86	N/A
82	1/7/2025 14:01	FO	4/1/2025 9:58	KB	EDL-87	N/A
83	1/7/2025 15:46	FO	4/2/2025 8:09	KB	EDL-88	N/A
84	1/7/2025 15:42	FO	4/2/2025 7:54	KB	EDL-89	N/A
85	1/7/2025 15:36	FO	4/1/2025 16:18	KB	EDL-90	N/A
86	1/7/2025 15:21	FO	4/1/2025 14:51	KB	EDL-91	N/A
87	1/7/2025 15:15	FO	4/1/2025 14:45	KB	EDL-92	N/A
88	1/7/2025 14:58	FO	4/1/2025 14:15	KB	EDL-93	N/A
89	1/7/2025 15:01	FO	4/1/2025 14:19	KB	EDL-94	N/A
90	1/7/2025 14:53	FO	4/1/2025 14:09	KB	EDL-95	N/A
91	1/7/2025 10:50	FO	4/1/2025 10:37	KB	EDL-96	N/A
92	1/7/2025 8:58	FO	4/1/2025 12:20	KB	EDL-97	N/A
Deploy Control	1/8/2025 16:00	FO	4/2/2025 11:00	KB	EDL-FB	N/A
93	1/7/2025 7:00	FO	4/1/2025 8:45	KB	EDL-TB	N/A
94	1/7/2025 9:07	FO	4/2/2025 9:06	KB	EDL-98	N/A
95	1/7/2025 9:12	FO	4/2/2025 10:00	KB	EDL-99	N/A
96	1/7/2025 9:51	FO	4/2/2025 9:47	KB	EDL-100	N/A

Table A.3. Second Quarter Issue and Collection Dates

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
29	4/1/2025 12:30	KB	7/8/2025 15:54	BH	EDL-1	N/A
30/22	4/2/2025 10:14	KB	7/7/2025 14:55	KB	EDL-2	N/A
31/23	4/2/2025 9:35	KB	7/8/2025 14:06	KB	EDL-3	N/A
32	4/1/2025 11:22	KB	7/7/2025 14:00	BH	EDL-4	N/A
33	4/1/2025 13:18	KB	7/7/2025 13:50	BH	EDL-5	N/A
34	4/1/2025 13:10	KB	7/7/2025 13:40	BH	EDL-6	N/A
35	4/1/2025 12:33	KB	7/7/2025 14:22	BH	EDL-7	N/A
36	4/1/2025 10:06	KB	7/8/2025 8:40	BH	EDL-9	N/A
37	4/1/2025 14:22	KB	7/8/2025 9:52	BH	EDL-12	N/A
38	4/1/2025 14:29	KB	7/8/2025 10:05	BH	EDL-13	N/A
39	4/1/2025 15:17	KB	7/8/2025 14:30	BH	EDL-14	N/A
40	4/2/2025 9:18	KB	7/7/2025 15:30	KB	EDL-15	N/A
41	4/1/2025 15:06	KB	7/8/2025 15:00	BH	EDL-16	N/A
42	4/2/2025 8:09	KB	7/8/2025 15:00	BH	EDL-19	N/A
43	4/2/2025 8:33	KB	7/8/2025 8:06	KB	EDL-22	N/A
44	4/2/2025 8:52	KB	7/8/2025 13:32	BH	EDL-25	N/A
45	4/1/2025 14:59	KB	7/8/2025 14:50	BH	EDL-30	N/A
46	4/1/2025 13:34	KB	7/7/2025 14:40	BH	EDL-35	N/A
47	4/1/2025 13:09	KB	7/7/2025 13:37	BH	EDL-37	N/A
48	4/2/2025 8:04	KB	7/8/2025 15:26	BH	EDL-38	N/A
49	4/2/2025 10:19	KB	7/7/2025 14:48	KB	EDL-40	N/A
50	4/1/2025 12:38	KB	7/7/2025 14:20	BH	EDL-46	N/A
51/24	4/1/2025 13:02	KB	7/7/2025 13:30	BH	EDL-50	N/A
52	4/2/2025 9:09	KB	7/8/2025 14:20	KB	EDL-52	N/A
53	4/2/2025 10:23	KB	7/7/2025 15:00	BH	EDL-53	N/A
54	4/2/2025 9:15	KB	7/8/2025 14:15	KB	EDL-58	N/A
55	4/1/2025 9:40	KB	7/7/2025 12:50	BH	EDL-59	N/A
56	4/1/2025 9:30	KB	7/7/2025 13:03	BH	EDL-60	N/A
57	4/1/2025 9:28	KB	7/7/2025 13:02	BH	EDL-61	N/A
58	4/1/2025 12:43	KB	7/7/2025 14:26	BH	EDL-62	N/A
59	4/1/2025 9:34	KB	7/7/2025 12:45	BH	EDL-63	N/A
60	4/1/2025 12:55	KB	7/7/2025 14:13	BH	EDL-64	N/A
61/25	4/2/2025 9:39	KB	7/8/2025 14:04	BH	EDL-65	N/A
62	4/2/2025 9:31	KB	7/8/2025 14:27	BH	EDL-66	N/A
63	4/2/2025 9:25	KB	7/8/2025 14:25	BH	EDL-67	N/A
64/26	4/1/2025 13:05	KB	7/7/2025 13:30	BH	EDL-68	N/A
65	4/1/2025 12:49	KB	7/7/2025 13:25	BH	EDL-69	N/A
66	4/1/2025 10:40	KB	7/8/2025 16:07	KB	EDL-70	N/A
67	4/1/2025 12:32	KB	7/8/2025 16:03	KB	EDL-71	N/A
68	4/1/2025 10:17	KB	7/8/2025 15:50	BH	EDL-72	N/A
69	4/1/2025 10:02	KB	7/8/2025 8:33	BH	EDL-73	N/A
70	4/1/2025 13:43	KB	7/8/2025 8:57	BH	EDL-74	N/A
71	4/1/2025 13:48	KB	7/8/2025 9:11	BH	EDL-75	N/A
72	4/1/2025 14:00	KB	7/8/2025 9:18	BH	EDL-76	N/A
73	4/1/2025 14:06	KB	7/8/2025 9:30	BH	EDL-77	N/A
74	4/1/2025 14:30	KB	7/8/2025 10:09	BH	EDL-78	N/A
75	4/1/2025 13:14	KB	7/7/2025 13:45	BH	EDL-79	N/A

Table A.3. Second Quarter Issue and Collection Dates (Continued)

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
76	4/1/2025 15:02	KB	7/8/2025 14:55	BH	EDL-80	N/A
77/27	4/1/2025 10:33	KB	7/8/2025 15:56	BH	EDL-81	N/A
78	4/2/2025 9:01	KB	7/7/2025 15:10	BH	EDL-82	N/A
79/28	4/2/2025 8:36	KB	7/8/2025 13:15	BH	EDL-83	N/A
80	4/2/2025 9:23	KB	7/8/2025 13:45	BH	EDL-84	N/A
81	4/1/2025 10:13	KB	7/8/2025 8:50	BH	EDL-86	Lost
82	4/1/2025 9:58	KB	7/8/2025 8:25	BH	EDL-87	N/A
83	4/2/2025 8:09	KB	7/8/2025 15:22	BH	EDL-88	N/A
84	4/2/2025 7:54	KB	7/8/2025 15:13	BH	EDL-89	N/A
85	4/1/2025 16:18	KB	7/8/2025 15:05	BH	EDL-90	N/A
86	4/1/2025 14:51	KB	7/8/2025 14:45	BH	EDL-91	N/A
87	4/1/2025 14:45	KB	7/8/2025 14:40	BH	EDL-92	N/A
88	4/1/2025 14:15	KB	7/8/2025 9:42	BH	EDL-93	N/A
89	4/1/2025 14:19	KB	7/8/2025 9:50	BH	EDL-94	N/A
90	4/1/2025 14:09	KB	7/8/2025 9:35	BH	EDL-95	N/A
91	4/1/2025 10:37	KB	7/8/2025 16:12	BH	EDL-96	N/A
92	4/1/2025 12:20	KB	7/7/2025 12:38	KB	EDL-97	N/A
Deploy Control	4/2/2025 11:00	KB	7/9/2025 6:30	BH	EDL-FB	N/A
93	4/1/2025 8:45	KB	7/7/2025 12:15	BH	EDL-TB	N/A
94	4/2/2025 9:06	KB	7/7/2025 15:15	KB	EDL-98	N/A
95	4/2/2025 10:00	KB	7/7/2025 15:22	BH	EDL-99	N/A
96	4/2/2025 9:47	KB	7/8/2025 14:20	BH	EDL-100	N/A

Table A.4. Third Quarter Issue and Collection Dates

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
29	7/8/2025 15:54	BH	10/7/2025 15:00	BH	EDL-1	N/A
30/22	7/7/2025 14:55	KB	8/14/2025 8:40	BH	EDL-2	N/A
31/23	7/8/2025 14:06	KB	10/7/2025 14:53	BH	EDL-3	N/A
32	7/7/2025 14:00	BH	10/7/2025 13:40	BH	EDL-4	N/A
33	7/7/2025 13:50	BH	10/7/2025 13:35	BH	EDL-5	N/A
34	7/7/2025 13:40	BH	10/7/2025 13:27	BH	EDL-6	N/A
35	7/7/2025 14:22	BH	10/6/2025 8:45	BH	EDL-7	N/A
36	7/8/2025 8:40	BH	10/6/2025 12:40	BH	EDL-9	N/A
37	7/8/2025 9:52	BH	10/6/2025 12:51	BH	EDL-12	N/A
38	7/8/2025 10:05	BH	10/6/2025 13:03	BH	EDL-13	N/A
39	7/8/2025 14:30	BH	10/7/2025 14:50	BH	EDL-14	N/A
40	7/7/2025 15:30	KB	10/7/2025 14:37	BH	EDL-15	N/A
41	7/8/2025 15:00	BH	10/6/2025 13:37	BH	EDL-16	N/A
42	7/8/2025 15:00	BH	10/7/2025 14:15	BH	EDL-19	N/A
43	7/8/2025 8:06	KB	10/7/2025 12:38	BH	EDL-22	N/A
44	7/8/2025 13:32	BH	10/7/2025 15:20	BH	EDL-25	N/A
45	7/8/2025 14:50	BH	10/6/2025 13:28	BH	EDL-30	N/A
46	7/7/2025 14:40	BH	10/6/2025 12:32	BH	EDL-35	N/A
47	7/7/2025 13:37	BH	10/7/2025 13:25	BH	EDL-37	N/A
48	7/8/2025 15:26	BH	10/7/2025 14:18	BH	EDL-38	N/A
49	7/7/2025 14:48	KB	10/7/2025 13:50	BH	EDL-40	N/A
50	7/7/2025 14:20	BH	10/6/2025 12:28	BH	EDL-46	N/A
51/24	7/7/2025 13:30	BH	10/7/2025 13:50	BH	EDL-50	N/A
52	7/8/2025 14:20	KB	10/7/2025 14:32	BH	EDL-52	N/A
53	7/7/2025 15:00	BH	8/14/2025 8:45	BH	EDL-53	N/A
54	7/8/2025 14:15	KB	10/7/2025 14:32	BH	EDL-58	N/A
55	7/7/2025 12:50	BH	10/6/2025 8:12	BH	EDL-59	N/A
56	7/7/2025 13:03	BH	10/6/2025 8:25	BH	EDL-60	N/A
57	7/7/2025 13:02	BH	10/6/2025 8:27	BH	EDL-61	N/A
58	7/7/2025 14:26	BH	10/6/2025 8:43	BH	EDL-62	N/A
59	7/7/2025 12:45	BH	10/6/2025 8:22	BH	EDL-63	N/A
60	7/7/2025 14:13	BH	10/7/2025 8:37	BH	EDL-64	N/A
61/25	7/8/2025 14:04	BH	10/7/2025 14:55	BH	EDL-65	N/A
62	7/8/2025 14:27	BH	10/7/2025 14:46	BH	EDL-66	N/A
63	7/8/2025 14:25	BH	10/7/2025 14:45	BH	EDL-67	N/A
64/26	7/7/2025 13:30	BH	10/7/2025 13:25	BH	EDL-68	N/A
65	7/7/2025 13:25	BH	10/7/2025 13:15	BH	EDL-69	N/A
66	7/8/2025 16:07	KB	10/7/2025 15:11	BH	EDL-70	N/A
67	7/8/2025 16:03	KB	10/7/2025 15:08	BH	EDL-71	N/A
68	7/8/2025 15:50	BH	10/6/2025 12:35	BH	EDL-72	N/A
69	7/8/2025 8:33	BH	10/6/2025 12:46	BH	EDL-73	N/A
70	7/8/2025 8:57	BH	8/14/2025 8:15	BH	EDL-74	N/A
71	7/8/2025 9:11	BH	8/14/2025 8:10	BH	EDL-75	N/A
72	7/8/2025 9:18	BH	8/14/2025 8:20	BH	EDL-76	N/A
73	7/8/2025 9:30	BH	10/7/2025 15:30	BH	EDL-77	N/A
74	7/8/2025 10:09	BH	10/6/2025 13:07	BH	EDL-78	N/A
75	7/7/2025 13:45	BH	10/7/2025 13:29	BH	EDL-79	N/A

Table A.4. Third Quarter Issue and Collection Dates (Continued)

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
76	7/8/2025 14:55	BH	10/6/2025 13:33	BH	EDL-80	N/A
77/27	7/8/2025 15:56	BH	10/7/2025 15:04	BH	EDL-81	N/A
78	7/7/2025 15:10	BH	10/7/2025 15:10	BH	EDL-82	N/A
79/28	7/8/2025 13:15	BH	10/8/2025 11:00	BH	EDL-83	N/A
80	7/8/2025 13:45	BH	10/7/2025 14:44	BH	EDL-84	N/A
81	7/8/2025 8:50	BH	10/6/2025 12:37	BH	EDL-86	N/A
82	7/8/2025 8:25	BH	10/6/2025 14:45	BH	EDL-87	N/A
83	7/8/2025 15:22	BH	10/6/2025 13:52	BH	EDL-88	N/A
84	7/8/2025 15:13	BH	10/6/2025 13:47	BH	EDL-89	N/A
85	7/8/2025 15:05	BH	10/6/2025 13:42	BH	EDL-90	N/A
86	7/8/2025 14:45	BH	10/6/2025 13:23	BH	EDL-91	N/A
87	7/8/2025 14:40	BH	10/8/2025 8:09	BH	EDL-92	N/A
88	7/8/2025 9:42	BH	10/8/2025 8:30	BH	EDL-93	N/A
89	7/8/2025 9:50	BH	10/6/2025 12:54	BH	EDL-94	N/A
90	7/8/2025 9:35	BH	10/6/2025 12:43	BH	EDL-95	N/A
91	7/8/2025 16:12	BH	10/7/2025 15:13	BH	EDL-96	N/A
92	7/7/2025 12:38	KB	10/6/2025 12:20	BH	EDL-97	N/A
Deploy Control	7/9/2025 6:30	BH	10/8/2025 11:10	BH	EDL-FB	N/A
93	7/7/2025 12:15	BH	10/9/2025 7:00	BH	EDL-TB	N/A
94	7/7/2025 15:15	KB	10/7/2025 14:14	BH	EDL-98	N/A
95	7/7/2025 15:22	BH	10/7/2025 14:27	BH	EDL-99	N/A
96	7/8/2025 14:20	BH	10/7/2025 14:30	BH	EDL-100	N/A

Table A.5. Fourth Quarter Issue and Collection Dates

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
29	10/7/2025 15:00	BH	1/7/2026 1601	BH	EDL-1	N/A
31/23	10/7/2025 14:53	BH	1/7/2026 1334	BH	EDL-3	N/A
32	10/7/2025 13:40	BH	1/7/2026 0906	KB	EDL-4	N/A
33	10/7/2025 13:35	BH	1/72026 0859	KB	EDL-5	N/A
34	10/7/2025 13:27	BH	1/7/2026 0849	KB	EDL-6	N/A
35	10/6/2025 08:45	BH	1/7/2026 0830	KB	EDL-7	N/A
36	10/6/2025 12:40	BH	1/7/2026 0939	KB	EDL-9	N/A
37	10/6/2025 12:51	BH	1/7/2026 1425	KB	EDL-12	N/A
38	10/6/2025 13:03	BH	1/7/2026 1430	KB	EDL-13	N/A
39	10/7/2025 14:50	BH	1/7/2026 1327	BH	EDL-14	N/A
40	10/7/2025 14:37	BH	1/7/2026 1312	BH	EDL-15	N/A
41	10/6/2025 13:37	BH	1/7/2026 1517	BH	EDL-16	N/A
42	10/7/2025 14:15	BH	1/7/2026 1540	BH	EDL-19	N/A
43	10/7/2025 12:38	BH	1/7/2026 0959	KB	EDL-22	N/A
44	10/7/2025 15:20	BH	1/7/2026 1356	BH	EDL-25	N/A
45	10/6/2025 13:28	BH	1/7/2026 1509	BH	EDL-30	N/A
46	10/6/2025 12:32	BH	1/7/2026 0918	KB	EDL-35	N/A
47	10/7/2025 13:25	BH	1/7/2026 0847	KB	EDL-37	N/A
48	10/7/2025 14:18	BH	1/7/2026 1537	BH	EDL-38	N/A
49	10/7/2025 13:50	BH	1/7/2026 1244	BH	EDL-40	N/A
50	10/6/2025 12:28	BH	1/7/2026 1559	BH	EDL-46	NA
51/24	10/7/2025 13:50	BH	1/7/2026 0842	KB	EDL-50	N/A
52	10/7/2025 14:32	BH	1/7/2026 1305	BH	EDL-52	N/A
53/22	10/7/2025 14:00	BH	1/7/2026 1246	KB	EDL-53	New location established on October 7, 2025. Both gamma and neutron dosimeter installed at this location.
54	10/7/2025 14:32	BH	1/7/2026 1307	KB	EDL-58	N/A
55	10/6/2025 08:12	BH	1/7/2026 0820	KB	EDL-59	N/A
56	10/6/2025 08:25	BH	1/7/2026 0808	KB	EDL-60	N/A
57	10/6/2025 08:27	BH	1/7/2026 0809	KB	EDL-61	N/A
58	10/6/2025 08:43	BH	1/7/2026 1555	BH	EDL-62	N/A
59	10/6/2025 08:22	BH	1/7/2026 0812	KB	EDL-63	N/A
60	10/7/2025 08:37	BH	1/7/2026 0834	BH	EDL-64	N/A
61/25	10/7/2025 14:55	BH	1/7/2026 1330	BH	EDL-65	N/A
62	10/7/2025 14:46	BH	1/7/2026 1324	KB	EDL-66	N/A
63	10/7/2025 14:45	BH	1/7/2026 1322	KB	EDL-67	N/A
64/26	10/7/2025 13:25	BH	1/7/2026 0845	KB	EDL-68	N/A
65	10/7/2025 13:15	BH	1/7/2026 1549	BH	EDL-69	N/A
66	10/7/2025 15:11	BH	1/7/2026 1611	BH	EDL-70	N/A
67	10/7/2025 15:08	BH	1/7/2026 1608	KB	EDL-71	N/A
68	10/6/2025 12:35	BH	1/7/2026 0924	KB	EDL-72	N/A
69	10/6/2025 12:46	BH	1/7/2026 0931	KB	EDL-73	N/A
73	10/7/2025 15:30	BH	1/7/2026 1411	KB	EDL-77	N/A
74	10/6/2025 13:07	BH	1/7/2026 1433	KB	EDL-78	N/A
75	10/7/2025 13:29	BH	1/7/2026 0855	KB	EDL-79	N/A

Table A.5. Fourth Quarter Issue and Collection Dates (Continued)

Badge ID	Date/Time Issued	Issued By	Date/Time Collected	Collected By	Location Name	Comments
76	10/6/2025 13:33	BH	1/7/2026 1513	BH	EDL-80	N/A
77/27	10/7/2025 15:04	BH	1/7/2026 1603	BH	EDL-81	N/A
78	10/7/2025 15:10	BH	1/7/2026 1248	BH	EDL-82	N/A
79/28	10/8/2025 11:00	BH	1/7/2026 1354	BH	EDL-83	N/A
80	10/7/2025 14:44	BH	1/7/2026 1319	KB	EDL-84	N/A
81	10/6/2025 12:37	BH	1/7/2026 1400	KB	EDL-86	N/A
82	10/6/2025 14:45	BH	1/7/2026 0929	KB	EDL-87	N/A
83	10/6/2025 13:52	BH	1/7/2026 1532	BH	EDL-88	N/A
84	10/6/2025 13:47	BH	1/7/2026 1529	BH	EDL-89	N/A
85	10/6/2025 13:42	BH	1/7/2026 1523	BH	EDL-90	N/A
86	10/6/2025 13:23	BH	1/7/2026 1504	KB	EDL-91	N/A
87	10/8/2025 08:09	BH	1/7/2026 1450	BH	EDL-92	N/A
88	10/8/2025 08:30	BH	1/7/2026 1417	KB	EDL-93	N/A
89	10/6/2025 12:54	BH	1/7/2026 1421	KB	EDL-94	N/A
90	10/6/2025 12:43	BH	1/7/2026 1407	KB	EDL-95	N/A
91	10/7/2025 15:13	BH	1/7/2026 1615	BH	EDL-96	N/A
92	10/6/2025 12:20	BH	1/7/2026 0747	BH	EDL-97	N/A
Deploy Control	10/8/2025 11:10	BH	1/7/2026 14:30	BH	EDL-FB	N/A
93	10/6/2025 07:00	BH	1/7/2026 0715	BH	EDL-TB	N/A
94	10/7/2025 14:14	BH	1/7/2026 1254	KB	EDL-98	N/A
95	10/7/2025 14:27	BH	1/7/2026 1300	KB	EDL-99	N/A
96	10/7/2025 14:30	BH	1/7/2026 1311	KB	EDL-100	N/A

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