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Mr. Norm Sandlin, Prime Contract Manager  
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Dear Mr. Sandlin:

**CONTRACT NO. DE-EM0004895: APPROVAL OF DELIVERABLE NO. 37, ANNUAL REPORT ON EXTERNAL RADIATION MONITORING FOR CALENDAR YEAR 2017, FRNP-RPT-0023/FR1**

Reference: Letter from W. Kirby to M. Fultz, "Four Rivers Nuclear Partnership, LLC— Transmittal of Revised Annual Report on External Radiation Monitoring for Calendar Year 2017, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FRNP-RPT-0023/FR1," (FRNP-18-0817), dated May 8, 2018

The U.S. Department of Energy has reviewed and approves the Four Rivers Nuclear Partnership, LLC Deliverable No. 37, Annual Report on External Radiation Monitoring for calendar year 2017, FRNP-RPT-0023/FR1.

If you have any questions or require additional information, please contact Gil Whitehurst at (740) 897-2948.

Sincerely,

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**Annual Report on  
External Radiation Monitoring  
For Calendar Year 2017,  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**

This document is approved for public release per review by:

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FRNP Classification Support

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Date



**Annual Report on  
External Radiation Monitoring  
for Calendar Year 2017,  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**

Date Issued—May 2018

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  
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## ACRONYMS

CY	calendar year
DOE	U.S. Department of Energy
E	effective dose
E <sub>50</sub>	committed effective dose
EMP	Environmental Monitoring Plan
OSL	Optically Stimulated Luminescence
PGDP	Paducah Gaseous Diffusion Plant
TED	total effective dose
TLD	thermoluminescent dosimeter
WKWMA	West Kentucky Wildlife Management Area

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## EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Order 458.1 establishes a radiation protection standard for members of the public. This standard requires that exposure of members of the public to radiation sources as a consequence of all routine DOE activities shall not cause, within a calendar year, a total effective dose (TED) greater than 100 millirem (mrem). Monitoring of several media is conducted at select locations near the Paducah Gaseous Diffusion Plant (PGDP), in accordance with CP2-ES-0006, *Environmental Monitoring Plan Fiscal Year 2017, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, (EMP) to confirm that this DOE standard is met.

Program requirements for the annual external gamma radiation monitoring are outlined in the EMP. This program provides for the measurement of deep dose from gamma and neutron radiation. Effective dose is the sum of deep dose from gamma radiation and deep dose from neutron radiation.

Results for external gamma and neutron radiation monitoring conducted in calendar year (CY) 2017 are summarized in this report. External gamma and neutron radiation monitoring consisted of quarterly placement, collection, and analysis of environmental thermoluminescence dosimeters (TLDs) and Optically Stimulated Luminescence (OSL) dosimeters. This information will be used to calculate TED, which will be presented in the CY 2017 Annual Site Environmental Report.

Monitoring results for CY 2017 indicate that 15 locations out of 51 were above the annualized background levels. These 15 locations were consistently the areas with the highest measured exposures throughout the monitoring period. These locations were adjacent to or in close proximity to the PGDP security fence in the vicinity of uranium hexafluoride storage cylinders. Because security protocols prohibited the public from gaining prolonged access to the PGDP boundary fence in CY 2017, the potential radiation doses calculated at or in close proximity to the fence are not realistic. For CY 2017, TLD-14, which is near Harmony Cemetery, located north of the plant security fence and south of Ogden Landing Road, represents the nearest location routinely accessible by the public. Measurements at this location indicated external radiation levels were at or below naturally occurring background radiation. In addition, the radiation exposure for the maximally exposed individual, a member of the public at the nearest local residence, was found to be equivalent to naturally occurring background.

Based on the results of measurements in areas accessible to the public or near the closest local residence, external radiation levels were found to be equivalent to naturally occurring background levels. Therefore, the effective dose received by a member of the public from DOE operations is considered to be negligible.

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# 1. INTRODUCTION

U.S. Department of Energy (DOE) Order 458.1 establishes a radiation protection standard for members of the public. This order requires that exposure of members of the public to radiation sources as a consequence of all routine DOE activities shall not cause, within a calendar year, a total effective dose (TED) greater than 100 mrem. One exposure pathway of concern for DOE operations at the Paducah Gaseous Diffusion Plant (PGDP) is direct external radiation exposure. External radiation exposure is defined as exposure attributed to radioactive sources outside the body.

The *Environmental Monitoring Plan, Fiscal Year 2017, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, CP2-ES-0006, establishes the DOE program for monitoring external radiation at areas readily accessible to members of the public. The external gamma radiation exposure monitoring program has the following five objectives:

1. Calculate the effective dose (E) to the maximally exposed individual member of the public;
2. Calculate the E to a member of the public in areas freely accessible to members of the public;
3. Calculate the E to a member of the public at the Paducah Site boundary;
4. Establish the dose potentially received by a member of the public visiting or passing through accessible portions of the DOE Reservation; and
5. Establish the radiation dose potentially received by a member of the public from direct exposure to DOE operations at the boundary of the PGDP perimeter fence.

In addition, the results stated in this report are presented using terms that are consistent with those found in DOE Order 458.1.

TED is the sum of E and committed effective dose ( $E_{50}$ ).  $E_{50}$  is the dose received from internally deposited radionuclides and is addressed in the Annual Site Environmental Report. E is the dose directly attributed to external radiation exposure. This document summarizes E.

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## 2. METHODOLOGY

The external gamma and neutron radiation monitoring program is designed to provide data on external radiation exposure from DOE operations to members of the public. The primary factor in selecting the monitoring locations was the potential for a member of the public to be exposed to external radiation. Secondary factors in selecting monitoring locations were accessibility and representative exposure, potentially received by members of the public, and area monitoring for individuals passing through the DOE site.

Environmental thermoluminescence dosimeters (TLDs) with a calcium fluoride and lithium fluoride matrix were placed at the monitoring locations and collected and analyzed quarterly for a period of one year. When the TLDs were collected, the next quarter's TLDs were placed at the same locations when possible. During the course of the year, two TLDs were discovered to be missing from their locations. This most likely is the result of vandalism or wildlife activity. When a TLD is reported missing multiple times, a new location is sought within the same area that is better hidden from normal view. The dosimeter at location TLD-19 was found to be missing during the second and fourth quarter. Results were estimated using the average of the other two quarters of deep dose exposure per day. A map of the locations is provided in Appendix A, and the monitoring locations are described in Appendix B. Locations TLD-22, TLD-54, TLD-85, TLD-86, TLD-87, TLD-88, TLD-89, TLD-90, TLD-91, TLD-92, TLD-93, TLD-94, and TLD-95 are considered to be background locations (i.e., locations presumably unaffected by PGDP operations or other site-specific radiation sources).

Environmental gamma Model 110 TLDs were received from Mirion Technologies of Irvine, CA, beginning in January 2017. In January 2017, OSL dosimeters were received from Landauer to monitor for neutron radiation. TLDs were kept in their individual, flexible protective packaging and placed in wide mouth, plastic sample bottles when deployed to the monitoring location. A lid is screwed on each bottle, and a nylon wire tie was wound around each bottle (under the lid) to secure it to a fence or other fixed structure. The plastic packaging and sample bottle provide a sturdy weather-resistant package that does not significantly attenuate gamma radiation (i.e., induce a negative bias on the measurement).

One TLD per quarterly sampling event was designated as a field blank and was carried to all monitoring locations during placement and collection of the TLDs. One control TLD (i.e., trip blank TLD) was retained in the sampling field office and then used as a transit blank accompanying the TLDs when they were shipped off-site for analysis. A total of 64 gamma TLDs and 7 neutron TLDs/OSLs representing 65 locations each quarter, including background and trip blank locations, was placed, as described in the entry tables in Appendix B. In most cases, the TLDs were secured at a height of approximately 3–4 ft above ground.

Coordinates for monitoring locations were determined using a differential global positioning system and data were entered into the Paducah Site geographic information system. No dosimeters were placed in radiologically contaminated areas.

Appendix A contains a map of the sample locations. The dosimeters were placed, collected, and shipped for analysis on the dates indicated in Appendix B. Based on process knowledge from historical surveys and the siting of dosimeters outside the bounds of radiological contamination areas, the dosimeters are non-contaminated and non-regulated for the purposes of handling and shipping (i.e., contamination levels are below DOE release criteria and U.S. Department of Transportation levels for regulated materials). Analytical results are found in Appendix C.

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### 3. RESULTS

Complete laboratory analysis reports for each quarter are included in Appendix C.

#### 3.1 FIRST QUARTER RESULTS

The gamma radiation dose time for the first quarter of CY 2017 was approximately 85 days. Sample results ranged from 14–585 mrem. The background samples ranged from 19–24 mrem. The mean background dose was 21 mrem.

The field blank measured dose of 13 mrem and the trip blank a dose of 12 mrem. These readings were indistinguishable from background, likely due to shielding provided by the office building where they were kept. Table 1 identifies locations with annual gamma doses above background.

**Table 1. Locations with Annual Gamma Doses above Background for the 1st Quarter**

Location	Effective Dose
TLD-1	156
TLD-2	272
TLD-7	31
TLD-13	23
TLD-19	24
TLD-25	27
TLD-30	23
TLD-35	23
TLD-40	22
TLD-50	40
TLD-53	94
TLD-60	286
TLD-61	585
TLD-70	46
TLD-71	39
TLD-74	22
TLD-75	23
TLD-76	23
TLD-77	23
TLD-78	26
TLD-81	101
TLD-82	26
TLD-83	51

There were no locations with positive neutron doses for the first quarter.

The gamma dosimeter locations with statistically significant values are located at or in close proximity to the PGDP security fence that is in adjacent to DOE uranium hexafluoride (UF<sub>6</sub>) cylinder storage yards.

### 3.2 SECOND QUARTER RESULTS

The gamma radiation dose time for the second quarter of CY 2017 was approximately 98 days. Sample results ranged from 17–575 mrem. The background samples ranged from 20–25 mrem. The mean background dose was 22 mrem.

The field blank measured dose of 14 mrem and the transit blank a dose of 14 mrem. These readings were indistinguishable from background, likely due to shielding provided by the office building where they were kept. Table 2 identifies locations with annual gamma doses above background.

**Table 2. Locations with Annual Gamma Doses above Background for the 2nd Quarter**

Location	Effective Dose
TLD-1	191
TLD-2	264
TLD-7	30
TLD-16	25
TLD-25	28
TLD-30	23
TLD-35	31
TLD-38	23
TLD-40	26
TLD-50	42
TLD-53	93
TLD-60	312
TLD-61	575
TLD-66	23
TLD-67	24
TLD-70	53
TLD-71	42
TLD-75	23
TLD-78	23
TLD-81	102
TLD-82	32
TLD-83	52

There were no locations with positive neutron doses for the second quarter.

The gamma dosimeter locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF<sub>6</sub> cylinder storage yards.

### 3.3 THIRD QUARTER RESULTS

The gamma radiation dose time for the third quarter of CY 2017 was approximately 92 days. Sample results ranged from 15–611 mrem. The background samples ranged from 17–24 mrem. The mean background dose was 20 mrem.

The field blank measured dose of 15 mrem and the transit blank a dose of 12 mrem. These readings were indistinguishable from background, likely due to shielding provided by the office building where they were kept. Table 3 identifies locations with annual gamma doses above background.

**Table 3. Locations with Annual Gamma Doses above Background for the 3rd Quarter**

<b>Location</b>	<b>Effective Dose</b>
TLD-1	216
TLD-2	250
TLD-5	23
TLD-7	28
TLD-13	22
TLD-16	23
TLD-25	27
TLD-35	28
TLD-38	21
TLD-40	26
TLD-50	43
TLD-53	105
TLD-60	243
TLD-61	611
TLD-70	52
TLD-71	39
TLD-74	23
TLD-78	23
TLD-81	92
TLD-82	27
TLD-83	45

There were no locations with positive neutron doses for the third quarter.

The gamma dosimeter locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF<sub>6</sub> cylinder storage yards.

### 3.4 FOURTH QUARTER RESULTS

The gamma radiation dose time for the fourth quarter of CY 2017 was approximately 92 days. Sample results ranged from 18–630 mrem. The background samples ranged from 23–28 mrem. The mean background dose was 25 mrem.

The field blank measured dose of 14 mrem, and the transit blank a dose of 14 mrem. These readings were indistinguishable from background, likely due to shielding by the office building where they were kept. Table 4 identifies locations with annual gamma doses above background.

**Table 4. Locations with Annual Gamma Doses above Background for the 4th Quarter**

<b>Location</b>	<b>Effective Dose</b>
TLD-1	222
TLD-2	327
TLD-5	27
TLD-7	30
TLD-13	26
TLD-16	28
TLD-25	34
TLD-30	26
TLD-35	26
TLD-40	29
TLD-50	46
TLD-53	103
TLD-60	374
TLD-61	630
TLD-67	29
TLD-70	44
TLD-71	39
TLD-72	27
TLD-74	28
TLD-76	26
TLD-78	26
TLD-81	114
TLD-82	31
TLD-83	55

There were no locations with positive neutron doses for the 4th quarter.

The gamma locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF<sub>6</sub> cylinder storage yards.

### 3.5 ANNUALIZED RESULTS

Annual gamma dose rates for CY 2017 for the locations were calculated. Dose results for all four quarters were summed for each location and adjusted (annualized) to account for the number of days in the field, varying from 365 (see Appendix D). The adjustment was calculated by adding the four quarters' results and multiplying the sum by 365, divided by the actual total days TLDs were in the field. The mean annual background E was determined to be 87.37 mrem. The mean background was subtracted from the annualized E to obtain a net annual E, attributed to PGDP operations for CY 2017, for each location.

To determine those data points that were statistically above background, the standard deviation of the background measurements was calculated using a normal distribution, yielding a result of 3.50 mrem. Results greater than three standard deviations from the mean background measurement (i.e., 98 mrem) are considered to be above background with 99.7% confidence. Due to the significance of these measurements, a high level of confidence has historically been applied to these statistical calculations in order to ensure doses to the public from plant related activities are accurately reported and to reduce the potential for reporting of “false positives”. Locations with E in excess of the mean background at 99.7% confidence were TLD-1, TLD-2, TLD-7, TLD-25, TLD-35, TLD-40, TLD-50, TLD-53, TLD-60, TLD-61, TLD-70, TLD-71, TLD-81, TLD-82, and TLD-83. These locations are in proximity to DOE UF<sub>6</sub> cylinder storage yards.

Table 5 presents the gamma dosimeter locations where the annualized total dose (mrem) was found to exceed the background with 99.7% confidence. Annual total dose is based on 24 hours per day/365 days per year.

**Table 5. Gamma TLD Locations with Results above Background**

Location	Annualized Effective Dose (mrem)	Mean Background Plus Three Standard Deviations (mrem)	Average Background (mrem)	Net Annual Dose (mrem)
TLD-1	781	98	87	694
TLD-2	1107	98	87	1020
TLD-7	118	98	87	31
TLD-25	115	98	87	28
TLD-35	107	98	87	20
TLD-40	102	98	87	15
TLD-50	170	98	87	83
TLD-53	393	98	87	306
TLD-60	1189	98	87	1102
TLD-61	2350	98	87	2263
TLD-70	194	98	87	107
TLD-71	158	98	87	71
TLD-81	407	98	87	320
TLD-82	115	98	87	28
TLD-83	202	98	87	115

NOTE: For purposes of this report, all dose measurements at these locations are assumed to result from DOE operations.

### 3.6 ANNUALIZED RESULTS FOR 2016 COMPARED TO 2017

Table 6 presents the results of a comparison between the annualized total gamma dose results for CY 2016 and for CY 2017. No new locations were added or discontinued in 2017. The locations with E in

excess of background were mainly consistent between 2016 and 2017. No areas previously identified with elevated dose rates in 2016 had decreased dose rates below background in 2017. One area (TLD-35) with dose rates below background in 2016 had elevated dose rates at a statistically significant level in 2017. Twenty four locations remained statistically consistent ( $\pm 5\%$ ) between 2016 and 2017. Radiation dose rates are subject to change as a result of DUF<sub>6</sub> plant operations such as UF<sub>6</sub> relocation.

**Table 6. Effective Annual Gamma Dose of Common Monitoring Locations for CY 2016 and CY 2017**

<b>Common Location</b>	<b>2016 Annualized Effective Dose (mrem)</b>	<b>2017 Annualized Effective Dose (mrem)</b>	<b>Increase or Decrease from 2016 to 2017</b>	<b>% Change</b>
<b>TLD-1</b>	<b>807</b>	<b>781</b>	<b>-26</b>	<b>-3.22</b>
<b>TLD-2</b>	<b>1047</b>	<b>1107</b>	<b>60</b>	<b>5.73</b>
TLD-3	83	86	3	3.61
TLD-4	80	84	4	5.00
TLD-5	87	91	4	4.60
TLD-6	74	75	1	1.35
<b>TLD-7</b>	<b>101</b>	<b>118</b>	<b>17</b>	<b>16.83</b>
TLD-9	74	75	1	1.35
TLD-12	71	78	7	9.86
TLD-13	88	92	4	4.55
TLD-14	77	75	-2	-2.60
TLD-15	69	72	3	4.35
TLD-16	93	96	3	3.23
TLD-19	90	83	-7	-7.78
<b>TLD-25</b>	<b>112</b>	<b>115</b>	<b>3</b>	<b>2.68</b>
TLD-30	81	91	10	12.35
<b>TLD-35</b>	<b>94</b>	<b>107</b>	<b>13</b>	<b>13.83</b>
TLD-37	84	83	-1	1.19
TLD-38	85	88	3	3.53
<b>TLD-40</b>	<b>103</b>	<b>102</b>	<b>-1</b>	<b>-0.97</b>
TLD-46	75	83	8	10.67
<b>TLD-50</b>	<b>174</b>	<b>170</b>	<b>-4</b>	<b>-2.30</b>
TLD-52	71	78	7	9.86
<b>TLD-53</b>	<b>410</b>	<b>393</b>	<b>-17</b>	<b>-4.15</b>
TLD-58	65	72	7	10.77
TLD-59	67	71	4	5.97
<b>TLD-60</b>	<b>1266</b>	<b>1189</b>	<b>-77</b>	<b>-6.08</b>
<b>TLD-61</b>	<b>2789</b>	<b>2350</b>	<b>-439</b>	<b>-15.74</b>
TLD-62	67	70	3	4.48
TLD-63	65	70	5	7.69
TLD-64	69	70	1	1.45
TLD-65	69	75	6	8.70
TLD-66	82	87	5	6.10
TLD-67	83	92	9	10.84
TLD-68	84	82	-2	-2.38
TLD-69	70	71	1	1.43
<b>TLD-70</b>	<b>157</b>	<b>194</b>	<b>37</b>	<b>23.57</b>

**Table 6. Total Annual Gamma Dose of Common Monitoring Locations for CY 2016 and CY 2017 (Continued)**

<b>Common Location</b>	<b>2016 Annualized Effective Dose (mrem)</b>	<b>2017 Annualized Effective Dose (mrem)</b>	<b>Increase or Decrease from 2016 to 2017</b>	<b>% Change</b>
<b>TLD-71</b>	<b>103</b>	<b>158</b>	<b>55</b>	<b>53.40</b>
TLD-72	82	87	5	6.10
TLD-73	73	79	6	8.22
TLD-74	93	92	-1	-1.08
TLD-75	86	90	4	4.65
TLD-76	83	85	2	2.41
TLD-77	84	84	0	0.00
TLD-78	92	97	5	5.43
TLD-79	73	81	8	10.96
TLD-80	77	83	6	7.79
<b>TLD-81</b>	<b>331</b>	<b>407</b>	<b>76</b>	<b>22.96</b>
<b>TLD-82</b>	<b>103</b>	<b>115</b>	<b>12</b>	<b>11.65</b>
<b>TLD-83</b>	<b>219</b>	<b>202</b>	<b>-17</b>	<b>-7.76</b>
TLD-84	71	80	9	12.68

NOTE: The locations that are **bolded** are where the annualized total mrem was above the maximum background with 99% confidence.

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## 4. ANALYSIS

Effective dose is a calculated quantity, expressed in rem, developed by the International Commission on Radiation Protection (ICRP) for purposes of radiation protection. The E is assumed to be related to the risk of a radiation-induced cancer or a severe hereditary effect. It takes into account (1) the absorbed doses that will be delivered to the separate organs or tissues of the body during the lifetime of an individual due to intakes of radioactive materials; (2) the absorbed doses due to irradiation by external sources; (3) the relative effectiveness of different radiation types in inducing cancers or severe hereditary effects; (4) the susceptibility of individual organs to develop a radiation-related cancer or severe hereditary effect; (5) considerations of the relative importance of fatal and non-fatal effects; and, (6) the average years of life lost from a fatal health effect. Thus, the E is a quantity calculated by multiplying the equivalent dose received by every significantly irradiated tissue in the body by a respective tissue weighting factor (this factor reflects the risk of radiation-induced cancer to that tissue) and summing together the individual tissue results to obtain the effective dose. Such a dose, in theory, carries with it the same risk of cancer as would an equal equivalent dose delivered uniformly to the whole body (Health Physics Society, PS-005, 2009). The TLDs used are designed to measure the dose due to external gamma radiation or neutron radiation. The vendors use industry standard conversions to calculate the E received from the external exposure. As such, the results from the analysis of the TLDs are presented in units of E (mrem). DOE’s limiting values for members of the public are in units of TED (DOE Order 458.1).

Table 7 provides calculated values of E rate in mrem/hour for those locations with results statistically above background based on the net annual gamma doses determined and reported in Table 5.

**Table 7. Net Annual Gamma Effective Doses**

Location	Net Annual Effective Doses (mrem)	Net Dose Rate (mrem/hour)
TLD-1	694	0.079
TLD-2	1020	0.116
TLD-7	31	0.004
TLD-25	28	0.003
TLD-35	20	0.002
TLD-40	15	0.002
TLD-50	83	0.009
TLD-53	306	0.035
TLD-60	1102	0.126
TLD-61	2263	0.258
TLD-70	107	0.012
TLD-71	71	0.008
TLD-81	320	0.037
TLD-82	28	0.003
TLD-83	115	0.013

Avg. = 0.047

Table 8 provides calculated values of equivalent dose in mrem/hour for annual neutron doses as determined by neutron monitoring locations and data reported in Appendix E.

**Table 8. Neutron Effective Doses**

<b>Location</b>	<b>Annual Neutron Effective Dose (mrem)</b>	<b>Neutron Dose Rate (mrem/hour)</b>
TLD-2	0	0.000
TLD-3	0	0.000
TLD-50	0	0.000
TLD-65	0	0.000
TLD-68	0	0.000
TLD-81	0	0.000
TLD-83	0	0.000

Avg = 0.000

Historic surveys of the plant perimeter fence indicate that the TLDs are located in the areas where the maximum doses are likely to occur. Since the fall of 2001, security controls have been in place to restrict public access to the DOE Reservation. While controls have relaxed somewhat, provisions remain in place to prohibit regular public access to areas adjacent to the security fence. As such, the locations listed in Table 7 and Table 8 were not regularly accessible to the public in CY 2017. The external radiation exposures at the locations not listed in Table 7, although accessible to the public, were not above background with 99.7% confidence. Calculation of a worst case dose, assuming that a member of the public spends 80 hours at the location of highest measured dose along the security fence at TLD-2, determined that a dose of 9 mrem ( $0.116 \text{ mrem/hour} \times 80 \text{ hours}$ ) would be received. The DOE contribution of E from plant-derived gamma and neutron radiation that a member of the public received visiting or passing through accessible portions of the DOE Reservation (outside the PGDP security fence) was calculated by taking the average of the net gamma exposure rates in Table 7 plus average neutron exposure in Table 8 multiplied by an occupancy factor of 80 hours per year for an outdoor site visitor. An outdoor site visitor would receive 3.76 mrem ( $0.047 \text{ mrem/hour} \times 80 \text{ hours}$ ) a year worst case, which is well below the 100 mrem limit for CY 2017.

Historically, the two locations with the highest measured exposures (TLD-1 and TLD-2) are approximately 1,800 and 600 ft, respectively, from the nearest locations off the DOE property boundary. TLD-1 and TLD-2 both are in close proximity to the PGDP security perimeter fence in the vicinity of  $\text{UF}_6$  cylinder storage yards. The nearest off-reservation measurement locations are found within land owned by the Commonwealth of Kentucky and are designated as part of the West Kentucky Wildlife Management Area (WKWMA). No residences or businesses are located in the WKWMA. The nearest private residences to TLD-1 and TLD-2 are approximately 6,500 and 5,500 feet away, respectively.

In CY 2009, security restrictions were eased to allow regular public access to Harmony Cemetery located at TLD-14. The annual dose to a member of public visiting the cemetery at TLD-14 was statistically equivalent to the average background in CY 2017. While this location is located physically closer to the plant than the residences described above, the time spent annually at the cemetery is much less than is postulated for a resident; therefore, for purposes of calculation, the maximally exposed member of the general public continues to reside at these residences. The measurement locations that are closer to TLD-1 and TLD-2 than the nearest residents did not yield external radiation exposures that were statistically different from background. As the dose is inversely proportional to the distance from the source, the E to the maximally exposed individual at the two public residences nearest TLD-1 and TLD-2 also is not different from background.

## 5. CONCLUSIONS

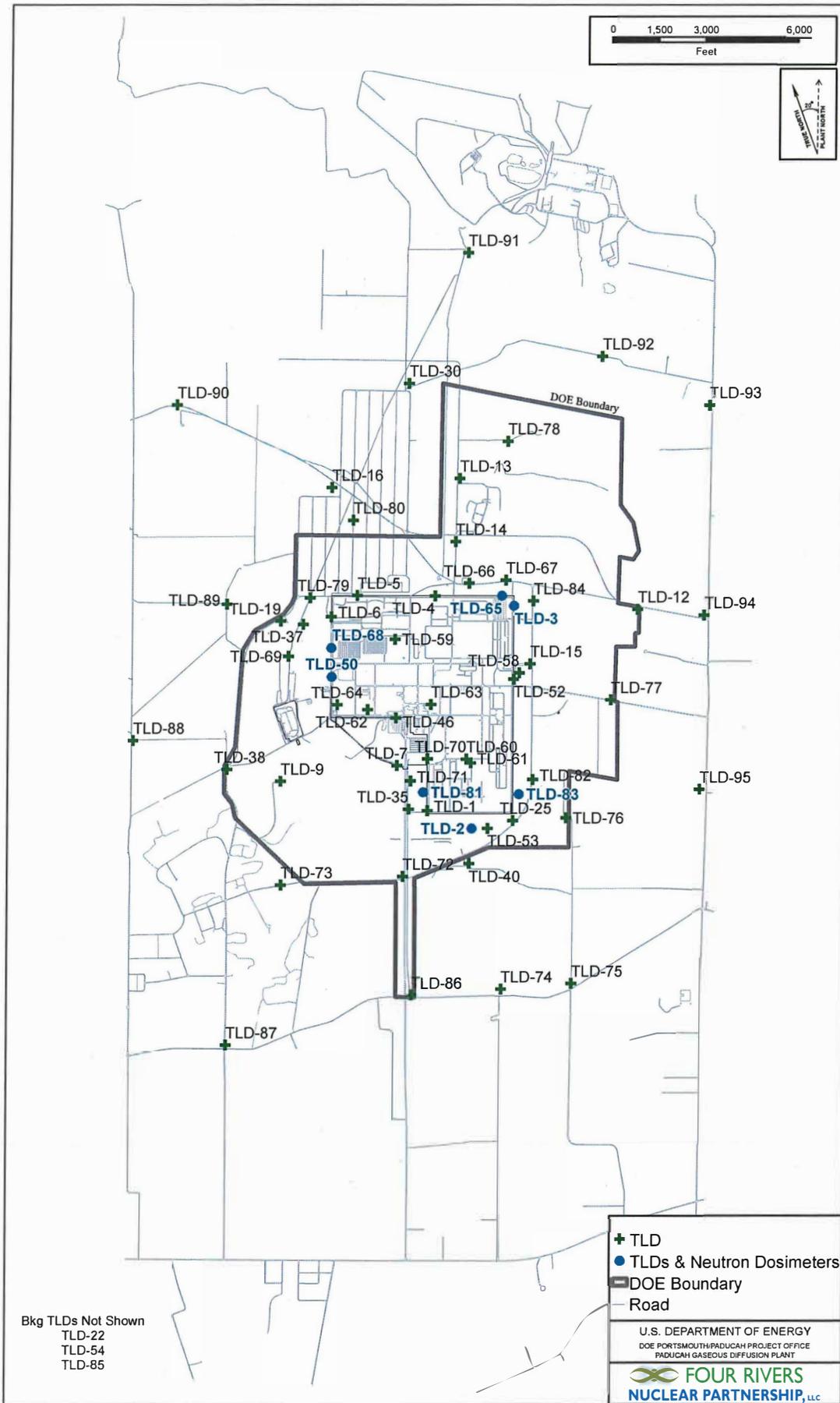
The public does not have regular access to the PGDP boundary fence; therefore, the radiation doses measured at the fence are not applicable to members of the public. Calculation of a worst case dose, assuming that a member of the public spends 80 hours at the location of highest measured dose along the security fence at TLD-2, determined that a dose of 9 mrem would be received. This is 11 times less than the DOE public dose limit of 100 mrem/yr. Due to the PGDP security protocols, no members of the public regularly access areas adjacent to the security fence. The external radiation doses measured by TLDs in areas accessible to the public were not statistically above background; therefore, the E potentially received by a member of the public passing through accessible portions of the DOE Reservation would receive 4 mrem a year in a worst case scenario. In 2017, TLD-14 and TLD-40 represented the closest locations that would be accessible to the public. TLD-14 is near Harmony Cemetery, located north of the plant security fence and south of Ogden Landing Road. Measurements at this location indicated external radiation doses statistically equivalent to background radiation level. In 2017, TLD-40 located on the DOE Reservation boundary within the DOE leased WKWMA area off of Dyke Road indicated external radiation dose measured to be slightly above background levels. The maximally exposed individual at the private residences also was calculated to be at background levels. Based on the results of the gamma and neutron radiation dose measurements made during CY 2017, the E to the maximally exposed individual member of the public from DOE operations was below the applicable DOE limit of 100 mrem within a year, in accordance with DOE Order 458.1.

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**APPENDIX A**

**MAP OF MONITORING LOCATIONS**

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**APPENDIX B**

**TLD PLACEMENT AND COLLECTION**

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Date/Time Issued/Badge ID	Issued By	Date/Time Collected	Collected By	Location Name	Description	NorthLong	West or East Lat	Xcoord	Ycoord	Comments
01/09/2017 08:51 9604-625	JW	4/4/2017 9:18	JW	TLD-1	PGDP security fence west of C-745-M near intersection of Patrol Road and Alabama Avenue near pole 21-20. Outside fence behind UDS dirt pile	N 37 06 16.66	W 088 48 55.18	-4172	-5856	N/A
01/09/2017 08:39 9605-626 1176	JW	4/4/2017 13:30	JW	TLD-2	PGDP security fence south of C-745-T near pole T20-6J. South Cylinder Yard perimeter fence	N 37 06 02.15	W 088 48 43.07	-2740	-6427	N/A
01/09/2017 07:59 9606-627 1177	JW	4/4/2017 8:57	JW	TLD-3	PGDP security fence east of C-745-H near pole 23-31. Perimeter fence NE corner	N 37 07 04.17	W 088 47 57.21	-1399	739	N/A
01/09/2017 10:02 9607-628	JW	4/4/2017 10:10	JW	TLD-4	North PGDP security fence near North-South Diversion Ditch.	N 37 07 15.74	W 088 48 25.56	-3957	1052	N/A
01/09/2017 09:58 9608-629	JW	4/4/2017 10:06	JW	TLD-5	North PGDP security fence north of C-747-A near pole T53A1P26G. North perimeter fence between lagoon	N 37 07 24.38	W 088 48 54.58	-6464	1068	N/A
01/09/2017 09:49 9609-630	JW	4/4/2017 9:58	JW	TLD-6	West PGDP security fence west of C-746-P1 near pole 22-4. 612 perimeter fence.	N 37 07 20.85	W 088 49 07.22	-7303	382	N/A
01/09/2017 09:08 9610-631	JW	4/4/2017 9:32	JW	TLD-7	PGDP perimeter fence adjacent to Curlee Road near entrance to DOE building (C-103). Perimeter fence across from entrance to DOE bldg.	N 37 06 29.15	W 088 49 02.49	-5153	-4400	N/A
N/A	N/A	N/A	N/A	TLD-8	Fence around U.S.G.S. stream gauging station at Bayou Creek and South Acid Road. USGS fence West 57 Acid Rd.	N 37 05 57.76	W 088 49 28.04	-6011	-8091	N/A
01/09/2017 12:07 9611-632	JW	4/4/2017 13:06	JW	TLD-9	Northeast corner of fence of old KOW water treatment plant, near Monitoring Well 309. Gate to MW305	N 37 06 37.12	W 088 49 48.11	-8901	-4907	N/A
N/A	N/A	N/A	N/A	TLD-10	Outfall 011 - hung from side of outfall sampling platform at about foot level, pole T19-15E. Gate Outfall 011	N 37 06 27.22	W 088 48 03.56	-602	-2948	N/A

N/A	N/A	N/A	N/A	TLD-11	Institutional controls fence on north side of McCall Road at Little Bayou Creek crossing. Little Bayou Creek & McCall Rd.	N 37 06 28.88	W 088 47 41.08	1052	-2167	N/A
01/09/2017 11:14 9612-633	JW	4/4/2017 12:08	JW	TLD-12	Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. MW191, Little Bayou & Ogden Landing Rd.	N 37 06 49.62	W 088 47 11.44	2588	626	N/A
01/09/2017 11:18 9613-634	JW	4/4/2017 12:13	JW	TLD-13	West fence of C-746-U landfill near entrance gate	N 37 07 48.17	W 088 48 00.61	-3182	4825	N/A
01/09/2017 07:53 9614-635	JW	4/4/2017 8:50	JW	TLD-14	Institutional controls fence along North-South Diversion Ditch on west side of 14th street extension near Highway 358 (K003). Fence at North South ditch, north of MW353	N 37 07 29.75	W 088 48 10.58	-3302	2798	N/A
01/09/2017 07:35 9615-636	JW	4/4/2017 8:35	JW	TLD-15	Northeast corner of C-755 fence behind C-755-D	N 37 06 45.01	W 088 47 58.91	-864	-1129	N/A
01/09/2017 11:38 9616-637	JW	4/4/2017 12:32	JW	TLD-16	WKWMA Clubhouse on northwest corner porch post. On porch WKWMA Headquarters.	N 37 07 59.44	W 088 48 49.76	-7311	4533	N/A
N/A	N/A	N/A	N/A	TLD-17	Suspended from the U.S.G.S. stream gauging station about 3 feet below the north side of the Highway 358 bridge over Big Bayou Creek. USGS at Big Bayou Creek Bridge by Lambs Garage	N 37 08 41.09	W 088 49 37.27	-12368	7174	N/A
N/A	N/A	N/A	N/A	TLD-18	Suspended about 3 feet below the U.S.G.S. stream gauging station platform at Little Bayou Creek and Anderson Road. USGS at Iron Bridge Little Bayou Creek. Right @ Tract 5 4-way Stop	N 37 08 22.09	W 088 47 25.71	-1702	9016	N/A
01/09/2017 12:00 9617-638	JW	4/4/2017 13:00	JW	TLD-19	Big Bayou Creek south of Transport Road Bridge--Located in tree to left of the DOE barricade. Iron Bridge BBC, behind notice sign.	N 37 07 25.09	W 088 49 26.57	-8922	248	N/A

N/A	N/A	N/A	N/A	TLD-20	Center of fence at north side of water treatment plant	N 37 06 59.83	W 088 49 36.29	-8788	-2421	N/A
N/A	N/A	N/A	N/A	TLD-21	Residence, Oaks Road, Paducah, Kentucky	N 36 58 12.77	W 088 32 52.01	85990	-24497	N/A
01/09/2017 10:26 9618-639	JW	4/4/2017 11:15	JW	TLD-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	N/A
N/A	N/A	N/A	N/A	TLD-23	Outside of the fence of the locked air sampling station at the northwest corner of the Heath ballpark fields	N 37 05 50.80	W 088 46 57.78	5667	-4583	N/A
N/A	N/A	N/A	N/A	TLD-24	BJC Kevil facility on stairway handrail outside southwest corner of building	N 37 04 39.52	W 088 52 51.97	N/A	N/A	N/A
01/09/2017 08:11 9620-641	JW	4/4/2017 9:09	JW	TLD-25	On power line tower nearest Dykes Road southeast of C-745-T	N 37 06 00.02	W 088 48 26.49	-1401	-6172	N/A
N/A	N/A	N/A	N/A	TLD-26	Massac Creek to left of path in tree. Highway 62 Bridge past Sunshine Dairy	N 36 57 31.92	W 088 25 13.90	122314	-15495	N/A
N/A	N/A	N/A	N/A	TLD-27	"Do not block entrance" sign on Plant Access Road near Post 15 and motorcycle parking area (C-800). Motorcycle Shed, Post 15	N 37 06 40.78	W 088 48 54.33	-4883	-3431	N/A
N/A	N/A	N/A	N/A	TLD-28	Bethel Church Road, turn right on Bobo Road, left on intersection, located in trees at Monitoring Well 194. Sign near staircase on Big Bayou, MW194	N 37 07 44.580	W 088 49 34.140	-10105	1884	N/A
N/A	N/A	N/A	N/A	TLD-29	First bunker off Ogden Landing Road, across from WKWMA Clubhouse, placed at the back side rafter, inside the window on the overhang. Inside the bunker, south of horse barn, west wall	N 37 07 55.380	W 088 48 41.820	-6503	4306	N/A

01/09/2017 11:34 9621-642	JW	4/4/2017 12:28	JW	TLD-30	Take the road by the PGDP landfills, drive past Monitoring Well 98, turn left at three-way, Monitoring Well 235 intersection at Tract 7 sign. The TLD is hung on the inside of the sign. Boldry School Rd., Tract 7 sign, west of MW381	N 37 08 21.060	W 088 45 09.060	-4836	7876	N/A
N/A	N/A	N/A	N/A	TLD-31	Boldry School Road straight through gravel road, turn right at Tract 6 gate, turn left at intersection, back to circle at dirt road, (L241) about 30 feet off road in a tree. Top of hill at pipeline in tree. (Green Scorpion)	N 37 09 02.580	W 088 47 25.620	-3201	12751	N/A
N/A	N/A	N/A	N/A	TLD-32	Boldry School Road, past Ducks Unlimited Area on Tract 6, located in a tree on the side of the road. South Dead Dog Rd in tree East side of road. 30 yds prior to Tract 6 Sign	N 37 09 50.040	W 088 48 03.480	-5489	15453	N/A
N/A	N/A	N/A	N/A	TLD-33	Harmony Cemetery off Dykes Road behind PGDP, on the large tree in the center	N 37 07 17.580	W 088 48 12.540	-2886	1553	N/A
N/A	N/A	N/A	N/A	TLD-34	Dykes Road back side of PGDP, across from Monitoring Well 145, Monitoring Well 144 on the gravel road	N 37 06 58.440	W 088 48 52.320	-779	940	N/A
01/09/2017 09:06 9622-643	JW	4/4/2017 9:30	JW	TLD-35	Outfall 017 off of Plant Access Road. Outfall 017 UDS laydown yard	N 37 06 21.480	W 088 49 03.960	-4773	-5806	N/A
N/A	N/A	N/A	N/A	TLD-36	PGDP plant access road, turn at DOE, turn towards Northwest Plume facility, turn towards landfill (C-746-K) at creek on road and the end of the bridge. Randy Bridge	N 37 06 50.640	W 088 49 23.040	-7321	-2865	N/A
01/09/2017 09:47 9623-644	JW	4/4/2017 9:51	JW	TLD-37	KPDES Outfall 001 behind Vortec facility. K001	N 37 07 18.600	W 088 49 15.660	-8202	138	N/A

01/09/2017 12:04 9624-645	JW	4/4/2017 13:04	JW	TLD-38	Five-Points Creek with concrete bridge, on tree behind 2A sign.	N 37 06 43.320	W 088 50 09.000	-10630	-4528	N/A
N/A	N/A	N/A	N/A	TLD-39	Outfall 10 off Dykes Road near C-755 complex. Outfall 010	N 37 06 33.540	W 088 48 00.900	-612.5	-2231.25	N/A
01/09/2017 08:13 9625-646	JW	4/4/2017 9:12	JW	TLD-40	Turn north on Kelly Road off Woodville Road, go about 1/2 mile on Kelly road and turn left, go about 1/2 miles, TLD placed in trees on left. Orange sign on blocked road, east of 57 off Dykes Rd.	N 37 05 52.200	W 088 48 52.20	-2818	-7551	N/A
N/A	N/A	N/A	N/A	TLD-41	Acid Road near old monitoring well past bridge. Acid Rd by COE monitoring well.	N 37 06 07.800	W 088 50 18.360	-10116	-6298	N/A
N/A	N/A	N/A	N/A	TLD-42	Ogden Landing Road, past landfill, at Northeast Plume, on "No Trespassing" sign	N 37 06 55.380	W 088 47 19.080	-1219	-1701	N/A
N/A	N/A	N/A	N/A	TLD-43	Monitoring Well 98 on road past landfill, in the trees	N 37 08 12.240	W 088 47 50.700	-3125	-6568	N/A
N/A	N/A	N/A	N/A	TLD-44	Outside security fence west of Lasagna site on the corner post of posted area - southeast corner	N 37 07 08.880	W 088 49 12.780	-7337	-1591	N/A
N/A	N/A	N/A	N/A	TLD-45	At C-743 trailer complex at walk-in gate	N 37 06 45.900	W 088 49 04.620	-7337	-474	N/A
01/09/2017 09:12 9626-647	JW	4/4/2017 9:35	JW	TLD-46	Truck entrance at receiving C-720	N 37 06 44.700	W 088 49 00.120	-5198	-2865	NA
N/A	N/A	N/A	N/A	TLD-47	Tree line south of C-745-T Cylinder Storage Yard. First road on left on Dykes Rd past 57. Last tree on right before clearing	N 37 06 00.300	W 088 48.49.380	-3156	-6777	N/A
N/A	N/A	N/A	N/A	TLD-48	Tree line along the security fence east of C-745-H. Gate 44 road, NE corner of fence	N 37 07 06.60	W 088 47.53.82	-1225	1064	N/A
N/A	N/A	N/A	N/A	TLD-49	Outfall 001 Posted Area. Power pole North C-612 T1	N 37 07 26.52	W 088 49.04.92	-7325	984	N/A
01/09/2017 09:40 9627-648 1178	JW	4/4/2017 9:47	JW	TLD-50	West Patrol Road fence across from C-745-A	N 37 07 02.88	W 088 49.15.18	-7287	-1547	N/A
N/A	N/A	N/A	N/A	TLD-51	Outfall 015 Posted Area	N 37 07 07.02	W 088 49.13.68	-7316	-1112	N/A
01/09/2017 07:39 9628-649	JW	4/4/2017 8:40	JW	TLD-52	East Patrol Road fence across from C-745-E.	N 37 06 42.18	W 088 48.07.20	-1397	-1628	N/A

01/09/2017 08:40 9629-650	JW	4/4/2017 13:35	JW	TLD-53	Security fence at southeast corner of C-745-T Yard. Down fence line away from TLD-2.	N 37 06 00.42	W 088 48.37.02	-2220	-6423	N/A
01/10/2017 06:30 9630-651	KA	4/10/2017 21:00	KA	TLD-54	Residence; Jalusian Trail	N 57 87 72.16	E 23 93 13.48	45296	-25254	N/A
N/A	N/A	N/A	N/A	TLD-55	C-410/420 Office/BCS	N 59 10 67.99	E 22 80 74.83	-3963	-1574	Discontinued 7/10/2014
N/A	N/A	N/A	N/A	TLD-56	O/S C-410 Truck Alley Facing C-412	N 59 09 84.68	E 22 81 16.67	-3733	-1776	N/A
N/A	N/A	N/A	N/A	TLD-57	C-340 Foyer	N 59 04 60.56	E 22 85 14.19	-1882	-2886	N/A
01/09/2017 07:27 9631-652	JW	4/4/2017 8:32	JW	TLD-58	West Central C-755 Complex	N 59 07 98.00	E 22 88 70.74	-1209	-1422	N/A
01/09/2017 14:46 9632-653	JW	4/4/2017 14:09	JW	TLD-59	C-752A Break Area	N 59 15 61.62	E 22 78 55.79	-5234	-339	N/A
01/09/2017 13:42 9633-654	JW	4/4/2017 14:01	JW	TLD-60	C-333A Light Pole on Fence Pole #16	N 59 02 07.10	E 22 80 71.62	-2919	-4199	N/A
01/09/2017 13:49 9634-655	JW	4/4/2017 14:02	JW	TLD-61	West of C-746Q Light Pole #14	N 59 01 58.14	E 22 80 98.35	-2778	-4315	N/A
01/09/2017 14:56 9635-656	JW	4/4/2017 15:34	JW	TLD-62	C-743 Trailer Complex Light Pole #336,behind Trailer #3.	N 59 10 20.18	E 22 73 49.81	-6111	-2607	N/A
01/09/2017 14:00 9636-657	JW	4/4/2017 14:30	JW	TLD-63	C-412 HP Break Trailer	N 59 08 36.46	E 22 79 46.95	-4069	-2435	N/A
01/09/2017 09:33 9637-658	JW	4/4/2017 10:21	JW	TLD-64	C-764 T-6 Trailer	N 59 11 77.55	E 22 70 88.88	-7098	-2447	N/A
01/09/2017 08:02 9638-659 1179	JW	4/4/2017 9:01	JW	TLD-65	Located O/S of North Security fence North of C-745H Cylinder Yard; South of C-762 Laydown Yard	N 37 07 08.54386	W 088 48 00.45376	-1795	1062	N/A
01/09/2017 07:49 9639-660	JW	4/4/2017 8:48	JW	TLD-66	Located on tree @Southeast corner of New Harmony Cemetery; adjacent to last concrete barrier & large metal post	N 37 07 15.80859	W 088 48 11.08836	-2856	1457	N/A
01/09/2017 07:47 9640-661	JW	4/4/2017 8:46	JW	TLD-67	Located on "No Trespassing" sign North side of Dykes Rd next to Security Fence North of C-762 Laydown yard	N 37 07 12.70502	W 088 47 56.75697	-1658	1560	N/A
01/09/2017 09:44 9641-662 1180	JW	4/4/2017 9:50	JW	TLD-68	West Security Fence West of C-745B Cylinder Yard & Southeast of Vortec Site	N 37 07 11.60797	W 088 49 11.43416	-7302	-617	N/A
01/09/2017 09:23 9642-663	JW	4/4/2017 9:40	JW	TLD-69	Wooden utility pole (T12-15 H) next to gravel road @Northeast corner of pond North of C-611	N 37 07 13.70394	W 088 49 28.37928	-8664	-888	N/A

01/09/2017 09:03 9643-664	JW	4/4/2017 9:26	JW	TLD-70	O/S of West Security Fence Southeast of C-333 midway between C810 parking area & North BWCS Security Fence	N 37 06 27.82855	W 088 48 50.25203	-4173	-4189	N/A
01/09/2017 08:58 9644-665	JW	4/4/2017 9:24	JW	TLD-71	O/S of West Security Fence of BWCS under security light, Northeast of wooden utility pole (11056 KU 78487)	N 37 06 23.05971	W 088 48 59.65074	-4723	-4903	N/A
01/09/2017 08:48 9645-666	JW	4/4/2017 9:14	JW	TLD-72	North Side of Air Monitoring Station AMD57, Northwest of Post 57	N 37 05 55.32798	W 088 49 15.28582	-4952	-7972	N/A
01/09/2017 12:12 9646-667	JW	4/4/2017 13:10	JW	TLD-73	Eastern "Railroad Crossing" sign @train tracks on Acid Road	N 37 06 06.14205	W 088 50 02.01070	-8883	-8241	N/A
01/09/2017 10:43 9647-668	JW	4/4/2017 11:33	JW	TLD-74	Located on "Warning Siren" sign @turnoff North of Magruder & Woodville intersection	N 37 05 10.96196	W 088 48 53.61411	-1765	-11586	N/A
01/09/2017 10:45 9648-669	JW	4/4/2017 11:36	JW	TLD-75	Located on "Warning Siren" sign @North of Kelley Rd & Woodville Rd intersection	N 37 05 04.94525	W 088 48 26.65157	496	-11409	N/A
01/09/2017 10:49 9649-670	JW	4/4/2017 11:41	JW	TLD-76	Located on "Tract A" sign below power lines southside of Kelley Rd in sharp curve between Woodville & McCaw Rds	N 37 05 55.05466	W 088 48 06.27328	310	-6082	N/A
01/09/2017 10:54 9650-671	JW	4/4/2017 11:46	JW	TLD-77	Located on "Warning Siren" sign North side of McCaw Rd east of Kelley Rd intersection	N 37 06 25.46598	W 088 47 33.66599	1737	-2287	N/A
01/09/2017 11:22 9651-672	JW	4/4/2017 12:16	JW	TLD-78	Northeast Corner of C-746U Landfill Security Fence	N 37 07 54.00752	W 088 47 37.45924	-1622	6020	N/A
01/09/2017 09:55 9652-673	JW	4/4/2017 10:02	JW	TLD-79	Located on left post of the "Wildlife Management" gate on New Waterline Rd Southwest of Plant gate 41A west of C-612	N 37 07 28.86304	W 88 49 12.50003	-7981	993	N/A
01/09/2017 11:41 9653-674	JW	4/4/2017 12:35	JW	TLD-80	Located on "Cattle" gate west of MW 453 & MW 454 on gravel rd east of New Waterline Rd	N 37 07 47.29850	W 088 48 46.10944	-6612	3477	N/A
01/09/2017 08:55 9654-675 1181	JW	4/4/2017 9:21	JW	TLD-81	Southeast corner of BWCS security fence next to gate V1 East of New Waterline East of C1100	N 37 06 18.33947	W 088 48 56.42591	-4314	-5262	N/A
01/09/2017 08:08 9655-676	JW	4/4/2017 9:07	JW	TLD-82	Short wooden pole East of Dykes Rd North of Outfall 13	N 37 06 10.13175	W 088 48 13.53048	-765	-4851	N/A

01/09/2017 08:22 9656-677 1182	JW	4/4/2017 13:14	JW	TLD-83	Large metal power pole West of Dykes Rd South of Outfall 13	N 37 06 07.30640	W 088 48 20.71726	-1214	-5319	N/A
01/09/2017 07:42 9657-678	JW	4/4/2017 9:44	JW	TLD-84	Located @MW496 on the East Side of Dykes Rd	N 37 07 03.50589	W 088 47 49.26485	-769	894	N/A
01/09/2017 16:30 9658-679	SO	4/4/2017 17:00	SO	TLD-85	Residence; corner of Springwell and Buckner Lane	N 37 03 27.9036	W 088 40 43.9638	39082	-7750	N/A
01/09/2017 10:40 9659-680	JW	4/4/2017 11:30	JW	TLD-86	Plant Entrance, Gravel Construction Rd. Right side on orange warning signal sign	N 37° 5' 18.8622"	W 088 49 28.2282	-4676	-11794	N/A
01/09/2017 12:16 9660-681	JW	4/4/2017 13:14	JW	TLD-87	KOW Entrance north of Woodville Rd north of Kevil Eagles. Right side on orange warning signal sign	N 37 05 24.2802	W 088 50 43.9548	-10629	-13381	N/A
01/09/2017 11:54 9661-682	JW	4/4/2017 12:51	JW	TLD-88	Bethel Church Road KOW entrance. North of Massay Rd, right side on yellow post	N 37 07 05.4876	W 088 50 37.9608	-13677	-3597	N/A
1/09/2017 11:50 9662-683	JW	4/4/2017 12:47	JW	TLD-89	Bobo Rd, off of Bethel Church Rd. Continue east 200 yds past end of asphalt. At intersection on orange warning signal sign	N 37 07 35.9976	W 088 49 44.3922	-10657	788	N/A
01/09/2017 11:46 9663-684	JW	4/4/2017 12:41	JW	TLD-90	Bridge on Ogden Landing Rd east of Lamb's garage. On NE corner of bridge on contaminated creek sign	N 37 08 54.6714	W 088 47 27.2472	-12310	7182	N/A
01/09/2017 11:31 9664-685	JW	4/4/2017 12:24	JW	TLD-91	Boldry School Rd on KOW at Shawnee plant entrance. On cattle gate road on hill, right side	N 37 08 40.9884	W 088 49 36.5232	-2952	12069	N/A
01/09/2017 11:03 9665-686	JW	4/4/2017 11:59	N/A	TLD-92	Anderson Road off Metropolis Lake Rd. follow West until road ends @Railroad tracks. On left crossing gate post.	N 37 07 42.7866	W 088 46 17.1438	1392	8745	N/A
01/09/2017 11:02 9666-687	JW	4/4/2017 11:55	JW	TLD-93	MW 100, North on Metropolis Lake Rd past railroad tracks on left side on Well bollard	N 37 08 09.0744	W 088 46 50.9304	4874	7186	N/A
01/09/2017 11:12 9667-688	JW	4/4/2017 12:06	JW	TLD-94	Residence; corner of Ogden Landing Rd & Metropolis Lake Rd	N 37 05 48.9294	W 088 47 12.4332	4740	436	N/A
01/09/2017 10:57 9668-689	JW	4/4/2017 11:49	JW	TLD-95	West McCracken Health Clinic, Metropolis Lake Rd. On Light Pole in SW corner of parking lot	N 37 06 40.5468	W 088 46 47.2872	4617	-5167	N/A

01/09/2017 16:00 9669-690	JW	4/4/2017 16:00	JW	TLD-FB	Taken along while placing and collecting all other samples - stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
01/09/2017 07:00 9670-691	JW	4/4/2017 7:00	JW	TLD-TB	Stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
9671-692	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
9672-693	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
9673-694	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
9674-695	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
9675-696	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
9619-640	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A

Date/Time Issued/Badge ID	Issued By	Date/Time Collected	Collected By	Location Name	Description	NorthLong	West or East Lat	Xcoord	Ycoord	Comments
04/04/2017 09:18 1707-625	JW	7/11/2017 9:24	JW	TLD-1	PGDP security fence west of C-745-M near intersection of Patrol Road and Alabama Avenue near pole 21-20. Outside fence behind UDS dirt pile	N 37 06 16.66	W 088 48 55.18	-4172	-5856	N/A
04/04/2017 13:30 1708-626 1175	JW	7/11/2017 14:45	JW	TLD-2	PGDP security fence south of C-745-T near pole T20-6J. South Cylinder Yard perimeter fence	N 37 06 02.15	W 088 48 43.07	-2740	-6427	N/A
04/04/2017 08:57 1709-627 1176	JW	7/11/2017 9:00	JW	TLD-3	PGDP security fence east of C-745-H near pole 23-31. Perimeter fence NE corner	N 37 07 04.17	W 088 47 57.21	-1399	739	N/A
04/04/2017 10:10 1710-628	JW	7/11/2017 10:33	JW	TLD-4	North PGDP security fence near North-South Diversion Ditch.	N 37 07 15.74	W 088 48 25.56	-3957	1052	N/A
04/04/2017 10:06 1711-629	JW	7/11/2017 10:29	JW	TLD-5	North PGDP security fence north of C-747-A near pole T53A1P26G. North perimeter fence between lagoon	N 37 07 24.38	W 088 48 54.58	-6464	1068	N/A
04/04/2017 09:58 1712-630	JW	7/11/2017 10:24	JW	TLD-6	West PGDP security fence west of C-746-P1 near pole 22-4. 612 perimeter fence.	N 37 07 20.85	W 088 49 07.22	-7303	382	N/A
04/04/2017 09:32 1713-631	JW	7/11/2017 9:52	JW	TLD-7	PGDP perimeter fence adjacent to Curlee Road near entrance to DOE building (C-103). Perimeter fence across from entrance to DOE bldg.	N 37 06 29.15	W 088 49 02.49	-5153	-4400	N/A
N/A	N/A	N/A	N/A	TLD-8	Fence around U.S.G.S. stream gauging station at Bayou Creek and South Acid Road. USGS fence West 57 Acid Rd.	N 37 05 57.76	W 088 49 28.04	-6011	-8091	N/A
04/04/2017 1306 1714-632	JW	7/11/2017 13:54	JW	TLD-9	Northeast corner of fence of old KOW water treatment plant, near Monitoring Well 309. Gate to MW305	N 37 06 37.12	W 088 49 48.11	-8901	-4907	N/A
N/A	N/A	N/A	N/A	TLD-10	Outfall 011 - hung from side of outfall sampling platform at about foot level, pole T19-15E. Gate Outfall 011	N 37 06 27.22	W 088 48 03.56	-602	-2948	N/A

N/A	N/A	N/A	N/A	TLD-11	Institutional controls fence on north side of McCall Road at Little Bayou Creek crossing. Little Bayou Creek & McCall Rd.	N 37 06 28.88	W 088 47 41.08	1052	-2167	N/A
04/04/2017 12:08 1715-633	JW	7/11/2017 12:45	JW	TLD-12	Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. MW191, Little Bayou & Ogden Landing Rd.	N 37 06 49.62	W 088 47 11.44	2588	626	N/A
04/04/2017 12:13 1716-634	JW	7/11/2017 12:49	JW	TLD-13	West fence of C-746-U landfill near entrance gate	N 37 07 48.17	W 088 48 00.61	-3182	4825	N/A
04/04/2017 08:50 1717-635	JW	7/11/2017 8:53	JW	TLD-14	Institutional controls fence along North-South Diversion Ditch on west side of 14th street extension near Highway 358 (K003). Fence at North South ditch, north of MW353	N 37 07 29.75	W 088 48 10.58	-3302	2798	N/A
04/04/2017 08:35 1718-636	JW	7/11/2017 8:34	JW	TLD-15	Northeast corner of C-755 fence behind C-755-D	N 37 06 45.01	W 088 47 58.91	-864	-1129	N/A
04/04/2017 12:32 1719-637	JW	7/11/2017 13:10	JW	TLD-16	WKWMA Clubhouse on northwest corner porch post. On porch WKWMA Headquarters.	N 37 07 59.44	W 088 48 49.76	-7311	4533	N/A
N/A	N/A	N/A	N/A	TLD-17	Suspended from the U.S.G.S. stream gauging station about 3 feet below the north side of the Highway 358 bridge over Big Bayou Creek. USGS at Big Bayou Creek Bridge by Lambs Garage	N 37 08 41.09	W 088 49 37.27	-12368	7174	N/A
N/A	N/A	N/A	N/A	TLD-18	Suspended about 3 feet below the U.S.G.S. stream gauging station platform at Little Bayou Creek and Anderson Road. USGS at Iron Bridge Little Bayou Creek. Right @ Tract 5 4-way Stop	N 37 08 22.09	W 088 47 25.71	-1702	9016	N/A
04/04/2017 13:00 1720-638	JW	lost	JW	TLD-19	Big Bayou Creek south of Transport Road Bridge--Located in tree to left of the DOE barricade. Iron Bridge BBC, behind notice sign.	N 37 07 25.09	W 088 49 26.57	-8922	248	N/A

N/A	N/A	N/A	N/A	TLD-20	Center of fence at north side of water treatment plant	N 37 06 59.83	W 088 49 36.29	-8788	-2421	N/A
N/A	N/A	N/A	N/A	TLD-21	Residence, Oaks Road, Paducah, Kentucky	N 36 58 12.77	W 088 32 52.01	85990	-24497	N/A
04/04/2017 11:15 1721-639	JW	7/11/2017 11:40	JW	TLD-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	N/A
N/A	N/A	N/A	N/A	TLD-23	Outside of the fence of the locked air sampling station at the northwest corner of the Heath ballpark fields	N 37 05 50.80	W 088 46 57.78	5667	-4583	N/A
N/A	N/A	N/A	N/A	TLD-24	BJC Kevil facility on stairway handrail outside southwest corner of building	N 37 04 39.52	W 088 52 51.97	N/A	N/A	N/A
04/04/2017 09:09 1722-640	JW	7/11/2017 14:38	JW	TLD-25	On power line tower nearest Dykes Road southeast of C-745-T	N 37 06 00.02	W 088 48 26.49	-1401	-6172	N/A
N/A	N/A	N/A	N/A	TLD-26	Massac Creek to left of path in tree. Highway 62 Bridge past Sunshine Dairy	N 36 57 31.92	W 088 25 13.90	122314	-15495	N/A
N/A	N/A	N/A	N/A	TLD-27	"Do not block entrance" sign on Plant Access Road near Post 15 and motorcycle parking area (C-800). Motorcycle Shed, Post 15	N 37 06 40.78	W 088 48 54.33	-4883	-3431	N/A
N/A	N/A	N/A	N/A	TLD-28	Bethel Church Road, turn right on Bobo Road, left on intersection, located in trees at Monitoring Well 194. Sign near staircase on Big Bayou, MW194	N 37 07 44.580	W 088 49 34.140	-10105	1884	N/A
N/A	N/A	N/A	N/A	TLD-29	First bunker off Ogden Landing Road, across from WKWMA Clubhouse, placed at the back side rafter, inside the window on the overhang. Inside the bunker, south of horse barn, west wall	N 37 07 55.380	W 088 48 41.820	-6503	4306	N/A

04/04/2017 12:28 1723-641	JW	7/11/2017 13:06	JW	TLD-30	Take the road by the PGDP landfills, drive past Monitoring Well 98, turn left at three-way, Monitoring Well 235 intersection at Tract 7 sign. The TLD is hung on the inside of the sign. Boldry School Rd., Tract 7 sign, west of MW381	N 37 08 21.060	W 088 45 09.060	-4836	7876	N/A
N/A	N/A	N/A	N/A	TLD-31	Boldry School Road straight through gravel road, turn right at Tract 6 gate, turn left at intersection, back to circle at dirt road, (L241) about 30 feet off road in a tree. Top of hill at pipeline in tree. (Green Scorpion)	N 37 09 02.580	W 088 47 25.620	-3201	12751	N/A
N/A	N/A	N/A	N/A	TLD-32	Boldry School Road, past Ducks Unlimited Area on Tract 6, located in a tree on the side of the road. South Dead Dog Rd in tree East side of road. 30 yds prior to Tract 6 Sign	N 37 09 50.040	W 088 48 03.480	-5489	15453	N/A
N/A	N/A	N/A	N/A	TLD-33	Harmony Cemetery off Dykes Road behind PGDP, on the large tree in the center	N 37 07 17.580	W 088 48 12.540	-2886	1553	N/A
N/A	N/A	N/A	N/A	TLD-34	Dykes Road back side of PGDP, across from Monitoring Well 145, Monitoring Well 144 on the gravel road	N 37 06 58.440	W 088 48 52.320	-779	940	N/A
04/04/2017 09:30 1724-642	JW	7/11/2017 9:44	JW	TLD-35	Outfall 017 off of Plant Access Road. Outfall 017 UDS laydown yard	N 37 06 21.480	W 088 49 03.960	-4773	-5806	N/A
N/A	N/A	N/A	N/A	TLD-36	PGDP plant access road, turn at DOE, turn towards Northwest Plume facility, turn towards landfill (C-746-K) at creek on road and the end of the bridge. Randy Bridge	N 37 06 50.640	W 088 49 23.040	-7321	-2865	N/A
04/04/2017 09:51 1725-643	JW	7/19/2017 10:22	JW	TLD-37	KPDES Outfall 001 behind Vortec facility. K001	N 37 07 18.600	W 088 49 15.660	-8202	138	N/A

04/04/2017 13:04 1726-644	JW	7/11/2017 13:52	JW	TLD-38	Five-Points Creek with concrete bridge, on tree behind 2A sign.	N 37 06 43.320	W 088 50 09.000	-10630	-4528	N/A
N/A	N/A	N/A	N/A	TLD-39	Outfall 10 off Dykes Road near C-755 complex. Outfall 010	N 37 06 33.540	W 088 48 00.900	-612.5	-2231.25	N/A
04/04/2017 09:12 1727-645	JW	7/11/2017 9:10	JW	TLD-40	Turn north on Kelly Road off Woodville Road, go about 1/2 mile on Kelly road and turn left, go about 1/2 miles, TLD placed in trees on left. Orange sign on blocked road, east of 57 off Dykes Rd.	N 37 05 52.200	W 088 48 52.20	-2818	-7551	N/A
N/A	N/A	N/A	N/A	TLD-41	Acid Road near old monitoring well past bridge. Acid Rd by COE monitoring well.	N 37 06 07.800	W 088 50 18.360	-10116	-6298	N/A
N/A	N/A	N/A	N/A	TLD-42	Ogden Landing Road, past landfill, at Northeast Plume, on "No Trespassing" sign	N 37 06 55.380	W 088 47 19.080	-1219	-1701	N/A
N/A	N/A	N/A	N/A	TLD-43	Monitoring Well 98 on road past landfill, in the trees	N 37 08 12.240	W 088 47 50.700	-3125	-6568	N/A
N/A	N/A	N/A	N/A	TLD-44	Outside security fence west of Lasagna site on the corner post of posted area - southeast corner	N 37 07 08.880	W 088 49 12.780	-7337	-1591	N/A
N/A	N/A	N/A	N/A	TLD-45	At C-743 trailer complex at walk-in gate	N 37 06 45.900	W 088 49 04.620	-7337	-474	N/A
04/04/2017 09:35 1728-646	JW	7/11/2017 9:57	JW	TLD-46	Truck entrance at receiving C-720	N 37 06 44.700	W 088 49 00.120	-5198	-2865	NA
N/A	N/A	N/A	N/A	TLD-47	Tree line south of C-745-T Cylinder Storage Yard. First road on left on Dykes Rd past 57. Last tree on right before clearing	N 37 06 00.300	W 088 48.49.380	-3156	-6777	N/A
N/A	N/A	N/A	N/A	TLD-48	Tree line along the security fence east of C-745-H. Gate 44 road, NE corner of fence	N 37 07 06.60	W 088 47.53.82	-1225	1064	N/A
N/A	N/A	N/A	N/A	TLD-49	Outfall 001 Posted Area. Power pole North C-612 T1	N 37 07 26.52	W 088 49.04.92	-7325	984	N/A
04/04/2017 09:47 1729-647 1177	JW	7/11/2017 10:18	JW	TLD-50	West Patrol Road fence across from C-745-A	N 37 07 02.88	W 088 49.15.18	-7287	-1547	N/A
N/A	N/A	N/A	N/A	TLD-51	Outfall 015 Posted Area	N 37 07 07.02	W 088 49.13.68	-7316	-1112	N/A
04/04/2017 08:40 1730-648	JW	7/11/2017 8:39	JW	TLD-52	East Patrol Road fence across from C-745-E.	N 37 06 42.18	W 088 48.07.20	-1397	-1628	N/A

04/04/2017 13:35 1731-649	JW	7/11/2017 14:47	JW	TLD-53	Security fence at southeast corner of C-745-T Yard. Down fence line away from TLD-2.	N 37 06 00.42	W 088 48.37.02	-2220	-6423	N/A
04/10/2017 21:00 1732-650	KA	7/15/2017 6:30	KA	TLD-54	Residence; Jalusian Trail	N 57 87 72.16	E 23 93 13.48	45296	-25254	N/A
N/A	N/A	N/A	N/A	TLD-55	C-410/420 Office/BCS	N 59 10 67.99	E 22 80 74.83	-3963	-1574	Discontinued 7/10/2014
N/A	N/A	N/A	N/A	TLD-56	O/S C-410 Truck Alley Facing C-412	N 59 09 84.68	E 22 81 16.67	-3733	-1776	N/A
N/A	N/A	N/A	N/A	TLD-57	C-340 Foyer	N 59 04 60.56	E 22 85 14.19	-1882	-2886	N/A
04/04/2017 08:32 1733-651	JW	7/11/2017 8:29	JW	TLD-58	West Central C-755 Complex	N 59 07 98.00	E 22 88 70.74	-1209	-1422	N/A
04/04/2017 14:09 1734-652	JW	7/12/2017 12:30	JW	TLD-59	C-752A Break Area	N 59 15 61.62	E 22 78 55.79	-5234	-339	N/A
04/04/2017 14:01 1735-653	JW	7/11/2017 15:12	JW	TLD-60	C-333A Light Pole on Fence Pole #16	N 59 02 07.10	E 22 80 71.62	-2919	-4199	N/A
04/04/2017 14:02 1736-654	JW	7/11/2017 15:14	JW	TLD-61	West of C-746Q Light Pole #14	N 59 01 58.14	E 22 80 98.35	-2778	-4315	N/A
04/04/2017 15:34 1737-655	JW	7/11/2017 15:52	JW	TLD-62	C-743 Trailer Complex Light Pole #336, behind Trailer #3.	N 59 10 20.18	E 22 73 49.81	-6111	-2607	N/A
04/04/2017 14:30 1738-656	JW	7/11/2017 15:44	JW	TLD-63	C-412 HP Break Trailer	N 59 08 36.46	E 22 79 46.95	-4069	-2435	N/A
04/04/2017 10:21 1739-657	JW	7/11/2017 10:40	JW	TLD-64	C-764 T-6 Trailer	N 59 11 77.55	E 22 70 88.88	-7098	-2447	N/A
04/04/2017 09:01 1740-658 1178	JW	7/11/2017 9:03	JW	TLD-65	Located O/S of North Security fence North of C-745H Cylinder Yard; South of C-762 Laydown Yard	N 37 07 08.54386	W 088 48 00.45376	-1795	1062	N/A
04/04/2017 08:48 1741-659	JW	7/11/2017 8:48	JW	TLD-66	Located on tree @Southeast corner of New Harmony Cemetery; adjacent to last concrete barrier & large metal post	N 37 07 15.80859	W 088 48 11.08836	-2856	1457	N/A
04/04/2017 08:46 1742-660	JW	7/11/2017 8:46	JW	TLD-67	Located on "No Trespassing" sign North side of Dykes Rd next to Security Fence North of C-762 Laydown yard	N 37 07 12.70502	W 088 47 56.75697	-1658	1560	N/A
04/04/2017 09:50 1743-661 1179	JW	7/11/2017 10:20	JW	TLD-68	West Security Fence West of C-745B Cylinder Yard & Southeast of Vortec Site	N 37 07 11.60797	W 088 49 11.43416	-7302	-617	N/A
04/04/2017 09:40 1744-662	JW	7/11/2017 10:12	JW	TLD-69	Wooden utility pole (T12-15 H) next to gravel road @Northeast corner of pond North of C-611	N 37 07 13.70394	W 088 49 28.37928	-8664	-888	N/A

04/04/2017 09:26 1745-663	JW	7/11/2017 9:40	JW	TLD-70	O/S of West Security Fence Southeast of C-333 midway between C810 parking area & North BWCS Security Fence	N 37 06 27.82855	W 088 48 50.25203	-4173	-4189	N/A
04/04/2017 09:24 1746-664	JW	7/11/2017 9:30	JW	TLD-71	O/S of West Security Fence of BWCS under security light, Northeast of wooden utility pole (11056 KU 78487)	N 37 06 23.05971	W 088 48 59.65074	-4723	-4903	N/A
04/04/2017 09:14 1747-665	JW	7/11/2017 9:20	JW	TLD-72	North Side of Air Monitoring Station AMD57, Northwest of Post 57	N 37 05 55.32798	W 088 49 15.28582	-4952	-7972	N/A
04/04/2017 13:10 1748-666	JW	7/11/2017 13:59	JW	TLD-73	Eastern "Railroad Crossing" sign @train tracks on Acid Road	N 37 06 06.14205	W 088 50 02.01070	-8883	-8241	N/A
04/04/2017 11:33 1749-667	JW	7/11/2017 12:00	JW	TLD-74	Located on "Warning Siren" sign @turnoff North of Magruder & Woodville intersection	N 37 05 10.96196	W 088 48 53.61411	-1765	-11586	N/A
04/04/2017 1136 1750-668	JW	7/11/2017 12:03	JW	TLD-75	Located on "Warning Siren" sign @North of Kelley Rd & Woodville Rd intersection	N 37 05 04.94525	W 088 48 26.65157	496	-11409	N/A
04/04/2017 11:41 1751-669	JW	7/11/2017 12:08	JW	TLD-76	Located on "Tract A" sign below power lines southside of Kelley Rd in sharp curve between Woodville & McCaw Rds	N 37 05 55.05466	W 088 48 06.27328	310	-6082	N/A
04/04/2017 11:46 1752-670	JW	7/11/2017 12:14	JW	TLD-77	Located on "Warning Siren" sign North side of McCaw Rd east of Kelley Rd intersection	N 37 06 25.46598	W 088 47 33.66599	1737	-2287	N/A
04/04/2017 12:16 1753-671	JW	7/11/2017 12:52	JW	TLD-78	Northeast Corner of C-746U Landfill Security Fence	N 37 07 54.00752	W 088 47 37.45924	-1622	6020	N/A
04/04/2017 10:02 1754-672	JW	7/11/2017 10:27	JW	TLD-79	Located on left post of the "Wildlife Management" gate on New Waterline Rd Southwest of Plant gate 41A west of C-612	N 37 07 28.86304	W 88 49 12.50003	-7981	993	N/A
04/04/2017 12:35 1755-673	JW	7/11/2017 13:14	JW	TLD-80	Located on "Cattle" gate west of MW 453 & MW 454 on gravel rd east of New Waterline Rd	N 37 07 47.29850	W 088 48 46.10944	-6612	3477	N/A
04/04/2017 09:21 1756-674 1180	JW	7/11/2017 9:27	JW	TLD-81	Southeast corner of BWCS security fence next to gate V1 East of New Waterline East of C1100	N 37 06 18.33947	W 088 48 56.42591	-4314	-5262	N/A
04/04/2017 09:07 1757-675	JW	7/11/2017 9:11	JW	TLD-82	Short wooden pole East of Dykes Rd North of Outfall 13	N 37 06 10.13175	W 088 48 13.53048	-765	-4851	N/A

04/04/2017 13:14 1758-676 1181	JW	7/11/2017 14:33	JW	TLD-83	Large metal power pole West of Dykes Rd South of Outfall 13	N 37 06 07.30640	W 088 48 20.71726	-1214	-5319	N/A
04/04/2017 09:44 1759-677	JW	7/11/2017 8:43	JW	TLD-84	Located @MW496 on the East Side of Dykes Rd	N 37 07 03.50589	W 088 47 49.26485	-769	894	N/A
04/04/2017 17:00 1760-678	SO	7/11/2017 17:00	SO	TLD-85	Residence; corner of Springwell and Buckner Lane	N 37 03 27.9036	W 088 40 43.9638	39082	-7750	N/A
04/04/2017 11:30 1761-679	JW	7/11/2017 14:06	JW	TLD-86	Plant Entrance, Gravel Construction Rd. Right side on orange warning signal sign	N 37° 5' 18.8622"	W 088 49 28.2282	-4676	-11794	N/A
04/04/2017 1314 1762-680	JW	7/11/2017 14:03	JW	TLD-87	KOW Entrance north of Woodville Rd north of Kevil Eagles. Right side on orange warning signal sign	N 37 05 24.2802	W 088 50 43.9548	-10629	-13381	N/A
04/04/2017 12:51 1763-681	JW	7/11/2017 13:30	JW	TLD-88	Bethel Church Road KOW entrance. North of Massay Rd, right side on yellow post	N 37 07 05.4876	W 088 50 37.9608	-13677	-3597	N/A
04/04/2017 12:47 1764-682	JW	7/11/2017 13:26	JW	TLD-89	Bobo Rd, off of Bethel Church Rd. Continue east 200 yds past end of asphalt. At intersection on orange warning signal sign	N 37 07 35.9976	W 088 49 44.3922	-10657	788	N/A
04/04/2017 12:41 1765-683	JW	7/11/2017 13:20	JW	TLD-90	Bridge on Ogden Landing Rd east of Lamb's garage. On NE corner of bridge on contaminated creek sign	N 37 08 54.6714	W 088 47 27.2472	-12310	7182	N/A
04/04/2017 12:24 1766-684	JW	7/11/2017 13:00	JW	TLD-91	Boldry School Rd on KOW at Shawnee plant entrance. On cattle gate road on hill, right side	N 37 08 40.9884	W 088 49 36.5232	-2952	12069	N/A
04/04/2017 11:59 1767-685	JW	7/11/2017 12:31	N/A	TLD-92	Anderson Road off Metropolis Lake Rd. follow West until road ends @Railroad tracks. On left crossing gate post.	N 37 07 42.7866	W 088 46 17.14 38	1392	8745	N/A
04/04/2017 11:55 1768-686	JW	7/11/2017 12:27	JW	TLD-93	MW 100, North on Metropolis Lake Rd past railroad tracks on left side on Well bollard	N 37 08 09.0744	W 088 46 50.9304	4874	7186	N/A
04/04/2017 12:06 1769-687	JW	7/11/2017 12:41	JW	TLD-94	Residence; corner of Ogden Landing Rd & Metropolis Lake Rd	N 37 05 48.9294	W 088 47 12.4332	4740	436	N/A
04/04/2017 11:49 1770-688	JW	7/11/2017 12:19	JW	TLD-95	West McCracken Health Clinic, Metropolis Lake Rd. On Light Pole in SW corner of parking lot	N 37 06 40.5468	W 088 46 47.2872	4617	-5167	N/A

04/04/2017 16:00 1771-689	JW	7/11/2017 16:00	JW	TLD-FB	Taken along while placing and collecting all other samples - stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
04/04/2017 07:00 1772-690	JW	7/11/2017 7:00	JW	TLD-TB	Stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
1773-691	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
1774-692	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
1775-693	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
1776-694	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
1777-695	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
1778-696	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A

Date/Time Issued/Badge ID	Issued By	Date/Time Collected	Collected By	Location Name	Description	NorthLong	West or East Lat	Xcoord	Ycoord	Comments
07/11/2017 09:24 3619-625	JW	10/11/2017 8:50	JW	TLD-1	PGDP security fence west of C-745-M near intersection of Patrol Road and Alabama Avenue near pole 21-20. Outside fence behind UDS dirt pile	N 37 06 16.66	W 088 48 55.18	-4172	-5856	N/A
07/11/2017 14:45 3620-626 1177	JW	10/11/2017 8:40	JW	TLD-2	PGDP security fence south of C-745-T near pole T20-6J. South Cylinder Yard perimeter fence	N 37 06 02.15	W 088 48 43.07	-2740	-6427	N/A
07/11/2017 09:00 3621-627 1178	JW	10/11/2017 8:13	JW	TLD-3	PGDP security fence east of C-745-H near pole 23-31. Perimeter fence NE corner	N 37 07 04.17	W 088 47 57.21	-1399	739	N/A
07/11/2017 10:33 3622-628	JW	10/11/2017 9:58	JW	TLD-4	North PGDP security fence near North-South Diversion Ditch.	N 37 07 15.74	W 088 48 25.56	-3957	1052	N/A
07/11/2017 10:29 3623-629	JW	10/11/2017 9:49	JW	TLD-5	North PGDP security fence north of C-747-A near pole T53A1P26G. North perimeter fence between lagoon	N 37 07 24.38	W 088 48 54.58	-6464	1068	N/A
07/11/2017 10:24 3624-630	JW	10/11/2017 9:39	JW	TLD-6	West PGDP security fence west of C-746-P1 near pole 22-4. 612 perimeter fence.	N 37 07 20.85	W 088 49 07.22	-7303	382	N/A
07/11/2017 09:52 3625-631	JW	10/11/2017 9:05	JW	TLD-7	PGDP perimeter fence adjacent to Curlee Road near entrance to DOE building (C-103). Perimeter fence across from entrance to DOE bldg.	N 37 06 29.15	W 088 49 02.49	-5153	-4400	N/A
N/A	N/A	N/A	N/A	TLD-8	Fence around U.S.G.S. stream gauging station at Bayou Creek and South Acid Road. USGS fence West 57 Acid Rd.	N 37 05 57.76	W 088 49 28.04	-6011	-8091	N/A
07/11/2017 13:54 3626-632	JW	10/11/2017 13:52	JW	TLD-9	Northeast corner of fence of old KOW water treatment plant, near Monitoring Well 309. Gate to MW305	N 37 06 37.12	W 088 49 48.11	-8901	-4907	N/A
N/A	N/A	N/A	N/A	TLD-10	Outfall 011 - hung from side of outfall sampling platform at about foot level, pole T19-15E. Gate Outfall 011	N 37 06 27.22	W 088 48 03.56	-602	-2948	N/A

N/A	N/A	N/A	N/A	TLD-11	Institutional controls fence on north side of McCall Road at Little Bayou Creek crossing. Little Bayou Creek & McCall Rd.	N 37 06 28.88	W 088 47 41.08	1052	-2167	N/A
07/11/2017 12:45 3627-633	JW	10/11/2017 12:22	JW	TLD-12	Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. MW191, Little Bayou & Ogden Landing Rd.	N 37 06 49.62	W 088 47 11.44	2588	626	N/A
07/11/2017 12:49 3628-634	JW	10/11/2017 12:25	JW	TLD-13	West fence of C-746-U landfill near entrance gate	N 37 07 48.17	W 088 48 00.61	-3182	4825	N/A
07/11/2017 08:53 3629-635	JW	10/11/2017 8:04	JW	TLD-14	Institutional controls fence along North-South Diversion Ditch on west side of 14th street extension near Highway 358 (K003). Fence at North South ditch, north of MW353	N 37 07 29.75	W 088 48 10.58	-3302	2798	N/A
07/11/2017 08:34 3630-636	JW	10/11/2017 9:50	JW	TLD-15	Northeast corner of C-755 fence behind C-755-D	N 37 06 45.01	W 088 47 58.91	-864	-1129	N/A
07/11/2017 13:10 3631-637	JW	10/11/2017 12:54	JW	TLD-16	WKWMA Clubhouse on northwest corner porch post. On porch WKWMA Headquarters.	N 37 07 59.44	W 088 48 49.76	-7311	4533	N/A
N/A	N/A	N/A	N/A	TLD-17	Suspended from the U.S.G.S. stream gauging station about 3 feet below the north side of the Highway 358 bridge over Big Bayou Creek. USGS at Big Bayou Creek Bridge by Lambs Garage	N 37 08 41.09	W 088 49 37.27	-12368	7174	N/A
N/A	N/A	N/A	N/A	TLD-18	Suspended about 3 feet below the U.S.G.S. stream gauging station platform at Little Bayou Creek and Anderson Road. USGS at Iron Bridge Little Bayou Creek. Right @ Tract 5 4-way Stop	N 37 08 22.09	W 088 47 25.71	-1702	9016	N/A
07/11/2017 13:48 3632-638	JW	10/11/2017 13:41	JW	TLD-19	Big Bayou Creek south of Transport Road Bridge--Located in tree to left of the DOE barricade. Iron Bridge BBC, behind notice sign.	N 37 07 25.09	W 088 49 26.57	-8922	248	N/A

N/A	N/A	N/A	N/A	TLD-20	Center of fence at north side of water treatment plant	N 37 06 59.83	W 088 49 36.29	-8788	-2421	N/A
N/A	N/A	N/A	N/A	TLD-21	Residence, Oaks Road, Paducah, Kentucky	N 36 58 12.77	W 088 32 52.01	85990	-24497	N/A
07/11/2017 11:40 3633-639	JW	10/11/2017 10:42	JW	TLD-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	N/A
N/A	N/A	N/A	N/A	TLD-23	Outside of the fence of the locked air sampling station at the northwest corner of the Heath ballpark fields	N 37 05 50.80	W 088 46 57.78	5667	-4583	N/A
N/A	N/A	N/A	N/A	TLD-24	BJC Kevil facility on stairway handrail outside southwest corner of building	N 37 04 39.52	W 088 52 51.97	N/A	N/A	N/A
07/11/2017 14:38 3634-640	JW	10/11/2017 8:33	JW	TLD-25	On power line tower nearest Dykes Road southeast of C-745-T	N 37 06 00.02	W 088 48 26.49	-1401	-6172	N/A
N/A	N/A	N/A	N/A	TLD-26	Massac Creek to left of path in tree. Highway 62 Bridge past Sunshine Dairy	N 36 57 31.92	W 088 25 13.90	122314	-15495	N/A
N/A	N/A	N/A	N/A	TLD-27	"Do not block entrance" sign on Plant Access Road near Post 15 and motorcycle parking area (C-800). Motorcycle Shed, Post 15	N 37 06 40.78	W 088 48 54.33	-4883	-3431	N/A
N/A	N/A	N/A	N/A	TLD-28	Bethel Church Road, turn right on Bobo Road, left on intersection, located in trees at Monitoring Well 194. Sign near staircase on Big Bayou, MW194	N 37 07 44.580	W 088 49 34.140	-10105	1884	N/A
N/A	N/A	N/A	N/A	TLD-29	First bunker off Ogden Landing Road, across from WKWMA Clubhouse, placed at the back side rafter, inside the window on the overhang. Inside the bunker, south of horse barn, west wall	N 37 07 55.380	W 088 48 41.820	-6503	4306	N/A

07/11/2017 13:04 3635-641	JW	10/11/2017 12:46	JW	TLD-30	Take the road by the PGDP landfills, drive past Monitoring Well 98, turn left at three-way, Monitoring Well 235 intersection at Tract 7 sign. The TLD is hung on the inside of the sign. Boldry School Rd., Tract 7 sign, west of MW381	N 37 08 21.060	W 088 45 09.060	-4836	7876	N/A
N/A	N/A	N/A	N/A	TLD-31	Boldry School Road straight through gravel road, turn right at Tract 6 gate, turn left at intersection, back to circle at dirt road, (L241) about 30 feet off road in a tree. Top of hill at pipeline in tree. (Green Scorpion)	N 37 09 02.580	W 088 47 25.620	-3201	12751	N/A
N/A	N/A	N/A	N/A	TLD-32	Boldry School Road, past Ducks Unlimited Area on Tract 6, located in a tree on the side of the road. South Dead Dog Rd in tree East side of road. 30 yds prior to Tract 6 Sign	N 37 09 50.040	W 088 48 03.480	-5489	15453	N/A
N/A	N/A	N/A	N/A	TLD-33	Harmony Cemetery off Dykes Road behind PGDP, on the large tree in the center	N 37 07 17.580	W 088 48 12.540	-2886	1553	N/A
N/A	N/A	N/A	N/A	TLD-34	Dykes Road back side of PGDP, across from Monitoring Well 145, Monitoring Well 144 on the gravel road	N 37 06 58.440	W 088 48 52.320	-779	940	N/A
07/11/2017 09:44 3636-642	JW	10/11/2017 9:03	JW	TLD-35	Outfall 017 off of Plant Access Road. Outfall 017 UDS laydown yard	N 37 06 21.480	W 088 49 03.960	-4773	-5806	N/A
N/A	N/A	N/A	N/A	TLD-36	PGDP plant access road, turn at DOE, turn towards Northwest Plume facility, turn towards landfill (C-746-K) at creek on road and the end of the bridge. Randy Bridge	N 37 06 50.640	W 088 49 23.040	-7321	-2865	N/A
07/19/2017 11:08 3637-643	JW	10/11/2017 9:35	JW	TLD-37	KPDES Outfall 001 behind Vortec facility. K001	N 37 07 18.600	W 088 49 15.660	-8202	138	N/A

07/11/2017 13:52 3638-644	JW	10/11/2017 13:47	JW	TLD-38	Five-Points Creek with concrete bridge, on tree behind 2A sign.	N 37 06 43.320	W 088 50 09.000	-10630	-4528	N/A
N/A	N/A	N/A	N/A	TLD-39	Outfall 10 off Dykes Road near C-755 complex. Outfall 010	N 37 06 33.540	W 088 48 00.900	-612.5	-2231.25	N/A
07/11/2017 09:10 3639-645	JW	10/11/2017 8:44	JW	TLD-40	Turn north on Kelly Road off Woodville Road, go about 1/2 mile on Kelly road and turn left, go about 1/2 miles, TLD placed in trees on left. Orange sign on blocked road, east of 57 off Dykes Rd.	N 37 05 52.200	W 088 48 52.20	-2818	-7551	N/A
N/A	N/A	N/A	N/A	TLD-41	Acid Road near old monitoring well past bridge. Acid Rd by COE monitoring well.	N 37 06 07.800	W 088 50 18.360	-10116	-6298	N/A
N/A	N/A	N/A	N/A	TLD-42	Ogden Landing Road, past landfill, at Northeast Plume, on "No Trespassing" sign	N 37 06 55.380	W 088 47 19.080	-1219	-1701	N/A
N/A	N/A	N/A	N/A	TLD-43	Monitoring Well 98 on road past landfill, in the trees	N 37 08 12.240	W 088 47 50.700	-3125	-6568	N/A
N/A	N/A	N/A	N/A	TLD-44	Outside security fence west of Lasagna site on the corner post of posted area - southeast corner	N 37 07 08.880	W 088 49 12.780	-7337	-1591	N/A
N/A	N/A	N/A	N/A	TLD-45	At C-743 trailer complex at walk-in gate	N 37 06 45.900	W 088 49 04.620	-7337	-474	N/A
07/11/2017 09:57 3640-646	JW	10/11/2017 9:08	JW	TLD-46	Truck entrance at receiving C-720	N 37 06 44.700	W 088 49 00.120	-5198	-2865	NA
N/A	N/A	N/A	N/A	TLD-47	Tree line south of C-745-T Cylinder Storage Yard. First road on left on Dykes Rd past 57. Last tree on right before clearing	N 37 06 00.300	W 088 48.49.380	-3156	-6777	N/A
N/A	N/A	N/A	N/A	TLD-48	Tree line along the security fence east of C-745-H. Gate 44 road, NE corner of fence	N 37 07 06.60	W 088 47.53.82	-1225	1064	N/A
N/A	N/A	N/A	N/A	TLD-49	Outfall 001 Posted Area. Power pole North C-612 T1	N 37 07 26.52	W 088 49.04.92	-7325	984	N/A
07/11/2017 10:18 3641-647 1179	JW	10/11/2017 9:30	JW	TLD-50	West Patrol Road fence across from C-745-A	N 37 07 02.88	W 088 49.15.18	-7287	-1547	N/A
N/A	N/A	N/A	N/A	TLD-51	Outfall 015 Posted Area	N 37 07 07.02	W 088 49.13.68	-7316	-1112	N/A
07/11/2017 08:39 3642-648	JW	10/11/2017 7:53	JW	TLD-52	East Patrol Road fence across from C-745-E.	N 37 06 42.18	W 088 48.07.20	-1397	-1628	N/A

07/11/2017 14:47 3643-649	JW	10/11/2017 8:38	JW	TLD-53	Security fence at southeast corner of C-745-T Yard. Down fence line away from TLD-2.	N 37 06 00.42	W 088 48.37.02	-2220	-6423	N/A
07/15/2017 06:30 3644-650	KA	10/12/2017 5:30	KA	TLD-54	Residence; Jalusian Trail	N 57 87 72.16	E 23 93 13.48	45296	-25254	N/A
N/A	N/A	N/A	N/A	TLD-55	C-410/420 Office/BCS	N 59 10 67.99	E 22 80 74.83	-3963	-1574	Discontinued 7/10/2014
N/A	N/A	N/A	N/A	TLD-56	O/S C-410 Truck Alley Facing C-412	N 59 09 84.68	E 22 81 16.67	-3733	-1776	N/A
N/A	N/A	N/A	N/A	TLD-57	C-340 Foyer	N 59 04 60.56	E 22 85 14.19	-1882	-2886	N/A
07/11/2017 08:29 3645-651	JW	10/11/2017 7:45	JW	TLD-58	West Central C-755 Complex	N 59 07 98.00	E 22 88 70.74	-1209	-1422	N/A
07/12/2017 12:30 3646-652	JW	10/11/2017 14:42	JW	TLD-59	C-752A Break Area	N 59 15 61.62	E 22 78 55.79	-5234	-339	N/A
07/11/2017 15:12 3647-653	JW	10/11/2017 14:33	JW	TLD-60	C-333A Light Pole on Fence Pole #16	N 59 02 07.10	E 22 80 71.62	-2919	-4199	N/A
07/11/2017 15:14 3648-654	JW	10/11/2017 14:35	JW	TLD-61	West of C-746Q Light Pole #14	N 59 01 58.14	E 22 80 98.35	-2778	-4315	N/A
07/11/2017 15:52 3649-655	JW	10/11/2017 14:47	JW	TLD-62	C-743 Trailer Complex Light Pole #336, behind Trailer #3.	N 59 10 20.18	E 22 73 49.81	-6111	-2607	N/A
07/11/2017 15:44 3650-656	JW	10/11/2017 14:52	JW	TLD-63	C-412 HP Break Trailer	N 59 08 36.46	E 22 79 46.95	-4069	-2435	N/A
07/11/2017 10:40 3651-657	JW	10/11/2017 10:05	JW	TLD-64	C-764 T-6 Trailer	N 59 11 77.55	E 22 70 88.88	-7098	-2447	N/A
07/11/2017 09:03 3652-658-1180	JW	10/11/2017 8:16	JW	TLD-65	Located O/S of North Security fence North of C-745H Cylinder Yard; South of C-762 Laydown Yard	N 37 07 08.54386	W 088 48 00.45376	-1795	1062	N/A
07/11/2017 08:48 3653-659	JW	10/11/2017 8:01	JW	TLD-66	Located on tree @Southeast corner of New Harmony Cemetery; adjacent to last concrete barrier & large metal post	N 37 07 15.80859	W 088 48 11.08836	-2856	1457	N/A
07/11/2017 08:46 3654-660	JW	10/11/2017 7:59	JW	TLD-67	Located on "No Trespassing" sign North side of Dykes Rd next to Security Fence North of C-762 Laydown yard	N 37 07 12.70502	W 088 47 56.75697	-1658	1560	N/A
07/11/2017 10:20 3655-661 1181	JW	10/11/2017 9:32	JW	TLD-68	West Security Fence West of C-745B Cylinder Yard & Southeast of Vortec Site	N 37 07 11.60797	W 088 49 11.43416	-7302	-617	N/A
07/11/217 10:12 3656-662	JW	10/11/2017 9:14	JW	TLD-69	Wooden utility pole (T12-15 H) next to gravel road @Northeast corner of pond North of C-611	N 37 07 13.70394	W 088 49 28.37928	-8664	-888	N/A

07/11/2017 09:40 3657-663	JW	10/11/2017 8:59	JW	TLD-70	O/S of West Security Fence Southeast of C-333 midway between C810 parking area & North BWCS Security Fence	N 37 06 27.82855	W 088 48 50.25203	-4173	-4189	N/A
07/11/2017 09:30 3658-664	JW	10/11/2017 8:56	JW	TLD-71	O/S of West Security Fence of BWCS under security light, Northeast of wooden utility pole (11056 KU 78487)	N 37 06 23.05971	W 088 48 59.65074	-4723	-4903	N/A
07/11/2017 09:20 3659-665	JW	10/11/2017 8:47	JW	TLD-72	North Side of Air Monitoring Station AMD57, Northwest of Post 57	N 37 05 55.32798	W 088 49 15.28582	-4952	-7972	N/A
07/11/2017 13:59 3660-666	JW	10/11/2017 14:00	JW	TLD-73	Eastern "Railroad Crossing" sign @train tracks on Acid Road	N 37 06 06.14205	W 088 50 02.01070	-8883	-8241	N/A
07/11/2017 12:00 3661-667	JW	10/11/2017 11:39	JW	TLD-74	Located on "Warning Siren" sign @turnoff North of Magruder & Woodville intersection	N 37 05 10.96196	W 088 48 53.61411	-1765	-11586	N/A
07/11/2017 12:03 3662-668	JW	10/11/2017 11:42	JW	TLD-75	Located on "Warning Siren" sign @North of Kelley Rd & Woodville Rd intersection	N 37 05 04.94525	W 088 48 26.65157	496	-11409	N/A
07/11/2017 12:08 3663-669	JW	10/11/2017 11:47	JW	TLD-76	Located on "Tract A" sign below power lines southside of Kelley Rd in sharp curve between Woodville & McCaw Rds	N 37 05 55.05466	W 088 48 06.27328	310	-6082	N/A
07/11/2017 12:14 3664-670	JW	10/11/2017 11:55	JW	TLD-77	Located on "Warning Siren" sign North side of McCaw Rd east of Kelley Rd intersection	N 37 06 25.46598	W 088 47 33.66599	1737	-2287	N/A
07/11/2017 12:52 3665-671	JW	10/11/2017 12:32	JW	TLD-78	Northeast Corner of C-746U Landfill Security Fence	N 37 07 54.00752	W 088 47 37.45924	-1622	6020	N/A
07/11/2017 10:27 3666-672	JW	10/11/2017 9:45	JW	TLD-79	Located on left post of the "Wildlife Management" gate on New Waterline Rd Southwest of Plant gate 41A west of C-612	N 37 07 28.86304	W 88 49 12.50003	-7981	993	N/A
07/11/2017 13:14 3667-673	JW	10/11/2017 12:57	JW	TLD-80	Located on "Cattle" gate west of MW 453 & MW 454 on gravel rd east of New Waterline Rd	N 37 07 47.29850	W 088 48 46.10944	-6612	3477	N/A
07/11/2017 09:27 3668-674 1182	JW	10/11/2017 8:54	JW	TLD-81	Southeast corner of BWCS security fence next to gate V1 East of New Waterline East of C1100	N 37 06 18.33947	W 088 48 56.42591	-4314	-5262	N/A
07/11/2017 09:11 3669-675	JW	10/11/2017 8:25	JW	TLD-82	Short wooden pole East of Dykes Rd North of Outfall 13	N 37 06 10.13175	W 088 48 13.53048	-765	-4851	N/A

07/11/2017 14:33 3670-676 1183	JW	10/11/2017 8:30	JW	TLD-83	Large metal power pole West of Dykes Rd South of Outfall 13	N 37 06 07.30640	W 088 48 20.71726	-1214	-5319	N/A
07/11/2017 08:43 3671-677	JW	10/11/2017 7:56	JW	TLD-84	Located @MW496 on the East Side of Dykes Rd	N 37 07 03.50589	W 088 47 49.26485	-769	894	N/A
07/11/2017 17:00 3672-678	SO	10/10/2017 17:00	SO	TLD-85	Residence; corner of Springwell and Buckner Lane	N 37 03 27.9036	W 088 40 43.9638	39082	-7750	N/A
07/11/2017 14:06 3673-679	JW	10/11/2017 11:35	JW	TLD-86	Plant Entrance, Gravel Construction Rd. Right side on orange warning signal sign	N 37° 5' 18.8622"	W 088 49 28.2282	-4676	-11794	N/A
07/11/2017 14:03 3674-680	JW	10/11/2017 14:07	JW	TLD-87	KOW Entrance north of Woodville Rd north of Kevil Eagles. Right side on orange warning signal sign	N 37 05 24.2802	W 088 50 43.9548	-10629	-13381	N/A
07/11/2017 13:30 3675-681	JW	10/11/2017 13:20	JW	TLD-88	Bethel Church Road KOW entrance. North of Massay Rd, right side on yellow post	N 37 07 05.4876	W 088 50 37.9608	-13677	-3597	N/A
07/11/2017 13:26 3676-682	JW	10/11/2017 13:11	JW	TLD-89	Bobo Rd, off of Bethel Church Rd. Continue east 200 yds past end of asphalt. At intersection on orange warning signal sign	N 37 07 35.9976	W 088 49 44.3922	-10657	788	N/A
07/11/2017 13:20 3677-683	JW	10/11/2017 13:00	JW	TLD-90	Bridge on Ogden Landing Rd east of Lamb's garage. On NE corner of bridge on contaminated creek sign	N 37 08 54.6714	W 088 47 27.2472	-12310	7182	N/A
07/11/2017 13:00 3678-684	JW	10/11/2017 12:41	JW	TLD-91	Boldry School Rd on KOW at Shawnee plant entrance. On cattle gate road on hill, right side	N 37 08 40.9884	W 088 49 36.5232	-2952	12069	N/A
07/11/2017 12:31 3679-685	JW	10/11/2017 12:12	N/A	TLD-92	Anderson Road off Metropolis Lake Rd. follow West until road ends @Railroad tracks. On left crossing gate post.	N 37 07 42.7866	W 088 46 17.1438	1392	8745	N/A
07/11/2017 12:27 3680-686	JW	10/11/2017 12:07	JW	TLD-93	MW 100, North on Metropolis Lake Rd past railroad tracks on left side on Well bollard	N 37 08 09.0744	W 088 46 50.9304	4874	7186	N/A
07/11/2017 12:41 3681-687	JW	10/11/2017 12:20	JW	TLD-94	Residence; corner of Ogden Landing Rd & Metropolis Lake Rd	N 37 05 48.9294	W 088 47 12.4332	4740	436	N/A
07/11/2017 12:19 3682-688	JW	10/11/2017 12:01	JW	TLD-95	West McCracken Health Clinic, Metropolis Lake Rd. On Light Pole in SW corner of parking lot	N 37 06 40.5468	W 088 46 47.2872	4617	-5167	N/A

07/11/2017 16:00 3683-689	JW	10/11/2017 15:00	JW	TLD-FB	Taken along while placing and collecting all other samples - stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
07/11/2017 07:00 3684-690	JW	10/11/2017 7:00	JW	TLD-TB	Stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
3685-691	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
3686-692	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
3687-693	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
3688-694	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
3689-695	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
3690-696	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A

Date/Time Issued/Badge ID	Issued By	Date/Time Collected	Collected By	Location Name	Description	NorthLong	West or East Lat	Xcoord	Ycoord	Comments
10/11/2017 08:50 5596-625	JW	1/11/2018 9:22	JW	TLD-1	PGDP security fence west of C-745-M near intersection of Patrol Road and Alabama Avenue near pole 21-20. Outside fence behind UDS dirt pile	N 37 06 16.66	W 088 48 55.18	-4172	-5856	N/A
10/11/2017 08:40 5597-626 1400	JW	1/11/2018 9:00	JW	TLD-2	PGDP security fence south of C-745-T near pole T20-6J. South Cylinder Yard perimeter fence	N 37 06 02.15	W 088 48 43.07	-2740	-6427	N/A
10/11/2017 08:13 5598-627 1401	JW	1/11/2018 8:24	JW	TLD-3	PGDP security fence east of C-745-H near pole 23-31. Perimeter fence NE corner	N 37 07 04.17	W 088 47 57.21	-1399	739	N/A
10/11/2017 09:58 5599-628	JW	1/11/2018 10:34	JW	TLD-4	North PGDP security fence near North-South Diversion Ditch.	N 37 07 15.74	W 088 48 25.56	-3957	1052	N/A
10/11/2017 09:49 5600-629	JW	1/11/2018 10:26	JW	TLD-5	North PGDP security fence north of C-747-A near pole T53A1P26G. North perimeter fence between lagoon	N 37 07 24.38	W 088 48 54.58	-6464	1068	N/A
10/11/2017 09:39 5601-630	JW	1/11/2018 10:18	JW	TLD-6	West PGDP security fence west of C-746-P1 near pole 22-4. 612 perimeter fence.	N 37 07 20.85	W 088 49 07.22	-7303	382	N/A
10/11/2017 09:05 5602-631	JW	1/11/2018 9:50	JW	TLD-7	PGDP perimeter fence adjacent to Curlee Road near entrance to DOE building (C-103). Perimeter fence across from entrance to DOE bldg.	N 37 06 29.15	W 088 49 02.49	-5153	-4400	N/A
N/A	N/A	N/A	N/A	TLD-8	Fence around U.S.G.S. stream gauging station at Bayou Creek and South Acid Road. USGS fence West 57 Acid Rd.	N 37 05 57.76	W 088 49 28.04	-6011	-8091	N/A
10/11/2017 13:52 5603-632	JW	1/11/2018 15:44	JW	TLD-9	Northeast corner of fence of old KOW water treatment plant, near Monitoring Well 309. Gate to MW305	N 37 06 37.12	W 088 49 48.11	-8901	-4907	N/A
N/A	N/A	N/A	N/A	TLD-10	Outfall 011 - hung from side of outfall sampling platform at about foot level, pole T19-15E. Gate Outfall 011	N 37 06 27.22	W 088 48 03.56	-602	-2948	N/A

N/A	N/A	N/A	N/A	TLD-11	Institutional controls fence on north side of McCall Road at Little Bayou Creek crossing. Little Bayou Creek & McCall Rd.	N 37 06 28.88	W 088 47 41.08	1052	-2167	N/A
10/11/2017 12:22 5604-633	JW	1/11/2018 14:29	JW	TLD-12	Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. MW191, Little Bayou & Ogden Landing Rd.	N 37 06 49.62	W 088 47 11.44	2588	626	N/A
10/11/2017 12:25 5605-634	JW	1/11/2018 14:33	JW	TLD-13	West fence of C-746-U landfill near entrance gate	N 37 07 48.17	W 088 48 00.61	-3182	4825	N/A
10/11/2017 08:04 5606-635	JW	1/11/2018 8:17	JW	TLD-14	Institutional controls fence along North-South Diversion Ditch on west side of 14th street extension near Highway 358 (K003). Fence at North South ditch, north of MW353	N 37 07 29.75	W 088 48 10.58	-3302	2798	N/A
10/11/2017 09:50 5607-636	JW	1/11/2018 7:50	JW	TLD-15	Northeast corner of C-755 fence behind C-755-D	N 37 06 45.01	W 088 47 58.91	-864	-1129	N/A
10/11/2017 12:54 5608-637	JW	1/11/2018 14:50	JW	TLD-16	WKWMA Clubhouse on northwest corner porch post. On porch WKWMA Headquarters.	N 37 07 59.44	W 088 48 49.76	-7311	4533	N/A
N/A	N/A	N/A	N/A	TLD-17	Suspended from the U.S.G.S. stream gauging station about 3 feet below the north side of the Highway 358 bridge over Big Bayou Creek. USGS at Big Bayou Creek Bridge by Lambs Garage	N 37 08 41.09	W 088 49 37.27	-12368	7174	N/A
N/A	N/A	N/A	N/A	TLD-18	Suspended about 3 feet below the U.S.G.S. stream gauging station platform at Little Bayou Creek and Anderson Road. USGS at Iron Bridge Little Bayou Creek. Right @ Tract 5 4-way Stop	N 37 08 22.09	W 088 47 25.71	-1702	9016	N/A
10/11/2017 13:41 5609-638	JW	lost	JW	TLD-19	Big Bayou Creek south of Transport Road Bridge--Located in tree to left of the DOE barricade. Iron Bridge BBC, behind notice sign.	N 37 07 25.09	W 088 49 26.57	-8922	248	N/A

N/A	N/A	N/A	N/A	TLD-20	Center of fence at north side of water treatment plant	N 37 06 59.83	W 088 49 36.29	-8788	-2421	N/A
N/A	N/A	N/A	N/A	TLD-21	Residence, Oaks Road, Paducah, Kentucky	N 36 58 12.77	W 088 32 52.01	85990	-24497	N/A
10/11/2017 10:42 5610-639	JW	1/11/2018 13:18	JW	TLD-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	N/A
N/A	N/A	N/A	N/A	TLD-23	Outside of the fence of the locked air sampling station at the northwest corner of the Heath ballpark fields	N 37 05 50.80	W 088 46 57.78	5667	-4583	N/A
N/A	N/A	N/A	N/A	TLD-24	BJC Kevil facility on stairway handrail outside southwest corner of building	N 37 04 39.52	W 088 52 51.97	N/A	N/A	N/A
10/11/2017 08:33 5611-640	JW	1/11/2018 8:54	JW	TLD-25	On power line tower nearest Dykes Road southeast of C-745-T	N 37 06 00.02	W 088 48 26.49	-1401	-6172	N/A
N/A	N/A	N/A	N/A	TLD-26	Massac Creek to left of path in tree. Highway 62 Bridge past Sunshine Dairy	N 36 57 31.92	W 088 25 13.90	122314	-15495	N/A
N/A	N/A	N/A	N/A	TLD-27	"Do not block entrance" sign on Plant Access Road near Post 15 and motorcycle parking area (C-800). Motorcycle Shed, Post 15	N 37 06 40.78	W 088 48 54.33	-4883	-3431	N/A
N/A	N/A	N/A	N/A	TLD-28	Bethel Church Road, turn right on Bobo Road, left on intersection, located in trees at Monitoring Well 194. Sign near staircase on Big Bayou, MW194	N 37 07 44.580	W 088 49 34.140	-10105	1884	N/A
N/A	N/A	N/A	N/A	TLD-29	First bunker off Ogden Landing Road, across from WKWMA Clubhouse, placed at the back side rafter, inside the window on the overhang. Inside the bunker, south of horse barn, west wall	N 37 07 55.380	W 088 48 41.820	-6503	4306	N/A

10/11/2017 12:46 5612-641	JW	1/11/2018 14:46	JW	TLD-30	Take the road by the PGDP landfills, drive past Monitoring Well 98, turn left at three-way, Monitoring Well 235 intersection at Tract 7 sign. The TLD is hung on the inside of the sign. Boldry School Rd., Tract 7 sign, west of MW381	N 37 08 21.060	W 088 45 09.060	-4836	7876	N/A
N/A	N/A	N/A	N/A	TLD-31	Boldry School Road straight through gravel road, turn right at Tract 6 gate, turn left at intersection, back to circle at dirt road, (L241) about 30 feet off road in a tree. Top of hill at pipeline in tree. (Green Scorpion)	N 37 09 02.580	W 088 47 25.620	-3201	12751	N/A
N/A	N/A	N/A	N/A	TLD-32	Boldry School Road, past Ducks Unlimited Area on Tract 6, located in a tree on the side of the road. South Dead Dog Rd in tree East side of road. 30 yds prior to Tract 6 Sign	N 37 09 50.040	W 088 48 03.480	-5489	15453	N/A
N/A	N/A	N/A	N/A	TLD-33	Harmony Cemetery off Dykes Road behind PGDP, on the large tree in the center	N 37 07 17.580	W 088 48 12.540	-2886	1553	N/A
N/A	N/A	N/A	N/A	TLD-34	Dykes Road back side of PGDP, across from Monitoring Well 145, Monitoring Well 144 on the gravel road	N 37 06 58.440	W 088 48 52.320	-779	940	N/A
10/11/2017 09:03 5613-642	JW	1/11/2018 9:43	JW	TLD-35	Outfall 017 off of Plant Access Road. Outfall 017 UDS laydown yard	N 37 06 21.480	W 088 49 03.960	-4773	-5806	N/A
N/A	N/A	N/A	N/A	TLD-36	PGDP plant access road, turn at DOE, turn towards Northwest Plume facility, turn towards landfill (C-746-K) at creek on road and the end of the bridge. Randy Bridge	N 37 06 50.640	W 088 49 23.040	-7321	-2865	N/A
10/11/2017 09:35 5614-643	JW	1/11/2018 10:14	JW	TLD-37	KPDES Outfall 001 behind Vortec facility. K001	N 37 07 18.600	W 088 49 15.660	-8202	138	N/A

10/11/2017 13:47 5615-644	JW	1/11/2018 15:42	JW	TLD-38	Five-Points Creek with concrete bridge, on tree behind 2A sign.	N 37 06 43.320	W 088 50 09.000	-10630	-4528	N/A
N/A	N/A	N/A	N/A	TLD-39	Outfall 10 off Dykes Road near C-755 complex. Outfall 010	N 37 06 33.540	W 088 48 00.900	-612.5	-2231.25	N/A
10/11/2017 08:44 5616-645	JW	1/11/2018 8:36	JW	TLD-40	Turn north on Kelly Road off Woodville Road, go about 1/2 mile on Kelly road and turn left, go about 1/2 miles, TLD placed in trees on left. Orange sign on blocked road, east of 57 off Dykes Rd.	N 37 05 52.200	W 088 48 52.20	-2818	-7551	N/A
N/A	N/A	N/A	N/A	TLD-41	Acid Road near old monitoring well past bridge. Acid Rd by COE monitoring well.	N 37 06 07.800	W 088 50 18.360	-10116	-6298	N/A
N/A	N/A	N/A	N/A	TLD-42	Ogden Landing Road, past landfill, at Northeast Plume, on "No Trespassing" sign	N 37 06 55.380	W 088 47 19.080	-1219	-1701	N/A
N/A	N/A	N/A	N/A	TLD-43	Monitoring Well 98 on road past landfill, in the trees	N 37 08 12.240	W 088 47 50.700	-3125	-6568	N/A
N/A	N/A	N/A	N/A	TLD-44	Outside security fence west of Lasagna site on the corner post of posted area - southeast corner	N 37 07 08.880	W 088 49 12.780	-7337	-1591	N/A
N/A	N/A	N/A	N/A	TLD-45	At C-743 trailer complex at walk-in gate	N 37 06 45.900	W 088 49 04.620	-7337	-474	N/A
10/11/2017 09:08 5617-646	JW	1/11/2018 9:53	JW	TLD-46	Truck entrance at receiving C-720	N 37 06 44.700	W 088 49 00.120	-5198	-2865	NA
N/A	N/A	N/A	N/A	TLD-47	Tree line south of C-745-T Cylinder Storage Yard. First road on left on Dykes Rd past 57. Last tree on right before clearing	N 37 06 00.300	W 088 48.49.380	-3156	-6777	N/A
N/A	N/A	N/A	N/A	TLD-48	Tree line along the security fence east of C-745-H. Gate 44 road, NE corner of fence	N 37 07 06.60	W 088 47.53.82	-1225	1064	N/A
N/A	N/A	N/A	N/A	TLD-49	Outfall 001 Posted Area. Power pole North C-612 T1	N 37 07 26.52	W 088 49.04.92	-7325	984	N/A
10/11/2017 09:30 5618-647 1402	JW	1/11/2018 10:08	JW	TLD-50	West Patrol Road fence across from C-745-A	N 37 07 02.88	W 088 49.15.18	-7287	-1547	N/A
N/A	N/A	N/A	N/A	TLD-51	Outfall 015 Posted Area	N 37 07 07.02	W 088 49.13.68	-7316	-1112	N/A
10/11/2017 07:53 5619-648	JW	1/11/2018 7:53	JW	TLD-52	East Patrol Road fence across from C-745-E.	N 37 06 42.18	W 088 48.07.20	-1397	-1628	N/A

10/11/2017 08:38 5620-649	JW	1/11/2018 9:06	JW	TLD-53	Security fence at southeast corner of C-745-T Yard. Down fence line away from TLD-2.	N 37 06 00.42	W 088 48.37.02	-2220	-6423	N/A
10/12/2017 05:30 5621-650	KA	1/18/2018 5:30	KA	TLD-54	Residence; Jalusian Trail	N 57 87 72.16	E 23 93 13.48	45296	-25254	N/A
N/A	N/A	N/A	N/A	TLD-55	C-410/420 Office/BCS	N 59 10 67.99	E 22 80 74.83	-3963	-1574	Discontinued 7/10/2014
N/A	N/A	N/A	N/A	TLD-56	O/S C-410 Truck Alley Facing C-412	N 59 09 84.68	E 22 81 16.67	-3733	-1776	N/A
N/A	N/A	N/A	N/A	TLD-57	C-340 Foyer	N 59 04 60.56	E 22 85 14.19	-1882	-2886	N/A
10/11/2017 07:45 5622-651	JW	1/11/2018 7:45	JW	TLD-58	West Central C-755 Complex	N 59 07 98.00	E 22 88 70.74	-1209	-1422	N/A
10/11/2017 14:42 5623-652	JW	1/17/2018 12:50	JW	TLD-59	C-752A Break Area	N 59 15 61.62	E 22 78 55.79	-5234	-339	N/A
10/11/2017 14:33 5624-653	JW	1/17/2018 12:30	JW	TLD-60	C-333A Light Pole on Fence Pole #16	N 59 02 07.10	E 22 80 71.62	-2919	-4199	N/A
10/11/2017 14:35 5625-654	JW	1/17/2018 12:35	JW	TLD-61	West of C-746Q Light Pole #14	N 59 01 58.14	E 22 80 98.35	-2778	-4315	N/A
10/11/2017 14:47 5626-655	JW	1/17/2018 13:05	JW	TLD-62	C-743 Trailer Complex Light Pole #336, behind Trailer #3.	N 59 10 20.18	E 22 73 49.81	-6111	-2607	N/A
10/11/2017 14:52 5627-656	JW	1/17/2018 13:30	JW	TLD-63	C-412 HP Break Trailer	N 59 08 36.46	E 22 79 46.95	-4069	-2435	N/A
10/11/2017 10:05 5628-657	JW	1/11/2018 10:43	JW	TLD-64	C-764 T-6 Trailer	N 59 11 77.55	E 22 70 88.88	-7098	-2447	N/A
10/11/2017 08:16 5629-658 1403	JW	1/11/2018 8:29	JW	TLD-65	Located O/S of North Security fence North of C-745H Cylinder Yard; South of C-762 Laydown Yard	N 37 07 08.54386	W 088 48 00.45376	-1795	1062	N/A
10/11/2017 08:01 5630-659	JW	1/11/2018 8:13	JW	TLD-66	Located on tree @Southeast corner of New Harmony Cemetery; adjacent to last concrete barrier & large metal post	N 37 07 15.80859	W 088 48 11.08836	-2856	1457	N/A
10/11/2017 07:59 5631-660	JW	1/11/2018 8:10	JW	TLD-67	Located on "No Trespassing" sign North side of Dykes Rd next to Security Fence North of C-762 Laydown yard	N 37 07 12.70502	W 088 47 56.75697	-1658	1560	N/A
10/11/2017 09:32 5632-661 1404	JW	1/11/2018 10:12	JW	TLD-68	West Security Fence West of C-745B Cylinder Yard & Southeast of Vortec Site	N 37 07 11.60797	W 088 49 11.43416	-7302	-617	N/A
10/11/2017 09:14 5633-662	JW	1/11/2018 9:59	JW	TLD-69	Wooden utility pole (T12-15 H) next to gravel road @Northeast corner of pond North of C-611	N 37 07 13.70394	W 088 49 28.37928	-8664	-888	N/A

10/11/2017 08:59 5634-663	JW	1/11/2018 9:38	JW	TLD-70	O/S of West Security Fence Southeast of C-333 midway between C810 parking area & North BWCS Security Fence	N 37 06 27.82855	W 088 48 50.25203	-4173	-4189	N/A
10/11/2017 08:56 5635-664	JW	1/11/2018 9:33	JW	TLD-71	O/S of West Security Fence of BWCS under security light, Northeast of wooden utility pole (11056 KU 78487)	N 37 06 23.05971	W 088 48 59.65074	-4723	-4903	N/A
10/11/2017 08:47 5636-665	JW	1/11/2018 9:18	JW	TLD-72	North Side of Air Monitoring Station AMD57, Northwest of Post 57	N 37 05 55.32798	W 088 49 15.28582	-4952	-7972	N/A
10/11/2017 14:00 5637-666	JW	1/11/2018 15:49	JW	TLD-73	Eastern "Railroad Crossing" sign @train tracks on Acid Road	N 37 06 06.14205	W 088 50 02.01070	-8883	-8241	N/A
10/11/2017 11:39 5638-667	JW	1/11/2018 13:41	JW	TLD-74	Located on "Warning Siren" sign @turnoff North of Magruder & Woodville intersection	N 37 05 10.96196	W 088 48 53.61411	-1765	-11586	N/A
10/11/2017 11:42 5639-668	JW	1/11/2018 13:44	JW	TLD-75	Located on "Warning Siren" sign @North of Kelley Rd & Woodville Rd intersection	N 37 05 04.94525	W 088 48 26.65157	496	-11409	N/A
10/11/2017 11:47 5640-669	JW	1/24/2018 8:30	JW	TLD-76	Located on "Tract A" sign below power lines southside of Kelley Rd in sharp curve between Woodville & McCaw Rds	N 37 05 55.05466	W 088 48 06.27328	310	-6082	N/A
10/11/2017 11:55 5641-670	JW	1/11/2018 13:54	JW	TLD-77	Located on "Warning Siren" sign North side of McCaw Rd east of Kelley Rd intersection	N 37 06 25.46598	W 088 47 33.66599	1737	-2287	N/A
10/11/2017 12:32 5642-671	JW	1/11/2018 14:36	JW	TLD-78	Northeast Corner of C-746U Landfill Security Fence	N 37 07 54.00752	W 088 47 37.45924	-1622	6020	N/A
10/11/2017 09:45 5643-672	JW	1/11/2018 10:22	JW	TLD-79	Located on left post of the "Wildlife Management" gate on New Waterline Rd Southwest of Plant gate 41A west of C-612	N 37 07 28.86304	W 88 49 12.50003	-7981	993	N/A
10/11/2017 12:57 5644-673	JW	1/11/2018 14:54	JW	TLD-80	Located on "Cattle" gate west of MW 453 & MW 454 on gravel rd east of New Waterline Rd	N 37 07 47.29850	W 088 48 46.10944	-6612	3477	N/A
10/11/2017 08:54 5645-674 1405	JW	1/11/2018 9:25	JW	TLD-81	Southeast corner of BWCS security fence next to gate V1 East of New Waterline East of C1100	N 37 06 18.33947	W 088 48 56.42591	-4314	-5262	N/A
10/11/2017 08:25 5646-675	JW	1/11/2018 8:41	JW	TLD-82	Short wooden pole East of Dykes Rd North of Outfall 13	N 37 06 10.13175	W 088 48 13.53048	-765	-4851	N/A

10/11/2017 08:30 5647-676 1406	JW	1/11/2018 8:49	JW	TLD-83	Large metal power pole West of Dykes Rd South of Outfall 13	N 37 06 07.30640	W 088 48 20.71726	-1214	-5319	N/A
10/11/2017 07:56 5648-677	JW	1/11/2018 8:06	JW	TLD-84	Located @MW496 on the East Side of Dykes Rd	N 37 07 03.50589	W 088 47 49.26485	-769	894	N/A
10/10/2047 17:00 5649-678	SO	1/17/2018 17:00	SO	TLD-85	Residence; corner of Springwell and Buckner Lane	N 37 03 27.9036	W 088 40 43.9638	39082	-7750	N/A
10/11/2017 11:35 5650-679	JW	1/11/2018 13:30	JW	TLD-86	Plant Entrance, Gravel Construction Rd. Right side on orange warning signal sign	N 37° 5' 18.8622"	W 088 49 28.2282	-4676	-11794	N/A
10/11/2017 14:07 5651-680	JW	1/11/2018 15:43	JW	TLD-87	KOW Entrance north of Woodville Rd north of Kevil Eagles. Right side on orange warning signal sign	N 37 05 24.2802	W 088 50 43.9548	-10629	-13381	N/A
10/11/2017 13:20 5652-681	JW	1/11/2018 15:11	JW	TLD-88	Bethel Church Road KOW entrance. North of Massay Rd, right side on yellow post	N 37 07 05.4876	W 088 50 37.9608	-13677	-3597	N/A
10/11/2017 13:11 5653-682	JW	1/11/2018 15:06	JW	TLD-89	Bobo Rd, off of Bethel Church Rd. Continue east 200 yds past end of asphalt. At intersection on orange warning signal sign	N 37 07 35.9976	W 088 49 44.3922	-10657	788	N/A
10/11/2017 13:00 5654-683	JW	1/11/2018 14:58	JW	TLD-90	Bridge on Ogden Landing Rd east of Lamb's garage. On NE corner of bridge on contaminated creek sign	N 37 08 54.6714	W 088 47 27.2472	-12310	7182	N/A
10/11/2017 12:41 5655-684	JW	1/11/2018 14:42	JW	TLD-91	Boldry School Rd on KOW at Shawnee plant entrance. On cattle gate road on hill, right side	N 37 08 40.9884	W 088 49 36.5232	-2952	12069	N/A
10/11/2017 12:12 5656-685	JW	1/11/2018 14:19	N/A	TLD-92	Anderson Road off Metropolis Lake Rd. follow West until road ends @Railroad tracks. On left crossing gate post.	N 37 07 42.7866	W 088 46 17.1438	1392	8745	N/A
10/11/2017 12:07 5657-686	JW	1/11/2018 14:03	JW	TLD-93	MW 100, North on Metropolis Lake Rd past railroad tracks on left side on Well bollard	N 37 08 09.0744	W 088 46 50.9304	4874	7186	N/A
10/11/2017 12:20 5658-687	JW	1/11/2018 14:26	JW	TLD-94	Residence; corner of Ogden Landing Rd & Metropolis Lake Rd	N 37 05 48.9294	W 088 47 12.4332	4740	436	N/A
10/11/2017 12:01 5659-688	JW	1/11/2018 13:58	JW	TLD-95	West McCracken Health Clinic, Metropolis Lake Rd. On Light Pole in SW corner of parking lot	N 37 06 40.5468	W 088 46 47.2872	4617	-5167	N/A

10/11/2017 15:00 5660-689	JW	1/11/2017 16:00	JW	TLD-FB	Taken along while placing and collecting all other samples - stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
10/11/2017 07:00 5661-690	JW	1/11/2018 7:00	JW	TLD-TB	Stored in "lead box" at C-101 Dosimetry office	N/A	N/A	NA	NA	N/A
5662-691	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
5663-692	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
5664-693	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
5665-694	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
5666-695	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A
5667-696	JW	N/A	N/A	SPARE	Lead Box in C-101 Dosimetry office	N/A	N/A	N/A	N/A	N/A

**APPENDIX C**  
**TLD ANALYTICAL DATA**

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### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	1/1/2017
<b>Process</b>	0234377

Badge Number	Name	Exposure mR*
	CONTROL	13
	CONTROL	13
625	ENVIRONMENTAL	156
626	ENVIRONMENTAL	272
627	ENVIRONMENTAL	21
628	ENVIRONMENTAL	20
629	ENVIRONMENTAL	20
630	ENVIRONMENTAL	19
631	ENVIRONMENTAL	31
632	ENVIRONMENTAL	19
633	ENVIRONMENTAL	19
634	ENVIRONMENTAL	23
635	ENVIRONMENTAL	19
636	ENVIRONMENTAL	17
637	ENVIRONMENTAL	21
638	ENVIRONMENTAL	24
639	ENVIRONMENTAL	21
640	ENVIRONMENTAL	14
641	ENVIRONMENTAL	27
642	ENVIRONMENTAL	23
643	ENVIRONMENTAL	23
644	ENVIRONMENTAL	21
645	ENVIRONMENTAL	20

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	1/1/2017
<b>Process</b>	0234377

Badge Number	Name	Exposure mR*
646	ENVIRONMENTAL	22
647	ENVIRONMENTAL	19
648	ENVIRONMENTAL	40
649	ENVIRONMENTAL	20
650	ENVIRONMENTAL	94
651	ENVIRONMENTAL	21
652	ENVIRONMENTAL	17
653	ENVIRONMENTAL	18
654	ENVIRONMENTAL	286
655	ENVIRONMENTAL	585
656	ENVIRONMENTAL	18
657	ENVIRONMENTAL	17
658	ENVIRONMENTAL	14
659	ENVIRONMENTAL	18
660	ENVIRONMENTAL	20
661	ENVIRONMENTAL	21
662	ENVIRONMENTAL	21
663	ENVIRONMENTAL	19
664	ENVIRONMENTAL	46
665	ENVIRONMENTAL	39
666	ENVIRONMENTAL	19
667	ENVIRONMENTAL	20
668	ENVIRONMENTAL	22

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	1/1/2017
<b>Process</b>	0234377

Badge Number	Name	Exposure mR*
669	ENVIRONMENTAL	23
670	ENVIRONMENTAL	23
671	ENVIRONMENTAL	23
672	ENVIRONMENTAL	26
673	ENVIRONMENTAL	19
674	ENVIRONMENTAL	20
675	ENVIRONMENTAL	101
676	ENVIRONMENTAL	26
677	ENVIRONMENTAL	51
678	ENVIRONMENTAL	19
679	ENVIRONMENTAL	19
680	ENVIRONMENTAL	22
681	ENVIRONMENTAL	21
682	ENVIRONMENTAL	20
683	ENVIRONMENTAL	20
684	ENVIRONMENTAL	21
685	ENVIRONMENTAL	20
686	ENVIRONMENTAL	20
687	ENVIRONMENTAL	22
688	ENVIRONMENTAL	24
689	ENVIRONMENTAL	21
690	ENVIRONMENTAL	13
691	ENVIRONMENTAL	12

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	1/1/2017
<b>Process</b>	0234377

Badge Number	Name	Exposure mR*
692	ENVIRONMENTAL	12
693	ENVIRONMENTAL	13
694	ENVIRONMENTAL	12
695	ENVIRONMENTAL	13
696	ENVIRONMENTAL	13

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	4/1/2017	
<b>Process</b>	0235618	

Badge Number	Name	Exposure mR*
	CONT ROL	16
	CO NROL	14
625	ENVI RONMENT AL	191
626	ENVI RONMENT AL	264
627	ENVI RONMENT AL	21
628	ENVI RONMENT AL	21
629	ENVI RONMENT AL	22
630	ENVI RONMENT AL	18
631	ENVI RONMENT AL	30
632	ENVI RONMENT AL	17
633	ENVI RONMENT AL	18
634	ENVI RONMENT AL	22
635	ENVI RONMENT AL	18
636	ENVI RONMENT AL	17
637	ENVI RONMENT AL	25
639	ENVI RONMENT AL	20
640	ENVI RONMENT AL	28
641	ENVIRONMENTAL	23
642	ENVI RONMENT AL	31
643	ENVI RONMENTAL	20
644	ENVI RONMENT AL	23
645	ENVI RONMENT AL	26
646	ENVIRONMENTAL	20

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	4/1/2017
<b>Process</b>	0235618

Badge Number	Name	Exposure mR*
647	ENVIRONMENTAL	42
648	ENVIRONMENTAL	19
649	ENVIRONMENTAL	93
650	ENVIRONMENTAL	25
651	ENVIRONMENTAL	17
652	ENVIRONMENTAL	18
653	ENVIRONMENTAL	312
654	ENVIRONMENTAL	575
655	ENVIRONMENTAL	17
656	ENVIRONMENTAL	19
657	ENVIRONMENTAL	18
658	ENVIRONMENTAL	18
659	ENVIRONMENTAL	23
660	ENVIRONMENTAL	24
661	ENVIRONMENTAL	21
662	ENVIRONMENTAL	18
663	ENVIRONMENTAL	53
664	ENVIRONMENTAL	42
665	ENVIRONMENTAL	21
666	ENVIRONMENTAL	19
667	ENVIRONMENTAL	20
668	ENVIRONMENTAL	23
669	ENVIRONMENTAL	21

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	4/1/2017
<b>Process</b>	0235618

Badge Number	Name	Exposure mR*
670	ENVIRONMENTAL	22
671	ENVIRONMENTAL	23
672	ENVIRONMENTAL	20
673	ENVIRONMENTAL	20
674	ENVIRONMENTAL	102
675	ENVIRONMENTAL	32
676	ENVIRONMENTAL	52
677	ENVIRONMENTAL	20
678	ENVIRONMENTAL	20
679	ENVIRONMENTAL	22
680	ENVIRONMENTAL	21
681	ENVIRONMENTAL	20
682	ENVIRONMENTAL	24
683	ENVIRONMENTAL	25
684	ENVIRONMENTAL	20
685	ENVIRONMENTAL	23
686	ENVIRONMENTAL	22
687	ENVIRONMENTAL	23
688	ENVIRONMENTAL	24
689	ENVIRONMENTAL	14
690	ENVIRONMENTAL	14
691	ENVIRONMENTAL	13
692	ENVIRONMENTAL	14

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

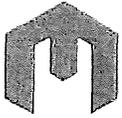


### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	4/1/2017	
<b>Process</b>	0235618	

Badge Number	Name	Exposure mR*
693	ENVIRONMENTAL	13
694	ENVIRONMENTAL	13
695	ENVIRONMENTAL	14
696	ENVIRONMENTAL	13

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	7/1/2017	
<b>Process</b>	0236511	

Badge Number	Name	Exposure mR*
	CONTROL	13
	CONTROL	14
625	ENVIRONMENTAL	216
626	ENVIRONMENTAL	250
627	ENVIRONMENTAL	19
628	ENVIRONMENTAL	18
629	ENVIRONMENTAL	23
630	ENVIRONMENTAL	16
631	ENVIRONMENTAL	28
632	ENVIRONMENTAL	15
633	ENVIRONMENTAL	17
634	ENVIRONMENTAL	22
635	ENVIRONMENTAL	15
636	ENVIRONMENTAL	17
637	ENVIRONMENTAL	23
638	ENVIRONMENTAL	17
639	ENVIRONMENTAL	20
640	ENVIRONMENTAL	27
641	ENVIRONMENTAL	20
642	ENVIRONMENTAL	28
643	ENVIRONMENTAL	19
644	ENVIRONMENTAL	21
645	ENVIRONMENTAL	26

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	7/1/2017	
<b>Process</b>	0236511	

Badge Number	Name	Exposure mR*
646	ENVIRONMENTAL	19
647	ENVIRONMENTAL	43
648	ENVIRONMENTAL	17
649	ENVIRONMENTAL	105
650	ENVIRONMENTAL	24
651	ENVIRONMENTAL	16
652	ENVIRONMENTAL	16
653	ENVIRONMENTAL	243
654	ENVIRONMENTAL	611
655	ENVIRONMENTAL	16
656	ENVIRONMENTAL	16
657	ENVIRONMENTAL	17
658	ENVIRONMENTAL	17
659	ENVIRONMENTAL	19
660	ENVIRONMENTAL	19
661	ENVIRONMENTAL	16
662	ENVIRONMENTAL	16
663	ENVIRONMENTAL	52
664	ENVIRONMENTAL	39
665	ENVIRONMENTAL	20
667	ENVIRONMENTAL	23
668	ENVIRONMENTAL	20
669	ENVIRONMENTAL	19

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	7/1/2017	
<b>Process</b>	0236511	

Badge Number	Name	Exposure mR*
670	ENVIRONMENTAL	16
671	ENVIRONMENTAL	23
672	ENVIRONMENTAL	20
673	ENVIRONMENTAL	19
674	ENVIRONMENTAL	92
675	ENVIRONMENTAL	27
676	ENVIRONMENTAL	45
677	ENVIRONMENTAL	16
678	ENVIRONMENTAL	18
679	ENVIRONMENTAL	21
680	ENVIRONMENTAL	17
681	ENVIRONMENTAL	21
682	ENVIRONMENTAL	20
683	ENVIRONMENTAL	18
684	ENVIRONMENTAL	18
685	ENVIRONMENTAL	22
686	ENVIRONMENTAL	21
687	ENVIRONMENTAL	18
688	ENVIRONMENTAL	18
689	ENVIRONMENTAL	15
690	ENVIRONMENTAL	12
691	ENVIRONMENTAL	13
692	ENVIRONMENTAL	12

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 PADUCAH REMEDIATION SERVICES
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	7/1/2017
<b>Process</b>	0236511

Badge Number	Name	Exposure mR*
693	ENVIRONMENTAL	12
694	ENVIRONMENTAL	14
695	ENVIRONMENTAL	12
696	ENVIRONMENTAL	12

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	PADUCAH REMEDIATION SERVICES
<b>Location</b>	0000LAT	
<b>Monitoring Period</b>	10/1/2017	
<b>Process</b>	0236511	

<b>Badge Number</b>	<b>Name</b>	<b>Exposure mR<sup>†</sup></b>
666	ENVIRONMENTAL	7

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

Account	98365	Four Rivers Nuclear Partnership, L LC
Location	00000LAT	
Monitoring Period	7/1/2017	
Process	0237626	

Badge Number	Name	Exposure mR
666	ENVIRONMENTAL	28

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365 Four Rivers Nuclear Partnership, LLC
<b>Location</b>	00000LAT
<b>Monitoring Period</b>	10/1/2017
<b>Process</b>	0237626

Badge Number	Name	Exposure mR
	CONTROL	16
	CONTROL	17
625	ENVIRONMENTAL	222
626	ENVIRONMENTAL	327
627	ENVIRONMENTAL	25
628	ENVIRONMENTAL	25
629	ENVIRONMENTAL	27
630	ENVIRONMENTAL	22
631	ENVIRONMENTAL	30
632	ENVIRONMENTAL	24
633	ENVIRONMENTAL	24
634	ENVIRONMENTAL	26
635	ENVIRONMENTAL	23
636	ENVIRONMENTAL	21
637	ENVIRONMENTAL	28
639	ENVIRONMENTAL	26
640	ENVIRONMENTAL	34
641	ENVIRONMENTAL	26
642	ENVIRONMENTAL	26
643	ENVIRONMENTAL	23
644	ENVIRONMENTAL	24
645	ENVIRONMENTAL	29
646	ENVIRONMENTAL	25

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	Four Rivers Nuclear Partnership, LLC
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	10/1/2017	
<b>Process</b>	0237626	

Badge Number	Name	Exposure mR*
647	ENVIRONMENTAL	46
648	ENVIRONMENTAL	22
649	ENVIRONMENTAL	103
650	ENVIRONMENTAL	26
651	ENVIRONMENTAL	22
652	ENVIRONMENTAL	21
653	ENVIRONMENTAL	374
654	ENVIRONMENTAL	630
655	ENVIRONMENTAL	21
656	ENVIRONMENTAL	20
657	ENVIRONMENTAL	21
658	ENVIRONMENTAL	22
659	ENVIRONMENTAL	25
660	ENVIRONMENTAL	29
661	ENVIRONMENTAL	24
662	ENVIRONMENTAL	18
663	ENVIRONMENTAL	44
664	ENVIRONMENTAL	39
665	ENVIRONMENTAL	27
667	ENVIRONMENTAL	28
668	ENVIRONMENTAL	24
669	ENVIRONMENTAL	26
670	ENVIRONMENTAL	23

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	Four Rivers Nuclear Partnership, LLC
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	10/1/2017	
<b>Process</b>	0237626	

Badge Number	Name	Exposure mR*
671	ENVIRONMENTAL	26
672	ENVIRONMENTAL	22
673	ENVIRONMENTAL	24
674	ENVIRONMENTAL	114
675	ENVIRONMENTAL	31
676	ENVIRONMENTAL	55
677	ENVIRONMENTAL	25
678	ENVIRONMENTAL	28
679	ENVIRONMENTAL	26
680	ENVIRONMENTAL	23
681	ENVIRONMENTAL	24
682	ENVIRONMENTAL	23
683	ENVIRONMENTAL	26
684	ENVIRONMENTAL	26
685	ENVIRONMENTAL	24
686	ENVIRONMENTAL	24
687	ENVIRONMENTAL	26
688	ENVIRONMENTAL	26
689	ENVIRONMENTAL	14
690	ENVIRONMENTAL	14
691	ENVIRONMENTAL	15
692	ENVIRONMENTAL	14
693	ENVIRONMENTAL	16

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.



### Global Dosimetry Solutions Environmental Report

<b>Account</b>	98365	Four Rivers Nuclear Partnership, LLC
<b>Location</b>	00000LAT	
<b>Monitoring Period</b>	10/1/2017	
<b>Process</b>	0237626	

Badge Number	Name	Exposure mR*
694	ENVIRONMENTAL	14
695	ENVIRONMENTAL	13
696	ENVIRONMENTAL	15

\*- No control exposures have been subtracted, and only element, reader and fade corrections have been made.

+ - Unusual element result observed. D - Element damaged and cannot be evaluated.

**APPENDIX D**  
**ENVIRONMENTAL TLD DATA**

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TLD Number	Quarter 1						Quarter 2						Quarter 3						Quarter 4						Total Monitored Effective Dose (mrem)	Total Exposure Days	Annualized Effective Dose (mrem)	Net Annualized Effective Dose (mrem)	Net Annualized mrem/day	Net Annualized mrem/hr	Comments
	TLD Location Number	Start	End	Exposure Days	Effective Dose (mrem)	Normalized Effective Dose/day	TLD Location Number	Start	End	Exposure Days	Effective Dose (mrem)	Normalized Effective Dose/day	TLD Location Number	Start	End	Exposure Days	Effective Dose (mrem)	Normalized Effective Dose/day	TLD Location Number	Start	End	Exposure Days	Effective Dose (mrem)	Normalized Effective Dose/day							
1	1	1/9/2017	4/4/2017	85	156	1.84	1	4/4/2017	7/11/2017	98	191	1.95	1	7/11/2017	10/11/2017	92	216	2.35	1	10/11/2017	1/11/2018	92	222	2.41	785	367	781	694	1.901	0.079	
2	2	1/9/2017	4/4/2017	85	272	3.20	2	4/4/2017	7/11/2017	98	264	2.69	2	7/11/2017	10/11/2017	92	250	2.72	2	10/11/2017	1/11/2018	92	327	3.55	1113	367	1107	1020	2.794	0.116	
3	3	1/9/2017	4/4/2017	85	21	0.25	3	4/4/2017	7/11/2017	98	21	0.21	3	7/11/2017	10/11/2017	92	19	0.21	3	10/11/2017	1/11/2018	92	25	0.27	86	367	86	-1	-0.004	0.000	
4	4	1/9/2017	4/4/2017	85	20	0.24	4	4/4/2017	7/11/2017	98	21	0.21	4	7/11/2017	10/11/2017	92	18	0.20	4	10/11/2017	1/11/2018	92	25	0.27	84	367	84	-3	-0.009	0.000	
5	5	1/9/2017	4/4/2017	85	20	0.24	5	4/4/2017	7/11/2017	98	22	0.22	5	7/11/2017	10/11/2017	92	23	0.25	5	10/11/2017	1/11/2018	92	27	0.29	92	367	91	4	0.012	0.001	
6	6	1/9/2017	4/4/2017	85	19	0.22	6	4/4/2017	7/11/2017	98	18	0.18	6	7/11/2017	10/11/2017	92	16	0.17	6	10/11/2017	1/11/2018	92	22	0.24	75	367	75	-12	-0.034	-0.001	
7	7	1/9/2017	4/4/2017	85	31	0.36	7	4/4/2017	7/11/2017	98	30	0.31	7	7/11/2017	10/11/2017	92	28	0.30	7	10/11/2017	1/11/2018	92	30	0.33	119	367	118	31	0.086	0.004	
8	9	1/9/2017	4/4/2017	85	19	0.22	9	4/4/2017	7/11/2017	98	17	0.17	9	7/11/2017	10/11/2017	92	15	0.16	9	10/11/2017	1/11/2018	92	24	0.26	75	367	75	-12	-0.034	-0.001	
9	12	1/9/2017	4/4/2017	85	19	0.22	12	4/4/2017	7/11/2017	98	18	0.18	12	7/11/2017	10/11/2017	92	17	0.18	12	10/11/2017	1/11/2018	92	24	0.26	78	367	78	-9	-0.026	-0.001	
10	13	1/9/2017	4/4/2017	85	23	0.27	13	4/4/2017	7/11/2017	98	22	0.22	13	7/11/2017	10/11/2017	92	22	0.24	13	10/11/2017	1/11/2018	92	26	0.28	93	367	92	5	0.015	0.001	
11	14	1/9/2017	4/4/2017	85	19	0.22	14	4/4/2017	7/11/2017	98	18	0.18	14	7/11/2017	10/11/2017	92	15	0.16	14	10/11/2017	1/11/2018	92	23	0.25	75	367	75	-12	-0.034	-0.001	
12	15	1/9/2017	4/4/2017	85	17	0.20	15	4/4/2017	7/11/2017	98	17	0.17	15	7/11/2017	10/11/2017	92	17	0.18	15	10/11/2017	1/11/2018	92	21	0.23	72	367	72	-15	-0.042	-0.002	
13	16	1/9/2017	4/4/2017	85	21	0.25	16	4/4/2017	7/11/2017	98	25	0.26	16	7/11/2017	10/11/2017	92	23	0.25	16	10/11/2017	1/11/2018	92	28	0.30	97	367	96	9	0.026	0.001	
14	19	1/9/2017	4/4/2017	85	24	0.28	19	4/4/2017	7/11/2017	98	21	0.21	19	7/11/2017	10/11/2017	92	17	0.18	19	10/11/2017	1/11/2018	92	21	0.23	83	367	83	-4	-0.012	-0.001	The 2nd & 4th Qtr Tld was found missing. Estimate of Effective Dose based on other two Qtr readings
15	22	1/9/2017	4/4/2017	85	21	0.25	22	4/4/2017	7/11/2017	98	20	0.20	22	7/11/2017	10/11/2017	92	20	0.22	22	10/11/2017	1/11/2018	92	26	0.28	87	367	87	0	-0.001	0.000	
16	25	1/9/2017	4/4/2017	85	27	0.32	25	4/4/2017	7/11/2017	98	28	0.29	25	7/11/2017	10/11/2017	92	27	0.29	25	10/11/2017	1/11/2018	92	34	0.37	116	367	115	28	0.078	0.003	
17	30	1/9/2017	4/4/2017	85	23	0.27	30	4/4/2017	7/11/2017	98	23	0.23	30	7/11/2017	10/11/2017	92	20	0.22	30	10/11/2017	1/11/2018	92	26	0.28	92	367	91	4	0.012	0.001	
18	35	1/9/2017	4/4/2017	85	23	0.27	35	4/4/2017	7/11/2017	98	31	0.32	35	7/11/2017	10/11/2017	92	28	0.30	35	10/11/2017	1/11/2018	92	26	0.28	108	367	107	20	0.056	0.002	
19	37	1/9/2017	4/4/2017	85	21	0.25	37	4/4/2017	7/19/2017	106	20	0.19	37	7/19/2017	10/11/2017	84	19	0.23	37	10/11/2017	1/11/2018	92	23	0.25	83	367	83	-4	-0.012	-0.001	
20	38	1/9/2017	4/4/2017	85	20	0.24	38	4/4/2017	7/11/2017	98	23	0.23	38	7/11/2017	10/11/2017	92	21	0.23	38	10/11/2017	1/11/2018	92	24	0.26	88	367	88	1	0.001	0.000	
21	40	1/9/2017	4/4/2017	85	22	0.26	40	4/4/2017	7/11/2017	98	26	0.27	40	7/11/2017	10/11/2017	92	26	0.28	40	10/11/2017	1/11/2018	92	29	0.32	103	367	102	15	0.042	0.002	
22	46	1/9/2017	4/4/2017	85	19	0.22	46	4/4/2017	7/11/2017	98	20	0.20	46	7/11/2017	10/11/2017	92	19	0.21	46	10/11/2017	1/11/2018	92	25	0.27	83	367	83	-4	-0.012	-0.001	
23	50	1/9/2017	4/4/2017	85	40	0.47	50	4/4/2017	7/11/2017	98	42	0.43	50	7/11/2017	10/11/2017	92	43	0.47	50	10/11/2017	1/11/2018	92	46	0.50	171	367	170	83	0.228	0.009	
24	52	1/9/2017	4/4/2017	85	20	0.24	52	4/4/2017	7/11/2017	98	19	0.19	52	7/11/2017	10/11/2017	92	17	0.18	52	10/11/2017	1/11/2018	92	22	0.24	78	367	78	-9	-0.026	-0.001	
25	53	1/9/2017	4/4/2017	85	94	1.11	53	4/4/2017	7/11/2017	98	93	0.95	53	7/11/2017	10/11/2017	92	105	1.14	53	10/11/2017	1/11/2018	92	103	1.12	395	367	393	306	0.838	0.035	
26	54	1/10/2017	4/10/2017	85	18	0.23	54	4/10/2017	7/15/2017	96	25	0.26	54	7/15/2017	10/12/2017	89	24	0.27	54	10/12/2017	1/18/2018	98	26	0.27	96	373	94	7	0.019	0.001	
27	58	1/9/2017	4/4/2017	85	17	0.20	58	4/4/2017	7/11/2017	98	17	0.17	58	7/11/2017	10/11/2017	92	16	0.17	58	10/11/2017	1/11/2018	92	22	0.24	72	367	72	-15	-0.042	-0.002	
28	59	1/9/2017	4/4/2017	85	18	0.21	59	4/4/2017	7/12/2017	99	18	0.18	59	7/12/2017	10/11/2017	91	16	0.18	59	10/11/2017	1/11/2018	98	21	0.21	73	373	71	-16	-0.043	-0.002	
29	60	1/9/2017	4/4/2017	85	286	3.36	60	4/4/2017	7/11/2017	98	312	3.18	60	7/11/2017	10/11/2017	92	243	2.64	60	10/11/2017	1/17/2018	98	374	3.82	1215	373	1189	1102	3.019	0.126	
30	61	1/9/2017	4/4/2017	85	585	6.88	61	4/4/2017	7/11/2017	98	575	5.87	61	7/11/2017	10/11/2017	92	611	6.64	61	10/11/2017	1/17/2018	98	630	6.43	2401	373	2350	2263	6.199	0.258	
31	62	1/9/2017	4/4/2017	85	18	0.21	62	4/4/2017	7/11/2017	98	17	0.17	62	7/11/2017	10/11/2017	92	16	0.17	62	10/11/2017	1/17/2018	98	21	0.21	72	373	70	-17	-0.045	-0.002	
32	63	1/9/2017	4/4/2017	85	17	0.20	63	4/4/2017	7/11/2017	98	19	0.19	63	7/11/2017	10/11/2017	92	16	0.17	63	10/11/2017	1/17/2018	98	20	0.20	72	373	70	-17	-0.045	-0.002	
33	64	1/9/2017	4/4/2017	85	14	0.16	64	4/4/2017	7/11/2017	98	18	0.18	64	7/11/2017	10/11/2017	92	17	0.18	64	10/11/2017	1/11/2018	92	21	0.23	70	367	70	-17	-0.048	-0.002	
34	65	1/9/2017	4/4/2017	85	18	0.21	65	4/4/2017	7/11/2017	98	18	0.18	65	7/11/2017	10/11/2017	92	17	0.18	65	10/11/2017	1/11/2018	92	22	0.24	75	367	75	-12	-0.034	-0.001	
35	66	1/9/2017	4/4/2017	85	20	0.24	66	4/4/2017	7/11/2017	98	23	0.23	66	7/11/2017	10/11/2017	92	19	0.21	66	10/11/2017	1/11/2018	92	25	0.27	87	367	87	0	-0.001	0.000	
36	67	1/9/2017	4/4/2017	85	21	0.25	67	4/4/2017	7/11/2017	98	24	0.24	67	7/11/2017	10/11/2017	92	19	0.21	67	10/11/2017	1/11/2018	92	29	0.32	93	367	92	5	0.015	0.001	
37	68	1/9/2017	4/4/2017	85	21	0.25	68	4/4/2017	7/11/2017	98	21	0.21	68	7/11/2017	10/11/2017	92	16	0.17	68	10/11/2017	1/11/2018	92	24	0.26	82	367	82	-5	-0.015	-0.001	
38	69	1/9/2017	4/4/2017	85	19	0.22	69	4/4/2017	7/11/2017	98	18	0.18	69	7/11/2017	10/11/2017	92	16	0.17	69	10/11/2017	1/11/2018	92	18	0.20	71	367	71	-16	-0.045	-0.002	
39	70	1/9/2017	4/4/2017	85	46	0.54	70	4/4/2017	7/11/2017	98	53	0.54	70	7/11/2017	10/11/2017	92	52	0.57	70	10/11/2017	1/11/2018	92	44	0.48	195	367	194	107	0.293	0.012	
40	71	1/9/2017	4/4/2017	85	39	0.46	71	4/4/2017	7/11/2017	98	42	0.43	71	7/11/2017	10/11/2017	92	39	0.42	71	10/11/2017	1/11/2018	92	39	0.42	159	367	158	71	0.195	0.008	
41	72	1/9/2017	4/4/2017	85	19	0.22																									

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**APPENDIX E**

**NEUTRON AREA DOSIMETER DATA**

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Environmental Dosimeter Report  
From 01/01/2017 to 12/31/2017

Participant Name, Number	TLD Location	Begin wear date	End wear date	Dosimeter Type	Total Neutron	Fast Neutron	Thermal Neutron
VISITOR,01176	TLD-2	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01177	TLD-3	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01178	TLD-50	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01179	TLD-65	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01180	TLD-68	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01181	TLD-81	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01182	TLD-83	1/1/2017	3/31/2017	Neutron	M	M	M
VISITOR,01175	TLD-2	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01176	TLD-3	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01177	TLD-50	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01178	TLD-65	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01179	TLD-68	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01180	TLD-81	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01181	TLD-83	4/1/2017	6/30/2017	Neutron	M	M	M
VISITOR,01177	TLD-2	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01178	TLD-3	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01179	TLD-50	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01180	TLD-65	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01181	TLD-68	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01182	TLD-81	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01183	TLD-83	7/1/2017	9/30/2017	Neutron	M	M	M
VISITOR,01400	TLD-2	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01401	TLD-3	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01402	TLD-50	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01403	TLD-65	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01404	TLD-68	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01405	TLD-81	10/1/2017	12/31/2017	Neutron	M	M	M
VISITOR,01406	TLD-83	10/1/2017	12/31/2017	Neutron	M	M	M

Minimal Dose Equivalent Reported: Dose equivalents below the minimum measurable quantity for the current monitoring period are recorded as "M".

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