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

JUL 2 4 2017

Mr. Michael S. Strickland, Director Prime Contract Management Fluor Federal Services, Inc. P.O. Box 369 Kevil, Kentucky 42053

Dear Mr. Strickland:

PPPO-02-4076555-17A

CONTRACT NO. DE-EM0001131, TASK ORDER DE-DT0007774: RESPONSE TO REVISED FLUOR FEDERAL SERVICES, INC. DELIVERABLE NO. 101 – ANNUAL REPORT ON EXTERNAL RADIATION MONITORING FOR CALENDAR YEAR 2016

Reference:

Letter from M. Strickland to M. Fultz, "Fluor Federal Services Inc., Paducah Deactivation Project – Response to Comments on Deliverable No. 101 – Annual Report on External Radiation Monitoring for Calendar Year 2016, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FPDP-RPT-0082," (FPAD-17-2782), dated May 22, 2017

The U.S. Department of Energy (DOE) has reviewed the Flour Federal Services, Inc. Deliverable No. 101 - Annual Report on External Radiation Monitoring for Calendar Year 2016. DOE has the following clarification:

The acronym for committed effective dose (CED) used on Page 1 of Section 1, Introduction, and the Acronym List, should be E₅₀. Please change the acronym if used in other places of the document as well.

DOE has no additional comments and the referenced document is hereby conditionally approved pending implementation of this clarification.

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

Sincerely,

Marcia D. Fultz Contracting Officer

Portsmouth/Paducah Project Office

e-copy:

bob.smith@ffspaducah.com, FFS/Kevil chris.wagner@lex.doe.gov, PPPO/PAD cork.blackshire@ffspaducah.com, FFS/Kevil daniel.lillard@lex.doe.gov, PPPO/PAD donald.dihel@lex.doe.gov, PPPO/PAD ffscorrespondence@ffspaducah.com, FFS/Kevil gilbert.whitehurst@lex.doe.gov, PPPO/PORTS jennifer.woodard@lex.doe.gov, PPPO/PAD marcia.fultz@lex.doe.gov, PPPO/PAD marcia.fultz@lex.doe.gov, PPPO/LEX michael.strickland@ffspaducah.com, FFS/Kevil pad.rmc@swiftstaley.com, SSI/Kevil roland.chretien@ffspaducah.com, FFS/Kevil tom.hines@lex.doe.gov, PPPO/PAD tracey.duncan@lex.doe.gov, PPPO/PAD

Annual Report on External Radiation Monitoring for Calendar Year 2016, Paducah Gaseous Diffusion Plant, Paducah, Kentucky



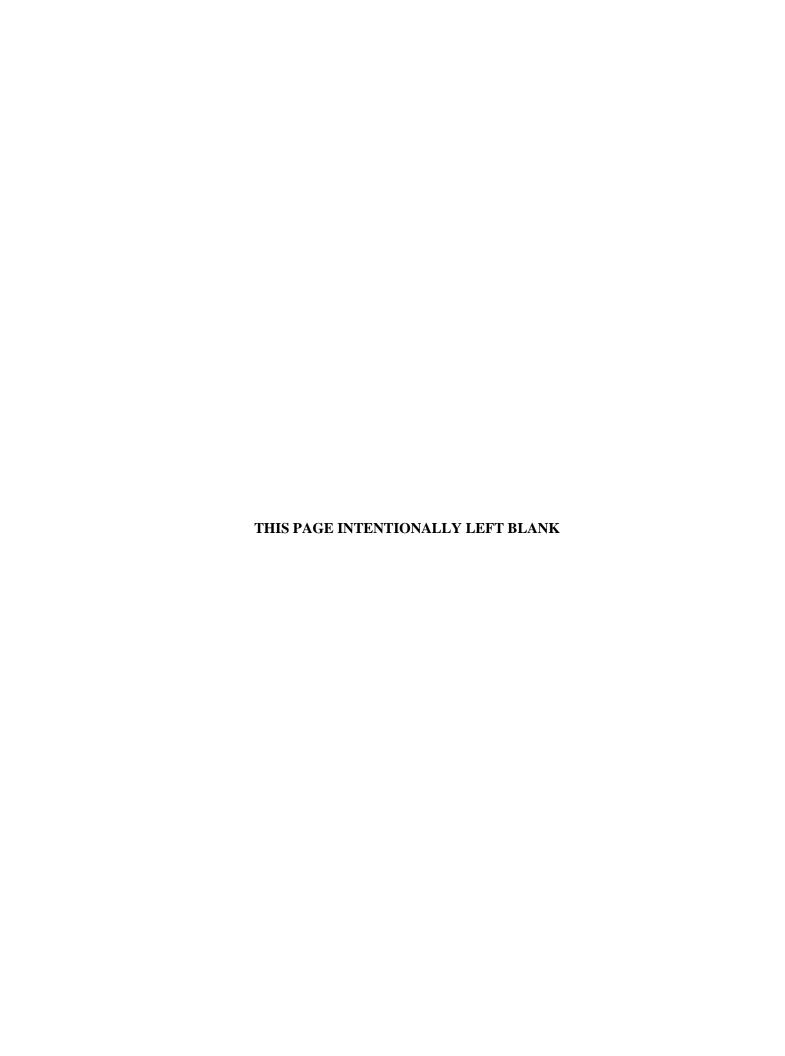
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Annual Report on External Radiation Monitoring for Calendar Year 2016, Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—August 2017

U.S. DEPARTMENT OF ENERGY Office of Environmental Management

Prepared by
FLUOR FEDERAL SERVICES, INC.,
Paducah Deactivation Project
managing the
Deactivation Project at the
Paducah Gaseous Diffusion Plant
under Task Order DE-DT0007774



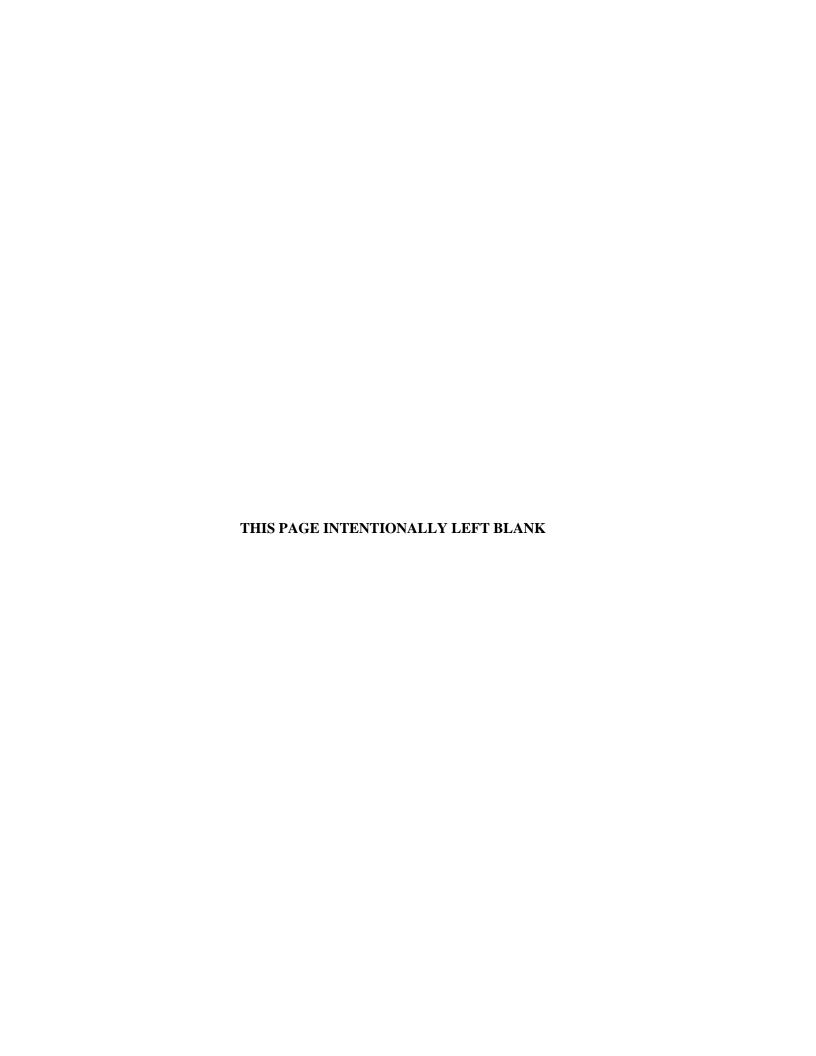
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ACRONYMS

CY calendar year

DOE U.S. Department of Energy

E effective dose

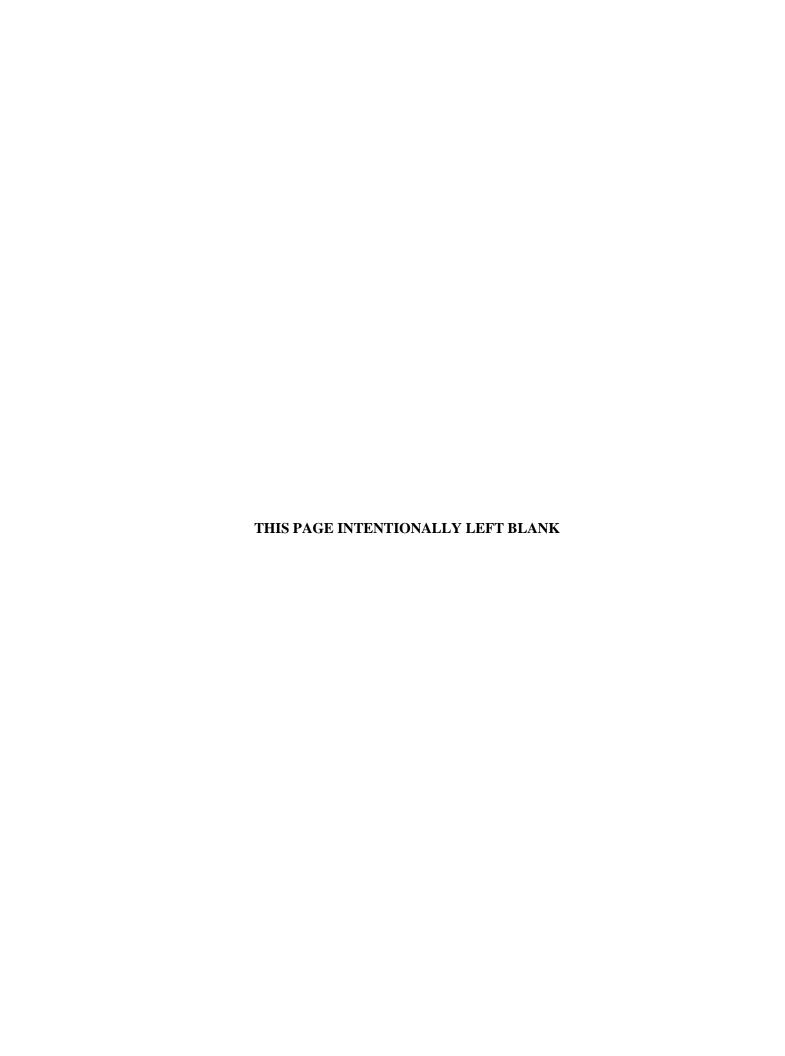
E₅₀ committed effective dose

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



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 2016*, *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) 2016 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 2016 Annual Site Environmental Report.

Monitoring results for CY 2016 indicate that 14 locations out of 51 were above the annualized background levels. These 14 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 2016, the potential radiation doses calculated at or in close proximity to the fence are not realistic. For CY 2016, 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.



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 2016, 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.



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, one TLD was discovered to be missing from its location. 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-92 was found to be missing during the first quarter. Results were estimated using the average of three 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 2016. In January 2016, 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 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.



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 2016 was approximately 90 days. Sample results ranged from 14–666 mrem. The background samples ranged from 18–23 mrem. The mean background dose was 20 mrem.

The field blank measured dose of 11 mrem and the trip blank a dose of 13 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 | 199 |
| TLD-2 | 252 |
| TLD-5 | 22 |
| TLD-7 | 23 |
| TLD-13 | 22 |
| TLD-16 | 22 |
| TLD-25 | 24 |
| TLD-35 | 23 |
| TLD-40 | 24 |
| TLD-50 | 40 |
| TLD-53 | 97 |
| TLD-60 | 289 |
| TLD-61 | 666 |
| TLD-70 | 36 |
| TLD-71 | 24 |
| TLD-76 | 21 |
| TLD-77 | 21 |
| TLD-78 | 22 |
| TLD-81 | 108 |
| TLD-82 | 25 |
| TLD-83 | 55 |

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 (UF₆) cylinder storage yards.

3.2 SECOND QUARTER RESULTS

The gamma radiation dose time for the second quarter of CY 2016 was approximately 97 days. Sample results ranged from 16–691 mrem. The background samples ranged from 20–25 mrem. The mean background dose was 22 mrem.

The field blank measured dose of 15 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 | 187 |
| TLD-2 | 252 |
| TLD-7 | 24 |
| TLD-16 | 23 |
| TLD-19 | 25 |
| TLD-25 | 27 |
| TLD-30 | 23 |
| TLD-35 | 27 |
| TLD-37 | 23 |
| TLD-40 | 27 |
| TLD-50 | 43 |
| TLD-53 | 98 |
| TLD-60 | 327 |
| TLD-61 | 691 |
| TLD-70 | 36 |
| TLD-71 | 26 |
| TLD-74 | 24 |
| TLD-75 | 24 |
| TLD-78 | 23 |
| TLD-81 | 75 |
| TLD-82 | 28 |
| TLD-83 | 61 |

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

These gamma dosimeter locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF₆ cylinder storage yards.

3.3 THIRD QUARTER RESULTS

The gamma radiation dose time for the third quarter of CY 2016 was approximately 91 days. Sample results ranged from 15–718 mrem. The background samples ranged from 17–23 mrem. The mean background dose was 20 mrem.

The field blank measured dose of 13 mrem and the transit blank a dose of 13 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

| Location | Effective Dose |
|----------|----------------|
| TLD-1 | 213 |
| TLD-2 | 254 |
| TLD-7 | 25 |
| TLD-16 | 24 |
| TLD-19 | 23 |
| TLD-25 | 30 |
| TLD-35 | 23 |
| TLD-38 | 23 |
| TLD-40 | 22 |
| TLD-50 | 43 |
| TLD-53 | 102 |
| TLD-60 | 317 |
| TLD-61 | 718 |
| TLD-66 | 22 |
| TLD-70 | 41 |
| TLD-71 | 24 |
| TLD-72 | 21 |
| TLD-74 | 22 |
| TLD-78 | 22 |
| TLD-81 | 68 |
| TLD-82 | 25 |
| TLD-83 | 49 |

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

These gamma dosimeter locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF₆ cylinder storage yards.

3.4 FOURTH QUARTER RESULTS

The gamma radiation dose time for the fourth quarter of CY 2016 was approximately 91 days. Sample results ranged from 18–737 mrem. The background samples ranged from 21–27 mrem. The mean background dose was 24 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

| Location | Effective Dose |
|----------|----------------|
| TLD-1 | 217 |
| TLD-2 | 300 |
| TLD-3 | 26 |
| TLD-7 | 30 |
| TLD-13 | 25 |
| TLD-16 | 25 |
| TLD-25 | 32 |
| TLD-40 | 31 |
| TLD-50 | 50 |
| TLD-53 | 117 |
| TLD-60 | 343 |
| TLD-61 | 737 |
| TLD-68 | 26 |
| TLD-70 | 46 |
| TLD-71 | 30 |
| TLD-74 | 28 |
| TLD-78 | 26 |
| TLD-81 | 84 |
| TLD-82 | 26 |
| TLD-83 | 56 |

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

These gamma locations with statistically significant values are located at or in close proximity to the PGDP security fence that is adjacent to DOE UF_6 cylinder storage yards.

3.5 ANNUALIZED RESULTS

Annual gamma dose rates for CY 2016 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 85 mrem. The mean background was subtracted from the annualized E to obtain a net annual E, attributed to PGDP operations for CY 2016, 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 4.52 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 TED in excess of the mean background at 99.7% confidence were TLD-1, TLD-2, TLD-7, TLD-25, 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 UF₆ 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 | 807 | 98 | 85 | 722 |
| TLD-2 | 1047 | 98 | 85 | 962 |
| TLD-7 | 101 | 98 | 85 | 16 |
| TLD-25 | 112 | 98 | 85 | 27 |
| TLD-40 | 103 | 98 | 85 | 18 |
| TLD-50 | 174 | 98 | 85 | 89 |
| TLD-53 | 410 | 98 | 85 | 325 |
| TLD-60 | 1266 | 98 | 85 | 1181 |
| TLD-61 | 2789 | 98 | 85 | 2704 |
| TLD-70 | 157 | 98 | 85 | 72 |
| TLD-71 | 103 | 98 | 85 | 18 |
| TLD-81 | 331 | 98 | 85 | 246 |
| TLD-82 | 103 | 98 | 85 | 18 |
| TLD-83 | 219 | 98 | 85 | 134 |

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

3.6 ANNUALIZED RESULTS FOR 2015 COMPARED TO 2016

Table 6 presents the results of a comparison between the annualized total gamma dose results for CY 2015 and for CY 2016. No new locations were added or discontinued in 2016. The locations with E in excess of background were mainly consistent between 2015 and 2016. No areas previously identified with elevated dose rates in 2015 had decreased dose rates below background in 2016. Two areas with dose rates below background in 2015 had elevated dose rates at a statistically significant level in 2016. Twenty-two locations remained statistically consistent (\pm 5%) between 2015 and 2016. Radiation dose rates are subject to change as a result of plant operations such as UF₆ relocation. UF₆ cylinder yard operations were affected by shutdown of the DUF₆ plant in 2016. This likely is the result of decreased

readings. The DUF_6 plant operation resumed; next year, an increase of dose over 2016 results is expected.

Table 6. Effective Annual Gamma Dose of Common Monitoring Locations for CY 2015 and CY 2016

| Common Location | 2015 Annualized Effective Dose (mrem) | 2016 Annualized Effective Dose (mrem) | Increase or Decrease from 2015 to 2016 | % Difference |
|--------------------|---|---|---|--------------|
| TLD-1 | 781 | 807 | 26 | 3.22 |
| TLD-2 | 1048 | 1047 | -1 | -0.10 |
| TLD-3 | 88 | 83 | -5 | -6.02 |
| TLD-4 | 86 | 80 | -6 | -7.50 |
| TLD-5 | 92 | 87 | -5 | -5.75 |
| TLD-6 | 81 | 74 | -7 | -9.46 |
| TLD-7 | 114 | 101 | -13 | -12.87 |
| TLD-9 | 77 | 74 | -3 | -4.05 |
| TLD-12 | 75 | 71 | -4 | -5.63 |
| TLD-13 | 94 | 88 | -6 | -6.82 |
| TLD-14 | 74 | 77 | 3 | 3.90 |
| TLD-15 | 73 | 69 | -4 | -5.80 |
| TLD-16 | 98 | 93 | -5 | -5.38 |
| TLD-19 | 90 | 90 | 0 | 0.00 |
| TLD-25 | 116 | 112 | -4 | -3.57 |
| TLD-30 | 83 | 81 | -2 | -2.47 |
| TLD-35 | 105 | 94 | -11 | -11.70 |
| TLD-37 | 83 | 84 | 1 | 1.19 |
| TLD-38 | 84 | 85 | 1 | 1.18 |
| TLD-40 | 103 | 103 | 0 | 0.00 |
| TLD-46 | 80 | 75 | -5 | -6.67 |
| TLD-50 | 182 | 174 | -8 | -4.60 |
| TLD-52 | 82 | 71 | -11 | -15.49 |
| TLD-53 | 396 | 410 | 14 | 3.41 |
| TLD-58 | 68 | 65 | -3 | -4.62 |
| TLD-59 | 72 | 67 | -5 | -7.46 |
| TLD-60 | 1276 | 1266 | -10 | -0.79 |
| TLD-61 | 2460 | 2789 | 329 | 11.80 |
| TLD-62 | 77 | 67 | -10 | -14.93 |
| TLD-63 | 71 | 65 | -6 | -9.23 |
| TLD-64 | 75 | 69 | -6 | -8.70 |
| TLD-65 | 72 | 69 | -3 | -4.35 |
| TLD-66 | 87 | 82 | -5 | -6.10 |
| TLD-67 | 86 | 83 | -3 | -3.61 |
| TLD-68 | 87 | 84 | -3 | -3.57 |
| TLD-69 | 76 | 70 | -6 | -8.57 |
| TLD-70 | 181 | 157 | -24 | -15.29 |
| TLD-71 | 158 | 103 | -55 | -53.40 |
| TLD-72 | 88 | 82 | -6 | -7.32 |
| TLD-73 | 78 | 73 | -5 | -6.85 |

Table 6. Total Annual Gamma Dose of Common Monitoring Locations for CY 2015 and CY 2016 (Continued)

| Common Location | 2015 Annualized Effective Dose (mrem) | 2016 Annualized Effective Dose (mrem) | Increase or Decrease from 2015 to 2016 | % Difference |
|--------------------|---|---|---|--------------|
| TLD-74 | 95 | 93 | -2 | -2.15 |
| TLD-75 | 88 | 86 | -2 | -2.33 |
| TLD-76 | 86 | 83 | -3 | -3.61 |
| TLD-77 | 82 | 84 | 2 | 2.38 |
| TLD-78 | 90 | 92 | 2 | 2.17 |
| TLD-79 | 82 | 73 | -9 | -12.33 |
| TLD-80 | 84 | 77 | -7 | -9.09 |
| TLD-81 | 424 | 331 | -93 | -28.09 |
| TLD-82 | 109 | 103 | -6 | -5.83 |
| TLD-83 | 243 | 219 | -24 | -10.96 |
| TLD-84 | 75 | 71 | -4 | -5.63 |

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



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 | 722 | 0.082 |
| TLD-2 | 962 | 0.110 |
| TLD-7 | 16 | 0.002 |
| TLD-25 | 27 | 0.003 |
| TLD-40 | 18 | 0.002 |
| TLD-50 | 89 | 0.010 |
| TLD-53 | 325 | 0.037 |
| TLD-60 | 1181 | 0.135 |
| TLD-61 | 2704 | 0.309 |
| TLD-70 | 72 | 0.008 |
| TLD-71 | 18 | 0.002 |
| TLD-81 | 246 | 0.028 |
| TLD-82 | 18 | 0.002 |
| TLD-83 | 134 | 0.015 |

Avg. = 0.053

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

| Location | Annual Neutron Effective Dose (mrem) | Neutron Dose Rate (mrem/hour) |
|----------|---|----------------------------------|
| 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 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 accessible regularly to the public in CY 2016. 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. 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 4.24 mrem (0.053 mrem/hour × 80 hours) a year worst case, which is well below the 100 mrem limit for CY 2016.

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 UF₆ 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 ft away, respectively.

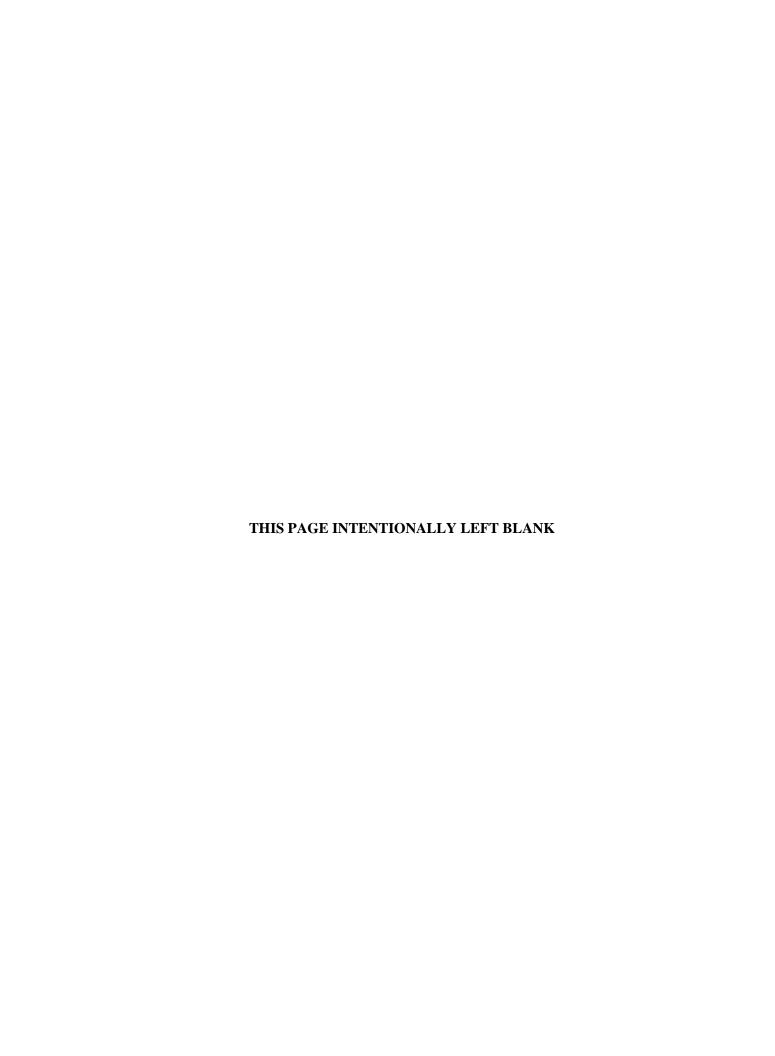
In CY 2009, security restrictions were eased to allow regular public access to Harmony Cemetery located at TLD-14. The annual dose to a member of public visiting the cemetery at TLD-14 was statistically equivalent to the average background in CY 2016. While this location is located physically closer 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.

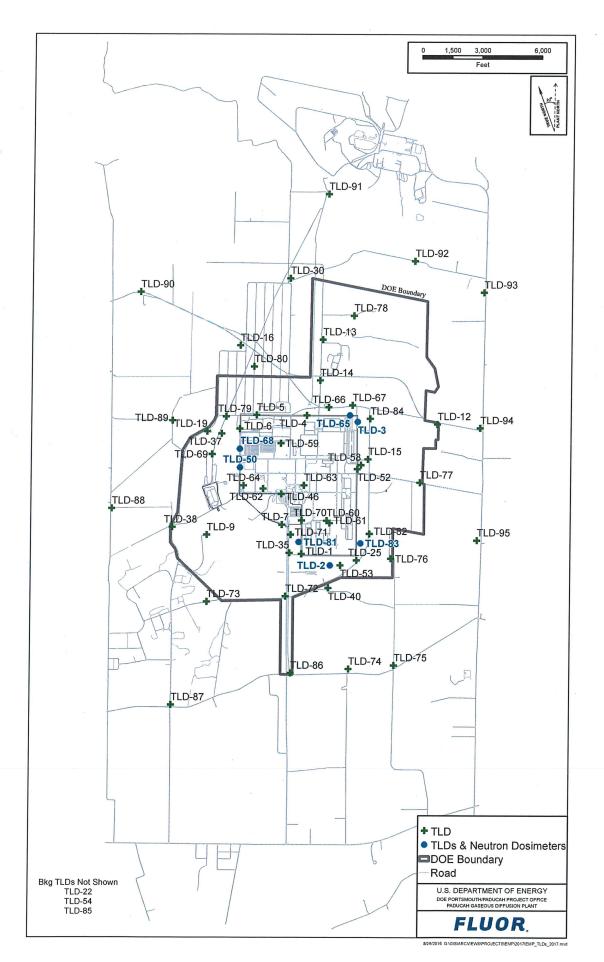
5. CONCLUSIONS

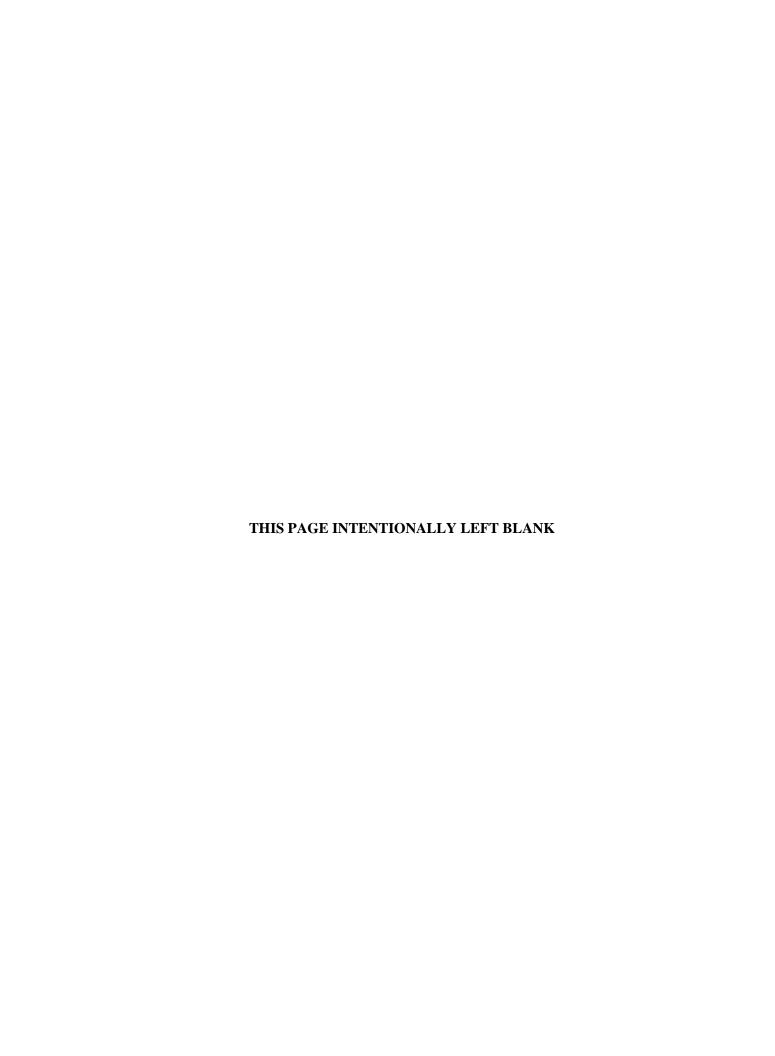
The public does not have regular access to the PGDP boundary fence; therefore, the radiation doses measured at the fence are not applicable to members of the public. Calculation of a worst case dose, assuming that a member of the public spends 80 hours at the location of highest measured dose along the security fence, determined that a dose of 4 mrem would be received. This is 25 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 2016, 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 2016, 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 2016, the ED 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.



APPENDIX A MAP OF MONITORING LOCATIONS







APPENDIX B TLD PLACEMENT AND COLLECTION



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| Date/Time | Issued | Date/Time | Collected | Location | | | | | | |
|----------------------------------|--------|----------------|-----------|----------|--|---------------|------------------|--------|--------|----------|
| Issued/Badge ID | Ву | Collected | Ву | Name | Description | NorthLong | West or East Lat | Xcoord | Ycoord | Comments |
| 01/06/2016 09:53 | | | | | 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 | | | | · | |
| 868-627 | JW | 4/5/2016 9:57 | JW | TLD-1 | pile | N 37 06 16.66 | W 088 48 55.18 | -4172 | -5856 | N/A |
| 01/06/2016 11:33 869-628 1127 | ٦W | 4/5/2016 9:51 | 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 |
| 01/06/2016 09:28 870-629 1126 | 1W | 4/5/2016 8:52 | 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 |
| 01/07/2016 11:12 871-630 | ٦W | 4/5/2016 14:22 | ٦W | TLD-4 | North PGDP security fence near North-South Diversion Ditch. North PGDP security fence north of | N 37 07 15.74 | W 088 48 25.56 | -3957 | 1052 | N/A |
| 01/07/2016 11:05 872-631 | 1W | 4/5/2016 14:16 | JW | TLD-5 | C-747-A near pole T53A1P26G. North perimeter fence between lagoon West PGDP security fence west of C | N 37 07 24.38 | W 088 48 54.58 | -6464 | 1068 | N/A |
| 01/06/2016 10:54 873-632 | JW | 4/5/2016 10:47 | ıw | TLD-6 | 746-P1 near pole 22-4. 612 perimeter fence. | N 37 07 20.85 | W 088 49 07.22 | -7303 | 382 | N/A |
| 01/06/2016 10:09 874-633 | 1W | 4/5/2016 10:14 | 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. | i | W 088 49 28.04 | -6011 | -8091 | N/A |
| 01/06/2016 16:07 875-634 | JW | 4/5/2016 15:35 | | 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 |

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| 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 |
| 01/06/2016 14:58 876-635 | JW | 4/5/2016 12:39 | 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 |
| 01/06/2016 15:03 877-636 | 1M | 4/5/2016 12:43 | ١W | 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 |
| 01/06/2016 09:21 878-637 | JW | 4/5/2016 8:46 | 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 |
| 01/06/2016 09:03 879-638 | JW | 4/5/2016 8:27 | WI. | 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 |
| 01/06/2016 15:28 880-639 | JW | 4/5/2016 13:05 | 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 |
| 01/06/2016 16:14 881-640 | 1W | 4/5/2016 13:41 | JW | TLD-19 | Big Bayou Creek south of Transport Road BridgeLocated 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 |

| | | | | | Center of fence at north side of | | | | | |
|------------------|-------|----------------|----------|--------|---------------------------------------|----------------|-----------------|--------------|-----------|----------|
| N/A | N/A | N/A | N/A | TLD-20 | water treatment plant | N 37 06 59.83 | W 088 49 36.29 | -8788 | -2421 | N/A |
| | | | | 1 | Residence Oaks Road Paducah, | | | | | |
| N/A | N/A | N/A | N/A | TLD-21 | Kentucky | N 36 58 12.77 | W 088 32 52.01 | 85990 | -24497 | N/A |
| | | | | | Outside of the fence of the locked | | | | | |
| | | | | | air sampling station at the rear | | | | | |
| 01/07/2016 11:51 | | | | | corner of the Bethel Cumberland | | | | | |
| 882-641 | JW | 4/5/2016 11:31 | 1M | TLD-22 | Presbyterian Church Cemetery | N 37 00 05.36 | W 088 52 36.29 | -8159 | -46801 | N/A |
| | | | | | Outside of the fence of the locked | | | | | |
| | | | | | air sampling station at the | | | | | |
| ı | | | | | northwest corner of the Heath | | | | | |
| N/A | N/A | N/A | N/A | TLD-23 | ballpark fields | N 37 05 50.80 | W 088 46 57.78 | 5667 | -4583 | N/A |
| | 1 | 1 | | | BJC Kevil facility on stairway | | | | <u> </u> | <u> </u> |
| I | | | | | handrail outside southwest corner | | | | | |
| N/A | N/A | N/A | N/A | TLD-24 | of building | N 37 04 39.52 | W 088 52 51.97 | N/A | N/A | N/A |
| | | <u> </u> | | | | | | | | |
| 01/06/2016 09:40 | | | | | On power line tower nearest Dykes | | | | | |
| 883-642 | JW | 4/5/2016 9:06 | . WL | TLD-25 | Road southeast of C-745-T | N 37 06 00.02 | W 088 48 26.49 | -1401 | -6172 | N/A |
| | | 7,7,000 | | | Massac Creek to left of path in tree. | | | | · · · · · | |
| • | | | | | Highway 62 Bridge past Sunshine | | | | | |
| N/A | N/A | N/A | N/A | TLD-26 | Dairy | N 36 57 31.92 | W 088 25 13.90 | 122314 | -15495 | N/A |
| , | 1 | | 1 | | | | | | | 1 , 1 |
| ĺ | | | | | "Do not block entrance" sign on | | | | | |
| | | | | | Plant Access Road near Post 15 and | | | | | |
| | | | | | motorcycle parking area (C-800). | · | | | | |
| N/A | N/A | N/A | N/A | TLD-27 | Motorcycle Shed, Post 15 | N 37 06 40.78 | W 088 48 54.33 | -4883 | -3431 | N/A |
| | 1 | | <u> </u> | | | | | | | |
| | | | 1 | | Bethel Church Road, turn right on | | | 1 | . | |
| | | | | | Bobo Road, left on intersection, | | | | 1 | |
| | l | | | | located in trees at Monitoring Well | | | | | |
| | | | | İ | 194. Sign near staircase on Big | | | | | |
| N/A | N/A | N/A | N/A | TLD-28 | Bayou, MW194 | N 37 07 44.580 | W 088 49 34.140 | -10105 | 1884 | N/A |
| | 1,7,7 | 1.7. | 1.77. | + | | | | | 1 | 1.7 |
| | | | | 1 | 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 | | | | | |
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| 01/06/2016 15:23 884-643 | JW | 4/5/2016 13:01 | 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 01/06/2016 10:07 885-644 | N/A | N/A 4/5/2016 10:11 | N/A | TLD-34 | Dykes Road back side of PGDP, across from Monitoring Well 145, Monitoring Well 144 on the gravel road Outfall 017 off of Plant Access Road. Outfall 017 UDS laydown yard | N 37 06 58.440 | W 088 48 52.320 | -779 | 940 | N/A |
| N/A | N/A | 4/5/2016 10:11 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 21.480 N 37 06 50.640 | W 088 49 03.960 W 088 49 23.040 | -7321 | -2865 | N/A N/A |
| 01/06/2016 10:51 886-645 | JW | 4/5/2016 10:45 | JW | TLD-37 | KPDES Outfall 001 behind Vortec facility. K001 | N 37 07 18.600 | W 088 49 15.660 | -8202 | 138 | N/A |

| | | 1 | | | 1 | Ţ | | | | |
|----------------------------------|------|----------------|------|---------|---|----------------|-----------------|--------|----------|-------------|
| 01/06/2016 16:03 | | | | | Five-Points Creek with concrete | | | | | |
| 887-646 | JW | 4/5/2016 13:30 | JW | TLD-38 | bridge, on tree behnd 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 |
| 01/06/2016 09:47 888-647 | JW | 4/5/2016 9:07 | 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 | IN/A | INVA | IN/A | 1120-41 | Ogden Landing Road, past landfill, at Northeast Plume, on "No | 37 00 07.800 | W 088 30 18.300 | -10116 | -0298 | IN/A |
| N/A | N/A | N/A | N/A | TLD-42 | Tresspassing" sign | N 37 06 55.380 | W 088 47 19.080 | -1219 | -1701 | N/A |
| | | | | | Monitoring Well 98 on road past | | | | | |
| N/A | N/A | N/A | N/A | TLD-43 | 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 |
| 01/06/2016 10:15 890-649 | JW | 4/5/2016 10:17 | 1M | 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 |
| NI/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 | IN/A | N/A | N/A | 11LD-48 | Outfall 001 Posted Area. Power | 3/ 0/ 06.60 | VV U00 47.53.82 | -1225 | 1064 | N/A |
| N/A | N/A | N/A | N/A | TLD-49 | pole North C-612 T1 | N 37 07 26.52 | W 088 49.04.92 | -7325 | 984 | N/A |
| 01/06/2016 10:44 889-648 1128 | 1W | 4/5/2016 10:39 | | 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 |
| 01/06/2016 09:07 891-650 | JW | 4/5/2016 8:33 | 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 |

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| | T | | | 1 | Security fence at southeast corner | | | | T | T |
|----------------------------------|------|----------------|------|--------|---|------------------|-------------------|-------|--------|------|
| 01/06/2016 11:32 | | | | | of C-745-T Yard. Down fence line | | | | | |
| 892-651 | JW. | 4/5/2016 9:51 | 1\\\ | TLD-53 | away from TLD-2. | N 37 06 00.42 | W 088 48.37.02 | -2220 | -6423 | N/A |
| 01/08/2016 07:00 | +*** | 1/5/2010 3:31 | - | 125 33 | laway nom 125 2. | N 37 00 00112 | 17 000 10.07.02 | 1220 | 10125 | 14// |
| 893-652 | KA | 4/8/2016 15:00 | 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 | N/A |
| , | + | .,, | | | | | | 1 | | 1.,, |
| 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 |
| 01/06/2016 08:55 | | | | | | | | | | |
| 894-653 | JW | 4/5/2016 8:25 | 1M | TLD-58 | West Central C-755 Complex | N 59 07 98.00 | E 22 88 70.74 | -1209 | -1422 | N/A |
| 01/07/2016 10:23 | | | | | | | | | | |
| 895-654 | JW | 4/6/2016 9:55 | JW | TLD-59 | C-752A Break Area | N 59 15 61.62 | E 22 78 55.79 | -5234 | -339 | N/A |
| 01/07/2016 10:36 | | | | | C-333A Light Pole on Fence Pole | | | | | |
| 896-655 | JW | 4/5/2016 14:40 | JW | TLD-60 | #16 | N 59 02 07.10 | E 22 80 71.62 | -2919 | -4199 | N/A |
| 01/07/2016 10:37 | | | | | | | | | | |
| 897-656 | JW | 4/5/2016 14:41 | JW | TLD-61 | West of C-746Q Light Pole #14 | N 59 01 58.14 | E 22 80 98.35 | -2778 | -4315 | N/A |
| 01/07/2016 10:11 | | | | | C-743 Trailer Complex Light Pole | | | | | |
| 898-657 | JW | 4/5/2016 14:54 | JW | TLD-62 | #336,behind Trailer #3. | N 59 10 20.18 | E 22 73 49.81 | -6111 | -2607 | N/A |
| 01/07/2016 10:30 | | | | | | | | | | |
| 899-658 | JW | 4/5/2016 14:46 | JW | TLD-63 | C-412 HP Break Trailer | N 59 08 36.46 | E 22 79 46.95 | -4069 | -2435 | N/A |
| 01/07/2016 10:56 | | | | | | | | | | |
| 900-659 | J.M. | 4/5/2016 14:31 | JW | TLD-64 | C-764 T-6 Trailer | N 59 11 77.55 | E 22 70 88.88 | -7098 | -2447 | N/A |
| 01/06/2016 09:31 901-660 1122 | JW | 4/5/2016 8:56 | 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 |
| 01/06/2016 09:18 902-661 | JW | 4/5/2016 8:44 | 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 |
| 01/06/2016 09:14 903-662 | JW | 4/5/2016 8:41 | . 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 |
| 01/06/2016 10:47 904-663 1123 | ٦W | 4/5/2016 10:36 | 2 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 |
| 01/06/2016 10:20 905-664 | JW | 4/5/2016 10:29 |) 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 |

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| | | | | | O/S of West Security Fence | | | | | | |
| | | | | | Southeast of C-333 midway | N 37 06 27.82855 | W 088 48 50.25203 | | | | |
| 01/06/2016 10:03 | 1 | | | | between C810 parking area & | 11.37.00.27.02033 | W 000 10 30.23203 | | | Ì | l |
| 906-665 | JW | 4/5/2016 10:08 | JW | TLD-70 | North BWCS Security Fence | | | -4173 | -4189 | N/A | j |
| | | | | | O/S of West Security Fence of | | | | | | |
| | | | | - | BWCS under security light, | N 37 06 23.05971 | W 088 48 59.65074 | ` | | | 1 |
| 01/06/2016 10:00 | | | | | Northeast of wooden utility pole | 1 37 00 23.03371 | W 088 48 33.03074 | | | | |
| 907-666 | JW | 4/5/2016 10:05 | JW | TLD-71 | (11056 KU 78487) | | | -4723 | -4903 | N/A | 1 |
| | 1 | | | | North Side of Air Monitoring | | | | | | 1 |
| 01/06/2016 09:50 | | | | | Station AMD57, Northwest of Post | N 37 05 55.32798 | W 088 49 15.28582 | | | | |
| 908-667 | JW | 4/5/2016 9:54 | JW | TLD-72 | 57 | | | -4952 | -7972 | N/A | |
| | | | | | | | | | | | |
| 01/06/2016 16:23 | | | | | Eastern "Railroad Crossing" sign | N 37 06 06.14205 | W 088 50 02.01070 | | | | |
| 909-668 | JW | 4/5/2016 13:57 | JW | TLD-73 | @train tracks on Acid Road | | | -8883 | -8241 | N/A | |
| | | | | | | | | | | | |
| | | | | | Located on "Warning Siren" sign | N 37 05 10.96196 | W 088 48 53.61411 | | | | |
| 01/06/2016 14:14 | | | | | @turnoff North of Magruder & | 7, 03 10,30130 | 11 000 10 33.01 111 | | ļ | | |
| 910-669 | JW | 4/5/2016 11:52 | JW | TLD-74 | Woodville intersection | | | -1765 | -11586 | N/A | |
| | | | | | Located on "Warning Siren" sign | | | | } | | |
| 01/06/2016 14:20 | | | | | @North of Kelley Rd & Woodville | N 37 05 04.94525 | W 088 48 26.65157 | | | 1 | |
| 911-670 | JW | 4/5/2016 11:55 | 1M | TLD-75 | Rd intersection | | | 496 | -11409 | N/A | 1 |
| | 1 | | | | | | | | | | 1 |
| | | | | | Located on "Tract A" sign below | | | 1 | 1 | | |
| | | | | | power lines southside of Kelley Rd | N 37 05 55.05466 | W 088 48 06.27328 | | | | |
| 01/06/2016 14:25 | | | | | in sharp curve between Woodville | | | | | | |
| 912-671 | JW | 4/5/2016 12:01 | JW | TLD-76 | & McCaw Rds | | | 310 | -6082 | N/A | 4 |
| | | | | | Located on "Warning Siren" sign | | | | | | 1 |
| 01/06/2016 14:31 | | | | | North side of McCaw Rd east of | N 37 06 25.46598 | W 088 47 33.66599 | | | | |
| 913-672 | 1M | 4/5/2016 12:07 | JW | TLD-77 | Kelley Rd intersection | | | 1737 | -2287 | N/A | 1 |
| 01/06/2016 15:09 | | . /= / | | | Northeast Corner of C-746U Landfil | N 37 07 54.00752 | W 088 47 37.45924 | | | | |
| 914-673 | JW | 4/5/2016 12:46 | J.M | TLD-78 | Security Fence | | | -1622 | 6020 | N/A | 4 |
| | | | 1 | | la catal and after the Coll Manner | | | | 1 | | |
| | | | | | Located on left post of the "Wildlife | | | | | | |
| 01/07/0015 11 01 | | | | | Management" gate on New | N 37 07 28.86304 | W 88 49 12.50003 | | | | |
| 01/07/2016 11:01 | l | 1/5/2015 11 10 | | | Waterline Rd Southwest of Plant | | | | | | |
| 915-674 | JW | 4/5/2016 14:12 | JW | TLD-79 | gate 41A west of C-612 | | | -7981 | 993 | N/A | 4 |
| | | | | ł | | | | | | | |
| 04/05/004545 04 | | | | | Located on "Cattle" gate west of | N 37 07 47.29850 | W 088 48 46.10944 | | | | |
| 01/06/2016 15:31 | | 4/5/2046 42 22 | | T15 00 | MW 453 & MW 454 on gravel rd | | | 6640 | 2477 | N/A | |
| 916-675 | JW | 4/5/2016 13:08 | ηW | TLD-80 | east of New Waterline Rd | _ | | -6612 | 3477 | N/A | 4 |
| | | | | | Southoast corner of DMCS co | | | | | | |
| 01/06/2016 00 57 | | | | J | Southeast corner of BWCS security | N 37 06 18.33947 | W 088 48 56.42591 | 1 | | 1 | |
| 01/06/2016 09-57 | 11/4/ | 1/5/2016 10:01 | III | TID 01 | fence next to gate V1 East of New | | | 1214 | E2C2 | N/A | |
| 917-676 1125 01/06/2016 09:43 | JW | 4/5/2016 10:01 | 1 1/1 | TLD-81 | Waterline East of C1100 | | | -4314 | -5262 | N/A | + |
| 1 . | JW | A/E/2016 0:22 | l _{INA} | TLD-82 | Short wooden pole East of Dykes Rd North of Outfall 13 | N 37 06 10.13175 | W 088 48 13.53048 | -765 | 1051 | N/A | 1 |
| 918-677 | 11/1/ | 4/5/2016 9:22 | 1,10 | ILD-82 | Tra Mortii of Outidii 13 | <u> </u> | | J-703 | -4851 | IN/A | ┙ |

| | Т | | | | | | | | | |
|------------------|-------|----------------|---------|---------|--------------------------------------|-------------------|---|--------|--------|---------------|
| 01/06/2016 11:23 | | | | | Large metal power pole West of | N 37 06 07.30640 | W 088 48 20.71726 | | | |
| 919-678 1124 | ٦W | 4/5/2016 9:27 | JW | TLD-83 | Dykes Rd South of Outfall 13 | | | -1214 | -5319 | N/A |
| 01/06/2016 09:12 | | | | | Located @MW496 on the East Side | N 37 07 03.50589 | W 088 47 49.26485 | | | |
| 920-679 | JW | 4/5/2016 8:39 | JW | TLD-84 | of Dykes Rd | | W 088 47 49.26485 | -769 | 894 | N/A |
| 01/06/2016 16:50 | l | | | | Residence; corner of Springwell and | | | | | |
| 921-680 | SO | 4/5/2016 16:00 | so | TLD-85 | Buckner Lane | N 37 03 27.9036 | W 088 40 43.9638 | 39082 | -7750 | N/A |
| | | | | | Plant Entrance, Gravel Construction | | | | | |
| 01/06/2016 14:11 | | | | | Rd. Right side on orange warning | | | | | |
| 922-681 | JW | 4/5/2016 11:49 | JW | TLD-86 | signal sign | N 37° 5' 18.8622" | W 088 49 28.2282 | -4676 | -11794 | N/A |
| | | | | | KOW Entrance north of Woodville | | | | | |
| 01/06/2016 16:27 | | | | | Rd north of Kevil Eagles. Right side | | | | | |
| 923-682 | JW | 4/5/2016 13:52 | 11/4/ | TLD-87 | on orange warning signal sign | N 37 05 24.2802 | W 088 50 43.9548 | -10629 | -13381 | N/A |
| 323-082 | 1344 | 4/3/2010 13.32 | 344 | TLD-87 | Bethel Church Road KOW entrance. | N 37 03 24.2802 | W 000 30 45.9346 | -10029 | -13301 | IN/A |
| 01/06/2016 15:58 | | | | | North of Massay Rd, right side on | | | | | |
| 924-683 | JW | 4/5/2016 13:26 | 11/4/ | TLD-88 | yellow post | N 37 07 05.4876 | W 088 50 37.9608 | -13677 | -3597 | N/A |
| 321 003 | 1300 | 17572010 15.20 | 344 | TED 66 | yenow post | 14 57 67 65.4676 | 100000000000000000000000000000000000000 | 13077 | -3337 | 114/7 |
| | | | | | Bobo Rd, off of Bethel Church Rd. | | | | | |
| | | | | | Continue east 200 yds past end of | | | | | |
| 01/06/2016 15:52 | | | | | asphalt. At intersection on orange | | | | | |
| 925-684 | JW | 4/5/2016 13:22 | JW | TLD-89 | warning signal sign | N 37 07 35.9976 | W 088 49 44.3922 | -10657 | 788 | N/A |
| | | | | | | | | | | |
| | | | | | Bridge on Ogden Landing Rd east of | : | | | | |
| 01/06/2016 15:36 | | | | | Lamb's garage. On NE corner of | | | | ŀ | |
| 926-685 | JW | 4/5/2016 13:16 | 1M | TLD-90 | bridge on contaminated creek sign | N 37 08 54.6714 | W 088 47 27.2472 | -12310 | 7182 | N/A |
| | | | | | | | | | | |
| 04/05/00454547 | ļ | | | - 1 | Boldry School Rd on KOW at | | | | | |
| 01/06/2016 15:17 | | 4/5/2016 12:55 | | TI D 04 | Shawnee plant entrance. On cattle | N 27 00 40 0004 | W 000 40 26 F222 | 2052 | 12000 | 21/2 |
| 927-686 | JW | 4/5/2016 12:55 | 1M | TLD-91 | gate road on hill, right side | N 37 08 40.9884 | W 088 49 36.5232 | -2952 | 12069 | N/A |
| | | | | | Anderson Road off Metropolis Lake | | | | | |
| | | | | | Rd. follow West until road ends | | | | | |
| 01/06/2016 14:46 | | | | | @Railroad tracks. On left crossing | | | | | found lost |
| 928-687 | WL | Lost | N/A | TLD-92 | gate post. | N 37 07 42.7866 | W 088 46 17.1438 | 1392 | 8745 | 04/05/2016 |
| 220 007 | 3 4 4 | 1.030 | 1.17.74 | 1120-02 | MW 100, North on Metropolis Lake | | 1,1,000 40 17.1430 | 1332 | 0743 | 3-7, 03, 2010 |
| 01/06/2016 14:42 | | | | | Rd past railroad tracks on left side | | | | | |
| 929-688 | JW | 4/5/2016 12:17 | JW - | TLD-93 | on Well bollard | N 37 08 09.0744 | W 088 46 50.9304 | 4874 | 7186 | N/A |
| | | | | | | | | | | |
| 01/06/2016 14:53 | | | 1 | | Residence; corner of Ogden | | | | | |
| 930-689 | JW | 4/5/2016 12:37 | JW | TLD-94 | Landing Rd & Metropolis Lake Rd | N 37 05 48.9294 | W 088 47 12.4332 | 4740 | 436 | N/A |
| | | | | | Most MaCrocker Health Clini | | | | | |
| 01/05/2015 14:25 | | | | | West McCracken Health Clinic, | | | | | |
| 01/06/2016 14:36 | 1,,,, | A/E/2016 12:44 | 1,,,, | TID OF | Metropolis Lake Rd. On Light Pole | N 27 06 40 5460 | W 000 AC 47 2072 | 1617 | F167 | N/A |
| 931-690 | JW | 4/5/2016 12:11 | -1100 | TLD-95 | in SW corner of parking lot | N 37 06 40.5468 | W 088 46 47.2872 | 4617 | -5167 | N/A |

| | | | | | Taken along while placing and | | | 1 | T | |
|------------------|----|----------------|-----|--------|---------------------------------------|-----|-----|----------|-----|-----|
| | | | | | collecting all other samples - stored | | | | | |
| 01/07/2016 12:15 | | | | | in "lead box" at C-101 Dosimetry | | | | | |
| 866-625 | JW | 4/6/2016 10:55 | JW | TLD-FB | office | N/A | N/A | NA | NA | N/A |
| 01/06/2016 08:00 | | | | | Stored in "lead box" at C-101 | | | | | |
| 867-626 | JW | 4/5/2016 7:30 | JW | TLD-TB | Dosimetry office | N/A | N/A | NA | NA | N/A |
| 932-691 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 933-692 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 934-693 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 935-694 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 936-695 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 937-696 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
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| Date/Time | Issued | Date/Time | Collected | Location | | | | | | |
|-----------------------------------|--------|-----------------|-----------|----------|--|---------------|------------------|--------|--------|----------|
| ssued/Badge ID | Ву | Collected | Ву | Name | Description | NorthLong | West or East Lat | Xcoord | Ycoord | Comments |
| 04/05/2016 09:57 | | | | | 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 | | | | | |
| 218-625 | JW | 7/11/2016 9:44 | JW | TLD-1 | pile | N 37 06 16.66 | W 088 48 55.18 | -4172 | -5856 | N/A |
| 04/05/2016 09:51 3219-626 1375 | 1W | 7/12/2016 7:40 | ٦W | 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 |
| 04/05/2016 08:52 3220-627 1376 | JW | 7/11/2016 9:16 | 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 |
| 04/05/2016 14:22 3221-628 | 1M | 7/11/2016 10:55 | 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 |
| 04/05/2016 14:16 3222-629 | JW | 7/11/2016 10:50 | ١W | 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 |
| 04/05/2016 10:47 3223-630 | JW | 7/11/2016 10:42 | ١W | 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 |
| 04/05/2016 10:14 3224-631 | 1W | 7/11/2016 10:06 | 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. | | W 088 49 28.04 | -6011 | -8091 | N/A |
| 04/05/2016 15:35 3225-632 | JW | 7/11/2016 14:22 | | 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 |

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| 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 |
|--|-----|----------------------------------|-----|--------|---|--------------------------------|----------------|---------------|-------|-----|
| | | | | | Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. | | | | | |
| 04/05/2016 12:39 3226-633 | JW | 7/11/2016 13:16 | JW | TLD-12 | MW191, Little Bayou & Ogden Landing Rd. | N 37 06 49.62 | W 088 47 11.44 | 2588 | 626 | N/A |
| 04/05/2016 12:43 3227-634 | JW | 7/11/2016 13:21 | 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 |
| 04/05/2016 08:46 3228-635 04/05/2016 08:27 3229-636 | JW | 7/11/2016 9:08 7/11/2016 8:39 | | 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 Northeast corner of C-755 fence behind C-755-D | N 37 07 29.75 N 37 06 45.01 | W 088 48 10.58 | -3302 -864 | 2798 | N/A |
| 04/05/2016 13:05 3230-637 | 1W | 7/11/2016 13:44 | | 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 | 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 | | 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 |
| 04/05/2016 13:41 3231-638 | ٦W | 7/11/2016 14:30 | JW | TLD-19 | Big Bayou Creek south of Transport Road BridgeLocated 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 |

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| | | | | <u> </u> | Center of fence at north side of | | | 1 | 1 | |
|------------------|----------|-----------------|-------|----------|---|----------------|------------------|--------|--------|----------|
| N/A | N/A | N/A | N/A | TLD-20 | water treatment plant | N 37 06 59.83 | W 088 49 36.29 | -8788 | -2421 | N/A |
| | | | | | Residence, Oaks Road, Paducah, | | | | | |
| N/A | N/A | N/A | N/A | TLD-21 | Kentucky | N 36 58 12.77 | W 088 32 52.01 | 85990 | -24497 | N/A |
| | | | | | Outside of the fence of the locked | | | | | |
| | | | | | air sampling station at the rear | | | | | |
| 04/05/2016 11:31 | | | Ì | | corner of the Bethel Cumberland | | | | | |
| 3232-639 | Jw. | 7/11/2016 12:12 | lıw | TLD-22 | Presbyterian Church Cemetery | N 37 00 05.36 | W 088 52 36.29 | -8159 | -46801 | N/A |
| 3232 033 | | 7/11/2010 12:11 | - | 1.20 22 | Outside of the fence of the locked | | 11. 000 32 30.23 | - 0233 | 10001 | 1.47. |
| | | | | | air sampling station at the | | | | | |
| | | | | | northwest corner of the Heath | | | | | |
| N/A | N/A | N/A | N/A | TLD-23 | ballpark fields | N 37 05 50.80 | W 088 46 57.78 | 5667 | -4583 | N/A |
| , | — | | | | BJC Kevil facility on stairway | | | | | <u> </u> |
| | | | | | handrail outside southwest corner | | | | | |
| N/A | N/A | N/A | N/A | TLD-24 | of building | N 37 04 39.52 | W 088 52 51.97 | N/A | N/A | N/A |
| | | | | | | | | | | |
| 04/05/2016 09:06 | | | | | On power line tower nearest Dykes | | | 1 | | |
| 3233-640 | JW | 7/11/2016 9:35 | JW | TLD-25 | Road southeast of C-745-T | N 37 06 00.02 | W 088 48 26.49 | -1401 | -6172 | N/A |
| | | | | | Massac Creek to left of path in tree. | | | | | |
| | 1 | | | | Highway 62 Bridge past Sunshine | | | | | |
| N/A | N/A | N/A | N/A | TLD-26 | Dairy | N 36 57 31.92 | W 088 25 13.90 | 122314 | -15495 | N/A |
| | ŀ | | | | | | | | | |
| | | | | 1 | "Do not block entrance" sign on | | | | | |
| | | | | | Plant Access Road near Post 15 and | | | | | |
| | | | | | motorcycle parking area (C-800). | | | | | |
| N/A | N/A | N/A | N/A | TLD-27 | Motorcycle Shed, Post 15 | N 37 06 40.78 | W 088 48 54.33 | -4883 | -3431 | N/A |
| | | |] | | | | |] | | |
| | | | | | Bethel Church Road, turn right on | | | | | |
| | | | | | Bobo Road, left on intersection, | | | | | |
| | | | | | located in trees at Monitoring Well | | | | | |
| NI / A | N/A | N/A | N/A | TLD-28 | 194. Sign near staircase on Big Bayou, MW194 | N 37 07 44.580 | W 088 49 34.140 | -10105 | 1884 | N/A |
| N/A | - IN/A | IN/A | IN/A | 1110-28 | Bayou, WWV194 | N 37 07 44.380 | W 088 43 34.140 | -10103 | 1004 | IV/A |
| | | | | | 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 | | | | | |
| N/A | N/A | N/A | N/A | TLD-29 | of horse barn, west wall | N 37 07 55.380 | W 088 48 41.820 | -6503 | 4306 | N/A |
| 11/17 | 114/ 🗥 | 113/77 | 117/7 | 1.20 23 | or noise built, west wall | 1 57 67 55.566 | 1 000 10 11.020 | | | 1// |

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|------------------------------|-----|-----------------|-----|--------|---|----------------|-----------------|-------|-------|-----|
| 04/05/2016 13:01 3234-641 | JW | 7/11/2016 13:38 | 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 |
| 04/05/2016 10:11 3235-642 | JW | 7/11/2016 10:01 | 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 |
| 04/05/2016 10:45 3236-643 | 1M | 7/11/2016 10:40 | · | TLD-37 | KPDES Outfall 001 behind Vortec facility. K001 | N 37 07 18.600 | W 088 49 15.660 | -8202 | 138 | N/A |

| (| Ļ | |
|---|----------|---|
| ŀ | <u>'</u> | |
| (| 5 | • |

| 04/05/2016 13:30 | | | | | Five-Points Creek with concrete | | | | | |
|------------------|-------|-----------------|--------|---------|--|----------------|------------------|--------|----------|-------|
| 3237-644 | JW | 7/11/2016 14:16 | IW/ | TLD-38 | bridge, on tree behnd 2A sign. | N 37 06 43.320 | W 088 50 09.000 | -10630 | -4528 | N/A |
| | + | 7/11/2010 11110 | - | 1.22 00 | Zinage, on the series 2 vaign | | | 10000 | 1,020 | 1.771 |
| | | | | | Outfall 10 off Dykes Road near C- | | | | | |
| N/A | N/A | N/A | N/A | TLD-39 | 755 complex. Outfall 010 | N 37 06 33.540 | W 088 48 00.900 | -612.5 | -2231.25 | N/A |
| | | | | | | | | | | · |
| | | | | | Turn north on Kelly Road off | | | 1 | | |
| | | | | | Woodville Road, go about 1/2 mile | | | | | |
| | | | | | on Kelly road and turn left, go | | | | | |
| | | | | | about 1/2 miles, TLD placed in trees | | | | | |
| 04/05/2016 09:07 | | | ĺ | | on left. Orange sign on blocked | | | | | |
| 3238-645 | JW | 7/11/2016 9:38 | 1M | TLD-40 | road, east of 57 off Dykes Rd. | N 37 05 52.200 | W 088 48 52.20 | -2818 | -7551 | N/A |
| | | | | | | | | | | |
| | ł | | | | Acid Road near old monitoring well | | | | | |
| N1/A | 1.1/4 | 1,1/4 | N. /A | TI D 41 | past bridge. Acid Rd by COE | N 27 06 07 800 | W 000 F0 10 200 | 10116 | 6200 | N/A |
| N/A | N/A | N/A | N/A | TLD-41 | monitoring well. Ogden Landing Road, past landfill, | N 37 06 07.800 | W 088 50 18.360 | -10116 | -6298 | N/A |
| | | | | | at Northeast Plume, on "No | | | | | |
| N/A | N/A | N/A | N/A | TLD-42 | Tresspassing" sign | N 37 06 55.380 | W 088 47 19.080 | -1219 | -1701 | N/A |
| 11//1 | 117// | 11177 | 13,71 | 1.00 .2 | Monitoring Well 98 on road past | 3, 00 00.000 | 11 000 17 25.000 | 1 | 1,01 | 1.4// |
| N/A | N/A | N/A | N/A | TLD-43 | landfill, in the trees | N 37 08 12.240 | W 088 47 50.700 | -3125 | -6568 | N/A |
| | | | | | | | | | | |
| I | | | | | Outside security fence west of | | | | | 1 |
| | | | | | Lasagna site on the corner post of | | | | | |
| N/A | N/A | N/A | N/A | TLD-44 | posted area - southeast corner | N 37 07 08.880 | W 088 49 12.780 | -7337 | -1591 | N/A |
| | | | | | At C-743 trailer complex at walk-in | | | | | |
| N/A | N/A | N/A | N/A | TLD-45 | gate | N 37 06 45.900 | W 088 49 04.620 | -7337 | -474 | N/A |
| 04/05/2016 10:17 | l | 7/44/2045 40 00 | J.,, | TID 46 | T | N 27 05 44 700 | W 000 40 00 430 | 5400 | 2005 | |
| 3239-646 | JW | 7/11/2016 10:09 | 11100 | TLD-46 | Truck entrance at receiving C-720 | N 37 06 44.700 | W 088 49 00.120 | -5198 | -2865 | NA |
| | | | | 1 | Tree line south of C-745-T Cylinder | | | | | |
| | | | | | Storage Yard. First road on left on | ` | | | | |
| | | | | | Dykes Rd past 57. Last tree on right | | | | | |
| N/A | N/A | N/A | N/A | TLD-47 | before clearing | N 37 06 00.300 | W 088 48.49.380 | -3156 | -6777 | N/A |
| | 1.7 | 1.77. | | | Tree line along the security fence | | | | | |
| | | | | | east of C-745-H. Gate 44 road, NE | | | | | |
| N/A | N/A | N/A | N/A | TLD-48 | corner of fence | N 37 07 06.60 | W 088 47.53.82 | -1225 | 1064 | N/A |
| | | | | | Outfall 001 Posted Area. Power | | | | | |
| N/A | N/A | N/A | N/A | TLD-49 | pole North C-612 T1 | N 37 07 26.52 | W 088 49.04.92 | -7325 | 984 | N/A |
| | | | | | | | | | | |
| 04/05/2016 10:39 | | | | | West Patrol Road fence across from | 1 | | | | 1 |
| 3240-647 1377 | JW | 7/11/2016 10:32 | | TLD-50 | 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 |
| 04/05/2016 08:33 | JW | 7/11/2016 0:43 | , INA/ | 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 |
| 3241-648 | 11/1/ | 7/11/2016 8:43 | אארומ | ILD-52 | U-743-E. | IN 37 00 42.18 | VV U88 48.07.20 | 1-122/ | 1-1028 | IIV/A |

| | | | | | Security fence at southeast corner | | | | | |
|----------------------|-------|-----------------|------------------|---------|---|------------------|-------------------|--------|--------|--------------|
| 4/05/2016 09:51 | İ | | | İ | of C-745-T Yard. Down fence line | | | | | |
| 242-649 | JW | 7/12/2016 9:47 | JW | TLD-53 | away from TLD-2. | N 37 06 00.42 | W 088 48.37.02 | -2220 | -6423 | N/A |
| 04/08/2016 15:00 | | | | | | | | | | |
| 3243-650 | KA | 7/12/2016 6:00 | KA | TLD-54 | Residence; Jalusian Trail | N 57 87 72.16 | E 23 93 13.48 | 45296 | -25254 | N/A |
| | 1 | | | 1 | | | | | | Discontinued |
| 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 | 7/10/2014 |
| N/A | N/A | N/A | N/A | TLD-56 | O/S C-410 Truck Alley Facing C-412 | N 50 00 84 68 | E 22 81 16.67 | -3733 | -1776 | N/A |
| V/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 |
| 04/05/2016 08:25 | 111/7 | IN/A | IN/A | 1120-37 | C-340 royer | 14 33 04 00.30 | L 22 85 14.15 | 1-1002 | -2000 | IN/A |
| 3244-651 | JW | 7/11/2016 8:34 | 1\A/ | TLD-58 | West Central C-755 Complex | N 59 07 98.00 | E 22 88 70.74 | -1209 | -1422 | N/A |
| 04/06/2016 09:55 | 1300 | 7/11/2010 8:54 | 300 | 1120-38 | West central C-755 complex | 14 39 07 98.00 | L 22 88 70.74 | 1-1209 | -1422 | IN/A |
| 3245-652 | JW | 7/12/2016 8:20 | 11/4/ | TLD-59 | C-752A Break Area | N 59 15 61.62 | E 22 78 55.79 | -5234 | -339 | N/A |
| 04/05/2016 14:40 | 1300 | 7/12/2010 8.20 | 1344 | 1120-33 | C-333A Light Pole on Fence Pole | 10 33 13 01.02 | L 22 78 33.73 | -3234 | -333 | IN/A |
| 3246-653 | JW | 7/11/2016 15:02 | 11/4/ | TLD-60 | #16 | N 59 02 07.10 | E 22 80 71.62 | -2919 | -4199 | N/A |
| 04/05/2016 14:41 | 7 4 | //11/2010 13.02 | 2 4 4 | 112-00 | 770 | 11 33 02 07.10 | L 22 00 / 1.02 | -2313 | -4177 | 111/14 |
| 3247-654 | JW | 7/11/2016 15:04 | 11/4/ | TLD-61 | West of C-746Q Light Pole #14 | N 59 01 58.14 | E 22 80 98.35 | -2778 | -4315 | N/A |
| 04/05/2016 14:54 | 300 | 7/11/2010 13.04 | 1744 | TLD-01 | C-743 Trailer Complex Light Pole | N 33 01 38.14 | L 22 80 38.33 | -2778 | -4313 | IN/A |
| 3248-655 | Jw | 7/11/2016 15:20 | 11/4/ | TLD-62 | #336,behind Trailer #3. | N 59 10 20.18 | E 22 73 49.81 | -6111 | -2607 | N/A |
| 04/05/2016 14:46 | 1300 | 7/11/2010 13.20 | 300 | 1120-02 | #330,beriiila Trailer #3. | N 39 10 20.18 | L 22 /3 49.81 | -0111 | -2007 | IN/A |
| 3249-656 | JW | 7/11/2016 15:35 | 1114/ | TLD-63 | C-412 HP Break Trailer | N 59 08 36.46 | E 22 79 46.95 | -4069 | -2435 | N/A |
| 04/05/2016 14:31 | 3 4 4 | 7/11/2010 13.33 | 1344 | 1110-03 | C-412 HF Bleak Hallel | N 39 08 30.40 | E 22 /3 40.33 | -4009 | -2455 | IN/A |
| 3250-657 | JW | 7/11/2016 11:05 | [NA/ | TLD-64 | C-764 T-6 Trailer | N 59 11 77.55 | E 22 70 88.88 | -7098 | -2447 | N/A |
| 3230-037 | 1300 | //11/2016 11.03 | 1300 | TLD-04 | C-764 1-6 ITaliel | N 39 11 //.33 | E 22 /U 88.88 | -7098 | -2447 | IN/A |
| | | | ļ | | Located O/S of North Security fence | | | j | | |
| 04/05/2016 09:56 | | | | | North of C-745H Cylinder Yard; | N 37 07 08.54386 | W 088 48 00.45376 | | | |
| 04/05/2016 08:56 | Jw | 7/11/2016 0:26 | 11.47 | TID CE | South of C-762 Laydown Yard | | | 1705 | 1002 | N1/A |
| 3251-658 1378 | 1100 | 7/11/2016 9:26 | 1100 | TLD-65 | 30uth of C-762 Laydown Fard | | | -1795 | 1062 | N/A |
| | | | | | Located on tree @Southeast corner | | | | | |
| | | | | i | of New Harmony Cemetery; | 1 | W 000 40 41 0000C | | | |
| 04/05/2016 08:44 | 1 | | | l | adjacent to last concrete barrier & | N 37 07 15.80859 | W 088 48 11.08836 | | | |
| | 11.47 | 7/11/2016 0:05 | 1347 | TID CC | 1 - | | | 2056 | 1457 | N1/A |
| 3252-659 | JW | 7/11/2016 9:05 | 1 1 1 1 | TLD-66 | large metal post Located on "No Trespassing" sign | | | -2856 | 1457 | N/A |
| | | | | | i e | | | | | |
| 04/05/2016 00:44 | | | | | North side of Dykes Rd next to | N 37 07 12.70502 | W 088 47 56.75697 | | | |
| 04/05/2016 08:41 | l.,, | 7/11/2016 0:00 | | TID 67 | Security Fence North of C-762 | | | 1,050 | 15.00 | N/A |
| 3253-660 | JW | 7/11/2016 9:02 | 11/1/ | TLD-67 | Laydown yard West Security Fence West of C- | | | -1658 | 1560 | N/A |
| 04/05/2016 10 25 | | | | | 1 | N 07 07 44 60-07 | | | | |
| 04/05/2016 10:36 | | 7/44/2046422 | | TI 5 66 | 745B Cylinder Yard & Southeast of | N 37 07 11.60797 | W 088 49 11.43416 | 7000 | 667 | 1,1/4 |
| 3254-661 1379 | 1M | 7/11/2016 10:35 | 1 ₁ M | TLD-68 | Vortec Site | | | -7302 | -617 | N/A |
| | | | | | 11/2 12/2 12/2 12/2 12/2 | | | | | |
| 0.4.10=10.04.6.40.== | | | | | Wooden utility pole (T12-15 H) | N 37 07 13.70394 | W 088 49 28.37928 | | | 1 |
| 04/05/2016 10:29 | 1 | -// | 1 | | next to gravel road @Northeast | | | | | l |
| 3255-662 | JW | 7/11/2016 10:23 | IIM | TLD-69 | corner of pond North of C-611 | | | -8664 | -888 | N/A |

| | 1 | · · · · · · · · · · · · · · · · · · · | | T | 0/5 5 14 - 1 5 1 - 5 1 | | · r | 1 | 7 | 7 |
|------------------|-------|---------------------------------------|-----------|----------|--|-------------------|--------------------|-------|---------|--------|
| | | | | | O/S of West Security Fence | | | | | |
| 04/05/2045 40 00 | | | | | Southeast of C-333 midway | N 37 06 27.82855 | W 088 48 50.25203 | | | |
| 04/05/2016 10:08 | ,,,, | 7/11/2016 0.57 | 15.47 | TI D 70 | between C810 parking area & | | | 4470 | 44.00 | N/A |
| 3256-663 | JW | 7/11/2016 9:57 | JW | TLD-70 | North BWCS Security Fence | | - | -4173 | -4189 | N/A |
| | | | | | O/S of West Security Fence of | | | | | |
| 04/05/004640.05 | | | | | BWCS under security light, | N 37 06 23.05971 | W 088 48 59.65074 | | | |
| 04/05/2016 10:05 | l | 7/44/2046054 | | | Northeast of wooden utility pole | | | 4700 | 4000 | 1,1,0 |
| 3257-664 | JW | 7/11/2016 9:54 | JW | TLD-71 | (11056 KU 78487) | | | -4723 | -4903 | N/A |
| / / | | | | | North Side of Air Monitoring | | | | | |
| 04/05/2016 09:54 | l | 7/44/2046 0 40 | | | Station AMD57, Northwest of Post | N 37 05 55.32798 | W 088 49 15.28582 | **** | 7070 | 11/4 |
| 3258-665 | JW | 7/11/2016 9:40 | <u>JM</u> | TLD-72 | 57 | | | -4952 | -7972 | N/A |
| 04/05/2046 42.57 | | | | | Factoria II Dailean d'Ougania all'aine | N 27 06 06 1420F | W 000 F0 02 04 070 | | | |
| 04/05/2016 13:57 | 1 | 7/11/2015 11 27 | | | Eastern "Railroad Crossing" sign | N 37 06 06.14205 | W 088 50 02.01070 | | | 1 |
| 3259-666 | JW | 7/11/2016 14:37 | JW | TLD-73 | @train tracks on Acid Road | | + | -8883 | -8241 | N/A |
| | | - | | | Located on "Warning Siren" sign | | | | | |
| 04/05/2016 11:52 | | | | | @turnoff North of Magruder & | N 37 05 10.96196 | W 088 48 53.61411 | | | |
| 1 ' ' | JW | 7/11/2016 12:25 | 11.47 | TLD-74 | Woodville intersection | | | -1765 | -11586 | N/A |
| 3260-667 | 1700 | 7/11/2016 12:35 | 7.00 | TLD-74 | Located on "Warning Siren" sign | | | -1/05 | -11290 | IN/A |
| 04/05/2016 11:55 | | | | | @North of Kelley Rd & Woodville | N 37 05 04.94525 | W 088 48 26.65157 | | | |
| 1 | JW | 7/11/2016 12:37 | 11.47 | TLD-75 | Rd intersection | 1 37 03 04.94323 | W 088 48 20.03137 | 496 | -11409 | N/A |
| 3261-668 | 1700 | //11/2010 12.5/ | 3 00 | TLU-73 | Nu littersection | | | 1430 | 1-11409 | IN/A |
| | | | | | Located on "Tract A" sign below | | | | | |
| | | | | | power lines southside of Kelley Rd | N 37 05 55.05466 | W 088 48 06.27328 | | | |
| 04/05/2016 12:01 | | | | | in sharp curve between Woodville | 14 37 03 33.03400 | W 000 40 00.27520 | | | |
| 3262-669 | JW | 7/11/2016 12:45 | 1\A/ | TLD-76 | & McCaw Rds | | | 310 | -6082 | N/A |
| 3202-003 | 3 4 4 | 7/11/2010 12:43 | 300 | 1120-70 | Located on "Warning Siren" sign | | | 1310 | 10002 | 117/1 |
| 04/05/2016 12:07 | | | | | North side of McCaw Rd east of | N 37 06 25.46598 | W 088 47 33.66599 | | | |
| 3263-670 | JW | 7/11/2016 12:48 | 1\\\ | TLD-77 | Kelley Rd intersection | 1137 00 23.10330 | 1, 000 1, 33,00333 | 1737 | -2287 | N/A |
| 04/05/2016 12:46 | 1300 | 7/11/2010 12:40 | 3 4 4 | 1 | Northeast Corner of C-746U Landfill | | | 12737 | 12207 | 1,7,7 |
| 3264-671 | JW | 7/11/2016 13:23 | ıw | TLD-78 | Security Fence | N 37 07 54.00752 | W 088 47 37.45924 | -1622 | 6020 | N/A |
| 3204 071 | 3** | //11/2010 13:23 | 3 ** | 120 70 | Jesus in the second sec | | | 1 | 10020 | 1.47.1 |
| | | | | | Located on left post of the "Wildlife | | | | | |
| | | | | | Management" gate on New | N 37 07 28.86304 | W 88 49 12.50003 | | | |
| 04/05/2016 14:12 | | | | | Waterline Rd Southwest of Plant | | 17 00 15 12.0000 | | | |
| 3265-672 | JW | 7/11/2016 10:48 | 1\\ | TLD-79 | gate 41A west of C-612 | | | -7981 | 993 | N/A |
| 3203 072 | 3** | 7/12/2020 20110 | | 1120 / 3 | 8446 127 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 | | | 17302 | 1 | 1,7, |
| | | | | | Located on "Cattle" gate west of | | | | | |
| 04/05/2016 13:08 | | | | | MW 453 & MW 454 on gravel rd | N 37 07 47.29850 | W 088 48 46.10944 | | | |
| 3266-673 | JW | 7/11/2016 13:50 | Jw | TLD-80 | east of New Waterline Rd | | | -6612 | 3477 | N/A |
| | 1 | ,, | <u> </u> | | | | | | | |
| | | | | | Southeast corner of BWCS security | | | | | |
| 04/05/2016 10:01 | | | | | fence next to gate V1 East of New | N 37 06 18.33947 | W 088 48 56.42591 | | | |
| 3267-674 1380 | JW | 7/11/2016 9:51 | JW | TLD-81 | Waterline East of C1100 | | | -4314 | -5262 | N/A |
| 04/05/2016 09:22 | | 1 | † | | Short wooden pole East of Dykes | | | | | |
| 3268-675 | JW | 7/11/2016 9:30 | JW | TLD-82 | Rd North of Outfall 13 | N 37 06 10.13175 | W 088 48 13.53048 | -765 | -4851 | N/A |
| | | | 1 | | | | | | | |

| | | 1 | <u> </u> | T | | | <u> </u> | т | | · · · · · · · · · · · · · · · · · · · |
|------------------|--|---|-----------------|---------|--------------------------------------|-------------------|--------------------|--------|--------|---------------------------------------|
| 04/05/2016 09:27 | | | | | Large metal power pole West of | N 37 06 07.30640 | W 088 48 20.71726 | | | |
| 3269-676 1381 | 1M | 7/12/2016 8:05 | 1M | TLD-83 | Dykes Rd South of Outfall 13 | | | -1214 | -5319 | N/A |
| 04/05/2016 08:39 | | | | | Located @MW496 on the East Side | N 37 07 03.50589 | W 088 47 49.26485 | | | |
| 270-677 | JW | 7/11/2016 8:47 | JW | TLD-84 | of Dykes Rd | | | -769 | 894 | N/A |
| 4/05/2016 16:00 | | | | | Residence; corner of Springwell and | i | | | | |
| 3271-678 | SO | 7/11/2016 12:00 | SO | TLD-85 | Buckner Lane | N 37 03 27.9036 | W 088 40 43.9638 | 39082 | -7750 | N/A |
| | | | | | Plant Entrance, Gravel Construction | | | | | |
| 04/05/2016 11:49 | | | | | Rd. Right side on orange warning | | | | | |
| 272-679 | 1M | 7/11/2016 12:29 | JW | TLD-86 | signal sign | N 37° 5' 18.8622" | W 088 49 28.2282 | -4676 | -11794 | N/A |
| | | | | | KOW Entrance north of Woodville | | | | | |
| 4/05/2016 13:52 | | | | | Rd north of Kevil Eagles. Right side | | | | | |
| 273-680 | WL | 7/11/2016 14:47 | 11/4/ | TLD-87 | on orange warning signal sign | N 37 05 24.2802 | W 088 50 43.9548 | -10629 | -13381 | N/A |
| 273 000 | 1300 | 7/11/2010 14.47 | 3 00 | 1120-07 | Bethel Church Road KOW entrance. | 14 37 03 24.2802 | VV 088 30 43.3348 | -10023 | -13301 | TV/A |
| 04/05/2016 13:26 | 1 | | | | North of Massay Rd, right side on | | | İ | | |
| 3274-681 | JW | 7/11/2016 14:07 | 11/4/ | TLD-88 | yellow post | N 37 07 05.4876 | W 088 50 37.9608 | -13677 | -3597 | N/A |
| 5274-081 | 300 | 7/11/2010 14:07 | 1744 | TLD-88 | yenow post | N 37 07 03.4870 | W 088 30 37.3008 | -150// | -5597 | IN/A |
| | | | | | Bobo Rd, off of Bethel Church Rd. | | | | | |
| | | |] | | Continue east 200 yds past end of | | } | |] | |
| 04/05/2016 13:22 | | | | | asphalt. At intersection on orange | | | | | |
| 3275-682 | JW | 7/11/2016 14:04 | 11/4/ | TLD-89 | warning signal sign | N 37 07 35.9976 | W 088 49 44.3922 | -10657 | 788 | N/A |
| | 1 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | ., | + | 1.00 | 1.7.1. |
| | | | | 1 | Bridge on Ogden Landing Rd east of | | | | | |
| 04/05/2016 13:16 | | | | | Lamb's garage. On NE corner of | | | | 1 | |
| 3276-683 | JW. | 7/11/2016 13:55 | lıw | TLD-90 | bridge on contaminated creek sign | N 37 08 54 6714 | W 088 47 27.2472 | -12310 | 7182 | N/A |
| | | 1 ,, | | 1 | | | ., | 1 | 7202 | 1.7 |
| | | | | | Boldry School Rd on KOW at | | | | | |
| 04/05/2016 12:55 | | | | | Shawnee plant entrance. On cattle | | | | | |
| 3277-684 | JW | 7/11/2016 13:33 | l _{IM} | TLD-91 | gate road on hill, right side | N 37 08 40.9884 | W 088 49 36.5232 | -2952 | 12069 | N/A |
| 2277 001 | 1 | 1/11/2010 13:03 | 1 | 1120 32 | Anderson Road off Metropolis Lake | | W 000 43 30:3232 | 12332 | 12003 | 17/ |
| | | | | | Rd. follow West until road ends | | | | | |
| 04/05/2016 12:23 | | | | | @Railroad tracks. On left crossing | | | | | |
| 3278-685 | JW | 7/11/2016 13:07 | N1/A | TLD-92 | gate post. | N 37 07 42.7866 | W 088 46 17.1438 | 1392 | 8745 | N/A |
| 5276-083 | 300 | 7/11/2010 13.07 | IN/A | TLD-32 | MW 100, North on Metropolis Lake | | VV 088 40 17.1438 | 1392 | 0/43 | IN/A |
| 04/05/2016 12:17 | | | | | Rd past railroad tracks on left side | | | | | |
| , , | JW | 7/11/2016 12:50 | 1111 | TLD-93 | on Well bollard | N 27 09 00 0744 | W 000 4C FO 0204 | 4874 | 7100 | N/A |
| 3279-686 | 100 | 7/11/2016 12:59 | 100 | 1LD-93 | on well bollard | N 37 08 09.0744 | W 088 46 50.9304 | 4874 | 7186 | IN/A |
| 04/05/2016 12:37 | | | | | Residence; corner of Ogden | | | | | |
| 3280-687 | Jw. | 7/11/2016 13:14 | 11/1/ | TLD-94 | Landing Rd & Metropolis Lake Rd | N 37 05 48.9294 | W 088 47 12.4332 | 4740 | 436 | N/A |
| J200 '007 | 1,00 | //11/2010 13.14 | 13.44 | 1120-34 | Landing Na & Metropolis Lake Na | 14 37 03 40.3234 | VV 000 47 12.4332 | 17770 | 1430 | 11// |
| | | | | | West McCracken Health Clinic, | | | | | |
| 04/05/2016 12:11 | | | | | Metropolis Lake Rd. On Light Pole | | | | | |
| 3281-688 | Jw | 7/11/2016 12:52 | 111/1 | TLD-95 | in SW corner of parking lot | N 37 06 40.5468 | W 088 46 47.2872 | 4617 | -5167 | N/A |
| 2201-000 | 1244 | //11/2010 12:52 | ۱۱۸۸۰ | 1150-33 | Till 244 collifer of harkfill for | IN 37 00 40.3408 | JVV 000 40 47.28/2 | 1401/ | 1-210/ | TIN/ M |

| *************************************** | | | | | Taken along while placing and | | | 1 | | |
|---|----|-----------------|-----|--------|---------------------------------------|-----|-----|-----|-----|-----|
| | | | | | collecting all other samples - stored | | | | | |
| 04/06/2016 10:55 | 1 | | | - 1 | in "lead box" at C-101 Dosimetry | | | 1 | | |
| 3282-689 | 1M | 7/12/2016 10:00 | JW | TLD-FB | office | N/A | N/A | NA | NA | N/A |
| 04/05/2016 07:30 | | | | | Stored in "lead box" at C-101 | | | | | |
| 3283-690 | 1M | 7/11/2016 7:00 | JW | TLD-TB | Dosimetry office | N/A | N/A | NA | NA | N/A |
| 3284-691 | ٦W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 3285-692 | 1W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 3286-693 | ٦W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 3287-694 | 1W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 3288-695 | ١W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 3289-696 | 1M | 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 | | Collected | Location | | | | | | |
|------------------|--------------|---------------------|-----------|----------|--|---------------|---|--------|--------|----------|
| Issued/Badge ID | Ву | Date/Time Collected | Ву | Name | Description | NorthLong | West or East Lat | Xcoord | Ycoord | Comments |
| | | | | | PGDP security fence west of C-745-M near intersection of Patrol Road | | | | | |
| | | | | | and Alabama Avenue near pole 21- | | | | | l |
| 07/11/2016 09:44 | | | | | 20. Outside fence behind UDS dirt | | | | | |
| 5383-625 | JW | 10/10/2016 9:12 | JW | TLD-1 | pile | N 37 06 16.66 | W 088 48 55.18 | -4172 | -5856 | N/A |
| | | | | | PGDP security fence south of C-745- | | | | | |
| 7/12/2016 07:40 | | | | | T near pole T20-6J. South Cylinder | | | | | |
| 5384-626 1071 | 1M | 10/10/2016 12:22 | JW | TLD-2 | Yard perimeter fence | N 37 06 02.15 | W 088 48 43.07 | -2740 | -6427 | N/A |
| | | | | | PGDP security fence east of C-745- | | | | | |
| 07/11/2016 09:16 | | | | | H near pole 23-31. Perimeter fence | i . | | | | |
| 5385-627 1072 | 1M | 10/10/2016 8:43 | JW | TLD-3 | NE corner | N 37 07 04.17 | W 088 47 57.21 | -1399 | 739 | N/A |
| 07/11/2016 10:55 | | | | | North PGDP security fence near | | | | | |
| 5386-628 | Jw | 10/10/2016 10:26 | IW/ | TLD-4 | North-South Diversion Ditch. | N 37 07 15.74 | W 088 48 25.56 | -3957 | 1052 | N/A |
| 3360 020 | 1 | 10/10/2010 10:20 | | 1.22 | North PGDP security fence north of | 37 07 23.74 | W 000 40 23.30 | 3337 | 1032 | Tity/A |
| | | | | | C-747-A near pole T53A1P26G. | | | | | |
| 07/11/2016 10:50 | | | | | North perimeter fence between | · | | | | |
| 5387-629 | JW | 10/10/2016 10:22 | JW | TLD-5 | lagoon | N 37 07 24.38 | W 088 48 54.58 | -6464 | 1068 | N/A |
| | | | | | West PGDP security fence west of C- | 1 | | | | 1 |
| 07/11/2016 10:42 | 1 | 10/10/00151010 | | | 746-P1 near pole 22-4. 612 | | | | | |
| 5388-630 | JW | 10/10/2016 10:12 | JW | TLD-6 | perimeter fence. | N 37 07 20.85 | W 088 49 07.22 | -7303 | 382 | N/A |
| | | | | | PGDP perimeter fence adjacent to | | | | | |
| | | | | | Curlee Road near entrance to DOE | | | | | |
| 07/11/2016 10:06 | | | | | building (C-103). Perimeter fence | | | | | |
| 5389-631 | JW | 10/10/2016 9:32 | JW | TLD-7 | across from entrance to DOE bldg. | N 37 06 29.15 | W 088 49 02.49 | -5153 | -4400 | N/A |
| | | | | | Fence around U.S.G.S. stream | | | | | |
| | | | | | gauging station at Bayou Creek and | | | | | |
| | 1. | | | | South Acid Road. USGS fence West | 1 | | | | |
| N/A | N/A | N/A | N/A | TLD-8 | 57 Acid Rd. | N 37 05 57.76 | W 088 49 28.04 | -6011 | -8091 | N/A |
| | | | | | Northeast corner of fence of old KOW water treatment plant, near | | | | | |
| 07/11/2016 14:22 | | | | | Monitoring Well 309. Gate to | | | | | |
| 5390-632 | JW | 10/10/2016 14:59 | WL | TLD-9 | MW305 | N 37 06 37.12 | W 088 49 48.11 | -8901 | -4907 | N/A |
| | | | <u> </u> | 1 | Outfall 011 - hung from side of | | 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 1 | 1.22. | 1 |
| | | | ł | | outfall sampling platform at about | | | | | |
| | | | | 1 | foot level, pole T19-15E. Gate | | | | | |
| N/A | N/A | N/A | N/A | TLD-10 | Outfall 011 | N 37 06 27.22 | W 088 48 03.56 | -602 | -2948 | N/A |

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|---|---|---|
| ١ | ۲ | ٠ |
| 1 | Ň | ٠ |
| ١ | Ń | 1 |

| 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 |
|------------------------------|-----|------------------|------|--------|--|---------------|----------------|--------|--------|----------|
| 07/11/2016 13:16 | | | | | Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. MW191, Little Bayou & Ogden | | | | | |
| 5391-633 | 1M | 10/10/2016 13:49 | JW | TLD-12 | Landing Rd. | N 37 06 49.62 | W 088 47 11.44 | 2588 | 626 | N/A |
| 07/11/2016 13:21 5392-634 | JW | 10/10/2016 13:53 | 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 |
| 07/11/2016 09:08 5393-635 | JW | 10/10/2016 8:37 | ١W | 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 |
| 07/11/2016 08:39 | | | | | Northeast corner of C-755 fence | | | | | |
| 5394-636 | JW | 10/10/2016 8:04 | JW | TLD-15 | behind C-755-D | N 37 06 45.01 | W 088 47 58.91 | -864 | -1129 | N/A |
| 07/11/2016 13:44 5395-637 | ıw | 10/10/2016 14:12 | 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 |
| | | | | | 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 @ | | | | | |
| N/A | N/A | N/A | N/A | TLD-18 | Tract 5 4-way Stop | N 37 08 22.09 | W 088 47 25.71 | -1702 | 9016 | N/A |
| 07/11/2016 14:30 | | | | | Big Bayou Creek south of Transport Road BridgeLocated in tree to left of the DOE barricade. Iron Bridge | | | | | |
| 5396-638 | JW | 10/10/2016 14:51 | IΛΛΛ | TLD-19 | BBC, behind notice sign. | N 37 07 25.09 | W 088 49 26.57 | -8922 | 248 | N/A |

| | T | | | 1 | Center of fence at north side of | | T | | T | |
|------------------|-----|------------------|-----|--------|---------------------------------------|----------------|-----------------|--------|--------|-----|
| N/A | N/A | N/A | N/A | TLD-20 | water treatment plant | N 37 06 59.83 | W 088 49 36.29 | -8788 | -2421 | N/A |
| | | | | | Residence, Oaks Road, Paducah, | | | | | |
| N/A | N/A | N/A | N/A | TLD-21 | Kentucky | N 36 58 12.77 | W 088 32 52.01 | 85990 | -24497 | N/A |
| | | | | | | | | | | |
| | | | | | Outside of the fence of the locked | | | | | |
| | | | | | air sampling station at the rear | | | | | |
| 07/11/2016 12:12 | | | | 1 | corner of the Bethel Cumberland | | | | | |
| 5397-639 | JW | 10/10/2016 11:55 | JW | TLD-22 | Presbyterian Church Cemetery | N 37 00 05.36 | W 088 52 36.29 | -8159 | -46801 | N/A |
| | | | | | Outside of the fence of the locked | | | 1 | | |
| | | | | | air sampling station at the | | | | | |
| | | | | | northwest corner of the Heath | | | 1 | | |
| N/A | N/A | N/A | N/A | TLD-23 | ballpark fields | N 37 05 50.80 | W 088 46 57.78 | 5667 | -4583 | N/A |
| | | | | | BJC Kevil facility on stairway | | | | | |
| | | | | | handrail outside southwest corner | | | | | |
| N/A | N/A | N/A | N/A | TLD-24 | of building | N 37 04 39.52 | W 088 52 51.97 | N/A | N/A | N/A |
| | | | | | | | | | | |
| 07/11/2016 09:35 | İ | | | | On power line tower nearest Dykes | | | | | |
| 5398-640 | JW | 10/10/2016 9:00 | JW | TLD-25 | Road southeast of C-745-T | N 37 06 00.02 | W 088 48 26.49 | -1401 | -6172 | N/A |
| | | | | | Massac Creek to left of path in tree. | | | | | |
| | | | | | Highway 62 Bridge past Sunshine | | | | | |
| N/A | N/A | N/A | N/A | TLD-26 | Dairy | N 36 57 31.92 | W 088 25 13.90 | 122314 | -15495 | N/A |
| | | | | | | | | | | |
| | | | | | "Do not block entrance" sign on | | | j | | |
| | | | | | Plant Access Road near Post 15 and | | | | | |
| | | | | | motorcycle parking area (C-800). | | | | | |
| N/A | N/A | N/A | N/A | TLD-27 | Motorcycle Shed, Post 15 | N 37 06 40.78 | W 088 48 54.33 | -4883 | -3431 | N/A |
| | 1 | | | | | | | | | |
| | | | | | Bethel Church Road, turn right on | | | | | |
| | | | | | Bobo Road, left on intersection, | | | | | |
| | | | | | located in trees at Monitoring Well | | | ĺ | | |
| | | | | | 194. Sign near staircase on Big | | | | | |
| N/A | N/A | N/A | N/A | TLD-28 | Bayou, MW194 | N 37 07 44.580 | W 088 49 34.140 | -10105 | 1884 | N/A |
| | | | | | | | | | | |
| | | | | | 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 | | | | | |
| N/A | N/A | N/A | N/A | TLD-29 | of horse barn, west wall | N 37 07 55.380 | W 088 48 41.820 | -6503 | 4306 | N/A |

| | T | T | | | | | | | T | T |
|------------------|-------|------------------|-------|---------|--|----------------|------------------|-------|--------|--------------|
| | | | | | | | | | | |
| | | | | | 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 | | | | | |
| 07/11/2016 13:38 | | | | | sign. Boldry School Rd., Tract 7 | | | | | |
| 5399-641 | JW | 10/10/2016 14:07 | JW | TLD-30 | | N 37 08 21.060 | W 088 45 09.060 | -4836 | 7876 | N/A |
| | | | | | | | | | | 1,7 |
| | | | | | 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 | | | 1 | } | |
| N/A | N/A | N/A | N/A | TLD-31 | tree. (Green Scorpion) | N 37 09 02.580 | W 088 47 25.620 | -3201 | 12751 | N/A |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | 1 | | | | Boldry School Road, past Ducks | | | | | |
| | | | | | Unlimited Area on Tract 6, located | | | | | |
| | | | | | in a tree on the side of the road. | | | | 1 | |
| 21/4 | | | N. /A | TI D 22 | South Dead Dog Rd in tree East side | N 27 00 F0 040 | 000 40 00 400 | F.400 | 45.450 | 1.,,, |
| N/A | N/A | N/A | N/A | TLD-32 | of road. 30 yds prior to Tract 6 Sign | N 37 09 50.040 | W 088 48 03.480 | -5489 | 15453 | N/A |
| | | | | | Harmony Cemetery off Dykes Road | | | | | |
| NI/A | N/A | N/A | N/A | TLD-33 | 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 | IN/A | IN/A | IN/A | 11.0-35 | the center | N 37 07 17.380 | VV 088 48 12.340 | -2000 | 1333 | IN/A |
| | | | | | Dykes Road back side of PGDP, | | | | | |
| | | | | | across from Monitoring Well 145, | | | | | |
| | | | | | Monitoring Well 144 on the gravel | | 1 | | | |
| N/A | N/A | N/A | N/A | TLD-34 | road | N 37 06 58.440 | W 088 48 52.320 | -779 | 940 | N/A |
| | | | | | Outfall 017 off of Plant Access | | | | | |
| 07/11/2016 10:01 | | | | | Road. Outfall 017 UDS laydown | | | | | |
| 5400-642 | JW | 10/10/2016 9:29 | 1M | TLD-35 | yard | N 37 06 21.480 | W 088 49 03.960 | -4773 | -5806 | N/A |
| | | | | | | | | | | |
| | 1 | | | | | | | | | |
| | | | | | PGDP plant access road, turn at | | | | | |
| | | | | | DOE, turn towards Northwest | | • | | 1 | |
| | | | | | Plume facility, turn towards landfill | | | | | |
| | 1,1/2 | 1,14 | 1 | TID CC | (C-746-K) at creek on road and the | N 27.06 50 640 | W 000 40 33 545 | 7224 | 2065 | 121/4 |
| N/A | N/A | N/A | N/A | TLD-36 | end of the bridge. Randy Bridge | N 37 06 50.640 | W 088 49 23.040 | -7321 | -2865 | N/A |
| 07/11/2016 10:40 | 1,000 | 10/10/2016 10:00 | 100/ | TID 27 | KPDES Outfall 001 behind Vortec | N 27 07 18 COO | W 000 40 4F CC0 | 9202 | 120 | N1 / A |
| 5401-643 | 1M | 10/10/2016 10:09 | 100 | TLD-37 | facility. K001 | N 37 07 18.600 | W 088 49 15.660 | -8202 | 138 | N/A |

| | T | | | | 7 | | | 7 | T | T |
|------------------|------|------------------|--------|---|--|-----------------|-------------------|--------|----------|----------|
| 07/11/2016 14:16 | | | | | Five-Points Creek with concrete | | | | | |
| 5402-644 | JW | 10/10/2016 14:56 | JW | TLD-38 | bridge, on tree behnd 2A sign. | N 37 06 43.320 | W 088 50 09.000 | -10630 | -4528 | N/A |
| | | | | | | | | | | |
| | 1 | | | } | Outfall 10 off Dykes Road near C- | | | | | |
| N/A | N/A | N/A | N/A | TLD-39 | 755 complex. Outfall 010 | N 37 06 33.540 | W 088 48 00.900 | -612.5 | -2231.25 | N/A |
| | | | | į | | | | | | |
| | | | | 1 | Turn north on Kelly Road off | | | | | |
| | | | | | Woodville Road, go about 1/2 mile | | | | | ļ |
| | | | | | on Kelly road and turn left, go | | | | | |
| | İ | | | | about 1/2 miles, TLD placed in trees | | | | | |
| 07/11/2016 09:38 | | | | | on left. Orange sign on blocked | | | | | |
| 5403-645 | JW | 10/10/2016 9:03 | JM | TLD-40 | road, east of 57 off Dykes Rd. | N 37 05 52.200 | W 088 48 52.20 | -2818 | -7551 | N/A |
| | | | | | A id Bandanan Idan a idan a idan | | | | | |
| | | | | | Acid Road near old monitoring well | | | | |] |
| N1 / A | \ | N1/A | N1 / A | TID 44 | past bridge. Acid Rd by COE | N 27 06 07 000 | W 000 F0 10 200 | 10116 | 6200 | N. / A |
| N/A | N/A | N/A | N/A | TLD-41 | monitoring well. Ogden Landing Road, past landfill, | N 37 06 07.800 | W 088 50 18.360 | -10116 | -6298 | N/A |
| | | | | | at Northeast Plume, on "No | | | | | |
| NI/A | N/A | N/A | N/A | TLD-42 | Tresspassing" sign | N 37 06 55.380 | W 088 47 19.080 | -1219 | -1701 | N/A |
| N/A | IN/A | IN/ A | IN/A | 1110-42 | Monitoring Well 98 on road past | N 37 06 33.360 | VV 068 47 19.080 | 1-1219 | [-1/01 | IN/A |
| N/A | N/A | N/A | N/A | TLD-43 | landfill, in the trees | N 37 08 12.240 | W 088 47 50.700 | -3125 | -6568 | N/A |
| IN/A | IN/A | IN/A | IN/A | 111111111111111111111111111111111111111 | landin, in the trees | N 37 08 12.240 | W 088 47 30.700 | -3123 | -0308 | IN/A |
| | | | | | Outside security fence west of | | | | | |
| | 1 | | | | Lasagna site on the corner post of | | | | | |
| N/A | N/A | N/A | N/A | TLD-44 | posted area - southeast corner | N 37 07 08.880 | W 088 49 12.780 | -7337 | -1591 | N/A |
| 14/7 | 1.77 | 11,7,1 | ,,, | 1.22 | At C-743 trailer complex at walk-in | 11 37 37 301333 | 1. 000 13 121.700 | 1.557 | 1331 | 1.7/ |
| N/A | N/A | N/A | N/A | TLD-45 | gate | N 37 06 45.900 | W 088 49 04.620 | -7337 | -474 | N/A |
| 07/11/2016 10:09 | | <u> </u> | | | | | | | | <u> </u> |
| 5404-646 | 1W | 10/10/2016 9:36 | JW | TLD-46 | Truck entrance at receiving C-720 | N 37 06 44.700 | W 088 49 00.120 | -5198 | -2865 | NA |
| | | | | | | | | | | |
| | | · | | | Tree line south of C-745-T Cylinder | | | | | |
| | | | | 1 | Storage Yard. First road on left on | | | | | |
| | | | Ì | | Dykes Rd past 57. Last tree on right | : | | | | |
| N/A | N/A | N/A | N/A | TLD-47 | before clearing | N 37 06 00.300 | W 088 48.49.380 | -3156 | -6777 | N/A |
| | | | | | Tree line along the security fence | | | | | |
| | 1 | | | | east of C-745-H. Gate 44 road, NE | | | | | |
| N/A | N/A | N/A | N/A | TLD-48 | corner of fence | N 37 07 06.60 | W 088 47.53.82 | -1225 | 1064 | N/A |
| | | | | | Outfall 001 Posted Area. Power | | | | | |
| N/A | N/A | N/A | N/A | TLD-49 | pole North C-612 T1 | N 37 07 26.52 | W 088 49.04.92 | -7325 | 984 | N/A |
| | | | | | | | | | | |
| 07/11/2016 10:32 | | 12 (22 (22) | | | West Patrol Road fence across from | 1 | | | | l |
| 5405-647 1073 | JW | 10/10/2016 10:37 | | TLD-50 | 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 |
| 07/11/2016 08:43 | | 10/10/10010 | l | TI D | East Patrol Road fence across from | N 27 06 12 12 | | 4227 | 4.500 | 1,14 |
| 5406-648 | JW | 10/10/2016 8:26 | JW | TLD-52 | C-745-E. | N 37 06 42.18 | W 088 48.07.20 | -1397 | -1628 | N/A |

| | Т — | | | | Security fence at southeast corner | | | 1 | | |
|-----------------------------------|-----------------|--------------------|-----------------|----------------|-------------------------------------|------------------|-------------------|-------|---------|--------------|
| 07/12/2016 09:47 | | | | | of C-745-T Yard. Down fence line | | | | | |
| 5407-649 | Jw | 10/10/2016 12:26 | IW | TLD-53 | away from TLD-2. | N 37 06 00.42 | W 088 48.37.02 | -2220 | -6423 | N/A |
| 07/12/2016 06:00 | 1 | 10, 10, 2010 11.10 | 15 4 . | 1.22.00 | laway nom 125 2. | 14 37 00 00.12 | W 000 40.07.02 | -2220 | 1.0423 | 111/7 |
| 5408-650 | КА | 10/12/2016 7:00 | кд | TLD-54 | Residence; Jalusian Trail | N 57 87 72.16 | E 23 93 13.48 | 45296 | -25254 | N/A |
| 3400 030 | 100 | 10, 12, 2010 | 10-1 | 1122 31 | Residence, salasian Tran | 11 37 07 72.20 | L 23 33 13.70 | 43230 | -23234 | Discontinued |
| 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 | 7/10/2014 |
| 10/15 | 111// | IN/ C | IN/A | 1120 33 | C-410, 420 Office, 500 | N 33 10 07.33 | L 22 00 /4.03 | -3903 | -13/4 | //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 |
| 07/11/2016 08:34 | 1 | | <u> </u> | | | | | | | 1.7 |
| 5409-651 | JW | 10/10/2016 8:02 | WL | TLD-58 | West Central C-755 Complex | N 59 07 98.00 | E 22 88 70.74 | -1209 | -1422 | N/A |
| 07/12/2016 08:20 | | , ., | | | | | | | 1 | 1,4, |
| 5410-652 | JW | 10/11/2016 10:15 | JW | TLD-59 | C-752A Break Area | N 59 15 61.62 | E 22 78 55.79 | -5234 | -339 | N/A |
| 07/11/2016 15:02 | | | | - | C-333A Light Pole on Fence Pole | | | | + | 1.7 |
| 5411-653 | JW | 10/11/2016 9:17 | $I_{\rm JW}$ | TLD-60 | #16 | N 59 02 07.10 | E 22 80 71.62 | -2919 | -4199 | N/A |
| 07/11/2016 15:04 | + | ,, | | 1 | | | | | 1.20 | 14/7. |
| 5412-654 | WI | 10/11/2019 9:19 | I_{iw} | TLD-61 | West of C-746Q Light Pole #14 | N 59 01 58.14 | E 22 80 98.35 | -2778 | -4315 | N/A |
| 07/11/2016 15:20 | 1311 | 10,2-, | | | C-743 Trailer Complex Light Pole | 110000000 | 1 22 00 30.02 | 12770 | 1020 | 13/7 |
| 5413-655 | l _{JW} | 10/10/2016 15:37 | lıw | TLD-62 | #336,behind Trailer #3. | N 59 10 20.18 | E 22 73 49.81 | -6111 | -2607 | N/A |
| 07/11/2016 15:35 | + | 20, 20, 2020 | | | | 11 33 23 23.23 | | | | 111/7. |
| 5414-656 | JW | 10/11/2016 9:55 | I_{iw} | TLD-63 | C-412 HP Break Trailer | N 59 08 36.46 | E 22 79 46.95 | -4069 | -2435 | N/A |
| 07/11/2016 11:05 | + | 20/22/2020 | J | 1.22 00 | 0 1221// 27000 110/00 | 11 33 33 33 | 12273 10.33 | 1.005 | 12.55 | 14// |
| 5415-657 | JW | 10/10/2016 10:46 | I_{IW} | TLD-64 | C-764 T-6 Trailer | N 59 11 77.55 | E 22 70 88.88 | -7098 | -2447 | N/A |
| 3413-037 | | 10/10/2010 10 | 3 | 1120 01 | C-70-1 6 Haller | N 33 11 / / .33 | L 22 /0 00.00 | -7030 | 1-27-17 | 18/7 |
| | | | | | Located O/S of North Security fence | | | | | |
| 07/11/2016 09:26 | | | | | North of C-745H Cylinder Yard; | N 37 07 08.54386 | W 088 48 00.45376 | | | |
| 5416-658 1074 | JW | 10/10/2016 8:47 | / | TLD-65 | South of C-762 Laydown Yard | | | -1795 | 1062 | N/A |
| 3410-036 107-4 | 1700 | 10/10/2010 0 | 7 4 4 | I LD 03 | South of C-702 Edydown Tara | - | | -1/55 | 1002 | IN/A |
| | | | | | Located on tree @Southeast corner | | | | | |
| | | | | | of New Harmony Cemetery; | N 37 07 15.80859 | W 088 48 11.08836 | | | |
| 07/11/2016 09:05 | | | | | adjacent to last concrete barrier & | N 37 U/ 13.00033 | W 000 40 TT'00020 | | | |
| 5417-659 | Jw | 10/10/2016 8:33 | 11/4/ | TLD-66 | large metal post | | | -2856 | 1457 | N/A |
| 3417-039 | 1344 | 10/10/2010 0.55 | 3 00 | 112000 | Located on "No Trespassing" sign | | | -2000 | 1457 | 14/ 📉 |
| | | | | | North side of Dykes Rd next to | | | | | |
| 07/11/2016 09:02 | | | | | Security Fence North of C-762 | N 37 07 12.70502 | W 088 47 56.75697 | | | |
| 5418-660 | Jw. | 10/10/2016 8:32 | 111/ | TLD-67 | Laydown yard | | | -1658 | 1560 | N/A |
| 3418-000 | 11/1/ | 10/10/2010 0.32 | . J V V | ILD-07 | West Security Fence West of C- | <u> </u> | | -1020 | 1300 | IN/A |
| 07/11/2016 10:25 | | | | | 745B Cylinder Yard & Southeast of | N 37 07 11.60797 | W 088 49 11.43416 | | | |
| 07/11/2016 10:35 5419-661 1075 | JW | 10/10/2016 10:03 | 1,,, | TLD-68 | Vortec Site | N 3/ U/ 11.0U/3/ | W 088 49 11.45410 | -7302 | -617 | N/A |
| 5419-001 10/5 | 1100 | 10/10/2016 10:03 | JVV | 1120-08 | Vortec site | | | -/302 | -p1\ | IN/A |
| | | | } | | Wandan william polo (T12 15 H) | | Ì | | | |
| 27/44/2016 10:22 | | | | | Wooden utility pole (T12-15 H) | N 37 07 13.70394 | W 088 49 28.37928 | | | |
| 07/11/2016 10:23 | l, | 10/10/2016 0.56 | , | J C0 | next to gravel road @Northeast | | - | 0004 | 1 | N. / A |
| 5420-662 | JW | 10/10/2016 9:56 | JM | TLD-69 | corner of pond North of C-611 | | | -8664 | -888 | N/A |

Located on "Cattle" gate west of

MW 453 & MW 454 on gravel rd

Southeast corner of BWCS security

fence next to gate V1 East of New

Short wooden pole East of Dykes

east of New Waterline Rd

Waterline East of C1100

Rd North of Outfall 13

TLD-80

TLD-81

TLD-82

O/S of West Security Fence Southeast of C-333 midway

between C810 parking area &

O/S of West Security Fence of BWCS under security light,

Northeast of wooden utility pole

North BWCS Security Fence

TLD-70

N 37 06 27.82855

N 37 06 23.05971

N 37 07 47.29850

N 37 06 18.33947

N 37 06 10.13175

W 088 48 50.25203

W 088 48 59.65074

W 088 48 46.10944

W 088 48 56.42591

W 088 48 13.53048

-6612

-4314

-765

3477

-5262

-4851

-4173

-4189

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

07/11/2016 09:57

07/11/2016 09:54

07/11/2016 13:50

07/11/2016 09:51

07/11/2016 09:30

5432-674 1076

5433-675

JW

JW

JW

10/10/2016 14:15 JW

10/10/2016 9:16 JW

10/10/2016 8:58 JW

5431-673

JW

10/10/2016 9:26 JW

5421-663

| | | | | 1 | T | ı | | | | |
|------------------------------|------|-------------------|-------|----------|--|-------------------|-------------------|--------|--------|-------|
| 07/12/2016 08:05 | | 10/10/2015 10 10 | | T. D. 00 | Large metal power pole West of | N 37 06 07.30640 | W 088 48 20.71726 | | | |
| 5434-676 1077 | 1M | 10/10/2016 12:40 | JW | TLD-83 | Dykes Rd South of Outfall 13 | | | -1214 | -5319 | N/A |
| 07/11/2016 08:47 5435-677 | JW | 10/10/2016 9:20 | DA/ | TLD-84 | Located @MW496 on the East Side | N 37 07 03.50589 | W 088 47 49.26485 | 760 | 004 | 1,1/4 |
| 07/11/2016 12:00 | 1100 | 10/10/2016 8:30 | 100 | 11LD-84 | of Dykes Rd Residence; corner of Springwell and | - | | -769 | 894 | N/A |
| 5436-678 | so | 10/10/2016 16:30 | 50 | TLD-85 | Buckner Lane | N 37 03 27.9036 | W 088 40 43.9638 | 39082 | -7750 | N/A |
| 3430-076 | 130 | 10/10/2010 10.50 | 30 | 1110-85 | Plant Entrance, Gravel Construction | | VV 088 40 43.9638 | 39082 | -7/50 | IN/A |
| 07/11/2016 12:29 | j | } | | | Rd. Right side on orange warning | | | | | |
| 5437-679 | 1M | 10/12/2016 13:20 | 11/4/ | TLD-86 | signal sign | N 37° 5' 18.8622" | W 088 49 28.2282 | -4676 | -11794 | N/A |
| 3437-079 | 1100 | 10/12/2010 13.20 | JVV | ILD-80 | Signal Sign | N 37 3 16.6622 | VV 008 49 28.2282 | 1-40/0 | -11/94 | IN/A |
| | | | | | KOW Entrance north of Woodville | | | | | |
| 07/11/2016 14:47 | | | | | Rd north of Kevil Eagles. Right side | | | | | |
| 5438-680 | WL | 10/10/2016 15:11 | JW. | TLD-87 | on orange warning signal sign | N 37 05 24.2802 | W 088 50 43.9548 | -10629 | -13381 | N/A |
| | | 1 | | | Bethel Church Road KOW entrance. | | | | | |
| 07/11/2016 14:07 | | | | | North of Massay Rd, right side on | | | | | |
| 5439-681 | Jw. | 10/10/2016 14:41 | Jw | TLD-88 | yellow post | N 37 07 05.4876 | W 088 50 37.9608 | -13677 | -3597 | N/A |
| | | | | | | | | | | |
| | | | | | Bobo Rd, off of Bethel Church Rd. | | | | | |
| | ļ | | | | Continue east 200 yds past end of | | | 1 | | |
| 07/11/2016 14:04 | | | | | asphalt. At intersection on orange | | | | | |
| 5440-682 | JW | 10/10/2016 14:32 | JW | TLD-89 | warning signal sign | N 37 07 35.9976 | W 088 49 44.3922 | -10657 | 788 | N/A |
| | | | | | | | | | | |
| | | | | 1 | Bridge on Ogden Landing Rd east of | = | | | | |
| 07/11/2016 13:55 | | | İ | | Lamb's garage. On NE corner of | | | | | |
| 5441-683 | JW | 10/10/2016 14:26 | JW | TLD-90 | bridge on contaminated creek sign | N 37 08 54.6714 | W 088 47 27.2472 | -12310 | 7182 | N/A |
| | | | | | | | | | | |
| | | | | | Boldry School Rd on KOW at | | | | | |
| 07/11/2016 13:33 | | | | | Shawnee plant entrance. On cattle | | | | | |
| 5442-684 | JW | 10/10/2016 14:02 | JW | TLD-91 | gate road on hill, right side | N 37 08 40.9884 | W 088 49 36.5232 | -2952 | 12069 | N/A |
| | | | J | | Anderson Road off Metropolis Lake | | |) | | |
| | - | | | | Rd. follow West until road ends | | | | | |
| 07/11/2016 13:07 | | | | | @Railroad tracks. On left crossing | | | | | |
| 5443-685 | 1M | 10/10/2016 13:38 | N/A | TLD-92 | gate post. | N 37 07 42.7866 | W 088 46 17.1438 | 1392 | 8745 | N/A |
| | | | | | MW 100, North on Metropolis Lake | | | | | |
| 07/11/2016 12:59 | | | | | Rd past railroad tracks on left side | | | | | |
| 5444-686 | 1M | 10/10/2016 13:32 | JW | TLD-93 | on Well bollard | N 37 08 09.0744 | W 088 46 50.9304 | 4874 | 7186 | N/A |
| 07/11/001510 | | | | | | | | | 1 | |
| 07/11/2016 13:14 | | 10/10/10010 :- :- | | | Residence; corner of Ogden | | | | | |
| 5445-687 | JW | 10/10/2016 13:45 | 1M | TLD-94 | Landing Rd & Metropolis Lake Rd | N 37 05 48.9294 | W 088 47 12.4332 | 4740 | 436 | N/A |
| | | | | | West McCreeker Health Clini | | | | | |
| 07/44/2045 42 52 | | | | | West McCracken Health Clinic, | | | | | 1 |
| 07/11/2016 12:52 | | 40/40/2016 12 25 | | TI D 05 | Metropolis Lake Rd. On Light Pole | N 27 06 40 F462 | W 000 46 47 2672 | 4647 | 5467 | 1,1/2 |
| 5446-688 | JW | 10/10/2016 13:25 | lιM | TLD-95 | in SW corner of parking lot | N 37 06 40.5468 | W 088 46 47.2872 | 4617 | -5167 | N/A |

| | | | | | Taken along while placing and | | | | | |
|------------------|----|------------------|-----|--------|---------------------------------------|-----|------|-----|-----|-----|
| | | | | | collecting all other samples - stored | | | | | |
| 07/12/2016 10:00 | | | |] | in "lead box" at C-101 Dosimetry | | | | | |
| 5447-689 | JW | 10/11/2016 10:30 | JW | TLD-FB | office | N/A | N/A | NA | NA | N/A |
| 07/11/2016 07:00 | | | | | Stored in "lead box" at C-101 | | | | | |
| 5448-690 | JW | 10/10/2016 7:00 | JW | TLD-TB | Dosimetry office | N/A | N/A | NA | NA | N/A |
| 5449-691 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A_ | N/A | N/A | N/A |
| 5450-692 | 1M | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 5451-693 | ٦W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 5452-694 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 5453-695 | ٦W | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 5454-696 | 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 | Date/Time | Collected | Location | | | | | | |
|------------------|--------|---|-----------|----------|---|---------------|------------------|--------|--------------|----------|
| ssued/Badge ID | Ву | Collected | Ву | Name | Description | NorthLong | West or East Lat | Xcoord | Ycoord | Comments |
| | | | | 1 | | | | | | |
| | | | | | PGDP security fence west of C-745- | | | | | |
| | | | | | M near intersection of Patrol Road | | | | | |
| | | | | | and Alabama Avenue near pole 21- | | | | | |
| 10/10/2016 09:12 | | | | | 20. Outside fence behind UDS dirt | | | | | |
| 7450-625 | 1M | 1/9/2017 8:51 | JW | TLD-1 | pile | N 37 06 16.66 | W 088 48 55.18 | -4172 | -5856 | N/A |
| | | | | | PGDP security fence south of C-745- | | | | | |
| 10/10/2016 12:22 | | | | | T near pole T20-6J. South Cylinder | | | | | |
| 7451-626 1159 | JW | 1/9/2017 8:39 | Jw | TLD-2 | Yard perimeter fence | N 37 06 02.15 | W 088 48 43.07 | -2740 | -6427 | N/A |
| | | , | | | PGDP security fence east of C-745- | | | | | , |
| 10/10/2016 08:43 | | | | | H near pole 23-31. Perimeter fence | | | | | |
| 7452-627 1160 | JW | 1/9/2017 7:59 | JW | TLD-3 | NE corner | N 37 07 04.17 | W 088 47 57.21 | -1399 | 739 | N/A |
| | | | | | | | | | | |
| 10/10/2016 10:26 | | | | | North PGDP security fence near | | | | | |
| 7453-628 | JW | 1/9/2017 10:02 | JW | TLD-4 | North-South Diversion Ditch. | N 37 07 15.74 | W 088 48 25.56 | -3957 | 1052 | N/A |
| | | | | | North PGDP security fence north of | | | | | |
| | | | | | C-747-A near pole T53A1P26G. | | | | 1 | |
| 10/10/2016 10:22 | | | | | North perimeter fence between | İ | | | | |
| 7454-629 | JW | 1/9/2017 9:58 | JW | TLD-5 | lagoon | N 37 07 24.38 | W 088 48 54.58 | -6464 | 1068 | N/A |
| | | | | | West PGDP security fence west of C | | | | | |
| 10/10/2016 10:12 | | | | | 746-P1 near pole 22-4. 612 | | | | | |
| 7455-630 | JW | 1/9/2017 9:49 | JW | TLD-6 | perimeter fence. | N 37 07 20.85 | W 088 49 07.22 | -7303 | 382 | N/A |
| | | | | | | | | | | |
| | | | | | PGDP perimeter fence adjacent to | | | | | |
| 40/40/2046 00:22 |) | | | | Curlee Road near entrance to DOE | | | | | |
| 10/10/2016 09:32 | 1,147 | 1/0/2017 0:00 | 1047 | T. D. 7 | building (C-103). Perimeter fence | N 27 06 20 15 | W 000 40 03 40 | F452 | 1,100 | 1,1/0 |
| 7456-631 | JW | 1/9/2017 9:08 | 1100 | TLD-7 | | N 37 06 29.15 | W 088 49 02.49 | -5153 | -4400 | N/A |
| | | | | | Fence around U.S.G.S. stream | | | | | |
| | | | | | gauging station at Bayou Creek and | 1 | | ı | | |
| 21/4 | 1,1/2 |)/A | N1/A | TIDE | South Acid Road. USGS fence West | 1 | W 000 40 20 04 | C011 | 0001 | N. / A |
| N/A | N/A | N/A | N/A | TLD-8 | 57 Acid Rd. Northeast corner of fence of old | N 37 05 57.76 | W 088 49 28.04 | -6011 | -8091 | N/A |
| | | | | | | | | | | |
| 40/40/2045 44 50 | | | | | KOW water treatment plant, near | | | | | |
| 10/10/2016 14:59 | NA. | 1/0/2017 12 27 | , l , , , | TIDO | Monitoring Well 309. Gate to | N 27 06 27 12 | W 000 40 40 11 | 0001 | 4007 | N1/A |
| 7457-632 | 1M | 1/9/2017 12:07 | JVV | TLD-9 | MW305 | N 37 06 37.12 | W 088 49 48.11 | -8901 | -4907 | N/A |
| | | | | | Outfall 011 - hung from side of | | | | | |
| | | | | | outfall sampling platform at about | | | | | |
| 21/4 | l.,,- | 1.14 | | TID 10 | foot level, pole T19-15E. Gate | N 27 06 27 22 | W 000 40 00 FG | 600 | 2010 | 21/4 |
| N/A | N/A | N/A | N/A | TLD-10 | Outfall 011 | N 37 06 27.22 | W 088 48 03.56 | -602 | -2948 | N/A |

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|--|-----|----------------|-----|-------------|---|---------------|----------------|--------|-------|-----|
| 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 |
| 10/10/2016 13:49 | | | | | Institutional controls fence near Monitoring Well 191 where Little Bayou Creek crosses Hwy 358. | | | | | |
| 7458-633 | JW | 1/9/2017 11:14 | JW | TLD-12 | MW191, Little Bayou & Ogden Landing Rd. | N 37 06 49.62 | W 088 47 11.44 | 2588 | 626 | N/A |
| 10/10/2016 13:53 7459-634 | JW | 1/9/2017 11:18 | | 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 |
| 10/10/2016 08:37 7460-635 10/10/2016 08:04 | JW | 1/9/2017 7:53 | ٦w | 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 Northeast corner of C-755 fence | N 37 07 29.75 | W 088 48 10.58 | -3302 | 2798 | N/A |
| 7461-636 | JW | 1/9/2017 7:35 | JW | TLD-15 | behind C-755-D | N 37 06 45.01 | W 088 47 58.91 | -864 | -1129 | N/A |
| 10/10/2016 14:12 7462-637 | JW | 1/9/2017 11:38 | 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 | TID 10 | 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 @ | | | | | |
| N/A | N/A | N/A | N/A | TLD-18 | Tract 5 4-way Stop Big Bayou Creek south of Transport | N 37 08 22.09 | W 088 47 25.71 | -1702 | 9016 | N/A |
| 10/10/2016 14:51 7463-638 | ٦W | 1/9/2017 12:00 | JW | TLD-19 | Road BridgeLocated 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 |

| -8159 | -24497 | N/A |
|--------|-----------------------------|--------------------------------|
| .8159 | | |
| .8159 | | |
| .8150 | | |
| .8150 | 1 | |
| 2150 | 1 | |
| 0133 | -46801 | N/A |
| | | |
| | | |
| | | |
| 5667 | -4583 | N/A |
| | | |
| | | |
| N/A | N/A | N/A |
| | | |
| | | |
| -1401 | -6172 | N/A |
| | | |
| | | |
| 122314 | -15495 | N/A |
| | | |
| | | |
| | | |
| 4000 | 2421 | N/A |
| -4883 | -3431 | IN/A |
| | | |
| | | |
| l | | |
| | | |
| -10105 | 1884 | N/A |
| | 1 | 1.77 |
| | 1 | 1 |
| | | |
| N1 | /A 1401 22314 4883 | /A N/A 1401 -6172 22314 -15495 |

Clubhouse, placed at the back side rafter, inside the window on the overhang. Inside the bunker, south

of horse barn, west wall

Center of fence at north side of

Residence, Oaks Road, Paducah,

N 37 06 59.83

N 37 07 55.380

W 088 48 41.820

-6503

4306

N/A

W 088 49 36.29

-8788

-2421

N/A

water treatment plant

N/A

N/A

TLD-29

TLD-20

N/A

N/A

N/A

N/A

N/A

N/A

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|------------------------------|-----|----------------|-----|--------|---|----------------|-----------------|-------|-------|-----|
| 10/10/2016 14:07 7466-641 | JW | 1/9/2017 11:34 | 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 | | 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 | | 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 |
| 10/10/2016 09:29 7467-642 | JW | 1/9/2017 9:06 | 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 |
| 10/10/2016 10:09 7468-643 | ٦W | 1/9/2017 9:47 | ١W | TLD-37 | KPDES Outfall 001 behind Vortec facility. K001 | N 37 07 18.600 | W 088 49 15.660 | -8202 | 138 | N/A |

| | Ī | | | | | | | 1 | | |
|------------------|-------|----------------|-----------------|---------|--------------------------------------|-----------------|------------------|---------|----------|------|
| 10/10/2016 14:56 | | | | | Five-Points Creek with concrete | | | | | |
| 7469-644 | JW | 1/9/2017 12:04 | JW | TLD-38 | bridge, on tree behnd 2A sign. | N 37 06 43.320 | W 088 50 09.000 | -10630 | -4528 | N/A |
| | | | | | Outfall 10 off Dykes Road near C- | | | | | |
| N/A | N/A | N/A | N/A | TLD-39 | 755 complex. Outfall 010 | N 37 06 33.540 | W 088 48 00.900 | -612.5 | -2231.25 | N/A |
| | 111/7 | IV/A | IV/A | 1120-33 | 755 complex. Guttan G10 | 14 37 00 33.340 | VV 088 48 00.300 | 1-012.5 | -2231.23 | IN/A |
| | | | | | 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 | | | | | |
| 10/10/2016 09:03 | | | | | on left. Orange sign on blocked | | | | | |
| 7470-645 | 1M | 1/9/2017 8:13 | JW | TLD-40 | road, east of 57 off Dykes Rd. | N 37 05 52.200 | W 088 48 52.20 | -2818 | -7551 | N/A |
| | | | | | Acid Road near old monitoring well | | | | | |
| | | | | | past bridge. Acid Rd by COE | | | | | |
| N/A | N/A | N/A | N/A | TLD-41 | monitoring well. | N 37 06 07.800 | W 088 50 18.360 | -10116 | -6298 | N/A |
| | | | | | Ogden Landing Road, past landfill, | | | | | |
| | | | | | at Northeast Plume, on "No | | | | | |
| N/A | N/A | N/A | N/A | TLD-42 | Tresspassing" sign | N 37 06 55.380 | W 088 47 19.080 | -1219 | -1701 | N/A |
| | 1 | | | | Monitoring Well 98 on road past | | | | | |
| N/A | N/A | N/A | N/A | TLD-43 | landfill, in the trees | N 37 08 12.240 | W 088 47 50.700 | -3125 | -6568 | N/A |
| | | | | | Outside security fence west of | | | | | |
| | | | | | Lasagna site on the corner post of | | | | | |
| N/A | N/A | N/A | N/A | TLD-44 | posted area - southeast corner | N 37 07 08.880 | W 088 49 12.780 | -7337 | -1591 | N/A |
| | | | | | At C-743 trailer complex at walk-in | | | | | |
| N/A | N/A | N/A | N/A | TLD-45 | gate | N 37 06 45.900 | W 088 49 04.620 | -7337 | -474 | N/A |
| 10/10/2016 09:36 | | | | | | | | | | |
| 7471-646 | JW | 1/9/2017 9:12 | JW | TLD-46 | Truck entrance at receiving C-720 | N 37 06 44.700 | W 088 49 00.120 | -5198 | -2865 | NA |
| | | | 1 | | Tree line south of C-745-T Cylinder | | | | | 1 |
| | | | | | Storage Yard. First road on left on | | | | | |
| | | | | | Dykes Rd past 57. Last tree on right | : | | | | |
| N/A | N/A | N/A | N/A | TLD-47 | before clearing | N 37 06 00.300 | W 088 48.49.380 | -3156 | -6777 | N/A |
| | | | | | Tree line along the security fence | | | | | |
| | | | | | east of C-745-H. Gate 44 road, NE | | | | | |
| N/A | N/A | N/A | N/A | TLD-48 | corner of fence | N 37 07 06.60 | W 088 47.53.82 | -1225 | 1064 | N/A |
| *** | | | | | Outfall 001 Posted Area. Power | | | 70.55 | | 1 |
| N/A | N/A | N/A | N/A | TLD-49 | pole North C-612 T1 | N 37 07 26.52 | W 088 49.04.92 | -7325 | 984 | N/A |
| 10/10/2016 10:37 | | | | | West Patrol Road fence across from | | | | | |
| 7472-647 1161 | J.W | 1/9/2017 9:40 | l _{IW} | TLD-50 | 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 02.88 | W 088 49.13.68 | -7316 | -1112 | N/A |
| 10/10/2016 08:26 | 1 | | T | | East Patrol Road fence across from | | | 1 | | 1 |
| 7473-648 | JW | 1/9/2017 7:39 | JW | TLD-52 | C-745-E. | N 37 06 42.18 | W 088 48.07.20 | -1397 | -1628 | N/A |

| | T | | | 1 | Security fence at southeast corner | | | T | 1 | T |
|-----------------------------------|-----|----------------|-------|---------|---|-------------------|-------------------|-------|--------|--------------|
| 10/10/2016 12:26 | | | | | of C-745-T Yard. Down fence line | | | İ | | |
| 7474-649 | JW | 1/9/2017 8:40 | JW | TLD-53 | away from TLD-2. | N 37 06 00.42 | W 088 48.37.02 | -2220 | -6423 | N/A |
| .0/12/2016 07:00 | | | | | | | | | | |
| 475-650 | KA | 1/10/2017 6:30 | KA | TLD-54 | Residence; Jalusian Trail | N 57 87 72.16 | E 23 93 13.48 | 45296 | -25254 | N/A |
| | | | | | | | | | | Discontinued |
| 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 | 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 |
| I/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 |
| .0/10/2016 08:02 | | | | | | | | | | |
| 476-651 | JW | 1/9/2017 7:27 | JW | TLD-58 | West Central C-755 Complex | N 59 07 98.00 | E 22 88 70.74 | -1209 | -1422 | N/A |
| .0/11/2016 10:15 | | | | | | | | | | |
| 7477-652 | JW | 1/9/2017 14:46 | JW | TLD-59 | C-752A Break Area | N 59 15 61.62 | E 22 78 55.79 | -5234 | -339 | N/A |
| 10/11/2016 09:17 | | | | | C-333A Light Pole on Fence Pole | | | | | |
| 7478-653 | JW | 1/9/2017 13:42 | JW | TLD-60 | #16 | N 59 02 07.10 | E 22 80 71.62 | -2919 | -4199 | N/A |
| 10/11/2016 09:19 | | | | | | | | | | |
| 479-654 | JW | 1/9/2017 13:49 | JW | TLD-61 | West of C-746Q Light Pole #14 | N 59 01 58.14 | E 22 80 98.35 | -2778 | -4315 | N/A |
| .0/10/2016 15:37 | | | | | C-743 Trailer Complex Light Pole | - | | | | |
| 480-655 | JW | 1/9/2017 14:56 | JW | TLD-62 | #336,behind Trailer #3. | N 59 10 20.18 | E 22 73 49.81 | -6111 | -2607 | N/A |
| .0/11/2016 09:55 | | | | | | | | | | |
| 7481-656 | JW | 1/9/2017 14:00 | JW | TLD-63 | C-412 HP Break Trailer | N 59 08 36.46 | E 22 79 46.95 | -4069 | -2435 | N/A |
| 10/10/2016 10:46 | | | | | | | | | | |
| 7482-657 | JW | 1/9/2017 9:33 | JW | TLD-64 | C-764 T-6 Trailer | N 59 11 77.55 | E 22 70 88.88 | -7098 | -2447 | N/A |
| 10/10/2016 08:47 7483-658 1162 | ٦W | 1/9/2017 8:02 | ٦W | 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 |
| 10/10/2016 08:33 7484-659 | JW | 1/9/2017 7:49 | 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 |
| 10/10/2016 08:32 7485-660 | 1W | 1/9/2017 7:47 | 11/4/ | 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 |
| . 103 000 | 344 | 1/3/201/ 1.4/ | 300 | 1120-07 | West Security Fence West of C- | | | 1030 | 1300 | 137.7 |
| 10/10/2016 10:03 | | | | | · · | N 37 07 11.60797 | W 088 49 11.43416 | | | |
| 7486-661 1163 | JW | 1/9/2017 9:44 | NI | TLD-68 | Vortec Site | 1.5, 0, 11.00, 3, | 300 45 11.45410 | -7302 | -617 | N/A |
| 10/10/2016 09:56 7487-662 | 1W | 1/9/2017 9:23 | 3 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 |

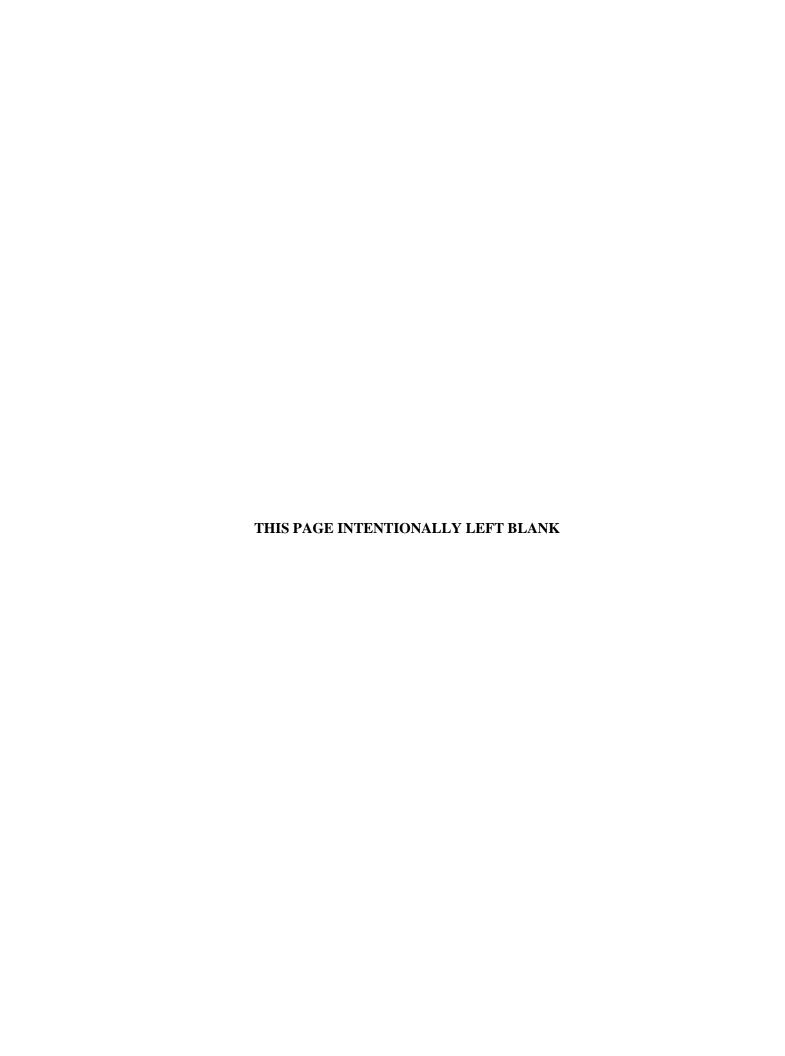
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| | 7 | | | 1 | To 10 5111 1 0 11 5 | | T | · r | 1 | |
|------------------------------|--|------------------|--|----------|---------------------------------------|------------------|--------------------|--------|--------|-------|
| | | | | | O/S of West Security Fence | | | | | |
| | | | | | Southeast of C-333 midway | N 37 06 27.82855 | W 088 48 50.25203 | 1 | | |
| 10/10/2016 09:26 | | | | | between C810 parking area & | | | | | |
| 7488-663 | JW | 1/9/2017 9:03 | JW | TLD-70 | North BWCS Security Fence | | | -4173 | -4189 | N/A |
| | | | | | O/S of West Security Fence of | | | | | |
| | | | | | BWCS under security light, | N 37 06 23.05971 | W 088 48 59.65074 | | | |
| 10/10/2016 09:22 | | | | | Northeast of wooden utility pole | N 37 06 23.05971 | W 088 48 59.65074 | ł | | |
| 7489-664 | Jw | 1/9/2017 8:58 | JW | TLD-71 | (11056 KU 78487) | | | -4723 | -4903 | N/A |
| | | | | | North Side of Air Monitoring | | | | | |
| 10/10/2016 09:06 | | | | | 1 | N 37 05 55.32798 | W 088 49 15.28582 | | | |
| 7490-665 | Jw | 1/9/2017 8:48 | 1\\\ | TLD-72 | 57 | | 1. 000 15 10120002 | -4952 | -7972 | N/A |
| 7430 003 | 1344 | 1/3/2017 0:10 | 3 * * | 1120 /2 | 3. | | | 1-1332 | + | 1.7/ |
| 10/10/2016 15:04 | | | | | Eastern "Railroad Crossing" sign | N 37 06 06.14205 | W 088 50 02.01070 | | | |
| | | 4 /0 /2017 12:12 | 11.47 | TI D 70 | | N 37 06 06.14203 | W 088 30 02.01070 | 0000 | 0241 | N/A |
| 7491-666 | JW | 1/9/2017 12:12 | JW | TLD-73 | @train tracks on Acid Road | | | -8883 | -8241 | N/A |
| | | | | | | | | | | |
| | | | | | Located on "Warning Siren" sign | N 37 05 10.96196 | W 088 48 53.61411 | 1 | | |
| 10/10/2016 12:57 | | | | | @turnoff North of Magruder & | | | | | |
| 7492-667 | JW | 1/9/2017 10:43 | JW | TLD-74 | Woodville intersection | | | -1765 | -11586 | .N/A |
| | | | | | Located on "Warning Siren" sign | | | | | |
| 10/10/2016 13:01 | | | | ļ | @North of Kelley Rd & Woodville | N 37 05 04.94525 | W 088 48 26.65157 | | | |
| 7493-668 | 1M | 1/9/2017 10:45 | JW | TLD-75 | Rd intersection | | | 496 | -11409 | N/A |
| | | | | | | | | | | |
| | | | | | Located on "Tract A" sign below | | | | | |
| | | | | | power lines southside of Kelley Rd | N 37 05 55.05466 | W 088 48 06.27328 | | | |
| 10/10/2016 13:14 | 1 | | | | in sharp curve between Woodville | | | | | |
| 7494-669 | JW | 1/9/2017 10:49 | 11/1/ | TLD-76 | & McCaw Rds | | | 310 | -6082 | N/A |
| 7 + 3 + 003 | | 1/3/2017 10:43 | 344 | 1120 70 | Located on "Warning Siren" sign | | | 1320 | 10002 | 1,7,7 |
| 10/10/2016 12:21 | | | | | North side of McCaw Rd east of | N 37 06 25.46598 | W 088 47 33.66599 | | | |
| 10/10/2016 13:21 7495-670 | JW | 1/9/2017 10:54 | 1114 | TLD-77 | Kelley Rd intersection | N 57 00 23.40396 | W 088 47 33.00333 | 1737 | -2287 | N/A |
| | 1344 | 1/9/2017 10.54 | 7 // | TLD-77 | Northeast Corner of C-746U Landfill | | | 1/3/ | -2207 | IN/A |
| 10/10/2016 13:56 | 1 | 4 /0 /2047 44 22 | | 71.0.70 | | N 37 07 54.00752 | W 088 47 37.45924 | 1,522 | 5000 | N1/A |
| 7496-671 | JW | 1/9/2017 11:22 | JW | TLD-78 | Security Fence | | | -1622 | 6020 | N/A |
| | | | | | | | | | | |
| | | ĺ | | | Located on left post of the "Wildlife | | | ĺ | | |
| | | | | | Management" gate on New | N 37 07 28.86304 | W 88 49 12.50003 | | | |
| 10/10/2016 10:19 | | | | | Waterline Rd Southwest of Plant | | | | | |
| 7497-672 | JW | 1/9/2017 9:55 | JW | TLD-79 | gate 41A west of C-612 | | | -7981 | 993 | N/A |
| | | | | | | | | | | |
| | | | | | Located on "Cattle" gate west of | N 07 07 47 00055 | W 000 40 45 4005 | 1 | | |
| 10/10/2016 14:15 | | | | | MW 453 & MW 454 on gravel rd | N 37 07 47.29850 | W 088 48 46.10944 | | | |
| 7498-673 | JW | 1/9/2017 11:41 | .l _{uw} | TLD-80 | east of New Waterline Rd | | | -6612 | 3477 | N/A |
| | | | | 1 | | | | T | + | |
| | | | | | Southeast corner of BWCS security | | | | | |
| 10/10/2016 09:16 | | | | | fence next to gate V1 East of New | N 37 06 18.33947 | W 088 48 56.42591 | 1 | | |
| 1 | Jw | 1/0/2017 0:55 | | TLD-81 | Waterline East of C1100 | | | -4314 | -5262 | N/A |
| 7499-674 1164 | JVV | 1/9/2017 8:55 | 1 | ILLIN-8T | | + | | 1-4514 | -5202 | IN/A |
| 10/10/2016 08:58 | | 4/0/2027 5 == | J | TI D 00 | Short wooden pole East of Dykes | N 37 06 10.13175 | W 088 48 13.53048 | 765 | 4074 | |
| 7500-675 | JW | 1/9/2017 8:08 | llnM | TLD-82 | Rd North of Outfall 13 | 1 | | -765 | -4851 | N/A |

| | · | | | | | T | 1 | | T | 1 |
|------------------|------|----------------|-------|--------|--------------------------------------|-------------------|-------------------|--------|--------|-------|
| 10/10/2016 12:40 | | | | | Large metal power pole West of | N 37 06 07.30640 | W 088 48 20.71726 | | | |
| 7501-676 1165 | JW | 1/9/2017 8:22 | JW | TLD-83 | Dykes Rd South of Outfall 13 | | | -1214 | -5319 | N/A |
| 10/10/2016 08:30 | | | | | Located @MW496 on the East Side | N 37 07 03.50589 | W 088 47 49.26485 | | | |
| 7502-677 | JW | 1/9/2017 7:42 | JM | TLD-84 | of Dykes Rd | | | -769 | 894 | N/A |
| 10/10/2016 16:30 | | | | | Residence; corner of Springwell and | 1 | | | | |
| 7503-678 | SO | 1/9/2017 16:30 | SO | TLD-85 | Buckner Lane | N 37 03 27.9036 | W 088 40 43.9638 | 39082 | -7750 | N/A |
| | | | | | Plant Entrance, Gravel Construction | | | | | |
| 10/12/2016 13:20 | | | | | Rd. Right side on orange warning | | | | | |
| 7504-679 | JW | 1/9/2017 10:40 | JW | TLD-86 | signal sign | N 37° 5' 18.8622" | W 088 49 28.2282 | -4676 | -11794 | N/A |
| | | | | | KOW Fireman and the factor of the | | | | | |
| 40/40/00464544 | | | | | KOW Entrance north of Woodville | | | | | |
| 10/10/2016 15:11 | l | 4/0/00474045 | l | | Rd north of Kevil Eagles. Right side | | | 10500 | 40004 | 1 |
| 7505-680 | 1M | 1/9/2017 12:16 | JW | TLD-87 | on orange warning signal sign | N 37 05 24.2802 | W 088 50 43.9548 | -10629 | -13381 | N/A |
| | | | | | Bethel Church Road KOW entrance. | | | | | 1 |
| 10/10/2016 14:41 | | | | | North of Massay Rd, right side on | | | | | 1. |
| 7506-681 | JW | 1/9/2017 11:54 | 1)W | TLD-88 | yellow post | N 37 07 05.4876 | W 088 50 37.9608 | -13677 | -3597 | N/A |
| | | | | | | | | | | |
| | | | | | Bobo Rd, off of Bethel Church Rd. | | | | | |
| | | | | | Continue east 200 yds past end of | | | | | |
| 10/10/2016 14:32 | | | l | | asphalt. At intersection on orange | | | | | |
| 7507-682 | JW | 1/9/2017 11:50 | JW | TLD-89 | warning signal sign | N 37 07 35.9976 | W 088 49 44.3922 | -10657 | 788 | N/A |
| | | | | | | | | | | |
| , , | | | | | Bridge on Ogden Landing Rd east of | | | | | |
| 10/10/2016 14:26 | | | | | Lamb's garage. On NE corner of | | | | | |
| 7508-683 | JW | 1/9/2017 11:46 | JW | TLD-90 | bridge on contaminated creek sign | N 37 08 54.6/14 | W 088 47 27.2472 | -12310 | 7182 | N/A |
| | | | | | | | | | | |
| , , | | | | | Boldry School Rd on KOW at | | | | | |
| 10/10/2016 14:02 | | . /2 /22 | l | | Shawnee plant entrance. On cattle | | | | | |
| 7509-684 | JW | 1/9/2017 11:31 | JW | TLD-91 | gate road on hill, right side | N 37 08 40.9884 | W 088 49 36.5232 | -2952 | 12069 | N/A |
| | | | | | Anderson Road off Metropolis Lake | | | | | |
| | | | | | Rd. follow West until road ends | | | | | |
| 10/10/2016 13:38 | | | | | @Railroad tracks. On left crossing | | | | | |
| 7510-685 | JW | 1/9/2017 11:03 | N/A | TLD-92 | gate post. | N 37 07 42.7866 | W 088 46 17.1438 | 1392 | 8745 | N/A |
| | | | | | MW 100, North on Metropolis Lake | | | | | |
| 10/10/2016 13:32 | | | | | Rd past railroad tracks on left side | | | | | |
| 7511-686 | JW | 1/9/2017 11:02 | JW | TLD-93 | on Well bollard | N 37 08 09.0744 | W 088 46 50.9304 | 4874 | 7186 | N/A |
| 10/10/2015 12:45 | | | | | Posidones, corner of Order | | | | | |
| 10/10/2016 13:45 | ,,,, | 1/0/2017 11 12 | | TIP OF | Residence; corner of Ogden | N 27 OF 40 0204 | W 000 47 12 1222 | 4740 | 126 | NI/A |
| 7512-687 | JW | 1/9/2017 11:12 | , INM | TLD-94 | Landing Rd & Metropolis Lake Rd | N 37 05 48.9294 | W 088 47 12.4332 | 4740 | 436 | N/A |
| | | | | | West McCracken Health Clinic, | | | | | |
| 10/10/2016 12:25 | | | | | l l | | | | | |
| 10/10/2016 13:25 | | 1/0/2017 10:55 | , ,,, | TID 05 | Metropolis Lake Rd. On Light Pole | N 27 06 40 F469 | W 000 4C 47 2072 | 1617 | F167 | INI/A |
| 7513-688 | JW | 1/9/2017 10:57 | 7144 | TLD-95 | in SW corner of parking lot | N 37 06 40.5468 | W 088 46 47.2872 | 4617 | -5167 | N/A |

| | | | | | Taken along while placing and | | | | | |
|------------------|----|----------------|-----|--------|---------------------------------------|-----|-----|-----|-----|-----|
| | | | | | collecting all other samples - stored | | | | | |
| 10/11/2016 10:30 | | | | | in "lead box" at C-101 Dosimetry | | | | | 1 |
| 7514-689 | JW | 1/9/2017 16:00 | JW | TLD-FB | office | N/A | N/A | NA | NA | N/A |
| 10/10/2016 07:00 | | | | | Stored in "lead box" at C-101 | | | | | |
| 7515-690 | JW | 1/9/2017 7:00 | JW | TLD-TB | Dosimetry office | N/A | N/A | NA | NA | N/A |
| 7516-691 | 1M | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 7517-692 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 7518-693 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 7519-694 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 7520-695 | JW | N/A | N/A | SPARE | Lead Box in C-101 Dosimetry office | N/A | N/A | N/A | N/A | N/A |
| 7521-696 | 1M | 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



| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 1/1/2016 | |
| Process | 0229838 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| | CONTROL | 12 |
| | CONTROL | 12 |
| 625 | ENVIRONMENTAL | 11 |
| 626 | ENVIRONMENTAL | 13 |
| 627 | ENVIRONMENTAL | 199 ` |
| 628 | ENVIRONMENTAL | 252 |
| 629 | ENVIRONMENTAL | 18 |
| 630 | ENVIRONMENTAL | 19 |
| 631 | ENVIRONMENTAL | 22 |
| 632 | ENVIRONMENTAL | 19 |
| 633 | ENVIRONMENTAL | 23 |
| 634 | ENVIRONMENTAL | 16 |
| 635 | ENVIRONMENTAL | 16 |
| 636 | ENVIRONMENTAL | 22 |
| 637 | ENVIRONMENTAL | 19 |
| 638 | ENVIRONMENTAL | 16 |
| 639 | ENVIRONMENTAL | 22 |
| 640 | ENVIRONMENTAL | 19 |
| 641 | ENVIRONMENTAL | 19 |
| 642 | ENVIRONMENTAL | 24 |
| 643 | ENVIRONMENTAL | 18 |
| 644 | ENVIRONMENTAL | 23 |
| 645 | ENVIRONMENTAL | 19 |

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

Page 1 of 4

| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 1/1/2016 | |
| Process | 0229838 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 646 | ENVIRONMENTAL | 19 |
| 647 | ENVIRONMENTAL | 24 |
| 648 | ENVIRONMENTAL | 40 |
| 649 | ENVIRONMENTAL | 18 |
| 650 | ENVIRONMENTAL | 17 |
| 651 | ENVIRONMENTAL | 97 |
| 652 | ENVIRONMENTAL | 22 |
| 653 | ENVIRONMENTAL | 15 |
| 654 | ENVIRONMENTAL | 15 |
| 655 | ENVIRONMENTAL | 289 |
| 656 | ENVIRONMENTAL | 666 |
| 657 | ENVIRONMENTAL | 16 |
| 658 | ENVIRONMENTAL | 14 |
| 659 | ENVIRONMENTAL | 16 |
| 660 | ENVIRONMENTAL | 17 |
| 661 | ENVIRONMENTAL | 18 |
| 662 | ENVIRONMENTAL | 18 |
| 663 | ENVIRONMENTAL | 19 |
| 664 | ENVIRONMENTAL | 16 |
| 665 | ENVIRONMENTAL | 36 |
| 666 | ENVIRONMENTAL | 24 |
| 667 | ENVIRONMENTAL | 20 |
| 668 | ENVIRONMENTAL | 17 |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 1/1/2016 | |
| Process | 0229838 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 669 | ENVIRONMENTAL | 20 |
| 670 | ENVIRONMENTAL | 20 . |
| 671 | ENVIRONMENTAL | 21 |
| 672 | ENVIRONMENTAL | 21 |
| 673 | ENVIRONMENTAL | 22 |
| 674 | ENVIRONMENTAL | 17 |
| 675 | ENVIRONMENTAL | 17 |
| 676 | ENVIRONMENTAL | 108 |
| 677 | ENVIRONMENTAL | 25 |
| 678 | ENVIRONMENTAL | 55 |
| 679 | ENVIRONMENTAL | 17 |
| 680 | ENVIRONMENTAL | 19 |
| 681 | ENVIRONMENTAL | 18 |
| 682 | ENVIRONMENTAL | 18 |
| 683 | ENVIRONMENTAL | 18 |
| 684 | ENVIRONMENTAL | 19 |
| 685 | ENVIRONMENTAL | 20 |
| 686 | ENVIRONMENTAL | 19 |
| 688 | ENVIRONMENTAL | 22 |
| 689 | ENVIRONMENTAL | 20 |
| 690 | ENVIRONMENTAL | 20 |
| 691 | ENVIRONMENTAL | 12 |
| 692 | ENVIRONMENTAL | 12 |

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

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| | | - |
|--------------------------|----------|------------------------------|
| Account | 98365 | PADUCAH REMEDIATION SERVICES |
| Location | 00000LAT | |
| Monitoring Period | 1/1/2016 | |
| Process | 0229838 | |
| | • | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 693 | ENVIRONMENTAL | 11 |
| 694 | ENVIRONMENTAL | 11 |
| 695 | ENVIRONMENTAL | 11 |
| 696 | ENVIRONMENTAL | 11 |

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

| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 4/1/2016 | |
| Process | 0230937 | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| | CONTROL | 14 |
| | CONTROL | 15 |
| 625 | ENVIRONMENTAL | 187 |
| 626 | ENVIRONMENTAL | 252 |
| 627 | ENVIRONMENTAL | 20 |
| 628 | ENVIRONMENTAL | 20 |
| 629 | ENVIRONMENTAL | 22 |
| 630 | ENVIRONMENTAL | 18 |
| 631 | ENVIRONMENTAL | 24 |
| 632 | ENVIRONMENTAL | 19 |
| 633 | ENVIRONMENTAL | 18 |
| 634 | ENVIRONMENTAL | 22 |
| 635 | ENVIRONMENTAL | 21 |
| 636 | ENVIRONMENTAL | 17 |
| 637 | ENVIRONMENTAL | 23 |
| 638 | ENVIRONMENTAL | 25 |
| 639 | ENVIRONMENTAL | 21 |
| 640 | ENVIRONMENTAL | 27 |
| 641 | ENVIRONMENTAL | 23 |
| 642 | ENVIRONMENTAL | 27 |
| 643 | ENVIRONMENTAL | 23 |
| 644 | ENVIRONMENTAL | 22 |
| 645 | ENVIRONMENTAL | 27 |

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

Page 1 of 4

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

| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 4/1/2016 | |
| Process | 0230937 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 646 | ENVIRONMENTAL | 19 |
| 647 | ENVIRONMENTAL | 43 |
| 648 | ENVIRONMENTAL | 18 |
| 649 | ENVIRONMENTAL | 98 |
| 650 | ENVIRONMENTAL | 24 |
| 651 | ENVIRONMENTAL | 17 |
| 652 | ENVIRONMENTAL | 17 |
| 653 | ENVIRONMENTAL | 327 |
| 654 | ENVIRONMENTAL | 691 |
| 655 | ENVIRONMENTAL | 16 |
| 656 | ENVIRONMENTAL | 18 |
| 657 | ENVIRONMENTAL | 18 |
| 658 | ENVIRONMENTAL | 18 |
| 659 | ENVIRONMENTAL | 21 |
| 660 | ENVIRONMENTAL | 22 |
| 661 | ENVIRONMENTAL | 21 |
| 662 | ENVIRONMENTAL | 16 |
| 663 | ENVIRONMENTAL | 36 |
| 664 | ENVIRONMENTAL | 26 |
| 665 | ENVIRONMENTAL | 22 |
| 666 | ENVIRONMENTAL | 19 |
| 667 | ENVIRONMENTAL | 24 |
| 668 | ENVIRONMENTAL | 24 |

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

Page 2 of 4

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

| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 4/1/2016 | · |
| Process | 0230937 | |
| | | |

| Badge Number | Name. | Exposure mR* |
|--------------|---------------|--------------|
| 669 | ENVIRONMENTAL | 21 |
| 670 | ENVIRONMENTAL | 22 |
| 671 | ENVIRONMENTAL | 23 |
| 672 | ENVIRONMENTAL | 18 |
| 673 | ENVIRONMENTAL | 20 |
| 674 | ENVIRONMENTAL | 75 |
| 675 | ENVIRONMENTAL | 28 |
| 676 | ENVIRONMENTAL | 61 |
| 677 | ENVIRONMENTAL | 18 |
| 678 | ENVIRONMENTAL | 20 |
| 679 | ENVIRONMENTAL | 20 |
| 680 | ENVIRONMENTAL | 22 |
| 681 | ENVIRONMENTAL | 21 |
| 682 | ENVIRONMENTAL | 21 |
| 683 | ENVIRONMENTAL | 24 |
| 684 | ENVIRONMENTAL | 22 |
| 685 | ENVIRONMENTAL | 24 |
| 686 | ENVIRONMENTAL | 21 |
| 687 | ENVIRONMENTAL | 23 |
| 688 | ENVIRONMENTAL | 25 |
| 689 | ENVIRONMENTAL | 15 |
| 690 | ENVIRONMENTAL | 14 |
| 691 | ENVIRONMENTAL | 14 |

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

Page 3 of 4

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

| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 4/1/2016 | |
| Process | 0230937 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 692 | ENVIRONMENTAL | 14 |
| 693 | ENVIRONMENTAL | 1.5 |
| 694 | ENVIRONMENTAL | 14 |
| 695 | ENVIRONMENTAL | 14 |
| 696 | ENVIRONMENTAL | 14 |

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^{*-} 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.



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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 7/1/2016 | |
| Process | 0232156 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| | CONTROL | 13 |
| | CONTROL | 13 |
| 625 | ENVIRONMENTAL | 213 |
| 626 | ENVIRONMENTAL | 254 |
| 627 | ENVIRONMENTAL | 20 |
| 628 | ENVIRONMENTAL | 19 |
| 629 | ENVIRONMENTAL | 20 |
| 630 | ENVIRONMENTAL | 16 |
| 631 | ENVIRONMENTAL | 25 |
| 632 | ENVIRONMENTAL | 18 |
| 633 | ENVIRONMENTAL | 17 |
| 634 | ENVIRONMENTAL | 20 |
| 635 | ENVIRONMENTAL | 17 |
| 636 | ENVIRONMENTAL | 16 |
| 637 | ENVIRONMENTAL | 24 |
| 638 | ENVIRONMENTAL | 23 |
| 639 | ENVIRONMENTAL | 19 |
| 640 | ENVIRONMENTAL | 30 |
| 641 | ENVIRONMENTAL | 19 |
| 642 | ENVIRONMENTAL | 23 |
| 643 | ENVIRONMENTAL | 19 |
| 644 | ENVIRONMENTAL | 23 |
| 645 | ENVIRONMENTAL | 22 |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 7/1/2016 | |
| Process | 0232156 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 646 | ENVIRONMENTAL | 18 |
| 647 | ENVIRONMENTAL | 43 |
| 648 | ENVIRONMENTAL | 17 |
| 649 | ENVIRONMENTAL | 102 |
| 650 | ENVIRONMENTAL | 20 |
| 651 | ENVIRONMENTAL | 15 |
| 652 | ENVIRONMENTAL | 17 |
| 653 | ENVIRONMENTAL | 317 |
| 654 | ENVIRONMENTAL | 718 |
| 655 | ENVIRONMENTAL | 16 |
| 656 | ENVIRONMENTAL | 16 |
| 657 | ENVIRONMENTAL | 18 |
| 658 | ENVIRONMENTAL | 16 |
| 659 | ENVIRONMENTAL | 22 |
| 660 | ENVIRONMENTAL | 20 |
| 661 | ENVIRONMENTAL | 19 |
| 662 | ENVIRONMENTAL | 17 |
| 663 | ENVIRONMENTAL | 41 |
| 664 | ENVIRONMENTAL | 24 |
| 665 | ENVIRONMENTAL | 21 |
| 666 | ENVIRONMENTAL | 17 |
| 667 | ENVIRONMENTAL | 22 |
| 668 | ENVIRONMENTAL | 19 |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES ` |
|--------------------------|----------|--------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 7/1/2016 | |
| Process | 0232156 | |
| | | |

| Badge Number | Name | Exposure mR* |
|------------------|---------------|--------------|
| 669 | ENVIRONMENTAL | 19 |
| 670 | ENVIRONMENTAL | ·19 |
| 671 _. | ENVIRONMENTAL | 22 |
| 672 | ENVIRONMENTAL | 18 |
| 673 | ENVIRONMENTAL | 19 |
| 674 | ENVIRONMENTAL | 68 |
| 675 | ENVIRONMENTAL | 25 |
| 676 | ENVIRONMENTAL | 49 |
| 677 | ENVIRONMENTAL | 16 |
| 678 | ENVIRONMENTAL | 17 |
| 679 | ENVIRONMENTAL | 21 |
| 680 | ENVIRONMENTAL | 20 |
| 681 | ENVIRONMENTAL | 21 |
| 682 | ENVIRONMENTAL | 22 |
| 683 | ENVIRONMENTAL | 23 |
| 684 | ENVIRONMENTAL | 21 |
| 685 | ENVIRONMENTAL | 21 |
| 686 | ENVIRONMENTAL | 18 |
| 687 | ENVIRONMENTAL | 19 |
| 688 | ENVIRONMENTAL | 18 |
| 689 | ENVIRONMENTAL | 13 |
| 690 | ENVIRONMENTAL | 13 |
| 691 | ENVIRONMENTAL | 13 |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 7/1/2016 | |
| Process | 0232156 | |
| | | • |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| 692 | ENVIRONMENTAL | 12 |
| 693 | ENVIRONMENTAL | 12 |
| 694 | ENVIRONMENTAL | 14 |
| 695 | ENVIRONMENTAL | 14 |
| 696 | ENVIRONMENTAL | 12 |

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



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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|-----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 10/1/2016 | |
| Process | 0233244 | |
| | | |

| Badge Number | Name | Exposure mR* |
|--------------|---------------|--------------|
| | CONTROL | 15 |
| | CONTROL | 16 |
| 625 | ENVIRONMENTAL | 217 |
| 626 | ENVIRONMENTAL | 300 |
| 627 | ENVIRONMENTAL | 26 |
| 628 | ENVIRONMENTAL | 23 |
| 629 | ENVIRONMENTAL | 24 |
| 630 | ENVIRONMENTAL | 22 |
| 631 | ENVIRONMENTAL | 30 |
| 632 | ENVIRONMENTAL | 22 |
| 633 | ENVIRONMENTAL | 21 |
| 634 | ENVIRONMENTAL | 25 |
| 635 | ENVIRONMENTAL | 21 |
| 636 | ENVIRONMENTAL | 21 |
| 637 | ENVIRONMENTAL | 25 |
| 638 | ENVIRONMENTAL | 24 |
| 639 | ENVIRONMENTAL | 26 |
| 640 | ENVIRONMENTAL | 32 |
| 641 | ENVIRONMENTAL | 22 |
| 642 | ENVIRONMENTAL | 22 |
| 643 | ENVIRONMENTAL | 24 |
| 644 | ENVIRONMENTAL | 22 |
| 645 | ENVIRONMENTAL | 31 |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|-------------------|-----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 10/1/2016 | |
| Process | 0233244 | |
| | | |

| Name | Exposure mR* |
|---------------|---|
| ENVIRONMENTAL | 21 |
| ENVIRONMENTAL | 50 |
| ENVIRONMENTAL | 20 |
| ENVIRONMENTAL | 117 |
| ENVIRONMENTAL | 27 |
| ENVIRONMENTAL | 19 |
| ENVIRONMENTAL | 19 |
| ENVIRONMENTAL | 343 |
| ENVIRONMENTAL | 737 |
| ENVIRONMENTAL | 20 |
| ENVIRONMENTAL | 18 |
| ENVIRONMENTAL | 18 |
| ENVIRONMENTAL | 19 |
| ENVIRONMENTAL | 22 |
| ENVIRONMENTAL | 24 |
| ENVIRONMENTAL | 26 |
| ENVIRONMENTAL | 22 |
| ENVIRONMENTAL | 46 |
| ENVIRONMENTAL | 30 |
| ENVIRONMENTAL | 20 |
| ENVIRONMENTAL | 21 |
| ENVIRONMENTAL | 28 |
| ENVIRONMENTAL | 24 |
| | ENVIRONMENTAL |

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

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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|-----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 10/1/2016 | |
| Process | 0233244 | |
| · | | |

| Badge Number | Name Name | Exposure mR* |
|--------------|---------------|--------------|
| 669 | ENVIRONMENTAL | 23 |
| 670 | ENVIRONMENTAL | 23 |
| 671 | ENVIRONMENTAL | 26 |
| 672 | ENVIRONMENTAL | 21 |
| 673 | ENVIRONMENTAL | 22 |
| 674 | ENVIRONMENTAL | 84 |
| 675 | ENVIRONMENTAL | 26 |
| 676 | ENVIRONMENTAL | 56 |
| 677 | ENVIRONMENTAL | 21 |
| 678 | ENVIRONMENTAL | 22 |
| 679 | ENVIRONMENTAL | 23 |
| 680 | ENVIRONMENTAL | 21 |
| 681 | ENVIRONMENTAL | 22 |
| 682 | ENVIRONMENTAL | 23 |
| 683 | ENVIRONMENTAL | 25 |
| 684 | ENVIRONMENTAL | 23 |
| 685 | ENVIRONMENTAL | 24 |
| 686 | ENVIRONMENTAL | 24 |
| 687 | ENVIRONMENTAL | 24 |
| 688 | ENVIRONMENTAL | 23 |
| 689 | ENVIRONMENTAL | 14 |
| 690 | ENVIRONMENTAL | 14 |
| 691 | ENVIRONMENTAL | 14 |

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

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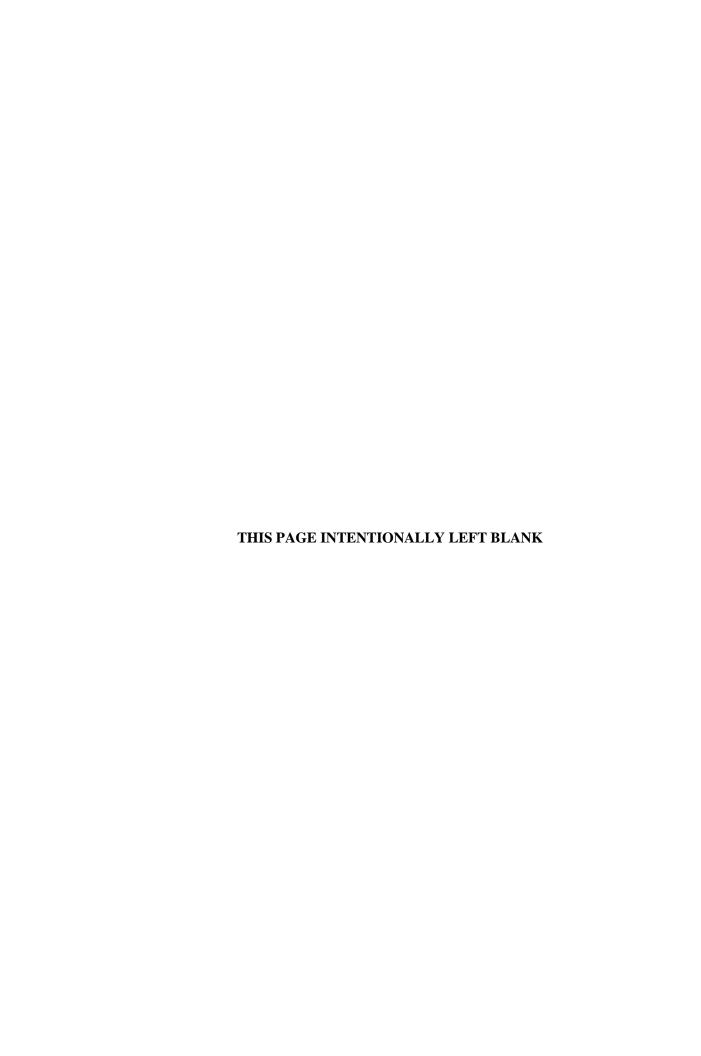
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| Account | 98365 | PADUCAH REMEDIATION SERVICES |
|--------------------------|-----------|------------------------------|
| Location | 00000LAT | |
| Monitoring Period | 10/1/2016 | |
| Process | 0233244 | |
| | | |

| Badge Number | Name: | Exposure mR* |
|--------------|---------------|--------------|
| 692 | ENVIRONMENTAL | 14 |
| 693 | ENVIRONMENTAL | 17. |
| 694 | ENVIRONMENTAL | 14 |
| 695 | ENVIRONMENTAL | 15 |
| 696 | ENVIRONMENTAL | 13 |

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

APPENDIX D ENVIRONMENTAL TLD DATA



| | I | | Quarter 1 | 1 | | | | Quai | ter 2 | | | | Q | uarter 3 | | | | | | Quarter 4 | | | | | | | | | |
|------------------|-------------------------|----------------------------------|-----------|-------------------------------|-------------------------------------|------------------------|----------------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-----------|--------------------------|---------------|--------------------------|-------------------------------------|------------------------|--------------------------|----------|--------------|-----------------------------|----------------------------------|---------------------------------------|------------|---------------------------------------|--|----------------------------|---------------------------|--|
| TLD Number | TLD Location Number | Start En | nd Exposu | re Days Effective Does (mrem) | Normalized Effective Dose/day | TLD Location Number | Start | End Exp | osure Days Effective Does (mrem) | Normalized Effective Dose/day | TLD Location Number | Start | End I | exposure Days | Effective Does (mrem) | Normalized Effective Dose/day | TLD Location Number | Start | End | Exposure Day | Effective Does ys (mrem) | Normalized Effective Dose/day | Total Monitored Effecitve Dose (mrem) | | e Annualized Effective Dose (mrem) | Net Annualized Effective Does (mrem) | Net Annualized mrem/day | Net Annualized mrem/hr | Comments |
| 1 | 1 | 1/6/2016 4/5/2 | 2016 9 | 90 199 | 2.21 | 1 | 4/5/2016 | 7/11/2016 | 97 187 | 1.93 | 1 | 7/11/2016 | 10/10/2016 | 91 | 213 | 2.34 | 1 | 10/10/2016 | 1/9/2017 | 91 | 217 | 2.38 | 816 | 369 | 807 | 722 | 1.979 | 0.082 | |
| 2 | 2 | 1/6/2016 4/5/2 | | 90 252 | 2.80 | 2 | 4/5/2016 | | 98 252 | 2.57 | 2 | | 10/10/2016 | 90 | 254 | 2.82 | 2 | 10/10/2016 | | 91 | 300 | 3.30 | 1058 | 369 | 1047 | 962 | 2.634 | 0.110 | |
| 3 4 | 3 4 | 1/6/2016 4/5/2 1/7/2016 4/5/2 | | 90 18 39 19 | 0.20 | 3 | 4/5/2016 4/5/2016 | | 97 20 97 20 | 0.21 | 3 4 | | 10/10/2016 | 91 91 | 20 19 | 0.22 | 3 | 10/10/2016 10/10/2016 | | 91 91 | 26 | 0.29 | 84 81 | 369 368 | 83 80 | -2 -5 | -0.005 -0.013 | 0.000 -0.001 | |
| 5 | 5 | 1/7/2016 4/5/2 | | | 0.25 | 5 | 4/5/2016 | | 97 22 | 0.23 | 5 | | 10/10/2016 | 91 | 20 | 0.22 | 5 | 10/10/2016 | | 91 | 24 | 0.26 | 88 | 368 | 87 | 2 | 0.006 | 0.000 | |
| 6 | 6 | 1/6/2016 4/5/2 | | | 0.21 | 6 | 4/5/2016 | | 97 18 | 0.19 | 6 | | 10/10/2016 | 91 | 16 | 0.18 | 6 | 10/10/2016 | | 91 | 22 | 0.24 | 75 | 369 | 74 | -11 | -0.030 | -0.001 | |
| 7 8 | 7 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 23 90 16 | 0.26 | 9 | 4/5/2016 4/5/2016 | | 97 24 97 19 | 0.25 | 7 | | 10/10/2016 | 91 | 25 18 | 0.27 | 7 9 | 10/10/2016 | | 91 91 | 30 | 0.33 | 102 75 | 369 369 | 74 | -11 | -0.030 | -0.002 | |
| 9 | 12 | 1/6/2016 4/5/2 | | 90 16 | 0.18 | 12 | 4/5/2016 | | 97 18 | 0.19 | 12 | | 10/10/2016 | 91 | 17 | 0.19 | 12 | 10/10/2016 | | 91 | 21 | 0.23 | 72 | 369 | 71 | -14 | -0.038 | -0.002 | |
| 10 | 13 | 1/6/2016 4/5/2 | | 90 22 | 0.24 | 13 | 4/5/2016 | | 97 22 | 0.23 | 13 | | 10/10/2016 | 91 | 20 | 0.22 | 13 | 10/10/2016 | | 91 | 25 | 0.27 | 89 | 369 | 88 | 3 | 0.008 | 0.000 | |
| 11 | 14 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | | 0.21 0.18 | 14 | 4/5/2016 4/5/2016 | | 97 21 97 17 | 0.22 | 14 15 | | 10/10/2016 | 91 | 17 16 | 0.19 | 14 15 | 10/10/2016 | | 91 91 | 21 | 0.23 | 78 | 369 369 | 77 69 | -8 -16 | -0.021 -0.043 | -0.001 -0.002 | |
| 13 | 16 | 1/6/2016 4/5/2 | 2016 9 | 90 22 | 0.24 | 16 | 4/5/2016 | 7/11/2016 | 97 23 | 0.24 | 16 | 7/11/2016 | 10/10/2016 | 91 | 24 | 0.26 | 16 | 10/10/2016 | 1/9/2017 | 91 | 25 | 0.27 | 94 | 369 | 93 | 8 | 0.022 | 0.001 | |
| 14 15 | 19 | 1/6/2016 4/5/2 | | 90 19 | 0.21 | 19 | 4/5/2016 4/5/2016 | | 97 25 97 21 | 0.26 | 19 | | 10/10/2016 | 91 | 23 19 | 0.25 | 19 | 10/10/2016 | | 91 91 | 24 | 0.26 | 91 85 | 369 368 | 90 84 | 5 | 0.014 | 0.001 | |
| 16 | 25 | 1/7/2016 4/5/2 1/6/2016 4/5/2 | | | 0.25 | 22 | 4/5/2016 | | 97 21 97 27 | 0.22 | 22 25 | | 10/10/2016 | 91 91 | 30 | 0.21 | 22 25 | 10/10/2016 | | 91 | 32 | 0.29 | 113 | 369 | 112 | 27 | -0.002 0.073 | 0.000 | |
| 17 | 30 | 1/6/2016 4/5/2 | | 90 18 | 0.20 | 30 | 4/5/2016 | | 97 23 | 0.24 | 30 | | 10/10/2016 | 91 | 19 | 0.22 | 30 | 10/10/2016 | | 91 | 22 | 0.24 | 82 | 369 | 81 | -4 | -0.011 | 0.000 | |
| 18 | 35 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 23 90 19 | 0.26 | 35 | 4/5/2016 | | 97 27 97 23 | 0.28 | 35 37 | | 10/10/2016 | 91 | 23 19 | 0.25 | 35 37 | 10/10/2016 | | 91 91 | 22 | 0.24 | 95 85 | 369 369 | 94 | 9 | 0.025 -0.003 | 0.001 | |
| 20 | 38 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | | 0.21 | 38 | 4/5/2016 4/5/2016 | | 97 22 | 0.23 | 38 | | 10/10/2016 | 91 | 23 | 0.21 | 38 | 10/10/2016 | | 91 | 22 | 0.24 | 86 | 369 | 85 | 0 | 0.000 | 0.000 | |
| 21 | 40 | 1/6/2016 4/5/2 | 2016 9 | | 0.27 | 40 | 4/5/2016 | 7/11/2016 | 97 27 | 0.28 | 40 | 7/11/2016 | 10/10/2016 | 91 | 22 | 0.24 | 40 | 10/10/2016 | 1/9/2017 | 91 | 31 | 0.34 | 104 | 369 | 103 | 18 | 0.049 | 0.002 | |
| 22 | 46 | 1/6/2016 4/5/2 | | 90 18 | 0.20 | 46 | 4/5/2016 4/5/2016 | | 97 19 | 0.20 | 46 | | 10/10/2016 | 91 | 18 | 0.20 | 46 | 10/10/2016 | | 91 | 21 | 0.23 | 76 | 369 | 75 174 | -10 | -0.027 | -0.001 | |
| 23 | 50 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 40 90 17 | 0.44 | 50 52 | 4/5/2016 | | 97 43 97 18 | 0.44 | 50 52 | | 10/10/2016 | 91 91 | 43 17 | 0.47 | 50 | 10/10/2016 | | 91 91 | 20 | 0.55 | 176 72 | 369 369 | 71 | -14 | -0.038 | -0.002 | |
| 25 | 53 | 1/6/2016 4/5/2 | 2016 9 | 90 97 | 1.08 | 53 | 4/5/2016 | 7/12/2016 | 98 98 | 1.00 | 53 | | 10/10/2016 | 90 | 102 | 1.13 | 53 | 10/10/2016 | | 91 | 117 | 1.29 | 414 | 369 | 410 | 325 | 0.889 | 0.037 | |
| 26 28 | 54 | 1/8/2016 4/8/2 | | 91 22 | 0.24 | 54 58 | 4/8/2016 4/5/2016 | | 95 24 97 17 | 0.25 | 54 58 | | 10/12/2016 | 92 | 20 15 | 0.22 | 54 58 | 10/12/2016 | | 89 91 | 27 | 0.30 | 93 | 367 369 | 92 65 | -20 | 0.021 | 0.001 | |
| 29 | 59 | 1/6/2016 4/5/2 1/7/2016 4/6/2 | | | 0.17 | 59 | 4/6/2016 | | 97 17 | 0.18 | 59 | | 10/10/2016 | 91 | 17 | 0.16 | 59 | 10/10/2016 | | 90 | 19 | 0.21 | 68 | 368 | 67 | -20 | -0.054 -0.048 | -0.002 -0.002 | |
| 30 | 60 | 1/7/2016 4/5/2 | | 39 289 | 3.25 | 60 | 4/5/2016 | | 97 327 | 3.37 | 60 | 7/11/2016 | 10/11/2016 | 92 | 317 | 3.45 | 60 | 10/11/2016 | | 90 | 343 | 3.81 | 1276 | 368 | 1266 | 1181 | 3.235 | 0.135 | |
| 31 | 61 | 1/7/2016 4/5/2 | | | 7.48 | 61 | 4/5/2016 | | 97 691 | 7.12 | 61 | | 10/11/2016 | 92 | 718 | 7.80 | 61 | 10/11/2016 | | 90 | 737 | 8.19 | 2812 68 | 368 368 | 2789 | 2704 | 7.408 | 0.309 | |
| 32 | 63 | 1/7/2016 4/5/2 1/7/2016 4/5/2 | | | 0.18 | 63 | 4/5/2016 4/5/2016 | | 97 16 97 18 | 0.16 | 62 | | 10/10/2016 | 91 | 16 | 0.18 | 62 | 10/10/2016 | | 91 | 20 | 0.22 | 66 | 368 | 67 | -18 -20 | -0.048 -0.054 | -0.002 -0.002 | |
| 34 | 64 | 1/7/2016 4/5/2 | | | 0.18 | 64 | 4/5/2016 | | 97 18 | 0.19 | 64 | | 10/10/2016 | 91 | 18 | 0.20 | 64 | 10/10/2016 | | 91 | 18 | 0.20 | 70 | 368 | 69 | -16 | -0.043 | -0.002 | |
| 35 | 65 | 1/6/2016 4/5/2 | | 90 17 | 0.19 | 65 | 4/5/2016 | | 97 18 | 0.19 | 65 | | 10/10/2016 | 91 | 16 | 0.18 | 65 | 10/10/2016 | | 91 | 19 | 0.21 | 70 | 369 | 69 | -16 | -0.043 | -0.002 | |
| 36 37 | 67 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 18 90 18 | 0.20 | 66 | 4/5/2016 4/5/2016 | | 97 21 97 22 | 0.22 | 66 67 | | 10/10/2016 | 91 | 22 | 0.24 | 66 67 | 10/10/2016 | | 91 91 | 22 | 0.24 | 83 | 369 369 | 82 83 | -3 | -0.008 -0.005 | 0.000 | |
| 38 | 68 | 1/6/2016 4/5/2 | | 00 19 | 0.21 | 68 | 4/5/2016 | 7/11/2016 | 97 21 | 0.22 | 68 | | 10/10/2016 | 91 | 19 | 0.21 | 68 | 10/10/2016 | | 91 | 26 | 0.29 | 85 | 369 | 84 | -1 | -0.003 | 0.000 | |
| 39 | 69 | 1/6/2016 4/5/2 | | 90 16 | 0.18 | 69 | 4/5/2016 | | 97 16 97 36 | 0.16 | 69 | | 10/10/2016 | 91 | 17 | 0.19 | 69 | 10/10/2016 | | 91 | 22 | 0.24 | 71 | 369 | 70 | -15 | -0.040 | -0.002 | |
| 40 | 70 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 36 | 0.40 | 70 71 | 4/5/2016 4/5/2016 | | 97 36 97 26 | 0.37 | 70 71 | | 10/10/2016 | 91 | 24 | 0.45 | 70 71 | 10/10/2016 | | 91 | 30 | 0.51 | 159 104 | 369 369 | 157 | 72 18 | 0.198 | 0.008 | |
| 42 | 72 | 1/6/2016 4/5/2 | | | 0.22 | 72 | 4/5/2016 | | 97 22 | 0.23 | 72 | | 10/10/2016 | 91 | 21 | 0.23 | 72 | 10/10/2016 | | 91 | 20 | 0.22 | 83 | 369 | 82 | -3 | -0.008 | 0.000 | |
| 43 | 73 | 1/6/2016 4/5/2 | | 90 17 | 0.19 | 73 | 4/5/2016 | | 97 19 | 0.20 | 73 | | 10/10/2016 | 91 | 17 | 0.19 | 73 | 10/10/2016 | | 91 | 21 | 0.23 | 74 | 369 | 73 | -12 | -0.032 | -0.001 | |
| 44 | 74 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 20 | 0.22 | 74 | 4/5/2016 4/5/2016 | 7/11/2016 | 97 24 97 24 | 0.25 | 74 | | 10/10/2016 | 91 | 22 19 | 0.24 | 74 75 | 10/10/2016 | | 91 91 | 28 | 0.31 | 94 | 369 369 | 93 | 8 | 0.022 | 0.001 | |
| 46 | 76 | 1/6/2016 4/5/2 | | 90 21 | 0.23 | 76 | | 7/11/2016 | 97 21 | 0.22 | 76 | | 10/10/2016 | 91 | 19 | 0.21 | 76 | 10/10/2016 | | 91 | 23 | 0.25 | 84 | 369 | 83 | -2 | -0.005 | 0.000 | |
| 47 | 77 | 1/6/2016 4/5/2 | | | 0.23 | 77 | 4/5/2016 | | 97 22 | 0.23 | 77 | | 10/10/2016 | 91 | 19 | 0.21 | 77 | 10/10/2016 | | 91 | 23 | 0.25 | 85 | 369 | 84 | -1 | -0.003 | 0.000 | |
| 48 | 78 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | | 0.24 | 78 | 4/5/2016 4/5/2016 | | 97 23 97 18 | 0.24 | 78 79 | | 10/10/2016 | 91 | 18 | 0.24 | 78 79 | 10/10/2016 | | 91 91 | 26 | 0.29 | 93 | 369 369 | 92 73 | -12 | 0.019 -0.032 | -0.001 | |
| 50 | 80 | 1/6/2016 4/5/2 | | | 0.19 | 80 | 4/5/2016 | | 97 20 | 0.13 | 80 | | 10/10/2016 | 91 | 19 | 0.21 | 80 | 10/10/2016 | | 91 | 22 | 0.24 | 78 | 369 | 77 | -12 | -0.032 | -0.001 | |
| 51 | 81 | 1/6/2016 4/5/2 | 2016 9 | 90 108 | 1.20 | 81 | 4/5/2016 | 7/11/2016 | 97 75 | 0.77 | 81 | 7/11/2016 | 10/10/2016 | 91 | 68 | 0.75 | 81 | 10/10/2016 | 1/9/2017 | 91 | 84 | 0.92 | 335 | 369 | 331 | 246 | 0.675 | 0.028 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 52 | 82 | 1/6/2016 4/5/2 | | | 0.28 | 82 | 4/5/2016 | | 97 28 | 0.29 | 82 | | 10/10/2016 | 91 | 25 | 0.27 | 82 | 10/10/2016 | | 91 | 26 | 0.29 | 104 | 369 | 103 | 18 | 0.049 | 0.002 | |
| 53 | 83 | 1/6/2016 4/5/2 | | 90 55 | 0.61 | 83 | 4/5/2016 | | 98 61 | 0.62 | 83 | | 10/10/2016 | 90 | 49 | 0.54 | 83 | 10/10/2016 | | 91 | 56 | 0.62 | 221 | 369 | 219 | 134 | 0.366 | 0.015 | |
| 54 55 | 85 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 17 90 19 | 0.19 | 84 | 4/5/2016 4/5/2016 | 7/11/2016 7/11/2016 | 97 18 | 0.19 | 84 85 | | 10/10/2016 | 91 91 | 16 17 | 0.18 | 85 | 10/10/2016 | | 91 91 | 21 | 0.23 0.24 | 78 | 369 369 | 77 | -14 | -0.038 -0.021 | -0.002 -0.001 | |
| 56 | 86 | 1/6/2016 4/5/2 | | 00 18 | 0.20 | 86 | 4/5/2016 | | 97 20 | 0.21 | 86 | | 10/12/2016 | 93 | 21 | 0.23 | 86 | 10/12/2016 | | 89 | 23 | 0.26 | 82 | 369 | 81 | -4 | -0.011 | 0.000 | |
| 57 | 87 | 1/6/2016 4/5/2 | 2016 9 | 90 18 | 0.20 | 87 | 4/5/2016 | 7/11/2016 | 97 22 | 0.23 | 87 | 7/11/2016 | 10/10/2016 | 91 | 20 | 0.22 | 87 | 10/10/2016 | 1/9/2017 | 91 | 21 | 0.23 | 81 | 369 | 80 | -5 | -0.013 | -0.001 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58 | 88 | 1/6/2016 4/5/2 | | · | 0.20 | 88 | 4/5/2016 | | 97 21 | 0.22 | 88 | | 10/10/2016 | 91 | 21 | 0.23 | 88 | 10/10/2016 | | 91 | 22 | 0.24 | 82 | 369 | 81 | -4 | -0.011 | 0.000 | |
| 59 60 | 89 90 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 19 | 0.21 | 90 | 4/5/2016 4/5/2016 | | 97 21 97 24 | 0.22 | 89 90 | | 10/10/2016 10/10/2016 | 91 | 22 | 0.24 | 89 90 | 10/10/2016 10/10/2016 | | 91 91 | 23 | 0.25 0.27 | 85 92 | 369 369 | 84 91 | -1 6 | -0.003 0.016 | 0.000 | |
| 61 | 91 | 1/6/2016 4/5/2 | | | 0.21 | 91 | 4/5/2016 | | 97 22 | 0.23 | 91 | | 10/10/2016 | 91 | 21 | 0.23 | 91 | | 1/9/2017 | 91 | 23 | 0.25 | 85 | 369 | 84 | -1 | -0.003 | 0.000 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | The 1st Qtr tld was found missing. Estimate of Effective Dose based on other three Qtr |
| 62 | 92 | 1/6/2016 4/5/2 | | · | 0.26 | 92 | 4/5/2016 | | 97 24 | 0.25 | | 7/11/2016 | | 91 | 21 | 0.23 | | 10/10/2016 | | 91 | 24 | 0.26 | 92 | 369 | 91 | 6 | 0.016 | | readings |
| 63 | 93 94 | 1/6/2016 4/5/2 1/6/2016 4/5/2 | | 90 22 90 20 | 0.24 | 93 94 | 4/5/2016 4/5/2016 | | 97 21 97 23 | 0.22 | 93 94 | | 10/10/2016 | 91 91 | 18 19 | 0.20 | 93 94 | 10/10/2016 | | 91 91 | 24 | 0.26 0.26 | 85 86 | 369 369 | 84 85 | -1 0 | -0.003 0.000 | 0.000 | |
| 65 | 95 | 1/6/2016 4/5/2 | 2016 9 | 90 20 | 0.22 | 95 | 4/5/2016 | 7/11/2016 | 97 25 | 0.26 | 95 | 7/11/2016 | 10/10/2016 | 91 | 18 | 0.20 | 95 | 10/10/2016 | 1/9/2017 | 91 | 23 | 0.25 | 86 | 369 | 85 | 0 | 0.000 | 0.000 | |
| 66 | FB | 1/7/2016 4/6/2 | | 90 11 | 0.12 | FB | 4/6/2016 | | 97 15 | 0.15 | FB | | 10/11/2016 | 91 | 13 | 0.14 | FB | | 1/9/2017 | 90 | 14 | 0.16 | 53 | 368 | 53 | -32 | -0.089 | -0.004 | |
| 67 Background | TB Annualized | 1/6/2016 4/5/2 | 2016 9 | 90 13 | 0.14 | TB | 4/5/2016 | //11/2016 | 97 14 | 0.14 | ТВ | //11/2016 | 10/10/2016 | 91 | 13 | 0.14 | TB | 10/10/2016 | 1/9/201/ | 91 | 14 | 0.15 | 54 | 369 | 53 | -32 | -0.087 | -0.004 | |
| Locations 22 | Effective Dose 84.31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

22 84.31
54 92.49
85 77.15
86 81.11
87 80.12
88 81.11
89 84.08
90 91.00
91 84.08
92 91.00
93 84.08
94 85.07
95 85.07

Average Bkg DDE 84.67
3 sigma 13.57
Lower Range 71.10
Upper Range 98.23
Standard Deviation 4.52

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APPENDIX E NEUTRON AREA DOSIMETER DATA



FPDP Environmental Dosimeter Report From 01/01/2016 to 12/31/2016

| Participant Name, Number | Customer Reference | Begin wear date | End wear date | Dosimeter Type | Total Neutron | Fast Neutron | Thermal Neutron |
|--------------------------|--------------------|-----------------|---------------|----------------|---------------|--------------|-----------------|
| VISITOR,01122 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | М | М |
| VISITOR,01123 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | М | М |
| VISITOR,01124 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | М | М |
| VISITOR,01125 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | М | М |
| VISITOR,01126 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | М | М |
| VISITOR,01127 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | M | М | М |
| VISITOR,01128 | Environmental | 1/1/2016 | 3/31/2016 | Neutron | М | м | М |
| VISITOR,01375 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | М | М |
| VISITOR,01376 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | М | М |
| VISITOR,01377 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | М | M |
| VISITOR,01378 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | M | М |
| VISITOR,01379 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | М | M |
| VISITOR,01380 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | M | М |
| VISITOR,01381 | Environmental | 4/1/2016 | 6/30/2016 | Neutron | М | М | М |
| VISITOR,01071 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | М | М | М |
| VISITOR,01072 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | М | М | М |
| VISITOR,01073 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | М | М | М ' |
| VISITOR,01074 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | M | М | M |
| VISITOR,01075 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | М | М | М |
| VISITOR,01076 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | M | М | М |
| VISITOR,01077 | Environmental | 7/1/2016 | 9/30/2016 | Neutron | М | М | М |
| VISITOR,01159 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | М | М |
| VISITOR,01160 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | M | М |
| VISITOR,01161 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | M | M | М |
| VISITOR,01162 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | М | М |
| VISITOR,01163 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | М | М |
| VISITOR,01164 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | М | М |
| VISITOR,01165 | Environmental | 10/1/2016 | 12/31/2016 | Neutron | М | М | М |

