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Uranium Enrichment Toxic Substances Control Act Compliance Agreement 2016 Annual Compliance Agreement Report January 1–December 31, 2016, for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

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Uranium Enrichment Toxic Substances Control Act Compliance Agreement 2016 Annual Compliance Agreement Report January 1–December 31, 2016, for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—June 2017

Prepared for the 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 contract DE-DT0007774

PREFACE

The U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) entered into the Uranium Enrichment Toxic Substances Control Act Compliance Agreement (UE TSCA CA) to address TSCA compliance at the Paducah, Portsmouth, and Oak Ridge uranium enrichment facilities. This agreement, signed on February 20, 1992, is intended to bring DOE's UE facilities into full compliance with the TSCA regulations for the management of polychlorinated biphenyls (PCBs). This agreement was modified on September 25, 1997, and again on May 30, 2017. At Paducah, the UE TSCA CA addresses the following:

- Use of PCBs in ventilation duct gaskets;
- Investigation of historic PCB disposal sites;
- Use and removal of leaking potential PCB devices;
- Sampling of air;
- Cleanup of PCB spills;
- Storage of PCB waste;
- Maintenance of/servicing of PCB-contaminated electrical cables and associated equipment;
- Disposal of PCB waste;
- Ensurance of worker safety measures; and
- Identification of PCBs above 50 ppm in the C-340 hydraulic systems.

This annual report follows a format accepted by both DOE and EPA and is consistent with Attachment 1 of the UE TSCA CA. This Annual Compliance Agreement Report summarizes UE TSCA CA activities that occurred at Paducah for the period January 1 through December 31, 2016. Future annual reports will summarize activities based on implementing changes per the May 30, 2017, UE TSCA CA modification agreement.

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ACRONYMS

| CA | Compliance Agreement |
|------|--------------------------------------|
| CFR | Code of Federal Regulations |
| CY | calendar year |
| DOE | U.S. Department of Energy |
| EPA | U.S. Environmental Protection Agency |
| PGDP | Paducah Gaseous Diffusion Plant |
| PPE | personal protective equipment |
| TSCA | Toxic Substances Control Act |
| UE | Uranium Enrichment |

EXECUTIVE SUMMARY

This Annual Compliance Agreement Report summarizes the Uranium Enrichment Toxic Substances Control Act Compliance Agreement (UE TSCA CA) activities that occurred at Paducah for the period January 1 to December 31, 2016. The report is formatted consistent with Attachment 1 of the UE TSCA CA.

During calendar year 2016, Paducah continued to address the elements identified in the UE TSCA CA as required by the agreement.

Air sampling was conducted during each of the four quarters in accordance with the UE TSCA CA Attachment I, Section 1, Interim Measures, (D) Air Sampling. Results did not exceed the UE TSCA CA reporting level of $0.5 \ \mu g/m^3$.

Eleven polychlorinated biphenyl (PCB) gasket spills were cleaned and closed in accordance with the standards set forth in the UE TSCA CA Attachment I, Section 2, Compliance Measures, (C) Spill Cleanup.

Paducah shipped for disposal approximately 22,807 kg of TSCA-regulated PCB/radioactive waste on 15 Uniform Hazardous Waste Manifests. Twenty-two certificates of disposal were received in 2016.

1. INTERIM MEASURES

1.1 TROUGHING

The Uranium Enrichment Toxic Substances Control Act Compliance Agreement (UE TSCA CA) required all motor exhaust duct gasket flanges to be troughed by March 30, 1994. Approximately 16,000 troughs were installed at the Paducah facility to complete this requirement.¹ Installation of additional troughing is completed as necessary.

1.2 ON-SITE DISPOSAL INVESTIGATION

The UE TSCA CA requires the Paducah facility to provide certification to the U.S. Environmental Protection Agency (EPA) that all polychlorinated biphenyl (PCB) disposal sites at the facility are being investigated pursuant to separate permits, agreements, or orders within 30 days from the effective date of the UE TSCA CA. This requirement was completed previously.²

1.3 POTENTIAL DEVICES

The UE TSCA CA requires that all switchyard potential devices at the Paducah facility containing leaking PCB capacitors be replaced by May 31, 1993. This requirement was completed previously.³

1.4 AIR SAMPLING

The UE TSCA CA requires that PCB air sampling be conducted in process buildings with motor exhaust duct ventilation systems. These buildings include the C-331, C-333, C-335, and C-337 process buildings at the Paducah facility. At least five samples are required to be taken per building per year. At least one of the five samples will be taken at a best engineering judgment-selected site, with the remainder of the sites being selected randomly. For each of the buildings, the samples must be taken quarterly every calendar year (CY), at least 30 days apart. The U.S. Department of Energy (DOE) is required to report quarterly to EPA any PCB concentrations greater than $0.5 \ \mu g/m^3$ measured from any air monitoring sampler at any location.

United States Enrichment Corporation stopped enriching uranium in May 2013 and returned leased facilities to DOE on October 21, 2014.

The results of the samples taken during CY 2016 are shown in Appendix A. The quarterly sample sets were obtained more than 30 days apart. The sampling was conducted as described in National Institute for Occupational Safety and Health 5503. The volumes and flow rates, as noted, were necessary to achieve the detection limit required by the UE TSCA CA. All samples results were below laboratory reporting limits of 0.1 μ g/m³.

 ¹ More information can be found in the *Polychlorinated Biphenyl Annual Compliance Agreement Report for the Paducah Gaseous Diffusion Plant* (January 1, 1994, through December 31, 1994).
² More information can be found in the *PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility*

² More information can be found in the PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement.

³ More information can be found in the PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement.

2. COMPLIANCE MEASURES

2.1 PROCESS LUBRICATION OIL SAMPLING

The UE TSCA CA required the Paducah facility to inventory and sample each process lube oil system and define the PCB content of each system. This requirement was completed previously.⁴

2.2 PROCESS LUBE OIL REMOVAL

Section 2.2 does not apply to the Paducah Gaseous Diffusion Plant (PGDP).

2.3 SPILL CLEANUP

The UE TSCA CA requires that PCB spills and PCB-contaminated oil that may leak onto building floors be cleaned in accordance with the EPA PCB Spill Cleanup Policy in 40 *CFR* § 761, Subpart G. Reports documenting PCB spills and PCB spill cleanup measures are required to be prepared each quarter and summarized in this Annual Compliance Agreement Report. Record copies of cleanup documentation are kept on-site and are available for inspection.

The UE TSCA CA allows historic spills, those that occurred before March 19, 1992, to be left in place until demolition of the facility. PCB high-concentration gasket spills (i.e., from a source of 500 parts per million or greater in PCB concentration) that occurred to building floors after March 19, 1992, shall be verified clean in accordance with the requirements of the UE TSCA CA.

The following is a summary of PCB gasket spill activities for CY 2016:

- Number of PCB spill sites awaiting verification of successful cleaning as of January 1, 2016—14
- Number of new PCB spill sites identified during reporting period—8
- Number of PCB spill sites closed during reporting period—11
- Remaining PCB spill sites awaiting verification of successful cleaning as of December 31, 2016–11
- Number of PCB spill sites closed as a historic spill—0

All PCB gasket spills identified in this document are handled as high concentration PCB spills. Appendix B shows the CY 2016 summary of PCB gasket spill activities by quarter.

2.4 STORAGE

The UE TSCA CA requires that all areas designated for the storage of TSCA-regulated PCB waste meet the requirements specified in 40 *CFR* § 761.65, unless stated otherwise in the agreement or subsequent concurrences. In addition, these storage areas are prohibited from storing nonradioactive PCB waste items beyond one year. This requirement was completed previously.⁵ Paducah continues to store TSCA-

⁴ More information can be found in *PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement*.

⁵ More information can be found in *PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement.* Certification for compliance with 40 *CFR* § 761.65 was submitted by DOE to EPA on August 11, 1992.

regulated PCB waste in areas that meet 40 *CFR* § 761.65, unless stated otherwise in the UE TSCA CA or subsequent concurrences.

At Paducah, PCB waste generated on-site is assumed to contain a radioactive component. Pending radiological characterization for disposal, Paducah radiological PCB waste is stored in accordance with the requirements of the UE TSCA CA, Attachment I, Section 2(D), "Storage," 40 *CFR* § 761.65, "Storage for disposal," and associated concurrences. Radioactive waste is shipped for disposal to DOE-owned facilities, Nuclear Regulatory Commission-licensed facilities, or facilities that have received authorized limits approval from DOE and the facility's host state. In compliance with the UE TSCA CA and subsequent concurrences, when a radioactive PCB waste is determined to be nonradioactive, the one-year disposal time will be based on the date the waste is determined to be nonradioactive.

2.5 GASKET REMOVAL PROGRAM AND VENTILATION DUCT MANAGEMENT

The initiation date of gasket/duct removal is to coincide with decommissioning UE activities at Paducah.⁶ No work activity related to the Gasket Removal Program or Ventilation Duct Management was conducted during 2016.

2.6 ELECTRICAL CABLES AND ASSOCIATED EQUIPMENT

The UE TSCA CA requires PCB-contaminated electrical cables and associated equipment to be removed from the facilities upon decommissioning, unless they require maintenance, servicing, or replacement during plant operations or gasket removal. If maintained or serviced, the cables, cable trays, and associated equipment shall be removed or cleaned to standards set forth in the UE TSCA CA. No electrical cables and associated equipment were removed from facilities during 2016.

2.7 DISPOSAL

The UE TSCA CA requires that all nonradioactive TSCA-regulated PCB waste stored at the Paducah facility for greater than one year (at the time of the agreement) be disposed of properly. This requirement was completed previously.⁷

During CY 2016, 87 PCB/radioactive waste items weighing approximately 22,807 kilograms (kg) were shipped off-site for disposal on 15 hazardous waste manifests. Also during CY 2016, 22 certificates of disposal for PCB/radioactive wastes were received.

The PCB waste off-site disposal information for this reporting period is shown in Appendix C. Waste generated as a result of site cleanup and operations is included in this report, including Comprehensive, Environmental Response, Compensation, and Liability Act waste, which is provided for information only and is intended to show progress toward removal of PCBs at Paducah.

⁶ See September 25, 1997, letter from Craig Hooks, Director Federal Facilities Enforcement Office, EPA, to Alvin L. Alm, Assistant Secretary for Environmental Restoration, DOE, and Terry Lash, Director Office of Energy Science and Technology, DOE.

⁷ More information can be found in the PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement.

2.8 WORKER SAFETY MEASURES

The UE TSCA CA required that all persons (on-site at the time of the agreement) entering the active PCB spill areas be provided worker safety training and that they use suitable personal protective equipment (PPE) and clothing to prevent unreasonable risk to human health posed by PCBs and any other hazardous material used or encountered during the work activities. This requirement was completed previously.⁸ Three hundred and fifteen employees received PCB Awareness Training in 2016. Adequate PPE and the Integrated Safety Management System are used for the protection of workers at Paducah.

2.9 HYDRAULIC SYSTEMS AT PADUCAH

The UE TSCA CA requires an annual inspection of readily accessible C-340 PCB-contaminated hydraulic system components for leaks and accumulation of free liquid. Per the TSCA CA, the hydraulic systems in C-340 are the only hydraulic systems under the CA requirements for removal. Demolition of the C-340-B building, where the hydraulic systems were located, was initiated September 26, 2012, and was completed on January 3, 2013; therefore, there were no CA requirements for inspection in 2016.

Following building demolition, the remaining slab was cleaned by washing, and two coats of epoxy paint in contrasting colors were applied.

⁸ More information can be found in the PGDP Annual 1992 Report on Toxic Substances Control Act Federal Facility Compliance Agreement.

APPENDIX A

CY 2016 UE TSCA CA AIR SAMPLING RESULTS

CY 2016 UE TSCA CA Air Sampling Results

| | Sample Numbers | Sample Date | Building | Floor | Sample Coordinates | Method of Selection | Results* (mg/m ³) | Pump Flow Rate (liters/ minute) | Air Volume Sampled (liters) |
|-----------|-----------------|-------------|----------|--------|-----------------------|------------------------|---|---------------------------------------|-----------------------------------|
| Quarter 1 | PCB16-AIR-02-01 | 1/26/2016 | C-331 | Ground | SE of DD-20 | Random | PCBs not detected above laboratory reporting limits | 1.02 | 515 |
| | PCB16-AIR-02-02 | 1/26/2016 | C-331 | Ground | At BB-25 | BEJ | BEJ PCBs not detected above laboratory reporting limits | | 540 |
| | PCB16-AIR-02-03 | 1/26/2016 | C-333 | Ground | N of Ja-4 | Random | PCBs not detected above laboratory reporting limits | | 528 |
| | PCB16-AIR-02-04 | 1/26/2016 | C-335 | Cell | S of S-19 | Random | PCBs not detected above laboratory reporting limits | 1.02 | 513 |
| | PCB16-AIR-02-05 | 1/26/2016 | C-337 | Ground | S of U-28 | Random | PCBs not detected above laboratory reporting limits | 1.04 | 527 |
| | PCB16-AIR-03-01 | 4/6/2016 | C-331 | Cell | SW of X-32 | Random | PCBs not detected above laboratory reporting limits | 1.01 | 545 |
| 2 | PCB16-AIR-03-02 | 4/6/2016 | C-333 | Ground | E of P-9 | Random | PCBs not detected above laboratory reporting limits | 1.01 | 524 |
| uarter 2 | PCB16-AIR-03-03 | 4/6/2016 | C-333 | Ground | At B-10 | BEJ | PCBs not detected above laboratory reporting limits | 1.07 | 554 |
| 0 | PCB16-AIR-03-04 | 4/6/2016 | C-335 | Ground | W of K-18 | Random | PCBs not detected above laboratory reporting limits | 1.02 | 543 |
| | PCB16-AIR-03-05 | 4/6/2016 | C-337 | Cell | NW of Jb-14 | Random | PCBs not detected above laboratory reporting limits | 1.04 | 534 |
| | PCB16-AIR-04-01 | 7/14/2016 | C-331 | Cell | E of D-26 | Random | PCBs not detected above laboratory reporting limits | | 539 |
| uarter 3 | PCB16-AIR-04-02 | 7/14/2016 | C-333 | Ground | N of Ua-47 | Random | PCBs not detected above laboratory reporting limits | 1.06 | 542 |
| | PCB16-AIR-04-03 | 7/14/2016 | C-335 | Cell | E of EE-13 | Random | PCBs not detected above laboratory reporting limits | 1.05 | 511 |
|) | PCB16-AIR-04-04 | 7/14/2016 | C-335 | Ground | E of S-2 | BEJ | PCBs not detected above laboratory reporting limits | 1.06 | 525 |
| | PCB16-AIR-04-05 | 7/14/2016 | C-337 | Cell | W of C-7 | Random | PCBs not detected above laboratory reporting limits | 1.02 | 484 |
| | PCB17-AIR-01-01 | 11/9/2016 | C-331 | Cell | S of B-21 | Random | PCBs not detected above laboratory reporting limits | 1.04 | 518 |
| 4 | PCB17-AIR-01-02 | 11/9/2016 | C-333 | Cell | NE of La-06 | Random | PCBs not detected above laboratory reporting limits | 1.08 | 536 |
| Juarter | PCB17-AIR-01-03 | 11/9/2016 | C-335 | Ground | SW of DD-25 | Random | PCBs not detected above laboratory reporting limits | 1.04 | 518 |
| ð | PCB17-AIR-01-04 | 11/9/2016 | C-337 | Cell | S of Mb-38 | Random | PCBs not detected above laboratory reporting limits | 1.02 | 515 |
| | PCB17-AIR-01-05 | 11/9/2016 | C-337 | Ground | at Eb-29 | BEJ | PCBs not detected above laboratory reporting limits | 1.04 | 522 |

*Limit of detection 0.01 $\mu\text{g/m}^3$

APPENDIX B

CY 2016 SUMMARY OF PCB GASKET SPILLS BY QUARTER



Figure B.1. PCB Gasket Spills January 1 through December 31, 2016

APPENDIX C

CY 2016 PCB WASTE DISPOSAL ACTIVITIES

CY 2016 PCB Waste Disposal Activities

| РСВ | | | Earliest Date | | | | | | | CD Rec'd |
|---------|--|----------------|----------------------------|-----------------|---------------------------|---------------------|--|-----------------------------------|------------------|--------------------------|
| I Count | Description | Weight (kg) | Removed from Service | Date Shipped | Manifest | Shipment No. | Disposal Location | Disposal Method | Disposal Date | No. of Items Disposed |
| 3 | Drums of PCB Waste | 562 | 4/22/2015 | 3/23/2016 | 006841794JJK | DSSI-16- 031 | DSSI-Perma-Fix, Kingston, TN | Alternate Thermal Treatment | 7/21/16 | 8/2/2016 |
| 1 | ST-90 of Mixed/PCB Waste | 819 | 6/3/2015 | 3/28/2016 | 006841795JJK | 9701-02- 0013 | Energy <i>Solutions</i> , Clive, UT | Landfill | 5/26/2016 | 6/14/2016 |
| 52 | (10) Drums of PCB/LLW(42) Drums of PCB Waste | 2,734 | 4/9/2015 | 3/28/2016 | 006841798JJK ¹ | 7307-15- 0002 | Energy <i>Solutions</i> , Clive, UT | Landfill | 6/23/2016 | 7/5/2016 52 |
| 1 | (1) Drum of PCB Waste | 57 | 8/12/2015 | 3/28/2016 | 006841802JJK ³ | 9701-15- 0007 | Energy <i>Solutions</i> , Clive, UT | Landfill | 12/6/2016 | 12/12/2016 |
| 1 | (1) Tanker of PCB Transformer Oil | 11,303 | 1/22/2016 | 5/20/2016 | 006841805JJK | FLR15- HSPCB-055 | Clean Harbors, LaPorte, TX | Incineration | 5/23/2016 | 5/25/2016 |
| 2 | (1) Drum of PCB/RCRA Mixed, (1) Drum of RCRA/TSCA Waste | 18 | 8/5/2015 | 6/29/2016 | 006841810JJK | 02620 | Perma-Fix, Gainesville, FL | | | |
| 12 | (12) Drums of PCB Waste | 276 | 12/29/2015 | 6/30/2016 | 006841811JJK | 9701-17- 0001 | Energy <i>Solutions</i> , Clive, UT | Landfill | 8/30/2016 | 10/7/2016 12 |
| 1 | (1) Drum of PCB/LLW | 177 | 1/5/2016 | 6/30/2016 | 006841813JJK ² | 9701-21- 0014 | EnergySolutions, Clive, UT | Landfill | 10/27/2016 | 11/30/2016 |
| 2 | (1) ST-90 of LLW/PCB Remediation Debris and (1) Excepted packaged motor (Scrap Equipment) | 3,960 | 2/25/2016 | 7/19/2016 | 006841814JJK | 9701-21- 0015 | Energy <i>Solutions,</i> Clive, UT | Landfill | 10/27/2016 | 11/30/2016 |
| 2 | (1) Drum PCB/RCRA Mixed liquid lab residuals & (1) drum of PCB/RCRA Mixed solid lab residuals | 40 | 4/28/2016 | 8/19/2016 | 006841816JJK | 02623 | UTPerma-Fix, Gainesville, FL | | | |
| 1 | (1) Drum of Contaminated Chemical waste with PCBs | 4 | 8/17/2016 | 8/26/2016 | $006841819JJK^{4}$ | 9701-15- 0008 | Energy <i>Solutions,</i> Clive, UT | Landfill | 12/6/2016 | 12/12/2016 1 |
| 5 | (5) Drums of LLW/RCRA/PCB Waste | 880 | 9/15/2016 | 10/27/2016 | 006841822JJK | DSSI-16- 112 | DSSI- Perma-Fix, Kingston, TN | | | |
| 1 | (1) ST-90 of LLW/RCRA/PCB Waste | 317 | 4/5/2016 | 10/28/2016 | 006841824JJK | 9701-02- 0015 | Energy <i>Solutions,</i> Clive, UT | Landfill | 11/14/2016 | 11/29/2016 1 |

CY 2016 PCB Waste Disposal Activities (Continued)

| РСВ | | | Earliest Date | | | | | | | CD Rec'd |
|---------------|------------------------------------|----------------|----------------------------|-----------------|--------------|---------------------|---|------------------------|------------------|--------------------------|
| Item Count | Description | Weight (kg) | Removed from Service | Date Shipped | Manifest | Shipment No. | Disposal Location | Disposal Method | Disposal Date | No. of Items Disposed |
| 1 | (1) ST-90 LLW/RCRA/PCB Waste | 233 | 9/14/2016 | 10/28/2016 | 006841825JJK | 7307-03- 0002 | Energy <i>Solutions,</i> Clive, UT | Landfill | 11/29/2016 | 12/13/2016 |
| 2 | (2) Totes of LLW/RCRA/PCB Waste | 1,427 | 9/14/2016 | 10/28/2016 | 006841826JJK | 9701-24- 0003 | Energy <i>Solutions,</i> Clive, UT | | | |
| 1 | Drum of RCRA/PCB/LLW | 3 | 10/4/2013 | 2/10/2015 | 006841697JJK | ETTP-15- 037 | M&EC, Oak Ridge, TN | Treatment/ Landfill | 2/22/2016 | 3/23/2016 |
| 1 | Tanker of PCB Transformer Oil | 19,205 | 8/31/2015 | 8/31/2015 | 006841724JJK | FLR15- HSPCB_008 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/6/2015 | 1/19/2016 1 |
| 1 | Tanker of PCB Transformer Oil | 17,980 | 8/31/2015 | 8/31/2015 | 006841725JJK | FLR15- HSPCB_009 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/4/2015 | 1/19/2016 |
| 1 | Tanker of PCB Transformer Oil | 18,425 | 9/3/2015 | 9/3/2015 | 006841726JJK | FLR15- HSPCB_010 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/10/2015 | 1/19/2016 |
| 1 | Tanker of PCB Transformer Oil | 18,815 | 9/9/2015 | 9/9/2015 | 006841729JJK | FLR15- HSPCB_013 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/19/2015 | 1/19/2016 1 |
| 1 | Tanker of PCB Transformer Oil | 17,944 | 9/13/2015 | 9/14/2015 | 006841734JJK | FLR15- HSPCB_016 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/7/2015 | 1/19/2016 1 |
| 1 | Tanker of PCB Transformer Oil | 18,525 | 9/14/2015 | 9/14/2015 | 006841735JJK | FLR15- HSPCB_017 | Veolia Technical Solutions, Port Arthur, TX | Incineration | 10/9/2015 | 1/19/2016 |
| 1 | Tanker of PCB Transformer Oil | 14,415 | 12/21/2015 | 12/21/2015 | 006841786JJK | FLR15- HSPCB_051 | Clean Harbors, Deer Park, LaPorte, TX | Incineration | 12/24/2015 | 1/7/2016 |
| 1 | Tanker of PCB Transformer Oil | 13,326 | 12/22/2015 | 12/22/2015 | 006841787JJK | FLR15- HSPCB_052 | Clean Harbors, Deer Park, LaPorte, TX | Incineration | 12/27/2015 | 1/7/2016 |
| 1 | Tanker of PCB Transformer Oil | 13,834 | 12/29/2015 | 12/29/2015 | 006841788JJK | FLR15- HSPCB_053 | Clean Harbors, Deer Park, LaPorte TX | Incineration | 1/1/2016 | 1/7/2016 |
| 1 | Tanker of PCB Transformer Oil | 12,555 | 12/31/2015 | 12/31/2015 | 006841789JJK | FLR150 HSPCB_54 | Clean Harbors, Deer Park, LaPorte, TX | Incineration | 1/3/2016 | 1/7/2016 |

CY 2016 PCB Waste Disposal Activities (Continued)

| PCB Item | Description | Weight (kg) | Earliest Date Removed from | Date Shipped | Manifest | Shipment No. | Disposal Location | Disposal Method | Disposal Date | CD Rec'd No. of Items |
|-------------|------------------------|----------------|-------------------------------------|-----------------|--------------|-----------------|----------------------|--------------------|------------------|--------------------------|
| Count | | | Service | | | | | | | Disposed |
| 1 | (1) Drum of PCB/RCRA | 8 | 6/8/2015 | 11/12/2015 | 006841763JJK | DSSI-15- | Perma-Fix DSSI, | Alternate | 04/08/2016 | 4/21/2016 |
| | Mixed Solid Lab Sample | | | | | 121 | Kingston, TN | Thermal | | 1 |
| | Returns | | | | | | | Treatment | | |
| | | | | | | | | | | |
| 87 | 87 Total Shipped | | 807 | | | | | Total CDs Rec | eived | 22 |
| | | | | | | | | Total No. of Ite | ems | |
| | Total Disposed | | 477 | | | | | Disposed | | 88 |

CD = Certificate of Disposal

LLW = low-level waste

PCB = polychlorinated biphenyl

RCRA = Resource Conservation and Recovery Act

RFD = Request for Disposal

All PCB waste listed is PCB/radioactive waste. Weights and volumes are taken from the Uniform Hazardous Waste Manifests.

Summary of Waste Disposal Activities for CY 2016

| 87 Items [15 manifests] |
|--|
| 1409 ft ³ |
| 22,807 kg |
| 88 Items (22 CDs: 185,477 kg; 6142 ft ³) |
| |

1. On May 24, 2016, per the TSDF, Shipment ID: 7307-15-0001, UHWM 006841798JJK was changed to 7307-15-0002. These changes were noted on the UHWM and are captured in this report.

2. Shipments were captured in previous reports as shipped; however, CDs are captured on this report.

3. On April 28, 2016, one drum was removed from Shipment ID: 7307-15-0001, UHWM 006841798JJK, per the treatment, storage, and disposal facility (TSDF), and was manifested under Shipment ID: 9701 15-0007, UHWM 006841802JJK. This drum was captured in the 2016 1st Quarter report under the previous shipment ID and UHWM; however, the changes are captured in this report.

4. This shipment is a lab pack with items containing > 500 ppm PCBs, but less than DOT Reportable Quantities.