

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF)	APPROVAL TO DISPOSE
)	
ENVIRONMENTAL PROTECTION)	OF POLYCHLORINATED
)	
SERVICES, INC.)	BIPHENYLS (PCBs)
)	
4 INDUSTRIAL PARK DRIVE)	
)	
WHEELING, WEST VIRGINIA)	

AUTHORITY

This approval is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the federal Polychlorinated Biphenyls (PCB) Regulation, 40 CFR 761.60.

Failure to comply with the approval conditions specified herein shall constitute a violation of §§ 761.60(e) and 761.50(a) and may also be a violation of other provisions of the PCB Regulations in 40 CFR part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.

SUMMARY AND FINDINGS

Background information, process descriptions, demonstration test result summaries, and the Environmental Protection Agency's (EPA's) findings related to this approval are included in Appendices I through IV.

Environmental Protection Services, Inc. (EPS) is the sole owner of three PCBXTM chemical dechlorination (CD) units which are designed to chemically destroy PCBs in diesel oil and mineral oil dielectric fluid (MODEF) so that both oils can be recycled and reused. The EPA has carefully assessed EPS's operations, and has audited and observed demonstrations of the PCBXTM CD units' treatment process capabilities and efficiency. The EPA finds that the EPS PCBXTM CD units, when treating diesel oil and MODEF containing PCBs in accordance with the conditions of this approval, provide PCB destruction equivalent to an approved TSCA

incinerator, as required by 40 CFR 761.60(e).¹ Further, the EPA finds that the EPS process and sampling methods, when performed in accordance with this approval, will not pose an unreasonable risk of injury to health or the environment.

EFFECTIVE DATE

This approval to operate nationwide is effective upon signature by the Director of the Office of Resource Conservation and Recovery (ORCR) and shall expire on September 14, 2022, unless otherwise specified in Condition 23.

¹ The regulations at § 761.60(e) allow for the destruction of PCBs using methods other than incineration, provided the alternative method can achieve a level of performance equivalent to an incinerator approved under § 761.70 or a high efficiency boiler operating in compliance with § 761.71. The level of performance required for non-thermal destruction is measured differently than for thermal methods. It is the Agency's policy that non-thermal methods operating under § 761.60(e) that destroy 99.9999% of PCBs as calculated by the Destruction Removal Efficiency (DRE) meet an equivalent level of performance to an incinerator approved under § 761.70 or a high efficiency boiler operating in compliance with § 761.71. See "Draft Guidelines for Permit Applications and Demonstration Test Plans for PCB Disposal by Non-Thermal Alternative Methods," August 21, 1986.

CONTENTS

Definitions and Acronyms

Conditions

Approval

Appendices

- I. Company Background
- II. Process Description
- III. Flow Diagram
- IV. Demonstration Test Results
- V. Sample 30-Day Advanced Notification of Operations Form

DEFINITIONS AND ACRONYMS

Definitions found in 40 CFR 761.3 apply unless otherwise noted below.

“Analytical data” means: (a) a formal report from a chemical analysis laboratory; or (b) appropriate chemical instrument printouts from a chemical instrument that have appropriate controls, standards, and written instrumental operating parameters and conditions. Technical judgment or experience is not considered analytical data.

“Application” means all data and materials upon which the EPA based its decision to approve the EPS PCBX™ CD units e.g., information submitted to the EPA by EPS to define, represent, or describe proposed testing protocols, proposed design and operations, and operational limits of the PCBX™ CD units. This includes the request for approval required by 761.60(e) and such data and materials submitted in relation to both the demonstration and operating approval applications. This includes EPS’s “PCB Disposal by Non-Thermal Alternative Method Permit Application,” dated April 1, 2013.

“Approval” means the content of this document, the conditions within, and the application.

“Calendar year” or “year” means any 365 consecutive days except in the occurrence of a leap year, which contains 366 days. The calendar year does not necessarily begin on January 1st.

“CD” means the process of chemical dechlorination.

“CFR” means the Code of Federal Regulations.

“Day(s)” means a calendar day(s), unless otherwise specified.

“Director of ORCR” means the Director of the Office of Resource Conservation and Recovery (ORCR), Office of Land and Emergency Management (OLEM), U.S. EPA, Washington, DC. Phone Number: 703-308-8895. Mailing address: USEPA Headquarters, 1200 Pennsylvania Avenue, N. W., OLEM/ORCR, Mail Code: 5303P, Washington, DC 20460.

“Facility” means all contiguous land and structures (such as a single manufacturing plant) at which the EPS PCBX™ CD unit(s) disposal operations are conducted.

“Facility location” means a street address or a directional description which would allow a facility to be found by an EPA inspector, as opposed to a P.O. Box that is not indicative of the location of the facility where the treatment unit(s) will be located.

“HQ” means EPA Headquarters.

“Job” means all EPS PCBX™ CD unit(s) disposal operations for a single customer within fifty road miles of a central location. A job may consist of the EPS PCBX™ CD unit(s) disposal operations at several different facilities for a single customer.

“Lost-time injury” means an injury related to the operation of the EPS PCBX™ CD unit(s) which results in an employee not performing his/her normal assignments during the workday and/or any successive workday following the day of injury.

“Major modification” means any change to capacity, design, operations, or any other changes significantly affecting, or having the potential to significantly affect, overall PCB destruction efficiency, performance, or environmental impact of the EPS PCBX™ CD unit(s) or process.

“Mobile operations” means those operations where the EPS PCBX™ CD unit(s) operates at a facility for less than 60 total cumulative days in any calendar year. Cumulative days do not have to be consecutive to count towards the 60 days. The 60-cumulative day compilation starts on the first day any component of the EPS PCBX™ CD unit(s) begins operating at the facility.

“MODEF” means mineral oil dielectric fluid.

“Operations” means the process of treating PCBs ≥ 50 ppm, including start-up (e.g., powering up, running any oil through the equipment) of the EPS PCBX™ CD unit(s), preparation of PCB waste feed, and decontamination of the EPS PCBX™ CD unit(s) and supporting components once treatment is terminated.

“ORCR” means the Office of Resource Conservation and Recovery, located at the EPA Headquarters.

“PCB” means polychlorinated biphenyls as defined in § 761.3.

“PCB Regulations” are the regulations at 40 CFR 761.

“Permanent operations” means those operations where the EPS PCBX™ CD unit(s) operate(s) at a facility for 60 total cumulative days or longer in the same year. The 60-cumulative day compilation starts on the first day any component of the EPS PCBX™ CD unit(s) begins operating at the facility. Cumulative days do not have to be consecutive to count towards the 60 days.

“Process waste” means wastes generated by EPS’s PCBX™ process.

“Regional EPA Administrator” means the Regional Administrator in the Region in which EPS is or will be operating.

“Regional PCB Coordinator” means the contact listed on the following website for the EPA Region in which the EPS PCBX™ CD unit(s) is/are or will be operating:
[https://www.epa.gov/pcbs/epa-regional-polychlorinated-biphenyl-pcb-programs#pcb coordinator](https://www.epa.gov/pcbs/epa-regional-polychlorinated-biphenyl-pcb-programs#pcb%20coordinator)

“Site” has the same definition as “Facility.”

“SDS” means material safety data sheets.

“Spill” has the same meaning as “Spill” as defined in EPA's PCB Spill Cleanup Policy in § 761.123.

CONDITIONS OF APPROVAL

Per 40 CFR 761.60(e), this approval waives otherwise applicable requirements of §§ 761.60(a) and 761.70. This alternative disposal approval may reference additional requirements of part 761 but EPS should not rely solely on this approval for all requirements related to PCBs or the disposal of PCB waste. In the event that the information contained in the application or other supporting documents differs from the conditions specified in this document, the conditions of this document shall govern.

1. Feedstock Restrictions

- a) The EPS PCBX™ CD units shall only treat MODEF and diesel oil.
- b) Except as described in paragraph (1)(f) below, EPS shall not treat MODEF containing PCBs in concentrations greater than 17,780 ppm.
 - 1) EPS shall not blend or dilute MODEF containing PCBs to reduce the PCB concentration of the feedstock material to meet treatment levels (i.e., to within the appropriate maximum permissible concentration for treatment). EPS shall not dilute MODEF containing PCBs in concentrations greater than 50 ppm with MODEF containing PCBs in concentrations less than 50 ppm.
- c) Except as described in paragraph (1)(f) below, EPS shall not treat diesel oil containing PCBs in concentrations greater than 1,600 ppm.
 - 1) EPS shall not blend or dilute diesel oil containing PCBs in concentrations greater than 1,600 ppm to reduce the PCB concentration of the feedstock material to meet treatment levels (i.e., to within the appropriate maximum permissible concentration for treatment). EPS shall not dilute diesel oil containing PCBs in concentrations greater than 50 ppm with diesel oil containing PCBs in concentrations less than 50 ppm.
- d) Prior to treatment, EPS shall characterize the feedstock for PCBs (Aroclor type and concentration) using EPA Method 8082A (SW-846). The feedstock shall be sampled and analyzed by gas chromatography in accordance with the procedures described in EPS's April 2013 application.

- e) Whenever feedstock (MODEF or diesel oil) is handled through an intermediate tank(s) or tote(s) prior entering the treatment pipes of the PCBX™ CD unit such as when treating bulk quantities of oil, the tanks must be clearly labeled. Feed tanks must be labeled so as to distinguish them from treated product tanks. Example labels include "Feed Tank," "Treated Product Tank," and "Intermediate, In-Process Holding Tank."
- f) EPS may propose a modification to this condition in the future, should it successfully demonstrate to the EPA through an approved demonstration test that EPS's PCBX™ CD process is capable of treating higher concentrations of PCBs. Authorized EPA representatives will witness the demonstration and obtain split samples for verification of analytical results.

2. Operating Conditions

Operation of the PCBX™ CD unit(s) shall be subject to the conditions of this approval and shall be consistent with the information included in EPS's application dated April 1, 2013.

Compliance with the parameter limits in parts 2(b) and 2(e) of this condition is required at all times, irrespective of whether any parameter deviation coincides with the 30-minute recording interval in Condition 8(a)(5).

a) Treatment Units Covered by this Approval

EPS shall only conduct PCB treatment operations, under the conditions of this approval, with the following PCBX™ CD unit(s). See Condition 19 on how to incorporate additional units.

Name of the Unit	Vehicle Identification Number (VIN)	License Plate
Rig 2 Processing Trailer	1H2V04027BC006501	OH TMH-2751
Rig 6 Processing Trailer	1H2V04524EB002201	OH TMC-9608
Rig 8 Processing Trailer	1JJV532Y8VL412739	OH TQM-5003

b) Treatment Unit Shutdown

The PCBX™ CD unit(s) shall be shut down (i.e., stop the feed and run clean oil through the system) if either of the following limits are exceeded for more than five (5) minutes:

- 1) A maximum reagent temperature of 250°F (121°C);
- 2) Reactor temperatures above the safety limit of 260°F (127°C);
- 3) A maximum reactor pressure of 20 psi;
- 4) Pressure built-up of 60 psi maximum at the Fuller's Earth tank's pressure gage in the system; and

- 5) A nitrogen blanket pressure below 90 psi.

EPS shall monitor each of these parameters (e.g., by use of an alarm system) and immediately take corrective actions if any of the aforementioned limits are exceeded. After a shutdown due to exceedance of any of these limits, EPS shall take additional corrective measures to prevent further exceedances before resuming operations. If automatic shutdowns due to exceedances of any of these conditions occur more than three (3) times within a year, EPS shall follow the requirements in Condition 5. Any one (1) exceedance of any of the conditions counts towards the three (3).

EPS shall also shut down the PCBX™ CD unit(s) upon failure of the monitoring and/or recording equipment for the parameters specified in Condition 8(A) for more than five (5) minutes. After such a shutdown is triggered, EPS shall not resume treatment operations until the equipment is repaired or replaced with functional equipment.

c) Flow Rate

The feed oil flow rate of the PCBX™ CD unit(s) shall be in the range of 1900 kg/hr to 3410 kg/hr.

d) Nitrogen

EPS shall operate the PCBX™ CD unit(s) using an oxygen-free, nitrogen-filled internal environment.

e) Minimum Reaction Temperature

EPS shall maintain a minimum temperature of 245°F in the reactor during the reaction time. This value shall be recorded every 30 minutes during operations of the PCB treatment system.

f) Processing of Energized Transformers

Pursuant to recommended conditions included in the EPS operating approval application, EPS shall not process transformers while energized unless the following criteria are met:

- 1) Transformer voltage rating: 69 KV maximum
- 2) Transformer capacity: 200 gallons minimum
- 3) Dielectric constant: 22 KV minimum
- 4) Level gauge: properly working
- 5) Water concentration: 60 ppm maximum
- 6) Flow rate:
 - 200 to 350 gallons 10 GPM maximum

- 350 to 500 gallons 13 GPM maximum
- Over 500 gallons 15 GPM maximum

7) Safe access to all valves

3. Sampling Plan and Feedstock Concentration

EPS shall follow the sampling plan in the submitted application for sampling contaminated feedstock at each facility to ensure compliance with Condition 8(a) of this permit.

4. Treatment Verification and Disposal of MODEF and Diesel Oil That Could Not Be Adequately Treated

- a) EPS shall sample each batch of treated MODEF or diesel oil at the facility where the PCBXTM CD unit(s) is/are conducting the treatment and analyze the samples by gas chromatography for the concentration of PCBs. The treated MODEF or diesel oil shall be sampled and analyzed by gas chromatography in accordance with the procedures described in EPS's application.
- b) If the concentration of PCBs in a batch of treated MODEF or diesel oil is ≥ 2 ppm PCBs, EPS shall either:
 - 1) Repeat treatment of that batch of MODEF or diesel oil in the PCBXTM CD unit(s) until the MODEF or diesel oil is reduced to less than 2 ppm PCBs for up to three (3) total treatments of that batch (each time that sodium is added to a batch is considered one treatment); or
 - 2) Dispose of that batch of MODEF or diesel oil in accordance with 40 CFR part 761, subpart D as if it contains the PCB concentration of the pre-treated feedstock prior to any dilution that may have occurred. The burden of ensuring proper disposal (including shipment to an appropriate disposal facility) shall be on EPS.

5. Requirements Upon Repeated Failure to Achieve PCB Treatment Levels of < 2 ppm

Immediately upon the third incidence of failure to achieve the required treatment levels (as described in Condition 4(b)) within any year, EPS shall cease operation of the PCBXTM CD unit(s) and shall notify the ORCR HQ contact identified in Condition 13 and the Regional PCB Coordinator by phone within three (3) business days after the third incidence of failure. EPS shall also submit a written report to the ORCR HQ contact identified in Condition 13 and the Regional PCB Coordinator within seven (7) days of ceasing operation. The written report shall include information on the conditions under which the treatment failed, the likely cause(s) of the treatment failure, the final disposal location of the waste, steps being taken to improve the performance of the unit(s), and the estimated time before the unit(s) is/are able to perform as specified in this approval. In such instances, the malfunctioning PCBXTM CD unit(s) shall not resume operation until the problem has been corrected to the satisfaction of the ORCR HQ contact identified in Condition 13 and until EPS receives approval from ORCR via written or email correspondence.

6. Unit Damage

EPS shall report any damage to the PCBX™ CD unit(s) that may impact the unit(s) ability to operate in accordance with this approval within two (2) business days by phone to the PCB Regional Coordinator and the ORCR HQ contact identified in Condition 13. Within five (5) business days, EPS shall submit a written report that addresses such damage to the Director of ORCR and the PCB Regional Coordinator. The written report shall include information on the incident causing the damage, the cause(s) of the incident, steps being taken to repair the unit(s), and the estimated time before the unit(s) is/are able to perform as specified in this approval. EPS shall notify the PCB Regional Coordinator and the ORCR HQ contact identified in Condition 13 by phone and receive approval from ORCR via written or emailed correspondence before resuming operations. The EPA may require a performance demonstration or submittal of appropriate data and/or information before EPS may resume operations to confirm that the unit(s) has/have been fully repaired.

7. Generated Waste Disposal and Handling Requirements

- a) EPS shall sample and analyze any non-aqueous liquid wastes generated by the EPS PCBX™ CD unit(s).
 - 1) EPS shall dispose of non-liquid and non-aqueous liquid wastes with PCB concentrations of ≥ 2 ppm (e.g., sludge, Fuller's earth filter media, and disposable personal protective equipment) as if they contained the PCB concentration of the pre-treated feedstock prior to any dilution that may have occurred (see §§ 761.50 and 761.60 for disposal options).
 - 2) EPS may dispose of non-liquid and non-aqueous liquid process wastes generated by the PCBX™ CD unit with pre-diluted (if applicable) concentrations < 2 ppm as non-regulated PCB materials, but final disposition of such waste must comply with all local, state, and federal regulations.
- b) EPS shall sample and analyze any aqueous liquid process streams.
 - 1) For aqueous liquid process wastes containing PCBs at concentrations ≥ 0.5 ppb and < 3 ppb, EPS shall dispose of these wastes in compliance with § 761.50(a)(3). For aqueous liquid process wastes containing ≥ 3 ppb, EPS shall dispose of these wastes as if they contained the PCB concentration of the pre-treated feedstock (e.g., MODEF) that was being treated at the time the aqueous liquid process waste was generated.
 - 2) For aqueous liquid process wastes containing < 0.5 ppb PCBs (pre-diluted concentrations if applicable), EPS may manage these wastes as non-regulated PCB materials, but final disposition of such aqueous liquid process streams must comply with all local, state, and federal regulations.
- c) EPS shall comply with the labeling and marking requirements for storage, holding, and process tanks (PCB Containers) at §§ 761.40 and 761.45 for all aqueous liquid process

streams which contain PCB levels ≥ 3 ppb and for non-liquid and non-aqueous wastes that contain PCB levels ≥ 2 ppm.

8. Monitoring, Recordkeeping, and Reporting Requirements

- a) EPS shall monitor, record, and maintain the following PCBXTM CD unit(s) operating parameters and information:
- 1) Estimated quantity of MODEF or diesel oil treated in each treatment batch;
 - 2) Concentration of PCBs in the MODEF or diesel oil feedstock, including both the highest known pre-diluted PCB concentration (if applicable) as well as the actual PCB concentration, for each treatment batch;
 - 3) Amount of dechlorination reagent used in each treatment batch and per job;
 - 4) Post-treatment concentrations of PCBs in the MODEF or diesel oil for each treatment batch;
 - 5) Any parameters measured during the procedure, including but not limited to temperature and pressure of reaction in the EPS PCBXTM CD unit(s), which shall be recorded every 30 minutes during each treatment batch beginning before any heating is done and ending when the treated MODEF or diesel oil is about to be removed;
 - 6) Any exceedance of any of the operating parameter limits in Conditions 2(b) and 2(e) irrespective of whether any parameter deviation coincides with the 30-minute recording interval in Condition 8(a)(5));
 - 7) A copy of the analytical report (including the associated gas chromatogram) to determine the final concentration of decontamination solvent or wastewater not sent for disposal;
 - 8) Quantity of PCB wastes generated at each job, including MODEF and diesel oil that could not be successfully treated to achieve levels of below two (2) ppm PCBs;
 - 9) Identification of facilities used to dispose of the PCB wastes listed in Condition 4(b) and Condition 7, and method of disposal;
 - 10) Date, time, and duration of treatment batches;
 - 11) Name and business address of the PCBXTM CD unit(s) operator and supervisor for each treated batch;
 - 12) The name and address of each client whose MODEF or diesel oil was treated by the PCBXTM CD unit(s);

- 13) A copy of the gas chromatograms from the tests required by Conditions 1, 4, and 7;
 - 14) A summary of the total number of gallons of MODEF and diesel oil treated by the PCBXTM CD unit(s) during the previous year;
 - 15) Any and all reports required by Conditions 5, 6, and 10; and
 - 16) Documentation that EPS and the facility at which EPS is operating have obtained any necessary approvals and permits from federal, state and local agencies.
- b) EPS shall develop, compile, and maintain the records in Condition 8(a), above, in a paper log or electronically, as follows:
- 1) EPS shall maintain and make available for inspection, the records for all ongoing and past PCB treatment jobs conducted by each PCBXTM CD unit in the previous five (5) years in the trailer for that unit;
 - 2) EPS shall compile the records for treatment conducted at each facility within three (3) days of the end of treatment at that facility (i.e., the end of a job) and keep these documents at its main office in Wheeling, West Virginia, or another secure location, from the three-day point until at least ten (10) years after the disposal/treatment date of the last job;
 - 3) If records are electronic, EPS shall create a backup of all records in a manner that would prevent them from being destroyed if the original records were destroyed; and
 - 4) EPS shall make the original records or, for electronic files, backup records if the originals have been destroyed, available for inspection by authorized representatives of the EPA upon request.
- c) If EPS initiates and completes closure of the PCBXTM CD unit(s) while this approval is in force or if the approval expires, EPS shall electronically submit all records to the Director of ORCR within 90 days of certifying closure or expiration, whichever comes first.
- d) EPS shall maintain annual records on the disposition of all PCBs and submit them annually to the Director of ORCR in compliance with 40 CFR 761.180(a).

9. Advance Notification of Operations

a) 30-Day Advance Notification of Operations

EPS shall, at least 30 days prior to locating its PCBXTM CD unit(s) at a facility, send a 30-day advance notification of operations by submitting the information specified in condition 9(b) to the ORCR HQ contact identified in Condition 13, and to the appropriate EPA Regional PCB Coordinator, state environmental agency, and local government environmental entities (if applicable) based on the location where operations will occur.

An acceptable example of a 30-day advance written notification of operations is included in Appendix V.

b) Information to Be Contained in the 30-Day Advance Notification of Operations

The following information shall be included in the 30-day advance notification of operations discussed in Condition 9(a). The information specified in Conditions 9(b)(1) and 9(b)(2) will be available to the public and may be used to schedule EPA TSCA inspections and facilitate oversight of operations.

- 1) Company Identifications: name, address, contact person name and phone number, the vehicle identification number (VIN) or state Department of Motor Vehicle license plate number for the mobile unit(s), and the number to a phone that is dedicated to the EPS operations at a facility; and,
- 2) When and where the disposal/treatment will occur, including: street address, a name/phone number for the facility manager (if applicable), a brief description of the facility, the date the PCB activity is scheduled to begin, and the estimated duration (in days) of the operations.
- 3) Name of the company that owns the facility where the unit will be operating, as well as their mailing address, and a contact person name/phone number;
- 4) A name, title, and phone number for: the EPA ORCR contact, EPA Regional contact, State contact, and local contact; and
- 5) Description of the nature of the PCB activity, including: the type of disposal/treatment process, estimates of the amount of MODEF and diesel oil treated and estimates of PCB concentration in the MODEF and diesel oil before treatment. These estimates shall be based on analytical data provided by the customer and/or analytical data from EPS.

c) Changes to 30-Day Advance Notifications of Operations

- 1) If a change or changes to the information submitted in the original 30-day advance notification of operations for a particular facility is, or are, necessary before operations have begun under that notification, EPS shall (with the exceptions of changing the schedule to an earlier treatment operations start date and changing the facility location - see below) send an email that describes the change or changes to those required to be notified by Condition 9(a) in advance of the operating start date that is stated in the original 30-day advance notification of operations. EPS may initiate the PCB activities as originally scheduled after they have submitted the change(s) provided the change(s) does not require modification of this operating approval.
- 2) If a change or changes to the information submitted in the original 30-day advance notification of operations for a particular facility is, or are, necessary after operations have begun under that notification, EPS shall (with the exceptions of changing the facility location - see Condition 9(c)(3) below) send an email that

describes the change or changes to those required to be notified by Condition 9(a). EPS may continue the treatment/disposal activities after submitting the change(s), provided the change(s) do not require modification of this operating approval.

- 3) If EPS wishes to operate at a facility other than the facility identified in the submitted 30-day notification of operations or change the scheduled start date to an earlier date, EPS shall submit a new 30-day advance notification of operations to those required to be notified by Condition 9(a) (which may differ from those notified by the original 30-day advance notification of operations). EPS shall also notify those individuals to whom the original 30-day advance notification of operations was submitted of the date or location change. In such circumstance EPS shall not initiate activities earlier than 30 days after submitting the new 30-day advance notification of operations.

d) Additional Notifications

In addition to the 30-day advance notification of operations prescribed in Condition 9(a) of this approval, EPS shall provide three types of additional notifications:

- 1) EPS shall provide the following information to local fire departments and other applicable local emergency response authorities prior to operating in the jurisdiction where EPS intends to operate.
 - A. The 30-day advance notification of operations described in Condition 9(b).
 - B. Safety Data Sheets (SDS) for the principal chemicals in the treatment unit, and/or to be treated in the treatment unit (including PCBs, chemical reagents (e.g., sodium), and any other chemicals (e.g., nitrogen gas), if applicable);
 - C. The approximate quantities of principal chemicals in each treatment unit, and/or to be treated in the treatment unit; and
 - D. General location of where the EPS PCBXTM CD unit(s) will be at the facility.
- 2) EPS shall provide a 30-day advance non-confidential written notification of intent to operate posted in a location where the community located nearest the facility will likely see it (for example, the local newspaper, news website). However, when the PCBXTM CD treatment unit(s) will operate at the same location multiple times during the same calendar year, EPS may provide the 30-day advance notification of intent to operate required under this condition on a yearly basis, so long as the information included in the original notice has not significantly changed. This notification shall include the following information:
 - A. Contact information for an EPS representative;
 - B. Contact information for a facility representative;

- C. General location of where the EPS PCBXTM unit(s) will be situated at the facility;
 - D. Brief description of the type of waste being treated;
 - E. Brief description of the EPS treatment process;
 - F. Anticipated dates of operation at the facility; and
 - G. Link to EPA website where this approval document and the 30-day advance notifications of operations are posted.
- 3) Before treating PCB MODEF or diesel oil in the PCBXTM CD unit(s), EPS shall either post this approval document prominently (or provide a link) on its website where visitors would reasonably expect to see announcements on environmental projects, or link to the EPA website where this approval document is posted. Also, EPS shall either post (or provide a link to) the information specified in Conditions 9(b)(1) and 9(b)(2) on the same web page as the approval, or link to the EPA website where these notifications are posted. Both the approval and the information in Conditions 9(b)(1) and 9(b)(2) of the 30-day advance notifications of operations shall remain posted until 60 days after:
- A. This approval is terminated and permanent closure has been completed in accordance with Condition 17(d);
 - B. This approval expires (provided EPS has not followed the procedures described in Condition 23 to allow the approval to continue in force); or
 - C. The unit(s) is/are closed in accordance with Condition 17(d).

10. PCB Spills

- a) In the event EPS believes, or has reason to believe, that a spill (as defined in EPA's PCB Spill Cleanup Policy in 40 CFR 761.123) of PCBs has, or may have, occurred from any activities or devices related to EPS's operations, EPS shall: notify the Regional PCB Coordinator and the ORCR HQ contact identified in Condition 13 by phone immediately after initial response actions have been taken to ensure the protection of human health and the environment. EPS shall control and clean up any spills of PCBs or other fluids as provided in the Spill Prevention, Control and Countermeasure Plan provided in the application.
- b) In addition, EPS shall submit a written report to the appropriate Regional PCB Coordinator and the Director of ORCR no later than 15 business days after the spill occurred that describes the: 1) spill; 2) known or suspected cause(s) of the spill; 3) operations that were being conducted prior to, and during, the spill; 4) cleanup actions

conducted; and 5) changes in operations that EPS implemented to prevent such spills from occurring in the future.

- c) EPS shall not resume operations until the cause of the spill has been determined and corrected to the satisfaction of the EPA, and a written or emailed approval is received from the ORCR HQ contact identified in Condition 13.
- d) EPS shall also report PCB spills in accordance with applicable federal, state, and local requirements.

11. Health and Safety

- a) EPS shall maintain and operate its PCBXTM CD mobile unit(s) in a way that minimizes the possibility of a fire, explosion, or any unauthorized release of PCBs to air, soil or surface water which may pose an unreasonable risk of injury to health or the environment.
- b) EPS shall take all necessary precautionary measures to ensure its operations are in compliance with applicable health and safety standards, as required by this approval and other applicable federal, state and local laws, regulations and ordinances.
- c) EPS shall report by phone to the Regional PCB Coordinator and the ORCR HQ contact identified in Condition 13 by the end of the business day immediately following an incident that resulted in any lost-time injury occurring as a result of the EPS PCBXTM CD equipment or operations. EPS shall submit a written report describing the incident to the Director of ORCR within five (5) business days.
- d) At all times, EPS personnel operating any EPS PCBXTM CD unit(s) shall have a device such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio capable of summoning emergency assistance from local fire departments, police departments, or state or local emergency response teams.
- e) At least once a year, EPS shall test and maintain (to the extent necessary to assure its proper operation in time of emergency) all unit and/or facility communications or alarm systems, fire protection equipment and spill control equipment.
- f) Site-Specific Safety Plan
 - 1) Before treating any PCB-contaminated oil, EPS shall develop and maintain at the facility a site-specific safety plan for the activities covered by this approval. EPS shall also provide a copy of the site-specific safety plan to the emergency coordinator of the facility where it intends to operate prior to the EPS PCBXTM CD unit(s) arriving at the facility. EPS shall notify the facility where it will operate of the possible fire hazards associated with using the EPS PCBXTM CD unit(s). At a minimum, EPS shall include the following site-specific information in each site-specific safety plan:
 - A. Scope of work (description of the treatment process, maximum volume of contaminated oil that might be found at any given time within the EPS

PCBXTM CD unit(s) or in directly associated storage containers, and any hazardous materials to be used);

- B. Project personnel, including roles, responsibilities and qualifications, name of on-site safety coordinator, and name(s) of any on-site cardiopulmonary resuscitation (CPR)/First-Aid certified person(s);
- C. Emergency contact information, including local authorities (e.g., local fire and police departments) and nearest medical building that would accept patients contaminated with chemicals;
- D. Hazard identification (e.g., potential for sodium reactions/fires) and control/mitigation measures;
- E. Names of all chemicals used at the facility by EPS in its PCBXTM CD unit(s) along with approximate quantities and the corresponding material safety data sheets (SDS);
- F. Emergency action plan(s) specifying the following:
 - i. Contact information – name(s) and contact information for EPS personnel responsible for mobile unit(s) operation and facility personnel responsible for oversight of EPS's operations at the facility, and the persons responsible for handling emergencies (with 24-hour a day contact in the event of an emergency), including both phone numbers (office and home) and email addresses. This list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates;
 - ii. Evacuation plan(s);
 - iii. Response procedures for reasonable emergency scenarios;
 - iv. First aid location(s);
 - v. Eye-wash station location(s);
 - vi. Fire extinguisher and any other fire-fighting equipment location(s);
 - vii. Location of Safety Data Sheets (SDS);
 - viii. Flammable storage area(s); and
 - ix. Smoking/non-smoking areas.

- 2) EPS shall submit a copy of any site-specific safety plan to the ORCR HQ contact identified in Condition 13 or the applicable EPA Regional office upon request.
- 3) EPS shall immediately revise the site-specific safety plan if any of the relevant information in this approval or the safety plan itself changes.

g) Emergency Coordinator

EPS shall, at all times, have at least one designated employee either at the operating site premises or on call (i.e., available to respond to an emergency by reaching the operating site within 30 minutes) with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the site-specific safety plan, operations and activities at the site, the location and characteristics of waste handled, and the facility layout, including the hazards associated with the facility location where the PCBXTM CD unit(s) is/are operated.

h) Emergency Procedures

- 1) Whenever there is an imminent or actual release of PCBs to air, soil, or surface water, or an incident that results or may result in injury to health or the environment, for example from fire, spill, or explosion, the EPS emergency coordinator (or his/her designee when the emergency coordinator is on call) shall immediately:
 - A. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
 - B. Notify appropriate federal, state and/or local emergency response entities (e.g., fire departments) if their help is needed.
 - C. Use the Emergency Action Plan described in Condition 11(f)(1)(F) as a resource to expedite the emergency coordinator's response.
- 2) Whenever there is an imminent or actual release of PCBs to air, soil, or surface water, or an incident that results or may result in injury to health or the environment, for example, from fire, spill, or explosion, the emergency coordinator shall as soon as practical identify the character, exact source, amount, and real extent of any released materials. The emergency coordinator shall also assess possible hazards to health or the environment that may result from the release or emergency incident. This assessment shall consider both direct and indirect effects of the release or emergency incident (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any PCB surface water run-off from water or chemical agents used to control fire and heat-induced explosions).
- 3) If the emergency coordinator determines that the PCBXTM CD unit(s) has/have had a release of PCBs or emergency incident which presents or may pose an unreasonable risk of injury to health or the environment outside the site or facility, he/she shall report the findings as follows:

- A. If the assessment indicates that evacuation of local areas may be advisable, the emergency coordinator shall immediately notify appropriate local authorities; and
 - B. The emergency coordinator shall immediately notify either the government official designated as the on-scene coordinator for that geographical area, or the National Response Center (using their 24-hour toll free number 1-800-424-8802). The notification must include:
 - i. Name and telephone number of reporter;
 - ii. Name and address of facility;
 - iii. Time and type of incident (e.g., release, fire);
 - iv. Name and quantity of material(s) involved, to the extent known;
 - v. The extent of injuries, if any; and
 - vi. The possible hazards to human health, or the environment, outside the facility.
- 4) During an emergency, the emergency coordinator shall coordinate with the facility emergency coordinator and take all reasonable measures necessary to ensure that releases or emergency incidents do not recur or spread to other PCB waste at the operating site. These measures must include, where applicable and when possible, safely shutting down the CD treatment unit(s), collecting and containing released waste, removing or isolating containers and equipment, and other measures that can be implemented to protect health and the environment.
- 5) The emergency coordinator shall coordinate with the facility's emergency coordinator to assess if any facility operations/processes need to be suspended or if any immediate measures should be taken to minimize the risk of injury (e.g., from the release of toxics or the spread of fire) that could occur due to the nature of facility operations and chemicals/products stored at the facility.
- 6) Immediately after a release or emergency incident has been contained, EPS shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release or emergency incident at the facility.
- 7) EPS shall notify the Regional PCB Coordinator and the ORCR HQ contact identified in Condition 13 of the release or emergency incident by phone immediately after initial response actions have been taken to ensure the protection of health and the environment.
- 8) EPS shall submit a written report to the appropriate EPA Regional PCB Coordinator, ORCR HQ contact, and the Director of ORCR identified in

Condition 13 no later than 15 business days after the emergency incident occurred that describes the: a) incident; b) cause(s) of the incident, c) operations that were being conducted prior to, and during, the emergency; d) cleanup actions conducted; and e) changes in operations that EPS implemented or will implement to prevent such incidents from occurring in the future.

- 9) EPS shall not feed any PCB material into the EPS PCBXTM CD unit until the cause of the emergency incident has been determined and corrected to the satisfaction of the EPA. EPS shall not resume PCB treatment operations until written or emailed approval is received from the ORCR HQ contact identified in Condition 13.

- 10) EPS shall also report PCB emergency incidents in accordance with applicable federal, state, and local requirements.

i) Fire Suppression System

If operating indoors, EPS shall locate and operate its PCBXTM CD unit(s) only at a facility that has adequate fire suppression capabilities (e.g., sprinkler, standpipe or other specialized system). Separate and distinct fire suppression systems may be necessary based on the location of the EPS PCBXTM CD unit(s) relative to the location of the other chemicals in the building and based on the compatibility of the fire suppression system with the fire risk that is being mitigated in that particular area. It is the responsibility of EPS to evaluate whether the fire suppression system is appropriate to address the specific hazards based on chemical compatibility and the design and location of the EPS PCBXTM CD unit(s) at the facility, and taking also into account the materials that may be stored at the facility. EPS also shall only operate in a building that is in compliance with applicable federal, state, and/or local fire suppression requirements.

j) Fire Detection System

If operating indoors, EPS is only permitted to locate and operate its PCBXTM CD unit(s) at a facility that has an active (24 hours/day) fire detection system (such as smoke alarms) that immediately notifies facility workers, occupants, facility emergency responders (whether they are on-site or off-site), and local emergency responders (e.g., fire department) of a fire emergency. Each of the EPS PCBXTM CD units shall have its own active (24 hours/day) fire detection system that also meets the requirements discussed in this paragraph, for all indoor and outdoor operations.

k) Fire Fighting Equipment

EPS shall maintain and clearly label fire extinguishers and other firefighting equipment that are capable of suppressing 1) fires that may be associated with materials treated by the EPS PCBXTM CD unit(s) and 2) fires that may be associated with materials used by the EPS PCBXTM CD unit(s) (e.g., sodium reagent). Labeling shall be based on the compatibility of the extinguisher or equipment with the fire hazard and shall be available at each PCBXTM CD unit and within 25 feet of all work activities and operations. Multiple types of fire extinguishers and firefighting equipment may be necessary to

address different fire hazards posed by the EPS PCBXTM CD unit(s) and the wastes that it/they treat(s). All fire extinguishers shall have the following:

- 1) Annual inspection tag,
- 2) A gauge indicating fully charged,
- 3) Pin with security seal, and
- 4) Instructions on how to use.

l) Mobile Unit Placement

The PCBXTM CD unit(s) shall be located at an adequate safety distance so that operations will not pose unreasonable risk of injury to health or the environment. When not operating at EPS's facility in Wheeling, West Virginia, the PCBXTM CD unit(s) shall be located at least 20 feet away from any storage area for flammable or combustible materials or the minimum necessary to prevent releases and emergency incidents, whichever is greater. The PCBXTM CD unit(s) shall not be located next to a sensitive ecosystem if the treatment unit is operated outdoors.

m) Required Aisle Space

EPS shall not locate or operate the CD unit(s) and associated equipment, storage containers, etc., in an area that does not allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and disposal/treatment equipment operation in an emergency.

n) Sodium Preparation System

EPS shall adequately maintain and locate the sodium preparation system at a safe distance from, but no less than 10 feet from, any flammable or combustible materials (e.g., mineral oils, oily rags) inside the EPS PCBXTM CD unit(s), and no less than 20 feet away from any storage area for flammable or combustible materials (e.g., flammable liquid storage tanks or drums) that are either under the control of EPS or the facility where they are operating. While the sodium preparation unit(s) is/are in operation, EPS personnel shall be on site monitoring the unit(s) from within 30 feet at all times.

o) Start-up Phase Inspection

During the start-up phase of a treatment batch, EPS shall only circulate clean oil through the PCBXTM CD treatment system. EPS shall visually inspect the unit(s) for leaking or dripping connections during the startup phase. If any are identified, EPS shall perform the appropriate maintenance procedures (e.g., tighten connections, replace gaskets, packings or any other type of mechanical seal) before the unit(s) is/are put online in the treatment phase for processing. PCB waste shall not be fed for treatment until the system exhibits no leaks and is operating pursuant to the operating requirements included in this approval.

12. Security

EPS shall ensure its PCBXTM CD unit(s) is/are secure (e.g., with a fence, alarm system, signage) such that only those individuals participating in the operations and approved visitors are allowed in the area of the EPS PCBXTM CD unit(s) regardless of whether the unit(s) is/are operating.

13. Notifications and Reports

Notifications or reports required to be mailed to the Director of ORCR shall be mailed to: Director of ORCR, 1200 Pennsylvania Avenue N.W., Mail Code: 5303P, Washington, D.C. 20460. For electronic submission to the Director of ORCR or ORCR HQ contact, EPS shall email the information to ORCRPCBs@epa.gov. Wherever practical, email is preferable to phone and mail communication, except where specified otherwise.

Phone numbers for the EPA Regional PCB Coordinators can be found on the following website: <https://www.epa.gov/pcbs/epa-regional-polychlorinated-biphenyl-pcb-programs>. The ORCR HQ contact is Lilybeth Colón, 703-308-2392 or ORCRPCBs@epa.gov.

14. Agency Approvals/Permits

Operation of the EPS PCBXTM CD unit(s) may not commence until EPS has obtained all required approvals/permits from federal, state, and local agencies. EPS is responsible for obtaining such approvals/permits. EPS shall not operate the PCBXTM CD unit(s) at the facility unless the facility has been granted any necessary approvals/permits. Once EPS has verified that both it and the facility (as applicable) have been issued all required approvals/permits, EPS shall document that verification in their operating records, as described in Condition 8.

15. Personnel Training

- a) EPS shall ensure that the personnel directly involved with the operation of the PCBXTM CD unit(s) are familiar with the requirements of this approval. In this regard, EPS shall keep copies of the following documents with the PCBXTM CD unit(s) at all times:
 - 1) This operating approval,
 - 2) EPS's operating approval application,
 - 3) EPS's demonstration test approval requests and associated demonstration test approvals issued by the EPA,
 - 4) The Spill Prevention, Control and Countermeasure Plan, and
 - 5) EPS's sampling and analytical procedures.
- b) EPS shall also maintain a copy of the sampling and analytical procedures in the laboratory conducting the analyses.

c) At a minimum, EPS shall train personnel on the following:

- 1) The type of fluid which may be treated using the EPS PCBXTM CD unit(s) (i.e., MODEF and diesel oil), and the upper PCB concentration limits for the fluids which may be treated;
- 2) The recordkeeping, notification, and reporting requirements identified in Condition 8 and required by this approval, and the location of records and retention times;
- 3) The handling and/or PCB waste disposal requirements for process waste and other materials generated during the operation of the EPS PCBXTM CD unit(s);
- 4) The safety, operating, and maintenance procedures, with an emphasis on the safe handling and use of the sodium reagent to prevent harmful sodium reactions;
- 5) The procedures for using, inspecting, repairing, and replacing EPS's (and the facility's, if applicable) mobile unit(s) equipment, including emergency and monitoring equipment, with an emphasis on the fire suppression equipment; and
- 6) The Spill Prevention, Control and Countermeasure Plan.

16. Waste and Equipment Transport Between Jobs Sites

EPS shall not transport untreated PCB fluids or contaminated material offsite on the EPS PCBXTM CD unit(s). EPS shall comply with any applicable U.S. Department of Transportation (US DOT) requirements in 49 CFR part 172 when transporting PCB-contaminated equipment (e.g., reactors, tanks) off-site on the unit. EPS shall comply with applicable marking requirements for PCB containers in 40 CFR 761.40, and decontaminate the unit by:

- a) Rinsing all hoses and pipes with clean solvent three times prior to transporting the PCBXTM CD unit(s) from the site, and treat the spent solvent in accordance with Condition 7; or
- b) Flushing all hoses and pipes at least two times with MODEF containing PCBs in concentrations less than 50 ppm into the reactor of the EPS PCBXTM CD unit(s) and treating the flushed MODEF in the reactor in accordance with Condition 7.

17. Closure Cost Estimate and Plan, Financial Assurance, and Permanent Closure

a) Closure Cost Estimate and Plan

- 1) Prior to issuance of this approval, EPS submitted to ORCR a written closure plan and closure cost estimate that identified the steps and quantified the estimated costs for the activities EPS shall conduct to permanently close the PCBXTM CD unit(s). The provisions of 40 CFR 761.65(e)(4)-(8) and (f)(2)-(4) shall apply, except as otherwise provided in the conditions of this approval.

- 2) The EPA may require EPS to adjust the closure plan or closure cost estimate to ensure there would be no unreasonable risk of injury to health or environment.

b) Financial Assurance

- 1) EPS shall obtain and submit financial assurance for closure to the Director of ORCR 60 days prior to commencing PCB treatment operations at any facility. Within 60 days of receiving the financial assurance, the Director of ORCR will respond in writing approving or disapproving of the financial assurance. If the Director of ORCR does not respond within 60 days of receiving the financial assurance, EPS may assume that it is complete and acceptable and proceed with their operations. EPS shall apply the financial assurance requirements in § 761.65(g) for commercial storage facilities to its PCBXTM CD units and comply with such requirements. EPS shall not operate any of its PCBXTM CD units without the necessary financial assurance. 40 CFR 761.65(g) references the financial assurance mechanisms specified in 40 CFR part 264 subpart H of the Resource Conservation and Recovery Act (RCRA). EPS may choose any of the financial assurance mechanisms or combination of mechanisms provided for in the regulations. The EPA may require variations in the wording of the instruments from that found at § 264.151. EPS shall maintain financial assurance until closure activities have been completed.
- 2) EPS shall provide evidence of the increased value of the financial assurance mechanism whenever necessary (e.g., annual inflation adjustment, change in closure cost estimate triggered by modification of closure plan) as required in § 264.143, which is incorporated by reference in § 761.65(g).
- 3) EPS shall also obtain financial assurance for the compensation of third parties for bodily injury and property damage caused by sudden and nonsudden accidental occurrences from, or related to, the EPS PCBXTM CD unit(s) operations and submit to the Director of ORCR at least 60 days prior to commencing operations. Within 60 days of receiving the financial assurance, the Director of ORCR will respond in writing approving or disapproving of the financial assurance. If the Director of ORCR does not respond within 60 days of receiving the financial assurance, EPS may assume that it is complete and acceptable and proceed with their operations. EPS shall comply with the RCRA regulations that address third-party financial assurance liability requirements (i.e., § 264.147).

c) Changes to the Closure Plan, Closure cost estimate, or Financial Assurance Mechanisms

If EPS wishes to change the closure plan, closure cost estimate, or financial assurance mechanisms due to factors other than inflation, EPS may submit an adjusted plan, cost estimate, or financial assurance mechanism (as applicable) to the ORCR HQ contact. The EPA will review the proposed change(s) and may require EPS to revise the adjusted closure plan, closure cost estimate, or financial assurance mechanism prior to approving it.

b) Permanent Closure

- 1) Failure to submit a request for renewal as described in Condition 23 will be treated as evidence of EPS intent to close the PCBXTM CD unit(s). If EPS does not submit a request for renewal before the time specified in Condition 23, EPS shall initiate closure procedures within 60 days of the last treatment of MODEF or diesel oil containing PCBs ≥ 50 ppm by the EPS PCBXTM CD unit(s).
- 2) In the event that EPS expects to cease operation permanently or for the remaining duration of the approval, EPS shall initiate closure procedures within 60 days of the last treatment of PCB MODEF or diesel oil by the PCBXTM CD unit(s).
- 3) EPS shall notify the Director of ORCR, in writing, at least 60 days prior to the date on which final closure of its PCBXTM CD unit(s) is expected to begin (see § 761.65(e)(6)(i)).
- 4) Within 60 days of completion of closure of the EPS PCBXTM CD unit(s), EPS shall submit by registered mail, a certification to the Director of ORCR that the PCBXTM CD unit(s) has been closed in accordance with the closure plan (see § 761.65(e)(8)).
- 5) During the closure activity period, EPS shall dispose of all contaminated system component equipment in accordance with the disposal requirements of 40 CFR 761 subpart D or decontaminate the equipment in accordance with § 761.79.
- 6) EPS shall submit records to the Director of ORCR within 90 days of concluding closure as required in Condition 8(c).

18. Ownership Transfer

- a) If EPS intends to transfer ownership of the EPS PCBXTM CD unit(s) and the transferee wants to operate the PCBXTM CD unit(s) under the same or similar terms as this approval, EPS shall notify the Director of ORCR, in writing, at least 90 days before transferring ownership of the EPS PCBXTM CD unit(s). EPS shall also submit to the Director of ORCR, at least 90 days before such transfer, a notarized affidavit signed by the transferee that states the transferee is seeking an approval to operate the PCBXTM CD unit(s). Failure of EPS to provide the EPA with this required written documentation of the transfer within the specified time frame would be a violation of this approval and the approval would immediately terminate upon the transfer of ownership.
- b) After receiving notification, the EPA may:
 - 1) Issue an amended operating approval substituting the transferee's company name for EPS's name;
 - 2) Require the transferee to conduct a demonstration test and/or apply for a new PCB disposal approval by either submitting a complete application request or a partial application request (e.g., that focuses on information that demonstrates the

transferee has the ability to comply with the terms and conditions of this approval, such as a summary of company personnel qualifications and previous training that are relevant to complying with the terms and conditions of this approval, or a summary of previous compliance history, if applicable); or

- 3) A combination thereof.
- c) So that there will be no lapse in financial assurance for the transferred PCBXTM CD unit(s), the transferee shall establish financial assurance for closure compliant with Condition 17 and submit it to the ORCR HQ contact before the approval will be amended to transfer ownership. The transferee shall select one of the financial assurance mechanisms listed in the PCB Regulations at 40 CFR 761.65(g). The EPA may require variations in the wording of the instruments from that found at § 264.151. The financial assurance mechanism shall be effective as of the date of final approval of the transfer (i.e., the date the amended approval is signed by the Director of ORCR).
- d) The transferee shall not operate the mobile unit unless the EPA either has amended this approval to allow for such operation or has issued a new approval to the transferee.

19. Additional Unit(s)

- a) EPS shall only conduct PCB treatment operations, under the conditions of this approval, with the PCBXTM CD units covered by this approval. EPS shall not conduct PCB treatment operations in other PCBXTM CD units not covered by this approval until EPS submits a request to the Director of ORCR to modify this approval (i.e., to add the new PCBXTM CD unit(s) to this approval) and EPS receives approval from the Director of ORCR. The EPA may require EPS to conduct a demonstration test, if required, prior to receiving approval to conduct treatment operations in the new PCBXTM CD unit(s).
- b) Requests under Condition 19(a) to modify this approval shall include a written pre-operation report containing, at a minimum, the following information:
 - 1) Date of manufacture of the new PCBXTM CD unit;
 - 2) Identification and/or serial number of the new PCBXTM CD unit;
 - 3) Certification by an independent, registered professional engineer that the new PCBXTM CD unit is substantially identical to the original demonstrated PCBXTM CD unit in terms of engineering design, hardware, process capacity, quality and workmanship; and
 - 4) Certification by the Chief Executive Officer of EPS that the construction of the new PCBXTM CD unit has been completed in accordance with condition 19(b)(3).
 - 5) A list of all non-substantive changes made to the design and construction of the new PCBXTM CD unit which are not identical to the original PCBXTM CD unit (i.e., changes made to the unit even though the unit is considered substantially identical as described in Condition 19(b)(3) above).

c) The EPA, at its discretion, may:

- 1) Request additional information about the new PCBX™ CD unit(s);
- 2) Require EPS to conduct a demonstration test for the new PCBX™ CD unit(s) prior to making a determination on the modification request to ensure the new PCBX™ CD unit(s) is/are capable of complying with the terms and conditions of this approval;
- 3) Approve the modification request by relying on engineering information and other data/information provided in Condition 19(a) and (b) and determine demonstration testing is not required prior to, or after, the new PCBX™ CD unit(s) begin(s) treatment operations; or,
- 4) Deny EPS's approval modification request to add new PCBX™ CD unit(s) to this approval because the EPA, based on available data and information, concludes the new PCBX™ CD unit(s) is/are not capable of, or has/have not demonstrated the capability of, achieving the required performance standards and operating in a manner that does not pose unreasonable risk of injury to health and the environment.

20. Process/Equipment Modifications

EPS shall not make major modifications (e.g., changes of engineering design, ancillary hardware, or process capacity) to its PCBX™ CD unit(s) prior to receiving written approval from the Director of ORCR, to implement such major modifications. If EPS desires such major modifications, EPS shall submit an approval modification request to the Director of ORCR. The Director may, depending on the nature of the major modification request, require EPS to conduct a demonstration test to ensure the PCBX™ CD unit(s) continues to be in compliance with the applicable performance standards included in this approval and to ensure the PCBX™ CD unit(s) will continue to operate in a manner that does not pose unreasonable risk of injury to health and the environment.

21. Unit Operators

Operation of EPS's PCBX™ CD unit(s) shall be managed and overseen by a qualified EPS employee at all times the PCBX™ CD unit(s) is/are operated.

22. Approval Expiration Date

This approval shall become effective upon signature of the Director of ORCR and expire on September 14, 2022, except as otherwise specified in Condition 23.

23. Approval Continuation and Renewal

If EPS intends to continue to operate beyond the expiration date of this approval, EPS shall submit a complete operating approval renewal application request to the Director of ORCR at least 180 days prior to the expiration date of this approval. Upon submission of a complete approval renewal application, the EPA will inform EPS if a demonstration test plan will be

required. The demonstration test plan shall be submitted at least 90 days prior to the expiration date of this approval. If EPS submits this information to the EPA at least 180 days prior to the expiration date of this approval, this approval continues in force (i.e., does not expire) until the EPA either issues an approval renewal, a conditional approval renewal, or an approval request denial. EPS shall not be allowed to operate under revised operating conditions until the EPA issues EPS a fully renewed, and revised, operating approval. If EPS does not submit a complete approval renewal application request and, if required, a complete demonstration test plan to the EPA at least 180 days prior to the expiration date of this approval, this approval will expire as specified in Condition 22.

A complete approval renewal application and complete demonstration test plan are considered to be, at a minimum, information that was submitted in previously approved operating approval requests and demonstration test plans, with appropriate modifications or updates based on proposed revisions to the original approval, which may include treatment unit design and operation changes, updated safety protocols, and revised operating and testing procedures. For example, if EPS is seeking approval to treat another type of PCB material, or MODEX containing concentrations of PCBs $\geq 17,780$ ppm, or diesel oil containing concentrations of $\geq 1,600$ ppm, the approval application and demonstration test plan shall reflect those changes.

The EPA may require EPS to conduct another demonstration test to assure the EPA that EPS will continue to operate its PCBXTM CD unit(s) in accordance with the applicable performance standards and in a manner that does not pose an unreasonable risk of injury to health or the environment. As a result, EPS is encouraged to contact the ORCR HQ contact identified in Condition 13 in advance of 180 days prior to the expiration date of this approval if EPS intends to renew this approval in order to ascertain whether the EPA would require EPS to conduct a new demonstration test. This is especially important if EPS wants to make changes to its operating parameters.

24. Mobile versus Permanent Operation

This approval is for mobile operation of the EPS PCBXTM CD unit(s). If EPS operates the PCBXTM CD unit(s) at a facility for 60 cumulative days or longer within any year, then such operations are considered permanent operations requiring a separate approval, with the following exception. EPS may, pursuant to the provisions in Condition 24(b), request the EPA to waive the requirement to obtain a separate approval for permanent operations.

a) Advance Notification and Approval Process for Transitioning from Approved Mobile Operations to Approved Permanent Operations

The following requirements are applicable only if EPS intends to operate the PCBXTM CD unit(s) at a site for greater than 60 cumulative days in a year, and apply irrespective of whether EPS, pursuant to the provisions in part (b)(1) of this Condition, requests the EPA to waive the requirement to obtain a separate approval for permanent operations:

- 1) Notification Requirements Prior to Transitioning from Approved Mobile Treatment Operations to Approved Permanent Treatment Operations

- A. EPS shall provide advance written notification of their proposed intent to change to permanent operating status at least 7 days prior to the 60th cumulative day of operations to the Director of ORCR and the EPA Regional PCB coordinator.
 - B. This notification shall indicate whether EPS anticipates conducting operations in more than one EPA Region after leaving the permanent operations facility. If EPS anticipates conducting operations in more than one EPA Region after leaving the permanent operations facility, EPS shall include in the notification whether such anticipated treatment activities will use:
 - i. The PCBXTM CD unit(s) covered by this approval;
 - ii. New PCBXTM CD unit(s) that are identical to the units covered by this approval; or
 - iii. New PCBXTM CD unit(s) that are designed differently than the units covered by this approval.
 - C. EPS's future operating plans can impact whether the permitting authority will be the EPA HQ or the EPA Region pursuant to 40 CFR 761.60(e). Section 761.60(i) also gives the EPA the discretion to assign the authority to review and approve any aspect of a disposal system to the Director of ORCR in EPA HQ or to the Regional EPA Administrator.
- 2) Approval Requirements and Process for Transitioning from Approved Mobile Operations to Approved Permanent Operations
- A. EPS shall not operate for more than 60 cumulative days in a year at a facility without first obtaining a separate approval from the applicable EPA approval issuance authority to operate a permanently-based unit.
 - B. The EPA, at its discretion, may:
 - i. Require EPS to conduct a demonstration test;
 - ii. Require EPS to submit other information to the EPA including, but not limited to: a demonstration test plan, a demonstration test report, and an application.
 - iii. Require EPS to conduct public participation activities. If the EPA notifies EPS that public participation is required, the EPA may require EPS to make relevant documents, such as updated facility evaluations and updated approval applications, available to the public. The public participation activities may include providing a public notice to the community via an established treatment facility public mailing list or

an ad in a local newspaper and conducting a public meeting using procedures similar or identical to those described in § 270.42(b)(2)-(5). The EPA may also, based on the current or anticipated level of interest require EPS to, in addition to the activities discussed above, hold a public hearing using procedures similar to those described in §§ 124.12(a)(1), (2), and (4) and 124.12(b), (c) and (d).

iv. Approve or deny EPS's request.

C. Requirements described in parts (a)(2)(A) and (a)(2)(B) of this Condition do not apply if EPS operates pursuant to a waiver described in part (b) of this Condition.

b) Requirements and Process to Waive the Requirements in Part (a)(2) of this Condition

1) Waiver Request

- A. EPS may request to the EPA to waive the requirements in parts (a)(2)(A) and (a)(2)(B) of this Condition once per year. EPS shall submit such a request to the Director of ORCR at least 7 days prior to the 60th cumulative day operating at a particular facility.
- B. If, pursuant to part (b)(1)(A) of this Condition, EPS submits a request to the EPA to waive the requirements in parts (a)(2)(A) and (a)(2)(B) of this Condition, and the EPA has either approved or not yet made a determination on EPS's waiver request, then EPS may continue operating for up to ten (10) days after the 60th cumulative day at a facility pursuant to the conditions of this approval.
- C. If granted, such a waiver does not release a facility from any regulatory requirements to obtain other TSCA PCB approvals (e.g., a commercial storage approval).

2) EPA's Decision on a Waiver Request

The EPA may:

- A. Approve the waiver request and allow EPS to continue to operate pursuant to the conditions of this approval;
- B. Request additional information;
- C. Deny EPS's waiver request.

c) Transitioning Back to Mobile Operation Status after Approved Permanent Operations Have Concluded

- 1) EPS shall submit a notification 45 days in advance of mobilization to both the Regional EPA Administrator and the Director of ORCR if EPS would like to resume mobile operations.
- 2) Prior to mobilization, EPS shall comply with any applicable closure and decontamination requirements that are specified in the waiver and the applicable operating approval.
- 3) The EPA may modify this approval based on information that becomes available prior to allowing EPS to transition from permanent operation status to mobile operation status. EPS may also request the EPA to modify certain approval conditions that may not be appropriate or necessary for mobile operations.
- 4) If EPS anticipates transitioning back to mobile operation status after the expiration date of this approval, EPS shall submit a renewal application to the EPA no later than 180 days prior to the expiration date of this approval (see Condition 23) if they wish to ensure they can operate pursuant to this approval in the event the EPA does not make a final decision on the renewal application prior to this approval's expiration date.

DECISION TO APPROVE EPS's REQUEST TO CONDUCT PCB TREATMENT OPERATIONS

1. Approval to dispose of PCBs is hereby granted to Environmental Protection Services, Inc. (EPS), of Wheeling, West Virginia, subject to the conditions expressed in this approval and consistent with the materials and data included in the application and demonstration test plans and reports submitted to the EPA by EPS.
2. The EPA finds that the EPS PCBXTM CD units covered by this approval achieve a level of performance equivalent to a TSCA PCB incinerator and finds that, as reflected in the performance test results and as a result of the design aspects of the treatment system and the operating parameters and safety requirements included in this approval, the treatment units' operations will not pose an unreasonable risk of injury to health or the environment when operated in accordance with applicable regulations and the conditions of this approval.
3. The EPA reserves the right to impose additional conditions or revoke this approval when it has reason to believe that the EPS PCBXTM CD unit(s) is/are not achieving the relevant performance standards; it/they may pose an unreasonable risk of injury to health or the environment; new information requires changes; and/or if the EPA issues new regulations or standards that impact necessary conditions of this approval.
4. The EPA will make best efforts, taking into account the nature of the risk, to provide reasonable advance notice to EPS and to provide opportunity for EPS to comment on any modifications or termination of the approval. The EPA may require EPS to immediately suspend operations while the EPA is deciding whether to impose approval modifications or to terminate this approval.
5. Any departure from the conditions of this approval or the terms expressed in the application must receive prior written authorization from the Director of ORCR.
6. EPS shall be responsible for the actions of its employees and contractors that operate or assist in the operation of its PCBXTM CD unit(s) when those actions are related to performance of the process, including operating or moving the equipment.
7. EPS shall assume full responsibility for compliance with this approval and all federal, state and local regulations that apply to EPS's operation of the PCBXTM CD units, including, but not limited to, any malfunction, spill, pollutant release, incident, or other reporting requirements.
8. The EPA reserves the right for its employees or agents to inspect EPS's PCB treatment/disposal activities at any location at any reasonable time.

9. Violations of any applicable regulations or conditions of this approval may be subject to enforcement action and may result in termination of this approval. Violation of any requirement of this approval is a violation of 40 CFR 761.60(e) and 761.50(a) and may also be a violation of other provisions of 40 CFR part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.

9/14/2017
Date


Barnes Johnson, Director
Office of Resource Conservation and Recovery

APPENDIX I

COMPANY BACKGROUND

Environmental Protection Services, Inc. (EPS), located in Wheeling, West Virginia, specializes in the disposal and recycling of transformers and electrical equipment. EPS also offers the service of on-site treatment of PCB-contaminated oil by using its proprietary PCBXTM chemical dechlorination (CD) treatment units, which are mounted on transportable rigs. PCBs in the contaminated oil are primarily converted to sodium chloride and polyphenylene in the CD treatment process.

The EPA issued a 40 CFR 761.60(e) approval to EPS to destroy PCBs in oils using their CD process on May 22, 2006. The dechlorination process was approved at that time to destroy PCBs in mineral oil dielectric fluid (MODEF) that had PCB concentrations as high as 14,500 ppm. That approval was for two identical treatment units (specifically rigs number two and number six) mounted on rigs. Additionally, EPS has an EPA PCB commercial storage approval for its facility located in Wheeling, West Virginia, that allows them to store PCB waste received from small quantity generators for proper disposal.

In 2010, EPS requested approval from the EPA to renew their § 761.60(e) disposal approval and to: (1) increase the maximum allowable PCB concentration in MODEF that can be treated/disposed; (2) also treat PCB-contaminated diesel oil; and (3) add a new identical mobile treatment unit to their approval (unit number eight). The following timeline provides details of these requests and their associated demonstrations:

- EPS requested by letter dated July 30, 2010, to renew the EPS PCB Disposal Approval. Subsequently, EPS conducted a PCB disposal demonstration at its facility in Wheeling, West Virginia, during the week of November 29, 2010, treating PCB-contaminated MODEF, with an average concentration of up to 17,780 ppm PCBs, using its PCBXTM CD technology with EPS unit number two.
- EPS also requested by letter dated June 15, 2011, to conduct an additional demonstration test treating PCB-contaminated diesel oil. During the week of August 15, 2011, EPS conducted the additional PCB disposal demonstration at its facility in Wheeling, West Virginia, treating PCB-contaminated diesel oil using the PCBXTM technology with EPS unit number two.
- Lastly, EPS conducted a separate demonstration test during the week of December 3, 2012, to demonstrate that a new PCBXTM CD unit, unit number eight, is capable of adequately destroying PCBs in MODEF.
- The EPA representatives observed the three demonstrations and collected split samples of the waste feed and the treated MODEF and diesel oil (when applicable).
- Results of the analysis from the three demonstrations, which are summarized in Appendix IV of this approval, indicated that the EPS PCBXTM mobile units destroyed PCBs to levels below 2 ppm.

On August 19, 2013, EPS submitted a request to include new provisions to improve operational safety of its PCBXTM mobile chemical dechlorination (CD) units and the protection of the environment. ORCR identified no deficiencies in the request and issued an amendment on April 2, 2014. The amendment did not renew the EPS PCB Disposal Approval (which was still in effect subsequent to EPS submitting an approval renewal request within required deadlines), but rather added conditions to ensure operation of the EPS PCBXTM mobile CD units do not pose an unreasonable risk of injury to health and the environment.

EPS PCBXTM CD Units:

EPS is the owner of the following three regulated PCBXTM mobile CD units and two lab trailers.

Rig 2 Processing Trailer

VIN - 1H2V04027BC006501
Plate - OH TMH-2751

Rig 2 Lab Trailer

VIN - CHZ290003
Plate - OH TMH-2752

Rig 6 Processing Trailer

VIN - 1H2V04524EB002201
Plate - OH TMC-9608

Rig 6 Lab Trailer

VIN - A30089
Plate - OH TMC-9609

Rig 8 Processing Trailer

VIN - 1JJV532Y8VL412739
Plate - OH TQM-500

APPENDIX II

PROCESS DESCRIPTION AND FINDINGS

Process Description:

Generally, the feedstock for the PCBX™ mobile unit(s) is contained in a transformer or bulk tank. At the start of each run, the contaminated oil is pumped into inboard feedstock tanks. The contaminated oil is then passed through a furnace and leaves the furnace at a temperature of 95-105° C. The contaminated oil is then passed through an oil storage tank and combined with reagent (40% sodium in oil dispersion mixture) under a nitrogen blanket. The PCB-contaminated oil with the reagent is sent to a continuous dechlorination reactor. Reactors are pipelines with a controlled flow rate for the contaminated oil to react with the sodium reagent. In this process, the sodium reagent reacts with the chlorine atoms on the PCB molecule to form sodium chloride and chlorine-free biphenyl molecules.

The following equipment is included in the system:

- a) Inbound Feedstock oil tank, filters and pumps
- b) Reagent systems consisting of a mixer can, cylinder chest and reactant injection system
- c) Reactors
- d) Quench water system
- e) Centrifuge system
- f) Earth tank system
- g) Pre-vacuum system
- h) Vacuum system

Reactor Effluent:

The product oil (< 2 ppm PCB) leaving the reactor is first cooled with the quench water system and then passed through a degassing column which removes hydrogen gas from the system. The clean oil is then passed through a centrifuge system where the heavy products of the reaction (water, hydroxides, salts, polyphenylene, etc.) are forced to the perimeter of a centrifuge bowl. These heavy products then go into an effluent system consisting of two effluent tanks where the lighter oil (product oil) is separated from the heavier contaminated residuals (product wastes) by gravity.

The product oil is sent through an earth tank system for further removal of contaminants, polar compounds (such as acids and bases) and moisture, and passed through a vacuum system where it is sent back to the transformer.

Demonstration Findings:

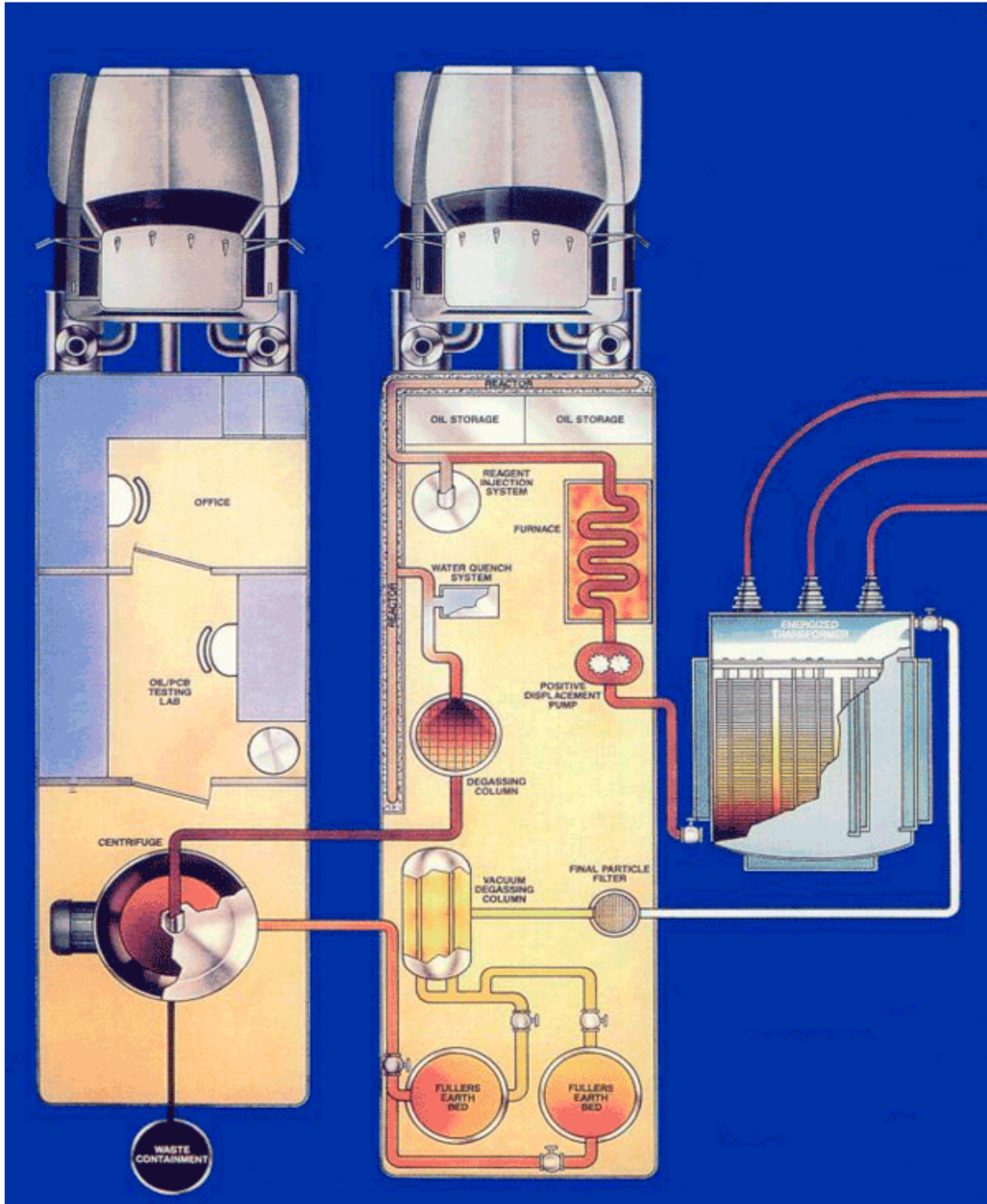
Pursuant to the demonstration approvals issued by the EPA to EPS, EPS successfully conducted three demonstration tests. The first demonstration test conducted using EPS's CD technology (Rig #2) during the week of November 29, 2010, demonstrated that EPS's CD process adequately destroys PCBs in MODEF at levels up to 17,780 ppm. The second demonstration test conducted during the week of August 15, 2011, using EPS's CD technology (Rig #2) adequately destroyed PCBs in diesel oil at levels up to 1,600 ppm. Lastly, another demonstration test

conducted with EPS's CD technology (Rig # 8) during the week of December 3, 2012, demonstrated that EPS's new PCBXTM CD unit is capable of adequately destroying PCBs in MODEF. Three test runs for TSCA compliance were conducted and were successfully completed during each demonstration. The EPA considers the three PCBXTM CD units included in this approval to be functionally equivalent and demonstration of one unit provides reasonable assurance for the three of them, however, we do require new units to be tested on one media type at least once.

APPENDIX III

FLOW DIAGRAM

From EPS's demonstration test plan



APPENDIX IV

SUMMARY OF DEMONSTRATION TEST RESULTS FOR THE PCBX™ CHEMICAL DECHLORINATION PROCESS

2010 Demonstration

Date: November 29 to December 3, 2010

Media: MODEF

Unit tested: Rig 2

Detection Limit: 0.00

Sample	Total PCB Concentration (ppm)	
	EPS's Lab	EPA's Lab
Feed Run 1	6,546	28,833
Feed Run 2	18,588	16,899
Feed Run 3	28,205	40,213
Average Feed	17,780	28,648
Treated Run 1	0.01	Non-detect
Treated Run 2	0.01	Non-detect
Treated Run 3	0.02	Non-detect

Run Number	Pressure (psi)	Reaction Temperature (°F)	Reaction Time (h)	Feed Rate (kg/h)
1	17.3	259.4	11:25	1988
2	18.0	259.0	10:00	2249
3	21.5	263.5	5:00	2500
Average	19.0	260.6	8:48	2246

2011 Demonstration

Date: August 15-16, 2011

Media: Diesel Oil

Unit tested: Rig 2

Detection Limit: 0.00

Sample	Total PCB Concentration (ppm)	
	EPS's Lab	EPA's Lab
Feed Run 1	1,146	40.09
Feed Run 2	1,749	36.89
Feed Run 3	1,954	35.32
Average Feed	1,616	37.43
Treated Run 1	0	1.76
Treated Run 2	0	1.86
Treated Run 3	0	1.88

Run Number	Pressure (psi)	Reaction Temperature (°F)	Reaction Time (h)	Feed Rate (kg/h)
1	14	248	14:00	2315
2	14	248	7:00	3409
3	14	260	11:30	2393
Average	14	252	10:50	2706

2012 Demonstration

Date: December 3-6, 2012

Media: MODEF

Unit tested: Rig 8

Detection Limit: 0.00

Sample	Total PCB Concentration (ppm)	
	EPS's Lab	EPA's Lab
Feed Run 1	10,695	10,037
Feed Run 2	14,850	13,824
Feed Run 3	16,151	15,178
Average Feed	13,899	13,013
Treated Run 1	0.3	1.02
Treated Run 2	1.3	1.01
Treated Run 3	0.5	1.00

Run Number	Pressure (psi)	Reaction Temperature (°F)	Reaction Time (h)	Feed Rate (kg/h)
1	20	250	16:00	2315
2	20	250	10:00	3409
3	20	250	11:30	2993
Average	20	250	12:30	2906

APPENDIX V

SAMPLE 30-DAY ADVANCED NOTIFICATION OF OPERATIONS FOR CONDITION NO.

9

Section A

Company

Name: Environmental Protection Services, Inc
Address: P.O. Box 710, Wheeling, West Virginia 26003-0091
Contact Person Name, Email Address and Phone: _____
VIN or License Plate Number of Mobile Unit: _____
Phone dedicated to the unit that the unit operator(s) have access to that goes with the unit to each site: _____

When and Where Disposal/Treatment Will Occur:

Street Address or Other Identifier for Site: _____
Facility Manager: _____
Phone Number for Facility Manager: _____
Brief Description of the Facility/Site: _____
Date Treatment Operations Expected to Begin: _____
Estimated Duration of the Treatment Operations (in Days): _____

Section B

Company that Owns the Facility where the Unit will be Operating

Name: _____
Mailing Address: _____
Contact Person Name and Phone: _____

Person, Organizational Affiliation/Title, and Phone Number for:

EPA ORCR Contact: Lilybeth Colón, EPA ORCR, PCB Approval Writer, 703-308-2392, ORCRPCBs@epa.gov
EPA Regional Contact: _____
State Contact: _____
Local (Town/City/County) Contact: _____

Nature of the Activity:

Type of PCB Disposal/Treatment Process: _____
Volume of MODEF or Diesel Oil Treated: _____
Concentration of PCBs in the MODEF or Diesel Oil Before Treatment: _____