

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

**FEB 23 2017**

REPLY TO THE ATTENTION OF:

Jason R. Shoff  
Refinery Manager  
Safety-Kleen Systems, Inc.  
601 Riley Road  
East Chicago, Indiana 46312-1698

Re: Comments on the 2016 Demonstration Run Report and Additional Comments Regarding PCB Alternative Treatment Technology and Storage Approval Renewal for Safety-Kleen Systems, Inc., East Chicago, Indiana

Dear Mr. Shoff:

The U.S. Environmental Protection Agency has received your 2016 Demonstration Run Report dated July 22, 2016, which included a CD containing analytical data and process data. The EPA has reviewed your Demonstration Run Report for the purposes of modifying the conditions of your existing 1998 Approval to operate an alternative technology under 40 Code of Federal Regulations (C.F.R.) § 761.60(e). In addition, EPA has reviewed the additional information and documents provided via email on December 18, 2015, for renewal of the 1998 Approval. The 1998 Approval includes conditions for both a polychlorinated biphenyl (PCB) Alternative Treatment Technology Approval in accordance with 40 C.F.R. § 761.60(e) and a PCB Storage Approval in accordance with 40 C.F.R. § 761.65(d).

Under 40 C.F.R. § 761.60(e), the EPA may, in its discretion, approve the use of the alternate method if it finds that the alternate disposal method provides PCB destruction equivalent to disposal in a § 761.60 incinerator or a § 761.61 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Under 40 C.F.R. § 761.65(d), the EPA may issue a PCB commercial storage approval upon determination that the operation of the commercial storage facility will not pose an unreasonable risk of injury to health or the environment. The Demonstration Report and additional information submitted by Safety-Kleen does not provide sufficient information, or the information provided is in need of clarification, for EPA to make an unreasonable risk determination. In order for EPA to make a risk determination based upon the Demonstration Report and additional information, Safety-Kleen will need to address the comments provided in the attachment to this letter.

At this time, EPA requires the information listed in the Attachment to complete the review of the Demonstration Report and for renewal of your 1998 PCB Approval. This required information must be provided within 60 days from the date of receipt of this letter. If you are unable to provide the required information within the allotted time, you may request an extension, listing

the reasons for your request and indicating when the requested information can be provided. Failure to provide the information by the required date or failure to request and obtain an extension may result in the EPA not approving your request to modify the conditions of your 1998 Approval. Submittal of this information does not ensure approval nor does it preclude EPA from requiring additional information if needed.

The information should be submitted to Lisa Graczyk, of my staff, at the above address. If you have any questions regarding this letter or any of the information requested, please contact Lisa Graczyk at (312) 353-3219.

Sincerely,



Mary S. Setnicar  
Chief  
RCRA/TSCA Programs Section

Attachment: EPA Comments on the Safety-Kleen Systems, Inc. 2016 Demonstration Report and Additional Information for the East Chicago Facility

cc: Lisa Graczyk, EPA, RCRA/TSCA Programs Section (LR-8J)  
Robert Guenther, EPA, ORC (C-14J)  
Karen Swetland-Johnson, EPA, ORCR  
Winston Lue, EPA, ORCR  
George Ritchotte, IDEM  
Dennis Zawodni, Safety-Kleen

## ATTACHMENT

### **EPA Comments on the Safety-Kleen Systems, Inc. 2016 Demonstration Report and Additional Information for the East Chicago Facility**

The following comments are based on the review of (1) Safety-Kleen Systems, Inc. (Safety-Kleen) 2016 Demonstration Report dated July 22, 2016, which summarizes the demonstration run of Safety-Kleen's hydrotreater to destroy PCBs using modified process variables and (2) additional information provided by Safety-Kleen via email on December 18, 2015 (updated information and documents since last Approval). The review was conducted to determine whether the Demonstration Report and additional information show that the modified process parameters of the hydrotreater will not present an unreasonable risk of injury to health or the environment, that the process meets the requirements of 40 C.F.R. Part 761, and that the information provided is adequate for renewal of the modified 1998 Approval. The comments below describe in detail what is missing or deficient in the information provided by Safety-Kleen.

#### **Comments Regarding Alternative Treatment Technology Approval and 2016 Demonstration Report**

1. Provide a copy of the maintenance plan for the hydrotreater and any other maintenance plans for PCB treatment system components (distillation, dehydration, etc.). This should include specific information on how Safety-Kleen will perform preventative maintenance to prevent hydrogen leaks; leak detection procedures; preventative maintenance for the V-406 (caustic scrubber), and any ancillary equipment that could affect the flow of the hydrogen and oil streams upstream and downstream of the hydrotreaters; metal fatigue studies around the valves, meters, and piping, etcetera.
2. Provide a description of the hydrogen loop around the hydroreactor.
3. Provide a Health and Safety Plan (HASP) that includes safety procedures related to PCBs and hydrotreater. The HASP should include fire-fighting and safety procedures including but not limited to the use of hydrogen meters; monitoring for lower explosive limit (LEL), oxygen, etcetera; location and use of fire-fighting equipment; and personal protective equipment required for different tasks. EPA did receive your Emergency Action Plan but this is not a HASP.
4. Does Safety-Kleen have any other written procedures, other than those provided to EPA on December 18, 2015, for inspection, sampling, and analysis of incoming loads of used oil when they arrive at the East Chicago facility? If so, please submit a copy of this to EPA. EPA has a copy of the Guard Tank Procedures (O330-009) and Oil and Antifreeze Collection Procedures (M410-005).
5. Does Safety-Kleen have a written sampling and analysis procedure for distillation and dehydration? If so, please submit a copy of this to EPA.
6. The process parameters were reported on an excel spreadsheet. Provide a range for pressure, temperature, residence time, and flow rate of the reactor in a summary table.

The ranges should be provided for each batch of oil treated during the demonstration run. Revise the Demonstration Report to include this information.

7. Provide additional process variables for the hydrotreater including hydrogen/oil ratio, recycle gas rate, and concentration of heteroatoms such as amines and thiols. This information should be provided for each batch run, including a range for each batch run. Revise the Demonstration Report to include this information.
8. Revise the Demonstration Report to include a table summarizing the range of PCB concentrations for all wastestreams sampled during the demonstration run. This table should include the following at a minimum: feed to distillation, all distillation outputs, feed to hydrotreater, and hydrotreater product samples. Water and tank wash samples do not need to be included in this table.
9. Provide information as to how Safety-Kleen plans to dispose of the water waste streams, including wash water, after hydrotreating PCBs.
10. How will Safety-Kleen modify operations in regards to the VFS Fuel when hydrotreating PCBs? Safety-Kleen should develop a Standard Operating Procedure for future operations (i.e. segregating VFS from rest of feed stream going to hydrotreater, etc.).

#### **Comments on Analytical Results**

11. Provide the following information for Safety-Kleen sample of V-330 collected on January 27, 2016, at 1100.
  - a. Show quantification calculations as required on the PCB Calculation Worksheet and include a description of the dilutions.
  - b. Please indicate if there was sample cleanup performed, what cleanup method was performed, and whether this was performed on all quality control samples.
  - c. Explain the choice of the calibration peaks.
  - d. Explain the use of four peaks instead of five for quantitation.
  - e. Explain the reporting of the result on a dry weight basis.
12. Clarify the time relationship between the sample analysis and the external standard (ESTD) analysis.

#### **Comments regarding Commercial PCB Storage Approval**

13. Provide a diagram depicting the location of all PCB storage areas (tanks and container storage area in Plant 1). This diagram must include dimensions of containment area including curb heights, floor slopes if applicable, locations of all tanks to be used for PCB storage, and locations of any other pertinent structures such as containment sumps, trenches, or drains.
14. Confirm that Safety-Kleen desires to continue to use all the same tanks for storage of PCBs as listed in the 1998 Approval.
15. In accordance with 40 C.F.R. § 761.65(c)(7), are the tanks that Safety-Kleen intends to use for PCB storage designed, constructed and operated in compliance with Occupational Safety and Health Standards, 29 C.F.R. § 1910.106, Flammable and Combustible

Liquids? This includes all tanks Safety-Kleen intends to use for PCB storage including tanks 101, 102, 103, 104, 105, 106, 107, 108, 110, 111, 112, 109, 120, and 121, as applicable.

16. In accordance with 40 C.F.R. § 761.65(d)(2)(iii), provide a current signed and dated certification showing that the owner or operator of the Safety-Kleen PCB storage facility in East Chicago, Indiana, has certified compliance with the storage facility standards in paragraphs (b) and (c)(7) of 40 C.F.R. § 761.65. The wording of the certification must conform with the text under the definition of *Certification* in 40 C.F.R. § 761.3.
17. In accordance with 40 C.F.R. § 761.65(e)(1)(iv), the closure plan must include "...a description of the methods for sampling and testing of surrounding soils, and the criteria for determining the extent of removal or decontamination." The closure plan only lists PCB analyses for residual solids in tank bottoms. The closure plan must be revised to include the following.
  - a. PCB analysis should also be included for any rinse waters of tanks that contained PCBs.
  - b. The closure plan must include a sampling protocol to determine that decontamination was sufficient to remove PCBs from the concrete diking, curbing, and slab floor in PCB storage areas; tanks; and equipment used to handle PCBs. This can be in the form of wipe and/or destructive samples as appropriate for the surface being sampled. In addition, the sampling protocol should include the cleanup standard that will be used to determine that decontamination was sufficient.
  - c. Section F of the Closure Plan addresses soil sampling on an as-needed basis if cracks are found in the containment area during closure and that a soil sampling plan would be submitted to the Indiana Department of Environmental Management (IDEM) for approval. This is acceptable, however, the soil sampling plan should also be submitted to EPA because of the possibility of PCBs being present in the soil so that EPA has a chance to review the plan.
18. Revise the closure cost estimate to add the sampling and analysis specified in comment 13 above.
19. The closure plan does not mention the container storage area in Plant 1. Revise the closure plan to include the PCB container storage area where drums and other containers are stored.

