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RETURN RECEIPT REQUESTED

May 19, 2017

Ms. Lisa Graczyk
Environmental Protection Agency
RCRA/TSCA Programs Section
LR-8J
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Chicago, IL 60604-3590

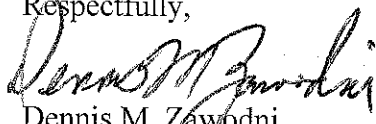
RE: Response to EPA's Feb. 23, 2017
Request for Additional Information
and Clarification

Dear Ms. Graczyk:

Enclosed please find Safety-Kleen's responses to Items # 6, 7, 17, 18 and 19 contained in your February 23, 2017 Request for Additional Information and Clarification for the Demonstration Run Report submitted on July 22, 2016.

If you have addition questions or need clarification, please contact me at dzawodni@safety-kleen.com or 219-391-6127.

Respectfully,


Dennis M. Zawodni
Sr. Compliance Manager

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.

Enclosed is a CD containing an Excel spreadsheet with the requested information, including the minimum, maximum and median for each parameter.

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.

Included with the CD referenced in #6 above, you can find the following additional process variables and ranges for: R405 temperature, R404 top bed temperature, Hydrogen Recycle Gas Rate and the Hydrogen to Oil Ratio. We do not monitor the concentration of heteroatoms such as amines and thiols.

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.

Attached, please find a revised Closure Plan.

18. Revise the closure cost estimate to add the sampling and analysis specified in comment 13 above.

The revised closure cost estimate is included in the enclosed Closure Plan. Once the Closure Plan has been approved, Safety-Kleen will revise the current Financial Assurance to reflect the revised costs.

19. The closure plan does not mention the container storage area in Plant I. Revise the closure plan to include the PCB container storage area where drums and other containers are stored.

The PCB container storage area has been included in the revised Closure Plan.

Safety-Kleen Systems, Inc.
TSCA Closure Plan

May 19, 2017

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1.0 Introduction

1.1 Current Regulatory Status

Safety-Kleen Systems, Inc. (EAS) owns and operates an used oil re-refinery facility at 601 Riley Road, East Chicago, IN. The EPA I.D. number for the facility is IND 077042034. The existing re-refinery facility operates in compliance with 329 IAC 13 regulated by the Indiana Department of Environmental Management (IDEM). In addition, the EAS facility has an Approval to Store and Dispose of PCB Contaminated Waste Oil by Re-Refining Process, issued by U.S. Environmental Protection Agency (EPA) Region V and an Approval of PCB Alternative Disposal Facility issued IDEM. EAS is authorized under these Approvals to process PCB contaminated used oil on a batch basis. Each batch is limited to 376,000 gallons unless additional volume is approved by EPA and IDEM. The disposal is accomplished using the same equipment as the primary full-time operation of re-refining used oil. The used oil re-refining process will exist at all times over the life of the PCB storage facility.

2.0 Purpose of the Closure Plan

In accordance with the regulatory requirements set forth by the EPA in 40 CFR 761.65(e) and by the IDEM in 329 IAC 4.1-4 (which incorporates 40 CFR 761.65(e)), EAS has developed this TSCA Closure Plan as part of its commercial Polychlorinated Biphenyl (PCB) storage facility permit modification application.

This Plan identifies all activities that are necessary to close each PCB management unit or the facility as a whole during any point or at the end of its intended operating life. For the purposes of this Plan, all units will be assumed to be fully active and operating at maximum capacity at the time of closure. The plan addresses decontamination of all units and areas of the facility used for PCB waste processing activities under the commercial PCB storage facility application.

The Closure Plan will be amended to reflect any changes in the maximum capacity occurring as the result of significant facility modifications or the closure of any of the individual PCB management units. All amendments to the Closure Plan will be submitted to EPA and IDEM for review and approval in accordance with 40 CFR 761.65(e)(4).

The purpose of this Closure Plan is to ensure that the EAS facility and the PCB management units within the facility are closed in a manner that minimizes the need for post-closure maintenance. This Plan has been carefully designed to eliminate the risk of post-closure escape of PCB wastes to groundwater, surface water, soil, or the atmosphere, and to prevent any threat to public health, safety, or welfare, or the environment. This plan is accompanied by a corresponding "Closure Cost Estimate" and a "Financial Assurance for Closure."

Changes in the design and operation of the commercial PCB storage facility will not be implemented until the appropriate modifications have been approved by EPA and IDEM. The facility Compliance Manager at EAS has the responsibility to amend the Closure

Plan whenever changes in operating plans, facility design or facility equipment affect the accuracy of the Closure Plan.

This Closure Plan will become effective upon approval of EAS's permit modification request, and remain in effect until modified by EAS and/or EPA/IDEM. A copy of this Closure Plan will be maintained on file at EAS. The Closure Plan will, as necessary, be amended in accordance with the requirements of 40 CFR 761.65(e) (4).

3.0 PCB Waste Handling Areas and Maximum Waste Inventory

3.1 Identification of PCB Waste Handling Areas

As described in the PCB permit modification application, EAS shall conduct PCB handling activities in numerous units throughout the facility, as follows:

A. TSCA Drum Storage Area

The following units are designated as "TSCA storage areas" that are designed in accordance with 40 CFR 761.65(b) standards.

1. Plant 1 Container Storage Building – A fully-contained building used for the indoor storage of site generated PCB wastes in containers (e.g., drums);

B. Tank Storage Area

1. Eleven 30,000 gallon carbon steel tanks in the used oil tank farm;
2. Two 15,000 gallon carbon steel tanks in the used oil tank farm;
3. One 20,000 gallon carbon steel tank in the used oil tank farm; and
4. Three 30,000 gallon carbon steel tanks in the intermediate tank farm

C. Shipping/Receiving Areas

The following units are designated as "shipping/receiving areas" for PCB waste in bulk form.

1. Truck Unloading Bay (Receiving Bay 1), functions as the active offloading area for tanker trailers transporters hauling PCB wastes;
2. Railcar Unloading (Railcar Unloading Area); and
3. Truck Loading Area (adjacent to the Intermediate tank farm).

D. Process Area

1. The Hydrotreater area of the facility contains the units in which PCB's will be processed and disposed.

E. Other Areas

These “other areas” are assets or structures that may provide support services related to EAS’s management of PCB’s at the facility (e.g., a laboratory used to test samples to determine PCB concentration, etc.), but are not PCB waste storage or disposal units or processes which require a USEPA TSCA permit. The “other areas” are identified under this application so that they may be included in confirmatory PCB sampling at the time of facility closure. The “other areas” include the following units:

1. Laboratory – An analytical testing laboratory for onsite waste analysis;
2. Roadway System – A concrete paved roadway system on which all highway vehicles carrying PCB wastes move about the facility; and
3. Rail Tracks – railroad tracks from the facility property line to the railcar unloading area.

3.2 Maximum Inventory of PCB Waste

The maximum waste inventory for the facility is 380,175 gallons. The “maximum inventory” is based on the 376,600 gallon tank storage limit and the 3,575 gallon drum storage limit. This maximum inventory shall be used as the basis for the TSCA closure cost estimate calculations.

4.0 General Closure Activities

4.1 Closure Schedule

EAS will submit a written notice of intended closure to the USEPA at least 60 days prior to the date on which closure is expected to begin. Within ninety (90) days after the facility submits the written notice of intended closure, if any PCB used oil is in storage, it will be processed in compliance with the Approvals. All closure activities will be completed within 180 days after receiving the final volume of PCB waste at the PCB management unit or facility. Within 60 days of the completion of closure, EAS will certify completion of closure in a written notice to USEPA. The certification of closure will be signed by EAS and an independent professional engineer.

Upon closure of the facility, all equipment and structures that have been in contact with PCB wastes will be decontaminated or demolished and transported for secure land disposal in accordance with 40 CFR Part 761. Decontamination of the facility and removal of all wastes for off-site disposal at the time of closure will eliminate the need for post-closure care. The closure schedule is for planning purposes, and intermediate time frames and completion dates may vary from those given in the schedule. The time required for completion of all closure activities for a final facility closure is estimated to be 90 days.

4.2 Inventory Removal

At closure, all bulk PCB wastes in inventory will be disposed of through the hydrotreater. All containerized PCB wastes will be prepared for transport and shipped to offsite treatment and disposal facilities in accordance with 40 CFR 761 record keeping and container standards.

The waste inventory removal methods to be utilized during all closure actions are identical to EAS's daily operating procedures for handling sludge and solids, and loading bulk trailer/tanker transport vehicles. Similarly, drummed solids (e.g., soil, debris) shall be consolidated into rolloff containers for bulk shipment purposes. Empty drums that are no longer usable will be disposed of at authorized offsite waste disposal facilities.

Following inventory removal, all dust and other residues will be swept or otherwise cleaned up and handled as PCB waste. Pallets used for container staging purposes will be broken down and disposed of as PCB debris.

The specific types of offsite PCB waste management facilities to be used for the disposal of EAS's waste inventory will be based on the availability of such facilities and any advancement in PCB treatment technologies. For the purposes of cost estimation, the disposal or treatment options to be considered will include:

1. For PCB liquids, including PCB oils, solvent flush and aqueous PCB mixtures- incineration at Onyx in Port Arthur, TX.

Decontamination of a PCB management unit will begin as soon as the unit is cleared of all inventory. Decontamination procedures are described in Section 5.0 below.

5.0 Description of Closure/Decontamination Activities

In Sections 5.1 through 5.4, EAS describes the procedures and decontamination objectives for the various types of PCB handling units/structure in operation at the facility, including:

- Equipment such as tanks, pipes, pumps, and other associated Equipment (e.g., filter baskets) are used for liquid transfer activities (Section 5.1);
- Concrete floor surfaces found in the container storage building and the tank containment area; and the Receiving areas (Section 5.2);
- Contaminated gravel from railways (Section 5.3); and
- Miscellaneous units, structures, and equipment not otherwise addressed in Sections 5.1 through 5.3 (Section 5.4).

5.1 Tank, Piping, Pumps, and Ancillary Equipment

5.1.1 Equipment and Areas to be Decontaminated

Equipment such as tanks, pipes, pumps, and other associated equipment (e.g., filter baskets) are used for liquid transfer activities.

5.1.2 Decontamination/Closure Standards

Specific decontamination/closure standards which apply to the piping and ancillary equipment are as follows:

1. Pursuant to 40 CFR 761.60 (b)(6), the piping and ancillary equipment (which meet the definition of "PCB article") may be disposed at a TSCA landfill operating under 40 CFR 761.75 provided that all free flowing liquid is removed and incinerated in a TSCA incinerator operating under 40 CFR 761.70. Under this option, the pipelines, pumps, and other equipment would be disconnected, inspected for the presence of free liquids, drained if free liquids are found, and then sent offsite for disposal at a TSCA landfill.
2. If a scrap metal or non-PCB reuse option is identified, the piping and other equipment shall first be decontaminated to meet a TSCA decontamination procedure as required by USEPA regulations or USEPA Region V policy. The internal and external surfaces of all pipelines and other impervious equipment would be triple rinsed with a solvent capable of dissolving PCB's as required by 40 CFR 761.79(c). Any piping or other equipment would be drained for 15 hours. All surfaces would then be soaked with a sufficient amount of diesel fuel or kerosene (containing <2 ppm PCBs) for at least 15 hours at $\geq 20^{\circ}\text{C}$. A sufficient amount is at least 800 ml for each 100 cm^2 of surface. The diesel fuel or kerosene will then be drained from the surfaces. All surfaces would again be soaked with a sufficient amount of diesel fuel or kerosene (containing <2 ppm PCBs) for at least 15 hours at $\geq 20^{\circ}\text{C}$. The diesel fuel or kerosene will then be drained from the surfaces.
3. All porous materials contaminated with PCB's such as wood, gasket material, and rubber shall be disposed at a TSCA incinerator per 40 CFR 761.70, or a TSCA landfill per 40 CFR 761.75. Contaminated porous materials will include all materials with visible staining or porous materials present in a PCB storage area.
4. All solvents and cleanup material (rags, absorbent pads, etc.) contaminated with solvent shall be incinerated at a facility in

compliance with 40 CFR 761.70.

5. All tank (s) will be decontaminated per the PCB Approval and 40 CFR 761.79 c(1).

5.1.3 Materials and Procedures for Decontamination

If necessary, the piping, pumps and other equipment shall be dismantled using wrenches and other standard hand tools. The piping and other equipment shall be visually inspected for signs of free flowing liquid. Any free liquids inside the piping or other equipment shall be containerized and shipped for offsite disposal at a TSCA incinerator.

Equipment decontamination shall be conducted inside Plant 1, the Hydrotreater area or the Intermediate Tank Farm. In all cases, EAS shall take all appropriate precautions to reduce PCB contamination during closure such as lining the floor of the building with plastic sheeting.

No TSCA decontamination standard is applicable if the equipment is intended to be shipped for TSCA disposal. If a non-TSCA reuse option is selected, or if the piping and other equipment are intended for scrap metal reclaim, it must first meet a TSCA decontamination procedure as required by USEPA regulations or by USEPA Region V policy.

5.2 Concrete Floors and Walls

5.2.1 Equipment and Areas to be Decontaminated/Closed

The equipment and area in this phase includes concrete floors and walls (up to 5' from the floor) of units such as the receiving areas and the container storage building.

5.2.2 Decontamination/Closure Standards

Specific closure/decontamination standards which apply to concrete floors and walls are as follows:

1. Concrete floors and walls shall be decontaminated to comply with the cleanup standard for "other restricted access areas" in 40 CFR 761.61 (a)(4)(i)(B), specifically to a TSCA cleanup level of 1 ppm PCB's by weight.
2. All solvents and cleanup material (rags, absorbent pads, etc.) contaminated with solvent shall be incinerated at a TSCA incinerator per 40 CFR 761.70. All sandblast grit and other porous residuals contaminated with PCB's at a detection limit of 1 ppm PCB shall be disposed at a TSCA incinerator per 40 CFR 761.70, or a TSCA landfill per 40 CFR 761.75.

3. Destructive sampling will be done for concrete.

5.2.3 Materials and Procedures for Decontamination/Closure

EAS may elect to conduct pre-cleaning sampling of concrete floors and walls to determine if, in fact, they are contaminated with PCB's and require TSCA decontamination. Samples shall be collected in accordance with the grid sampling procedures described in Section 6.1 below. If the samples show a PCB concentration of less than 1 ppm, the piece shall be deemed clean and not subject to further decontamination procedures.

If necessary, TSCA decontamination shall be conducted using a solvent soak and a thorough scrub down with hard bristle brushes and brooms. Hardened residual shall be scraped off using common hand tools, and following the initial scrub down, the walls/floors shall be rinsed with clean solvent. Grid samples will be taken from the floor and walls to confirm compliance with the TSCA cleanup level of 1 ppm.

If necessary, TSCA decontamination may also be conducted by sandblasting the exposed floor/wall surfaces, and disposing of the spent abrasive grit which contains greater than 1 ppm PCB in a TSCA landfill per 40 CFR 761.75. Samples shall be taken from the floor and walls in accordance with the grid sampling procedures described in Section 6.1 below to confirm compliance with the TSCA cleanup level of 1 ppm. Because concrete is a porous surface and decontamination to a cleanup level may not be possible, it may be necessary to remove the concrete and dispose of it as a PCB remediation waste.

5.3 Concrete/Gravel

5.3.1 Areas to be Decontaminated/Closed

The facility roadway system and other gravel areas (rail tracks leading to the unloading area) that are outside of concrete-lined and sealed secondary containment structures shall be included in the facility closure plan. Should a PCB spill take place on the plant traffic routes during transportation within the facility boundary line, cleanup immediately begins pursuant to 40 CFR 761.61 (a). Under this potential spill management practice, the plant traffic routes are maintained free from PCB contamination. At the closure of this facility, Safety-Kleen will perform destructive random sampling from ten (10) locations in the area indicated on Facility Roadway Plan drawing.

5.3.2 Investigative Sampling to Confirm PCB Contamination

Gravel areas which have been identified as having handled PCB's shall be pre-sampled to determine if PCB contamination is actually present. Ten (10) random samples will be collected in the rail tracks. All gravel contaminated with less than 1 ppm PCB's shall be considered to be clean and not requiring further decontamination/closure. Any gravel

results which show a PCB concentration equal to or greater than 1 ppm shall be considered to be PCB contaminated and shall be excavated and disposed as described in Section 5.3.3 below.

5.3.3 Excavation of PCB Contaminated Gravel

5.3.3.1 Decontamination Criteria

Specific decontamination/closure standards which apply to the gravel are as follows:

1. In accordance with 40 CFR 761.61 (a)(4)(B) gravel contaminated with PCB's shall be excavated to 1 ppm PCB's by weight. All contaminated with less than 1 ppm PCB's shall be considered non-TSCA regulated.

5.4 Decontamination/Closure

For the designated "other areas" where PCB's are to be handled, the following decontamination/closure procedures shall apply:

- Laboratory: Removal and disposal of all PCB samples, contaminated glassware and debris, followed by a solvent washdown of the walls, floors, and workbenches similar to the procedures for floors and walls described in Section 5.1 above. The washdown will be followed by sampling of the cleaned surface in accordance with the sampling procedures described in Section 6.2 below.
- Roadway System: Shall be decontaminated/closed as described in Section 5.2.3 above.
- Rail Tracks: Shall be decontaminated/closed as described in Section 5.3 above.

Any remaining area, structure, piece of equipment, or other device that is contaminated with PCB's shall be subject to decontamination and closure using the procedures analogous to described in Section 5.1 through 5.3 above, in accordance with 40 CFR Part 761, and/or as directed by USEPA Region V.

6.0 Sampling Procedures

6.1 Statistical Sampling Program for PCB's

A PCB Sampling Program will be conducted after removal of PCB wastes and waste containers from the site (per 40 CFR 761, Subparts N and P) and prior to initiating PCB cleanup activities. Where the initial samples exceed the appropriate levels for high

occupancy areas (40 CFR 761.61 (a)(4)), cleanup and/or demolition and removal of materials will be conducted, until cleanup objectives are met. After each cleanup of an area, additional sampling will be conducted, per requirements of 40 CFR 761, Subpart O, to verify that cleanup objectives have been met.

All floor and wall surfaces, as well as all containment structure surfaces, will first be visually inspected to identify any potential hot spots. This visual inspection will include both PCB storage and processing areas, areas through which PCB's are transported, and areas that might have inadvertently been contaminated by workers (restrooms, lunch rooms, etc.). This, along with the physical sampling program described below, will assist in identifying those areas or structures requiring cleaning or removal to achieve a clean closure of the PCB storage and associated areas. Locations exhibiting suspicious stains will be marked for sampling, cleanup, or removal.

The pre-cleanup sampling program will include the following:

A. PCB storage and processing areas.

Initial sampling will be conducted on a three-meter grid of all concrete surfaces, per 40 CFR 761, Subpart N (any re-sampling will be conducted in accordance with 40 CFR 761, Subpart O). The sampling and quality assurance procedures described in USEPA Region 1 publication, "Draft Standard Operating Procedure for Sampling Concrete in the Field", 12/1/97, will be followed in conducting the bulk sampling. As suggested by this procedure, a sampling depth of $\frac{1}{2}$ inch will be used, so that the sample taken at each sampling location may be considered a 'surface sample' (i.e., the concrete between 0 and $\frac{1}{2}$ inch will be removed for analysis). In order to get sufficient sample material in each sample for analysis, each sample may be a composite of cores drilled at the sampling location to a depth of $\frac{1}{2}$ inch - a total sample volume of about 35 cm^3 will be produced at each sample location. Each composite sample will be sufficiently large to allow analysis to the levels specified in 40 CFR 761.61 (a)(4). An equipment blank and field duplicate will also be produced, along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

Any non-porous surfaces in the PCB storage/processing areas will be sampled per 40 CFR 761, Subpart P. Large, nearly flat surfaces will be divided into 1 meter grids and each 1 meter square samples via a wipe sample of 100 cm^2 within the 1 meter square (761.302(a)). The location of the sample location in each 1-meter square will be determined per 761.304. Small, irregular surfaces will be sampled via wipe sample, also be produced along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

B. Traffic areas and other potentially contaminated areas.

1. Two hundred and fifty nine (259) wipe samples will be taken in the potentially contaminated areas (loading/unloading, traffic areas to/from PCB storage areas, Laboratory and rail tracks) where PCB's are stored/processed. Resampling will be

conducted as necessary to verify cleanup of contaminated areas previously identified. An equipment blank and field duplicate will also be produced along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

All sampling and analysis documentation will be maintained by EAS for a period of at least three years from the sampling date. If the sample results are equal to or below the cleanup levels specified in 40 CFR 761.61(a)(4) for high occupancy areas (10 micrograms/ 100 cm² for surface wipe samples and 1 ppm for the bulk samples), no further actions will be taken. Where these levels are not met, the areas will be cleaned and/or material removed for offsite disposal; until resampling of the area indicates that these levels have been met.

6.2 Wipe Testing Protocol

Wipe testing shall be performed and interpreted as follows:

1. Wipe samples should be taken of smooth, relatively non-porous surfaces (metal, glass) and concrete for conformance testing.
2. A 100 cm² template shall be placed on the area to be tested (except for interior pipe sampling).
3. The wiping medium shall be a gauze pad, glass wool or filter paper which has been saturated with hexane.
4. Collection and testing of field blanks and replicates shall be carried out in accordance with standard laboratory practices.
5. The analytical procedures to be used are SW 846 8082A & 3540.
6. Results from wipe tests must be less than 10 micrograms per 100 square centimeters (except for interior pipe sampling).
7. If results are higher than 10 micrograms per 100 cm², the areas must be re-cleaned and testing repeated until contamination levels are less than 10 micrograms per 100 cm² unless USEPA Region V approval is given to encapsulate these areas.

6.3 Destructive Sampling Protocol

Destructive sampling of solid samples shall be performed and interpreted as follows:

1. Destructive samples should be taken of hard porous surfaces (e.g., concrete) and gravel.
2. Samples should be obtained using hammer, chisel, drill or hole saws

and piston core, bulb planter, hand auger or King-tube sampler for gravel.

3. Concrete cores should be taken to a depth of 0.5 inches. The sample size should be approximately 35 cm³. Gravel samples should be taken to a depth of 12 inches. The gravel will be composited to produce a sample large enough to meet the required analytical level.
4. Collection and testing of field blanks and replicates shall be carried out in accordance with standard laboratory practices.
5. Results from destructive tests must be less than 1 milligram per kilogram.
6. If results are higher than 1 milligram per kilogram, the areas will be disposed in a TSCA landfill until results below 1 milligram per kilogram are found.

6.4 Analytical Methodology

1. A measured volume or weight of sample is extracted using the appropriate matrix specific sample extraction technique.
2. Liquid samples may be extracted at neutral pH with methylene chloride using either Method 3510 (separatory funnel), Method 3520 (continuous liquid-liquid extractor), Method 3535 (solid-phase extraction), or other appropriate technique or solvents.
3. Solid samples may be extracted with hexane-acetone (1:1) or methylene chloride-acetone (1:1) using Method 3540 (Soxhlet), Method 3541 (automated Soxhlet), Method 3545 (pressurized fluid extraction), Method 3546 (microwave extraction), Method 3550 (ultrasonic extraction), Method 3562 (supercritical fluid extraction), or other appropriate technique or solvents.
4. Tissue samples may be extracted using Method 3562 (supercritical fluid extraction), or other appropriate technique. The extraction techniques for other solid matrices may be appropriate for tissue samples.
5. Extracts for PCB analysis may be subjected to a sequential sulfuric acid/potassium permanganate cleanup (Method 3665) designed specifically for these analytes. This cleanup technique will remove (destroy) many single component organochlorine or organophosphorus pesticides. Therefore, this method is not applicable to the analysis of those compounds. Instead, use Method 8081.

6. After cleanup, the extract is analyzed by injecting a measured aliquot into a gas chromatograph equipped with either a narrow- or wide-bore fused-silica capillary column and either an electron capture detector (GC/ECD) or an electrolytic conductivity detector (GC/ELCD) (SW 846 8082A).

6.5 Health & Safety

All sampling activities will be conducted within the context of the facility's Health and Safety Plan, Training Plan and Contingency Plan to ensure that appropriate levels of personnel training, monitoring and protective equipment are maintained throughout pre-closure sampling process. All contaminated sampling debris and residuals will be containerized and disposed as PCB waste along with the PCB waste inventory.

6.6 Decontamination Criteria

The PCB management units are more than 0.1 kilometers away from a residential/commercial area and are surrounded by a manmade barrier (chain link fence). The units contain both low-contact and high-contact industrial surfaces. The surfaces which will undergo decontamination (e.g.: floors, walls, curbing) are non-impervious solid surfaces such as concrete and gravel.

All PCB storage areas will be decontaminated in accordance with 40 CFR 761.61 (a)(4) standards. All solid surfaces shall be cleaned to a level of 1 ppm. The property has an Environmental Restrictive Covenant filed with the Lake County Recorder's Office, which restricts this property from being used as residential or for recreational purposes. As such, there is no need to clean up the site to meet the low occupancy area cleanup level in compliance with 40 CFR 761.61 (a)(4)(i) and (ii).

The verification cleanup standard for nonporous surfaces is less than 10 micrograms per 100 cm² as measured by a standard wipe test (40 CFR 761.123).

7.0 Certification of Closure

Within 60 days of the completion of closure activities for a particular unit or the facility in general, EAS shall, by certified mail or by hand-delivery, submit in writing to EPA a certification signed by EAS and an independent professional engineer that the facility has been closed in compliance with the requirements of this Closure Plan.

8.0 Closure Cost Estimate

EAS has prepared a detailed cost estimate for the TSCA closure activities described in this Plan. A copy of the TSCA Closure Cost Estimate is included in Appendix 1 of this Closure Plan.

Per 40 CFR 761.65 (f)(2), the TSCA closure cost estimate will be revised annually to account for inflation. The closure cost estimate will also be adjusted following any modification to the closure plan which increases the cost for closure.

9.0 Financial Assurance for Closure

EAS will provide suitable financial assurance for TSCA Closure Cost Estimate prior to final issuance of the facility's Commercial PCB Storage Facility Permit. The TSCA financial assurance mechanism shall, at a minimum be valued to reflect any cost TSCA closure which is in addition to any RCRA closure cost estimate. A copy of the TSCA financial assurance mechanism is included in Appendix 2.

SHIP CANAL

INDIANAPOLIS BOULEVARD

NEW DECORATIVE FENCE

NEW GATE

NEW DECORATIVE FENCE

EXIST. FENCE

EXIST. GATE

RILEY ROAD

NEW DECORATIVE FENCE

NEW DECORATIVE FENCE

 Daniel H. Metz 4/16/08
PROJECT LEADER DATE
FOR CONSTRUCTION

Last Edit: Apr. 15, 2008

REV #	DATE	DESCRIPTION	APP'D
0	4/16	FOR CONSTRUCTION	

**SAFETY KLEEN CORP.
EAST CHICAGO, IN**



ORBITAL ENGINEERING, INC.
PITTSBURGH • CHICAGO • CLEVELAND
PHILADELPHIA • TOLEDO • BIRMINGHAM

SCALE 1" = 20'	DATE 3-7-08
DRWN CEI	CHK'D APP'D

WESTWARD PLANT EXPANSION
NEW STORAGE TANK FARM
LANDSCAPING PLAN

ORBITAL PROJECT NUMBER DRAWING NUMBER

ELD PROVIDE FIELD SURVEY
SIGNS FOR FENCING.

Appendix 1

Safety-Kleen Systems, Inc.
TSCA Closure Cost Estimate

May 19, 2017

1.0 TSCA Units Undergoing Closure

Individual cost estimates are presented in Section 3.0 for the following TSCA management units proposed for PCB management activities at Safety-Kleen Systems, Inc. (EAS):

Section / Unit

- 3.1 Container Storage Building (Plant 1)
- 3.2 Used Oil Storage Tanks (14 tanks)
- 3.3 VFS Storage Tanks (3 tanks)
- 3.4 Truck Unloading Bay (Receiving Bay 1)
- 3.5 Railcar Unloading (Railcar Unloading Area)
- 3.6 Truck Loading Area (adjacent to the Intermediate tank farm)
- 3.7 Other Areas – Roadway System, Laboratory, Rail Tracks and the Distillation Area

2.0 Pricing and Assumptions

2.1 Disposal Facilities/Pricing

The following disposal facilities and costs are used to calculate closure cost estimates. These figures represent third-party transportation and disposal costs as of September 2015.

<u>Disposal Facility</u>	<u>Disposal Transportation Total</u>		
a. Onyx—Port Arthur, TX TSCA Incineration			
- PCB oils, solvent flush, aqueous PCB mixtures	\$2.12/gal	\$0.53/gal	\$2.65/gal
b. EQ—Belleville, MI			
TSCA Secure Chemical Landfill			
- PCB solids/debris	\$115/cy	\$32/cy	\$147.00/cy

2.2 Labor, Equipment, and Analytical Charges

The following labor cost and equipment costs represent charges that would be incurred during a third-party closure of EAS.

Labor

a. work crew (1 supervisor @\$680/day, 3 laborers @ 440/day/man) = \$ 2,000/day

Equipment

- a. Miscellaneous Supplies (Brooms, squeegees, shovels, protective clothing, etc.) = \$ 128/day
- b. Portable Drum Crusher = \$ 128/day
- c. vacuum truck with operator = \$ 1025/DAY
- d. Rolloff Container (30 cubic yards) = \$ 128/day

Analytical

- a. wipe samples = \$ 64/sample
- b. soil/solid/liquid samples = \$ 141/sample

2.3 General Assumptions

1. Where possible, all wastes will be consolidated onsite and shipped to the ultimate treatment/disposal facility in bulk form. The rate of repacking/consolidation is approximately 100 55-gallon drums per work crew per day.
2. The floors and walls of the containment basin/pad undergoing decontamination will be cleaned using a suitable solvent (e.g., hexane, diesel fuel, No. 2 heat oil, etc.) and scrubbing brooms, followed by a solvent rinse. All cleaning residues and rinsate waters will be collected and shipped offsite for treatment/disposal. The total volume of solvent used in the cleaning and rinsing process is equal to 1% of the containment volume of the unit undergoing decontamination.
3. All empty drums will be crushed onsite using a portable drum crusher unit and shipped offsite in 30-CY rolloff containers. For cost estimation purposes, it is assumed that 1 crushed drum occupies a volume of 3 cubic feet or 0.11 cubic yards.
4. All pallets will be broken down and shipped offsite in 30-CY rolloff containers. For cost estimation purposes, it is assumed that 1 pallet occupies a volume of 4 cubic feet or 0.15 cubic yards.
5. All materials and equipment used as part of onsite decontamination activities (e.g., pumps, hoses, drum crusher, etc.) shall be adequately decontaminated after use. The cost for such decontamination is assumed to be \$3,200 per PCB unit.
6. Sampling costs are included in labor costs. Analytical costs are separately accounted.
7. Liquid density is assumed to be 9.0 lb/gal. Solid density is assumed to be 2000 lb/yd³.

3.0 Unit-Specific Closure Costs

3.1 Container Storage Building (Plant 1)

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
Labor	1 crew	1 days	2000 \$/day	4000
Equipment				
- Rolloff	1 unit	2 days	128 \$/day	256
- Drum Crusher	1 unit	2 days	128 \$/day	256
- Miscellaneous	1 unit	2 days	128 \$/day	256
Labor and Equipment Subtotal				4768
B. Disposal				
Debris				
- crushed drums	65 drums	0.11 cy/dr	147.00 \$/cy	1051
- pallets	17 units	0.15 cy/unit	147.00 \$/cy	375
Disposal Subtotal				1426
C. Storage Bay Decontamination				
Labor	1 crew	1 day	1984 \$/day	1984
Equipment				
- Miscellaneous	1 unit	1 day	128 \$/day	128
- Decontamination	1 unit	1 unit	3200 \$/unit	3200
Analytical				
- Pre-Cleanup	1 bay	28 sample/bay	141 \$/sam	3948
- Wipe Samples	1 bay	12 sample/bay	64 \$/sam	768
- destructive	1 bay	12 sample/bay	141 \$/sam	1692
- disposal	10 gallons	1 unit	2.65 \$/gal	27
Decontamination Subtotal				6435
GRAND TOTAL				12629

Notes:

1. The TSCA storage area is designed to hold up to 65 55-gallon drums. This is for site generated waste, consisting mostly of pump filter strainings, absorbents, personal protection equipment (PPE), sample containers and lab waste. At closure, drums containing bulk solids will be consolidated into roll-off containers.
2. The floor and wall surfaces of the storage unit will be adequately decontaminated through solvent wash and a thorough scrub down with hard bristle brushes and brooms.

3. The amount of solvent for the floors and walls is equal to 1% of the total containment volume of the structure. Per the calculations, the containment volume for the Storage Building (Plant 1) 1,010 gallons. Therefore, the solvent used is 10 gallons $[(.01)(1010) = 10]$.
4. Emptied liquid/solid drums will be crushed onsite and placed into three 30 cubic yard roll off containers along with wooden pallets ($65/4 = 17$) and decontamination residuals (e.g.: brooms, squeegees, protective equipment, etc.)
5. Post-closure analysis consists of 13 random wipe samples and 13 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

3.2 Used Oil Tank Storage Area

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
Labor	1 crew	14 day	0 \$/day	0
Consolidation And Preparation Subtotal				0
B. Disposal				
Liquid				
- bulk	Re-refinery	376600 gals	0 \$/gal	0
Disposal Subtotal				0
C. Decontamination				
Labor	1 crew	14 days	0 \$/day	0
Equipment				
- Miscellaneous	14 units	14 days	0 \$/day	0
- Decontamination	14 units	14 units	0 \$/unit	0
Analytical				
- decon solvent	14 tank	3/tank	141\$/sample	5922
- Pre-Cleanup	1 tank farm	166 sample/tank farm	141 \$/sample	23406
-Disposal	1129800 gallons	14 units	\$0/gal	0
Decontamination Subtotal				29328
GRAND TOTAL				29328

Notes:

1. The tanks are used for the storage of up to 376,600 gallons of PCB liquid. For "worst case" closure cost estimation purposes, EAS has assumed that the tank contains 376,600 gallons of PCB liquids requiring TSCA disposal. Since used oil re-refining is the primary line of business at this site and PCB disposal makes up an insignificant volume, it is planned that the re-refining operations will exist at the facility over the life of the PCB activity. Per 40 CFR 761.65(f)(iii), EAS believes that the disposal capacity will exist at the time of Closure. EAS will not include estimated cost for off-site disposal of the used oil contaminated PCBs in these tanks. In addition, the decontamination method in the existing Permit, utilizing used oil feed (for the re-refinery) and the re-refining process, will be implemented for decontamination. Decontamination will be managed at the facility.
2. Closure per 40 CFR 761.79(c)(1) involves triple washing with a suitable solvent. EAS intends to utilize used oil, as is approved in the Permit. Each tank will be completely filled full a minimum of 3 times. The material will be tested after each filling, ensuring that the final rinse is < 50 ppm. All used oil used as rinse material will be processed through the hydrotreater.

3.3 Hydrotreater

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
Labor	1 crew	14 day	0 \$/day	0
Consolidation And Preparation Subtotal				0
B. Disposal				
Liquid				
- bulk	Re-refinery	376600 gals	0 \$/gal	0
Disposal Subtotal				0
C. Decontamination				
Labor	1 crew	14 days	0 \$/day	0
Equipment				
- Decontamination	1 unit	14 units	0 \$/unit	0
Analytical				
- decon solvent	1	3/unit	141 \$/sample	423
Decontamination Subtotal				423
GRAND TOTAL				423

Notes:

1. The hydrotreater is used for the disposal of PCBs contained in used oil. Since used oil re-refining is the primary line of business at this site and PCB disposal makes up an insignificant volume, it is assumed that the re-refining operations will exist at the facility over the life of the PCB activity. Per 40 CFR 761.65(f)(iii), EAS believes that the disposal capacity will exist at the time of Closure. EAS will not include estimated cost for decontamination activities. EAS will utilize the decontamination method currently in the existing Permit. Vacuum distilled oil, containing < 50 ppm PCBs, will be used to decontaminate. A volume of 3 times the capacity of the hydrotreater will be processed through the hydrotreater. The material will be tested after 1x volume has been run through the hydrotreater. This will be done 3 times, ensuring that the final rinse is < 2 ppm.

3.4 VFS Tank Storage Area

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
Labor	1 crew	3 days	2000 \$/day	6000
Equipment				
- Miscellaneous	3 units	3 days	128 \$/day	384
Consolidation And Preparation Subtotal				6384
B. Disposal				
Liquid				
- bulk	4 railcars	79800 gals	2.65 \$/gal	211470
Disposal Subtotal				211470
C. Decontamination				
Labor	1 crew	3 days	00 \$/day	0
Equipment				
- Decontamination	3 units	3 units	0 \$/unit	0
Analytical				
- decon solvent	3 tanks	3/tank	141 \$/sample	1269
- Pre-Cleanup	1 tank farm	454 sample/tank farm	141 \$/sam	64014
- disposal	1129800	hydrotreater	0 \$/gal	0
Decontamination Subtotal				65283
GRAND TOTAL				283137

Notes:

1. The tanks are used for the storage of up to 79,800 gallons of PCB liquid. For "worst case" closure cost estimation purposes, EAS has assumed that the tank contains 79,800 gallons of PCB liquids requiring TSCA incineration.
2. Closure per 40 CFR 761.79(c)(1) involves triple washing with a suitable solvent. EAS intends to utilize vacuum distilled oil (produced by the distillation unit) as the rinse material. Each tank will be filled full a minimum of 3 times. The material will be tested after each filling, ensuring that the final rinse is < 50 ppm. All vacuum distilled oil used as rinse material will be processed through the hydrotreater.

3.7 Other Areas – Roadway System, Laboratory & Rail Tracks

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Waste Consolidation and Disposal – Not Applicable; see Note 1.				
B. Roadway Decontamination				
Labor	1 crew	4 days	2000 \$/day	8000
Equipment				
- Miscellaneous	1 unit	4 days	128 \$/day	512
- Decontamination	1 unit	4 days	3200 \$/unit	12800
Analytical				
- concrete	1 zone	148 sample/zone	141 \$/sam	20860
Decontamination Subtotal				42180
C. Laboratory Decontamination				
Labor	1 crew	1 day	2000 \$/day	2000
Equipment				
- Miscellaneous	1 unit	1 days	128 \$/day	128
- Decontamination	1 unit	1 unit	3200 \$/unit	3200
Analytical				
- wipe	1 round	37 sample/rnd	64 \$/sam	2368
- solid	1 round	37 sample/rnd	141 \$/sam	5217
Decontamination Subtotal				12913
D. Rail Tracks				
Labor	1 crew	2 days	2000 \$/day	4000
Equipment				
- Miscellaneous	1 unit	2 days	128 \$/day	256
- Decontamination	1 unit	2 days	3200 \$/unit	6400
Analytical				
- gravel	1 zones	74 sample/zone	141 \$/sample	10434
Decontamination Subtotal				21090
GRAND TOTAL				76183

Notes:

1. The Roadway System, Laboratory & Rail Tracks are not TSCA storage units. There is no inventory of PCB waste to be disposed.
2. The exact number and location of PCB samples for the roadway system and rail tracks will be taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites"

to Verify Cleanup”, May 1986. Given the size of the roadway system, the cost estimate provides for 2 zones of sampling.

3. The exact number and location of PCB samples for the laboratory will be taken in conformance with the USEPA “Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup”, May 1986. Given that the nature of the floors, walls, and other surface areas in the laboratory are both pervious/impervious, the cost estimate provides sampling for both types.

4.0 Inspection and Certification by Professional Engineer

EAS will retain an independent Professional Engineer (P.E.) to inspect and certify that the closure activities have been completed in accordance with the approved Closure Plan. It is assumed the cost for the P.E. will be 40 hours at \$128 per hour or \$5,120.

5.0 Summary of Closure Costs

5.1 TSCA Closure Cost Estimate

Using the unit-specific cost estimates calculated above, the total cost for full TSCA closure (i.e., removal of maximum PCB inventory and decontamination of PCB storage units) at EAS is:

Unit	Unit Cost
3.1 Container Storage Building (Plant 1)	12629
3.2 Used Oil Tank Storage Area	29328
3.3 Hydrotreater	423
3.4 VFS Tank Storage Area	283137
3.5 Other Areas – Roadway System & Laboratory	76183
4.0 Professional Engineer Certification	5120
Subtotal	406820
Contingency Factor (5%)	20341
Grand Total	427161

Appendix 2

Safety-Kleen Systems, Inc.
Financial Assurance for Closure



Clean Harbors
42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149

781.792.5000
800.282.0058
www.cleanharbors.com

VIA FEDERAL EXPRESS (TRN 778235822985)

January 20, 2017.

Ms. Ruth A. Jean
Hazardous Waste Permit Section
Office of Land Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46206

RE: **Safety-Kleen Oil Recovery Co.**
Financial Assurance
January 25, 2017 Annual Inflation Increase

Dear Ms. Jean:

Enclosed is an original insurance certificate issued by Indian Harbor Insurance Company for financial assurance coverage for the Safety-Kleen facility located in East Chicago.

The certificate has been amended, effective January 19, 2017, to reflect the annual inflation increase of the financial assurance. The increase was calculated by multiplying the existing 2016 financial assurance value by the annual inflation factor 1.01049. This inflation factor was calculated by dividing the annual Implicit Price Deflator (IPD) for Gross National Product (GNP) for 2015 (110.090) by the annual IPD for GNP for 2014 (108.947). These IPDs were obtained on December 13, 2016 from the U.S. Department of Commerce, Bureau of Economic Analysis, Table 1.1.9 Implicit Price Deflators for Gross Domestic Product.

$$\$1,301,030 \times 1.01049 = \$1,314,678$$

If you require any additional information please contact me at 219-746-5050 or at Harvey.Pamela@cleanharbors.com.

Sincerely,

Pamela K. Harvey
EHS Manager
Clean Harbors, Inc.
Safety-Kleen Systems, Inc., a Clean Harbors Company

Enclosure

Certificate of Insurance for Closure or Post-Closure Care

Name and Address of Insurer (herein called the "Insurer"):

Indian Harbor Insurance Company
Seaview House, 70 Seaview Avenue
Stamford, CT 06902-6040

Name and Address of Insured (herein called the "Insured"):

Safety-Kleen Oil Recovery Co.
42 Longwater Drive
Norwell, MA 02061

Facilities Covered:

Name: Safety-Kleen Oil Recovery Co.

Address: 601 Riley Road
East Chicago, Indiana 46312

Closure: \$1,314,678

Face Amount: \$1,314,678

Policy Number: PEC000707815

Effective Date: January 19, 2017

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 329 IAC 3.1-14-8, 329 IAC 3.1-14-18, 329 IAC 3.1-15-4(f), or 329 IAC 3.1-15-6(f) (see 329 IAC 3.1-15-10(e)) as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Indiana Department of Environmental Management (IDEM) commissioner, the Insurer agrees to furnish to the IDEM commissioner a duplicate original of the policy listed above including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 329 IAC 3.1-14-30 as such rule was constituted on the date shown immediately below.

Mary Ann Susavidge

(Signature of Authorized Representative of Insurer)

Date: 1/18/17

Mary Ann Susavidge, Vice President

Authorized Representative of Indian Harbor Insurance Company

Lynda A. Sergeant

(Witness of Notary Signature)

Date: January 18, 2017

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Lynda A. Sergeant, Notary Public
Uwchlan Twp., Chester County
My Commission Expires June 19, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES