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May 1, 2017

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

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

Dear Ms. Graczyk:

Safety-Kleen received the Request for Additional Information and Clarification for the Demonstration Run Report submitted on July 22, 2016. This is Safety-Kleen's response to the above noted letter. As we discussed on April 28, 2017, the responses to Items # 6, 7, 17, 18 and 19 will be submitted by May 19, 2017.

Enclosed are the Safety-Kleen responses to each Item, preceded by EPA's comments.

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

Safety-Kleen Systems, Inc.
601 Riley Road | East Chicago, IN 46312
219.397.1131 | 219.391.6180 (f)

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.

   For pressure vessels, tanks relief valves, and HT piping systems within the PCB treatment process, we follow American Petroleum Institute's (API) guidelines for inspections. The caustic tower,V-406, is tested on an annual basis to record ultrasonic thickness measurement on all courses, and a visual inspection is conducted externally and internally by a certified API Inspector. Depending on service, pressure vessels within the PCB treatment systems are internally inspected on different intervals with the maximum interval being 5 years. Piping within the Hydrotreater process is ultrasonically tested on an annual basis.

2. Provide a description of the hydrogen loop around the hydroreactor.

   Hydrogen is supplied to the plant through a pipe line to the hydrogen make-up compressors. The makeup compressors, C-410/411/412, compress the hydrogen to 900psig from 70psig. The makeup hydrogen is regulated to the discharge of the recycle compressors, C-402/403/404, to maintain system pressure at approximately 850psig. The make-up hydrogen combined with the recycle hydrogen is introduced into the preheated vacuum oil prior to the reactor train. After the reactor train, the gas stream is separated at the high pressure separator, V-403, before being scrubbed with caustic water in V-406. The caustic tower removes saturated hydrogen sulfide, and ammonia. After being scrubbed, the purified hydrogen is compressed back to system pressure via the recycle compressors, C-402/403/404.

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.

   The Health and Safety Plan is enclosed as Attachment #1.

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 (0330-009)

and Oil and Antifreeze Collection Procedures (M410-005).

Enclosed as Attachment #2, are the procedures that address the inspection and sampling of trailers and railcars.

The analytical procedures for receipt samples are completed by following the Sampling Parameters contained in Attachment II of the Approval, following SK9202 for PCB analysis. This SOP was submitted in the December 18, 2015 submittal.

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.

Section 5.6.1-2 in the PCB Processing Training Manual, submitted on December 18, 2015, outlines the sampling procedures for distillation and dehydration.

The analytical procedures for distillation and dehydration are completed by following the Sampling Parameters for the PCB Run frequency and method (grab/composite) contained in Attachment II of the Approval, following SK9202 or SK9213 SOPs for PCB analysis. These 2 SOPs were submitted on the December 18, 2015 submittal.

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.

To be submitted by May 19, 2017.

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.

To be submitted by May 19, 2017.

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.

The PCB concentration ranges are enclosed as Attachment #3.

The PCB concentration ranges are enclosed as Attachment #3.

9. Provide information as to how Safety-Kleen plans to dispose of the water waste streams, including wash water, after hydrotreating PCBs.

The procedure for wastewater treatment and disposal is enclosed as Attachment #4.

10. How will Safety-Kleen modify operations in regards to the VFS Fuel when hydrodtreating 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.).

The only change to operations is that the VFS will be held in the run-down tanks. Instead of slipping it into the hydrotreater, the VFS will be loaded into tanker trailers from these tanks. A description of the VFS loading procedures is enclosed as Attachment #5.

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.

Attachment # 6 is the PCB Calculation Worksheet and chromatogram. This shows the peaks that were used and multiplied by the 5/4 in accordance with the SOP. The numbers that were added are calculated by Chemstation. If all the peaks were used, then we will use the number given without any other calculation.

Based in SKSOP 9202, we weight approximately 3 grams of sample and add 27 mL of hexane / acetone (90/10) into the vial. This yields a 1:10 sample dilution. Then, we transferred 1 ml of the 1:10 dilution into another vial containing 9 ml of hexane and it yields 1:100 total sample dilution.

    b. Please indicate if there was sample cleanup performed, what cleanup method was performed, and whether this was performed on all quality control samples.

Sample V330 (Lite Vac Oil) was cleaned by using 9 mL of hexane and 9 mL of sulfuric acid, shake and centrifuge. Then, the top layer was run on a 1 g/ 6 mL tubes of Strata FL-PR Florisil (170 µm, 80A). Sample was collected on a GC vial and analyzed in the GC/ECD.

All of the quality control samples followed the same clean-up method.

c. Explain the choice of the calibration peaks.

Based on SK SOP9202, the aroclors have pre-determined peaks (Appendix C) that we followed. The peaks are assessed for retention time and peak ratios. If there is interference or weathering, per SOP SK9202, it is permissible to quantitate using less than five peaks (which was the case for this chromatogram).

d. Explain the use of four peaks instead of five for quantitation.

One of the five calibration peaks in this sample was much higher (peak#5) than the other four suggesting interference in the sample. The other four closely matching peaks were chosen for the calculation and multiplied by the ratio 5/4.

e. Explain the reporting of the result on a dry weight basis.

The result obtained on the µg/ml wet weight would be divided by the (1-(Water% /100) to obtain µg/g dry wt. For this sample, the water is 0.1% water so the answer would be technically the same for wet and dry weight basis for this sample (16.8).

12. Clarify the time relationship between the sample analysis and the external standard (ESTD) analysis.

We run a QC CCS with an allowable (+/-30% difference) from ESTD standard analysis every 24 hours or 20 samples, whichever comes first. Time is not a factor between when we perform ESTD analysis and when we can run a sample using that analysis for quantification. As long as the system remains stable and in-control as verified by the daily CCS then the calibration is considered good and useable. Also, for Tier II, we run a Matrix Spike and Matrix Spike Duplicate to verify stability/ recovery.

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.

The diagram and calculations are in included in Attachment #6. Also included is the Diagram for the VFS storage tanks in the Intermediate tank farm.

14. Confirm that Safety-Kleen desires to continue to use all the same tanks for storage of PCBs as listed in the 1998 Approval.

Safety-Kleen will continue to use the same tanks for the storage of PCBs received at the site. However, due to the issues caused with hydrotreating the VFS fuel, it will be necessary to add three tanks for storage this material. The size of each of the three tanks is 29,610 gallons. The maximum volume that these tanks are filled is 25,802 gallons for T-933 and T-935 (total 51,601 gallons) and 28,199 gallons for T-931.

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.

All storage tanks used for PCB storage are designed to UL 142 or API 650 and maintained to these standards. This includes tanks T-931, T-933 and T-935 that are being added for VFS storage.

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.

A certification is enclosed as Attachment #7.

17. In accordance with 40 C.F.R. § 761.65(e)(l)(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.

To be submitted by May 19, 2017.

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

To be submitted by May 19, 2017.

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.

To be submitted by May 19, 2017.

Attachment 1

Health and Safety Plan

Safety-Kleen Systems, Inc.
East Chicago, IN
Oil Re-Refining Facility

Health and Safety Plan
Working with Oil Containing
Polychlorinated Biphenyls (PCBs)

April 21, 2017, Revision 0.

Introduction:

This Health and Safety Plan addresses working with polychlorinated biphenyls (PCB's) and was developed using information and procedures obtained from the PCB Processing Training Manual revision 4, and with extracts from procedures and practices used at the East Chicago Oil Re-Refinery that are designed to help educate and protect employees from exposures to hazardous substances and materials while handling used oil and related processing equipment.

Policy and Scope:

Safety Kleen and Clean Harbors is committed to protecting the health and safety of our workers. This commitment is documented in our corporate Health and Safety Policy. This plan will address the health and safety aspects of receiving, sampling, analysis, off-loading, storage, processing, spill response, and first aid measures when working with PCB contaminated oil(s).

The objective of this plan is to:

- Responsibly and safely handle and process used oils that contain Polychlorinated Biphenyl's (PCB's).
- Maintain personnel and equipment contamination to a minimum.
- Minimize any personnel exposure and releases to the environment.
- Provide for the effective response in emergency situations.

This Health and Safety Plan (HASP) will initially be reviewed with each affected employee who will handle or process oils containing PCB's upon initial job assignment. This plan will also be reviewed with an employee when their job responsibilities under the plan change. When this plan changes, all employees covered under the plan will be notified of the changes and be required to review the plan. This Health and Safety Plan also incorporates by reference in its entirety the PCB Processing Training Manual Rev. 4 from which information for this plan was obtained.

Roles and Responsibilities:

Shipping and Receiving Manager – *Facility Shipping and Receiving Manager*
The Shipping and Receiving Manager will ensure that the personnel in his department have completed training on using the required Personal Protective Equipment (PPE) and decontamination procedures, the proper handling, storage, documentation, and decontamination of equipment having oils containing PCB's.

Laboratory Manager – *Facility Laboratory Manager*
The Laboratory Manager is responsible for ensuring the laboratory personnel that will handle the PCB's contaminated oil samples for analysis are training in the hazards associated with PCB exposure and will take the required measure to protect themselves from exposure by using the required PPE. The laboratory manager

will also make sure that personnel will handle, identify and label oil samples contaminated with PCB's according to the prescribed laboratory PCB protocol.

Operations Manager – *Facility Operations Manager*
The Operations Manager will ensure that the processing personnel in his department have completed training on using the required Personal Protective Equipment (PPE) and decontamination procedures, the prescribed processing, sampling, disposal, documentation, and decontamination of equipment having oils containing PCB's.

Health and Safety Manager – *Regional Health and Safety Manager Oil Re-Refineries*
The Health and Safety Manager is responsible to see that the corporate and facility health and safety procedures and policies are followed during the processing of PCB's, and to provide guidance and direction should the procedures and/or policies need to be modified to protect the health and safety of employees.

Compliance Manager – *Senior Compliance Manager*
The Compliance Manager is responsible for the environmental handling of PCB contaminated oil and protocols including spill reporting and regulatory documentations and reports.

Incident Commander – *Shift Supervisor Oil Recycling*
The Incident Commander is responsible for evaluating an incident, coordinating the employees, and providing the resources for coordinating the response in absence of the Facility Emergency Coordinator. The Incident Commander reports to the Emergency Coordinator.

Facility Contact Information

Position	Name	Telephone (cell)
Shipping and Receiving Manager	Nick Tratta	(219) 218-8939
Laboratory Manager	Erika Nelson	(219) 314-7087
Operations Manager	Chris Hasch	(219) 743-2035
Health and Safety Manager	Gary Malinowski	(773) 858-6801
Compliance Manager	Denny Zawodni	(219) 808-1172
Facility Supervisors (Control Room)	Dave Gaughan, Joe Tratta, Ray Currier, Ray Arnold	(219) 391-6149 (control room)

Health Effects of PCBs

Routes of Exposure:
PCBs can be ingested, inhaled, injected, and absorbed through the skin or mucous membranes. In a work place environment however, inhalation and skin absorption are the most likely routes of exposure. Poor personal hygiene habits have caused increased concern for ingestion as a probable route of exposure. Make sure to wash your hands with soap and water before eating, smoking, or using bathroom facilities.

Acute Effects:
Accidental spills and similar incidents can result in high level, short term exposures of PCBs to workers depending upon the concentration of PCB's in the oil. Few short-term exposure health effects have been

observed. This is substantiated by the broad use of PCBs in industry in the past. Skin and eye irritation may occur if there is prolonged direct contact with PCBs.

Chronic Effects:
The long-term health effects of PCBs are still under investigation. The most common known effects are related to the skin and nervous system. Skin related ailments include chloracne (a severe acne like condition), rashes, and darkening of the skin and nails. Nervous system disorders include headaches, dizziness, depression, memory loss, fatigue, nervousness, sleeplessness, and drowsiness.

There is evidence of changes in liver function, including increased levels in digestive enzymes. Animal studies have indicated liver damage which varied with the type of test animal, however these results have not been verified with the results from human surveys. Long term effects, if any, can be avoided by the proper use of personal protective equipment.

Studies for reproductive effects have been performed on women who have had high PCB work exposures. The study found that these women had slightly shorter pregnancies and delivered slightly smaller babies than did women working in low exposure areas. However other information such as the smoking and drinking habits of the participants, which may also have a major effect the birth weights, was not available. Definite conclusions on reproductive effects have yet to be reached.

There have been several studies of the possible occurrence of PCB related cancers among occupationally exposed workers. The studies were done by comparing the actual numbers of cancers among specific groups of workers with expected numbers. While there have been reports of increased occurrences of some types of cancers, most of these numbers have not been statistically significant. Laboratory studies indicate that PCBs can cause cancer in animals depending on the degree of exposure. The available data is not adequate to confirm or negate similar effects in humans at this time. Until further research is completed, PCBs remain a suspected carcinogenic agent in humans and proper personal protective equipment must be worn.

Other symptoms associated with long term occupational exposures to PCBs include nose and throat irritation, chest tightness, muscle and joint pain, decreased lung function, loss of appetite, loss of weight, nausea, vomiting, and abdominal pain. These effects are unlikely to occur in the short period during which we will be processing this material and the because of the personal protective equipment (PPE) that will be worn.

Two things become clear from this discussion of the health effects.

1. Evidence of chronic effects of PCB exposure is inconclusive at this time and proper PPE needs to be worn.
2. The studies performed have dealt with much higher PCB concentrations then are expected on this site. Due to the inconclusive evidence, PCB contaminated oil will be treated as if these effects have been proven to be true. The concentrations involved during the processing would not be expected to result in lasting effects in any circumstance and we are further safeguarded by our personal protective equipment.

Exposure Limits:
The American Conference of Governmental Hygienists (ACGIH) have recommended a time-weighted average exposure limit of 0.05 mg/m3 for airborne concentrations (approx. 0.04 ppm). Note that no airborne PCB concentrations are expected during the PCB processing because the system is enclosed and no oxygen is

present to form PCDF's and PCDD's, and sample coolers have been installed to further protect employees against any exposure to PCB oil that has an elevated temperature. There is no short-term exposure limit (STEL) indicated, however, the ACGIH has recommended a TLV-STEL of 1 mg/m3. There is a "skin notation" for PCB exposure which means that PCBs can be absorbed into the skin, thereby significantly increasing the workers over all exposure potential. For this reason, additional precautions will be taken to minimize the potential for contact with PCBs.

With regard to the protection of receiving, operations, and processing personnel exposures to hydrogen sulfide (H2S) vapors, the personnel working in and around the receiving, unloading bays, railcar receiving area, laboratory (if indicated), and the re-refinery process area will use personal H2S monitors as a primary source of notification of an H2S leak from equipment during handling and processing. In addition to the personal monitors, personnel in the operations and maintenance departments will use the permanently mounted stationary H2S monitors when working in the immediate re-refinery process battery limits. The stationary monitors will sound an H2S specific alarm in the process control room. The stationary H2S alarms can also be heard out in the processing area as well.

First Aid Measures:
If PCB contaminated oil comes in contact with skin, wash with soap and water for at least 15 minutes in the safety shower and immediately notify your supervisor. Remove contaminated clothing while under the shower. Store clothing in a sealed bag and place bag into the specifically designated PCB solid waste drum for disposal.

For PCB contaminated oil in the eyes, the eyes should be thoroughly flushed immediately with a gentle stream of water for at least 15 minutes at an eyewash station, keeping the eyelids open to ensure that all parts of the eye have been flushed thoroughly. If you need to rinse only one eye, rinse the eye from the inside to the outside (from nose to cheek) to avoid contaminating the other eye. Then seek medical attention immediately.

If PCB fluid is ingested (swallowed), do not allow the victim to drink anything. Thoroughly rinse the mouth with water but do not swallow it. DO NOT induce vomiting. Seek medical attention immediately.

For inhalation of PCB vapors, such as might happen during a large spill of heated oil, responders must don SCBA units and remove the victim to fresh air, administer oxygen if the victims breathing is irregular, or resuscitate the victim if breathing has stopped.

Safe Handling of PCBs when sampling, off-loading tankers/railcars, and processing

A "no contact" policy was adopted when handling PCB contaminated oil to minimize the potential exposure of employees to PCB's. When handling materials which may contain PCB's, and performing maintenance work on exposed equipment, follow the guidelines established for handling. These guidelines will be strictly enforced. Equipment which is in contact with any PCB contaminated streams will be thoroughly decontaminated before maintenance, transport, or reuse. The following sections will address the general use of personal protective equipment, the decontamination procedures for PPE and other equipment.

Personal Protective Equipment:
Personal protective equipment is to be worn whenever exposure or contact with PCB contaminated oil is anticipated, likely, or possible. Special PPE will be used during the PCB processing and destruction program. The equipment was selected with specific degradation and permeation characteristics to withstand PCB exposure. Four classifications of PPE "dress" will be used to describe the levels of protection needed for specific work to be performed.

Lab personnel will be issued Nitrile lab gloves, and a PVC coated apron and PVC booties.

1. **Class "D" Protective Clothing**
   Class "D" protective clothing consists of: a hard hat with face shield and nitrile gloves. Class "D" protective clothing is to be worn when contact with cold PCB contaminated oils is possible but not likely to occur. (i.e. taking process samples from coolers, changing a pressure gauge on equipment containing PCBs, etc.).

2. **Class "C" Protective Clothing**
   Class C protective clothing consists of: a hard hat with face shield, nitrile gloves, Saranex or similar coated chemical protective coveralls.
   Note: Clothing must overlap the boots and gloves.
   Class C protective clothing is to be worn when contact with cold PCB contaminated oil is likely (i.e. disassembling pumps or piping, collecting trailer samples, installing blinds, repairing packing leaks, small spill cleanup, etc.).

3. **Class "B" protective clothing**
   Class "B" protective clothing is worn where a respiratory hazard exists and the possibility of PCB exposure is above the recommended limit due to the surface area involved (such as a large spill), inadequate ventilation or the presence of hot oil or fire conditions.
   Class "B" protective clothing consists of: a hard hat, nitrile gloves, PVC boot covers, Saranex or similar coated (or similar chemical protective coveralls, and a Supplied Air Breathing Apparatus (SABA) or Self Contained Breathing Apparatus (SCBA).
   Note: The clothing must be sealed at the overlaps of the boots and gloves with duct tape.
   The Self Contained Breathing Apparatus ONLY is to be used when attempting to extinguish fires when PCB oils are involved.
   Class "B" clothing, using either SABA or SCBA may be used in situations where contact with hot PCB contaminated oils is likely but the potential for fire is low (repairing a seal leak on a hot oil service line such as the pumps on the Vacuum Fuel Stripper, etc.).

Decontamination:

General
A PCB decontamination area will be established in the Maintenance/Storage building. The decon area will consist of:
1) A decon area with a clean area, wash area, and a dirty area.
2) The area will be covered with plastic to provide a containment area and will house the PPE

decontamination equipment.

3) A plastic covered area will be established next to the decon station with a solvent parts washer and high pressure water washer for equipment and tool decontamination. A person will be assigned to maintain the decontamination area and will assist with the decontamination of PPE and equipment. On weekend shifts and during the night shift, an employee on that shift will assist in decontamination.

Decontamination of Personal Protective Equipment

The PPE designated for PCB use is not to be worn outside of the process area, tank farm area, or in any buildings or other areas where unprotected persons might come into contact the PCB contaminated PPE. All PPE and equipment is to be decontaminated in the area specified.

The following steps will be taken to ensure proper decontamination of Personal Protective Equipment:

1) Hard hats, goggles, and respirators are to be placed in the collection containers and are to be washed in warm soapy water and rinsed by the decon helper. This equipment is to be wiped dry and disinfected before re-use.

2) Over boots and gloves are to be washed in warm soapy water using a scrub brush in the boot bath and then rinsed. A spray bottle containing a solvent (hexane) will be available to assist in removing oil and asphalt from the PPE.

3) Clothing (Saranex coated or similar chemical protective coveralls, (or PVC aprons) is to be washed with warm soapy water and a scrub brush in the clothing bath and then rinsed.

4) The worker is to then remove the over boots, outer gloves, and coveralls (in that order). The person doffing the clothing should take care to only contact the inner surface of the PPE, while the helper should only contact the outer surface of the PPE while assisting in the doffing process.

5) All PPE is to be hung to dry by the decon helper.

6) All wash water and spray wash solvent is to be collected by the decon helper and placed into the labeled PCB waste drum for disposal.

The shift supervisor and decon helper will be responsible to ensure that these decontamination procedures are followed.

Emergency Procedures:

Precautions have been taken to ensure that the processes and equipment that will be used for the PCB destruction program are in good condition. However, if an emergency were to occur during the PCB destruction program, personnel must be prepared to take the actions necessary to minimize damage to the environment and risk to the health and safety of our employees and the general public. This section addresses emergency shutdown procedures for a spill or fire involving PCB contaminated process streams.

General
All spills or fires involving process streams from the used oil tank farm, through the process, to intermediate storage, and to the inlet of the hydrotreater reactors will be deemed to contain PCB material and will be acted upon appropriately as described in our Contingency Plan.

All emergency procedure duties will remain the same as assigned including the designation of the supervisor as interim Emergency Coordinator/Incident Commander until properly relieved by the designated emergency coordinators.

All emergencies at Contingency Plan levels are to be reported to the appropriate emergency services and the Environmental Protection Agency and TSCA immediately. The shift supervisor will be responsible for ensuring that the proper authorities are notified of any emergency situations, and that they are warned of the possible presence of low level PCBs on site.

The following authorities must be notified:

Safety-Kleen Systems, Inc. Emergency Coordinators
As designated by the above:
East Chicago Fire Department
Indiana Department of Environmental Management
St. Catherine Hospital
S-K Internal Reporting System (Safety Manager and Compliance Manager)
East Chicago Sanitary District (ECSD) Contact lists for these authorities are posted in the Operations' Control Room.

Spills
All personnel involved in a spill cleanup will wear the appropriate personal protective equipment as specified above with consideration given to the size, temperature, nature, and location of the spill. The shift supervisor will oversee all spill responses.

The following steps will be taken to control the spill, taking into consideration the safety of plant personnel:

1) When it is safe to do so, the source of the spill will be stopped, closed, or plugged to prevent further spillage.

2) The area of the spill will be controlled by creating dikes or berms using booms, oil dry, or similar materials or other means, as appropriate.

3) All sewers or water run-off from the area will be contained to prevent the spread of PCB contaminated materials.

4) Cleanup will be conducted as outlined in the PCB Spill Cleanup Requirements.

5) Whenever possible and if practical, the PCB oil will be collected for recycling (using the vacuum truck or pumps, etc.). When this cannot be accomplished, absorbent pads or oil dry will be used to collect the material.

6) All solid wastes such as pads, booms, or oil dry will be collected, placed in the PCB solid waste drums.

7) All equipment and PPE involved in the spill cleanup will be thoroughly decontaminated and be made ready for service as described above. When this cannot be done, the equipment is to be placed in the PCB solid waste drums.

8) All spills are to be immediately reported and the causes investigated by the on-duty supervisor.

Fires

All personnel are to remain up wind of a fire at all times. Any plant areas downwind of the fire or in the path of a smoke plume are to be immediately evacuated to a safe area. Emergency services such as the police or fire department may initiate a public evacuation after consulting the emergency coordinator, if needed. The protective equipment that is in the facility can be used by these response agencies if needed.
Fires are to be controlled or extinguished as quickly as possible by using the handheld dry chemical extinguishers for small fires or the AFFF foam and water spray system for large fires. Foam is to be discharged on large burning liquid pools or used as a vapor suppressant on spilled pools of oil by using the fixed AFFF foam/water monitors located at strategic locations around the facility.

After the safe application of water or foam, all personnel responding to a fire must wear level "B" protective clothing as specified in the PPE section above.

Upon arrival of the fire department, full authority is to be handed over to the fire chief. The emergency coordinator or his designee is to report to and remain with the fire chief to assist him by providing any information that is available. The emergency coordinator is responsible to ensure that all spilled material and water run-off is controlled and contained.

Emergency Shutdown Procedures:

During the PCB destruction program, it may become necessary to shut down the processing units.
(Note: The hydrotreater unit will not be considered PCB contaminated after the first inlet flange on R405).

There are two different types of shutdown procedures. The sections below describe the non-emergency emergency shutdown procedure. For non-emergency type situations: for example, a mechanical failure up stream or downstream of the unit, use the non-emergency shutdown. For emergency shutdown procedures such as spills, fires, and releases in an area involving the process unit itself. Follow the emergency shutdown procedures.

For any possible contact with PCB contaminated material, proper PPE will be worn. All equipment and PPE coming in contact with PCB contaminated oil will be decontaminated as per the decontamination section

above. All materials that cannot be properly decontaminated or reused will be disposed of as PCB solid waste.

Non-Emergency Shutdown Procedures
Shutdown: Dehydration, VFS, Vacuum tower, and the Luwa's.
Follow the general shutdown guidelines for this equipment. During non-emergency situations, the typical shutdown procedures which are included in the PCB training manual are followed.

Emergency Shutdown Procedure
There are different situations that may or may not warrant an emergency shutdown of the process units. Follow the section in the Operating Manual for the facility which describes the procedures to follow if an emergency shutdown becomes necessary.

Processing Safety Measures and Gas Monitoring:

During the processing of used oil, there are times when leaks can occur or when maintenance must be performed on the process equipment. The hydrotreating process uses hydrogen gas in the processing and a byproduct of the hydrotreating process is hydrogen sulfide gas or H_2S. H_2S is toxic to personnel at elevated levels and has poor warning properties. It has an odor described smelling like rotten eggs. After smelling H_2S at lower levels, it will deaden your sense of smell, and then if the levels become elevated it is dangerous (because you cannot detect it by smell) and will become unconscious and die from the exposure. This is when H_2S becomes dangerous to workers in the area. In order to keep workers safe and warn them of the presence of H_2S in the area, the facility has installed stationary H_2S gas monitoring equipment in the process area that will detect the presence of the gas at low levels and alarm in the control room. If H_2S gas monitors alarmed in the control room, the operations personnel evacuate the process area and barricade it so that no personnel enter. When the problem is corrected, the barricades are removed and normal operations resume.

Workers such as operators that obtain product samples from the process equipment, and maintenance workers who perform repairs on the equipment, are also supplied with personal H_2S monitors to wear while working in the process and/or preparing to off-load tanker trucks or rail cars that may contain elevated levels of H_2S as well.

Because hydrogen and hydrogen sulfide gas is flammable, any work that will be performed in areas of the facility where flammable and/or combustible materials may be present is controlled by a work permitting procedure. A part of the work permitting procedure is to test for flammable gasses in the area. Portable gas testing meters are used to check for the presence of flammable and/or toxic gases in the area where work will be performed. The gas testing meters are capable of checking and reporting the levels of oxygen (O2), Lower Explosive Limit (LEL) of flammable gases, carbon monoxide (CO), and hydrogen sulfide (H_2S). No repair or maintenance work is allowed to be done in the facility work areas including the loading, unloading, processing, storage, and other hazardous areas without obtaining a work permit.

Attachment 2

Procedures that Address the Inspection and Sampling of Trailers and Railcars

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		Revision level #:	004
		Implementation Date:	02/01/2005
Page #:	1 of 3	Revision Date:	3/06/2017
Approvers:	Nicholas Tratta/ Jason Shoff		

Inbound Tank Trailer Sampling

1.0 Purpose and Scope

This sampling procedure has been developed to insure the proper step by step method for sampling inbound tank trailers from various SK branches and third party sites. This procedure is intended for receiving operating personnel that will be involved in the sampling of inbound tank trailers to SK Refineries.

2.0 Definitions

COLIWASA - Device used to pull a liquid composite sample.
Acronym for COLIWASA-Composite Liquid Waste Sampler

3.0 Responsibilities

Receiving operators:

- The operator must wear proper PPE (IE hard hat, safety glasses with side shields, steel toe boots,H_2S monitor and a company issued uniform)
- The driver must also be wearing proper PPE, Hart Hat, safety glasses. (No Shorts)
- Log into WIN web using your own login

4.0 Procedure

1. Ensure that the date, time and truck number are logged into the sample log book.
2. When the tank trailer arrives under the designated sample rack, the operator will inspect the trailer using the Trailer Arrival Inspection Report (noting any damage, leaks and the physical Trailer Number on unit)
3. The receiving operator must then check the driver's paperwork for product type and source. The Operator must also ensure that the paperwork (manifest) has been properly filled out. (i.e. destination, carrier, sales order number, trailer number and source)

> Note:
> If this information does not match, see Supervisor.

4. Once paperwork is verified the sample can be pulled from the trailer. Ensure that the truck engine is not running and turn the traffic signal to red. Apply ground cable to ensure trailer is grounded to prevent any static discharge. Apply Chocks to the front and back of a set of tires to make sure trailer will not move. It is now safe to go on top of the trailer. Lower the rack down and open the dome lids bolts starting at the hinge side first to relieve any pressure that may have built up.

5. After opening the man way, the receiver will slowly insert the COLIWASA vertically into trailer until it gently touches the bottom.

> Note:
> It is important to slowly lower the COLIWASA and avoid hard impact on the bottom of the container. The COLIWASA is an expensive threaded device that may be damaged and rendered useless if allowed to free fall to the bottom.

6. The outer skirt of the COLIWASA is then pulled to the top of the inner COLIWASA core, ensuring that the inner core is not obstructed by the outer skirt.
7. Allow enough time for the inner core to fill completely with product. Once full, drop the outer skirt to the bottom of the trailer and tighten in place. Again, use caution when lowering the device to avoid damage.
8. The full COLIWASA can then be removed from the trailer.
9. The bottom of the COLIWASA should then be placed over an empty sample jar and the entire contents released. Ensure the lab gets at least a ¾ full jar.
10. If the unit being sampled has multiple compartments, it will be necessary to take an individual sample from each compartment.
11. Clean the exterior of the COLIWASA so it is ready for the next use.
12. Close the man way and ensure the gasket is in good shape and properly seated. Tighten all nuts/bolts. They must be tightened as if the unit were being put on the road for D.O.T. transportation.

> CAUTION!
> The man way closure must meet Department of Transportation requirements. The gasket must be properly seated and in good condition. All of the man way nuts and bolts must be tight to avoid any leakage during movement. Use the star pattern when tightening the nuts and bolts.

13. Make sure sample rack is lifted from the trailer and locked into the upright position.
14. Empty the entire contents of the COLIWASA into an appropriate sample jar. Install the jar lid and tighten.
15. Place the sample in the yellow sample carrier provided. The lid on the sample carrier is to always be used. Transport of full sample jars are always to be carried in the sample carrier for your safety.
16. All information is to be entered into the WIN system to allow for the load to be plant received, a drum gets generated and a bar code gets printed out.
17. The label printed containing all pertinent information must be affixed on the sample jar. The paperwork printed from WIN web also needs the bar code printed and applied to the paperwork. If the unit has multiple compartments, sample must be submitted for each compartment and marked to indicate the compartment the sample represents.
18. Once the sample has been properly packaged and labeled, it must be submitted to the lab for final testing and release.
19. Once the lab has completed its analysis, the paperwork will be transferred to the Transportation Clerks office for a Receiving Operators review.

> Note:
> Any samples being taken from the top of the trailer must be put in the yellow safety container for safe transportation from the top of the sample rack to the lab.

5.0 References

6.0 Revision Log

Revision Level:	Section:	Changes:	Date:
002	All	Format	7/21/2014
003	Header	Approvers	8/15/2016
004	3.0	Added H2S Monitor	3/6/2017

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		Revision level #:	002
		Implementation Date:	09/05/2014
Page #:	1 of 5	Revision Date:	8/15/2016
Approvers:	Nicholas Tratta/ Jason Shoff		

Tank Car PCB Used Oil Unloading Standard Operating Procedure

1.0 Purpose and Scope

The Tank Car PCB Unloading procedure has been developed to give plant personnel a step by step method to insure safe unloading of railcars containing PCBs. This procedure is intended for receiving personnel involved with the unloading of PCB waste oil railcars to waste oil PCB storage tanks.

2.0 Definitions

1. Blue Flag- Primary safety device. If an area is "Blue-flagged" that means do not proceed past this point.
2. Railcar Chocks- Rail chocks are placed on wheels of first and last cars of a string of cars. Chock flags are to be placed so they face towards the middle of east and west track.
3. Rail Tunnel- The rail tunnel is where all cars must be loaded or unloaded, unless express permission is given by operator's supervisor. It is the railcar containment area.
4. BOV- Bottom Operating Valve
5. PCBs – Polychlorinated Biphenyls, an U.S.A. banned man made chemical used primarily as an insulator in transformers and many different electrical devices.
6. COLIWASA- Is the device used to pull a used oil sample from the rail car. Acronym for COLIWASA-Composite Liquid Waste Sample.

3.0 Responsibilities

Receiving operator:

- To insure the safe unloading of PCB contaminated used oil cars.
- To insure PCB used oil cars are offloaded in a safe manner.
- Operation of used oil pumps and the maintaining of filters to those pumps.

Rail Asset Clerk:

- Insure the receiver has all the proper documents required to unload a PCB railcar.

Lab:

- Properly sample and clear all inbound railcars for unloading.
- If a railcar is found to have more than 2ppm PCBs, the lab is to notify all managers of the results.

EHS, Managers and Corporate Oil Review Panel:

- To review the lab results of the PCB used oil railcar. Conduct an investigation to determine if oil is TSCA regulated or non- regulated. Determine if the oil is to be received at East Chicago. Local management will determine which tank it is to be unloaded into.

4.0 Procedure

1. Railcar unloading must be done in the containment area unless permission is given by the operator's supervisor. When a railcar arrives it must be sampled and analyzed even if it comes with a pre shipment analysis. The rail car may also be sampled at the IHB yard by our third party contractor. If the railcar to be unloaded shows PCBs higher than 2 parts per million the lab will notify management and the approval process of where the contaminated oil will go will be initiated.
2. If management decides the PCB contaminated car is to be unloaded at the facility, the operator's supervisor will direct the operator to unload the car to a specific 27,000 gallon tank in the used oil tank farm. This tank is normally T-108.

> CAUTION!
> When a PCB car is approved by management for unloading; only the PCB car can be unloaded. No other cars can be unloaded while the PCB car is being unloaded; this could lead to contamination of the other cars to be unloaded.

3. Before unloading of any railcar the operator must get the paperwork associated with the incoming railcar from the Rail Asset Clerk's office. Also, the operator will do a pre unload inspection on an IPAD using the inspection icon. Information in this icon should include 4 pictures, seal numbers removed from the man way and BOV, outage of the car and the temperature of the oil in the car. The receiving report number should be documented in the comments section. Also, if the rail car has been sampled by a Third party there will be seals that were applied to the man way and BOV by the sample person. These seal numbers will be available on the "Tank Car Inspection Form". The operator must make sure these seals match the seals on the car before unloading. If the seals do not match seek supervision immediately.

> Note:
> IPAD inspections must be done. If for some reason you don't have your IPAD, use someone else's. Cars are not to be unloaded until the IPAD inspections are done.

> WARNING!
> Lab results must accompany the "Tank Car Inspection Form" that the Rail Asset Clerk has provided for the operator to unload a car. If lab results are not available for this specific car the operator is NOT to unload until supervision is informed. Unloading of waste oil cars without having Lab results is absolutely prohibited and cannot happen!

4. The operator must wear proper personal protective equipment. The personnel protective equipment will consist of:

   a. hard hat
   b. safety glasses
   c. company provided uniform with full length sleeves
   d. steel toed safety shoes
   e. rubber gloves
   f. organic type respirator is optional
   e. face shield

5. The operator must insure the "Tank Car Inspection Form" has been filled out prior to unloading. The operator must remove the seal or lock on the bottom of the car. The operator must ensure brakes are secure, chocks have been placed on wheels and that the ground cable is hooked up.
6. The operator must lower the access ramp onto the railcar ensuring the safety cage is in place. The operator will then open the man way on the railcar and take a core sample using the COLIWASA tube if the car hasn't been sampled at IHB yet. Refer to Rail Car Sampling EC07-101.

CAUTION!
Caution must be used when opening the man way so as to release pressure slowly. This is done by opening the vent if provided and or loosening the bolts starting and the hinged side.

7. After the Lab, EHS and the Corporate Review Panel have given the ok to unload the PCB contaminated railcar, the operator may start the unloading process.

Note:
If the operator sampled a car that was found to have PCBs, the COLIWASA used should be put out of service, and stored so not to contaminate future samples.

Note:
A rail car may be sampled outside of containment with the consent of supervision, and only if protected by a "MEN AT WORK" blue flag placed at the end of the rail car from which a switch can be made.

8. The operator must ensure the drains to the containment sump are open and free of debris. The operator places a drip pan under the unloading connection to be used. The operator will insure the BOV is closed then remove the bottom cap and attach necessary fittings.

Note:
It is important that the spill pans and drains are fee of debris that may block the flow of oil to the sump in case of a spill. Blocked drains may result in spills leaving the facility property and or entering the waterway.

Caution:
Any spills of PCB material must first be contained and stopped if possible, then immediately reported to the operators supervisor. If the operator comes in contact with the PCB material, the operator will remain in the area and hail for a decontamination team on channel 2. If safety is compromised the operator is to find a suitable safe zone to limit contamination through the re-refinery that also ensures the operators safety.

9. The operator then hooks up the unloading hose and secures the connection, both on the railcar and pump suction. All points of connections require the ears of the cam locks to be secured with durable Velcro straps. In the event that a suitable Velcro strap is not available some other means approved by a supervisor may be used on a temporary basis.
10. The operator must insure the unloading pump strainers are in place and clean.
11. The operator will check the PCB receiving tank gauge to insure there is sufficient room in the tank. The operator must also take a starting outage reading on the railcar. The operator will then open the appropriate valves on the tank, pump and lastly the railcar and then start the pump.

12. All connections or fittings must be checked for any sign of leaks. If any leaks are present, unloading must be stopped, leak stopped and reported to their supervisor.

WARING!

If there is any leaking after the BOV is opened to unload a PCB car, the BOV must be shut immediately and the leak is to be reported to a supervisor. The leak will have to be cleaned up using SK PCB cleanup protocol.

Note:

PCB spill cleanup protocol consists of:

- Any PCB contaminated spills are to be reported to the operator's supervisor and the facilities EHS manager.
- Operations on-shift supervisor is to be notified of PCB spill and assist with cleanup or containment if not done already.
- Led by the Operations on-shift supervisor, a team is to be put in place to contain the spill if needed and start the cleanup process.
- If the PCB spill is severe enough a decontamination area will be set up.
- Employees will be equipped with the proper PPE for cleanup. This includes: rubber gloves, tyvek suit, rubber boots, duct tape to seal the rubber boots and rubber gloves to the tyvek suit, safety glasses, face shield and a hard hat.
- All PPE and equipment used must either be decontaminated or thrown away in a PCB hazardous drum and labeled as such.
- Any equipment or SK grounds that have come in contact with PCB material must be decontaminated and cleaned to rid of any PCBs.
- All equipment or SK grounds that were decontaminated must have a swab test taken, the Lab will run a PCB test on it to ensure said equipment or grounds are rid of PCBs.
- All filter debris, rags, Tyvek suits, gloves, oil dry and etc. must be placed in a three ring drum with PCB labeling (with date) and stored in the PCB drums storage building in Plant # 1.

13. Once pumping has started, the operators must check the product is going to the desired tank.
14. After the tank car is completely empty, the operator must shut the BOV, suction valve on the pump, turn off the pump and shut the discharge valve.
15. The operator will disconnect the hose carefully and drain the hose into a PCB labeled bucket that will later be discarded into a PCB drum. The hose must be capped or plugged and returned to the pump area.

Note:

It is very important to flush all the pumps and unloading lines used with non-contaminated used oil. This is done with the next car to be unloaded. With all valves still lined up to the PCB tank, the operator will flush 2' of used oil into that tank. If there is insufficient room in the PCB tank, it will be necessary to flush to a new designated PCB tank that will hold the flush material.

16. The operator performs a visual inspection to ensure the car is empty, removes ground straps, puts cap/plug back on the bottom of the tank car, and seals the dome lid by securely fastening all the nuts with an 18" pipe wrench for safe transport. Seals are to be put on the man way and BOV after they are secured. These seal numbers are to be documented on the "Tank Car Unloading Report" and in their IPAD post unload inspection.

17. The operator completes all paperwork including "Tank Car Unloading Report" for unloading tank cars. Also, a post inspection report is to be done on their IPAD using the inspections icon provided. Picture's, seals and inn age are to be recorded in this icon.
18. The operator is to then give all completed paperwork to the Rail Asset Clerk so the car can be properly offered for transportation.
19. With the next used oil car to be unloaded the operator will flush the pumps, hoses and unloading lines into the PCB tank. 2 feet of used oil into the PCB tank is required. This will insure no contamination of future unloading of non-contaminated used oil.
20. After the pump and unloading lines have been flushed, the operator's supervisor is to lock out the suction and inlet lines to ensure no offloading of PCB material gets into a bulk storage tank.
21. The PCB tank is to be clearly labeled that the tank contains PCBs.

5.0 References

- EC07-101 Rail Tank Car Sampling SOP
- EC07-103 Tank Car Used Oil Unloading SOP

6.0 Revision Log

Revision Level:	Section:	Changes:	Date:
002	Header	Approvers	8/15/2016

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		Revision level #:	002
		Implementation Date:	09/12/2014
Page #:	1 of 5	Revision Date:	08/15/2016
Approvers:	Nicholas Tratta/ Jason Shoff		

Tank Trailer PCB Used Oil Unloading Standard Operating Procedure

1.0 Purpose and Scope

The Tank Trailer PCB Unloading procedure has been developed to give plant personnel a step by step method to ensure safe unloading of tank trailers containing PCBs. This procedure is intended for receiving personnel involved with the unloading of PCB waste oil trailers to waste oil PCB storage tanks.

2.0 Definitions

1. PCBs – Polychlorinated Biphenyls, an U.S.A. banned man made chemical used primarily as an insulator in transformers and many different electrical devices.
2. COLIWASA- Is the device used to pull a used oil sample from the tank trailer. Acronym for COLIWASA-Composite Liquid Waste Sample.

3.0 Responsibilities

Receiving operator:

- To ensure the safe unloading of PCB contaminated used oil trailers.
- To ensure PCB used oil trailers are offloaded in a safe manner.
- Operation of used oil pumps and the maintaining of filters to those pumps.

Lab:

- Properly analyze sample and clear all inbound tank trailers for unloading.
- If a tank trailer is found to have more than 2ppm PCBs, the lab is to notify all managers of the results.

EHS, Managers and Corporate Oil Review Panel:

- To review the lab results of the PCB used oil tank trailer. Conduct an investigation to determine if oil is TSCA regulated or non- regulated. Determine if the oil is to be received at East Chicago. Local management will determine which tank it is to be unloaded into.

4.0 Procedure

1. Tank trailer unloading must be done in the containment area unless permission is given by the operator's supervisor. When a tank trailer arrives it must be sampled and analyzed even if it comes with a pre shipment analysis. If the tank trailer to be unloaded shows PCBs higher than 2 parts per million the lab will notify management and a second sample must be taken and submitted to the lab for verification of PCB concentration. The approval or rejection process will be initiated and a decision will be made to determine where the oil will be unloaded or sent to.

2. If management decides the PCB contaminated trailer is to be unloaded at the facility, the operator's supervisor will direct the operator to unload the trailer to a specific tank in the used oil tank farm. This tank is normally T-108.

Note:
If the operator sampled a trailer that was found to have PCBs, the COLIWASA used must be tagged, removed from service, and stored so not to contaminate future samples.

CAUTION!
When a PCB trailer is approved by management for unloading; only the PCB trailer can be unloaded to the high side of the pumping tanks so that the low side pumping tanks piping doesn't get contaminated. No other trailers can be unloaded to the high side while the PCB trailer is being unloaded; this will prevent contamination of other piping being used in future unloading.

3. Before unloading of any trailer the operator must get the paperwork associated with the incoming trailer from the Transportation Clerk's office. Reference EC16-104 Tank Trailer Unloading SOP.
4. After the Lab, EHS and the Corporate Review Panel have given the ok to unload the PCB contaminated trailer, the operator may start the unloading process into the tank designated by management.
5. The operator is to fill out a "Tank Farm Log Transfer Sheet" showing which tank the trailer will be unloading into, marking in the margin of the book that the trailer being unloaded is PCB contaminated.
6. The operator will fill out the Trailer Unloading Log Book with date of transfer, time of transfer, tank number and the beginning and ending gauge readings.
7. The operator will place the "Do Not Enter" sign in the receiving bays entrance to show all personnel that unloading is in progress.
8. The operator will hook up the ground strap to the trailer. The operator will ensure the pump strainer is in place and clean. The operator, wearing all appropriate safety equipment, will open the man way bolts slowly to allow pressure build up to subside by starting at the hinged side first.

CAUTION!
Caution must be used when opening the man way so as to release pressure slowly. This is done by opening the vent if provided and or loosening the bolts starting and the hinged side.

WARNING!
Lab results must accompany the paper work that the Transportation Clerk has provided for the operator to unload a trailer. If lab results are not available for this specific trailer the operator is NOT to unload until supervision is informed. Unloading of waste oil trailers without having Lab results is absolutely prohibited and cannot happen!

9. The operator must wear proper personal protective equipment. The personnel protective equipment will consist of:

   a. hard hat
   b. safety glasses
   c. company provided uniform with full length sleeves
   d. steel toed safety shoes
   e. rubber gloves

f. organic type respirator is optional
g. face shield
h. depending upon the concentration level of the PCBs, additional protection such as Tyvek suit or other as directed by the supervisor may be required.

10. The operator will put a drip pan under all connections to be used. The operator will hook up the suction hose to the pump and trailer, paying attention not to spill any product. All hose connections should be secured with a heavy duty Velcro strap or some other suitable means such as wire if a strap is not available.
11. The operator will check the PCB receiving tank gauge to ensure there is sufficient room in the tank. The operator will then open the appropriate valves on the tank, pump and lastly the trailer and then start the pump.

Caution!
All trailers have emergency or hydraulic valves which must be opened to unload. Operator must ensure the man way is not closed nor obstructed which would cause trailer to implode.

12. The operator must check trailer and receiving tank to ensure the product is going to the correct tank. The operator must check for any signs of a leak or spill. If any leaks or spillage is noted, the unloading must be stopped and reported to the operator's supervisor.

Caution:
Any spills of PCB material must first be contained and stopped if possible, then immediately reported to the operators supervisor. If the operator comes in contact with the PCB material, the operator will remain in the area and hail for a decontamination team on channel 2. If safety is compromised the operator is to find a suitable safe zone to limit contamination through the re-refinery that also ensures the operators safety.

WARNING!
If there is any leaking after the trailer is opened to unload a PCB tank trailer, the trailer must be shut immediately and the leak is to be reported to a supervisor. The leak will have to be cleaned up using SK PCB cleanup protocol.

PCB spill cleanup protocol consists of:

- Any PCB contaminated spills are to be reported to the operator's supervisor and the facilities EHS manager.
- Operations on-shift supervisor is to be notified of PCB spill and assist with cleanup or containment if not done already.
- Led by the Operations on-shift supervisor, a team is to be put in place to contain the spill if needed and start the cleanup process.
- If the PCB spill is severe enough a decontamination area will be set up.
- Employees will be equipped with the proper PPE for cleanup. This includes: rubber gloves, tyvek suit, rubber boots, duct tape to seal the rubber boots and rubber gloves to the tyvek suit, safety glasses, face shield and a hard hat.
- All PPE and equipment used must either be decontaminated or thrown away in a PCB hazardous drum and labeled as such.
- Any equipment or SK grounds that have come in contact with PCB material must be decontaminated and cleaned to rid of any PCBs.
- All equipment or SK grounds that were decontaminated must have a swab test taken, the Lab will run a PCB test on it to ensure said equipment or grounds are rid of PCBs.

- All filter debris, rags, Tyvek suits, gloves, oil dry and etc. must be placed in a three ring drum with PCB labeling (with date) and stored in the PCB drums storage building in Plant # 1.

13. The operator must check on pump operation paying attention to unusually high or low pressure. High pressure would indicate a closed discharge valve or frozen pipe and low pressure would indicate a plugged strainer or closed suction.

Note:
Normal operating pressure, on the discharge line, while pumping is between 15 and 25 psi. If the psi is higher or lower the normal operating range, pumping must stop and a resolution to the abnormal psi must be resolved.

14. Once the trailer has been emptied, the operator will close the bottom trailer valve, pump suction valve and turn off the pump.
15. Open the bleeder valve on the suction line of the pump to relieve any hose pressure and drain any remaining oil from. When bleeding the pressure it should be done into a PCB labeled bucket. The bucket and its contents should be placed into a 3 ring drum properly labeled as PCBs and stored in the PCB storage building.
16. The operator will then carefully disconnect the suction hose paying attention to avoid a spill.

Caution!
Connections must be released slowly and carefully as they could be under pressure. There are bleeder valves on the suction lines of the pumps that should be opened before disconnecting the hoses to relieve any pressure. Hose must be capped or plugged and returned to storage position to prevent spillage and or being ran over by a vehicle.

17. The operator will disconnect the ground strap, return drip pan, remove the "Do Not Enter" sign and ensure the trailer valve is capped and wheel chocks are removed. The operator will then close the man way and remove the ramp. The operator will then direct the driver/shunt driver to remove the trailer and scale out for an empty weight.
18. The operator will complete the unloading log book with finished unloading time.
19. The operator will complete the "Tank Farm Log Transfer Sheet", with a tank gauge reading, total gallons transferred, and sign off on it. These are to be put in the S/R supervisor's office door for review.
20. Copies of the scale ticket and manifest are to go to the Transportation Clerk's office and the originals will go to the Receiving Clerk's office.
21. The operator will ensure the receiving areas are kept clean and safe.
22. With the next used oil trailer to be unloaded the operator will flush the pumps, hoses and unloading lines into the PCB tank. Approximately 3 inches (212 gallons) of PCB free used oil into the PCB tank is required. This will insure no contamination of future unloading of non-contaminated used oil.

Note:
It is very important to flush all the pumps and unloading lines used with non-contaminated used oil. This is done with the next trailer to be unloaded. With all valves still lined up to the PCB tank, the operator will flush 3 inches (212 gallons) of used oil into that tank. If there is insufficient room in the PCB tank, it will be necessary to flush to a new designated PCB tank that will hold the flush material.

23. After the pump and unloading lines have been flushed, the operator's supervisor is to lock out the suction and inlet lines to ensure no offloading of PCB material gets into a bulk storage tank.
24. The PCB tank is to be clearly labeled that the tank contains PCBs.

5.0 References

- EC16-104 Tank Trailer Unloading

6.0 Revision Log

Revision Level:	Section:	Changes:	Date:
002	Header	Approvers	8/15/2016

ATTACHMENT 3

PCB Concentration Ranges

Vessel/ Tank	Sample ID	PCB Concentrations for Batch 1 (ppm)		PCB Concentrations for Batch 2 (ppm)	
		Low	High	Low	High
V-201	Feed to Pre-treatment tank	<2	19.30	<2	17.66
V-203	Dehydration Overhead Receiver	<2			2.35 / 4.30 **
V-204	LERT Bottoms	<2		<2	
V-206	VFS Overhead Fuel	<2	102.00	9.8	118.91
	Bottoms Asphalt Extender	<2		<2	
	Feed to Hydrotreater	<2	11.14	<2	11.77
	Hydrotreater Product	<2		<2	
V-330	Lite Vacuum Oil Rundown	*	16.80	<2	31.13
V-304	Medium Vacuum Oil Rundown	<2		<2	
V-305	Heavy Vacuum Oil Rundown	<2		<2	
R-403	R403 Outlet	<2		<2	
V-405	Kerosene Rundown	<2		<2	
V-307	Caustic Solution	<2		<2	
V-407	Spent Caustic	<2		<2	
V-412	Air Stripper	<2		<2	

* For Batch 1, Lite, Med, and Heavy were analyzed one time.

** Composite of samples received. Sample had two layers. Organic layer was 4.30 ppm. Combining both layers PCB obtained was 2.35 ppm.

ATTACHMENT 4

Procedure for Wastewater Treatment and Disposal

safety-kleen ®		SOP #:	
		Revision level #:	
		Implementation Date:	
Page #:	1 of 3	Revision Date:	
Approvers:			

PCB - Process Water Rundown Treatment

1 PURPOSE and SCOPE

The process described below is for decontaminating process rundown water from the Light Ends Recovery Tower, LERT. This will be done in a batch operation that proved to be successful during the previous Polychlorinated biphenol, PCB run.

A batch size is approximately 22,000 gallons. From this batch, approximately 2,500 gallons of used oil is recovered 50 gallons of that would be emulsion chemicals. In addition, approximately 3,400 gallons of HTS Distillate will be generated for every two batches processed. All of the above material will be pumped into T-51b for further processing.

NOTE
Any material pumped to T-51b must be < 2ppm PCB concentration.

2 DEFINITIONS

PCB – Polychlorinated biphenol

3 RESPONSIBILITIES

The field operator will be responsible for the valve configuration and communication with the wastewater supervisor to ensure proper operations and documentation is being completed.

PPE Requirements

- All required PPE for plant personnel
- Nitrile gloves

4 PROCEDURE

HTS Distillate Wash Preperation

1. Prior to the start of the PCB water treatment process the following will be completed.
2. A trailer of HTS Distillate will be spotted between T-909 and emulsion breaking. 4,000 gallons of HTS Distillate will be transferred from the supplied trailer to T-651. The connection for unloading the HTS Distillate is located on the north side of the emulsion tank containment wall.
3. 5 Micron filter bags will be inserted in the filter pod filter bag housings.
4. Each bag will then be filled with activated carbon.

5. Empty drums will be spotted in the area and properly labeled. (PCB waste) These will be used for the spent carbon and filter bags in the event we need to change this material out.
6. All hoses will be checked and tied down as per normal procedure in the event they do not have locking cam lock connections.

PCB Water Processing

When we begin the PCB process run, water from the LERT rundown will be directed from the outlet of the rundown water cooler, E-208 to a specified emulsion breaking tank, T-651. Approximately, 21,000 gallons of water from the LERT rundown will be routed into T-651 for HTS Distillate washing. The water will be fed into this tank on-top of 4,000 gallons of HTS Distillate.

NOTE

The HTS Distillate wash material is changed whenever there is a detectable result in any of the PCB analysis. All PCB contacted HTS Distillate with a PCB level < 2 ppm can be pumped into T-51b.

When the tank is full, the following procedure will be used to treat the water.

Note

21,000 gallons of process water and the 4000 gallons of HTS Distillate will total + or – 29'6". Do not exceed 30' (ft.) when filling the emulsion breaking tank, T-651.

1. Transfer the water from T-651 to either T-653 or T-654 (two other emulsion breaking tanks), whichever is empty. Make sure to transfer the water and to stop the transfer in when it hits the HTS Distillate wash in T-651 tank.

Note

DO NOT pump the HTS Distillate over to T-653 or T-654.

2. Once the transfer is completed, begin circulating the tank (either T-653 or T-654) using P-651 pump through the emulsion tank heat exchanger, E-651.
3. During the circulation, check the water being circulated for pH. If the pH is 7 – 8, no caustic addition is required. If the pH is < 7, add one minute of fresh caustic via the air solenoid valve with the digital display. The caustic addition meter controller is a timer valve and can be set to 1 minute. Do not add more than 1 minute of fresh caustic at a time. We do not want the pH to go high because we do not have the ability to reduce pH.

Note

You must have P-651 running in order to activate the safety valve, SV for caustic addition.

4. Add 25 – 35 gallons of Coagulant from tank #151510. The chemical pump will pump 2 gallons per minute. The tank gauge = 14 gallons per inch.
5. Allow the treated tank to circulate for about 1½ hours. It should be noted that the rundown water from the process will be around 100 degrees. During the circulation process, do not allow the temp to get higher than 150 degrees. E-651 has steam on the shell side and the temperature is set by the digital controller with a max output of 30%.
6. Once the tank has circulated for the 1½ hours, shut down the circulation and allow the tank to settle.

7. After 4 hours, check the five tank level taps and look for clear water separation to determine if proper settling has occurred.
8. Check the tank for proper settling through the different height level taps and determine at which tap the water is clear and where the oil rag layer begins. Note this information on the tank log/PCB logbook.

Once proper settling has been verified, follow the remaining procedure as outlined below.

Water Filtering Process

1. Line up the treated tank to the P-653 pump to transfer the material out.
2. Line up the discharge valve to the inlet of the carbon filter pod. Make sure the valve going toward the pump out header is locked out.
3. Line up the carbon filter outlet valve to the hose connection and to T-652.
4. Open the discharge to suction spill back valve 100%
5. Pinch down the pump discharge valve going toward the carbon filter. (About 1-2 turns open)
6. Begin pumping the water from the treated tank to T-652 via the carbon filter. Check inlet pressure on the filter pod (top gauge). Adjust the inlet valve to hold + or – 25# inlet pressure.
7. Transfer all but the final foot of water or rag layer to T-652. Stop the transfer with about 1–2 foot remaining. This will ensure that no oil rag is pump through the carbon and into the final discharge tank.
8. Sample the oil rag material for PCB's. If the results are < than 2 ppm, pump the remaining oil rag material to T-51b.
9. When the treated tank transfer is complete, sample T-652 water for PCB's and take a sample to the lab for analytical. Grab the sample from the treated tanks 8 ft. tap. This will represent the material in the tank.
10. If the results are < 2 ppb PCB, the water will be discharged to the plant one sump area via hose.
11. If the results are > 2 ppb PCB, the water will be pumped back to the LERT tower via P-652.

LERT

Only PCB decontaminated water will be sent back to the light ends recovery tower (LERT) for additional treatment. This treatment is for ammonia, ethylene glycol, sulfides, and trace PCB removal. The water will then be reprocessed following the "PCB Water Processing" section of this procedure.

5 REFERENCES

6 REVISION LOG

Revision Level:	Section:	Changes:	Date:

ATTACHMENT 5

VFS Loading Procedures

safety-kleen ®		SOP #:	
		Revision level #:	
		Implementation Date:	
Page #:	1 of 3	Revision Date:	
Approvers:			

PCB-VFS Loading through Reactor Recirculation Line

1 PURPOSE and SCOPE

Water/Glycol is boiled off of the Vacuum Fuel Stripper, V-205 and condenses in the overhead condenser, E-205. The traces of water and light fuel that are condensed accumulate in the overhead accumulator, V-206. From V-206 the fuel phase is pumped to the rundown tanks located in the intermediate tank farm.

The Vacuum Fuel Stripper product from polychlorinated biphenyl (PCB) processing contains PCBs greater than 2 ppm. This product will be shipped off-site to an incinerator for disposal. This procedure specifies the steps to be taken to the product from the rundown tanks to a tanker trailer.

2 DEFINITIONS

VFS – Vacuum Fuel Stripper
PCB – Polychlorinated biphenyl

3 RESPONSIBILITIES

The field operator will be responsible for the valve configuration and communication with the board operator to ensure proper volume is being loaded.

PPE Requirements

- Tyvec suite
- Nitrile gloves
- Fresh air when on top of the trailer

4 PROCEDURE

NOTE

The two discharge valves going to the hydrotreater unit from the P904 pumps **must** be locked out before the trailer loading activities begin to prevent any PCB contaminated VFS from entering the hydrotreater unit.

1. Have receiving perform a pre load inspection before the trailer is spotted in containment next to the intermediate tank farm.

2. Once the trailer is spotted, place "do not enter" tape around the trailer to limit area to trained personnel only and then connect all hoses and ensure straps are on all hose connections.
3. Open the 6" suction valves at the tank leading to the P904 pumps from the desired tank (T-931, T-933 or T-935)
4. Open the header line suction valve found inside the intermediate tank farm wall coming into the P904 suction. This will tie in the PCB VFS fuel from the desired tank (T-931, T-933 or T-935).
5. Open the suction valve to P904 located inside of the intermediate tank farm pump alley.
6. Open P904 discharge valves.(Same alignment of valves as for the reactor recirculation standard operating procedure)

NOTE
Flow should be lined up as if R-403/4 were going to be put on oil recirculation.

7. Open R-403/4 recirculation valve on the north side of E-405.

NOTE
This is the last block valve before the trailer. Flow is now directed towards the caustic pump alley containment area.

8. Open the trailer loading valves.
9. Call the board operator and inform him that loading is about to begin (get a starting level for the tank that is being loaded from). **Approximately 4230 gallons of VFS will be loaded onto each trailer. This is about 5' of material from the tank.**
10. Start P904 and monitor the trailer level.
11. Once trailer is full, block in line at the valve north of E-405 and purge forward (to the trailer) from 1 inch bleeder.

NOTE
Once the final load has been completed vacuum oil must be ran through the loading line to triple rinse the lines and decontaminate.

5 REFERENCES

6 REVISION LOG

Revision Level:	Section:	Changes:	Date:

ATTACHMENT 6

PCB Calculation Worksheet

PCB CALCULATION WORKSHEET

Tier #2

Method : SK SOP 9202

Logbook : T2PCAL22

Date: 2-9-16

Page: 1

Sample : ID : #3 V330 1100 Prep Date: 1-27-16

Dilution 1: 2.9995 g (Sample Weight) into 30 ml(A) total volume

Dilution 2: 1 ml(B) to 10 ml(C)

Dilution 3: _____ ml(D) to _____ ml(E)

PCB Sequence Logbook / Page : PCBTI-115 / 180 Run Time: 1327

Standard : Standard Conc.(ug/ml): 0.1 ug/ml Aroclor : 1242 Batch: See Cal

QC : GC / Column ID : 4F 15 T2QA Logbook: 11 Page(s): 90

Standard : Run _____

Peak #	R.T.(min)	Area
1		
2		
3		
4		
5		
Total	Std Area	

Sample : Run _____

Peak #	R.T.(min)	Area
1		
2		
3		
4		
5		
Total	Smp Area	

PCB Calculation = $\frac{\text{Sample Area x Standard Conc. x Dilution 1 (A) x Dilution 2 (C) x Dilution 3 (E)}}{\text{Std Area x Sample Weight x Dilution 2 (B) x Dilution 3 (D)}}$

= $\frac{13.4399 \cdot 5}{4}$

= 16.80 ug/ml wet weight 1242 Aroclor

If using chemstation calculation, follow the above formula. The chemstation result replaces $\frac{\text{Sample Area x Standard Conc.}}{\text{Std Area}}$ in the calculation.

PCB Correction for water % ug/g dry wt = $\frac{\text{PCB found (ug/g)}}{\text{(1 - (\%water/100))}}$

KF Logbook/Page: _____

Water % = _____ = _____ = _____ ug/g dry wt.

(Water %) / 100 = _____ _____ Aroclor

1 - (Water %) / 100 = _____

TJH 2-9-16

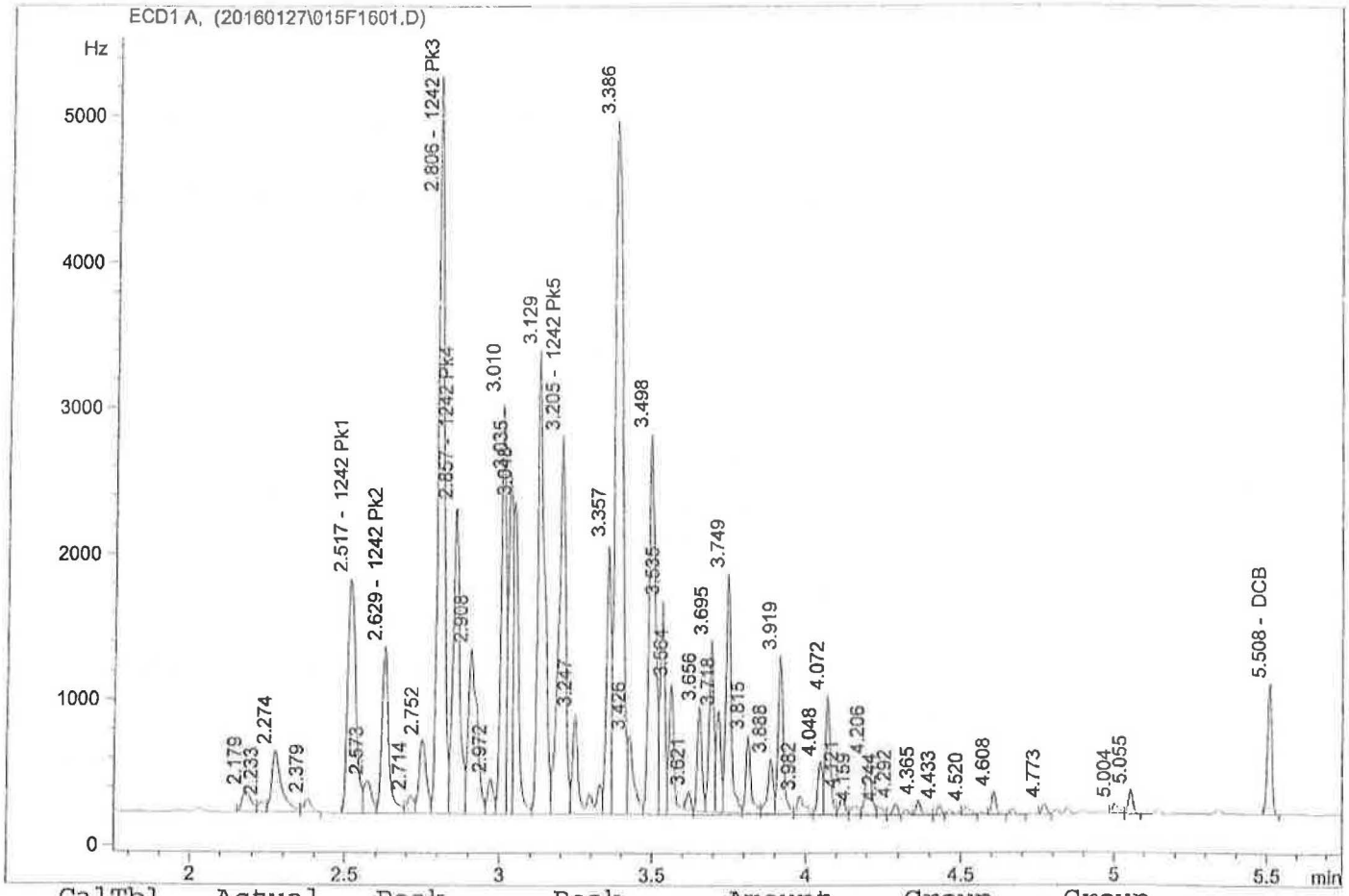
Analyst Date Reviewer Date

9202 Tier II Report for GC 4 - FRONT Channel 27Jan2016 at 13:40

Sample ID : #8 V330 1100 LITE JAC

Injection On: 1/27/2016 1:27:23 PM
Method : C:\HPCHEM\2\METHODS\F124216A.M
Modified : 1/23/2016 10:05:03 AM
Sample File : C:\HPCHEM\2\DATA\20160127\015F1601.D

Vial No. : 15
Inj. Vol. : 1 ul
Weight : 2.9995
Dilution : 1.0000
Multiplier: 1.0000
Analyst ID: TS



CalTbl R.T.	Actual R.T.	Peak Name	Peak Area	Amount ug/g	Group Names	Group Amt.
2.515	2.517	1242 Pk1	2996.3	3.0610	1242	18.7254
2.626	2.629	1242 Pk2	1827.5	2.9035		
2.806	2.806	1242 Pk3	6747.1	3.8376		
2.857	2.857	1242 Pk4	3179.5	3.6378		
3.204	3.205	1242 Pk5	4211.5	5.2854		
5.499	5.508	DCB	865.5	0.0385		

$\frac{13.4399 \cdot 5}{4} = 16.80$

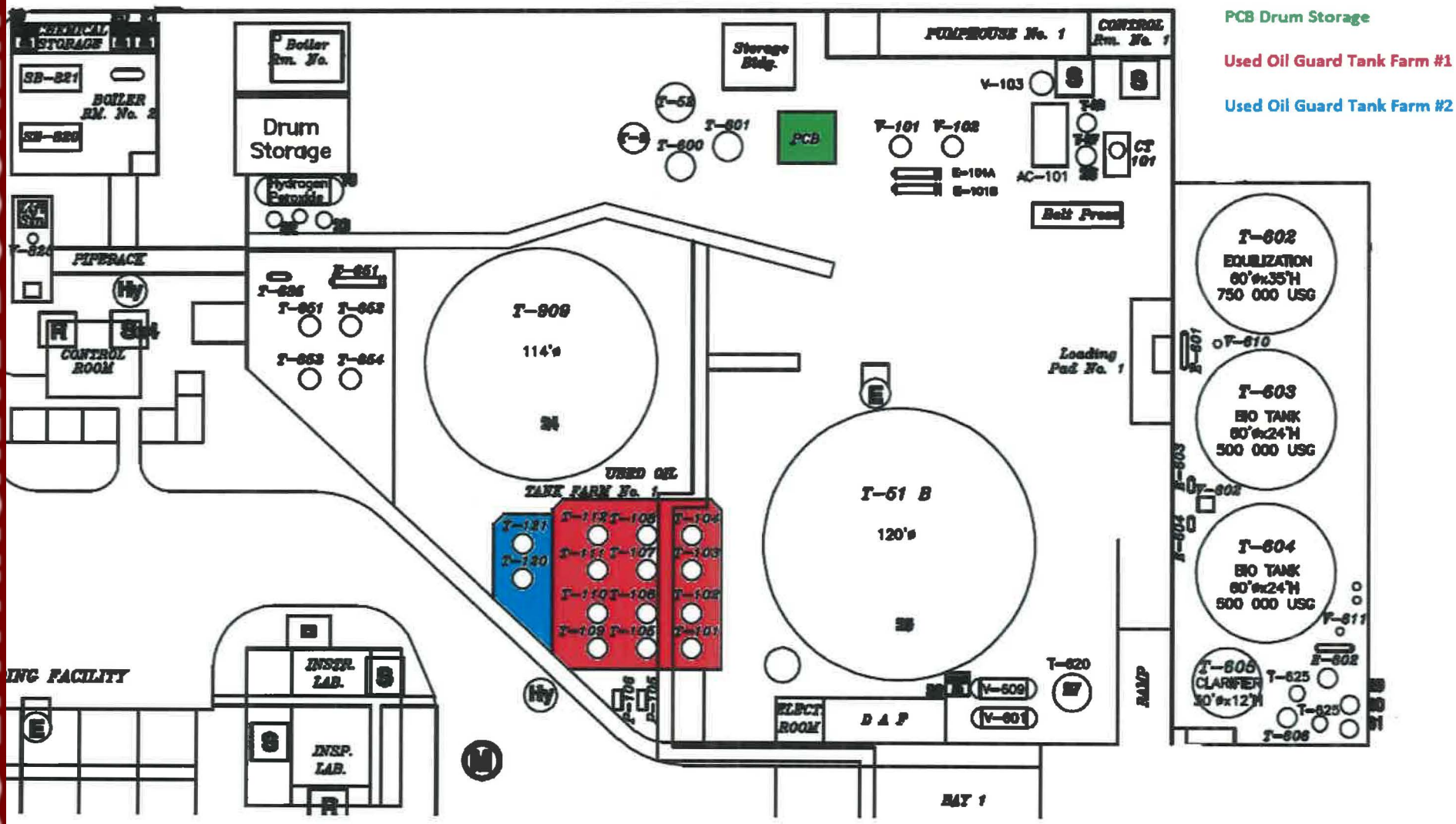
DCB % Recovery (Must be between 40% and 150%): 77.1% - Passed

NOTE: DILUTION REQUIRED!! RESULTS ARE NEAR/ABOVE UPPER CALIBRATION LIMIT!

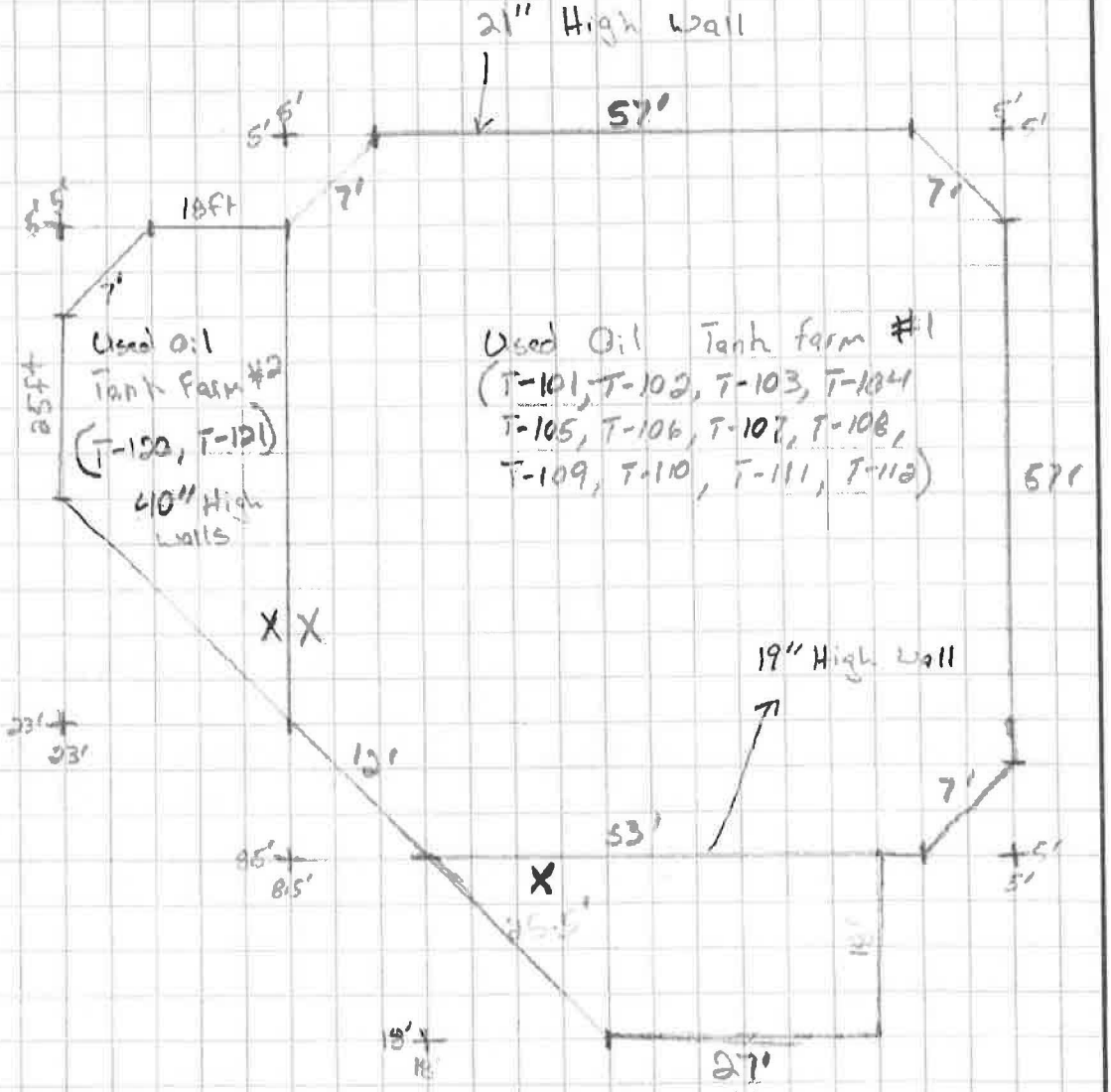
Comments: Calibrated to 20 ppm

ATTACHMENT 7

Diagrams for the Location of all PCB Storage Areas



"X" = Sumps



Tank Farm #2

$Area = (23ft)(53ft) - \frac{5ft^2}{2} - \frac{(23ft)^2}{2}$

$= 941.2ft^2$

Deducts: Tank - (2) 10ft ⌀

$A = \left(\frac{10ft}{2}\right)^2 (\pi)(2) = 157ft^2$

Total Area = $725ft^2$

Tank Farm #1

$Area = (67ft)(67ft) - \frac{(8.5ft)^2}{2} - \frac{3(5ft)^2}{2} + (18ft)(45ft) - \frac{18ft^2}{2} = 5063ft^2$

Deducts: - (11) 12ft ⌀ Tanks ; (2) 3 X 6 Pump
↳ (1) 8ft ⌀ Tank

$A = \left(\left(\frac{12ft}{2}\right)^2 \pi\right) 11 + (3ft)(6ft)(2) + \left(\left(\frac{10ft}{2}\right)^2 \pi\right)$

$= 1359ft^2$

Total Area = $5063ft^2 - 1359ft^2 = 3704ft^2$

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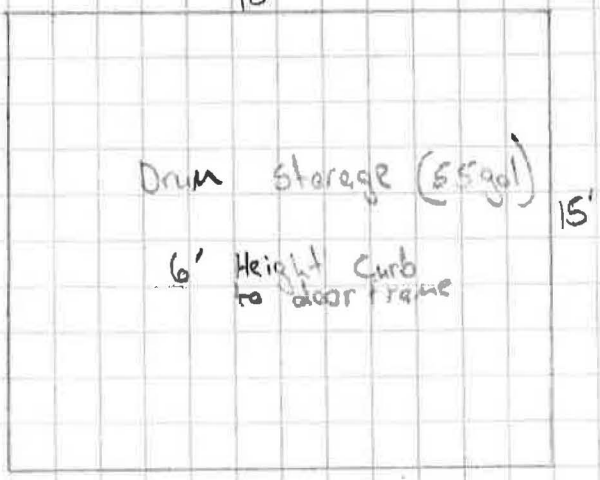
date: _____ scale: _____

drawn by: _____ job no.: _____

drawing no.

Drum Storage Bldg.



Area = (18ft)(15ft)
= 270 ft²

Volume = $(270ft^2)(6in)\left(\frac{1ft}{12in}\right) = 135ft^3$

$135ft^3$ = 1010 gallons

Req'd Volume
= 55 gallons (110%)
= 61 gallons

Suitability:
1010 gallons Available > 61 gallons Req'd

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drawing no.

Tank Farm #2

Volume = $785\ ft^2 \left(\frac{40\ in}{12\ ft}\right)$

$= 2617\ ft^3 = 19577$ Gallons

Containment Req'd

Largest Tank = 15,500 gallons (110%)
= 17050 gallons

Max Rainfall based on 0.19 in/hr x 24 hrs

$= 785\ ft^2 \left(0.19\ in/hr\right)\left(24\ hrs/day\right)\left(\frac{1\ ft}{12\ in}\right)$

$= 298\ ft^3 = 2229$ Gallons

Total Req'd = 17050 + 2229 Gallons
= 19279 Gallons

Suitability:

19577 gallons Available > 19279 Gal Req'd

Tank Farm #1

Volume = $3704\ ft^2 \left(\frac{12\ in}{12\ ft}\right)$

$= 6482\ ft^3 = 48488$ gallons

Containment Req'd

Largest Tank = 28,500 gallons (110%)
= 31350 gallons

Max Rainfall based on 0.19 in/hr x 24 hrs

$= 3704\ ft^2 \left(0.19\ in/hr\right)\left(\frac{24\ hrs}{day}\right)\left(\frac{1\ ft}{12\ in}\right)$

$= 1407.5\ ft^3 = 10529$ gallons

Total Req'd = 31350 gal + 10529 gal
= 41,879 gallons

Suitability:

48488 gallons available > 41,879 gal Req'd

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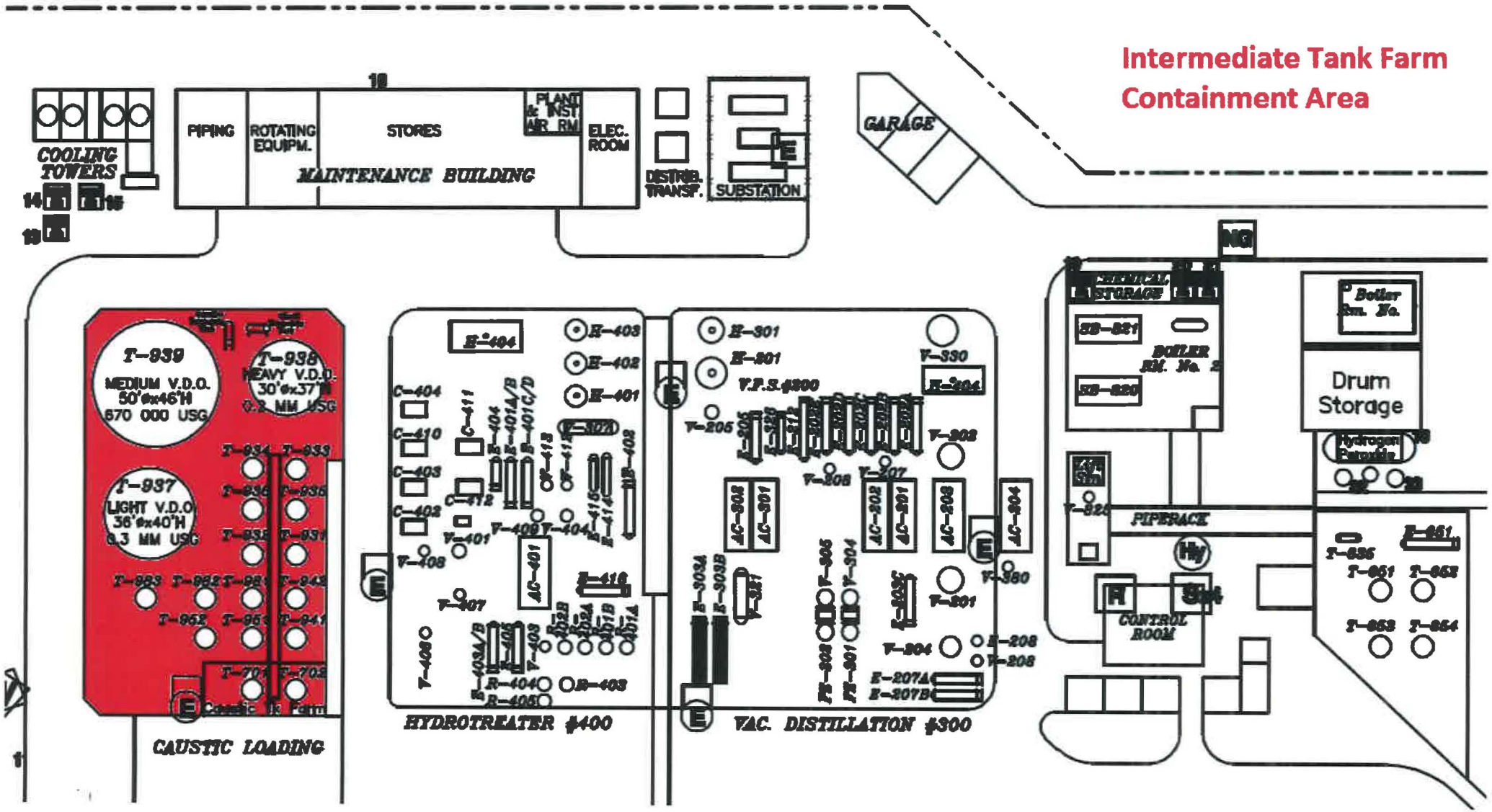

Intermediate Tank Farm
Containment Area
COOLING TOWERS
MAINTENANCE BUILDING
PIPING
ROTATING EQUIPM.
STORES
ELEC. ROOM
DISTRIB. TRANSF.
SUBSTATION
GARAGE
T-939
MEDIUM V.D.O.
50'ø x 46'H
670 000 USG
T-938
HEAVY V.D.O.
T-937
LIGHT V.D.O
36'ø x 40'H
0.3 MM USG
CAUSTIC LOADING
HYDROTREATER #400
VAC. DISTILLATION #300
Drum Storage
PIPERACK
CONTROL ROOM

BresLube
A Division of Safety-Kleen Canada Inc.

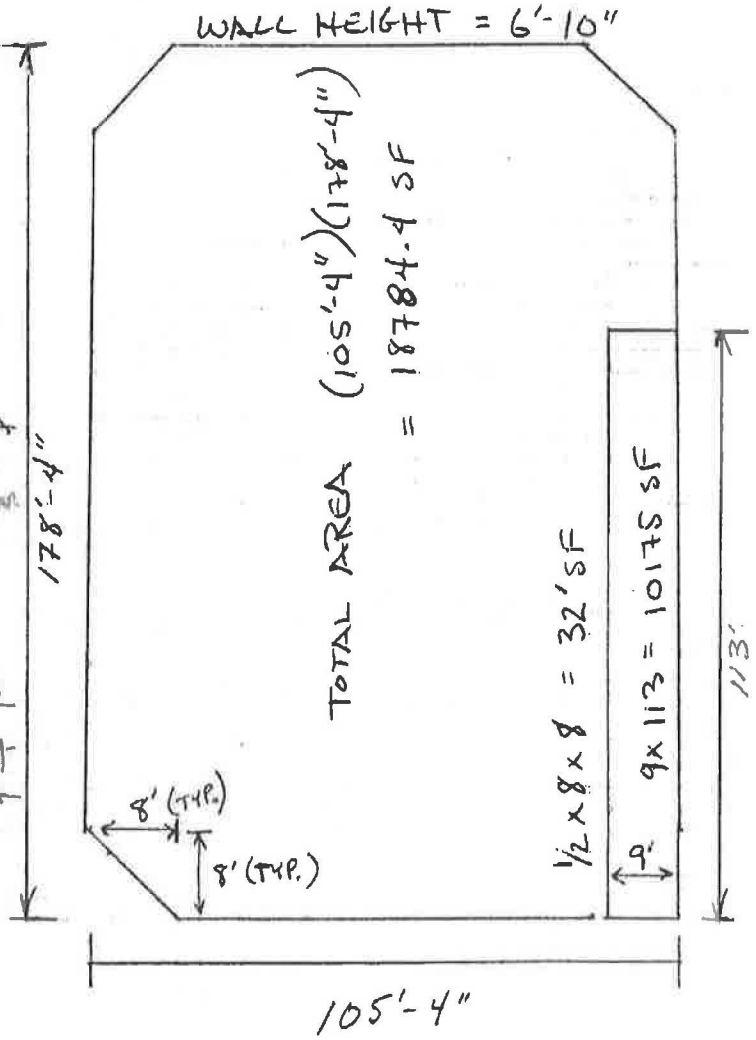
Calculation Sheet

Page 1/1
Project No.
Date 2/10/95
By MRK

Subject INTERMEDIATE TANK FARM CONTAINMENT VOLUME

I PLOT AREA

TOTAL AREA 18784.4
(CORNERS) - 3x32
(PUMP BAY -1017 SF
NET 17671.4 SF



II TANK PLOT SPACE

QTY	DIAM	AREA
AR		1697
~~14~~ 15	12'	~~1584~~ AR
1	50'	1964
1	36'	1018
1	30'	708
	~~TOTAL 3309~~	

EXCLUDE PLOT AREA OF ~~LARGEST TANK~~ ~~1939~~ AR
Total 5387

III

NET AREA = 17671.4 SF - ~~3309~~ AR 5387 = ~~14362~~ AR 12284.4 SF

IV

CONTAINMENT VOL = 14362 x 6'-10" = ~~98,140 CF~~ AR
= ~~734,089 gal~~ AR
= 83943.4 CF
= 627940 gal

BR39

(ITF)

Suitability of Intermediate Tank Farm Containment
For T-931, T-933, T-935

Containment Req'd

Largest Tank (T-931, T-933, T-935) (12'D x 35'H) = 29,610 Gal

(29,610 Gal)(110%) = 32571 gal

Max Rainfall based on 3.19 in/hr x 24hrs

$= 12284.4\ ft^2 \left(3.19\ \frac{in}{hr}\right)\left(24\ \frac{hrs}{day}\right)\left(\frac{1\ ft}{12\ in}\right) = 4668\ \frac{ft^3}{day}$

$= 34919\ \frac{gal}{day}$

Total Req'd = 32571 gal + 34919 $\frac{gal}{day}$ (1 day)

= 67490 gal

Suitability:

627940 gal Available > 67490 gal Req'd

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drawing no.

ATTACHMENT 8

Certification of Compliance with the Storage Facility Standards

CERTIFICATION

This is a certification in accordance with 40 C.F.R. § 761.65(d)(2)(iii) that Safety-Kleen Systems, Inc. East Chicago, Indiana, is in compliance with the storage facility standards in paragraphs (b) and (c)(7) of 40 C.F.R. § 761.65. These standards are:

40 C.F.R. § 761.65

(b) Except as provided in paragraphs (b)(2), (c)(1), (c)(7), (c)(9), and (c)(10) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following storage unit requirements:

(1) The facilities shall meet the following criteria:

(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;

(ii) An adequate floor that has continuous curbing with a minimum 6 inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored there, whichever is greater. PCB/radioactive wastes are not required to be stored in an area with a minimum 6 inch high curbing. However, the floor and curbing must still provide a containment volume equal to at least two times the internal volume of the largest PCB Container or 25 percent of the total internal volume of all PCB Containers stored there, whichever is greater.

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;

(iv) Floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined at § 761.3, which prevents or minimizes penetration of PCBs.

(v) Not located at a site that is below the 100-year flood water elevation.

(2) No person may store PCBs and PCB Items designated for disposal in a storage unit other than one approved pursuant to paragraph (d) of this section or meeting the design requirements of paragraph (b) of this section, unless the unit meets one of the following conditions:

(i) Is permitted by EPA under section 3004 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(ii) Qualifies for interim status under section 3005 of RCRA to manage hazardous waste in containers, meets the requirements for containment at § 264.175 of this chapter, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(iii) Is permitted by a State authorized under section 3006 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(iv) Is approved or otherwise regulated pursuant to a State PCB waste management program no less stringent in protection of health or the environment than the applicable TSCA requirements found in this part.

(v) Is subject to a TSCA Coordinated Approval, which includes provisions for storage of PCBs, issued pursuant to § 761.77.

(vi) Has a TSCA PCB waste management approval, which includes provisions for storage, issued pursuant to § 761.61(c) or § 761.62(c).

(c)(7) Stationary storage containers for liquid PCBs can be larger than the containers specified in paragraph (c)(6) of this section provided that:

(i) The containers are designed, constructed, and operated in compliance with Occupational Safety and Health Standards, 29 CFR 1910.106, Flammable and combustible liquids. Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers (see 29 CFR 1910.106(b)(1)(i)(f)).

(ii) The owners or operators of any facility using containers described in paragraph (c)(7)(i) of this section, shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in part 112 of this title. In complying with 40 CFR part 112, the owner or operator shall read ''oil(s)'' as ''PCB(s)'' whenever it appears. The exemptions for storage capacity, 40 CFR 112.1(d)(2), and the amendment of SPCC plans by the Regional Administrator, 40 CFR 112.4, shall not apply unless some fraction of the liquids stored in the container are oils as defined by section 311 of the Clean Water Act.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Jason R. Shoff

Refinery Manger Date:

4/14/2017