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July 22, 2016

Regional Administrator
ATT: Ms. Mary Setnicar
United States Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: 2016 Demonstration Run Report
Safety-Kleen Systems, Inc.
East Chicago, IN

Dear Ms. Setnicar:

Enclosed, please find the Report for the PCB Alternative Disposal Demonstration Run conducted in January and March 2016. The documents requested in the Approval for this Demonstration are included in that report. Additionally, an electronic copy of some of that data is included on a CD with the report.

By this letter, I am also certifying that all of the conditions of the January 21, 2016 Approval were followed during the Demonstration Runs.

Respectfully,

Jason R. Shoff
Refinery Manager

Enclosure

cc: Lisa Gracyk
George Ritchotte

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

SAFETY-KLEEN SYSTEMS INC.

PCB Run Report

Jason R Shoff
Refinery Manager

Contents

Executive Summary

For two periods in the first quarter of 2016, in January and March, East Chicago conducted PCB Runs. The Runs were to to demonstrate the refinery's capability of destroying PCBs at normal operating feed rates. A successful demonstration could lead to a modification of the facility's permit, thereby allowing normal lube oil production while destroying PCBs.

The demonstration was successful. The hydrotreater was able to process PCB-contaminated vacuum oil at full feed rates. All analytical results showed PCBs were destroyed after the reactor systems.

The facility worked through a series of operational challenges. The first was logistical. The Company transported all of the PCB-contaminated used oil by rail in two sets. Management was able to work with EPA and IDEM to consider this a single demonstration Run, which required both agencies' approval.

The low PCB contamination level resulted in equipment modifications. The concentration of the Catoosa used oil was originally reported to be 34 ppm. When slip-streamed into the Distillation unit with feed from T-51B, the resultant concentration would be under 10 ppm. EPA and IDEM did not find that to be a high-enough level to demonstrate processing capability, so capital was invested to modify equipment to feed used oil directly from the 100-Series storage tanks at full feed rates.

Based on recommendations from the 2012 Run, there were also equipment modifications to control the concentration of VFS in the hydrotreater feed. A dedicated feed pump and control system limited the concentration from 3% to <1%. This control prevented DP build in the reactor system, but the lighter composition of the fuel again led to high off-gas pressure and flaring. Ultimately, the PCB-contaminated VFS was shipped to the Clean Harbors Aragonite incinerator for disposal.

There were also reliability issues. In January, during the distillation of PCBs but prior to feeding them to the hydrotreater, there was a pinhole leak in the sample line by R-405. The hydrotreater was shut down for nearly three days to replace the affected piping. In March, there were cooling challenges in V-406. The degree of fouling in the vessel was underestimated, and the hydrotreater was depressured three times to clean the lower, upper, then packed sections of the tower.

The findings from this demonstration Run will be used to support a permit modification. Suggested changes include a removal of distillation operating restrictions and an increase to hydrotreater feed rates. If accepted by the EPA and IDEM, the facility could process TSCA used oil without incurring a business loss.

PCB Run Introduction

Goals

The 2016 PCB Run was another opportunity to demonstrate to regulators the facility can process PCB-contaminated oil at normal feed rates, thereby avoiding the rate reduction required to operate under the facility's current permit. This Run would also follow-up from an action item from the 2012 Run to limit and control the concentration of VFS in the hydrotreater feed.

Permit modifications

Modifications for this demo run were:

- Increasing used oil feed from 100-190 gpm to <240 gpm
- Increasing dehydrated feed from 100-180 gpm to <220 gpm
- Increasing feed to FE-301 from 50-80 gpm to <100 gpm
- Increasing V-330 vacuum from 10-14 mmHg to <30 mmHg
- Lowering the lower FE-302 vacuum limit from 6 mmHg to 3 mmHg
- Increasing the feed rate to the hydrotreater from <120 gpm to <175 gpm

Sampling and Monitoring Procedures

The entire PCB process was thoroughly documented. All transfer operations, plant inspections, lab results, and maintenance work performed during the processing period were documented and recorded in a logbook which used during the processing periods. This logbook was the responsibility of the Operations Supervisor and maintained by the Shift Supervisors, and was, in addition to the normal process, maintenance, and boiler logbooks, maintained at the facility. Wherever details of an item were recorded on a separate form, the logbook references that form.

Particular attention was taken to ensure that all reports were legible and complete. All items entered into the logbook included the date, time of entry, and the name or initials of the person making the entry.

Sampling Containers

A 16 oz. clear encapsulated wide mouth jar with a Teflon lined (green cap) was used for all PCB contaminated streams except for the asphalt samples. Due to high temperature of asphalt samples, tin cans were used. Operators ensured the jar was covered securely with the proper lid.

Sampling Procedures

When taking samples of process PCB streams, the operator wore the appropriate PPE. Some of the materials sampled were flammable. Operators ensured there were no open flames nearby while sampling was being performed.

Immediately after the sample was collected, an adhesive label was placed on the bottle clearly identifying the sample description, date, and operator's name. The labels were pre-printed with descriptions ahead of each Run to facilitate labeling and ensure accuracy and legibility.

Before sampling, lines were flushed to remove any residuals which may have been in the line from the last sampling. This sometimes required that the operator to drain the material into a plastic bucket. Plastic buckets were used wherever the sample point had a cooler. For points without a sample cooler, a metal bucket was used. Once the line was been flushed, the sample was taken. Bottles were not filled more than 90% full to allow for expansion and movement. The bucket used for sample collection was emptied into PCB liquid waste drums stationed around the facility. A dedicated, labeled sample bucket was used throughout the Runs. Decontamination of this bucket took place when the Runs were over.

Any excess PCB contaminated waste oil samples, rags, buckets, absorbent pads, or clean up devices were disposed of in drums and sent off-site for incineration.

When process equipment which was expected to contain PCBs was sampled, sampling was monitored by the Shift Supervisor who acted as back-up.

Wipe Test

Wipe tests were conducted monthly during PCB processing to confirm that an area is PCB free. This test was completed in compliance with the Permit.

Tank Transfers/Tank Changeover

An entry was made in the Tank Transfer Check List every time material was transferred into or out of a storage tank, or when process rundown tanks were switched. A copy of the Tank Transfer Check Lists are included in the Appendix.

Plant Inspections/Shift Handovers

Shift Supervisors perform roundsroutinely during the day. Rounds duties include visual inspections of key equipment, including the 100-Series storage tanks, and were recorded in logbooks.

Sample Collection

The Shift Supervisor recorded the time and description of any samples collected as part of the PCB Run in logbooks. This information included the Laboratory control number for each sample. The PCB test results were recorded into the logbook. This ensured that the samples were tested. The original Laboratory documentation remained in the Lab and was retained in a separate file.

Analytical Procedures

Samples were analyzed using a Capillary Gas Chromatography using Electron Capture Detection (GC/ECD). The samples are prepared by diluting and/or extracting with a hexane/acetone mixture (90/10) and clean up with sulfuric acid and adsorbent material such as Florisil. Each aroclor has a specific pattern detected by the GC analysis. Quantitation is accomplished by the external standard (ESTD) method analysis.

Tier I is a screening method that has been calibrated and verified by the analysis of an Instrument Performance Standard (IPS) containing Aroclors 1016 and 1260 at 0.01 µg/mL. For Tier II quantitation, instruments are calibrated and verified by the analysis of Calibration Check Standard (CCS) containing the same Aroclor mix at 0.10 µg/mL. When quantitation is required (Tier II), the ESTD method is accomplished by interpolation of sample peak areas against those in the calibration table. Quantitation of either Aroclor 1016 or 1260 is performed using a multipoint calibration of a mixed Aroclor standard containing these two Aroclors. All remaining Aroclors are quantified against single point calibrations. Calibrations are verified by evaluation of a CCS analysis against the initial calibration.

Traditionally VFS samples have required additional clean-up, during the PCB run VFS was originally cleaned by using twice the amount of Sulfuric Acid, but then it was determined that it needed the standard amount of 9 ml. VFS samples were prepared again and analyzed based on this finding.

Electronic copies of the analytical data are being submitted with this report.

Department Preparation

Training

The majority of the East Chicago supervisors and managerial staff had PCB Run experience, having been on site during the 2012 Run. Preparation for the Run started in December, with staff meeting weekly. Managers and supervisors reviewed the original permit and the modification submitted for this Run. All employees reviewed the PCB Training Manual, and signed off that they reviewed it.

Operations conducted a series of sampling trials, prior to processing any PCBs, to ensure sample point descriptions matched those in the permit, samples were dated, and that samples were clean. Trials were completed for each Operations shift.

Checklists

In addition to reviewing documents, department managers reviewed checklists created for the 2012 Run. The purpose of the checklists was to avoid duplication of work for future PCB runs and facilitate planning and executing required pre-run tasks. The checklists for each department are included in the Appendix.

Staffing

Operations staffing included an additional operator to cover the extra sampling requirements. The Lab added staffing to 2nd and 3rd shifts to cover weekend sample analysis. Shipping/Receiving Supervisors provided 24-hour coverage. There was no additional staffing in Waste Water Treatment.

PCB Feed

Size of the Run

The PCB contaminated used oil was transported by rail from Catoosa, OK to East Chicago. At Catoosa, the oil was stored in a single storage tank, with volume approximated to be 800,000 gallons. Due to the piping configuration and resulting heel size, along with an expectation of contaminated solids on the tank bottom, the initial size of the total Run was expected to be 720,000 gallons. Whatever volume wasn't sent to East Chicago, would be sent to an incinerator.

The final volume for the Run was larger than expected, as 784,160 gallons were processed. The tank heel was lower than expected, as was the volume of solids. Also, PCB contaminated oil for the Thermo Fluids (TFI) branch in Oklahoma, the source of the original contamination at Catoosa, was sent to East Chicago.

The size of the Run was the largest processed at East Chicago. Electronic copies of the receipt manifests are being submitted with this report.

Rail Logistics

The oil was transported from Catoosa and TFI to East Chicago by rail. East Chicago received permission from EPA and IDEM to process the contaminated oil in two batches, separated due to rail logistics requirements, and consider as a single Demonstration Run. The used oil was loaded in an initial set of 15 rail cars for the January Run, which were unloaded and returned back to Catoosa for the second Run in March. This method limited the number of railcars that would need to be decontaminated.

There was a challenge with timing and the size of the Run. The additional, unexpected volume in Catoosa's tank required an addition of railcars to the fleet and approval from EPA and IDEM to add approximately 60,000 gallons to the

size limit of the second Run. As a result, the second Run start date was initially set for Tuesday, March 1. This was pushed back one week due to loading and rail delays.

The refinery placed priority on processing the PCB railcars. Once the 100-Series tanks were full, the remaining cars were brought on-site and staged, waiting for the start of the Run. There were no other used oil cars brought on site. This ensured that there would be no interruption to the PCB Run, once started, due to a delay with local rail switching. It was also a safeguard that PCB-contaminated oil would not be unloaded into T-51B or T-150.

Questions about PCB Concentration

The concentration of PCB-contaminated used oil received at East Chicago was different from the initial analysis of samples from Catoosa. After the TSCA-level PCB oil was erroneously received and unloaded into Catoosa's storage tank, a sample was pulled and analyzed in Shreveport. The resultant concentration was determined to be 34 ppm of Aroclor 1242. Concentrations received at East Chicago from the first set of railcars varied between 11 and 20 ppm. The initial theory was the sample was not representative of the contents, since the tank was not circulated and settling of the phases. The first set of railcars pulled oil from the bottom of the tank, reinforced by water percentages that approached 20%.

The PCB concentration of the March Run was expected to be higher, but this did not happen. In fact, PCB concentrations were as low as 9 ppm and did not exceed 18 ppm. This difference could only be explained by a non-representative sample.

The PCB concentration of the used oil feed was an important point. While East Chicago's initial permit allowed up to 200 ppm used oil to be processed, since this was a Demonstration Run, a new permit would be issued at whatever concentration the facility demonstrated. The lower PCB concentration could restrict future internalization efforts.

Operations

Full Feed Rates Demonstrated

The primary objective of the demonstration run was fulfilled. The hydrotreater was able to demonstrate its ability to successfully destroy PCB-contaminated vacuum oil at target feed rates of 175 gpm. These rates were not sustained from start to finish due to reliability issues with V-406. As in 2012, the hydrotreater proved unable to process VFS. These issues are discussed further in this report.

The March Run was a clear demonstration period for the hydrotreater. After repairs to V-406, the unit ran at full feed rates from March 18 to the end of the Run.

Direct Refinery Feed from 100-Series Tanks

The low PCB concentration of Catoosa's used oil required the refinery to make equipment modifications to demonstrate the facility's ability to destroy PCBs. The facility's operating permit required PCB-contaminated used oil to be slip-streamed into dehydration feed from T-51B using the P-107 pump and controlled using FCV-107. The used oil from Catoosa was initially measured at 34 ppm, which would have been diluted to under 10 ppm. EPA and IDEM did not believe that concentration was high enough to demonstrate PCB destruction.

To compensate, for the Demo Run, the refinery replaced P-107 with a pump large enough to feed the distillation unit at full rates without slip-streaming. This change would prevent the PCB level from dilution and provide a better demonstration of the system's hydrotreating destruction ability.

Challenges from Initial High Water Percentage

The size of the Runs dictated logistics and preparation. The piping configuration of the 100-Series tank farm limited storage to 7 tanks, which had a capacity of 183,582 gallons. PCB contaminated used oil was unloaded from railcars into those tanks ahead of the Run start. The remaining railcars were staged on-site at the start of the Run and unloaded as used oil was fed into the refinery. Thus, the water in the used oil initially stored in the 100-Series tanks had time to separate, meaning the start of each Run in January and March included used oil feed with high water percentage. Feed rates were limited for the first hours to compensate for the additional driving force needed to process the water. Once the tank levels were reduced, and the water percentage decreased, feed rates were increased.

Hydrotreater Piping Leak

PCB-contaminated Vacuum oil was scheduled to be fed into the hydrotreater on Thursday, January 28, allowing for two days of inventory build. During Wednesday night shift, Refinery Operators discovered cloud of gas coming from a pinhole leak near R-405. The area was immediately evacuated and the unit depressured and shut down. The pinhole was in the small section of sample piping. The sample and surrounding piping were replaced and the hydrotreater was back online by Thursday night shift. Base oil streams were running down by Friday morning and PCB-vacuum oil started at 1835.

Hydrotreating VFS

One of the goals for this PCB Run was to control the concentration of VFS fed into the hydrotreater. In 2012, high concentrations of VFS were fed into the hydrotreater when VFS from tanks T-931 or T-935 were transferred to T-939. Because the piping for the transfer line in, and the hydrotreater feed suction are close, transferred VFS would be fed almost directly and exclusively into the hydrotreater. This caused massive build-up in off-gas pressure and DP in the R-401 reactors.

To control VFS concentration, a dedicated pump and control valve were installed to slipstream a low concentration of VFS into the hydrotreater feed. The system was completed in early January and test run one week ahead of the Run using VFS without PCBs. The test showed elevated DP and DT in the system at VFS feed concentrations of 3 gpm, however, this was believed to be manageable.

One challenge from the test run was the test was completed when HT feed rates were low due to a market shortage in used oil. The low HT feed rates resulted in higher back pressure on the feed line from P-935. The pump head was insufficient to overcome the pressure. The higher pressure also caused a seal leak. The originally sized impeller was replaced with a larger impeller and a spillback line installed to prevent seal damage.

During the Run, VFS was fed into the hydrotreater at 3 gpm, as during the trial. System DP and DT picked up, but levels did not level off after sustained feed. Operations reduced the VFS feed from 3 gpm to 0.5 gpm but DP and DT continued be elevated. Unlike in 2012, when the DP was pronounced in the R-401 reactors due to acute fouling, DP build was gradual but significant in the E-401 feed/effluent exchangers. This was a result of the VFS flashing; the system was designed to process base oils, which do not vaporize at design temperatures. There was also significant DT in the primary reactor, R-404, which reached up to 65°F. Typical DT in the reactors, even at Start-of-Run conditions, does not exceed 20°F. The DT was a result of two things: preferential reaction between the hydrogen and vaporized VFS, resulting in a greater exothermic reactor, and vapor pockets forming in the system, which have less heat capacity than liquid, and could be damaging to equipment.

If VFS feed was maintained at low feed percentages, it would have become the limiting factor in the duration of the PCB Run. At 0.5 gpm, it would have taken 28 days to process the VFS generated from the January Run, and up to 90 days to process the VFS from the March Run (rinsate volume must be hydrotreated).

As a result, Management decided to cease VFS treatment into the hydrotreater. The VFS, considered TSCA waste, would be sent to the Clean Harbors incinerator in Aragonite, Utah for destruction. Electronic copies of the manifests for the shipments of VFS for incinerators are being submitted with this report.

Managing Low Vacuum Oil Production

With the PCB Permitted restrictions on distillation pressures and temperatures, even with asphalt viscosity specification temporarily waived, distillation production was about 60% of typical rates. Increasing rates risked contaminating asphalt rundown with PCBs, which are concentrated in the lower viscosity ranges: highest in VFS, lowest in Heavy Vacuum Oil. Operational priority was on maintaining compliance.

To accommodate for lower Vacuum Oil production, coupled with high HT feed rates, the refinery increased Vacuum Oil inventory prior to the start of the PCB Runs. HT Feed Rates were reduced by 10% one week ahead of each Run start and maintained there until PCB-contaminated oil was fed into the hydrotreater.

High V-406 Overhead Temperature and Flange Leak

Leading up to the March Run, the refinery had been monitoring high overhead temperatures from V-406. Elevated temperatures were leading to increased liquid in the recycle gas. V-406 had been online since July 2015, which is the longest span between system cleaning since hydrotreater operation became continuous with the addition of the fractionation tower. The increased span was a result of piping modifications that allowed operation to bypass R-405 for inspection and catalyst change, while running from R-404 to R-403.

The elevated temperatures were believed to be a result of fouling and restricted flow in the cooling system. Prior to the scheduled start of PCB feed on March 10, the hydrotreater was taken offline and depressured on March 7 for cleaning. There was significant fouling and tube restriction in E-453 and in the lines to and from V-406. The fouling was cleaned and the unit repressured. As the hydrotreater was coming back online, operators noted a leak coming from an instrumentation flange. Also, during start-up, despite the cleaning, V-406 overhead temperatures remained elevated. The system was depressured again, and the upper water circulation lines around P-409 and P-915 cleaned. V-406 was opened and the upper section verified clear. The system was repressured and rundown resumed on March 10.

At start-up, overhead temperatures were normal, however temperatures increased over the following days. Operators attempted to compensate by increasing V-408 blow-down internals. After verifying the safety of doing so, Engineering increased the recycle compressor trip point temperature.

Blow down intervals increased over the weekend to the point where safe operation could not be ensured. The HT was depressured again on March 13 and V-406 fully opened and cleaned. Additional obstructions were found in the vessel, which were removed and cleaned. An API 510 internal vessel inspection was also performed with no issues found. The unit was repressured for a third time with no further issues with production or PCB feed.

Triple Rinsing

The facility's permit requires that three times the wetted volume of process equipment must be rinsed to ensure all PCB contaminants have been removed. After the January and March Runs, the distillation unit was flushed with approximately 900,000 gallons of used oil, per calculations in the Appendix. These calculations are identical to those used for the 2012 Run. Storage tanks used for PCB storage were locked out after the January Run and were not flushed until the March Run concluded.

The flushing techniques used for the used oil storage tanks and vacuum oil tanks were different. The 100-Series tanks were filled to the maximum gauge heights, emptied, and refilled. The storage tanks in the Intermediate Tank Farm are considered, by permit, to be process vessels. As a result, three times the volume of the maximum wetted surface level could pass through and be considered properly flushed. This distinguishing factor simplified the logistics of flushing these tanks.

No Issues with Waste Water Treatment

As in previous Runs, a layer of HTS Distillate was filled in the water rundown tank in Emulsion Breaking. This practice was again successful in preventing PCBs from entering the waste water process. There were no issues with any tanks of rundown water or with PCB contamination in the waste water process. All results were < 2 ppb.

Recommendations for Future PCB Runs

The challenges from this PCB run have generated a number of recommendations for future runs. The specific changes will be identified in a proposed revised permit to be submitted to EPA and IDEM within 90 days of this report. Generally, those revisions include:

1. Remove Distillation unit operating constraints
2. Remove sampling requirements from the distillation streams
3. Remove requirement to recirculate hydrotreater when reactors require switching
4. Increase the feed to the hydrotreater to < 175 gpm

Appendix

List of Key Personnel

Refinery Manager	Jason Shoff
Shipping and Receiving Manager	Nick Tratta
Shipping and Receiving Supervisors	John Tomczak, Brian Devine
Operations Manager	Kenneth Kim
Waste Water Treatment Supervisor	Jim Satterlee
Operations Supervisor	Chris Hasch
Shift Supervisors	Ray Arnold, Ray Currier, Dave Gaughan, Joe Tratta
Lab Manager	Erika Nelson
Lab Supervisors	Henry Dang, David Chen
Refinery Engineer	Adam Rainwater
Maintenance Supervisor	Tom Fleming
Safety Manager	Gary Malinowski
Compliance Manager	Denny Zawodni

Process Equipment Volume Calculations

	Primary		Secondary		Volume	
	Diameter (ft)	Height (ft)	Diameter (ft)	Height (ft)	(ft^3)	
V-201	12	26			2,941	
E-203A	4	18			226	
E-203B	4	18			226	
E-203C	6	18			509	
V-202	10	22			1,728	
E-202A	3	19			134	
E-202B	3	19			134	
E-202C	4	20			251	
E-202D	4	20			251	
E-202E	4	21			264	
E-202F	4	18			226	
V-203	5	13			255	
V-204	8	124			6,233	
E-207A	3	15			106	
E-207B	3	15			106	
V-205	6	40			1,131	
E-205	3	8			57	
V-206	3	8			57	
V-208	3	28			198	
E-208	2	4			13	
E-214	2	11			35	
V-330	12	75			8,482	
E-324A	3	14			99	
E-324B	2	23			72	
E-326	3	20			141	
FE-301					873	
V-301	7	10			385	
V-304	8	30			1,508	
FE-302					873	
V-302	7	10			385	
V-305	8	30			1,508	
V-307	4	12	2	15	198	
V-350	5	14			275	
				Total	29,880 ft^3	
					223,501 gallons	
		Add 33% for piping and misc below*			**298,001 gallons**	
Air Coolers, Other Ejectors, Ejector System, Heaters included						

Safety-Kleen East Chicago PCB Pre-Run Checklist – Refinery

	Task	✓	Date
1	Isolate all valves/piping on T-909		
2	Commission T-51b (lined out, check valves in place)		
3	PCB Logbooks available		
4	Sample jars ready for use (green lids, PCB labels)		
5	Sample bucket labeled and ready for use		
6	PPE ready (coated Tyvek suits, PVC gloves, hard-hat w/faceshield, PVC booties, PVC apron, duct tape, SCBAs charged, adequate amount of breathing air cylinders)		
7	Decon Area set up (pools, tool drop drum, plastic floor covering, chairs, tables, coat rack, sprayers, scrub brushes, parts washer, power washer, buckets for deconning respirators, solid waste drums)		
8	Solid waste drums set up in process area (Cannot exceed 65 drums)		
9	Vacuum truck empty and available and PCB sticker is in place		
10	Emulsion Breaking tanks empty (to receive process water)		
11	Vacuum Oil Guard tanks empty		
12	All sumps in process area empty		
13	Emergency response boxes fully supplied (if seal is intact, box is considered fully equipped)		
14	Close sleuth gates for the storm water system		
15	P-107, FI-107, FCV-107 verified to be in proper working order		
16	Temporary alarms set up in DCS for permit-specific operating conditions (Requires Temporary MOC)		
17	Sewer covers available		
18	Verify caustic flow to Emulsion breaking. Equipment is in proper working order.		
19	Complete pump switches (Two weeks prior to PCB run date)		
20	Asphalt rundown through a clean E-303 (One week prior to PCB run date)		
21	All sample coolers cleared		
22	Aisles and walking paths clear; no obstructions		
23	Scrubber bypass valves around V-307 closed and locked		
24	Proper contact numbers are available (spill notification, odors)		
25	VFS lined out to HT feed		
26	Sample schedule posted		
27	Process water rundown lined out to Emulsion Breaking tanks		
28	All employees reviewed and understand the PCB Processing Training Manual		
29	Fire suppression systems in proper working order		
30	Heaters switched to HTS Distillate and base loaded		
31	Automatic Purge on Analyzers disabled		

Safety-Kleen East Chicago PCB Pre-Run Checklist – WWTP

	Task	✓	Date
1	Sample jars ready for use (green lids, PCB labels)		
2	PPE ready (coated Tyvek suits, PVC gloves, hard-hat w/faceshield, PVC booties, PVC apron, duct tape, SCBAs charged, adequate amount of breathing air cylinders)		
3	Emulsion Breaking tanks empty (to receive process water)		
4	Emergency response boxes fully supplied (if seal is intact, box is considered fully equipped)		
5	Aisles and walking paths clear; no obstructions		
6	Sample schedule posted		
7	Process water rundown lined out to Emulsion Breaking tanks		
8	All employees reviewed and understand the PCB Processing Training Manual		
9	Solvent Extraction Set Up. Dry run completed. (4ft of distillate, filtration)		
10	If necessary, Baker Box (T-652 back-up) on site and piped in.		
11	Emulsion breaking chemical addition in proper working order		
12	Carbon socks on tank overflows		
13	Properly labeled waste drum set up for carbon socks		

Safety-Kleen East Chicago PCB Pre-Run Checklist – Lab

	Task	Completed	Date
1	PPE: Gloves, lab uniforms or coats		
2	PCB drum for debris		
3	Sample Storage Area		
4	GC Setup and calibrated		
5	GC Setup and calibrated (PCB Congeners)		
6	PCB Stickers		
7	PCB Run Logbook / Sample Schedule		
8	Spill Kit		
9	PCB Processing Manual Review		
10	PCB Congeners SK 9213		
11	PCB in water -LIHE 005		
12	PCB Spill Cleanup Requirements		

Approval Letter from EPA for March Run Size Increase

From: Graczyk, Lisa <graczyk.lisa@epa.gov>
Sent: Wednesday, February 17, 2016 9:08 AM
To: Zawodni, Dennis M; Shoff, Jason R
Cc: Setnicar, Mary; George Ritchotte
Subject: RE: Request to Modify Batch Size for 2nd Demonstration Run

As stated in our conference call on February 16, 2016, EPA approves the additional volume of approximately 60,000 gallons of PCB-contaminated oil for the second batch of the demonstration run of the hydrotreater.

Should you have any additional questions, please feel free to contact me.

Lisa

Lisa Graczyk
RCRA/TSCA Programs Section
U.S. EPA Region 5

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e-mail: graczyk.lisa@epa.gov

From: Zawodni, Dennis M [mailto:Denny.Zawodni@safety-kleen.com]
Sent: Friday, February 12, 2016 10:59 AM
To: George Ritchotte <GRITCHOT@idem.IN.gov>; Graczyk, Lisa <graczyk.lisa@epa.gov>
Cc: Shoff, Jason R <Jason.Shoff@safety-kleen.com>
Subject: Request to Modify Batch Size for 2nd Demonstration Run

I would like to discuss the following with the both of you. If we can arrange a quick conference call it would be appreciated.

S-K East Chicago has been notified that there are additional gallons of PCB contaminated used oil that can be removed from the Port of Catoosa tank. When the original calculations were done on the available gallons in their 3 million gallon tank, assumptions had to be made about the amount of sludge and solids on the bottom. Now that they are at the bottom, it appears that there may be an estimated additional 60,000+ pumpable gallons available than was planned on.

The issue is that they have loaded 16 railcars with 360,812 gallons as of today. Under the Approval (376,600 max for the batch), we would still have room for another 15,788 gals. (about 70% of what a railcar holds). We would like to request approval to increase the maximum batch volume to include the additional gallons that are available in the tank.

The reason for the request is that the cost to conduct a 3rd Demonstration Run for approximately 45,000 gals. is not likely to happen. The end result would be the incineration of those recyclable gallons. For that reason, we would like to have the Approval for the 2nd Demonstration Run increase the batch size to not-to-exceed 460,592 gallons from the Port of Catoosa. The 460,592 gallons is derived from the total for the Demonstration (800,00) less the gallons (339,408) processed during the 1st Demonstration Run.

Denny Zawodni Senior Compliance Manager | Safety-Kleen | A Clean Harbors Company | East Chicago,IN | dzawodni@safety-kleen.com 219.391.6127 (o) | 219.808.1172 (c) | 219.391.6180 (f) | safety-kleen.com