

US EPA ARCHIVE DOCUMENT



October 8, 2010

Margaret M. Guerriero
Director
Land and Chemicals Division
U.S. EPA Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

RE: Follow-up report on the Demonstration Run
PCB Disposal Modifications
Approved December 7, 2009

Dear Ms. Guerriero:

This is to provide supportive documentation to the Demonstration Run conducted in compliance conducted in accordance with the approval contained in the Dec. 7, 2009 letter from Region V EPA.

The December 7, 2009 approval was obtained in order to conduct PCB destruction under modified conditions to the current PCB Alternative Disposal Approval (dated 10/2/98, modified 5/23/03).

The modified conditions included the following:

- 1) Condition No. 23, specifically the condition was modified to increase the batch size from 376,000 gal. to 480,000 gal.;
- 2) Condition No. 29, specifically the condition was modified to increase the Hydrotreater Feed Rate (FI404) from ≤ 120 gpm to ≤ 175 gpm; and
- 3) Condition No. 47, specifically the condition was modified to remove Items #1 and #5 in Attachment V. These 2 requirements are specific the decontamination of the bulk storage tanks.

Modification No. 1 – Batch Size Increase

Beginning on Oct. 12, 2009, Safety-Kleen Systems, Inc. (S-K) East Chicago, IN began receiving shipments of regulated PCB contaminated used oil. All shipments were



received in tanker trailers. The trailers were received in accordance with the required Permit conditions, and unloaded into the approved PCB storage tanks. These shipments continued through Dec.9, 2009. Attachment #1 "PCB Oil Receipt Log" details the arrival dates, volumes, PCB concentrations and the tanks into which they were unloaded.

A total of 464,988 gallons of PCB contaminated used oil was received for processing. With the exceptions of 1 shipment (5,387 gallons) of PCB oil (Arochlor 1260/1016) from Wilkes Barre, PA, the PCB oil was identified as Arochlor 1016.

Modification No. 2 – Hydrotreater Feed Rate Increase

Distillation Feed

Processing of the PCB contaminated used began on Dec. 7, 2009. Feed from the storage/guard tanks was slipstreamed into the distillation process beginning at 5:20 am. The entire amount PCB oil continued to be fed to distillation and was completed on Dec. 9, 2009 at 10:00 pm. All of the distilled PCB contaminated oil was put into tank T-939. At this point, the oil is referred to as vacuum distilled oil.

Hydrotreater Feed

S-K began feeding the PCB contaminated vacuum distilled oil to the hydrotreater on Dec. 9, 2009 at 7:57 am. At that time, the feed rate to the hydrotreater (FI 404) was at 164 gpm. The PCB vacuum oil was continuously fed to the hydrotreater until it was empty. The PCB concentration in the vacuum oil was 17.2 ppm. Feed to the hydrotreater from T-939 was completed on Dec. 11, 2009 at 1:40 pm.

The feed rate to the hydrotreater (FI 404), during this run, measured from 150 gpm to 164 gpm. Attachment #2 "H-401 "FI404 – GPM) contains the summary of hourly readings from the on-line computer system (DCS) that monitors and records the Key Operating Conditions for FI404.

All other Key Process Variables measured in compliance with the specified Operating Range, contained in the Approval/Permit.

The analytical results for the hydrotreated products shows that all of the PCBs were destroyed. In accordance with Attachment IV - Section III, in the permit, Hydrotreater Products are analyzed using the Safety-Kleen's PCB Congener method. This method has a detection level of <0.5 ppm.

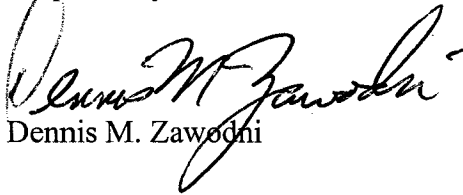
The results from the hydrotreater products testing showed that all samples were negative for PCBs. Attachment #3 "Hydrotreater Products Test Results" summarizes the testing and results.

Modification No. 3 – Tank Decontamination

This modification removed 2 specific requirements for decontamination of the storage tanks. Safety-Kleen, in accordance with this modification, did not conduct those activities (removal of free flowing liquid below the pick-up line and sampling of the heels). All other decontamination activities were conducted as required in the permit.

In summary, the PCB Demonstration Run was completed successfully. The increased feed-rate to the hydrotreater did not impact the efficacy of the catalytic hydredchlorination process. If you have any questions, please contact me at 219-391-6127 or by email at dzawodni@safety-kleen.com.

Respectfully,



Dennis M. Zawodni

cc: George Ritchotte, IDEM

Enclosures

Attachment #1

PCB Oil Receipt Log

**East Chicago Refinery
PCB Oil Received for Demonstration Run**

Receipt

Log	Date	EO#*	Manifest#	USG	PCBs	Tank
1	10/12/2009 Monday	411302	002038907	5,100	18.9	T-108
2		411307	002038911	5,199	21.2	T-108
3		411312	001980563	4,972	18.1	T-108
4	10/13/2009 Tuesday	411325	001980564	5,914	15.0	T-108
5		411343	001980566	5,955	21.6	T-108/107
6		411345	001980565	5,490	22.1	T-107
7	10/14/2009 Wednesday	411359	001980567	5,994	21.1	T-107
8		411361	001980568	6,026	19.0	T-107
9		411379	001980572	6,016	10.2	T-107
10	10/15/2009 Thursday	411408	001980571	6,705	9.3	T-106
11		411415	001980569	6,588	14.0	T-106
12		411419	001980570	6,698	12.0	T-106
13	10/16/2009 Friday	411440	001980587	6,708	16.9	T-106/105
14		411442	001980586	6,678	5.8	T-105
15		411450	001980585	6,686	8.2	T-105
16	10/19/2009 Monday	411471	001980584	6,738	20.2	T-105
17		411484	001980583	6,707	17.2	T-105/112
18		411489	001980582	6,714	17.3	T-112
19	10/20/2009 Tuesday	411513	001980581	6,620	21.7	T-112
20		411517	001980580	6,692	21.4	T-112
21		411518	001980573	6,668	17.2	T-112/111
22	10/21/2009 Wednesday	411561	001980574	6,662	20.0	T-111
23		411564	001980579	6,744	20.4	T-111
24		411580	001980575	6,517	20.9	T-111
25	10/22/2009 Thursday	411597	001980576	6,644	19.0	T-111/110
26		411601	001980578	6,746	19.8	T-110
27		411604	001980577	6,704	24.1	T-110
28	10/23/2009 Friday	411639	001980588	6,686	20.1	T-110
29		411643	001980590	6,761	18.4	T-104
30		411646	001980589	6,729	20.0	T-104
31	10/26/2009 Monday	411685	001980593	6,679	21.3	T-104
32		411688	001980592	6,392	23.0	T-140/120
33		411690	001980591	6,696	22.4	T-120
34	10/27/2009 Tuesday	411726	001980594	6,702	19.8	T-120/121
35		411727	001980595	6,752	21.4	T-121
36		411728	001980596	6,499	21.5	T-121
37	10/28/2009 Wednesday	411753	001980610	6,698	19.7	T-103
38		411774	001980611	6,488	22.2	T-103
39		411781	001980612	6,787	20.5	T-103

**Receipt
Log**

	Date	EO#	Manifest	USG	PCBs	Tank
40	12/7/2009 Monday	412991	001980607	6,456	15.8	T-102
41		412990	001980600	6,050	16.9	T-102
42		412994	001980608	6,220	17.1	T-102
43	12/8/2009 Tuesday	412996	001980606	6,038	16.8	T-102
44		413017	001980604	6,140	17.9	T-107
45		412984	001980598	6,219	14.7	T-107
46		413020	001980601	6,630	14.7	T-107
47		412965	001980609	6,068	14.7	T-107
48		412980	001980597	6,122	15.9	T-107
49		416033	001980602	6,478	14.9	T-107
50		413034	001980603	6,458	16.5	T-107
51		413038	002038961	6,242	19.2	T-107
52		413039	002038960	5,884	15.9	T-107
53		413049	002038959	6,227	16.3	T-107
54	413053	002038958	6,167	16.2	T-105	
55	413000	001980605	5,641	14.4	T-105	
56	412989	001980599	6,560	16.4	T-105	
57	413044	002038944	5,819	21.3	T-105	
58	413060	002038956	6,021	5.4	T-106	
59	12/9/2009 Wednesday Wilks Barre	413061	002038962	6,045	15.3	T-106
60		413052	002045402	5,837	14.8	T-104
61		413098	001981090	6,379	15.1	T-104
62		413087	001981091	6,690	15.5	T-104
63		413072	001981093	6,010	17.6	T-104
64		413069	002038957	5,890	17.5	T-104
65		413086	001981092	5,721	17.3	T-104
66		413073	001981094	5,912	17.8	T-104
67		413091	002038953	5,902	17.3	T-104
68		413093	002038954	6,190	18.3	T-104
69		413092	002038951	6,299	18.3	T-104
70		413090	002038952	6,655	17.1	T-104
71		413097	001981089	6,147	14.9	T-104
72		413106	002038949	6,128	15.9	T-104
73		413110	002038950	5,103	16.6	T-104
74		413108	002038955	5,896	9.9	T-104

* EO# is S-K's internal tracking number for receipts.

Attachment #2

FI404 GPM

FI404 - GPM
H-401 PREHEATER FEED
fi404.pv - SnapShot

<u>Timestamp</u>	<u>fi404.pv - SnapShot</u>
12/9/2009 7:00	163
12/9/2009 8:00	164
12/9/2009 9:00	157
12/9/2009 10:00	159
12/9/2009 11:00	160
12/9/2009 12:00	158
12/9/2009 13:00	158
12/9/2009 14:00	158
12/9/2009 15:00	157
12/9/2009 16:00	159
12/9/2009 17:00	152
12/9/2009 18:00	152
12/9/2009 19:00	154
12/9/2009 20:00	152
12/9/2009 21:00	151
12/9/2009 22:00	151
12/9/2009 23:00	155
12/10/2009 0:00	151
12/10/2009 1:00	153
12/10/2009 2:00	150
12/10/2009 3:00	150
12/10/2009 4:00	151
12/10/2009 5:00	152
12/10/2009 6:00	154
12/10/2009 7:00	151
12/10/2009 8:00	153
12/10/2009 9:00	153
12/10/2009 10:00	154
12/10/2009 11:00	153
12/10/2009 12:00	154
12/10/2009 13:00	154
12/10/2009 14:00	154
12/10/2009 15:00	154
12/10/2009 16:00	154
12/10/2009 17:00	156
12/10/2009 18:00	157
12/10/2009 19:00	158
12/10/2009 20:00	157
12/10/2009 21:00	160
12/10/2009 22:00	167
12/10/2009 23:00	163
12/11/2009 0:00	159
12/11/2009 1:00	161
12/11/2009 2:00	160
12/11/2009 3:00	160
12/11/2009 4:00	149
12/11/2009 5:00	150
12/11/2009 6:00	152

FI404 - GPM
H-401 PREHEATER FEED
fi404.pv - SnapShot

<u>Timestamp</u>	<u>fi404.pv - SnapShot</u>
12/11/2009 7:00	151
12/11/2009 8:00	155
12/11/2009 9:00	156
12/11/2009 10:00	160
12/11/2009 11:00	161
12/11/2009 12:00	161
12/11/2009 13:00	163
12/11/2009 14:00	163

Attachment #3

Hydrotreater Products Test Results

Hydrotreater Products Test Results

Tank	Product	Date	Time	Results (Neg/Pos)
T-946	120	12-9-09		Neg
T-944	120	12-9-09	2:40 pm	Neg
T-953	240	12-9-09	2:40 pm	Neg
T-945	70 (f/k/a Spindle Oil)	12-9-09	7:30 pm	Neg
T-948	120	12-09-09	7:30 pm	Neg
T-954	240	12-10-09	10:00 pm	Neg
T-944	120	12-10-09	2:00 am	Neg
T-946	120	12-10-09	9:45 am	Neg
T-953	240	12-10-09	9:45 am	Neg
T-947	70 (f/k/a Spindle Oil)	12-10-09	1:45 pm	Neg
T-948	120	12-10-09	1:45 pm	Neg
T-954	240	12-10-09	5:30 pm	Neg
T-944	120	12-10-09	7:10 pm	Neg
T-941	HTS Distillate (f/k/a Kero)	12-10-09	9:00 pm	Neg

Tank	Product	Date	Time	Results (Neg/Pos)
T-948	120	12-11-09	5:00 am	Neg
T-953	240	12-11-09	5:00 am	Neg
T-945	70 (f/k/a Spindle Oil)	12-11-09	5:00 am	Neg
T-946	120	12-11-09	12:05 pm	Neg
T-954	240	12-11-09	12:20 pm	Neg
T-942	HTS Distillate (f/k/a Kero)	12-11-09	1:05 pm	Neg
T-948	120	12-11-09	3:13 pm	Neg
T-947	70 (f/k/a Spindle Oil)	12-11-09	3:55 pm	Neg
T-953	240	12-11-09	8:00 pm	Neg
T-941	HTS Distillate (f/k/a Kero)	12-12-09	10:00 pm	Neg