

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISED

PERMITTEE

Safety-Kleen Systems, Inc.  
Attn: Kyle Schawel  
1500 East Villa Street  
Elgin, Illinois 60120

Application No.: 88070035                      I.D. No.: 031438AAK  
Applicant's Designation: SOLV STOR        Date Received: November 2, 1999  
Subject: FESOP for Spent Solvent Storage Tanks  
Date Issued: December 16, 1999            Expiration Date: November 7, 2000  
Location: 1500 East Villa Street, Elgin

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of fifteen storage tanks for clean and spent parts cleaner solvent, waste oil or oily water and spent antifreeze (T-9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 31, 32, 33, 34 and 35), a parts cleaner solvent return and fill station with rinsing unit, four Safety-Kleen parts cleaner machines, two gas fired boilers, and one continued use storage tank pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit (FESOP) is issued to limit emissions of volatile organic material (VOM) and hazardous air pollutants (HAPs) from the facility to less than major source thresholds for each pollutant (25 tons/yr for VOM and combined HAPs, and 10 tons/yr for any single HAP), as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit.
  - b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
  - c. This permit supersedes the current permit(s) issued for this location.
2. Throughputs of clean and spent solvents, etc., through the facility storage tanks shall not exceed the following limits:

Clean and Spent Solvents: 2,000,000 gal/mo, 17,500,000 gal/yr.

3. The Permittee shall maintain the following records and such other items as may be appropriate to calculate actual emissions of volatile organic material and enable the Agency to verify compliance with appropriate limits:
  - a. For clean and spent parts washer solvent with vapor pressure greater than 0.1 psia stored in tanks, amount and identification of each waste received and stored at the plant (lbs or gal).
  - b. For clean and spent parts washer solvent with vapor pressure greater than 0.1 psia stored in tanks, the quantity of identical material in all tanks and composition of material loaded and unloaded on a daily basis for each tanker load.
  - c. The final tabulation of the amount of identical material remaining in all tanks at the end of each work day.
4. If the materials handled at this facility are to be changed from that specified in this permit the Agency must be notified and, if necessary, the permit be revised accordingly.
5. This permit is issued based on the operation of all storage tanks and solvent handling not being subject to the requirements of Subpart TT of the 35 Ill. Adm. Code Part 218. This is a consequence of the voluntarily requested production limits of this federally enforceable state operating permit.
6. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: throughput of each material stored in all storage tanks from the previous calendar year. If there have been no exceedances during the prior calendar year the Annual Emissions Report shall include a statement to that effect.
7. Emissions of nitrogen oxides from the three gas boilers shall not exceed 8.1 tons/year. This limit is based on standard emission factors for natural gas, the maximum firing rates and the maximum hours of operation.
8. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

9. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
10. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Eisenhower Tower  
1701 South First Avenue  
Maywood, Illinois 60153

It should be noted that the issuance of this permit does not relieve the owner or operator from compliance with the 35 Ill. Adm. Code Title Part 731 Underground Storage Tank regulations or the permit requirements of Section 21 and 39 of the Environmental Protection Act, nor does it constitute a release from further responsibility for preventive or corrective action as defined under Section 4(y) of the Ill. Environmental Protection Act.

Please note that this permit has been revised to include one continued use storage tank and to incorporate Construction Permit #99110016.

It should be noted that this permit has been revised to no longer include the operation of two soil vapor extraction systems.

Page 4

If you have any questions on this, please call Tara T. Nguyen-Ede at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:TNE:jar

cc: Illinois EPA, FOS Region 1  
Illinois EPA, Compliance Section  
Lotus Notes

Attachment A

- 1a. i. Throughputs of materials and VOM emissions from the emission units for handling of clean and spent solvents shall not exceed the following limits:

<u>Throughput</u>	<u>Emission Unit</u>	<u>VOM Emissions</u>	
		<u>(Lb/Hr)</u>	<u>(Tons/Yr)</u>
17,500,000 Gal/Yr (Clean and Spent Solvent)	Parts Cleaner Solvent Return*	4.7	15.6
	Drum Filling	0.32	1.0
	Tank Storage	0.23	1.0
	Tanker Truck Filling	0.23	1.0
	Miscellaneous Units**	1.00	4.4
	Continued Use Storage Tank	0.1	<u>0.44</u>
		Total	23.44

\* Two equations were developed based on the results of a drum weighing experiment. The first equation describes solvent evaporation from containers during the time they are stacked and refilled after washing, using a calculated cleaning emission factor ( $E_i$  grams VOC/container) for each container type.

Container Washing evaporative losses:

$$L_{cw} = 0.0022 \text{ lb/g} \times E_i \times A_i \times N_i + VV$$

Where,

$L_{cw}$  = Evaporation loss from containers during washing, lb/yr.

$E_i$  = Container specific evaporation loss, g/container, determined from experiment

$A_i$  = Container specific ratio of exposed wetted surface area (0.35 for 30-gallon and 16-gallon drums and 0.5 for 5-gallon) to account for container stacking

$N_i$  = Number of each size container handled per year

In addition, the weight of the saturated vapor displaced when drums are emptied is taken into account. This is determined by calculating the weight of saturated parts cleaner solvent vapor using the following equations:

$$VV \text{ (lb/yr)} = \text{Vapor Vol. (gal/yr)} \times [P^*/14.7 \times M_v \text{ lb/lb-mole}] / [359 \text{ cu-ft/lb-mole} \times 7.48 \text{ gal/cu-ft}]$$

Where,

Vapor Vol. = Vapor space in drum equal to (container volume - solvent volume)

$P^*$  = Parts cleaner solvent vapor pressure, 0.0387 psia

14.7 = Atmospheric pressure, psia

$M_v$  = Molecular weight of parts cleaner solvent vapor, 138 lb/lb-mole

The second equation describes evaporation from the drum washer basin during operations using a calculated emission rate per surface area. An average of the initial evaporation rates for each container was divided by the average container surface area to obtain this rate. The emission rate ( $E_x$ ) can then be multiplied by the wetted surface area and actual hours of operation to obtain solvent loss from the washers.

Wash basin evaporative losses:

$$L_{wx} = 0.0022 \text{ lb/g} \times E_x \times A_w \times N_w \times O$$

Where,

$L_{wx}$  = Evaporation loss from washer and sump during washing, lb/yr

$E_x$  = Evaporation rate from washer surface, g/ft<sup>2</sup>-hr = 0.35 g/ft<sup>2</sup>-hr

$A_{wx}$  = Surface area of washer and sump, including washing mechanism, ft<sup>2</sup> = 22 ft<sup>2</sup> + 26 ft<sup>2</sup> + 26 ft<sup>2</sup> + = 74 ft<sup>2</sup>

$N_{wx}$  = Number of washers at the facility (3)

$O$  = Hours of operation, hr/yr = SUM (containers/year) x [1 yr/260 days] x [1.56 minutes/container] x [1 hr/60 minutes] x [1/# of washers]

Also, the parts cleaner includes the drum rinsing units which operate under a limit of 600,000 drums/years and an assumed emission rate of 0.0054 lb/drum.

\*\* Includes emissions from waste oil, oily water and spent antifreeze (with negligible vapor pressures); soil vapor extraction units and fugitives.

- b. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.

TNE:jar

217/782-2113

July 10, 1998

Safety-Kleen Systems, Inc.  
Attn: Ed Guglielmi  
1000 Randall Road  
Elgin, Illinois 60123

I.D. No.: 031438AAK

Dear Mr. Guglielmi:

Enclosed is a revised permit letter which reflects only a change of name. Please note that if you have changed or intend to change this operation it will be necessary to apply for revision of your air pollution permit(s).

If you have any questions or require any assistance concerning these matters, contact Tim Mabe at 217/782-2113.

Very truly yours,

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:TJM:88070035:jar

Enclosure

cc: Region 1  
I.D. File  
Permit File