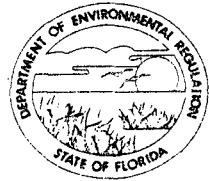


State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
FROM: \_\_\_\_\_ DATE: \_\_\_\_\_

TO: Satish Kastury

FROM: Armando Gonzalez *AG*

DATE: January 5, 1986

SUBJECT: Safety Kleen Corp., FLD 980 847 271  
Construction Permit Application HC29-118986  
Response to fourth NOD ??

Attached, please find the additional submittal by the referenced facility. Two (2) copies have been enclosed.

AG/br



D.E.R.

MAN 2 2 7

SOUTH WEST DISTRICT  
TAMPA

December 11, 1986  
EJJ 86-408

Mr. Armando Gonzales, Permitting Engineer  
Florida Dept. of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, FL 33610

Re: Safety-Kleen Corp. FLD 980847271  
Construction Permit Application HC29-118986

Dear Mr. Gonzales,

Please find attached information concerning wells in the vicinity of the subject facility; the nearest well is more than one mile from the facility.

In addition, the secondary containment of the accumulation center was miscalculated (Exhibit I.D.5-2b) and the permit application has been revised to include the correct information. Initially, the volume of the secondary containment was calculated using only the amounts held by the sumps. It should also include the volume held by the sloped floor (35,135 gallons).


Supplemental information, concerning the materials to be stored at the facility, has been added to the permit application. The following information has been added:

1. a description of the paint waste collection service and analyses of this waste
2. a description of the industrial solvents collection service and acceptance criteria for these wastes

Mr. Armando Gonzales  
December 11, 1986  
Page 2

You should note that these revisions will not affect the design capacity of the facility. If you have any questions or require further information, please contact me on extension 2246.

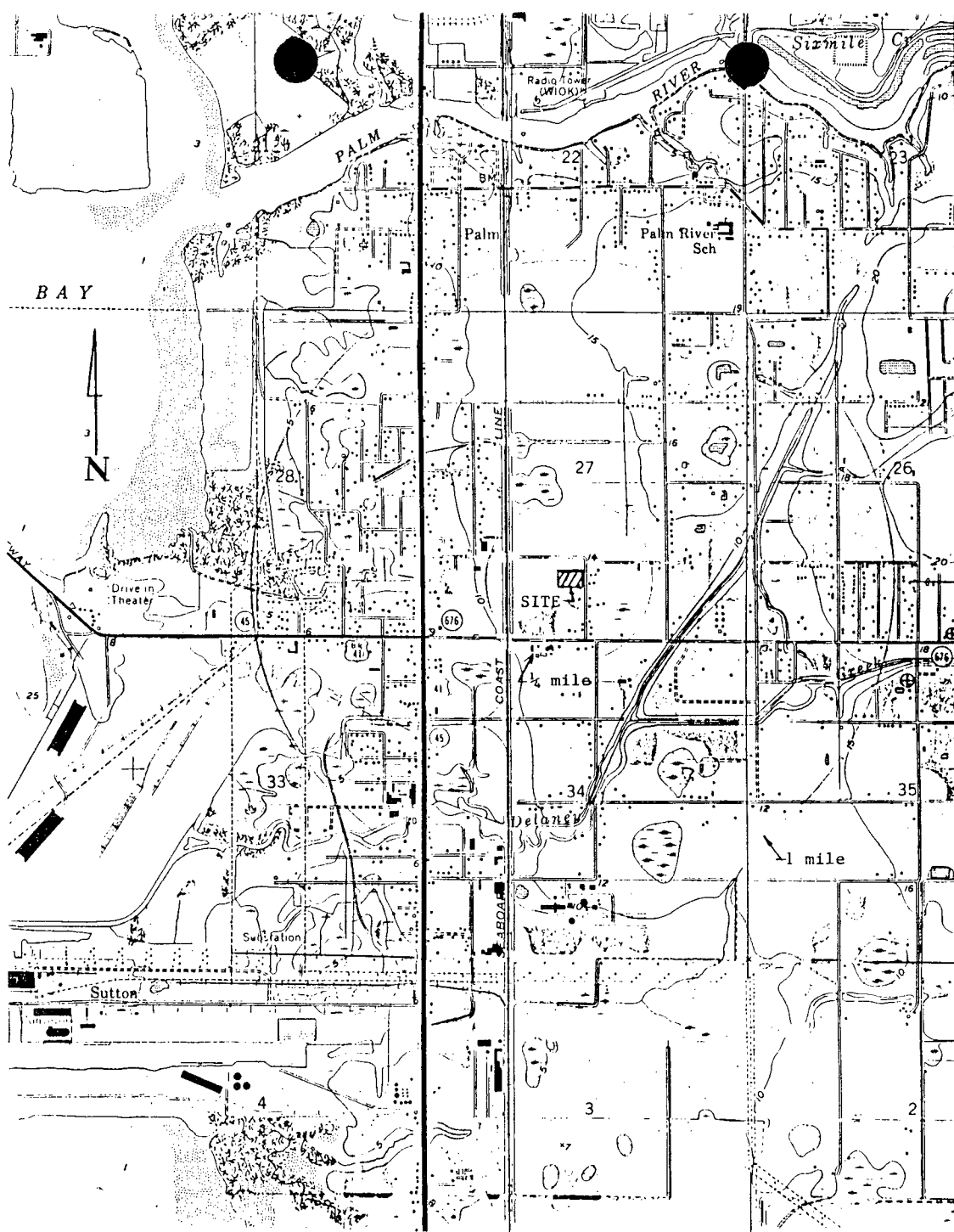
Sincerely,



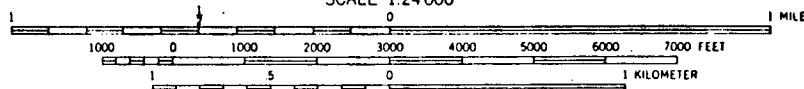
Ellen J. Jurszak, P.E.  
Environmental Engineer/  
Permits Manager

EJJ/dfs

cc: T. Becker, Tampa Reg. Mgr.  
F. Taylor, Br. Mgr. (3-163-01)



SCALE 1:24 000



CONTOUR INTERVAL 5 FEET  
DATUM IS MEAN SEA LEVEL

TAMPA, FLA.

N2752.5—W8222.5/7.5

1956  
PHOTOREVISED 1969  
AMS 4539 IV NW—SERIES V847

⊕ - Well Location

## TABLE OF CONTENTS

Page

i

<u>PART I</u>	- State of Florida Application for a Hazardous Waste Facility Permit.....	IA1
I.A.20	Existing or Pending Environmental Permits.....	IA20-1
I.B.3	Topography and Related Site Features.....	IB3-1
I.B.4	Relationship of the Facility to the 100-year Flood Plain.....	IB4-1
I.D.2	Operating Information	
I.D.2.a-1	Description of Business.....	ID2-1
I.D.2.a-2	Viability of Safety-Kleen Operations..	ID2-3
I.D.2.b-1	Specifications of the Hazardous Waste..	ID2-4
I.D.2.b-2	Used Mineral Spirits.....	ID2-6
I.D.2.b-3	Used Chlorinated Solvent.....	ID2-7
I.D.2.b-4	Used Mineral Spirits Bottom Sludge....	ID2-8
I.D.2.b-5	Used Mineral Spirits Dumpster Mud....	ID2-8
I.D.2.b-6	Dry Cleaning Wastes.....	ID2-9
I.D.2.b-7	Paint Wastes.....	ID2-10
I.D.2.b-8	Industrial Solvents.....	ID2-10
I.D.3	Waste Analysis Reports.....	ID3-1
I.D.4	Waste Analysis Program	
I.D.4.a-1	Waste Analysis-General.....	ID4-1
I.D.4.a-2	Waste Analysis at the Service Center..	ID4-2
I.D.4.a-3	Waste Analysis at the Reycle Center...	ID4-3
I.D.1.a-4	Waste Analysis Plan Updated.....	ID4-3
I.D.5	Facility Drawings.....	ID5-1
I.D.6	Manifest, Recordkeeping, and Reporting.....	ID6-1
I.E.1	Security Procedures and Equipment.....	IE1-1
I.E.2	Contingency Plan.....	IE2-1
I.E.2.a	General Information.....	IE2-1
I.E.2.b	Emergency Notification.....	IE2-3
I.E.2.c	Actions of the Emergency Coordinator..	IE2-4
I.E.2.d	Potential Spill Sources.....	IE2-8
I.E.2.e	Spill Control Procedures.....	IE2-10
I.E.2.f	Fire Control Procedures.....	IE2-13
I.E.2.g	Availability and Revision of the Contingency Plan.....	IE2-14
I.E.2.h	Arrangements with Local Authorities..	IE2-15
I.E.2.i	Evacuation Plan.....	IE2-16
I.E.2.j	Required Reports.....	IE2-16
I.E.3	Procedures for Storing Hazardous Waste	
I.E.3.a	Procedure for Segregating Waste Types.....	IE3-1
I.E.3.b	Drum Storage Areas.....	IE3-1

I.E.3.c	Storage Tanks.....	IE3-3
I.E.4	Preparedness and Prevention Program	
I.E.4.a	Inspection of Waste Management Facilities.....	IE4-1
I.E.4.b	Inspection of Emergency and Spill.....	IE4-3
	Control Equipment	
I.E.4.c	Inspection of Transportation Equipment.....	IE4-4
I.E.4.d	Verification of the Site Security and Inspection Action.....	IE4-4
I.E.4.e	Corrective Action.....	IE4-5
I.E.4.f	Available Equipment and Communication.....	IE4-5
I.E.4.g	Containment System.....	IE4-6
I.E.4.h	Incompatible Wastes.....	IE4-8
I.E.4.i	Responsibility for Preparedness and Prevention Plan.....	IE4-8
I.E.5	Personnel Training	
I.E.5.a	Outline of Training Program.....	IE5-1
I.E.5.b	Job Title, Qualifications and Duties of Employees Requiring Training.....	IE5-1
I.E.5.c	Description of the Training Programs.....	IE5-2
I.E.5.d	Training Director and Staff.....	IE5-3
I.E.5.e	Relevance of Training to Job Position.....	IE5-4
I.E.5.f	Preparedness, Prevention, and Contingency and Emergency Procedures.....	IE5-4
I.E.5.g	Other Specific Training Items.....	IE5-6
I.E.5.h	Implementation of the Training Program.....	IE5-8
I.F.1	Financial Responsibility and Closure	
I.F.1.a	Introduction.....	IF1-1
I.F.1.b	Facility Data.....	IF1-2
I.F.1.c	Closure Procedure.....	IF1-3
I.F.1.d	Facility Closure Schedule and Certification.....	IF1-13
I.F.1.e	Closure Cost Estimate.....	IF1-16
I.F.1.f	Financial Assurance for Closure.....	IF1-18
I.F.3	Liability Insurance.....	IF3-1

## Part II - Containers

II.B.1	Containment.....	II-1
II.B.2	Waste Compatibility.....	II-4
II.B.3	Incompatible Waste.....	II-4
II.B.4	Procedures for Leaking Containers.....	II-4
II.B.5	Inspection Procedures.....	II-4
II.B.6	Closure Plan.....	II-4

## Part III - Tanks

III.A.1	Material Compatibility.....	III-1
III.A.2	Treatment Processes.....	III-1
III.B.1	Tank Design and Operation Procedures.....	III-1
III.B.2	Inspection Procedure.....	III-2
III.B.3	Closure Plan.....	III-2

## LIST OF EXHIBITS

(Exhibits are Presented at the end of each Section)

### Exhibit No.

- I.A.20-1 Notification of Hazardous Waste Activity - July 3, 1985
- I.A.20-2 Part A Permit Application - July 3, 1985
  
- I.B.3-1 Topographic Map
- I.B.3-2 Wind Rose
  
- I.B.4-1 Flood Plain Map
  
- I.D.2-1 Typical Composition of Clean and Used Mineral Spirits Solvent
- I.D.2-2 Typical Composition of Immersion Cleaner and Carburetor and Cold Parts Cleaner #609
- I.D.2-3 Typical Chemical and Physical Analyses for Used Mineral Spirits (1 sheet)
- I.D.2-4 Typical Chemical and Physical Analyses for Mineral Spirits Dumpster Sludge (2 sheets)
- I.D.2-5 Typical Chemical and Physical Analyses for Used Immersion Cleaner (2 sheets)
- I.D.2-6 Typical Chemical and Physical Analyses for Dry Cleaning Filter Cartridge (1 sheet)
- I.D.2-7 Typical Chemical and Physical Analyses for Muck (3 sheets)
- I.D.2-8 Typical Chemical and Physical Analyses for Still Residue (3 sheets)
- I.D.2-8a Paint Waste Analyses
- I.D.2-8b Acceptance Criteria for Industrial Solvents
- I.D.2-9 Material Safety Data Sheet: Mineral Spirits
- I.D.2-10 Material Safety Data Sheet: Immersion Cleaners and Carburetor and Cold Parts Cleaner #609
- I.D.2-11 Material Safety Data Sheet - Tetrachloroethylene
- I.D.2-12 Material Safety Data Sheet - Lacquer Thinner
  
- I.D.4-11 Parameters and Rationable for Hazardous Waste Selection
- I.D.4-12 Parameters and Test Methods
- I.D.4-13 Methods Used to Sample Hazardous Wastes
- I.D.4-14 Frequency of Analysis
  
- I.D.5-1 Site Plan
- I.D.5-2a Floor Plan Section A
- I.D.5-2b Floor Plan Section B
- I.D.5-3 Tank Farm Plan
  
- I.E.2-1 Emergency Notification
- I.E.2-2 Telephone Notification Log
- I.E.2-3 Employees' Functions During an Emergency
- I.E.2-4 Material Safety Data Sheet for Mineral Spirits
- I.E.2-5 Material Safety Data Sheet for Immersion Cleaner
- I.E.2-6 Material Safety Data Sheet for Perchloroethylene
- I.E.2-7 Letter to Local Police Department
- I.E.2-8 Letter to Local Fire Department
- I.E.2-9 Letter to Local Hospital
  
- I.E.3-1 Construction Specifications of 16-Gallon Steel Barrel
- I.E.3-2 16-gal. Drum Lid Details
- I.E.3-3 Clamp Ring for 16-Gallon Drum Details

I.E.3-4 Adapter Clip Details for 16-Gallon Drum  
I.E.3-4a Polyethylene Drum Specifications  
I.E.3-4b Specifications for Lined Box  
I.E.3-4c Paint Waste Container Specifications  
I.E.3-5 Typical Construction Details and Dimensions for Aboveground Tanks  
I.E.3-6 Typical Aboveground Storage Tank Installation Details  
I.E.3-7 High Level Alarm System - Installation Details  
I.E.3-8 High Level Alarm System - Installation Information  
  
I.E.4-1 Facility Inspection Record and Procedure  
I.E.4-2 Emergency Equipment  
  
I.E.5-1 Training Plan Outline  
I.E.5-2 Job Title, Qualification and Duties of Employees Requiring Training  
I.E.5-3 Record of Personnel Training  
I.E.5-4 Trainer Qualifications  
I.E.5-5 Spill Prevention, Notification and Cleanup Plan  
I.E.5-6 Disaster and Fire Plan  
I.E.5-7 O.S.H.A. Occupational Safety and Health Administration  
  
I.F.1-1 Financial Assurance for Closure  
  
I.F.3-1 Certification of Liability Insurance - National Union Fire Insurance Co.



A. FIRST		SECOND	
7 3 9 9 (specify)	Business Services N.E.C.	7 5 1 7 2 (specify)	Petroleum Product Wholesalers
C. THIRD		D. FOURTH	
5 0 8 4 (specify)	Industrial Machinery & Equipment	7 5 0 1 3 (specify)	Automotive Parts and Supplies

III. OPERATOR INFORMATION

A. NAME		B. Is the name listed in Item VIII-A also the owner?
SAFETY-KLEEN CORP. ELGIN IL		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)		D. PHONE (area code & no.)	
F = FEDERAL S = STATE P = PRIVATE	M = PUBLIC (other than federal or state) O = OTHER (specify) P (specify)	A	3 1 2 6 9 7 8 4 6 0

E. STREET OR P.O. BOX	F. CITY OR TOWN	G. STATE	H. ZIP CODE
7 7 7 BIG TIMBER ROAD	ELGIN	IL	6 0 1 2 0

I. INDIAN LAND	Is the facility located on Indian lands?
	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	B. PSD (Air Emissions from Proposed Sources)
NI	9 P
C. UIC (Underground Injection of Fluids)	D. OTHER (specify)
UI	9
E. RCRA (Hazardous Wastes)	F. OTHER (specify)
RI	9

MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

IV. NATURE OF BUSINESS (provide a brief description)

This location is primarily a local sales/service office and warehouse for Safety-Kleen products consisting of small parts cleaning equipment, solvent and allied products such as hand cleaner, floor cleaner, parts washing brushes, etc. Safety-Kleen collects used solvents from the customer (primarily SQG & VSQG's) for temporary storage at this facility. Once a sufficient quantity of materials is collected, the materials are moved off-site in a semi trailer or tanker quantity to a Safety-Kleen Recycling Center.

V. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Burton E. Ericson Vice President/General Counsel	<i>Burton E. Ericson</i>	JUL 9 1986

COMMENTS FOR OFFICIAL USE ONLY
--------------------------------

<b>FORM 1</b> <b>GENERAL</b>	 <b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	<b>I. EPA I.D. NUMBER</b> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
---------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------

<b>II. POLLUTANT CHARACTERISTICS</b> INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.	<div style="border: 1px solid black; padding: 10px; font-weight: bold; font-size: 1.2em;">PLEASE PLACE LABEL IN THIS SPACE</div>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one-quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

<b>III. NAME OF FACILITY</b>	
1	SKIP SAFETY - KLEEN CORP. 3-163-01

<b>IV. FACILITY CONTACT</b>	
A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 HERSEY KEVIN MGR. ENV. ENGR	312 697 8460

<b>V. FACILITY MAILING ADDRESS</b>	
A. STREET OR P.O. BOX	
3 777 BIG TIMBER ROAD	
B. CITY OR TOWN	
4 EUGEN	
C. STATE	D. ZIP CODE
IL	60120

<b>VI. FACILITY LOCATION</b>	
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	
524th Avenue & 54th Street	
B. COUNTY NAME	
Hillsborough	
C. CITY OR TOWN	D. STATE E. ZIP CODE F. COUNTY CODE (if known)
6 TAMPA	FL 33619

FORM 333A EPA HAZARDOUS WASTE PERMIT APPLICATION Consolidated Permit Program (This information is required under Section 3005 of RCRA.) EPA I.D. NUMBER

(This information is required under Section 3005 of RCBA.)

FOR OFFICIAL USE ONLY

APPLICATION APPROVED		DATE RECEIVED mo. day		COMMENTS

## II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item 1 above.

**A. FIRST APPLICATION** (place an "X" below and provide the appropriate date)

1. EXISTING FACILITY (See instructions for definition of "existing" facility.  
Complete item below.)

~~NEW FACILITY (Complete item below.)~~

3	YR.	MO.	DAY	FOR EXISTING FACILITIES, PROVIDE THE DATE (YR., MO., & DAY) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (USE THE BOXES TO THE LEFT)
---	-----	-----	-----	--------------------------------------------------------------------------------------------------------------------------------------------

YR.	MO.	DAY
85	06	23

PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

**B. REVISED APPLICATION** (place an "X" below and complete item (above))

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

### III. PROCESSES - CODES AND DESIGN CAPACITIES

A. **PROCESS CODE** — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

**B. PROCESS DESIGN CAPACITY** — For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column 8(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<u>Storage:</u>			<u>Treatment:</u>		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS		T03	TONS PER HOUR OR METRIC TONS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	INCINERATOR	T04	GALLONS PER HOUR OR LITERS PER HOUR
<u>Disposal:</u>			OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided: Item III-C.)		
INJECTION WELL	D09	GALLONS OR LITERS			
LANDFILL	D00	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	D01	ACRES OR HECTARES			
OCEAN DISPOSAL	D02	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPOUNDMENT	D03	GALLONS OR LITERS			
UNIT OF MEASURE CODE			UNIT OF MEASURE CODE		
UNIT OF MEASURE			UNIT OF MEASURE		UNIT OF MEASURE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

DUP																																																																																			
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <table border="1"> <thead> <tr> <th rowspan="2">LINE NUMBER</th> <th rowspan="2">A. PROCESS CODE (from list above)</th> <th colspan="2">B. PROCESS DESIGN CAPACITY</th> <th rowspan="2">FOR OFFICIAL USE ONLY</th> </tr> <tr> <th>1. AMOUNT (specify)</th> <th>2. UNIT OF MEASURE (enter code)</th> </tr> </thead> <tbody> <tr> <td>X-11</td> <td>S 0 2</td> <td>600</td> <td>G</td> <td></td> </tr> <tr> <td>X-17</td> <td>T 0 3</td> <td>20</td> <td>E</td> <td></td> </tr> <tr> <td>1</td> <td>S 0 1</td> <td>75,403</td> <td>G</td> <td></td> </tr> <tr> <td></td> <td>S 0 2</td> <td>12,000</td> <td>G</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> <div style="width: 45%;"> <table border="1"> <thead> <tr> <th rowspan="2">LINE NUMBER</th> <th rowspan="2">A. PROCESS CODE (from list above)</th> <th colspan="2">B. PROCESS DESIGN CAPACITY</th> <th rowspan="2">FOR OFFICIAL USE ONLY</th> </tr> <tr> <th>1. AMOUNT (specify)</th> <th>2. UNIT OF MEASURE (enter code)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> </div>										LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	X-11	S 0 2	600	G		X-17	T 0 3	20	E		1	S 0 1	75,403	G			S 0 2	12,000	G		3					4					LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	5					6					7					8					9					10				
LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY																																																																															
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)																																																																																
X-11	S 0 2	600	G																																																																																
X-17	T 0 3	20	E																																																																																
1	S 0 1	75,403	G																																																																																
	S 0 2	12,000	G																																																																																
3																																																																																			
4																																																																																			
LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY																																																																															
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)																																																																																
5																																																																																			
6																																																																																			
7																																																																																			
8																																																																																			
9																																																																																			
10																																																																																			
X-11	S 0 2	600	G		5																																																																														
X-17	T 0 3	20	E		6																																																																														
1	S 0 1	75,403	G		7																																																																														
	S 0 2	12,000	G		8																																																																														
3					9																																																																														
4					10																																																																														

# II. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

## IV. DESCRIPTION OF HAZARDOUS WASTES

1. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

2. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

3. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

### 1. PROCESSES

#### 1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03D80	
X-2	D002	400	P	T03D80	
X-3	D001	100	P	T03D80	
X-4	D002				included with above

EPA I.D. NUMBER (enter from page 1)										FOR OFFICIAL USE ONLY									
Waste										Waste									
Waste										Waste									
V. DESCRIPTION OF HAZARDOUS WASTES (continued)																			
LINE	A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES												
							1. PROCESS CODES (enter)					2. PROCESS DESCRIPTION (if a code is not entered in D(1))							
1	D	0	0	1	1,320	T	S	0	2	S	0	1							
2	D	0	0	8			Included with above												
3	F	0	0	2	245	T	S	0	1										
4	F	0	0	4			Included with above												
5	F	0	0	1	2400	T	S	0	1										
6	F	0	0	2															
7	F	0	0	3	700	T	S	0	1										
8	F	0	0	5			Included with above												
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
26																			

EPA I.D. NO. (enter from page 1)									
1	2	3	4	5	6	7	8	9	10
									6

### FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

### I. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

### II. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)				LONGITUDE (degrees, minutes, & seconds)			
27	55	21	N	082	23	40	W

### III. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

☐ B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER				2. PHONE NO. (area code & no.)			
Gordon R. Burnam							
3. STREET OR P.O. BOX		4. CITY OR TOWN		5. ST.		6. ZIP CODE	
P.O. Box 41		Columbia		MO		652-05	

### C. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
Gordon Burnam	<i>Gordon Burnam</i>	7/18/85

### D. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
Burton E. Ericson	<i>Burton E. Ericson</i>	JUL 3 1985

*Burton E. Ericson*

12/11/86

then from the regeneration center back to the service center. The small quantities of residue remaining in the storage tanks at the service centers and after distillation of the used solvent at our solvent recycling plants are disposed of in accordance with applicable laws and regulations.

This closed loop provides Safety-Kleen with most of its solvent requirements; the resultant stabilized cost benefits are passed on to its customers. Ownership of the solvent remains with Safety-Kleen; the service center managers are accountable for the quantities of clean and used solvents handled by their branch operations. The service centers are basically a temporary storage and transfer facility. By Florida DER definition, however, these centers are considered to be the waste generator (I.D.1).

Safety-Kleen also provides a dry cleaning waste reclamation service where drums and boxes of dry cleaning wastes (chlorinated) are collected and stored temporarily at the service centers before shipment to the recycle centers for reclamation and residue disposal.

In addition, Safety-Kleen provides a paint waste reclamation service. Wastes containing various thinners and paints are collected in five gallon pails and sixteen gallon drums and are stored at the accumulation center (see Exhibit I.D.5-2b) in a room in the southwest corner of the building. These wastes are periodically shipped to a reclaimer, and the regenerated solvent is distributed to Safety-Kleen customers for use as product.

Safety-Kleen offers generators of large quantities of industrial solvents a reclamation service through its industrial solvents collection service. Wastes containing mineral spirits, halogenated solvents and lacquer thinners are shipped from the generator to the accumulation center in 55-gallon drums. The drums are then shipped to the Safety-Kleen recycle center in Lexington, South Carolina or to an independent reclaimer.

ID2-3a



I.D.2.b-1 SPECIFICATIONS OF THE HAZARDOUS WASTE

In Accordance with U.S. EPA Hazardous Waste Regulations, five types of hazardous waste have been identified at the Service Center:

1. The used mineral spirits solvent, returned from customers in separate drums transferred and stored in the aboveground tank awaiting shipment to the Recycle Center, is considered to be an Ignitable Waste and EP Toxic (D001/D008). In addition, drummed mineral spirits is received from industrial solvents customers. This material is stored in 55-gallon drums.
2. The used chlorinated solvent, returned from customers in separate drums and remaining in the same drum for shipment to the Recycle Center, is considered to be a Listed Waste from Non-Specific sources (F002 and F004);
3. Mineral spirits dumpster mud, and tank bottom sludge accumulated in the solvent return receptacles (wet dumpsters) and in the sludge tank, is considered to be an Ignitable Waste (D001) and possibly an EP Toxic Waste (D006 and/or D008); and
4. The spent halogenated solvents, collected from dry cleaning facilities in separate drums and remaining in the same drum for shipment to the Recycle Center, is considered to be a Listed Waste from Non-Specific Sources (F002). In addition, halogenated solvents (F001/F002) are accepted and stored as a result of the industrial solvents collection service.
5. Paint wastes and paint equipment cleaning wastes, primarily related to non-halogenated solvents, are considered to be Ignitable and/or Listed Waste from Non-Specific Sources (Waste Code: F003 and F005). These wastes are collected in pails and in drums at the customer's facility and remain in their containers until received by the reclaimer.

A typical composition, and chemical and physical analysis for each of the waste streams listed above is shown in Exhibits ID2-1 through ID2-8a based on existing data on these wastes generated from similar processes within Safety-Kleen's current and/or potential customers.

Material Safety Data Sheets for the Mineral Spirits, Immersion Cleaner, Dry Cleaning Solvent (Perchloroethylene), Lacquer Thinner and industrial solvents are presented in Exhibits I.D.2-9 through I.D.2-18 respectively.

ID2-5a

D1129-RV16

(still residues) are in liquid form and consist of primarily detergent, oil and grease, vinyl acetate (a sizing compound) and 20 to 30 percent of solvent.

Exhibit I.D.2-11 shows the Material Safety Data Sheet for tetra- (or per-) chloroethylene solvent.

I.D.2.b-7 PAINT WASTES

Paint wastes consist of various lacquer thinners (D001, F003, and F005) and paints (D006, D007 and D008). The waste is collected in black five gallon pails and sixteen gallon drums at the customer's place of business and the containers are then palletized and stored in an enclosed metal shelter. It is anticipated that this facility will ship 200,000 gallons of paint waste to a reclaimer annually. Exhibit I.D.2-8a shows the typical composition of waste paint related material. Exhibit I.D.2-12 is a Material Safety Data Sheet for lacquer thinner.

I.D.2.b-8 INDUSTRIAL SOLVENTS

Seven solvents are collected from industrial solvent users: mineral spirits (D001, D006, D008); 1,1,1-trichloroethane (F001, F002); per- and trichloroethylene (F001, F002); methylene chloride (F001, F002); 1,1,2-trichloro-1,1,2-trifluoroethane (F001, F002) and lacquer thinners (F003, F005). These wastes are shipped in 55-gallon drums and are stored on pallets. It is anticipated that 35,000 gallons of spent mineral spirits, 143,000 gallons of spent halogenated solvents and 55,000 gallons of spent lacquer thinners will be shipped from the accumulation center to a reclaimer on an annual basis. Exhibit I.D. 2-8b is a list of acceptance criteria for industrial solvents.

# KDM company

(512) 333-4011

May 21, 1986

## LABORATORY ANALYSIS

WASTE STREAM: Waste Paint Related Material

SOURCE: Safety-Kleen 5 gallon cans

METHOD(S): Dry weight determination  
Dry distillation  
Gas chromatograph

% RECOVERY: 90%

% SOLIDS: 1 %

ANALYSIS:

Water & Methanol	1.5%
Acetone	16%
M-E-K	24%
Lacquer Diluent	5%
MIBK	6%
Toluene	39%
Xylenes	6%
Others	2.5%
	<hr/> 100%

# KDM company

(512) 333-4011

May 21, 1986

## LABORATORY ANALYSIS

WASTE STREAM: Waste Paint Related Material

SOURCE: Safety-Kleen 16 gallon drums

METHOD(S): Dry weight determination  
Dry distillation  
Gas chromatograph

% RECOVERY: 72%

% SOLID: 9%

ANALYSIS:

H <sub>2</sub> O	1%
Acetone	13%
IPA	8%
M-E-K	5%
Lacquer Diluent	4%
MIBK	3%
Toluene	40%
Xylene	20%
EE Acetate	3%
Others	3%
	<hr/>
	100%

# KDM company

(512) 333-4011

August 13, 1986

## LABORATORY ANALYSIS

WASTE STREAM:	WASTE PAINT RELATED MATERIAL																											
SOURCE:	SAFETY KLEEN	16 gallon drums																										
METHOD(S):	DRY WEIGHT DETERMINATION DRY DISTILLATION GAS CHROMATOGRAPH																											
% RECOVERY:	76%																											
% SOLIDS:	12%																											
ANALYSIS:	<table><tbody><tr><td>H<sub>2</sub>O</td><td>1%</td></tr><tr><td>IP Acetate</td><td>1%</td></tr><tr><td>M E K</td><td>6%</td></tr><tr><td>IPA</td><td>8%</td></tr><tr><td>Acetone</td><td>8.5%</td></tr><tr><td>Lacquer Dilvent</td><td>3.5%</td></tr><tr><td>M-I-B-K</td><td>2%</td></tr><tr><td>Toluene</td><td>38%</td></tr><tr><td>n Butyl Acetate</td><td>4%</td></tr><tr><td>PM Acetate</td><td>14.5%</td></tr><tr><td>Xylenes</td><td>11.5%</td></tr><tr><td>Others</td><td><u>2%</u></td></tr><tr><td></td><td>100%</td></tr></tbody></table>		H <sub>2</sub> O	1%	IP Acetate	1%	M E K	6%	IPA	8%	Acetone	8.5%	Lacquer Dilvent	3.5%	M-I-B-K	2%	Toluene	38%	n Butyl Acetate	4%	PM Acetate	14.5%	Xylenes	11.5%	Others	<u>2%</u>		100%
H <sub>2</sub> O	1%																											
IP Acetate	1%																											
M E K	6%																											
IPA	8%																											
Acetone	8.5%																											
Lacquer Dilvent	3.5%																											
M-I-B-K	2%																											
Toluene	38%																											
n Butyl Acetate	4%																											
PM Acetate	14.5%																											
Xylenes	11.5%																											
Others	<u>2%</u>																											
	100%																											

## KDM company

(512) 333-4011

August 13, 1986

## LABORATORY ANALYSIS

WASTE STREAM:	WASTE PAINT RELATED MATERIAL																											
SOURCE:	SAFETY KLEEN	5 gallon cans																										
METHOS(S):	DRY WEIGHT DETERMINATION DRY DISTILLATION GAS CHROMATOGRAPH																											
% RECOVERY:	84%																											
% SOLIDS:	2%																											
ANALYSIS:	<table><tbody><tr><td>H<sub>2</sub>O</td><td>3%</td></tr><tr><td>IP Acetate</td><td>.5%</td></tr><tr><td>M-E-K</td><td>10%</td></tr><tr><td>IPA</td><td>5.5%</td></tr><tr><td>Acetone</td><td>5%</td></tr><tr><td>Lacquer Dilvent</td><td>6%</td></tr><tr><td>M-I-B-K</td><td>6%</td></tr><tr><td>Toluene</td><td>45%</td></tr><tr><td>n-Butyl Acetate</td><td>2.5%</td></tr><tr><td>PM Acetate</td><td>3%</td></tr><tr><td>Xylenes</td><td>12%</td></tr><tr><td>Others</td><td><u>1.5%</u></td></tr><tr><td></td><td>100%</td></tr></tbody></table>		H <sub>2</sub> O	3%	IP Acetate	.5%	M-E-K	10%	IPA	5.5%	Acetone	5%	Lacquer Dilvent	6%	M-I-B-K	6%	Toluene	45%	n-Butyl Acetate	2.5%	PM Acetate	3%	Xylenes	12%	Others	<u>1.5%</u>		100%
H <sub>2</sub> O	3%																											
IP Acetate	.5%																											
M-E-K	10%																											
IPA	5.5%																											
Acetone	5%																											
Lacquer Dilvent	6%																											
M-I-B-K	6%																											
Toluene	45%																											
n-Butyl Acetate	2.5%																											
PM Acetate	3%																											
Xylenes	12%																											
Others	<u>1.5%</u>																											
	100%																											



# Tower Laboratories

A Division of Tower Laboratories, Inc.

- 539 SO. RAYMOND • FULLERTON, CALIFORNIA 92631 • (714) 680-4414
- 1313 WEST RANDOLPH ST. • CHICAGO, ILLINOIS 60607 • (312) 421-5152
- 360 GLENWOOD AVENUE • EAST ORANGE, NEW JERSEY 07017 • (201) 673-4030

UNIT INFORMATION
CUSTOMER NUMBER
51177
LOCATION
ELGIN
UNIT ID
"WASTE PAINT MFG. AND FUEL TYPE THINNER"
MODEL
LUBE MFG
LUBE NAME
LUBE GRADE

## COMMENTS/RECOMMENDATIONS

5/6

TOTAL SULFUR, % - 0.0

TOTAL CHLORINE, % - 0.56

TO:

SAFETY-KLEEN CORP.  
ATTN: BRUCE BLAIR  
777 BIG TIMBER ROAD  
ELGIN, IL 60120

OPERATING INFORMATION							PHYSICAL DATA						
LAB NO.	SPECTRO NO.	DATE SAMPLED	OIL HRS./MI.	UNIT HRS./MI.	OIL ADDED	REPORT DATE	% FUEL DILUTION	% SUSPENDED SOLIDS	% WATER	VISCOSITY	40°C 100°C	GRADE	SPECIAL TESTS
S-222	C9943	06/11/86				06/23/86	0.0	0.0	0.0	0.0	0		

SPECTROGRAPHIC DATA																			
IRON	CHROMIUM	ALUMINUM	COPPER	LEAD	TIN	SILVER	NICKEL	SILICON	BORON	SODIUM	MAGNESIUM	CALCIUM	PHOSPHORUS	ZINC	BARIUM	CADMIUM	TITANIUM	MOLYBDENUM	ANTIMONY
231	17	162	24	85	38	0	0	282	0	18	40	4	0	0	42	75	1339	5	0



MAINTENANCE RECOMMENDATIONS: These recommendations are based upon the assumption of testing representative samples and correct, complete operating data.

UNIT DESCRIPTION: This includes unit ID, type of equipment, type of system and lubricant information.

OPERATING DATA

Date Sampled is the date you indicate on ID slip or sample bottle cap when sample is taken.

Unit Life is the time in miles or hours since the unit was new or overhauled.

Oil Life is the time in miles or hours the oil has been in use when the sample was taken.

Oil Added is the amount of oil added since the last oil drain.

PHYSICAL DATA INTERPRETATIONS

Fuel Dilution is the amount of unburned fuel in the sample. It results from leaking internal fuel lines, injectors, pumps, cold running engines, carburetor malfunction, timing and ignition problems.

Suspended Solids measures solids held in suspension by natural detergency and chemical additives. It consists of oxidation products and blow-by residues. Fuel soot is a major contributor to solids in diesel engines.

Water-Glycol measures the amount of condensed water and coolant. Water may enter from contaminated lube oil supplies or internal coolant leaks.

Viscosity is reported in centistokes at 40°C and 100°C. Increase or decrease in grade is significant.

Fuel dilution will reduce viscosity. Oxidation products or contamination may increase viscosity.

TYPICAL SOURCES OF SPECTRO ELEMENTS

Iron: Rings, cylinders, shafts, gears, discs, drums, bearings, valve and gear trains, rust and residual assembly debris.

Aluminum: Pistons, bearings, blowers, airborne dirt, gears, pumps, thrust washers, impellers, pump bodies and housings.

Chromium: Rings, liners, shafts, cylinder rods, cooling system additives.

Copper: Bearings, bushings, wet clutches, gears, wrist pins, thrust washers, pump parts, oil coolers.

Lead: Bearings, bushings, leaded gasoline, gear lubes, grease.

Tin: Bearings, bushings, babbitt, platings.

Nickel: Bearings, shafts, valves.

Silver: Bearings, wristpin bushings, solder.

Silicon: Airborne dirt, coolant, anti-foam and sealant additives.

Sodium: Coolant and oil additives, salt water, sea atmosphere.

Boron: Coolant and oil additives, salt water.

Zinc: Oil additives, bearings, platings.

Phosphorous: Oil and coolant additives.

Calcium: Oil additives, water, grease.

Magnesium: Oil additives, salt water, bearings, aircraft engines.

Barium: Oil and diesel fuel additives, water, grease.

Titanium: Turbines, springs, valves.

Antimony: Bearings, grease.

Molybdenum: Oil additives, piston rings.

Cadmium: Bearings, platings.

SPECIAL TESTS - Includes Neutralization Number, reported as TAN or TBN. Also includes any unusual contamination of significance.

SPECTROGRAPHIC DATA — PARTS PER MILLION BY WEIGHT (PPM)

Spectro analysis measures very fine, dispersed wear metals, dust, oil additives and cooling system additives. Many of these particles are small enough to easily pass through conventional filters. Absolute PPM are not always significant. Sharp increases may indicate a problem developing. Equipment type, age, metallurgy, oil added between drains, oil and coolant additives all contribute to the significance of PPM values.

ACCEPTANCE CRITERIA  
FOR  
INDUSTRIAL SOLVENTS

1. Solvents suitable for recycling will include mineral spirits, methylene chloride, 1,1,1-trichloroethane, trichloroethylene, and perchloroethylene, or mixtures of these solvents. Freon TF (1,1,2-trichloroethane-1,2,2-trifluoroethene) and TMC (a mixture of Freon and methylene chloride) will be acceptable for recycling but must be authorized.
2. A minimum of 50% yield of usable solvent is necessary. Yield is to be calculated as a percentage of the total sample received. Chemical breakdown of distillate should also be reported since this affects whether the distillate can be suitable incorporated into the Safety-Kleen product line.
3. The distillate cannot contain more than 5% by volume of aromatic solvents (Toluene + Xylene).
4. The distillate cannot contain more than 1% oxygenated solvents. (This excludes the inhibitor packages which should be reported as inhibitors)
5. Freon contamination is limited to 1% by volume for chlorinated feedstocks. Materials containing methylene chloride and freon should be noted as producing TMC.
6. The raw material cannot contain more than 50% water (free + emulsified). Solids content should not exceed 5% (by centrifuge) by volume.
7. Materials with more than 5% solid bottoms are not acceptable feedstocks for normal feed.
8. Materials which pose potential safety hazards are not acceptable, i.e. low flash point (less than 100°F), high toxicity and those which pose explosive hazards during processing.
9. Materials which contain herbicides, pesticides, PCB's and PBB's are not suitable feedstocks due to the potential for contamination of the processing equipment and facility.
10. Materials which contain more than 1% unknown are to be referred to Jim Breece or Clark Rose for a decision on further analysis or rejection, depending upon quantity.
11. All sample analyses which are approved by the lab will be forwarded to Jim Breece or Clark Rose for their acceptance prior to authorizing the generator to ship material to a recycle center.
12. All sample analyses which are rejected by the lab will be forwarded to Industrial Solvents and Operations to resolve whether or not the material can be accepted under a special processing and pricing arrangement.

**MATERIAL SAFETY DATA SHEET**  
**SAFETY-KLEEN CORP.**  
 777 Big Timber Rd.  
 Elgin, IL 60120



IDENTITY (As Used on Label and List)  
 Safety-Kleen Lacquer Thinner

None. Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I** Part #6782

Manufacturer's Name  
 Safety-Kleen Corp.

Emergency Telephone Number  
 312/697-8460

Address (Number, Street, City, State, and ZIP Code)  
 777 Big Timber Road

Telephone Number for Information  
 312/697-8460

Elgin, Illinois 60120

Date Prepared  
 12/13/85

Signature of Preparer (optional)

**Section II — Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	CSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Toluene	200 ppm	100 ppm	-	-
Xylene	100 ppm	100 ppm	-	-
Methyl Ethyl Ketone	200 ppm	200 ppm	-	-
Methyl Iso Butyl Ketone	100 ppm	50 ppm	-	-
Acetone	1000 ppm	750 ppm	-	-
Isopropanol	400 ppm	400 ppm	-	-
Methanol	200 ppm	200 ppm	-	-
Ethanol	1000 ppm	1000 ppm	-	-
Normal Butyl Acetate	150 ppm	150 ppm	-	-
Iso Butyl Acetate	200 ppm	200 ppm	-	-

**Section III — Physical/Chemical Characteristics**

Boiling Point	131-347°F.	Specific Gravity (H <sub>2</sub> O = 1)	~0.840
Vapor Pressure (mm Hg.)	~ 68°F.	Melting Point	N/A
Vapor Density (AIR = 1)	2.0	Evaporation Rate (Ether = 1)	slower than ether

Solubility in Water  
 Appreciable.

Appearance and Odor  
 Clear colorless liquid with characteristic solvent odor.

**Section IV — Fire and Explosion Hazard Data**

Flash Point (Method Used) <20°F. TCC	Flammable Limits	LEL 1.1	UEL 12.3
-----------------------------------------	------------------	---------	----------

Extinguishing Media  
 CO<sub>2</sub>, foam, dry chemical, water (mist only)

Special Fire Fighting Procedures  
 Liquid water may be used to cool containers and firefighters. However, due to differences in specific gravity, water could cause the free solvent to spread and a fire to spread.

Unusual Fire and Explosion Hazards  
 Extremely flammable.

## Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Heat, sparks, flame and fire.
Incompatibility (Materials to Avoid)			
Strong oxidizing agents.			
Hazardous Decomposition or Byproducts			
Normally none; however, incomplete burning may yield carbon monoxide.			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

## Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation? yes	Skin? yes	Ingestion? yes
Health Hazards (Acute and Chronic)			
Skin - Can cause drying of skin. Eyes - Severe irritant. Inhalation - Excessive inhalation can cause headache, dizziness and nausea. Ingestion - Harmful or fatal if swallowed.			
Carcinogenicity:	NTP? no	IARC Monographs? no	OSHA Required? no
None of the ingredients are known or suspected carcinogens.			
Signs and Symptoms of Exposure			
Drying of skin, eye irritation, headache, dizziness, and nausea.			
Medical Conditions			
Irritantly Aggravated by Exposure Unknown.			

## Emergency and First Aid Procedures

Skin - Wash with soap and water. Eyes - Irrigate with water. Inhalation - Remove to fresh air source and call a physician. Ingestion - DO NOT INDUCE VOMITING. Call a physician.

## Section VII — Precautions for Safe Handling and Use

## Steps to Be Taken in Case Material is Released or Spilled

Catch and collect for recovery as soon as possible. Avoid exposure to sparks, fire, flame, hot surfaces.

## Waste Disposal Method

Dispose of in accordance with company, local, state and federal regulations.

## Precautions to Be Taken in Handling and Storing

Extremely flammable. Keep away from heat, sparks, flame. Use with adequate ventilation.

Avoid long and repeated contact with skin. If clothes are inadvertently saturated with

## Other Precautions

solvent - DO NOT SMOKE - Keep away from ignition sources. Keep out of reach of children.

## Section VIII — Control Measures

## Respiratory Protection (Specify Type)

Respirator as recommended by NIOSH for concentrations above TLV limits.

Ventilation	Local Exhaust	Sufficient to keep concentration below lowest TLV.	Special
	Mechanical (General)	None.	Other
			None.

Protective Gloves In cases of prolonged contact, wear rubber gloves.

## Eye Protection

Yes - eyeglasses, safety glasses.

## Other Protective Clothing or Equipment

N/A

## Work/Hygiene Practices

Do not smoke while using this solvent. Wash hands thoroughly after use and before eating.

# MATERIAL SAFETY DATA SHEET

SAFETY-KLEEN CORP.  
777 Big Timber Rd.  
Elgin, IL 60123



IDENTITY (As Used on Label and List) Safety-Kleen 1,1,1-Trichloroethane Part No. 645

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

## Section I

Manufacturer's Name Safety-Kleen Corp.	Emergency Telephone Number 312/697-8460
Address (Number, Street, City, State, and ZIP Code) 777 Big Timber Road, Elgin, IL 60123	Telephone Number for Information 312/697-8460
	Date Prepared 11/7/85, Revised 6/17/86
	Signature of Preparer (optional)

## Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
1,1,1-Trichloroethane	350 ppm	350 ppm	-	
Diethylene ether	100 ppm	25 ppm		2.0

(The hazard information presented is based on tests conducted on this or similar mixtures.)

## Section III—Physical/Chemical Characteristics

Boiling Point	165°F.	Specific Gravity (H <sub>2</sub> O = 1)	1.321
Vapor Pressure (mm Hg.)	100 mm HG @ 20°C	Melting Point	N/A
Vapor Density (AIR = 1)	4.55	Evaporation Rate (toluene = 1)	2.88
Solubility in Water 0.07g/100g @ 25°C			
Appearance and Odor Clear and water white - characteristic chlorinated odor.			

## Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used) None	Flammable Limits	LEL 8.0	UEL 10.5
Extinguishing Media CO <sub>2</sub> , foam, dry chemical, water (mist only)			
Special Fire Fighting Procedures Self-contained respiratory equipment. Not considered flammable under normal industrial use conditions.			

### Unusual Fire and Explosion Hazards

Thermal decomposition liberates toxic and corrosive fumes.

**Section V—Reactivity Data**

Stability	Unstable		Conditions to Avoid Flames, welding arcs and other high temperatures.
	Stable	X	

**Incompatibility (Materials to Avoid)**

Water, slow hydrolysis produces corrosive acid.

**Hazardous Decomposition or Byproducts**

HCl, phosgene, CO, CO<sub>2</sub> upon combustion

Hazardous Polymerization	May Occur		Conditions to Avoid None
	Will Not Occur	X	

**Section VI—Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	yes	yes	yes

**Health Hazards (Acute and Chronic)**

Very low toxicity. Mild irritation, but essentially no corneal injury. Short contact - no irritation. Prolonged or frequent exposure - minor irritations. If confined to the skin - up to moderate irritation - even a burn.

Very low skin absorption. Anesthetic effects - may occur in the range of 500 to 1,000 ppm.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	no	no	no

There is no documented evidence to suggest that stabilized 1,1,1-Trichloroethane causes an increased cancer incidence in humans or animals; 1,1,1-trichloroethane is not listed by IARC, NTP, or OSHA as a carcinogen.

**Signs and Symptoms of Exposure**

Drying and burning of skin. Anesthetic effect at concentrations of 500 to 1,000 ppm.

**Medical Conditions**

Generally Aggravated by Exposure Unknown

**Emergency and First Aid Procedures**

EYES AND SKIN-Flush eyes with plenty of water. For both eyes and skin, get medical attention if irritation or injury develops. INHALATION-If breathing stops, give artificial respiration. Get medical help. Remove to fresh air; keep warm and quiet until recovered. INGESTION-DO NOT INDUCE VOMITING. Call a physician immediately.

**Section VII—Precautions for Safe Handling and Use**

No specific antidote known. Treat symptomatically. Caution with some solvents drinking alcohol shortly before during or after exposure may cause undesirable effects.

**Steps to Be Taken in Case Material is Released or Spilled**

Flush with water into retaining area or container. Avoid exposure to sparks, fire or hot metal surfaces.

**Waste Disposal Method**

Dispose of in accordance with company, local, state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Combustible. Keep away from heat, sparks and flame. Normal room ventilation is usually adequate. If cleaning operations are confined in a small, enclosed area with no moving air, provisions should be made to exhaust air from the room.

**Other Precautions**

Avoid long and repeated contact with skin. After prolonged solvent contact with hands, use skin cream to restore or replace natural oils. Do not ingest. Keep out of reach of children.

**Section VIII—Control Measures****Respiratory Protection (Specify Type)**

Provide necessary breathing apparatus for poorly ventilated areas.

Ventilation	Local Exhaust Normal room ventilation to keep vapor	Special N/A
	Mechanical (General) concentrations below TLV level.	Other

Protective Gloves If contact is prolonged, use protective gloves or barrier cream.

Eye Protection  
Yes - normal precautions.

**Other Protective Clothing or Equipment**

Protective headgear and apron when splashing is a problem.

**Work/Hygienic Practices**

Do not smoke when using this product.



**MATERIAL SAFETY DATA SHEET**  
**SAFETY-KLEEN CORP.**  
 777 Big Timber Rd.  
 Elgin, IL 60123

IDENTITY (As Used on Label and List) Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.  
 Safety-Kleen Trichloroethylene, Part #649

**Section I**

Manufacturer's Name Safety-Kleen Corp.	Emergency Telephone Number 312/697-8460
Address (Number, Street, City, State, and ZIP Code) 777 Big Timber Road	Telephone Number for information 312/697-8460
Elgin, IL 60123	Date Prepared 11/7/85, revised 4/24/86
	Signature of Preparer (optional)

**Section II—Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Trichloroethylene (Stabilized)	100 ppm	50 ppm		

**Section III—Physical/Chemical Characteristics**

Boiling Point	@ 760 mm	180° F.	Specific Gravity (H <sub>2</sub> O = 1)	1.46
Vapor Pressure (mm Hg.)	@ 68° F	58	Melting Point	N/A
Vapor Density (AIR = 1)		4.54	Evaporation Rate (toluene = 1)	0.28

Solubility in Water

1000 ppm

Appearance and Odor

Clear, colorless liquid with chloroform-like odor

**Section IV—Fire and Explosion Hazard Data**

Flash Point (Method Used) None (tag open cup)	Flammable Limits N/A	LEL	UEL
--------------------------------------------------	-------------------------	-----	-----

Extinguishing Media

Carbon dioxide, dry chemical or foam.

Special Fire Fighting Procedures

As appropriate for surrounding fire

Unusual Fire and Explosion Hazards

Above 110° F, vapors will burn but do not explode violently under any atmospheric conditions.

Vapors decomposed by flame to yield HCl gas, and phosgene gas under some conditions.

**Section V—Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	Protect from moist air; do not store in pits, basements or unventilated areas.

Incompatibility (Materials to Avoid)

Reacts with strong alkali to form spontaneously flammable dichloroacetylene.

Hazardous Decomposition or Byproducts

Decomposed by open flame, giving HCl and phosgene, COCl<sub>2</sub> gases.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur		

**Section VI—Health Hazard Data**

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
--------------------	--------------------	--------------	-------------------

Health Hazards (Acute and Chronic) Skin-Defatting action can cause dermatitis. Eyes-Slightly irritat. sensation and lachrymation. Inhalation-symptoms range from irritation of the nose and throat to nausea, an attitude of irresponsibility, blurred vision and finally disturbance of the central nervous system resulting in cardiac failure.

Carcinogenicity:	NTP? no	IARC Monographs? no	OSHA Regulated? no
------------------	------------	------------------------	-----------------------

Trichloroethylene is not listed on the OSHA, NTP, or IARC carcinogen lists.

**Signs and Symptoms of Exposure**

Eye irritation. Deoiling of skin. Irritation of nose and throat, nausea.

**Medical Conditions**

Generally Aggravated by Exposure Unknown

**Emergency and First Aid Procedures**

Eyes-Flush thoroughly with water. Skin-wash thoroughly with soap and warm water. Apply lanolin ointment. Ingestion-drunk water and induce vomiting. Repeat three times, then administer one tablespoonful of Epson Salts in water. Inhalation-Remove to fresh air. If necessary, apply artificial respiration and/or administer oxygen. Ingestion-Produces effects similar to inhalation.

**Section VII—Precautions for Safe Handling and Use****Steps to Be Taken in Case Material is Released or Spilled**

Get personnel protective equipment. Soak up spill in absorbent material, as sand, rags, etc., or contain spill and pump into drums or containers for disposal. Wash down area with soapy water and flush with water.

**Waste Disposal Method**

Dispose of in accordance with company, local, state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Avoid physical damage to drums; store in ventilated areas, not in pits or basement. Protect storage tank vents with a dryer to prevent entry of moist air.

**Other Precautions**

Strong alkalies, such as sodium or potassium hydroxide, can react with trichloroethylene to form spontaneously flammable dichloroacetylene.

**Section VIII—Control Measures****Respiratory Protection (Specify Type)**

Organic vapor-acid gas canister; self-contained breathing apparatus for emergencies.

Ventilation	Local Exhaust	Special	--
	General room ventilation plus local		
	Mechanical (General)	Other	--
exhaust at points of fume emission.			

**Protective Gloves**

Neoprene, vinyl, polyethylene, etc.

**Eye Protection**

Chemical safety goggles plus face shield.

**Other Protective Clothing or Equipment**

Neoprene safety shoes; neoprene suits or aprons for splash protection.

**Work/Hygiene Practices**

Do not smoke when using this product.



**MATERIAL SAFETY DATA SHEET****SAFETY-KLEEN CORP.****777 Big Timber Rd.****Elgin, IL 60123**

IDENTITY (As Used on Label and List)  
 Safety-Kleen Perchloroethylene

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I** Part #737

Manufacturer's Name Safety-Kleen Corp.	Emergency Telephone Number 312/697-8460
Address (Number, Street, City, State, and ZIP Code) 777 Big Timber Road	Telephone Number for Information 312/697-8460
Elgin, Illinois 60123	Date Prepared 11/7/85, revised 4/24/86
	Signature of Preparer (optional)

**Section II—Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Perchloroethylene (Stabilized)	100 ppm	50 ppm		

**Section III—Physical/Chemical Characteristics**

Boiling Point	250°F	Specific Gravity (H <sub>2</sub> O = 1)	1.6
Vapor Pressure (mm Hg.) @ 20°C	13	Melting Point	N/A
Vapor Density (AIR = 1)	5.8	Evaporation Rate (toluene = 1)	0.09

Solubility in Water

Negligible.

Appearance and Odor

Colorless, clear liquid, mildly sweet.

**Section IV—Fire and Explosion Hazard Data**

Flash Point (Method Used) None (tag closed cup)	Flammable Limits N/A	LEL	UEL
----------------------------------------------------	-------------------------	-----	-----

Extinguishing Media

N/A

Special Fire Fighting Procedures

Self-contained breathing equipment should be used by firemen in building where

Perchloroethylene is stored. Keep container cool.

Unusual Fire and Explosion Hazards

Vapors can be ignited by high energy ignition source. Decomposes with fire or hot surfaces to acidic gases and other highly toxic substance.

**Section V—Reactivity Data**

Stability	Unstable		Conditions to Avoid Contact with open flame, hot surfaces or emissions from welding arc.
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hydrogen chloride, phosgene and other highly toxic substance.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

## Section VI—Health Hazard Data

Route(s) of Entry:	Inhalation? yes	Skin? yes	Ingestion? yes
--------------------	--------------------	--------------	-------------------

## Health Hazards (Acute and Chronic)

Overexposure can cause vomiting, nausea, drowsiness, unconsciousness and even death in extreme cases.

Carcinogenicity:	NTP? no	IARC Monographs? no	OSHA Regulated? no
------------------	------------	------------------------	-----------------------

Perchloroethylene has been identified as an animal carcinogen by NTP, but is not listed on IARC or OSHA carcinogen lists as of August 1985.

## Signs and Symptoms of Exposure

Vomiting, drowsiness, nausea.

## Medical Conditions

Generally Aggravated by Exposure      Unknown.

## Emergency and First Aid Procedures

Move to fresh air. Remove contaminated clothing. If breathing has stopped, administer artificial respiration. Keep warm and quiet. Call a physician. Eye contact - wash with copious amounts of water. Never administer adrenaline.

## Section VII—Precautions for Safe Handling and Use

## Steps to Be Taken in Case Material is Released or Spilled

Evacuate the area, ventilate, avoid breathing vapor or coming in contact with liquid. Clean up area (wear protective clothing), contain spill, transfer by mopping or with absorbent material to storage container.

## Waste Disposal Method

Dispose of in accordance with company, local, state and federal regulations.

## Precautions to Be Taken in Handling and Storing

Avoid contact with skin and avoid vapors. Pipe vents outdoors. Store in cool, dry, ventilated area.

## Other Precautions

Prevent moist air from entering storage. No smoking in presence of vapors.

## Section VIII—Control Measures

## Respiratory Protection (Specify Type)

None required when used with adequate ventilation.

Ventilation	Local Exhaust	Special
	Sufficient to maintain below TLV.	---
	Mechanical (General)	Other
	----	---

## Protective Gloves

Neoprene, viton, PVC coated.

## Eye Protection

Chemical safety goggles.

## Other Protective Clothing or Equipment

Protective headgear and apron when splashing is a problem.

## Work/Hygiene Practices

Do not smoke when using this product.

# MATERIAL SAFETY DATA SHEET

SAFETY-KLEEN CORP.  
777 Big Timber Rd.  
Elgin, IL 60123



IDENTITY (As Used on Label and List) Methylene Chloride Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I Part #712

Manufacturer's Name <u>Safety-Kleen Corp.</u>	Emergency Telephone Number <u>312/697-8460</u>
Address (Number, Street, City, State, and ZIP Code) <u>777 Big Timber Road</u>	Telephone Number for Information <u>312/697-8460</u>
Elgin, IL 60123	Date Prepared <u>11/7/85, revised 4/24/86</u>
	Signature of Preparer (optional)

## Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
<u>Methylene Chloride</u>	<u>500 ppm</u>	<u>100 ppm</u>	<u>--</u>	

## Section III—Physical/Chemical Characteristics

Boiling Point	<u>104° F</u>	Specific Gravity (H <sub>2</sub> O = 1)	<u>1.3</u>
Vapor Pressure (mm Hg.)	<u>350</u>	Melting Point	<u>N/A</u>
<u>320° C</u>		Evaporation Rate (ether = 1)	<u>0.7</u>
Vapor Density (AIR = 1)	<u>2.9</u>		

Solubility in Water

Moderate

Appearance and Odor

Colorless clear liquid, mildly sweet.

## Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used) <u>None (tag closed cup)</u>	Flammable Limits <u>N/A</u>	LEL <u>--</u>	UEL <u>--</u>
-----------------------------------------------------------	--------------------------------	------------------	------------------

Extinguishing Media  
N/A

## Special Fire Fighting Procedures

Self contained breathing equipment should be used by firemen in building where methylene chloride is stored. Keep container cool.

## Unusual Fire and Explosion Hazards

Vapors can be ignited by high energy ignition source. Decomposes with fire or hot surfaces to corrosive and toxic fumes.

## Section V—Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Contact with open flame, hot surfaces or emissions from welding arc.

Incompatibility (Materials to Avoid)

## Hazardous Decomposition or Byproducts

Hydrogen chloride, phosgene, and other highly toxic substance.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

**Section VI—Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	yes	yes	yes

**Health Hazards (Acute and Chronic)**

Skin—can cause drying of skin. Eyes—Severe irritant. Inhalation—Excessive inhalation can cause headache, dizziness and nausea. Ingestion—Harmful or fatal if swallowed.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	no	no	no

Methylene Chloride has been found to cause tumors in laboratory test animals, but is not believed to pose a carcinogenic risk to man when handled as recommended. Methylene Chloride is listed in Group 3 by IARC and not listed by NTP or OSHA.

**Signs and Symptoms of Exposure**

Drying of skin, eye irritation, headache, dizziness, nausea.

**Medical Conditions**

Generally Aggravated by Exposure Unknown

**Emergency and First Aid Procedures**

Move to fresh air. Remove contaminated clothing. If breathing has stopped, administer artificial respiration. Keep warm and quiet. Call a physician. Eye contact—wash with copious amounts of water. Never administer adrenaline.

**Section VII—Precautions for Safe Handling and Use****Steps to Be Taken in Case Material is Released or Spilled**

Evacuate the area, ventilate, avoid breathing vapor or coming in contact with liquid.

Clean up area (wear protective clothing), contain spill, transfer by mopping or with absorbent material to storage container.

**Waste Disposal Method**

Dispose of in accordance with company, local, state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Avoid contact with skin and avoid vapors. Pipe vents outdoors. Store in cool, dry ventilated area.

**Other Precautions**

Prevent moist air from entering storage. No smoking in presence of vapors.

**Section VIII—Control Measures****Respiratory Protection (Specify Type)**

None required when used with adequate ventilation.

Ventilation	Local Exhaust	Special
	Sufficient to maintain below TLV	
	Mechanical (General)	Other

**Protective Gloves**

Neoprene, viton, PVC coated.

**Eye Protection**

Chemical safety goggles.

**Other Protective Clothing or Equipment**

Protective headgear and apron when splashing is a problem.

**Work/Hygienic Practices**

Do not smoke while using this product.

# MATERIAL SAFETY DATA SHEET

SAFETY-KLEEN CORP.

777 Big Timber Rd.

Elgin, IL 60123



IDENTITY (As Used on Label and List)

Safety-Kleen Solvent F\*

Part No. 699

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

## Section I

Manufacturer's Name

Safety-Kleen Corporation

Emergency Telephone Number

312/697-8460

Address (Number, Street, City, State, and ZIP Code)

777 Big Timber Road, Elgin, IL 60123

Telephone Number for Information

312/697-8460

Date Prepared

11/7/85, Revised 07/02/86

Signature of Preparer (optional)

\*

This is the same solvent as Preon TF

## Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))

OSHA PEL

ACGIH TLV

Other Limits Recommended

% (optional)

Trichlorotrifluoroethane

1000 ppm

1000 ppm

-

## Section III—Physical/Chemical Characteristics

Boiling Point

117.6°F.

Specific Gravity (H<sub>2</sub>O = 1)

0.972

1.157

Vapor Pressure (mm Hg.)

@ 77°F.

334

Melting Point

N/A

Vapor Density (AIR = 1)

6.5

Evaporation Rate  
(CCl<sub>4</sub> = 1)

0.1

Solubility in Water

77°F. 0.02% by weight

Appearance and Odor

Colorless liquid - slight ethereal odor.

## Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used)

None

Flammable Limits

None

LEL

N/A

UEL

N/A

Extinguishing Media

Non-flammable

Special Fire Fighting Procedures

None

Unusual Fire and Explosion Hazards

None

## Section V—Reactivity Data

Stability

Unstable

Conditions to Avoid

Open flames or high temperatures.

Stable

X

Incompatibility (Materials to Avoid)

Alkali or alkaline earth metals - powdered Al, Zn, Be, etc.

Hazardous Decomposition or Byproducts

Hydrochloric and hydrofluoric acids - possible carbonyl halides.

Hazardous Polymerization

May Occur

Conditions to Avoid

None

Will Not Occur

X

## SECTION V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

113 ppm

## EFFECTS OF OVEREXPOSURE

Severe eye irritation--drying of skin--excessive inhalation causes headache, dizziness and nausea. Harmful or fatal if swallowed.

EMERGENCY AND FIRST AID PROCEDURES Eye Contact: Flush with water. Skin Contact: Wash with mild soap/water, and apply skin cream. Inhalation: Remove to fresh air and call a physician; apply artificial respiration if necessary in extremes. Oral: Do not induce vomiting. Lavage carefully if appreciable quantity was ingested. Guard against aspiration into lungs. Administer 2 to 4 oz. of olive oil. Call a physician.

## SECTION VI — REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

Strong oxidizing agents

INCOMPATIBILITY (Materials to avoid)

## HAZARDOUS DECOMPOSITION PRODUCTS

Hcl, phosgene, CO, CO<sub>2</sub>, upon combustionHAZARDOUS  
POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

## SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush with water into retaining area or container. Avoid exposure to sparks, fire or hot metal surfaces.

WASTE DISPOSAL METHOD

Dispose in accordance with company or local, state or federal regulations.

Incinerate under safe conditions.

## SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Provide necessary breathing apparatus for poorly ventilated areas.

VENTILATION

LOCAL EXHAUST

SPECIAL

Normal room ventilation, to keep vapor

See special precautions

MECHANICAL (General)

OTHER

Concentration below TLV level

PROTECTIVE GLOVES

\*See below

EYE PROTECTION

Yes-normal precautions

OTHER PROTECTIVE EQUIPMENT

\*If skin contact is prolonged, use protective gloves or barrier cream

## SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Combustible. Keep away from heat, sparks and open flame. Normal room ventilation is usually adequate. If cleaning operations are confined in a small, enclosed area.

OTHER PRECAUTIONS

With no moving air, provisions should be made to exhaust air from the room. Avoid

long and repeated contact with skin. After prolonged solvent contact with hands, use skin creams to restore or replace natural oils. Do not ingest. Keep out of the reach of children.

# MATERIAL SAFETY DATA SHEET

SAFETY-KLEEN CORP.

777 Big Timber Rd.

Elgin, IL 60123



<b>IDENTITY (As Used on Label and List)</b> Safety-Kleen Solvent FMC* Part No. 700	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
---------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------

## Section I

<b>Manufacturer's Name</b> Safety-Kleen Corporation	<b>Emergency Telephone Number</b> 312/697-8460
<b>Address (Number, Street, City, State, and ZIP Code)</b> 777 Big Timber Road, Elgin, IL 60123	<b>Telephone Number for information</b> 312/697-8460
	<b>Date Prepared</b> 11/8/85, Revised 07/02/86
* This is the same solvent as Freon TMC	<b>Signature of Preparer (optional)</b>

## Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Trichlorotrifluoroethane	1000 ppm	1000 ppm	-	
Methylene Chloride	500 ppm	100 ppm	-	49.5

## Section III—Physical/Chemical Characteristics

<b>Boiling Point</b> 97°F	<b>Specific Gravity (H<sub>2</sub>O = 1)</b> @ 77°F 1.42
<b>Vapor Pressure (mm Hg.)</b> @ 77°F 500	<b>Melting Point</b> N/A
<b>Vapor Density (AIR = 1)</b> 4.9	<b>Evaporation Rate</b> (CCl <sub>4</sub> = 1) 0.3

**Solubility in Water**  
 77°F. 0.66% by weight

**Appearance and Odor**  
 Colorless liquid - slight ethereal odor.

## Section IV—Fire and Explosion Hazard Data

<b>Flash Point (Method Used)</b> None	<b>Flammable Limits</b> None	<b>LEL</b> N/A	<b>UEL</b> N/A
------------------------------------------	---------------------------------	-------------------	-------------------

**Extinguishing Media**  
 Non-flammable.

**Special Fire Fighting Procedures**  
 None

**Unusual Fire and Explosion Hazards**  
 None

## Section V—Reactivity Data

<b>Stability</b>	<b>Unstable</b>	<input type="checkbox"/>	<b>Conditions to Avoid</b> Flames or high temperatures.
	<b>Stable</b>	<input checked="" type="checkbox"/>	

**Incompatibility (Materials to Avoid)**  
 Alkali or alkaline earth metals - powdered Al, Zn, Be, etc.

**Hazardous Decomposition or Byproducts**  
 Hydrochloric and hydrofluoric acids - possible carbonyl halides.

<b>Hazardous Polymerization</b>	<b>May Occur</b>	<input type="checkbox"/>	<b>Conditions to Avoid</b> None
	<b>Will Not Occur</b>	<input checked="" type="checkbox"/>	

**Section V—Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	Heat, sparks, flame and fire.

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents.

**Hazardous Decomposition or Byproducts**

Normally none; however, incomplete burning may yield carbon monoxide.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	None

**Section VI—Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	yes	no	yes

**Health Hazards (Acute and Chronic)**

SKIN - Can cause drying of skin. EYES - Severe irritant. INHALATION - Excessive inhalation causes headache, dizziness and nausea. INGESTION - Harmful or fatal if swallowed.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	no	no	no

Not a known carcinogen.

**Signs and Symptoms of Exposure**

Drying of skin, eye irritation, headache, dizziness, nausea.

**Medical Conditions**

Generally Aggravated by Exposure Unknown

**Emergency and First Aid Procedures**

SKIN - Wash with soap and water. EYES - Irrigate with water. INHALATION - Remove to fresh air source and call a physician. INGESTION - DO NOT INDUCE VOMITING. Call a physician.

**Section VII—Precautions for Safe Handling and Use****Steps to Be Taken in Case Material is Released or Spilled**

Catch and collect for recovery as soon as possible. Avoid exposure to sparks, fire, flame, hot surfaces.

**Waste Disposal Method**

Dispose of in accordance with company, local, state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Combustible. Keep away from heat, sparks, flame. Use with adequate ventilation. Avoid long and repeated contact with skin. If clothes are inadvertently saturated with solvent - DO NOT SMOKE - Keep away from ignition sources.

**Other Precautions**

Keep out of reach of children.

**Section VIII—Control Measures****Respiratory Protection (Specify Type)**

Self-contained breathing apparatus for concentrations above TLV limits.

Ventilation	Local Exhaust	Special
	Normal room ventilation.	None.
	Mechanical (General)	Other
	None.	None.

Protective Gloves	In case of prolonged use, wear rubber gloves.	Eye Protection	Yes - eyeglasses, safety glasses.
-------------------	-----------------------------------------------	----------------	-----------------------------------

**Other Protective Clothing or Equipment**

N/A

**Work/Hygienic Practices**

Do not smoke while using this solvent.



ATTACHMENT I.D.3  
WASTE ANALYSIS REPORTS

I.D.3      WASTE ANALYSIS REPORTS

A typical composition of the analysis of the hazardous wastes handled at the facility is described in Sections I.D.2.b-1 to I.D.2.b-7 and waste analysis reports in Exhibits I.D.2-1 thru I.D.2-8a.

I.D.4.a-1 WASTE ANALYSIS - GENERAL

The used immersion cleaner is the primary feed stock for regeneration of Safety-Kleen's clean solvent products. Quality control of the used solvents is critical to the recycle center to safely recycle the material and to assure quality products. The closed loop system of managing the clean and used solvents is therefore designed to minimize the possibility of product contamination from outside sources. Within the closed loop, ownership of the material remains with Safety-Kleen and the product is leased to the customer.

Prior to leasing a parts cleaning machine, the customer's business activity is reviewed. Where the possibility exists for contamination of the mineral spirits, i.e., pesticide, herbicide, pharmaceutical, printing operations, the process is reviewed to insure that contamination of the product does not occur.

Sales representatives are instructed to visually examine the spent product when the machines are serviced, noting the consistency and volume of material recovered. The odor of the material is also noted to detect the presence of volatile materials such as gasoline. If a different odor is noted, the customer is warned that the material must not be contaminated. If the problems is not corrected, the machine is removed from the customer.

The dry cleaning and paint wastes are collected from facilities where a single process is managed at the facility and possibility of cross contamination by other chemicals or wastes is minimal.

The contents of the drums are verified by the sales representative when he services the customer and, comparable to the handling of immersion cleaner, the drums are not reopened until they reach the recycle center.

Prior to accepting an industrial solvents customer's waste for recycling, a sample is drawn and analyzed at Safety-Kleen's laboratory in Elgin, Illinois. The criteria used to determine whether a waste is acceptable for recycling are Exhibit ID2-8b. The drums are not opened until they reach the recycle center. Samples of the waste collected at the recycle center and the contents of the drum are either verified and accepted or rejected. Rejected wastes are either returned to the customer or properly disposed of.

I.D.4.a-2 WASTE ANALYSIS AT THE SERVICE CENTER

The Safety-Kleen Service Center in Tampa serviced numerous small quantity waste generator customers in 1984 and over 1,700 16-gallon drums of immersion cleaner solvents were delivered to the customers for degreasing operations and subsequently returned to the Service Center for recycling at Safety-Kleen's Recycle Centers. With the dry cleaning services, the number of customers who generate small quantities of wastes and use Safety-Kleen's recycling services has increased dramatically. With such large numbers of waste generators, performing waste analyses from each or selected generating point would become very costly and unmanageable.

I.D.4-2

Furthermore, all the materials collected at the Service Center and subsequently shipped to the Recycle Center are either managed at all times in the closed loop system or will be collected from a single purpose process. General nature and quality of these materials are known and Safety-Kleen's operating experiences have shown that the collected materials do not usually deviate from expectation and impact the recycling process. As an additional safe-guard, Safety-Kleen's personnel are instructed to inspect all materials before returning them to the Service Centers.

For these reasons, all waste analyses will be performed at the Recycle Center, as described in Section, I.D.4.a-3.

In accordance with 40 CFR 264.13(a), Safety-Kleen will also perform physical and chemical analysis of a waste stream when it is notified or has reason to believe that the process or operation generating the waste has changed, or when the result of inspection indicates that the waste to be collected does not match the waste designated. It is Safety-Kleen's practice that suspected non-conforming material must not be accepted until an analysis has been done or the material must be rejected.

I.D.4.a-3 WASTE ANALYSES AT THE RECYCLE CENTER

Analyses performed at the Recycle Centers are undertaken to safeguard the recycling process and to assure the product quality. The following Exhibits summarize a typical waste analysis plan at the Recycle Center related to the hazardous materials returned from the Service Center:

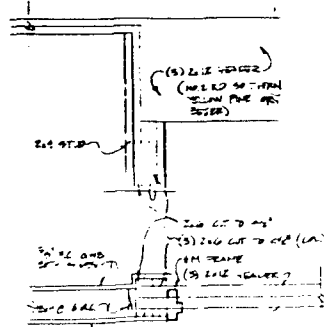
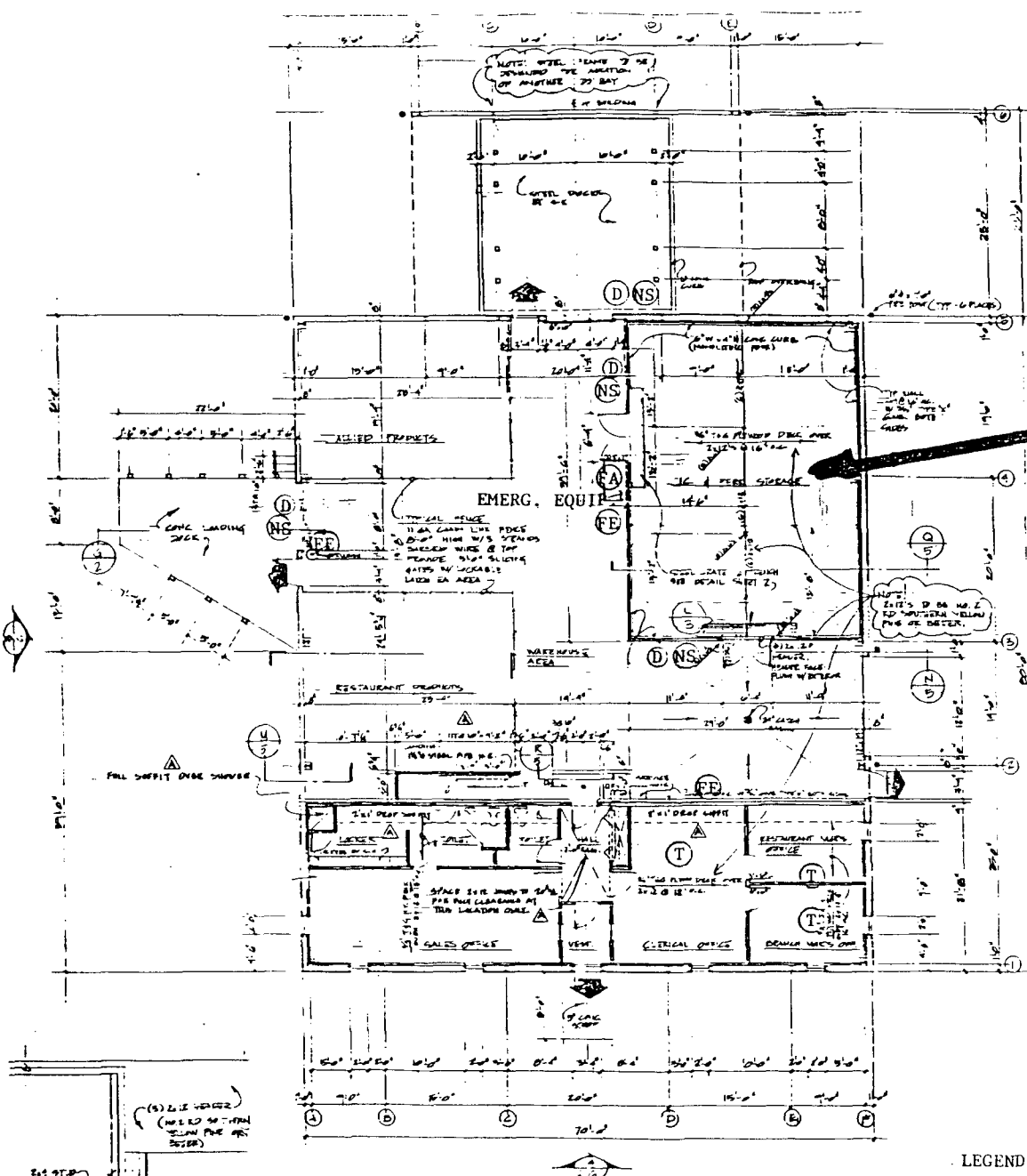
Exhibit I.D.4-11 Parameters and Rationale for Hazardous  
Waste Selection

Exhibit I.D.4-12 Parameters and Test Methods

Exhibit I.D.4-13 Methods Used to Sample Hazardous Wastes

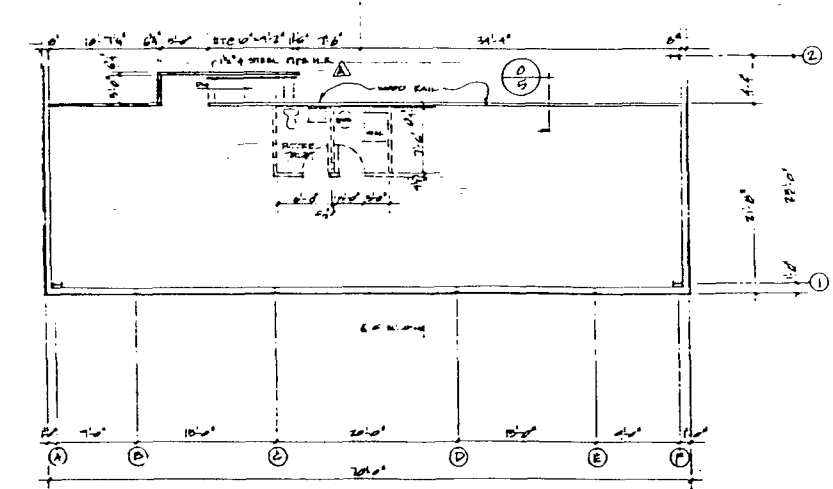
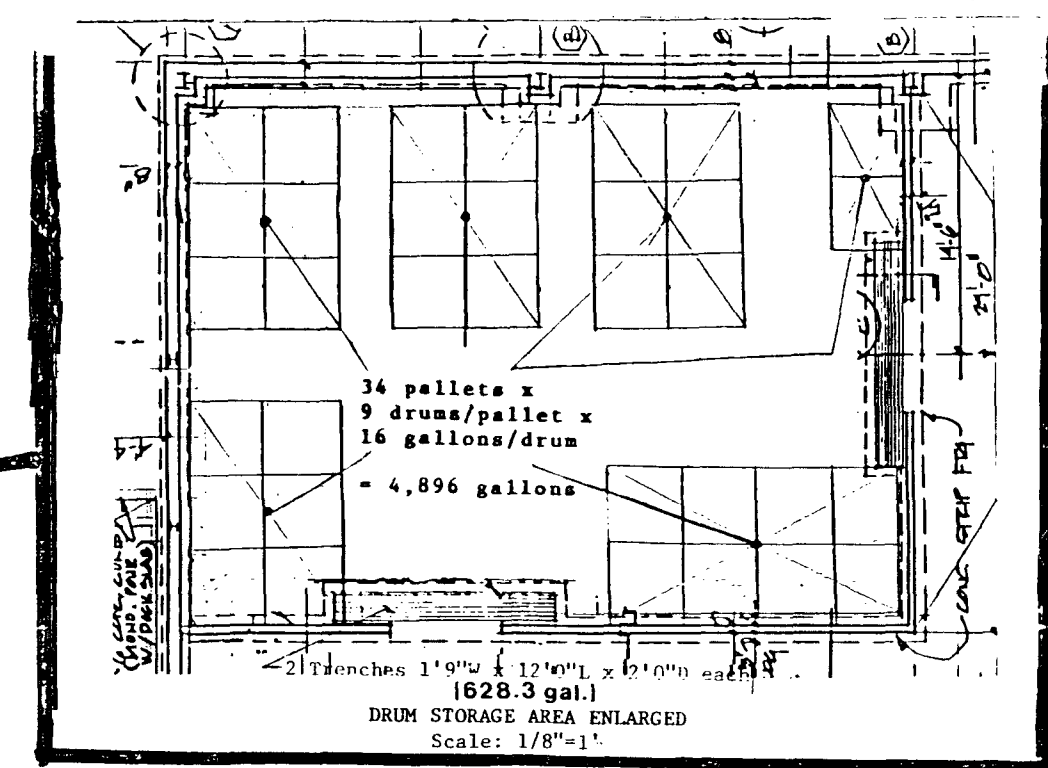
Exhibit I.D.4-14 Frequency of Analysis

A profile of the paint waste is in Exhibit 2-8a. It will be reanalyzed when the reclaimer to whom it is shipped requests reanalysis or when a change in the use of the product occurs.



SECTION A  
FLOOR PLAN

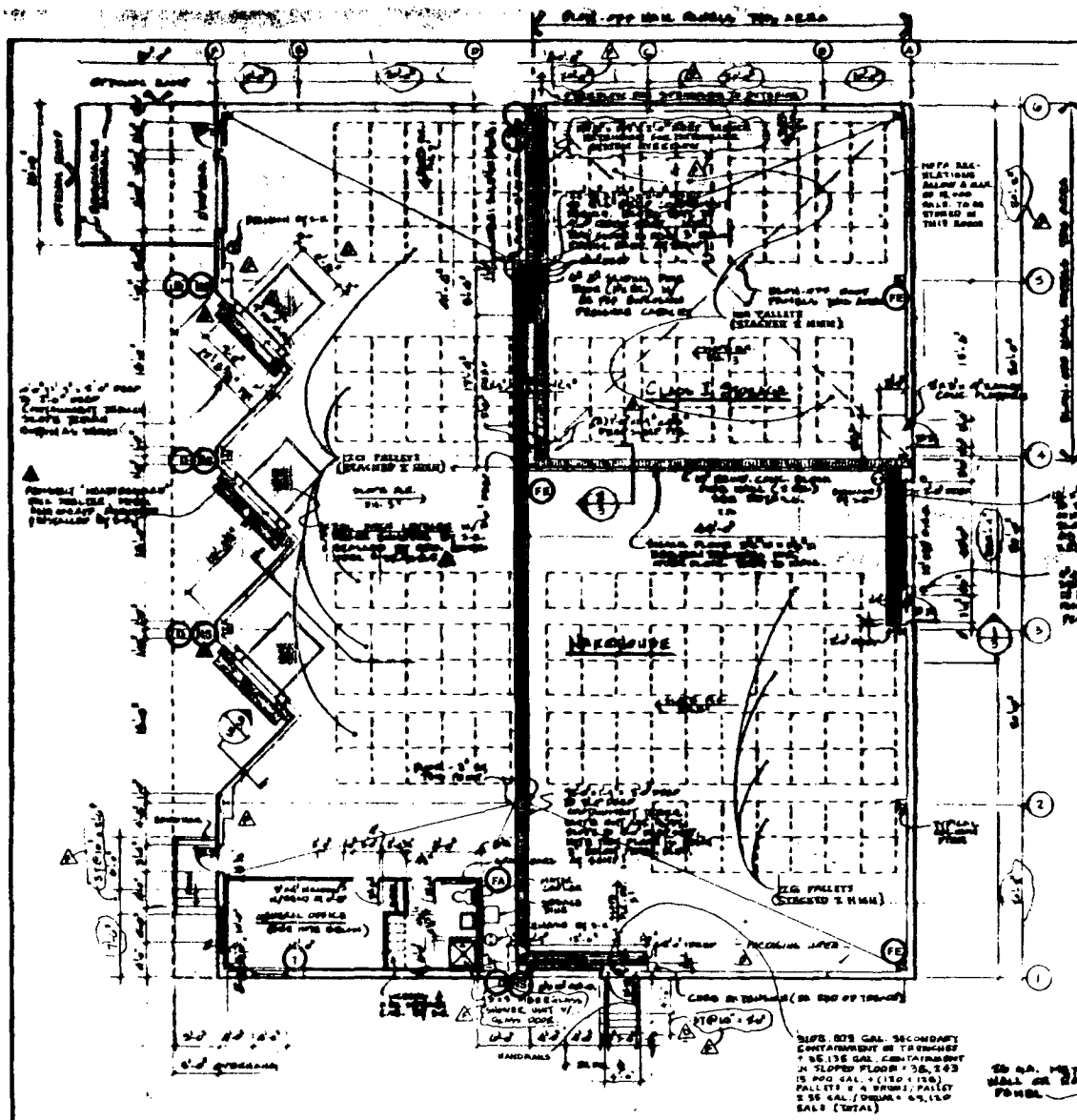
- LEGEND:
- Evacuation Route
  - D--Danger Sign
  - NS--No Smoking
  - FE--Fire Extinguisher
  - FA--First Aid
  - T--Telephone



MEZZANINE PLAN

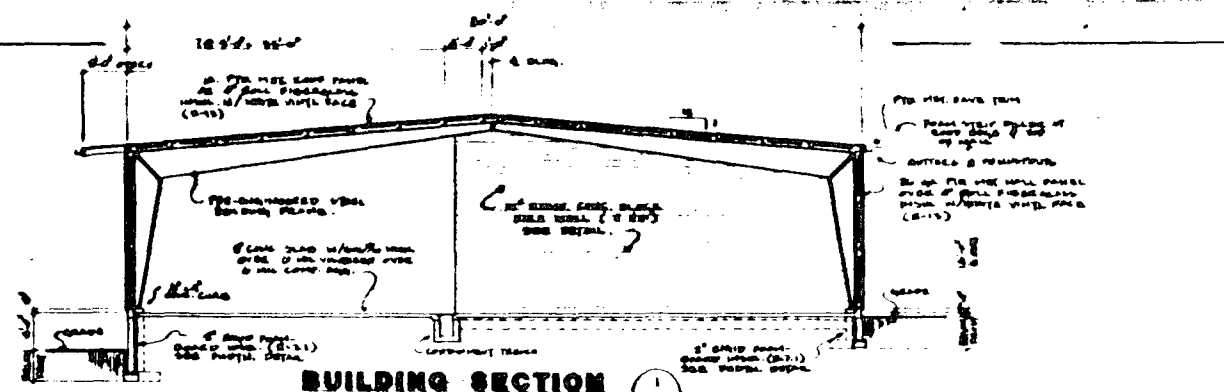
EXHIBIT I.D.5-2a

safety-kleen corp.	
80' 10" x 6" SERVICE CENTER FLOOR & MEZZ. PLANS, SECT. A (3)	
DATE	1/1/78
BY	J. D. 5-2a
FOR	LAURENCE & ASSOCIATES, INC.
PROJECT	LAURENCE & ASSOCIATES, INC.
SCALE	1/8" = 1'

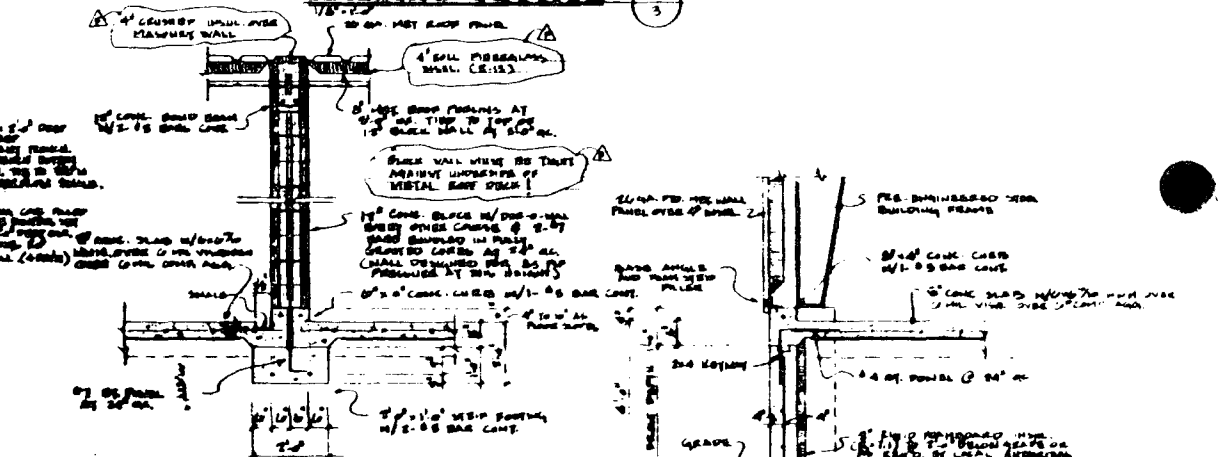


**FLOOR PLAN**  
1/8" = 1'-0"

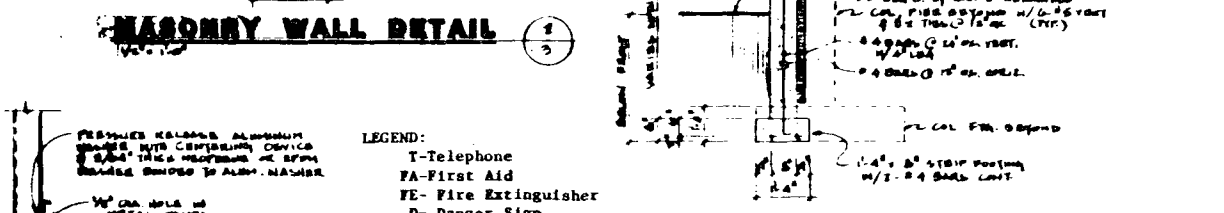
- GENERAL NOTES & DETAILS:**
1. WALLS 8" O.C. 1/2" MIN. THICK. EXTERIOR WALLS TO BE CONCRETE. INTERIOR WALLS TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.
  2. CEILING 8" O.C. 1/2" MIN. THICK. EXTERIOR CEILING TO BE CONCRETE. INTERIOR CEILING TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.
  3. FLOOR TO BE 4" MIN. THICK. EXTERIOR FLOOR TO BE CONCRETE. INTERIOR FLOOR TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.
  4. STAIRS TO BE 4" MIN. THICK. EXTERIOR STAIRS TO BE CONCRETE. INTERIOR STAIRS TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.
  5. ELEVATOR TO BE 4" MIN. THICK. EXTERIOR ELEVATOR TO BE CONCRETE. INTERIOR ELEVATOR TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.
  6. RESTROOMS TO BE 4" MIN. THICK. EXTERIOR RESTROOMS TO BE CONCRETE. INTERIOR RESTROOMS TO BE GYPSUM BOARD. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK. DOOR CASES TO BE 1 1/2" MIN. THICK.



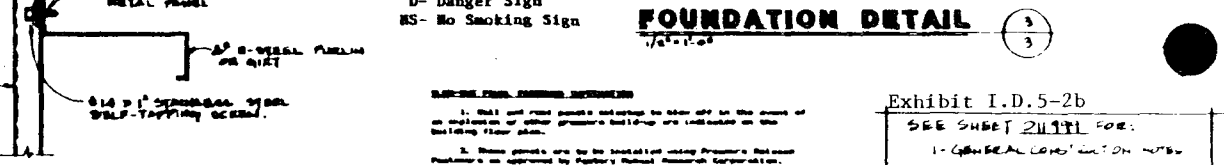
**BUILDING SECTION**  
1/8" = 1'-0"



**MASONRY WALL DETAIL**  
1/8" = 1'-0"



**FOUNDATION DETAIL**  
1/8" = 1'-0"



**BLOW-OFF PANEL DETAIL**  
1/8" = 1'-0"

**NOTES:**  
ALL CONSTRUCTION CHANGES BE REVISIONS. MUST BE SUBMITTED TO SAFETY-ALCOHOL UNIT IN WRITING & HAVE THE APPROVAL OF SAFETY-ALCOHOL UNIT IN WRITING.

- LEGEND:**
- T-Telephone
  - FA-First Aid
  - FE-Fire Extinguisher
  - D-Danger Sign
  - MS-No Smoking Sign

- GENERAL NOTES:**
1. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  2. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  3. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  4. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  5. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  6. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.
  7. All construction shall be in accordance with the latest edition of the Building Code of the City of Tampa.

Exhibit I.D.5-2b  
SEE SHEET 21111 FOR:  
1-GENERAL CONSTRUCTION NOTES  
2-GENERAL CONSTRUCTION NOTES

**SAFETY-ALCOHOL UNIT**

DATE: 10-1-80

PROJECT: 10-1-80

DESIGNER: 10-1-80

CONTRACTOR: 10-1-80

FLORIDA ACCIDENTATION CENTER

DATE: 10-1-80

PROJECT: 10-1-80

DESIGNER: 10-1-80

CONTRACTOR: 10-1-80

temporarily at the Service Center. The drums are picked up periodically for recycling at the Recycle Center. The paint and industrial wastes are collected from the customers' premises and stored at the accumulation center until they are delivered to a reclaimer.

Exhibits I.D.5-1, I.D.5-2a and I.D.5-2b showing the basic site and floor plans, particularly, the locations of waste management facilities and emergency equipment and facility storage.

I.E.2.b EMERGENCY NOTIFICATION

1. Emergency Coordinator

The Branch Manager or his designate is the emergency coordinator. Exhibit I.E.2-1 includes the names, home addresses, and both office and home phones of the primary emergency coordinator and his alternates. At all times there is at least one employee either on the facility premises or on call with responsibility for coordinating all emergency response measures. This primary emergency coordinator and alternate emergency coordinator are thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of materials handled, the location of all records within the facility and the facility layout. In addition, these coordinators have the authority to commit the resources needed to carry out the contingency plan.



The drums are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT Shipping Container Specification Number 5B. Exhibits I.E.3-1 to I.E.3-4 show typical detailed construction specifications of the 16-gallon immersion cleaner drums. The containers used to store dry cleaning wastes are shown in Exhibits 3-4a and 3-4b. Industrial solvents are stored in 55-gallon drums.

The drum storage area in the service center (Exhibit I.D. 5-2a) has secondary containment in the form of curbing and collection trenches. The two collection trenches measure 12' x 2' x 1-3/4' each (628.3 gallons total). No more than 6,283 gallons of spent solvent will be stored in this area.

The accumulation center is used for the collection of containers and boxes from Safety-Kleen service centers and industrial solvents customers prior to shipment to a Safety-Kleen recycle center or an independent reclaimer. Service centers in Florida ship their drummed wastes (dumpster sediment, spent immersion cleaner, dry cleaning wastes and paint wastes) to this warehouse for storage prior to reclamation. In addition, industrial solvents customers ship their drummed wastes directly to the accumulation center for storage.

IE3-3

The drum storage area in the accumulation center (Exhibit I.D. 5-2b) has secondary containment in the form of a sloped floor with trenches at the lowest point. The secondary containment will hold 38,243 gallons; no more than 69,120 gallons will be stored in this building.

The containers will be stored in the configurations shown on the Floor Plans, Exhibit I.D. 5-2b. At least two feet of aisle space will be maintained and the drums will be stored no more than two high. Containers will be placed on pallets and moved with a forklift or pallet jack whenever possible. Otherwise, drums will be moved using a handcart.

The above storage capacities, based on drum stacking configurations shown in Exhibits I.D.5-2a and I.D.5-2b, (75,403 gallons) does not exceed the process design capacity volume presented, in Section III.B of the Part A permit application, Exhibit I.A.20-2.

I.E.3.c STORAGE TANKS

The facility consists of two 12,000-gallon capacity aboveground steel tanks. Used mineral spirits contained in returned drums from the customers are transferred via the wet dumpster into one of these two

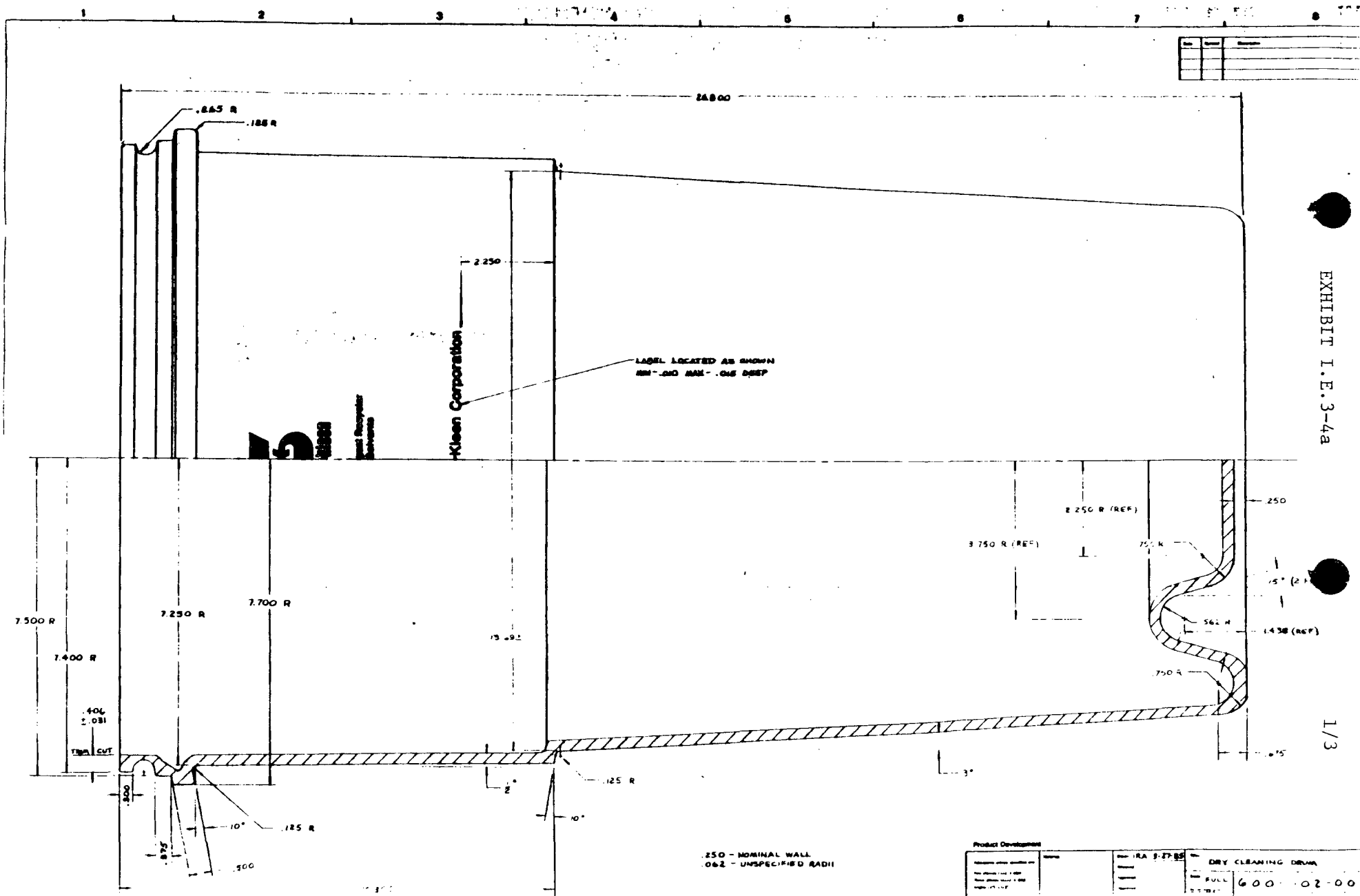
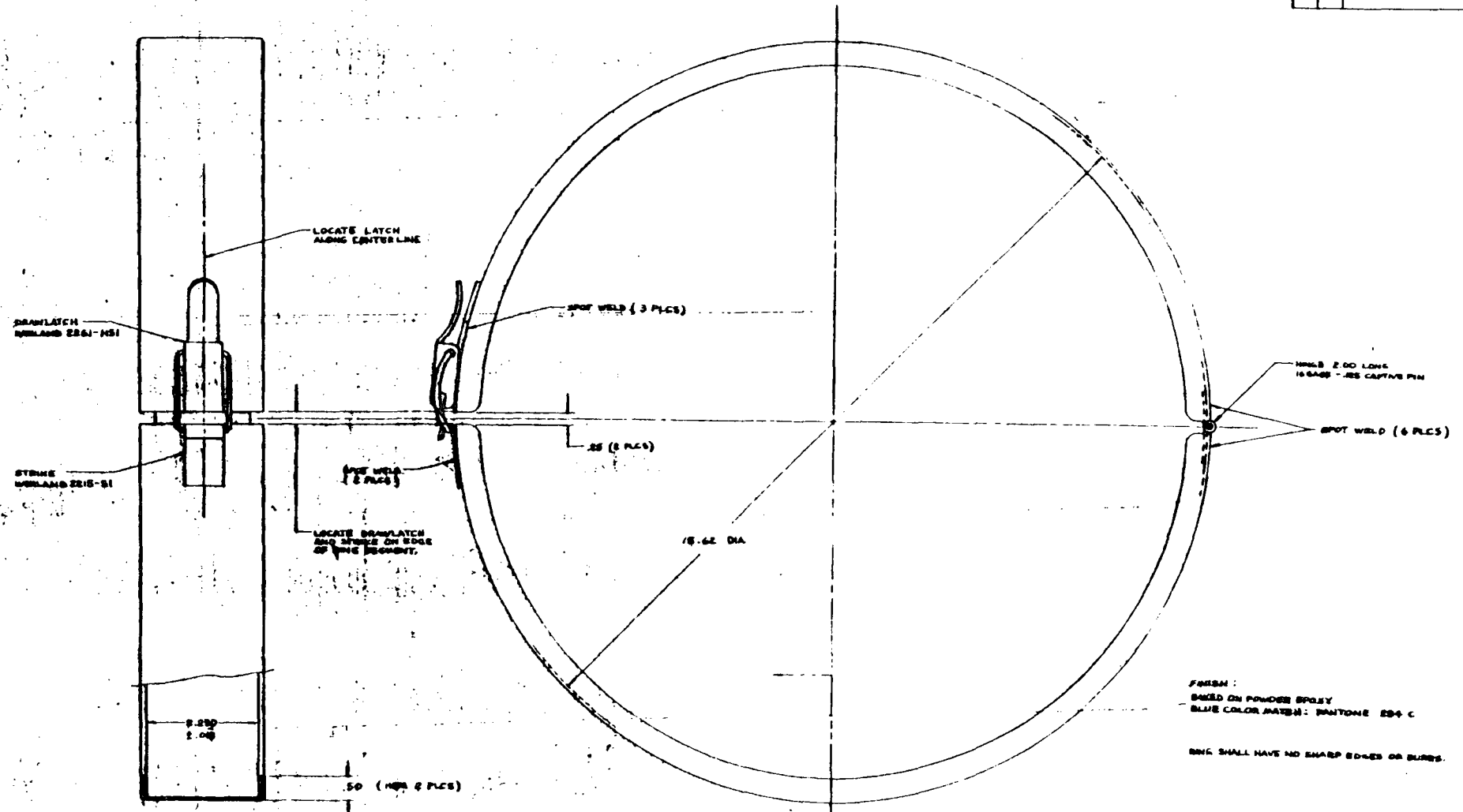


EXHIBIT I.E.3-4a

1/3

1 2 3 4 5 6 7 8

Rev	By	Date	Appr



3/3

Product Development		Rev 1-10-01		DRY CLEANING DESIGN BUREAU	
AS-4456		TID 4-2-01		PULL	
CS SYRSL		600-009-200-6		600-009-200-6	

Date	Symbol	Description	Drawn	Checked
4/18/86	--	Released ECO 402	SRT	JPK

BOX -- STANDARD DRY-CLEANING FILTER

Configuration: Die-cut, turkey-fold lock container requiring no taping.

Material: 275-pound-test, double-wall craft glued cartons with Michelman coating for water resistancy.

Size: Inside dimensions to be 16 9/16" x 16 9/16" x 15" deep.

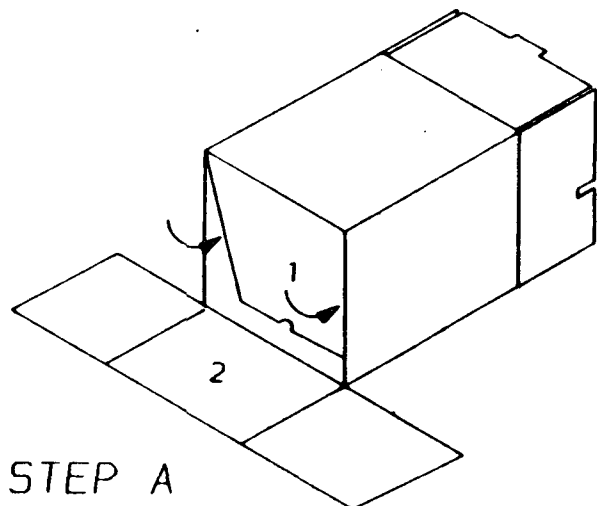
Other Required Features: Container to have instructions for proper assembly on two upper flaps as indicated in Safety-Kleen drawing # 603-001-100-32 (sheet 2) and # 603-001-100-33 (sheet 3).

Qualified Vendor(s): Mack Chicago Container Corp., Chicago, Illinois.

## Product Development

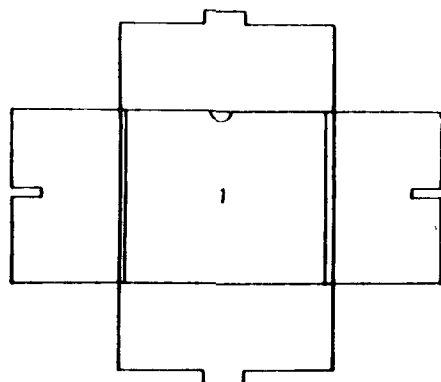
Tolerances unless specified are:  Two places (xx) ± .020 Three places (xxx) ± .005 Angles (x°) ± 1/2°	Material:	Drawn: SRT	Title: Box, Std DC Filt		
		Checked: JPK			
		Approved: JPK <i>[Signature]</i>	Scale:	603 - 001 - 100 - 11	
		Approved:	Do not scale print		
This drawing contains information proprietary to Safety-Kleen Corporation. Any disclosure or reproduction in part or in whole is expressly prohibited except by a written agreement from Safety-Kleen			Sheet 1 of 3	Revision:	P/N 3302

REVISIONS			
ECO	REV DESCRIPTION	DATE	APPROVED
402	- RELEASED	4-18-86	✓/A-Z



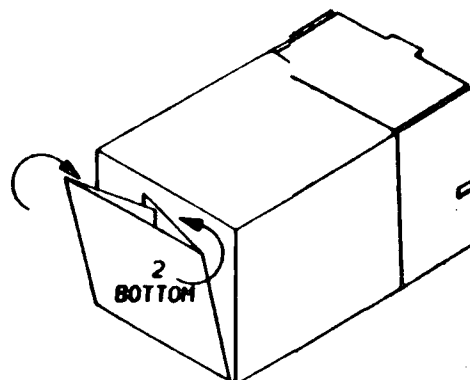
### STEP A

SQUARE UP BOX ON ITS SIDE.  
FOLD FLAP 1 INSIDE.



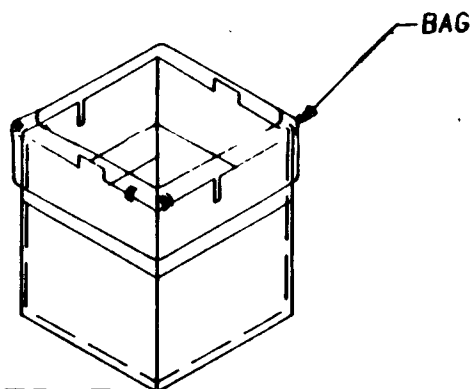
### STEP D

PUSH FLAP 1 TO BOTTOM OF BOX.



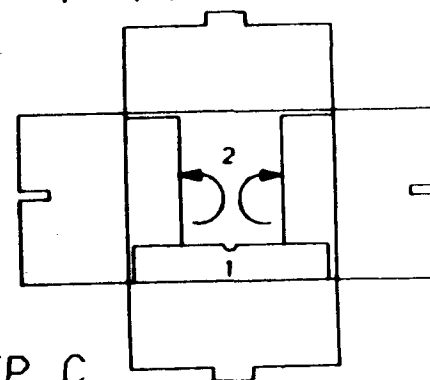
### STEP B

FOLD OVER FLAPS ON BOTTOM 2  
AND FOLD TO CLOSED POSITION.



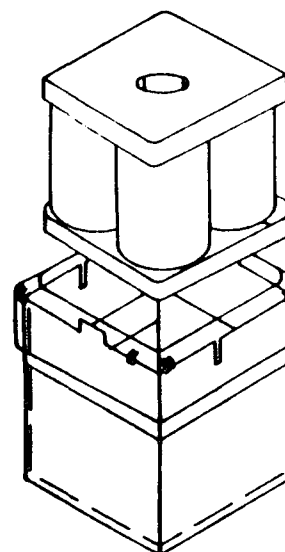
### STEP E

STAND BOX WITH FLAPS UP  
AND INSERT BAG DRAPING  
OVER FLAPS.



### STEP C

LIFT FLAP 1 TO UPRIGHT POSITION  
THEN PUSH FLAPS ON BOTTOM 2  
AGAINST SIDES OF BOX.

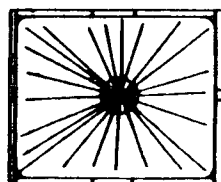


### STEP F

INSERT TRAY INTO BOTTOM OF  
BOX WITH TRAY SIDES  
FOLDED UP.

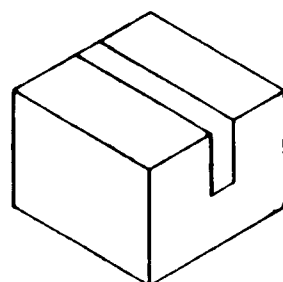
### STEP G

DRAIN FILTERS.  
PLACE FILTERS INTO TRAY  
AND COVER WITH SECOND  
TRAY SIDES FOLDED DOWN.



### STEP H

LIFT SIDES OF BAG, TWIST  
AND INSERT INTO CENTER  
HOLE OF TOP TRAY  
TO SEAL.



### STEP I

CLOSE BOX AND SEAL SEAM  
WITH TAPE. OVERLAPPING  
SIDE AT LEAST 6 INCHES.

Safety-Kleen Corporation 777 Big Timber Rd. Elgin IL. 60120 (312) 897-0400		Product Development	
T. DANCOSKI 2-10-86		BOX, STD. D.C. FILT.	
C 603		603-001-100-33	
NONE		3302	

Date	Symbol	Description	Drawn	Checked
4/18/86 --		Released ECO 402	JPK	DAL

## TRAY -- STANDARD DRY CLEANING FILTER BOX

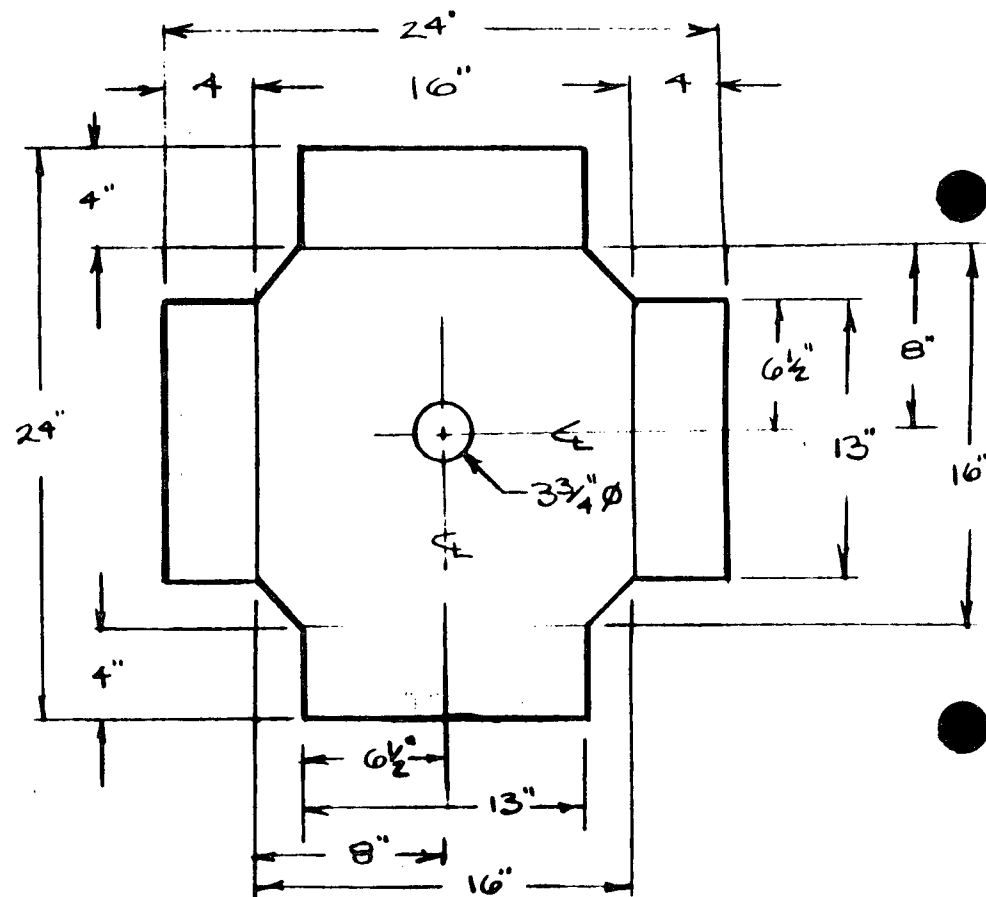
Configuration: A flat scored tray with broken corners when folded into position, with a  $3/34$ " diameter hole in the center of the tray.

Material: 275-pound-test, C-fluted corrugated.

Size: 16" x 16" x 4" deep.

Other Required Features: Corners of the tray shall be broken so as not to tear the poly-nylon-poly bag into which the tray is inserted.

Qualified Vendor(s): Mack Chicago Container Corp., Chicago, Illinois.



## Product Development

Tolerances unless specified are:  Two places (xx) ±.020 Three places (xxx) ±.005 Angles (x°) ±1/2°	Material: SEE ABOVE	Drawn: <i>John Paul Egan</i>	Title: Tray, Std DC Filt Bx			
		Checked: <i>DHL</i>				
		Approved: <i>John Paul Egan</i>	Scale:	603      —      003      —      100      —      1		
		Approved:	Do not scale print			
This drawing contains information proprietary to Safety-Kleen Corporation. Any disclosure or reproduction in part or in whole is expressly prohibited except by a written agreement from Safety-Kleen.			Sheet 1 of 1	Revision:	P/N 3307	

Date	Symbol	Description	Drawn	Checked
4/18/86 --		Released ECO 402	SRT	JPk

DISPENSER -- FOR TAPE FOR STANDARD DRY CLEANER BOX

Configuration: 2" tape dispenser

Qualified Vendor(s): Elgin Paper Co., Elgin, Illinois. (Vendor's product # H180)

### Product Development

Tolerances unless specified are:  Two places (xx) $\pm 0.020$ Three places (xxx) $\pm 0.005$ Angles (x°) $\pm 1/2^\circ$	Material:	Drawn: SRT	Title: Disp, Filt Bx Tape	
		Checked: JPK		
		Approved: JPK	Scale:	603 - 005 - 100 - 1
		Approved:	Do not scale print	
This drawing contains information proprietary to Safety-Kleen Corporation. Any disclosure or reproduction in part or in whole is expressly prohibited except by a written agreement from Safety-Kleen			Sheet of	Revision: P/N 3310



## GAYNES TESTING LABORATORIES, INC.

Container Set-Up:

1. Four (4) Filters drained for 1 hour
2. One (1) assemble container
3. One (1) Plastic Bag placed in the container
4. A bottom tray was placed in the plastic bag
5. The four (4) filters were placed in the bag and in the tray
6. The top tray was placed over the four (4) filters
7. The plastic bag was closed and the twisted end was stuffed in a center hole of the top tray
8. The top flaps of the container were closed and taped with 2" plastic tape.

Test Procedure & Results:Drop Test -

Using a Gaynes Free Fall Drop Tester, each container was subjected to three (3) drops from a height of 12 inches as follows:

1st. Drop flat on the Bottom, 2nd. Drop on a Bottom edge and 3rd. Drop on a Bottom corner.

Results - All containers ok; no immediate indication of leakage.

All six (6) containers were stored for 48 hours to determine if leaking would develop during that period.

Inspection after 48 hours indicated that containers no. 4 and no. 5 were leaking. This leakage in each package was caused by a small tear in the plastic bag. (See Photo no. 1).

Rotary Motion Vibration -

The four (4) remaining containers were placed in their normal upright shipping positions on the table of a Gaynes Rotary Motion Vibration Tester having a table displacement of 1.0 inch (See Photo no. 2). With the containers side by side and one end against the back stop, the machine was activated and the speed was increased until it was possible to move a 1/16 inch steel shim about 4 inches between the bottom of the container and the table surface. This occurred at a frequency of 220 rpm. After 15 minutes, the machine was stopped and the packages were inspected, and then were rotated 90° for a 2nd. 15 minutes of vibration at 220 rpm.

Results - All containers ok; no indication of leaking.

**PAINT WASTE CONTAINER**

**SPECIFICATIONS**

The empty 5 gallon pail is ordered under Safety-Kleen part number 9986, per the following specification:

5 gallon, 24 gage steel tighthead pail, black exterior, rust inhibited interior, DOT17E, with handle and 2" flange and plug.

11" outer diameter x 13-19/32" high

The current empty 16 gallon drum is ordered under Safety-Kleen part number 3362, per the following specification:

16 gallon, 20 gage steel closed head drum, with 2" bung and 3/4" bung, per DOT17E

14-7/8" outer diameter x 26-7/8" high

An anticipated closure schedule can be seen in Exhibit H-1. An anticipated maximum waste inventory for the facility is presented in the following section.

I.F.1.b FACILITY DATA

1. Waste Management Facility Descriptions

a. Aboveground Storage Tank

A 12,000-gallon steel tank, 10'6" diameter x 18'8" high, for used Mineral Spirits storage.

b. Drum Storage Areas

In Section A, 40'x 30' area with 6" wide by 4" high continuous curbing with collector sumps. It has capacity for 252 16-gallon, immersion cleaner drums; and 18 16-gallon Mineral Spirits dumpster mud drums; 54 16-gallon and 60 30-gallon dry cleaning waste drums (Perc), or a variation of specific drum contents within the total drum count.

In Section B, approximately 80' x 100' area with 6" wide by 4" high concrete curbing, sloped floors, collection trenches and sumps. It has capacity for 1,134 16-gallon immersion cleaner drums; 630 16-gallon and 250 30-gallon dry cleaning waste drums (Perc), or a variation of specific drum contents within the total drum count.

c. Solvent Return/Fill Shelter, two 10' x 25', with one solvent return receptacle (wet dumpster) each and associated appurtenances.

2. Maximum Inventory of Wastes

a. Used Mineral Spirits: 12,000 gallons

b. Drummed Waste: 75,403 gallons

I.F.l.e CLOSURE COST ESTIMATES

1. Tank Closure - Open, remove contents of, and clean, remove, and dispose of, a 12,000-gallon 10'6" diameter x 18'8" high aboveground storage tank.

Access to Tank \$ 350

Remove Material: The costs involved in off-site transportation and reclamation are adequately compensated by the economical value of the used solvent. Assume no net cost gain or loss.

Squeegee Clean Tank and Testing of wash water \$ 800

Dispose of wash water: 1,000 gal. at \$0.15/gal. \$ 150

Disconnect and cap all appurtenant piping and equipment

2 man-days at \$30/hr. \$ 480

Torch cut the tank

16 hours at \$40/hr. \$ 640

Remove tank \$ 350

Total Closure Cost for the 12,000-Gallon tank

\$2,770

2. CLOSURE OF DRUM STORAGE AREAS - Remove and return drums to the Recycle Center, clean the drum storage areas, and dispose of wash water generated.

a. Remove and return drums to the Recycle Center, 150 miles at \$1.75/mile, 20 trips

\$5,250\*\*

b. Clean the storage area - 8 man-hours at \$30.00/hour

\$ 240

c. Dispose of the wash water - 200 gallons at \$.15/gallon

\$ 30

Total Closure Cost

\$5,520

3. CLOSURE OF DUMPSTER AND RETURN/FILL SHELTER AREA - Remove, package and dispose of sludge, clean the dumpster and return/fill shelter area, remove dumpster and shelter structure for reuse.

a. Remove, package and dispose of sludge - 600 gallons at \$.75/gallon

\$ 452

b. Clean dumpster and shelter area - 8 man-hours at \$30.00/hour

\$ 240

c. Remove dumpster and shelter - 8 man-hours at \$40.00/hour

\$ 320

Total Closure Cost

\$1,012

4. CERTIFICATION OF CLOSURE

IF1-16

\$ 500

5. TOTAL CLOSURE COSTS

Aboveground Tanks:	\$2,770
Drum Storage Area:	5,520
Solvent Return/Fill:	1,012
Certification:	<u>500</u>
Total	\$9,802

\*\* Assumed the value of the used immersion cleaner and the drums offsets the cost of treatment by Safety-Kleen facility.

## PART II - CONTAINERS

### II.B.1 CONTAINMENT

The immersion cleaner is always contained in partially filled, 16-gallon, covered drums before, during, and after its use. Until received at the Recycle Center, the immersion cleaner is never transferred to another container. The drums containing the used immersion cleaner are returned to the Service Center and stored in a designated drum storage area before shipment to the Recycle Center.

The dry cleaning wastes are contained in 16-gallon drums and in lined boxes (16" x 16" x 15"). Paint wastes are stored in 16-gallon drums and in 5-gallon pails. Industrial solvents are stored in 55-gallon drums. The drums are managed similar to the used immersion cleaner drums, and contents within the drums will not be removed or processed at the Service Center.

The drum storage areas as shown on Exhibits I.D.5-2a and I.D.5-2b occupy portions of building areas which have a concrete floor, berms, and interceptor trenches to form a spill containment system. The system is free of cracks and gaps. Spills are removed by a hand-held, portable electric pump (the COMS pump), wet-dry vacuum cleaner, or sorbent materials. The capacities of the containment systems in each section are designed to be greater than 10% of the total liquid storage capacity in the drum storage areas. Since the characteristics of the stored wastes are known, no analysis are performed for the materials collected from the containment area. All collected materials are sent to a recycling

center for recycling/reclamation. The recovered materials that can not be effectively reclaimed at the recycle center will be, in turn, sent to a licensed facility for disposal

All drums are transported, moved, and stored carefully in an upright position. The route trucks are equipped with an electric hoist to assist loading/unloading. In the warehouse area, the immersion cleaner, mineral spirits dumpster mud drums, and dry cleaning waste drums are moved with 2-wheel hand trucks and stacked by hand. All drums will be elevated on pallets to eliminate the possibility of drums standing in spilled solvent.

The drums are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT Shipping Container Specification Number 5B. Exhibits I.E.3-1 to I.E.3-2 show typical detailed construction specifications of the 16-gallon immersion cleaner drums.

The drum storage areas for spent solvents (Exhibits I.D.5-2a and I.D.502b) have capacity for holding 75,403 gallons (1,370 55-gallon drums or 4,712 16-gallon drums).

Drums and boxes will be double-stacked. Exhibits I.D.5-2a and I.D.5-2b show the configuration and stacking arrangements of containers.

Wastes are stored in nylon-lined boxes, polyethylene and steel drums. Since none of the waste handled by Safety-Kleen react with metal, nylon or polyethylene, compatibility is assured. Immersion cleaner, industrial wastes, paint wastes and dry cleaning waste drums are never opened at the branch. None of the wastes are incompatible; however, solvents are segregated for quality assurance purposes. Only mineral spirits is placed in red drums, only immersion cleaner in gray, only perchloroethylene in polyethylene drums or in boxes and only paint waste in black drums or pails.

All drum storage areas are located indoors. The drum storage containment systems consist of 4" x 6" concrete curbing, trenches and a sumps which prevent both run-on and run-off.

II.B.2. WASTE COMPATIBILITY

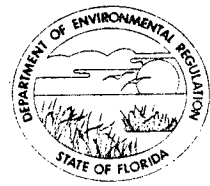
The solvents stored at this facility are not incompatible with each other, or with other materials handled at this facility, insofar as reactivity is concerned. However, they are the primary source of feed stock for regenerating the clean solvents. Separation of these used solvents is a standard practice at the Service Center.

All material at the Service Centers is managed in accordance with local fire protection code and fire department recommendation.

Drum storage configurations are shown of Exhibit I.D.5-2a and I.D.5-2b.



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: \_\_\_\_\_ Locn: \_\_\_\_\_  
To: \_\_\_\_\_ Locn: \_\_\_\_\_  
To: \_\_\_\_\_ Locn: \_\_\_\_\_  
From: \_\_\_\_\_ Date: \_\_\_\_\_

TO: Satish Kastury

FROM: Armando Gonzalez *AG*

DATE: November 26, 1986

SUBJECT: Safety-Kleen Corp.

FLD 980 847 271, HC29-118986, Partial response to 4th  
NOD

FLD 049 557 408, HF29-121717, completing response to 1st  
NOD

RECEIVED

DEC 01 1986

Hazardous Waste

Attached, please find two (2) different documents concerning the referenced applications. Letters dated November 18 and November 17, 1986 respectively.

AG/br

D. I. R.

NOV 18 1986

6011

TAMPA



November 18, 1986  
EJJ 86-395

Mr. Armando Gonzales, Permitting Engineer  
Florida Dept. of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, FL 33610

Re: Safety-Kleen Corp. FLD 980847271  
Construction Permit Application HC29-118986  
November 7, 1986 Notice of Deficiency

Dear Mr. Gonzales,

The purpose of this letter is to describe the June 16, 1986 spill at our Tampa Service Center. The tanks were tested by the manufacturer in accordance with the specifications in the legend table on Exhibit I.E.3-5. Subsequent to their installation, but before their initial filling, the manways were removed to permit entry for installation of the tank gauges. Upon initial filling of one tank, it was found that the manway gasket was leaking. The tanks were being filled to begin routine operation of the facility, not as a testing procedure. This problem was corrected immediately.

As stated in the response to your September 25, 1986 N.O.D., Section I.E.4.a (8) of the original permit presents a time table and method for leak detection. Since the tanks are aboveground, any leaks will be evident (as noted during the June 16, 1986 incident).

Tanks will be hydraulically tested once every two years and a wall-thickness test will be done once every five years.

Exhibit I.E.4-1 presents an inspection log, and emergency remedial actions are discussed in the Contingency Plan, Attachment I.E.2 of the permit.

3. LAND OWNER

THIS IS TO CERTIFY THAT I, AS LAND OWNER, UNDERSTAND THAT THIS APPLICATION IS SUBMITTED FOR THE PURPOSE OF OBTAINING A PERMIT TO CONSTRUCT, OPERATE, OR CLOSE A HAZARDOUS WASTE MANAGEMENT FACILITY ON THE PROPERTY AS DESCRIBED. FOR HAZARDOUS WASTE DISPOSAL FACILITIES, I FURTHER UNDERSTAND THAT I AM RESPONSIBLE FOR PROVIDING THE NOTICE IN THE DEED TO THE PROPERTY REQUIRED BY 40 CFR §264.120 AND §265.120, AS ADOPTED BY REFERENCE IN CHAPTER 17-30, FAC.

X Charlotte M. Mueller

SIGNATURE OF THE LAND OWNER OR AUTHORIZED REPRESENTATIVE\*

Charlotte M. Mueller, Owner  
NAME AND TITLE (PLEASE TYPE OR PRINT)

DATE: Oct 2, 1986 TELEPHONE NO. (813) 890-2557

\*ATTACH A LETTER OF AUTHORIZATION

4. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (WHERE REQUIRED BY CHAPTER 471, F.S.)

THIS IS TO CERTIFY THAT THE ENGINEERING FEATURES OF THIS HAZARDOUS WASTE MANAGEMENT FACILITY HAVE BEEN DESIGNED/EXAMINED BY ME AND FOUND TO CONFORM TO ENGINEERING PRINCIPLES APPLICABLE TO SUCH FACILITIES. IN MY PROFESSIONAL JUDGMENT, THIS FACILITY, WHEN PROPERLY CONSTRUCTED, MAINTAINED AND OPERATED, OR CLOSED, WILL COMPLY WITH ALL APPLICABLE STATUTES OF THE STATE OF FLORIDA AND RULES OF THE DEPARTMENT OF ENVIRONMENTAL REGULATION.

SIGNATURE

Phil Parker

MAILING ADDRESS Parker Mechanical Inc

NAME Phil Parker

(PLEASE TYPE)

P.O. Box 95263

STREET OR P.O. BOX  
Madeira Beach FL 33708

CITY

STATE

ZIP

(813) 360-5136

TELEPHONE NO.

Nov. 13, 1986

DATE

FLORIDA REGISTRATION NUMBER: P.E. 020781

(TAMPA PLANT CLOSURE)

(Please Affix Seal)

# CERTIFICATION

SAFETY-KLEEN CORP  
3-163-01 (OLD) TAMPA FL  
CLOSURE  
FLD 980817271  
049557408

## 1. OPERATOR

THIS IS TO CERTIFY THAT UNDER PENALTY OF LAW I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. FURTHER, I AGREE TO COMPLY WITH THE PROVISIONS OF CHAPTER 403, FLORIDA STATUTES, AND ALL RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL REGULATION. IT IS UNDERSTOOD THAT THE PERMIT IS ONLY TRANSFERABLE IN ACCORDANCE WITH SECTION 17-30.30, FAC, AND, IF GRANTED A PERMIT, THE DEPARTMENT OF ENVIRONMENTAL REGULATION WILL BE NOTIFIED PRIOR TO THE SALE OR LEGAL TRANSFER OF THE PERMITTED FACILITY.

*David A. Rutledge*

SIGNATURE OF THE OPERATOR OR AUTHORIZED REPRESENTATIVE\*

*CORP V.P. SALES & SERVICE*

NAME AND TITLE (PLEASE TYPE OR PRINT)

DATE: *June 18, 86* TELEPHONE NO. *(812) 426-9094*

\*ATTACH A LETTER OF AUTHORIZATION

## 2. FACILITY OWNER

THIS IS TO CERTIFY THAT I UNDERSTAND THIS APPLICATION IS SUBMITTED FOR THE PURPOSE OF OBTAINING A PERMIT TO CONSTRUCT, OPERATE, OR CLOSE A HAZARDOUS WASTE MANAGEMENT FACILITY ON THE PROPERTY AS DESCRIBED. AS OWNER OF THE FACILITY, I UNDERSTAND FULLY THAT THE FACILITY OPERATOR AND I ARE JOINTLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF CHAPTER 403, FLORIDA STATUTES, AND ALL RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL REGULATION.

*X Charlotte M. Mueller*

SIGNATURE OF THE FACILITY OWNER OR AUTHORIZED REPRESENTATIVE\*

*Charlotte M. Mueller, Owner*

NAME AND TITLE (PLEASE TYPE OR PRINT)

DATE: *Oct. 2, 1986* TELEPHONE NO. *(813) 870-2557*

\*ATTACH A LETTER OF AUTHORIZATION